

MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.

Before the Public Service Commission of North Dakota

Case No. PU-11-395 and PU-11-396

Corrected/Supplemental Rebuttal Testimony
of
Darcy J. Neigum

1 **Q. Please state your name and business address.**

2 A. My name is Darcy J. Neigum and my business address is 400
3 North Fourth Street, Bismarck, North Dakota 58501.

4 **Q. What is your position with Montana-Dakota Utilities Co.?**

5 A. I am the System Operations and Planning Manager of Montana-
6 Dakota Utilities Co. (Montana-Dakota), a Division of MDU Resources
7 Group, Inc.

8 **Q. Are you the same Darcy J. Neigum that submitted Direct and
9 Rebuttal Testimony in this proceeding?**

10 A. Yes, I am.

11 **Q. Why are you submitting corrected/supplemental testimony at this
12 time?**

13 A. I am submitting corrected/supplemental testimony for two reasons.
14 First, I am submitting a corrected Confidential Exhibit No. ___(DJN -3),
15 originally submitted with my rebuttal testimony, to reflect a correction of
16 the carrying costs associated with the 88 MW CT project. Second, I am
17 sponsoring an additional EGEAS modeling run conducted after submittal

1 of my rebuttal testimony that attempts to better quantify an anomaly in the
2 EGEAS model regarding the treatment of a PPA resource that expires
3 after the 20 year modeling period that was discussed in my rebuttal
4 testimony.

5 **Q. Explain why you are submitting a correction to the carrying costs**
6 **associated with the 88 MW CT project as shown on Confidential**
7 **Exhibit No. ___(DJN-3) to your Rebuttal Testimony filed on December**
8 **22, 2011.**

9 A. In a meeting with Advocacy Staff following filing of my rebuttal
10 testimony, I discovered that I had made an error in capturing the carrying
11 costs associated with years 17 through 20 of the 88 MW CT in comparison
12 with the cost of the IL Proposal. In the process of correcting the error, I
13 realized that Exhibit No. ___(DJN-3) submitted with my rebuttal testimony
14 on December 22, 2011, as well as the comparable exhibit sponsored by
15 Mr. Hahn (Exhibit RSH-7), used an embedded cost of debt that was too
16 high in today's market to accurately calculate the carrying charges for the
17 CT project. The use of an embedded cost of debt does not accurately
18 reflect the cost of the project for purposes of comparison of the 88 MW CT
19 with the IL Proposal.

20 **Q. Why is the embedded cost of debt inappropriate for calculating**
21 **carrying costs for comparison purposes?**

22 A. The embedded cost of debt reflects the cost incurred for debt
23 issuances in the past. Current debt costs are lower than most of the
24 historic issuances. Based on today's interest rate environment, the

1 Company expects that it will be able to finance long term debt for the 88
2 MW CT project at approximately 4.0 percent to 4.5 percent as opposed to
3 the embedded debt rate of 7 percent assumed in the comparison exhibits
4 that I and Mr. Hahn sponsored. A debt cost of 4.4 percent was used in
5 Montana-Dakota's EGEAS modeling runs which better reflects project
6 carrying costs for the 88 MW CT and other alternative projects. I used this
7 cost of debt to calculate the carrying charge for the 88 MW CT project in
8 my attached revised Confidential Exhibit No. 111 (DJN-3). I also changed
9 the discount rate for purposes of calculating the net present value of the
10 88 MW CT project and the PPA proposal from 7.53 percent used in the
11 comparison calculations that I and Mr. Hahn sponsored, to 7.58 percent
12 which is the discount rate used in the EGEAS modeling.

13 **Q. Did you make any adjustments to the cost of equity used in**
14 **calculating the carrying costs for the comparison exhibits?**

15 A. No. I continued to use the return on equity used in the settlement
16 of the Company's most recent rate case of 10.75 percent which is also the
17 rate used in the EGEAS models.

18 **Q. What are the results of the comparison utilizing the adjusted debt**
19 **costs?**

20 A. As shown on Confidential Revised Exhibit No. 111 (DJN-3) the 88
21 MW CT, including AFUDC, is less expensive than the IL Proposal on a
22 total expenditure basis and a net present value basis.

23 **Q. Why is the Company submitting additional EGEAS modeling results**
24 **at this time?**

1 A. On Page 27 of my Rebuttal Testimony, I described why a
2 comparison of the Net Present Values (NPVs) from the various EGEAS
3 modeling cases, with and without the IL Proposal, was not a valid
4 comparison due to the modeling limitations in EGEAS regarding a Power
5 Purchase Agreement (PPA) which expires after the initial 20 year study
6 period in the EGEAS model. In an effort to quickly turn around the rebuttal
7 testimony before the holiday season, we were unable to illustrate this
8 modeling anomaly in time for submission with the rebuttal testimony.
9 Since then, we have had an opportunity to prepare another EGEAS
10 modeling run to illustrate this issue.

11 **Q. Would you please describe the additional EGEAS modeling run that**
12 **the Company performed?**

13 A. In this additional EGEAS modeling run, Additional Case 5, the term
14 of the IL Proposal was shortened to 15 years so the model would have to
15 replace the PPA with another available resource in study Year 20.
16 Additional Case 5 reflects the La Capra Modified Base with the IL
17 Proposal (15 Year PPA) and no PTC extension or ND Wind with the
18 following additions identical to Additional Case 3 with the exception of the
19 term of the IL Proposal set to 15 years:

- 20 • Included the 176 MW Illinois combustion turbine with a 15 Year
21 PPA Term as a resource alternative
- 22 • Lowered the forced outage rate for the 43 MW Combustion Turbine
23 from 22.31 percent to 6.45 percent
- 24 • Set the fixed O&M for the wind energy option to \$0 from \$12/kW-yr

- 1 • Lowered the variable O&M for the self-built combined cycle option
2 to \$3.00/MWh from \$6.00/MWh

3 In Additional Case 5, the EGEAS model selected three 43 MW CTs and
4 one 88 MW CT for installation in 2030 after expiration of the PPA versus
5 the assumption that a new resource addition will be available in 2034 with
6 the same size and cost as the IL Proposal.

7 **Q. How did the NPVs differ between this new modeling run and**
8 **previous comparisons?**

9 A. The previous difference in NPVs between additional modeling
10 Cases 3 and 4, with and without the IL Proposal, was \$247 million. The
11 difference between the NVP's in Additional Cases 4 and 5, with and
12 without a 15 year IL Proposal, is \$57 million. The 15 year term of the IL
13 Proposal reduces any potential savings between years 16 and 20 that the
14 PPA might provide but it also does not include any additional transmission
15 service charges identified in the side-by-side comparison in the
16 Confidential Revised Exhibit No.111 (DJN -3). This additional modeling
17 run shows why the comparison of the NPV between Additional Cases 3
18 and Cases 4 should not be used to quantify a dollar value difference
19 between the 88 MW CT and the IL Proposal.

20 **Q. Does this conclude your rebuttal testimony?**

21 A. Yes, it does.