

**REBUTTAL TESTIMONY OF  
CHARLES W. KING**

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**Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

A. My name is Charles W. King. I am President of the economic consulting firm of Snavelly King Majoros O'Connor & Lee, Inc. ("Snavelly King"). My business address is 1220 L Street, N.W., Suite 410, Washington, D.C. 20005.

**Q. ARE YOU THE SAME CHARLES W. KING WHO SUBMITTED DIRECT TESTIMONY IN THIS CASE ON AUGUST 11, 2001?**

A. Yes. I am.

**Q. FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING?**

A. I am appearing on behalf of the Staff of the North Dakota Public Service Commission.

**Q. WHAT IS THE OBJECTIVE OF YOUR REBUTTAL TESTIMONY?**

A. This testimony has two objectives. The first objective is to respond to the direct testimony of J. Stephen Gaske on behalf of Montana-Dakota Utilities ("MDU" or "the Company"). The second objective is to update the data presented in my testimony of last August.

**Q. WHAT HAVE YOU FOUND TO BE THE APPROPRIATE UPDATED RATE OF RETURN FOR THE COMPANY'S NORTH DAKOTA ELECTRIC OPERATIONS?**

- 1 A. Based on an update of the data presented in my August testimony, I find that the  
2 appropriate rate of return on the Company's electric operations in North Dakota is **9.92**  
3 **percent**, inclusive of a return to equity of **11.7 percent**.  
4

5 **TESTIMONY OF J. STEPHEN GASKE**  
6

7 **Q. AT PAGES 9 THROUGH 12 OF HIS TESTIMONY, DR. GASKE**  
8 **RECOMMENDS THE USE OF THE "YIELD TO MATURITY" PROCEDURE**  
9 **FOR QUANTIFYING DEBT COSTS, RATHER THAN THE ACCOUNTING**  
10 **PROCEDURE YOU ADOPTED IN YOUR INITIAL TESTIMONY. WHAT IS**  
11 **YOUR RESPONSE TO THIS TESTIMONY?**  
12

- 13 A. Dr. Gaske is correct that the "yield to maturity" procedure is the conventional method of  
14 calculating the cost of debt. Indeed, I am informed that the North Dakota Commission  
15 Staff normally uses that procedure.  
16

17 In this instance, however, I recommend that the Commission adopt the accounting  
18 treatment that I used in my initial testimony. The reason is the extraordinarily high cost  
19 of MDU's debt. At 9.22 percent, MDU's yield to maturity debt cost is 223 basis points  
20 higher than the 6.99 percent cost of the long-term debt of Northern States Power (now  
21 Xcel Energy) and 283 basis points higher than its 6.39 percent short term debt cost.<sup>1</sup> It is  
22 154 basis points higher than the 7.68 percent debt cost reported by Otter Tail Power for  
23 year-end 2000.<sup>2</sup> Looking at the broader bond market, the current yield on Aaa corporate  
24 bonds is 268 basis points lower than MDU's claimed debt cost; that of Baa corporate  
25 bonds is 133 basis points lower.<sup>3</sup> MDU is asking its ratepayers to cover what appears to  
26 be an unreasonably high cost of debt.  
27

28 For this reason, I recommend that the Commission award MDU a rate of return that  
29 recovers its debt cost, inclusive of some very high redemption losses and issuance costs,

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<sup>1</sup> Case No. PU-400-00-521, Exhibit No. 11, Schedule MPS-1, March 13, 2001.

<sup>2</sup> Annual Report of the Otter Tail Power Company to the North Dakota Public Service Commission.

1 but on a basis that reduces the burden to ratepayers. The accounting procedure I set forth  
2 in my initial testimony permits the Company to amortize its debt issuance and  
3 redemption costs over the life of the debt issues, but it reduces the debt cost to ratepayers  
4 from 9.22 percent to 8.62 percent. This reduced cost is still considerably higher than the  
5 debt cost of the other two major North Dakota investor-owned utilities.

6  
7 **Q. WHAT OTHER AREAS OF DISAGREEMENT DO YOU HAVE WITH DR. GASKE?**  
8

9  
10 A. We disagree on the cost of MDU's equity capital. The specific areas of disagreement  
11 between Dr. Gaske and myself are the following:

- 12 • The inclusion of flotation costs,
- 13 • The selection of comparable companies,
- 14 • The procedure for estimating the coming year's dividend,
- 15 • The relevance of the Dr. Gaske's risk premium analysis,
- 16 • The relevance of Dr. Gaske's "Alternative Equity Investment Analysis."

17  
18 **Q. WHAT IS THE ISSUE WITH REGARD TO FLOTATION COSTS?**  
19

20 A. Dr. Gaske argues that there are significant costs associated with issuing new common  
21 equity capital and that these costs must be considered in determining the cost of capital.  
22 He calculates that the average flotation cost of new common stock issues of 15 electric  
23 companies during the period 1996-2000 was 4.75 percent. Accordingly, he inflates his  
24 equity return requirement by 4.75 percent.

25  
26 This adjustment is wholly inappropriate.

27  
28 **Q. WHY DO YOU CONTEND THAT WITNESS GASKE'S FLOTATION COST**  
29 **ADJUSTMENT IS WHOLLY INAPPROPRIATE?**  
30

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<sup>3</sup> [www.federalreserve.gov/releases/H15](http://www.federalreserve.gov/releases/H15)

1 A. First of all, Dr. Gaske's flotation cost ratio does not apply to MDU. Since 1997, MDU's  
2 parent company has issued 27,061,858 new shares of common stock with a value of  
3 \$579,764,238. The sum of all flotation costs for these stock issues has been \$5,424,682,  
4 for a ratio of flotation cost to new stock issued of 0.94 percent, about one-fifth the ratio  
5 Dr. Gaske proposes to use.<sup>4</sup>

6  
7 More to the point, however, is that Dr. Gaske would apply his flotation cost adjustment to  
8 the entire equity value of the company, inclusive of all stock already issued. The effect  
9 of his flotation cost adjustment is to increase his equity return by .57 percentage points.  
10 When multiplied by the \$1,077 million book equity value of the Company, this allowance  
11 amounts to \$6.3 million annually, which is substantially more than all the flotation costs  
12 the Company incurred during the past five years.

13  
14 If a flotation cost adder is to be used, it should be equal to a reasonable estimate of the  
15 annual flotation cost incurrence divided by the entire amount of the Company's equity.  
16 In MDU's case, annual flotation costs during the past five years have been about \$1.1  
17 million. The Company's total book equity value is \$1,087 million, for a flotation cost  
18 allowance of 0.1 percent. This amount is so small as to be lost in the rounding. For this  
19 reason, I recommend that there be no explicit flotation cost adder.

20  
21 The data and the calculations used in this answer are presented in Exhibit\_\_\_\_(CWK-  
22 1R) attached to this rebuttal testimony.

23  
24 **Q. AT PAGE 17 OF HIS TESTIMONY, DR. GASKE STATES THAT A FLOTATION**  
25 **COST ALLOWANCE IS NECESSARY TO PERMIT MDU TO SELL STOCK**  
26 **WITHOUT DILUTING THE VALUE OF THAT STOCK. IS THIS A**  
27 **RELEVANT ISSUE?**

28

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<sup>4</sup> MDU Response to King January 22 Data Request No. 6.

1 A. No. As of November 2001, the book value of MDU shares was \$15.58. On February 6,  
2 2002 MDU's shares were trading at \$27.79, for a market-to-book ratio of 1.78. Any sales  
3 of new MDU's stock would cause book value appreciation, not dilution.  
4

5 **Q. DR. GASKE CRITICIZES YOUR SELECTION OF TWO LISTS OF**  
6 **COMPARABLE COMPANIES, ARGUING THAT THERE IS NO STATISTICAL**  
7 **SIGNIFICANCE TO THE DIFFERENCES IN THE DCF AVERAGES. HOW DO**  
8 **YOU RESPOND TO THIS CRITICISM?**  
9

10 A. Dr. Gaske is correct that there are variations in the DCF returns within the two lists of  
11 companies that exceed the differences in the averages. This result is caused by two  
12 factors. The first is the smallness of the sample, particularly of the electric-only  
13 companies. With only four companies, it would require a very tight set of results, with  
14 little variation among them, to generate an average that would pass a test of statistical  
15 significance. The second reason is explained on pages 21 and 22 of my initial testimony.  
16 It is that the capital structures of the companies within the two groups create differences  
17 in financial risk that cause much of the variation among the DCF return requirements of  
18 companies having similar business risks.  
19

20 The absence of statistical significance to the averages, however, does not negate the  
21 justification for making the distinction between electric-only and combination  
22 electric/gas companies. Because of the small sample, there would likely be no statistical  
23 significance to the averages of the required returns of, say, two electric utilities versus  
24 two dot-com companies, but that does not mean that the risks are not different and the  
25 required returns of the dot-coms are not higher.  
26

27 If there is an objective reason for believing that one set of companies has a lower level of  
28 business risk than another, then it is still appropriate to use that sample of firms if it  
29 matches the description of the company under study. Thus, if there is reason to believe  
30 that combination firms have lower business risk than electric-only companies, and MDU

1 is a combination company, then it is appropriate to look to the DCF returns of the  
2 combination companies for an indication of MDU's required return.

3  
4 **Q. DR. GASKE ARGUES THAT IT IS MORE APPROPRIATE TO USE ELECTRIC-  
5 ONLY COMPANIES THAN COMBINATION COMPANIES IN FINDING MDU'S  
6 RATE OF RETURN. DO YOU AGREE?**

7  
8 A. Absolutely not. There are two reasons that combination electric/gas companies have  
9 lower business risks than electric-only companies. The first is that mentioned in my  
10 initial testimony, that electricity and gas are to some extent competitive, so that a utility  
11 controlling both enjoys a much stronger market position than one controlling only the  
12 electricity side. Dr. Gaske denies this, contending that MDU's natural gas distribution  
13 system is primarily used to provide heat and is not used to provide lighting or to run  
14 appliances such as television, dishwashers, etc. Electricity, contends Dr. Gaske, is not  
15 used for home heating except where natural gas is not available.

16  
17 The competitiveness of electricity and gas for space heating is to some extent a function  
18 of climate. In warmer climates, where heat pumps are feasible, electricity is a very active  
19 competitor with gas for home heating. But even in North Dakota, MDU estimates that it  
20 has 5,400 residential customers who use electricity for home heating.<sup>5</sup> For two other  
21 types of appliances, electricity and gas are quite competitive, as indicated by MDU's own  
22 figures on residential saturation:<sup>6</sup>

	<u>Electricity</u>	<u>Gas</u>
Water Heating	23.77%	64.54%
Cooking	84.35%	14.05%

23  
24  
25  
26  
27 Dr. Gaske goes on to argue that even if inter-energy competition exists, MDU has very  
28 little ability to control the costs of the respective energy sources, particularly their fuels,  
29 so that has limited ability to induce customers to select one form of energy over another.

<sup>5</sup> MDU Response to King's January 22, 2002 data request no. 11.

<sup>6</sup> MDU Response to King's January 22, 2002 data request no. 12.

1 That, of course, is exactly the point. The inability of a utility to induce its customers to  
 2 use electricity for, say, heating or cooking is a risk borne solely by electric-only utilities.  
 3 A combination utility avoids that risk because the customer remains its customer  
 4 regardless of his/her choice of fuel.

5  
 6 The other risk-reducing factor enjoyed by combination utilities but not by electric-only  
 7 companies relates to weather. In most of the country, peak electric consumption is driven  
 8 by air conditioning, so that fluctuations in summer weather patterns constitute a major  
 9 business risk. The earnings of gas utilities are susceptible to winter weather fluctuations.  
 10 Either an electric-only or gas-only utility is exposed to the vagaries of a single season's  
 11 weather. Combination utilities' risk is spread over two seasons. A low winter may be  
 12 offset by a high summer or vice versa. This risk-reducing characteristic has to be  
 13 recognized by investors. Indeed, it shows up in the evident earnings requirements of  
 14 combination vs. electric-only utilities.

15  
 16 **Q. DO YOU HAVE ANY COMMENTS ON DR. GASKE'S SELECTION OF 12**  
 17 **UTILITIES AS PROXIES FOR MDU?**

18  
 19 A. Dr. Gaske has selected 12 utilities, nine of which are also among the utilities I used in my  
 20 analysis. Dr. Gaske captures three additional utilities, IDACORP (Idaho Power),  
 21 American Electric Power (AEP), and Cleco Corp. by reducing the threshold on regulated  
 22 retail revenue from the 85 percent I used to 75 percent. This is an important difference.  
 23 The three additional companies raise Dr. Gaske's DCF results substantially. His  
 24 "Investor Required Return," exclusive of his flotation cost adjustment, for these three  
 25 companies are as follows:

	"Basic DCF" <sup>7</sup>	"2 <sup>nd</sup> Stage Retention DCF" <sup>8</sup>
26		
27	IDACORP	15.38% 13.60%
28	AEP	12.47% 12.47%
29	Cleco	14.34% 13.67%

<sup>7</sup> Exhibit \_\_\_\_\_ (JSD-1), Schedule 4, page 7.

<sup>8</sup> Id., page 6.

1 These return requirements are part of a list that averages to 12.44 percent for the “Basic  
2 DCF” and 12.10 percent of the “Second Stage Retention DCF.” Without these three  
3 utilities, these average return requirements reduce to 11.9 percent and 11.7 percent,  
4 respectively.

5  
6 These three companies should not be included in a proxy group for purposes of finding  
7 the equity return for regulated retail operations, whether electric or gas. In each case, the  
8 driving factor in investors’ assessments of these companies is either their wholesale  
9 electric operations, which are effectively unregulated, or their non-utility activities. This  
10 fact is evident in the *Value Line* reports, which I attach as an Exhibit\_\_\_\_(CWK-2R) to  
11 this testimony. Here are the opening lines of the commentaries on each of these  
12 companies:

13  
14 IDACORP: “IDACORP’s noncore enterprises are an important source of  
15 income.”

16  
17 AEP: “Thanks largely to American Electric Power’s wholesale business, earnings  
18 have recovered nicely in 2001”

19  
20 Cleco Corp: “Cleco’s nonregulated generating strategy should produce solid  
21 earnings growth in 2002.”

22  
23 In each case, the prospect of increased earnings from non-regulated activities is the driver  
24 of earnings expectations. Being unregulated, these activities are potentially more  
25 profitable but also more risky than regulated retail utility service. They therefore create  
26 higher earnings requirements. Those earnings requirements are inappropriate as a proxy  
27 for MDU’s retail electric service.

28  
29 **Q. WHAT IS THE NATURE OF YOUR DISAGREEMENT WITH DR. GASKE AS**  
30 **REGARDS THE ADJUSTMENT FOR THE COMING YEAR DIVIDEND?**

31

1 A. The DCF procedure requires that the dividend used in the dividend yield calculation  
2 should be the expected dividend for the coming year. The conventional procedure is to  
3 inflate the current dividend by some fraction of the “g” or annual growth factor in  
4 anticipation that there will be an increase in the dividend in the coming year. Dr. Gaske  
5 uses .625g, while I used .5g.

6  
7 Dr. Gaske’s factor is wrong because it assumes that the investor will not receive his/her  
8 first dividend until exactly three months from the date of purchase. The average for the  
9 next dividend increase is thus  $(.25+.50+.75+1.0)/4 = .625$ . My .5g factor assumes that  
10 the probability of the dividend increase is randomly distributed throughout the year  
11 following the purchase of the stock. The average delay in the dividend increase under  
12 this assumption is one-half a year, so that the appropriate factor is .5g.

13

14 The effect of this disagreement on the final result, however, is minimal.

15

16 **Q. WHY DO YOU DISAGREE WITH DR. GASKE’S RISK PREMIUM ANALYSIS?**

17

18 A. Dr. Gaske purports to measure the required return to equity by adding the historical  
19 difference in experienced earnings from stocks and bonds to the current levels of bond  
20 yields. These historical differences, as measured by Ibbotson Associates, go back to  
21 1926.

22

23 I have encountered this historical risk premium approach in a number of rate-of-return  
24 proceedings and have always found it so flawed, both conceptually and statistically, as to  
25 be virtually worthless.

26

27 The historical risk premium approach calculates the experienced returns to common  
28 stocks, bonds and Treasury bills on a monthly basis since 1926. It then assumes that the  
29 experienced differences in return between stocks and bonds represent the expected  
30 differences in return. The theory is that over a long enough period, actual return

1 differentials between stocks and bonds will equate to required or expected return  
2 differentials.

3  
4 This is a statement of faith, not experience, and it defies logic. If investors= short-term  
5 expectations are continually being frustrated (as has to have been the case during the last  
6 year), what possible logic supports the proposition that the sum of those failed short-term  
7 expectations represents a valid long-term representation of their expectations? Moreover,  
8 it is flatly untrue that the differential in required returns between bonds and stocks is  
9 fixed and unchanging, as this theory postulates. The perceived safety/risk relationship of  
10 bonds differs from stocks, and their relative desirability as investment vehicles changes  
11 continually depending on such factors as inflation, economic growth, and the capital  
12 structures of the enterprises issuing the securities.

13  
14 Quite apart from this conceptual failing, the theory fails statistically. The standard  
15 deviations of the observations, particularly the observations of the return differences, are  
16 greater than the mean of those observations. The means therefore lack statistical  
17 significance and are useless as a predictive tool.

18  
19 **Q. WHY DO YOU DISAGREE WITH DR. GASKE'S ALTERNATIVE EQUITY**  
20 **INVESTMENT ANALYSIS?**

21  
22 A. Dr. Gaske purports to demonstrate that MDU should be allowed a high return by  
23 observing that the returns to book equity on 746 industrial firms included in *The Value*  
24 *Line Investment Survey* have ranged from 27.57 percent to 31.75 percent over the five  
25 years 1996-2000. He argues that the average of 29.4 percent, along with the return of  
26 20.69 percent experienced by S&P's 500 companies, represents a "benchmark" which  
27 suggests that the 12.75 percent he proposes for MDU is quite low.

28  
29 This comparison is utterly irrelevant. Investors in industrial firms have no access to book  
30 equity value. The only value that is meaningful for investors in such firms is the market  
31 value. That is what an investor must pay to acquire the stock, and conversely, the value

1 an investor will receive by selling the stock. Book equity value in an industrial firm is a  
2 purely historical number representing the dollars of original investment in equity capital  
3 contributed to (or retained by) the company. It has little relevance to the current market  
4 value, even for fairly capital intensive firms. Since most stocks sell well above their  
5 book value, the return that is accessible to investor is considerably less than the 20 to 30  
6 percent noted by Dr. Gaske.

7  
8 Book values are relevant for regulated utilities because regulation makes them so.  
9 Regulation sets the earnings allowance for such companies relative to a rate base  
10 reflective of the book value of the capital invested utility operations. This condition does  
11 not apply to industrial firms.

### 12 13 **UPDATED RETURN CALCULATION**

14  
15 **Q. HAVE YOU UPDATED THE DATA CONTAINED IN YOUR AUGUST 11**  
16 **TESTIMONY?**

17  
18 A. Yes. Exhibit\_\_\_\_(CWK-3R) contains updated data as of February 2, 2002 for the inputs  
19 to the DCF analysis I presented last August. Specifically, it shows the latest 5-year  
20 consensus growth forecast as reported by Zacks Investors Services, the most recent 50-  
21 day market price as reported by CBS MarketWatch, and the most recent dividend for  
22 each of the four comparison electric companies and for the eight combination gas/electric  
23 utilities. For comparison purposes, I have shown in the last column the DCF returns I  
24 found for each company last August.

25  
26 The exhibit reveals that while individual company returns have changed, there is no  
27 change in the 12.1 percent average for the four electric-only utilities. The average return  
28 for the eight combination utilities has increased from 11.2 percent to 11.7 percent.

29  
30 **Q. DO YOU THEREFORE REVISE YOUR RECOMMENDED RETURN TO MDU'S**  
31 **EQUITY CAPITAL?**

1

2 A. Yes, I do. I recommend that MDU's equity capital return be revised to 11.7 percent. It is  
 3 notable that this return corresponds exactly to the "investor required return" calculated by  
 4 Dr. Gaske under the "second state retention growth DCF calculation" for the nine utilities  
 5 in his comparison group that derive more than 85 percent of their revenue from regulated  
 6 retail services.<sup>9</sup> It is only 20 basis point below the "basic DCF" calculation for the same  
 7 nine companies.<sup>10</sup>

8

9 **Q. WHAT IS YOUR RECOMMENDED RETURN TO TOTAL CAPITAL?**

10

11 A. My recommended return to total capital is **9.92 percent**, calculated as follows:

12

13

Item	Proportion	Cost	Weighted Cost
Debt	45.90%	8.62%	3.96%
Preferred Stock	5.23%	4.63%	0.24%
Equity	48.87%	11.7%	5.72%
Total	100.00%		<b>9.92%</b>

14

15

16

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

18

19 A. Yes. It does.

<sup>9</sup> Exhibit\_\_\_\_(JSG-2), Schedule 4, page 6.

<sup>10</sup> Id., page 7.