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**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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IN THE MATTER OF THE APPLICATION OF US MAGNESIUM LLC FOR DETERMINATION OF LONG-TERM ECONOMIC DEVELOPMENT RATES AND CONDITIONS OF INTERRUPTIBLE SERVICE	Docket No. 03-035-19
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**PREFILED SUREBUTTAL TESTIMONY OF ROGER J. SWENSON**

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US Magnesium LLC hereby submits the Prefiled Rebuttal Testimony of Roger J. Swenson in  
Docket 03-035-19.

DATED this 12<sup>th</sup> day of November, 2004.

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Gary A. Dodge,  
Attorney for US Magnesium LLC

PREFILED SUREBUTTAL TESTIMONY

Of

ROGER J. SWENSON

On behalf of US Magnesium LLC

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IN THE MATTER OF THE APPLICATION OF US MAGNESIUM LLC FOR  
DETERMINATION OF LONG-TERM ECONOMIC DEVELOPMENT  
RATES AND CONDITIONS OF INTERRUPTIBLE SERVICE

Docket No. 03-035-19

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November 12, 2004

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

2 A. To respond to PacifiCorp's Rebuttal Testimony.

3 **Q. Mr. Griswold's valuation for actual physical interruption on days with**  
4 **temperature in excess of 100 degrees has declined from \$.16 to \$.14 per**  
5 **MWH (page 2, lines 1-4). What is your response?**

6 A. As I explained in my rebuttal testimony, even at his old valuation of \$.16/MWH it  
7 was not worth the cost and risk to US Magnesium. At \$.14/MWH, it is even less  
8 attractive. As I have already indicated, we decline this offer.

9 **Q. Has PacifiCorp provided any additional information concerning the value of**  
10 **physical curtailment based on temperature?**

11 A. Yes. Today we received a response to a data request that "corrected" the value  
12 downward from \$.16/MWH to \$.03/MWH. Also we asked what the value would  
13 be for physical curtailment with a temperature trigger of 97 degrees, the  
14 temperature trigger we have seen described as the point for the Cool Keeper  
15 interruption point. The value provided by the PacifiCorp analysis is \$.06/MWH.

16 **Q. Do you find these values surprisingly low?**

17 A. Yes, particularly given what I believe to be the real system value to reducing peak  
18 requirements during the most critical hours. Frankly, it is telling in terms of the  
19 value PacifiCorp places on supply side resources as opposed to DSM resources.  
20 Given the values presented in the Interruptible Task Force report, something is  
21 simply not adding up.

22 **Q. Mr. Griswold also claims that the value of system integrity interruptions has**

1 **fallen to \$.10/MWH (page 2, lines 8-10). How do you react to this revelation?**

2 A. The value established in Idaho for Monsanto is \$.37/MWH, almost four times the  
3 value offered here. The only explanations that I can come up with are either that  
4 PacifiCorp used different assumptions as to the number of hours per year of  
5 potential interruption (they used 15 hours here), or that the Company values an  
6 Idaho customer interruption much greater for some reason than a Utah customer  
7 curtailment. Mr. Griswold has never provided convincing evidence as to his  
8 valuation, and I cannot accept it.

9 **Q. Mr. Griswold attempts to calculate the “net effective price” that he claims US**  
10 **Magnesium will pay if his proposals are accepted (page 2, line 18 – page 4,**  
11 **line 13). What do you think of his estimates?**

12 A. His estimates are wrong and misleading. I do, however, agree with the premise  
13 with which he began his discussion - his calculations are just estimates and they  
14 are dependent on many assumptions. Some of his assumptions are wrong and his  
15 presentation is very misleading.

16 **Q. Why are his assumptions wrong and his presentation misleading?**

17 A. First, he conveniently ignores the fact that US Mag suffered a dramatic price  
18 increase just three years ago – its total cost of purchased power increased by over  
19 33% from \$18/MWH in 2001 to about \$24/MWH in 2004. Second, although he  
20 includes the estimated cost to US Mag to purchase through interruptions, he  
21 completely ignores the cost to US Mag to provide reserves under his proposed  
22 new agreement, while at the same time crediting his proposed payments for that

1 service against his proposed increased in rates. Third, he proposes to tie rate  
2 increases to US Mag to Schedule 9 and assumes very low annual rate increases.

3 **Q. Can you explain the costs ignored by Mr. Griswold in connection with**  
4 **reserves?**

5 A. Yes. US Magnesium will incur significant costs to provide the new reserve  
6 service. The primary cost will be in the form of lost production for up to 100  
7 hours per year. This cost is similar to the cost to US Mag of either buying through  
8 or accepting physical interruption during hours of interruption – only in this case  
9 we will not have the option to choose the less-harmful option. Mr. Griswold  
10 recognizes the cost to US Mag of buying through or suffering interruption during  
11 the scheduled hours of interruptibility, but does not consider similar costs of  
12 interruption to provide reserves. Mr. Griswold’s projected 2005 cost to US Mag,  
13 before crediting payments for operating reserves, is \$28.16/MWH. His  
14 comparable estimated 2004 cost to US Magnesium (also without considering  
15 operating reserves) is \$23.70/MWH. The increase in this rate component is thus  
16 \$4.46/MWh, or almost 19%, as opposed to the 7.7% that he projects.

17 For his “net” impact calculation, Mr. Griswold credits against the  
18 proposed 2005 rate his proposed payment for operating reserves of \$2.64/MWH.  
19 He credits the revenue, but fails to consider the cost. This fundamental error is  
20 like offering to pay US Mag \$2.64/MWH if it will deliver to PacifiCorp a  
21 specified quantity of road salt and then claiming that US Mag’s power rates have  
22 decreased by \$2.64, without taking into consideration to the cost to US Mag to

1 produce and deliver the road salt. We have estimated US Mag's cost to provide  
2 the physical interruptions that may be required at about \$2/MWH. The net benefit  
3 would then be roughly \$.64/MWH that can be credited against the proposed  
4 \$28.16/MWH cost, for a true proposed "net" cost of \$27.52/MWH. This cost  
5 level would leave US Magnesium with a net cost increase of \$3.83/MWH, more  
6 than 16% over its current cost and a net increase of more than 52% in just three  
7 years.

8 **Q. What about Mr. Griswold's 2.1% projected escalation in Schedule 9 rates?**

9 **A.** Mr. Griswold's analysis assumes an average Schedule 9-based rate increase for a  
10 5-year contract term of 2.1% per year. He bases the estimate on the average  
11 increase over the last 5 years. In the first place, it is irritating that Mr. Griswold  
12 would rub in US Magnesium's face the fact that other industrial customers in  
13 Utah have experienced a five-year total rate increase of only 8.7%, when US Mag  
14 has already suffered an increase of over 33% in the past three years (41% over the  
15 past 5 years, since the end of 1999) and PacifiCorp's proposed pricing for US  
16 Magnesium would push its total 3-year increase to over 50% and its 5-year  
17 increase to about 62%! In that light, perhaps Mr. Griswold can begin to  
18 understand why we constantly struggle to determine whether we are paranoid or  
19 whether PacifiCorp is really out to get us.

20 In addition, as much as I (and probably other ratepayers) would like to  
21 believe this projection, it is much lower than the company's current requested rate  
22 increase of about 10% and much lower than projections that have been made by

1 company representatives concerning rate increases over the next several years.

2 With all of the peaking plants that PacifiCorp is building or planning to build to  
3 meet its explosive summer peak growth projections in Utah, rates that include the  
4 new summer peaking resources are likely to increase faster than the 2.1%  
5 increases that other Utah industrial customers have seen in the past five years.

6 **Q. Do you agree that US Magnesium's rates should be tied to Schedule 9?**

7 A. No. I once considered that a Schedule 9 inflator might be reasonable in the  
8 context of a ten-year agreement and a starting rate at the low end of the range of  
9 cost of service results. I recognized and argued at that time that actual increases in  
10 the cost of serving US Mag will be much lower than for firm Schedule 9  
11 customers - given the peaking resources being built to serve summer peaks – but I  
12 considered that disproportionate increases might move US Mag from the low end  
13 of the cost of service range to a mid-point. Under current circumstances, I have  
14 concluded that rate 9 increases for US Mag would be completely unreasonable.  
15 The proposed contract term has decreased from 10 years to 5 years. More  
16 important, however, is the fact that US Magnesium has already been asked to  
17 shoulder an inordinate and disproportionate cost increase – more than six times  
18 that of other Utah industrial customers, notwithstanding the fact that it is not US  
19 Mag that is causing the explosive peak growth. To the contrary, US Mag is  
20 helping to reduce the system peaks. I believe that US Magnesium should not be  
21 required to suffer any further rate increases in a five year contract (other than a  
22 cost increase to US Mag for providing reserves) unless and until other ratepayers

1 have borne at least somewhat equivalent cost increases. In all events, rate  
2 increases should be based only on increased energy costs and not on capacity-  
3 driven cost increases.

4 **Q. On page 5, lines 7-9 of Mr. Griswold's testimony, it appears that he is**  
5 **attempting to contrast your proposed interruption trigger based on**  
6 **temperatures in excess of historic means to his proposal for actual physical**  
7 **interruption on 100+ degree days, and claims that his proposal is "much**  
8 **more reasonable" What do you make of his suggestion?**

9 A. I cannot understand his statement. As explained above, if PacifiCorp values  
10 actual physical interruption on 100+ degree days at only 3 cents per MWH, it is  
11 simply not of any interest to US Mag. My testimony addressed a very different  
12 issue. Given that the cost of service analyses used by PacifiCorp and others give  
13 credit only for avoiding system peaks, my efforts have been aimed at identifying a  
14 more reasonable and effective way to eliminate unnecessary interruptions on days  
15 that are not necessary to avoid those peaks. We should not be trying to impose the  
16 maximum amount of pain or the maximum number of interruptions that can  
17 possibly be imposed on an interruptible customer. Rather, we should be trying to  
18 find methods that achieve what is desirable - reductions to the peak demands that  
19 are straining existing resources and causing construction of expensive peaking  
20 plants – without imposing unnecessary and excessive penalties or costs onto  
21 customers. Alternatively, if excessive interruptions are to be required, we should  
22 credit the extra revenue in the cost of service analysis. To propose an



1 insignificant value for physical interruption but nevertheless to claim that it is  
2 “much more reasonable” to require physical interruption than to fine-tune  
3 conditions of interruptibility to eliminate curtailment that is neither necessary nor  
4 credited in the cost analysis is simply irrational and unreasonable.

5 **Q. How do you respond to Mr. Griswold’s suggestion (on page 5, lines 12-21)**  
6 **that other drivers should be considered for interruption in winter months?**

7 A. I agree that projected temperatures on both the east and west systems should be  
8 considered in order to identify the days in which an interruption should occur in  
9 the winter. We should also continue to look for better indicators of the types of  
10 days on which interruption is really required to avoid system peaks. We have  
11 modified our proposal to include mean temperature triggers for the summer  
12 months only.

13 **Q. Are you aware of any new tools that may help in identifying better triggers**  
14 **for interruption days?**

15 A. Yes, the Scottish Power Environmental and Social Impact Report 2003/2004,  
16 page 24, describes a new tool that PacifiCorp has apparently begun to use called  
17 “Foresight, a computer modeling tool that predicts future demand.” It apparently  
18 uses regional weather patterns, population growth and other factors to predict  
19 electricity needs. That tool and its output might help give a more clear basis for  
20 temperature-related triggers or other factors that should be considered as  
21 interruption triggers.

1 **Q. Mr. Griswold also purports to offer an opinion on US Magnesium’s ability to**  
2 **handle physical interruptions (page 6, lines 1-15). Do you agree with his**  
3 **opinion?**

4 A. No. Mr. Griswold suggests that it is a simple matter to cycle magnesium  
5 electrolytic cells to achieve complete curtailment given a generation system as  
6 back up for part of the load. There are several problems with his notion. First,  
7 there are costs to US Mag to use its generation in the manner suggested.  
8 Moreover, generation during the summer months is limited by the output of the  
9 generators at very high temperatures. At 100 degrees, the generation units may  
10 not even be able to generate 30 MW. US Magnesium might do what Mr.  
11 Griswold suggests if it were possible, but it is not. His suggestion that we can  
12 install more generation is theoretically correct, but again it comes at a cost and  
13 requires access to significant capital.

14 **Q. Mr Griswold states that PacifiCorp will not plan for US Magnesium’s load**  
15 **(page 7, lines 2-6). What is your response?**

16 A. We have consistently taken the position that no resources have been or should be  
17 built to serve US Magnesium’s peak load. We have always accepted that we will  
18 be subject to actual physical interruption in instances when PacifiCorp  
19 legitimately lacks either access to energy or transmission necessary to serve our  
20 load. This is the basis for excluding peak capacity costs from the cost of service  
21 analysis as I propose, and it reinforces that increased costs stemming from new

1 peaking capacity that will be built over the next 5 years should not be passed on to  
2 US Mag.

3 **Q. Mr. Taylor objects to your proposal to allocate the costs of resources built to**  
4 **meet peak needs into the peak months. How do you respond?**

5 A. I have heard Mr. Taylor say in many discussions that cost of service allocation is  
6 not a science, that there are many ways to allocate costs and there is no one “true”  
7 answer. We should not lose sight of what we are trying to achieve, which is to  
8 identify costs that should properly be allocated to an interruptible customer. To  
9 the greatest extent practicable, costs should be assigned to the customers that  
10 cause the costs to be incurred. My suggestion is to assign the costs of meeting  
11 summer peak demands primarily (75%) to the customers that contribute to those  
12 peak demands. I believe it is correct public policy to send the economic signal  
13 that power costs are higher because of demands caused by air conditioning loads  
14 in summer months.

15 **Q. Mr Taylor also takes issue with your suggestion for monthly allocation of**  
16 **purchase power costs. What do you make of his position?**

17 A. He appears to be saying that we may gain more accurate cost allocation by using a  
18 higher degree of granularity, but we should not do it since we would not know  
19 where to stop. There is a very strong basis for using the monthly allocations that I  
20 propose, given that demand allocations are done on a monthly basis.

21 **Q. Have you prepared a draft contract that contains all of the rates and**  
22 **conditions of service that you propose for US Mag effective January 1, 2005?**

1 A. Yes. Attached as Exhibit 1SR.1 is such a contract. This contract is very similar to  
2 the existing contract between the parties, which the Commission has approved.  
3 The only substantive changes, reflecting the terms and condition that we propose,  
4 are in the definitions of “Curtailement Day” and “Curtailement Hour,” a new  
5 definition for “Operating Reserve Interruption,” and sections 3.6, 3.7, 3.10, 4.1,  
6 4.2 and Exhibit C. Attached as Exhibit 1SR.2 is a red-lined version of the  
7 proposed contract showing the changes that we propose from the existing  
8 contracts.

9 **Q. Does this complete your testimony?**

10 A. Yes.

## CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by email or US Mail, postage prepaid, this 12<sup>th</sup> day of November, 2004, on the following:

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