

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

<p>IN THE MATTER OF THE APPLICATION OF US MAGNESIUM LLC FOR DETERMINATION OF LONG- TERM ECONOMIC DEVELOPMENT RATES AND CONDITIONS OF INTERRUPTIBLE SERVICE</p>	<p>Docket No. 03-035-19</p>
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PREFILED SURREBUTTAL TESTIMONY OF PHILIP HAYET

12 NOVEMBER 2004

1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Philip M. Hayet. My business address is 215 Huntcliff
4 Terrace, Atlanta, GA, 30350.

5 **Q. ARE YOU THE SAME PHILIP HAYET THAT FILED DIRECT
6 TESTIMONY ON BEHLAF OF THE COMMITTEE OF CONSUMER
7 SERVICES (COMMITTEE) IN THIS CASE?**

8 A. Yes I am.

9 **Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

10 A. My testimony has two purposes: 1) ~~t~~To present the Committee's revised
11 position on certain provisions attendant to US Magnesium's (US Mag)
12 interruptible contract; and 2) to respond to particular issues raised in the
13 rebuttal testimony of US Mag witness, Mr. Roger Swenson.

14
15 **COMMITTEE'S REVISED POSITION**

16 **Q. AFTER REVIEWING THE REBUTTAL TESTIMONY FILED BY OTHER
17 PARTIES IN THIS PROCEEDING, IN LIGHT OF EITHER
18 PACIFICORP'S OR US MAG'S REBUTTAL TESTIMONY HAS THE
19 COMMITTEE ~~DECIDED TO~~ ALTERED ITS POSITION IN ANY WAY?**

20 A. Yes, there are two changes that the Committee would like to make to its
21 position as set forth originally proposed in our direct testimony. The first
22 change relates to the value of operating reserves, and the second charge
23 relates to the term of the contract.

24 **Q. PLEASE PROVIDE BACKGROUND CONCERNING THE
25 COMMITTEE'S POSITION ON US MAG'S OPERATING RESERVES.**

26 A. ~~In my direct testimony, I explained that I~~ the Committee initially accepted
27 Mr. Griswold's estimate of the value to PacifiCorp of allowing US Mag to
28 supply operating reserves to PacifiCorp. ~~However, The Committee I had~~
29 ~~also~~ intended to conduct further analyses based on ~~some~~ additional
30 information ~~that I had~~ requested from the Company. Specifically, the
31 Committee ~~It was my goal to calculate the~~ was striving to determine an

1 operating reserve benefit using a production cost model such as GRID.
2 However, ~~that I have not yet completed my~~ analysis is incomplete.

3 **Q. BASED ON YOUR REVIEW OF OTHER PARTIES' TESTIMONY**
4 **POSITIONS—WHAT IS THE COMMITTEE'S LATEST ASSUMPTION**
5 **REGARDING AN OPERATING RESERVE ADJUSTMENT?**

6 A. At this time, the Committee is not persuaded that any party has provided a
7 more detailed or thorough analysis than the Company's. PacifiCorp has
8 conducted numerous analyses supporting an operating reserve credit that
9 has ranged from about \$1.26/kW-month to \$1.59/kW-month. In his
10 supplemental direct testimony, Mr. Griswold supported a value of
11 \$1.38/kW-month. In his rebuttal testimony, he explains that the Company
12 has agreed to limit the contract to a ~~five~~5-year term, and he has computed
13 a new value of \$1.59/kW-month. The Committee is willing to accept this is
14 increase in value ~~increase in value as because it believes that there may~~
15 ~~be more value associated with~~ US Mag's provision of operating reserve
16 may be more beneficial than had been previously discussed by the
17 parties. The Committee's new calculation of the operating reserve credit
18 is found on the attached revised exhibit, CCS(SR-1). Whereas the
19 Committee previously recommended \$2.46/MWH, it now supports an
20 operating reserve credit of \$2.83/MWH.

21 **Q. BASED ON THIS MODIFICATION, WHAT IS THE COMMITTEE'S**
22 **REVISED RECOMMENDATION FOR US MAG'S INTERRUPTIBLE**
23 **CONTRACT RATE?**

24 A. The Committee's revised recommendation is a firm energy rate of
25 \$22.93/MWH.

26 **Q. WHAT OTHER CHANGE WOULD THE COMMITTEE LIKE TO MAKE**
27 **TO ITS ORIGINAL RECOMMENDATION?**

28 A. ~~In my direct testimony, I explained that I~~the Committee recommended a
29 preferred a contract term of between 3 and 5 years. Given US Mag's
30 stated preference for a 5-year contract term, the Committee is ~~now~~ willing
31 to support ~~agree to~~ that contract term.

1 **Q. HAS THE COMMITTEE REVISED ITS POSITION ON THE**
2 **ESCALATION FACTOR?**

3 A. No. The Committee remains committed to its position regarding the
4 contract escalation issue. The Committee believes that US Mag's contract
5 should escalate at the same rate as PacifiCorp's Schedule 9 Tariff ~~tariff~~
6 escalates over time. For example, PacifiCorp appears to be experiencing
7 a sharp increase in net power costs to meet its load
8 requirements ~~PacifiCorp is going~~. In the prior rate case, \$512 million (total
9 company) in net power costs was included in general base ~~rates~~ (~~based~~
10 ~~on the order from~~ Docket No. 03-2035-02). While the Commission has not
11 yet held hearings on ~~not yet heard~~ the current rate case, PacifiCorp has
12 incorporated \$745 million (total company) for net power costs in its
13 requested revenue requirement. This represents a significant proposed
14 increase in PacifiCorp's net power costs and causes the Committee to be
15 unwilling to support Mr. Swenson's request to entirely eliminate an
16 escalation factor, if ~~if~~ a 5-year ~~contract~~ term is approved by the
17 Commission.

18 **Q. DOES THE COMMITTEE SUPPORT US MAG'S ESCALATION**
19 **CONDITIONS SHOULD THE COMMISSION ADOPT A 10-YEAR**
20 **CONTRACT TERM?**

21 A. No. While US Mag is willing to accept an escalation provision, it has
22 requested that it be tied only to increases in Schedule 9 Tariff energy
23 costs. The Committee disagrees with US Mag's notion that its service
24 only burdens PacifiCorp with energy costs. For example, PacifiCorp
25 incurs administration and labor costs in serving US Mag's load.
26 Therefore, the escalation rate should be based on all cost increases,
27 except capacity, associated with Schedule 9.

28

29 **RESPONSE TO ROGER SWENSON'S COMMENTS**

30 **Q. WHAT DOES MR. SWENSON HAVE TO SAY CONCERNING THE**
31 **COMMITTEE'S CALCULATION METHOD?**

1 A. Mr. Swenson states that he generally supports the Committee's
2 calculation method, yet he criticizes some of our assumptions.

3 **Q. BEFORE DISCUSSING HIS CRITICISMS, CAN YOU BRIEFLY**
4 **DESCRIBE THE COMMITTEE'S APPROACH TO CALCULATING ITS**
5 **RECOMMENDED RATE FOR US MAG?**

6 A. The Committee relied on a top down approach in which the starting point
7 was the Schedule 9 ~~T~~tariff that applies to standard large industrial
8 customers. PacifiCorp determined this rate to be \$34/MWH. We then
9 reduced this rate based on the benefits that US Mag will provide to
10 PacifiCorp as an interruptible customer, who is also willing to serve some
11 of PacifiCorp's operating reserve requirements. We derived three
12 separate credits. The first credit amounts to \$4.60/MWH associated with
13 the energy savings that PacifiCorp ~~realizes~~ ~~will-achieve~~ by being able to
14 interrupt US Mag during the high cost peak hours. The second ~~is a~~ credit
15 ~~is a of~~ \$3.64/MWH savings that PacifiCorp ~~will-achieves~~ ~~by~~ not having to
16 build capacity to serve US Mag's load. The third credit relates to a
17 \$2.46/MWH benefit that US Mag will provide by satisfying part of
18 PacifiCorp's operating reserve requirement. The sum of these credits is
19 \$10.70/MWH, resulting in the Committee's earlier recommendation of
20 \$23.30/MWH for US Mag's contract rate.

21 **Q. PLEASE EXPLAIN MR. SWENSON'S CRITICISMS.**

22 A. Both of Mr. Swenson's criticisms related to our capacity cost credit
23 calculation. First, he objected to our assumption of using 15% as the
24 capacity factor for a combustion turbine unit. Second, he objected to our
25 use of \$61.94/kW-year as the annual capacity cost of a combustion
26 turbine unit.

27 **Q. WHY DID HE OBJECT TO THE COMMITTEE'S YOUR CAPACITY**
28 **FACTOR ASSUMPTION?**

29 A. To convert a capacity cost measured in \$/kW-year to an energy cost
30 measured in \$/MWH, the Committee divided the capital cost of a
31 combustion turbine unit by the amount of energy a combustion turbine unit
32 is expected to generate per year. The Committee made the assumption

1 that the annual capacity factor of a combustion turbine unit would be 15%,
2 which is certainly reasonable for most electric utilities~~systems~~ that
3 operate peaking units. However, Mr. Swenson noted that PacifiCorp
4 specified in its 2003 IRP Report that its peaking units on the East Side of
5 the system operate at a 12% capacity factor. Yet, what he failed to
6 mention is that PacifiCorp also reported that peaking units on the West
7 Side of the system operate for 23% of the time. The Committee's
8 approach to calculating benefits did not reflect only the East Side of the
9 system. When the operation of peaking units on both sides of the system
10 is considered, the Committee believes the use of a 15% capacity factor in
11 the calculation of a capacity credit is reasonable.

12 **Q. WHY DID MR SWENSON OBJECT TO THE COMMITTEE'S YOUR USE**
13 **OF \$61.94/KW-YR AS THE ANNUAL CAPACITY COST ASSUMPTION**
14 **FOR A COMBUSTION TURBINE UNIT?**

15 A. In his attempt to maximize the value of all credits that could be used to
16 reduce US Mag's contract rate, Mr. Swenson made use of the extremely
17 expensive West Valley combustion turbine plant lease. Conversely, ~~t~~The
18 Committee relied on the same combustion turbine capacity cost that had
19 been used by the Schedule 38 working group. The working group – which
20 included US Mag - reached a settlement for a Schedule 38 avoided cost
21 rate that was accepted by the Commission in Docket No. 04-035-T10. In
22 that Docket, the overnight capital cost for a frame-type combustion turbine
23 unit was assumed to be \$532/kW. When the overnight capital cost is
24 converted to a real levelized cost, the annual cost of a combustion turbine
25 unit, including fixed O&M expense, is \$61.94/kW-year.

26 **Q. WHY DOES THE COMMITTEE OBJECT TO THE USE OF THE WEST**
27 **VALLEY LEASE TO DETERMINE ANNUAL COST?**

28 A. The Committee rejects Mr. Swenson's attempts to use a cost based on
29 the West Valley lease priced at \$102.03/kW-year because it is excessively
30 high. Furthermore, there is no evidence to suggest that PacifiCorp is
31 considering the use of this sort of combustion turbine again. West Valley
32 is a plant composed of 5 - 40 MW aero-derivative combustion turbine

1 units. PacifiCorp is now considering larger combustion turbine units that
2 will benefit from certain economies of scale. Thus, combustion turbine
3 resources in the current IRP are not expected to cost anything close to Mr.
4 Swenson's \$102.03/kW-year.

5 **Q. MR. SWENSON ALSO DISCUSSES THE COMMITTEE'S YOUR**
6 **POSITION REGARDING TEMPERATURE ADJUSTMENTS. PLEASE**
7 **EXPLAIN HIS CONCERN.**

8 A. In my direct testimony, I disagreed with both PacifiCorp and US Mag on
9 their proposed temperature contract provisions. The Committee found
10 PacifiCorp's proposal to override US Mag's buy-through rights when
11 temperature exceeds 100 degrees to be arbitrary. We believe that unless
12 something occurs such that PacifiCorp would be physically unable to
13 supply power to US Mag, then PacifiCorp should be obligated to respect
14 US Mag's buy-through right, so long as US Mag is prepared to pay the
15 costs. In the case of US Mag, we found its recommendation that
16 PacifiCorp be restricted from calling for curtailments when the forecast
17 temperature is below the mean historical temperature in the summer or
18 above the mean historical temperature in the winter to be difficult and
19 possibly costly to implement. Furthermore, the Committee would be
20 compelled to increase its recommendation for US Mag's firm rate in order
21 for it to consider such a temperature provision.

22 **Q. MR. SWENSON TOOK ISSUE WITH THE COMMITTEE'S COMMENT**
23 **THAT US MAG ALWAYS HAS THE OPTION TO CURTAIL LOAD**
24 **WHEN IT BELIEVES THE COST TO PURCHASE ENERGY IN THE**
25 **MARKET IS TOO HIGH. HOW DO YOU RESPOND?**

26 A. The Committee realizes that curtailing load has the potential to negatively
27 affect US Mag's business operations. However, the reality of an
28 interruptible contract is that in exchange for a lower contract rate, the
29 customer is expected to curtail usage. The point that I tried to make in my
30 direct testimony is that a business such as US Mag has other options. In
31 fact, US Mag has quite a few options. First, it can rely on its buy-through
32 provision and pay whatever the market cost of power is in the hour that it

1 continues to use electricity. Secondly, it can rely on its own generating
2 unit, which can produce about 34 MW of capacity. Thirdly, it can put into
3 effect a revised production schedule in order to work around the times
4 when it may be interrupted. Finally, it can curtail load. In fact, Mr.
5 Swenson has indicated in meetings that US Mag has performed some
6 tests to see how well its processes can withstand being shutdown. He
7 explained that US Mag has now learned that it can shutdown some of its
8 electrolytic cells quickly for short periods of time, without harming its
9 equipment.

10 ~~Q. REGARDING MR. SWENSON'S TESTIMONY, DO YOU AGREE THAT~~
11 ~~NONE OF THE METHODOLOGIES USED BY PARTIES OTHER THAN~~
12 ~~US MAG ARE REASONABLE OR SUPPORTABLE?~~

13 ~~A. No, I do not. The Division, Committee, and PacifiCorp all analyzed the~~
14 ~~cost of interruptible service to US Mag with different assumptions and~~
15 ~~alternative methods, yet the results achieved were remarkably similar. In~~
16 ~~direct testimony filed on behalf of the Division, Ms. Coon determined a~~
17 ~~rate of \$23.14/MWH.¹ In rebuttal testimony filed on behalf of PacifiCorp,~~
18 ~~Mr. Griswold determined a rate of \$23.06/MWH². In my direct testimony, I~~
19 ~~determined a rate of \$23.30. Using different approaches and~~
20 ~~assumptions, each party calculated a rate close to \$23.00/MWH. Thus, I~~
21 ~~believe that the methodologies used by the Committee, Division and the~~
22 ~~Company are both reasonable and supportable.~~

23 RECOMMENDATIONS CONCLUSION

24 **Q. PLEASE SUMMARIZE THE COMMITTEE'S REVISED**
25 **RECOMMENDATIONS FOR US MAG'S SPECIAL CONTRACT.**

26 A. The Committee supports the following recommendations:

27 1. Contract TermLength – a five-year contract term that ~~would~~ allows
28 PacifiCorp to interrupt US Mag for six months of the year (June –
29 September, December, and January) for up to 4 hours per day.

30 2. Contract RatePrice – ~~the Committee supports a~~ contract rate of

1 22.93\$/MWH for US Mag's firm energy requirements. Exhibit
2 CCS(SR-1) illustrates the Committee's revised calculations for its
3 recommendation concerning US Mag's contract rate.

4 3. Contract Escalator – ~~the Contract should have~~ an escalation
5 provision that ~~would~~ adjusts the Contract Rate by the same
6 percentage rate change as Schedule 9, minus the percentage
7 change in the Schedule 9 capacity charge.

8 4. Buy-Through Provisions – Except for instances of physical
9 interruption, US Mag would have the right to buy-through an
10 interruption, ~~but would be obligated to pay for~~ the replacement
11 energy would be priced based on the Palo Verde Firm On-Peak
12 Index times PacifiCorp's Hourly Shaping Factors.

13 5. Operating Reserve – US Mag ~~would offer to supply~~ 85 MW of
14 contingency non-spinning operating reserves to PacifiCorp that
15 would be in effect for ~~in~~ all hours outside of the interruption
16 period~~hours~~.

17 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

18 **A. Yes.**