

LAW OFFICE  
CHARLES E. MAGRAW  
501 8<sup>TH</sup> AVE  
HELENA, MT 59601

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406/461-3696 (mobile) PUBLIC SERVICE  
[C.MAGRAW@BRESNAN.NET](mailto:C.MAGRAW@BRESNAN.NET) COMMISSION

May 2, 2014

Kate Whitney  
Administrator  
Montana Public Service Commission  
1701 Prospect  
Helena, MT 59620

By: Hand Delivery

Dear Ms. Whitney:

In the course of preparing data responses in D2013.12.85, Dr. Power discovered that a table in Dr. Power's direct testimony did not correspond with the values in a spread sheet used to generate that table.

Attached for filing is an uncorrected page 32 of Dr. Power's testimony, with errors highlighted. Also attached is a corrected page 32. This corrected page 32 should be substituted for page 32 as originally filed. During the hearing Dr. Power intends to note that he is correcting his testimony in this manner.

I have e-filed the above pages on the Commission's web site and effectuated service.

Thank you for your attention to this matter. I apologize for any inconvenience this may have caused.

Sincerely,



Charles Magraw

Encl.

1 Q. If there were no cost associated with risk and there were no residual value after  
2 30 years associated with the hydroelectric generators or any of the other  
3 additional generators added in the scenarios, how would the hydro purchase  
4 compare to the alternative scenarios?

5  
6 A. The assumption that all six supply portfolios had zero cost of risk and had zero  
7 residual value would be empirically false. Two important characteristics of electric  
8 supply alternatives would be ignored. However, if we were to make that double  
9 counterfactual assumption, the total costs of all six supply portfolios would  
10 appear to be about the same. The differences in total costs would be in the  
11 tenths of one percent. All alternatives would be approximately equally costly. In  
12 other words, it would be a toss-up. The hydro purchase alternative would be  
13 very slightly more expensive compared to 4 of the 5 alternatives.

14  
15 **Comparison of Alternative Portfolios if Both the Cost of Risk and Residual Generator Values Are Zero**

	Current + Market (\$millions)	Current+ CCCT (\$millions)	Current+ Hydro (\$millions)	Current+ LMS SSCT 2018 (\$millions)	Current+ LMS+Wind 2025 (\$millions)	Current+ CCCT+Wind 2025 (\$millions)
Total Cost if Both Cost of Risk and Residual Value Are Zero	\$6,277	\$6,256	\$6,275	\$6,300	\$6,252	\$6,217
Advantage of Hydro	-\$48	-\$19	\$0	\$25	-\$23	-\$58

16  
17  
18 Q. What conclusion do you draw from this review of the PowerSimm stochastic  
19 analysis of the various supply alternatives?

20  
21 A. The conclusion that the hydro purchase alternative is superior to the other  
22 alternative sources of electric supply appears to be quite robust even in the face  
23 of adopting unrealistic and unsupportable assumptions about the characteristics  
24 of the alternative supply portfolios and the inclusions of "alternative" portfolios,  
25 e.g. the "market only" portfolio, that are not realistic.

26

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 2 30 years associated with the hydroelectric generators or any of the other  
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 10 appear to be about the same. The differences in total costs would be in the  
 11 tenths of one percent. All alternatives would be approximately equally costly. In  
 12 other words, it would be a toss-up. The hydro purchase alternative would be  
 13 very slightly more expensive compared to 2 of the 5 alternatives. The “market  
 14 only” and the CCCT+Wind. See table below.

15  
 16 **Comparison of Alternative Portfolios if Both the Cost of Risk and Residual Generator Values Are Zero**

	Current + Market (\$millions)	Current+ CCCT (\$millions)	Current+ Hydro (\$millions)	Current+ LMS SSCT 2018 (\$millions)	Current+ LMS+Wind 2025 (\$millions)	Current+ CCCT+Wind 2025 (\$millions)
Total Cost if Both Cost of Risk and Residual Value Are Zero	\$5,770	\$5,863	\$5,814	\$5,855	\$5,815	\$5,807
Advantage of Hydro	-\$44	\$49	\$0	\$41	\$1	-\$7

17  
 18  
 19 Q. What conclusion do you draw from this review of the PowerSimm stochastic  
 20 analysis of the various supply alternatives?

21  
 22 A. The conclusion that the hydro purchase alternative is superior to the other  
 23 alternative sources of electric supply appears to be quite robust even in the face  
 24 of adopting unrealistic and unsupportable assumptions about the characteristics  
 25 of the alternative supply portfolios and the inclusions of “alternative” portfolios,  
 26 e.g. the “market only” portfolio, that are not realistic.

CERTIFICATE OF SERVICE

I hereby certify that I have, this 2nd day of May, 2014, served the foregoing uncorrected and corrected page 32s of Dr. Power's direct testimony on the parties to this proceeding.



A handwritten signature in cursive script, appearing to read "G. M. Power", is written over a horizontal line. The signature is fluid and extends to the right with a long, sweeping tail.