

**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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

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**SURREBUTTAL TESTIMONY**

**OF**

**DAVID L. TAYLOR**

**NOVEMBER 12, 2004**

1 **Q. Are you the same David L. Taylor that filed direct, supplemental and rebuttal**  
2 **testimony in this case?**

3 A. Yes I am.

4 **Q. What is the purpose of your surrebuttal testimony?**

5 A. In my surrebuttal testimony I will discuss some of the comments and representations  
6 presented in the rebuttal testimony of US Mag witnesses Roger Swenson and Lee  
7 Brown.

8 **Q. Both Mr. Swenson and Mr. Brown claim that the Company has used admittedly-**  
9 **flawed, unproven or discredited methodologies to determine a base rate for US**  
10 **Magnesium. Do you agree with their claim?**

11 A. No. In this proceeding we have used the long standing embedded cost of service  
12 (COS) methodology adopted by the commission. The embedded COS methodology  
13 employed by the Company and the DPU to determine US Mag's cost responsibility in  
14 this case is consistent with that used in the current and last Utah general rate cases.

15 As described in my direct and supplemental testimony, the US Mag loads used  
16 in the allocation of costs reflect their unique usage characteristics. Only when US  
17 Mag is deemed to be served by PacifiCorp's resources are their loads reflected for  
18 allocation purposes. This means that no energy usage or contribution to system peak  
19 is recognized for US Mag during any period they are curtailed, even if they choose to  
20 buy through that curtailment.

21 The Company filed COS study consistent with current Commission practice as  
22 stated in the Utah Commission order in Docket 01-035-38, page 8 and 9:

1 PacifiCorp, the Division, and the Committee each introduces embedded-cost  
2 analysis to support its views of appropriate interruption price and terms. Each  
3 of these embedded-cost analyses is consistent with prior Commission rulings.  
4 ... we employ the analyses of PacifiCorp, the Division and the Committee to  
5 define the areas within which we can consider the value of interruptibility.  
6

7 It also follows the conclusions laid out in the Report of the Special Contracts Task  
8 Force to the Utah PSC dated December 17, 1999. Page two of that report states:

9 "If the customer has special load characteristics, the rates for that customer  
10 would reflect the appropriate cost structure for serving that customer, and can  
11 be handled with normal procedures."  
12

13 Continuing to page 4 of the report is a further discussion which states:

14 "Our discussions quickly make it clear that a distinction needs to be made in  
15 special contracts between those contracts with special load characteristics and  
16 those customers with special financial needs. Some of the Special Contracts  
17 currently referred to as Special Incentive Contracts are in fact interruptible  
18 service customers who are covering all of their fixed and variable cost of  
19 service, but have lower rates than tariff because they have lower costs. The  
20 appropriateness of these rates should be evaluated using normal cost of service  
21 criteria..."  
22

23 Normal cost of service criteria, which reflected the US Mag loads only when they are  
24 taking service from PacifiCorp's resources, was used in this filing.

25 The report then indicates that Special Economic Incentive contracts require  
26 special criteria. I will discuss those criteria later in my surrebuttal testimony.

27 **Q. What are Mr. Swenson's specific concerns of the COS model?**

28 A. In his rebuttal testimony, Mr. Swenson identifies two concerns. He first notes that the  
29 model "effectively gives the same value whether the months that are chosen for  
30 interruption are peak summer and winter months or non-peak shoulder months." He  
31 then suggests that "the exact same value is produced whether you assume interruption  
32 for just one hour per month (the hour of system peak) or all 720 (or so) hours in the

1 month.”

2 **Q. Are his concerns sufficient to dismiss the Company filed cost of service results?**

3 A. No. While on their face, his concerns have some validity, they don't capture the full  
4 purpose of the methodology or they miss some of the counterbalancing effects of the  
5 methodology. Let's address his second concern first. His claim that the COS impact  
6 is the same with just one hour of interruption as it would be with interrupting all  
7 hours of the month is not true. The mechanics of measuring peak loads and picking  
8 the peak hour don't support his conclusion. As he acknowledges, the utility doesn't  
9 know what day or hour the system peak will occur, so only after the fact do you know  
10 which hour to interrupt. More importantly, if US Mag were to physically interrupt for  
11 only one hour, that hour, due to the fact that total system load is now 80 to 100 MW  
12 less, will most likely not be the hour of system peak. The monthly system peak would  
13 now occur in a surrounding hour or on a different day when US Mag is back on line.  
14 To achieve the full reduction in system peak and realize allocation benefits, many  
15 more hours of curtailments are necessary. US Mag, or any other interruptible  
16 customer, needs to be interrupted enough hours to ensure that the actual system peak  
17 hour occurs while they are curtailed, and that the system peak is reduced by the  
18 amount of the customers' interruptible load.

19 Moving beyond the mechanics, a single hour of interruption, even if it were  
20 successful at reducing the peak, misses the broader objectives of the allocation  
21 process. Load during the hour of system peak is used as a surrogate measurement to  
22 reflect each customer's, or class of customers', usage during the Company's peak  
23 period. Reducing load during the hour of system peak impacts the allocation of costs,

1 but reducing load during the broader peak period is how savings for the Company and  
2 our customers are achieved. Perhaps a good example of this concept is Time of Use  
3 service where prices are higher during the full on-peak period, not just the one hour of  
4 system peak.

5 Finally on this topic, the Company meets a significant portion of its needs  
6 with base load generation resources. The costs of those resources are apportioned  
7 across all twelve months of the year. For every month where US Mag is curtailed for  
8 only a few hours a day, it avoids 75% of the monthly portion of the fixed costs of  
9 those base loads resources. This provides a tremendous benefit to US Mag.

10 **Q. How about his concern that summer, winter and shoulder month loads are all**  
11 **valued the same?**

12 A. Seasonality is one area where the embedded COS model is not fully effective. As I  
13 mentioned in my direct and rebuttal testimony, however, the COS study filed in the  
14 current general rate case before this Commission includes seasonal allocation of the  
15 costs of specific resources that are more heavily used during either the winter or  
16 summer periods. There was very little impact on the fiscal year 2006 COS results for  
17 US Mag associated with the use of seasonal allocation procedures. (See Docket 04-  
18 045-42, Exhibits DLT-6, page 2 compared to DLT-8, page 2)

19 **Q. Mr. Swenson argues that the COS based approach does not account for the**  
20 **additional revenues generated by additional hours of interruption. Do**  
21 **additional hours of interruption produce more revenue?**

22 A. No. Just the opposite is true. When customers consume less (interrupted more)  
23 Company revenues go down. The only reason there are additional revenues during

1 these periods is because US Mag chooses to exercise their option to buy through the  
2 curtailment period. The additional revenues from those periods only cover the cost of  
3 the electricity acquired to serve US Mag during that same time period. It is an equal  
4 offset, there is no net benefit to the Company or our other customers.

5 US Mag has always argued that, from a Company cost perspective, there is no  
6 difference between a physical interruption and buying through a curtailment. At the  
7 direction of the Commission, we have removed all impacts of buying through the  
8 curtailment period from the jurisdictional allocation, the calculation of Utah's revenue  
9 requirement and from the class cost of service study. Removing the impacts of the  
10 buy through is accomplished by excluding US Mag's loads during that period and  
11 both the incremental net power costs and revenues associated with the buy through.

12

13 **Q. Mr. Swenson both applauds and criticizes CCS witness Phil Hayet on his**  
14 **methodology. Do you agree with Mr. Swenson's observations?**

15 A. Yes and no. He applauds Mr. Hayet for using a methodology that starts with firm  
16 service equivalent rate then deducts from that rate the value of the saved energy,  
17 capacity, and other ancillary services. This is the same approach that I suggested as  
18 an alternative in my direct testimony and is used for most other customers with  
19 ancillary service components of their contracts. As can be seen in Mr. Hayet's  
20 testimony, his calculations produce essentially the same net price to US Mag as the  
21 Company proposal.

22 **Q. Why hasn't the Company proposed using that approach here?**

23 A. In my discussions with US Mag, they have always resisted any reference to or use of a

1 full firm rate in the development of their contract price. Additionally, because this  
2 approach treats the interruptions as an acquisition of resource to meet load rather than  
3 a reduction in load, it does not provide Utah with any peak reduction benefit in the  
4 jurisdictional allocation process. The Utah Commission appears to be more  
5 comfortable using a methodology that recognizes curtailments as peak reductions  
6 which provide allocation benefits, rather than looking at curtailments as resource  
7 acquisitions which are treated in a similar manner as purchased power costs.

8

9 **Q. Do you agree with Mr. Swenson's criticism of the Mr. Hayet's assumptions?**

10 A. No. Mr. Swenson modifies the CCS calculations by reducing the SCCT capacity  
11 factor and increasing the SCCT annual capacity costs, both of which provide a larger  
12 capacity credit to US Mag. . Mr. Swenson's disregards the Company's recently  
13 approved avoided capacity cost and doubles it by using the capacity costs of the  
14 existing West Valley facility. I disagree with those modifications. The Company's  
15 approved avoided costs should provide a maximum value for the capacity and energy  
16 savings associated with customer interruptions.

17 **Q. Why does Mr. Brown argue that the Contribution to Fixed Cost test should be**  
18 **the appropriate standard to justify US Mag's contract price?**

19 A. Mr. Brown suggests that because the US Magnesium contract is both a special  
20 incentive and interruptible service agreement that the Contribution to Fixed Cost  
21 standard should apply.

22 **Q. Why hasn't the Company applied the Contribution to Fixed Cost standard to set**  
23 **their proposed price for US Mag?**

1 A. We could use that standard to set the US Mag contract price, but it would not be in  
2 their best interest. The Contribution to Fixed Cost standard would result in much  
3 higher prices for US Mag than those being proposed by the Company here. As I  
4 explained in my direct testimony, because of high avoided costs, the contribution to  
5 fixed costs standard doesn't provide a viable option for customers today. From  
6 PacifiCorp's recently approved avoided costs, the energy component alone for the  
7 next few years is between \$35 and \$42 per MWH. For this reason, both the Utah  
8 Commission and PacifiCorp have chosen to use the cost of service standard.

9 **Q. Why was the Contribution to Fixed Costs standard used to justify pervious US**  
10 **Mag contracts rates?**

11 A. In the past the Company's avoided costs were considerably lower than they are today.  
12 Specifically between 1995 and 1999, the Company approved avoided costs were  
13 between \$16 and \$18 per MWH. With avoided costs in that low, it was much easier  
14 to pass the Contribution to Fixed Costs test. That is not the case to day.

15 **Q. Do you agree with both Mr. Swenson's and Mr. Brown's assertions that the cost**  
16 **basis for the Contribution to Fixed Cost standard is average variable costs?**

17 A. Absolutely not. They base their entire argument on the assumption that "incremental  
18 costs" means "average variable costs." They appear to base that argument on a single  
19 reference from the DPU that suggests that **one** of the definitions of incremental costs  
20 **could** be defined as average variable costs. In all my study of economics or utility  
21 rate making, I've never found that to be the definition of incremental costs.  
22 Incremental costs, or marginal costs, are defined as the cost of producing next unit of  
23 output; the next kWh of energy and the next kW of capacity.



1 Both the 1999 taskforce report and recent Utah Commission practice defines  
2 incremental costs as the Company's approved avoided cost. Specifically the  
3 Definition section of the 1999 taskforce report states: "Incremental Capacity and  
4 Energy: For now, PacifiCorp will file with the contract information on two ways of  
5 calculating Incremental Costs:" Those ways are later defined in the report as "1) PSC  
6 approved avoided costs and 2) PC filed avoided costs." In fact Mr. Brown verifies  
7 this in his rebuttal testimony where he quotes the Utah Commission in its July 1998  
8 order:

9 A. To the extent that avoided costs of UP&L are different than the  
10 avoided costs submitted in support of the Agreement, **the Commission**  
11 **may modify the rates, prospectively, to make a reasonable**  
12 **contribution to costs. . . .**  
13

14 The Commission made clear that when avoided costs change, the new avoided costs  
15 should be used to determine whether or not the contract rates makes a reasonable  
16 contribution to fixed costs. Again, because of the Company's current avoided costs,  
17 the contribution to fixed costs standard cannot be used to support the contact prices  
18 proposed by any party in this case.

19 **Q. Does you agree with Mr. Brown's recommendation that the US Mag price not be**  
20 **changed until after 2005 or with Mr. Swenson's recommendation that the price**  
21 **be fixed for five years?**

22 A. No. As I stated in my direct testimony, the March 2003 cost of service study used as  
23 the basis for the Company's price proposal reflects the final resolution of Docket No.  
24 03-2035-02, the basis for current rates in Utah. Because it includes costs that were  
25 stipulated to by the parties in that case and accepted by the Utah Commission, there is

1 no dispute on the total costs in the study. That allows us to focus our efforts on  
2 determining US Mag's fair share of those costs. Using the cost of service study from  
3 the last Utah general rate case to develop the starting point for the contract rate aligns  
4 US Mag's prices with the current rate levels for other Utah customers.

5 While the March 2003 cost of service study is the basis for current tariff  
6 prices, those costs are from a test period that is nearly two years old. The March 2003  
7 cost of service results do not reflect the higher costs that are being reviewed by the  
8 Commission in the pending Docket 04-045-42. To ensure that US Mag's prices  
9 remain aligned with those of other Utah customers, the US Mag contract rate should  
10 be changed consistent with price changes for tariff customers.

11 **Q. In your direct and rebuttal testimony you indicated that results for US Mag in**  
12 **the Fiscal Year 2006 (FY06) cost of service study recently filed Docket 04-045-42**  
13 **are essentially the same as those from the March 2003 study. If costs are higher**  
14 **in the FY06 study, how can that be?**

15 A. The FY06 cost of service results referred to in my direct testimony are at the "earned"  
16 rate of return. This cost of service results stated at the earned rate of return reflects  
17 the allocation of the Company's revenue requirement among customer classes  
18 assuming no rate increase, or the alignment with current rate levels. At the  
19 conclusion of the general rate case new, most likely higher, prices will be established  
20 using the cost of service results at the "target", or newly authorized, rate of return.  
21 This will include all costs found to be prudent by the Commission and will reflect the  
22 Company's newly authorized rate of return. The results of the FY06 cost of service  
23 study was not used because we do not yet know what the final resolution of that case

1 will be. When Docket 04-045-42 is resolved new prices will be established in April  
2 2005. US Mag's contract price should be changed at that time to keep it aligned with  
3 the new prices for other Utah customers.

4  
5 **Q. What are your comments on Mr. Brown's and Mr. Swenson's reference that US**  
6 **Magnesium could see its costs for purchased power from PacifiCorp increase to**  
7 **a range of \$29.00 to \$30.00 / MWH?**

8 A. Their representation of US Mag's total purchased power costs includes their projected  
9 cost of buying through every hour of curtailment. If US Mag buys through every  
10 curtailment it is receiving the equivalent of firm service. Their projected total costs of  
11 \$29.00 to \$30.00 per MWH is significantly less than today's firm equivalent rate of  
12 about \$34 / MWH and likely to increase in April 2005.

13  
14 **Q. Does this conclude your surrebuttal testimony?**

15 A. Yes it does.