

**RPU-2009-0002**

**FILED WITH  
Executive Secretary**

**July 17, 2009**

**IOWA UTILITIES BOARD**

**OFFICE OF CONSUMER ADVOCATE**

**DIRECT TESTIMONY**

**OF**

**GREGORY VITALE**

**In Re: Interstate Power & Light Company  
Docket No. RPU-2009-0002**

**July 17, 2009**

1 **Q: What is your name and business address?**

2 A: My name is Gregory Vitale. My business address is 310 Maple Street,  
3 Des Moines, Iowa 50319-0063.

4 **Q: By whom are you employed?**

5 A: I am employed by the Consumer Advocate Division (OCA) of the Iowa  
6 Department of Justice as a Utility Specialist.

7 **Q: What is your educational background?**

8 A: I graduated with a Master of Arts degree in Economics from Washington  
9 State University in 1984. I graduated from Kent State University with a  
10 Bachelor of Arts degree in Economics in 1982.

11 **Q: What is your professional experience?**

12 A: I began employment with the Iowa State Commerce Commission as a  
13 Senior Utility Analyst in August 1985, transferred to OCA in July 1989  
14 and was promoted to Utility Specialist in March 1990. Since 1985, I have  
15 filed testimony in more than forty-five cases. These are listed on  
16 Appendix A. I have also been involved in other dockets and filings.

17 In 1989, I taught Managerial Finance for Simpson College. I also  
18 taught several economics classes at Hiram College during the 1984-1985  
19 academic year. I worked as a teaching assistant at Washington State  
20 University from 1982 through 1984.

1 **Q: Have you prepared an exhibit?**

2 A: Yes, OCA Exhibit \_\_\_ (GV-1) was prepared by me or under my  
3 supervision and contains Schedules A through W. Additional supporting  
4 analyses, excerpts and other information that I relied upon are included in  
5 my electronic workpapers.

6 **Q: What is the purpose of your testimony?**

7 A: The purpose of my testimony is to estimate the cost of common equity for  
8 Interstate Power & Light Company (Interstate or Company), a wholly-  
9 owned subsidiary of Alliant Energy Corporation (Alliant). I also  
10 comment on the testimony, exhibits and workpapers of Company witness  
11 Mr. Hanley.

12 **Q: Why is the cost of common equity important?**

13 A: The cost of common equity I estimate is used by OCA witness Ms. Parker  
14 to estimate the cost of capital. The cost of capital is a significant part of  
15 Interstate's electric utility's revenue requirement, costing tens of millions  
16 of dollars annually.

17 **Discounted Cash Flow Analysis & Market Efficiency**

18 **Q: How is the cost of common equity estimated?**

19 A: A discounted cash flow (DCF) analysis is used to estimate the cost of  
20 common equity.

1 **Q: Why is DCF analysis used to estimate the cost of common equity?**

2 A: Investors' financial decisions, including their expected return on common  
3 equity, are best described and are commonly evaluated by discounted cash  
4 flow analysis.

5 **Q: How is DCF analysis used to estimate the cost of common equity?**

6 A: DCF analysis begins with the price investors pay for common equity's  
7 expected cash flows. Common equity's cash flows are composed of  
8 dividends, if any, the growth in dividends over time and, the selling price

9 when sold. The equation  $P_0 = \int_0^{\infty} \frac{D_0^G}{e^{Kt}} dt$  summarizes these cash flows,

10 where P is the price, D the dividend, G the expected growth rate and K,  
11 the cost of common equity. Based on these cash flows, the cost of  
12 common equity is  $K = D/P + G$  as more fully described on Schedule A.

13 **Q: Does DCF analysis take into account other investments?**

14 A: Yes. Prices used in the DCF analysis are determined by investors and  
15 reflect their other investment opportunities, risks and expected returns.

16 **Q: Is the DCF cost of common equity reliable when stock market prices  
17 differ from book values?**

18 A: Yes. DCF analysis applies to stocks, bonds or other investments, even  
19 when market prices and book values differ. For example, bond market  
20 prices continue to reflect investors' expected returns based on discounted

1 cash flow analysis whether bonds are priced below, at or above par, where  
2 par is a bond's stated book value. Similarly, discounted cash flow  
3 analysis is reliable when stocks are priced below, at or above book values,  
4 just as it would be for any other asset where the price is determined by  
5 investors and is based on their expected returns.

6 **Q: Why is the DCF cost of common equity reliable whether the stock**  
7 **market price is below, at or above book value?**

8 A: Prices determined in capital markets are efficient, reflecting all publicly  
9 available information including market-to-book ratios. As a result, the  
10 DCF cost of common equity based on prices determined by investors is a  
11 reliable indicator of their expected returns whether the market price is  
12 below, at or above book value.

13 **Q: Does Company agree that the DCF cost of common equity is reliable**  
14 **whether the stock market price is below, at or above book value?**

15 A: No. (Hanley Dir. Test., pp. 23; 53).<sup>1</sup> Company's assertions are, however,  
16 erroneous, outside the findings of mainstream finance and contradict  
17 Company's own testimony. (Hanley, Dir. Test., pp. 16-18).

18 **Q: What evidence is there that Company's assertion is outside**  
19 **mainstream finance?**

---

<sup>1</sup> Page number corresponds to Interstate's electronic version.

1 A: The authors Brealey and Myers that Company cites noted “all relevant  
2 and ascertainable information is already reflected in security prices.”  
3 (Hanley Dir. Test., pp. 16-17). Since market-to-book ratios are publicly  
4 known information, they are already reflected in the market price  
5 determined by investors. As a result, and contrary to Company’s  
6 assertions, the DCF cost of common equity based on these prices is a  
7 reliable indicator of investors’ expected returns whether the market is  
8 priced lower than, at or higher than book value per share.

9 **Q: What makes capital markets efficient?**

10 A: Markets, such as the New York Stock Exchange, are efficient as a result  
11 of the competition between the participants. As soon as a new  
12 development unfolds, this competition drives the price to the point where  
13 investors have the opportunity to earn their cost of common equity but no  
14 more. As a result, capital markets are economically efficient as more  
15 fully explained on Schedule B.

16 **Q: What evidence is there that capital markets are efficient?**

17 A: The author Morin, whom Company cites, summarized this evidence:

18 A considerable body of empirical evidence indicates  
19 that U.S. capital markets are efficient with respect to  
20 a broad set of information, including historical and  
21 publicly available information.<sup>2</sup>

---

<sup>2</sup> Roger A. Morin, *New Regulatory Finance*, McGraw-Hill Companies, 2006, p. 279.

1 **Q: Does Company agree that capital markets are efficient?**

2 A: Yes. Company agrees that capital markets are efficient. (Hanley Dir.  
3 Test., pp. 16-18). Company, however, then proceeds to contradict this  
4 fact and its own testimony by asserting that markets fail to reflect  
5 investors' cost of common equity when prices differ from book value.

6 **Q: If capital markets are efficient, why does Company claim that the**  
7 **DCF understates or overstates investors' required rate of return?**  
8 **(Hanley, Dir. Test., p. 23)?**

9 A: Company relies on three hypothetical, but erroneous, examples to support  
10 its claim that DCF analysis understates or overstates investors' required  
11 rate of return when market prices differ from book value.

12 (Exhibit \_\_ (FJH-1), Schedule F). Company's hypothetical examples  
13 mistakenly assume investors' prices are fixed and they take whatever the  
14 return is on their investment. This is not how capital markets work.

15 **Q: How do capital markets reflect investors' required return as their**  
16 **expected return?**

17 A: Investors adjust prices until their expected return equals their required  
18 return which is the cost of common equity. Company, however, turns  
19 causality on its head in its erroneous hypothetical demonstrations. In  
20 statistical terms, Company mistakenly assumes price is an independent

1 variable in its hypothetical examples. Price, however, is the dependent  
2 variable. This is noted on Schedule A and explained on Schedule B  
3 which describes how investors act and why capital markets work  
4 efficiently, even when prices differ from book value.

5 **Q: Is Company's assumption correct that market efficiency does not**  
6 **reflect any known difference between market prices and book value?**

7 A: No. Capital markets such as the New York Stock Exchange are efficient  
8 and already reflect public information such as market-to-book ratios.  
9 Company noted this fact but then failed to reflect it in its testimony,  
10 analyses and recommendations. (Hanley, Dir. Test., pp. 16-18).

11 **Q: Can you demonstrate how Company's hypothetical market-to-book**  
12 **ratio examples are erroneous?**

13 A: Yes. This is demonstrated on Schedule C. Company assumed the price  
14 was established independently of investors' cost of common equity.  
15 Prices, however, are determined by investors and reflect their expected  
16 returns. This error is the reason for the internal inconsistencies in  
17 Company's hypothetical examples and why Company's assumed cost of  
18 common equity is not earned by investors in these examples.

19 **Q: Can you demonstrate how investors earn their DCF cost of common**  
20 **equity even when market and book values differ?**

1 A: Yes. This is demonstrated on Schedule D. In these examples, investors  
2 actually earn their cost of common equity because they adjust the price  
3 until their cost of common equity is expected to be earned. More  
4 technically, the price is the dependent value and adjusts until the expected  
5 return is investors' cost of common equity as noted on Schedule A  
6 mathematically and explained on Schedule B.

7 **Q: Is the DCF cost of common equity a fair return?**

8 A: Yes. Investors, competing against each other, bid an asset like common  
9 equity up to a price where the expected return is a fair return.

10 **Alliant and Other Combination Electric and Gas Utilities**

11 **Q: How did you determine the cost of common equity for Interstate's**  
12 **Iowa electric utility?**

13 A: I first estimated Alliant's cost of common equity since this is the source of  
14 all of Interstate's common equity. As a result of Alliant and Interstate's  
15 interconnected financing, their focus on regulated utility operations and  
16 other factors, I began my analysis of Interstate's cost of common equity  
17 by estimating the cost of common equity for its publicly traded parent,  
18 Alliant. I also estimated the DCF cost of common equity for a sample of  
19 firms with combination electric and gas utilities most like Alliant.

1 **Q: Is there a difference between Alliant and its wholly-owned Interstate**  
2 **subsidiary's cost of common equity?**

3 A: No. Barring extenuating circumstances, the distinction between the cost  
4 of common equity for Alliant and its Interstate utility subsidiary would be  
5 difficult, if not impossible, to measure. This is not surprising, since  
6 Alliant and Interstate are now primarily focused on regulated electric and  
7 gas utilities, capital is fungible, and Alliant provides all of Interstate's  
8 common equity.

9 **Q: Do combination electric and gas utilities differ from electric-only**  
10 **utilities?**

11 A: Yes. Alliant's combination electric and gas utilities have economies of  
12 scope not available to firms with only an electric or gas utility. These  
13 economies of scope allow Alliant to utilize its expertise in customer  
14 service, billing and other departments across its electric and gas utility  
15 operations. In addition, a firm with electric and gas utilities has two  
16 seasons of peak utility revenues that spread its utility revenue streams  
17 over the year. A combination utility has natural gas supply contracts  
18 which can also serve its electric operations and is in a better position to  
19 shift at least some production between coal and natural gas as fuel  
20 depending on the price of natural gas and the market price of electricity.

1 In contrast, gas-only utilities cannot, for the most part, shift fuels. As a  
2 result of these differences, both electric-only and gas-only utilities are  
3 different from Alliant.

4 **Q: Has the Board relied on combination electric and gas utilities to**  
5 **estimate the cost of common equity for a utility like Interstate?**

6 A: Yes. In previously litigated cases, the Board's primary focus has been on  
7 the publicly traded parent company such as Alliant to estimate the cost of  
8 common equity for one of its utility subsidiaries. The Board has also  
9 relied in part on other combination electric and gas utilities to estimate the  
10 cost of common equity for a combination utility's wholly owned  
11 subsidiary. This precedent is well enough established that Interstate's  
12 witness noted in a recent docket:

13 Moreover, it is my understanding that this Board  
14 favors the use of a proxy group of combination  
15 companies when the petitioner is itself a combination  
16 company.<sup>3</sup>

17  
18 **Q: Did Company rely on a sample of utilities to estimate the cost of**  
19 **common equity for Interstate?**

20 A: Yes. Company estimated the cost of common equity for Alliant and for a  
21 sample of ten utilities, some of which were combination electric and gas  
22 utilities. Company claimed its sample utilities were comparable to

---

<sup>3</sup> *Interstate Power and Light Company*, Docket No. RPU-05-1, Hanley Dir. Test., p. 54, ll. 6-13.

1 Interstate. Company also claimed that a number of non-regulated firms  
2 were similar to Alliant and its sample utilities, but then decided that its  
3 results were not plausible and did not rely on its cost of common equity  
4 estimates for its non-utility sample.

5 **Q: Did you rely on Company's utility sample?**

6 A: No. The electric utilities in Company's sample are not similar to Alliant.  
7 Company's utility sample includes utilities that are distribution and  
8 transmission-only utilities like Consolidated Edison and Nstar. Alliant,  
9 however, generates much of its own electricity. Other utilities in  
10 Company's sample are electric-only utilities including Progress Energy,  
11 Southern Company and Pinnacle West. Because of these and other  
12 differences, Company's utility sample is not a reliable indicator of the  
13 cost of common equity for a combination electric and gas firm like Alliant  
14 or its Iowa utility operations. I relied instead on a sample composed  
15 exclusively of combination electric and gas utilities more similar to  
16 Alliant, Interstate's publicly traded parent.

17 **Q: How did you select the sample utilities you relied on to estimate the  
18 cost of common equity?**

19 A: I relied on those combination utilities included in *Value Line* that are  
20 primarily rate-regulated utilities with both electric and gas utility

1 operations, have their own generation plants, depend primarily on coal to  
2 generate much of their electricity and showed other factors similar to  
3 Alliant.

4 **Q: What combination electric and gas utilities met these criteria?**

5 A: There were four combination electric and gas utilities that were most like  
6 Alliant: SCANA, TECO Energy, DTE Energy and Wisconsin Electric. A  
7 cost of common equity based on this sample of utilities is more reflective  
8 of Alliant and its Iowa utility subsidiary's cost of common equity.  
9 Summary details of these utilities are on Schedule E.

#### 10 **Price Dividend & Dividend Yield**

11 **Q: How did you estimate the DCF cost of common equity for Alliant and  
12 this sample of combination electric and gas utilities?**

13 A: In order to estimate the DCF cost of common equity for Alliant and each  
14 of the publicly traded electric and gas utilities most like Alliant, I  
15 estimated a representative dividend yield and a sustainable growth rate.

16 **Q: What price did you use in your DCF calculations?**

17 A: There is a trade-off between a price based on an average and more recent  
18 prices. I relied on prices averaged over the three-month period ending in  
19 May 2009. An average price over this period is more likely to be  
20 representative and better reflect current capital market conditions.

1 **Q: What price did Company rely on in its DCF calculations?**

2 A: Company averaged a recent spot price with another price. This other  
3 price was, in turn, based on two other observations over a two month  
4 period. (Exhibit \_\_\_ (FJH-1), Schedule H). A few spot prices are  
5 unlikely to be representative, however, especially under current market  
6 conditions.

7 **Q: What dividend did you use in your DCF analysis?**

8 A: I relied upon the indicated dividend. The indicated dividend is the most  
9 recently declared quarterly dividend multiplied by four to reflect the fact  
10 that utility common stocks generally pay dividends four times a year.  
11 This is the best information investors have of the current expected  
12 dividend.

13 **Q: Why is the indicated dividend the best indicator of the expected**  
14 **dividend?**

15 A: Investors' expectations of a firm's dividends are shaped by four facts: (1)  
16 firms are only legally required to pay the indicated dividend which is the  
17 most recently declared dividend annualized; (2) firms are not required to  
18 increase the dividend; (3) barring special dividends, firms generally only  
19 increase the dividend if it is believed to be sustainable; and (4) firms try to  
20 avoid lowering their dividend in the face of temporary declines in

1 earnings. As a result, the indicated dividend is the most recent and best  
2 information investors have about a firm's prospective dividend.

3 **Q: Do others use the indicated dividend to estimate current dividends?**

4 A: Yes. The indicated dividend is routinely used when financial information  
5 is disseminated, including on-line by firms such as *Yahoo Finance*.

6 **Q: Did Company use the indicated dividend in estimating its DCF cost of  
7 common equity?**

8 A: Company began with the indicated dividend and dividend yield, matching  
9 a current price with the current indicated dividend. Company then  
10 adjusted the indicated dividend with its own forecast of future dividends.  
11 Based on its own forecast, Company then calculated its revised dividend  
12 yield based on a current price and mismatched future projected dividend.  
13 (Exhibit \_\_\_ (FJH-1), Sch H, note 1; Sch G).

14 **Q: Why did Company increase the indicated dividend?**

15 A: Company claims this adjustment is needed to reflect the quarterly  
16 payment of dividends. (Hanley, Dir. Test., p. 27). Company confuses the  
17 periodic dividend payments from the underlying flow of funds that  
18 support these payments.

19 **Q: Are there any other reasons why Company increased the indicated  
20 dividend by its forecasts?**

1 A: Yes. Company alleges that this adjustment is needed to reflect the  
2 possibility that the indicated dividend may be increased in the future.

3 **Q: Do utilities increase their dividends every year as Company assumes**  
4 **in its forecasts?**

5 A: No. Company's erroneous assumption is speculative. Some utilities have  
6 not increased their dividends for years. For example, Empire District  
7 Electric Company, included in Company's utility sample, last increased  
8 its dividend in 1993. Company's upward adjustment to indicated  
9 dividends ignored this and other facts.

10 **Q: Should the indicated dividend be adjusted upward to reflect the**  
11 **possibility that the dividend may be raised in the future?**

12 A: No. Company's explicit upward adjustment to the indicated dividend is  
13 misplaced and creates a mismatch by using a current price with its  
14 speculative projected future dividend.

15 **Q: How does Company's forecasted dividend compare to the dividend**  
16 **actually paid to investors?**

17 A: Company's upward adjustment to the indicated dividend overestimates  
18 dividends actually paid.

19 **Q: How does the indicated dividend you relied upon compare to the**  
20 **dividend actually paid to investors?**

1 A: The indicated dividend approximates, but slightly overstates, the dividend  
2 actually paid to investors.

3 **Q: How would ratepayers be affected by Company's upward adjustment**  
4 **to the indicated dividend?**

5 A: Company's upward adjustment to the indicated dividend overstates its  
6 dividend, the dividend yield and its cost of common equity. In this case,  
7 Company's projected dividend yield adjustment overstates its return on  
8 equity estimate by .06% to .79%. (Exhibit \_\_\_ (FJH-1), Sch G).  
9 Company's seemingly modest overstatement of its cost of common equity  
10 estimate has a dramatic effect on ratepayers' costs, increasing these costs  
11 by as much as \$12 million annually. The data used to estimate this effect  
12 is depicted on Schedule F.

13 **Q: Are there other errors in Company's use of a forecasted dividend and**  
14 **dividend yield?**

15 A: Yes. Company assumes all of a utility's revenues and earnings are  
16 received once or twice a year. Utility revenues and earnings are, however,  
17 received over the course of the year and are better reflected by continuous  
18 DCF analysis.

19 **Q: Does the continuous DCF analysis describe investors' expected**  
20 **common equity cash flows?**

1 A: Yes. Continuous compounding describes both the way capital markets  
2 work and how financial markets are commonly analyzed. The authors  
3 Brealey and Meyers, first cited by Company, noted the importance of  
4 continuous DCF analysis stating:

5           There is a particular value to continuous  
6           compounding in capital budgeting, where it may  
7           often be more reasonable to assume that a cash flow  
8           is spread evenly over the year than that it occurs at  
9           the year's end.<sup>4</sup>

10  
11 **Q: Is it appropriate to rely on continuous DCF analysis in estimating a**  
12 **utility's cost of common equity?**

13 A: Yes. A utility actually earns, accrues and receives revenues throughout  
14 the day, all year long, due to cycle billing, lock boxes, multiple pay  
15 stations and automatic account debiting. The receipt of revenues  
16 throughout the day mathematically approximates a continuous flow of  
17 funds and is best reflected by continuous compounding.

18 **Q: Is continuous compounding commonly used in financial analysis?**

19 A: Yes. Continuous compounding is routinely used to measure growth rates,  
20 value stock options and in empirical analysis, especially for longer periods  
21 that better match the life of common equity.

22 **Q: Do investors need to receive their dividends continuously to rely on**

---

<sup>4</sup> Richard A. Brealey and Stewart C. Meyers, *Principles of Corporate Finance, International Edition*, McGraw-Hill, 2003, p. 44.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19

**continuous DCF analysis that you have relied upon?**

A: No. For example, some savings accounts earn interest on a continuous basis even though these funds are not distributed moment by moment to the account holders. Rather, management continues to reinvest all of its funds on behalf of its investors until the next periodic payment. Similarly, common equity investors' revenues and earnings are collected continuously throughout the year. These funds are reinvested until there is a periodic dividend payment. The DCF analysis that I relied upon reflects this continuous stream of revenues until they are paid out as dividends.

**Q: Did Company make any other adjustments to its cost of common equity estimates besides increasing the indicated dividend?**

A: Yes. Besides upwardly adjusting the indicated dividend, Company also incorrectly advocates business risk and financial risk adjustments to its cost of common equity estimates. (Exhibit \_\_\_ (FJH-1), Sch A, p. 1).

**Q: How did Company justify these adjustments to its cost of common equity estimates?**

A: Company claims that a business risk adjustment is warranted because its comparable firms are not actually comparable in size to Interstate and a

1 financial risk adjustment is warranted since its comparable firms' bond  
2 ratings are not actually comparable to Interstate's bond rating.

3 **Q: Why are Company's upward adjustments to its estimated cost of**  
4 **common equity for business and financial risks unwarranted?**

5 A: Company noted that capital markets are efficient, but then ignored this  
6 fact by proposing these redundant adjustments to its cost of common  
7 equity estimates. Since capital markets are efficient and already reflect  
8 this publicly available information, Company's upward adjustments to the  
9 market determined cost of common equity are unwarranted.

10 **Q: How does Company justify its upward adjustment to the cost of**  
11 **common equity for business risk? (Hanley, Dir. Test., pp. 6, 21).**

12 A: Company justifies its upward adjustment to its cost of common equity  
13 estimates by a misplaced comparison of Interstate to its sample utilities.

14 **Q: Why is Company's comparison of Interstate to Alliant and the other**  
15 **publicly traded utilities in its sample misplaced?**

16 A: Company compared publicly traded firms to Interstate, which is not  
17 publicly traded, rather than to Alliant, which owns Interstate and is  
18 publicly traded. Investors can only invest in Interstate indirectly by  
19 investing in Alliant. Company, however, ignores these facts in comparing  
20 publicly traded firms with Interstate. Once this error is corrected and

1 publicly traded firms are compared to publicly traded firms, there is no  
2 justification for Company's upward adjustment to its cost of common  
3 equity estimates for any business risk as a result of a difference in size.

4 **Q: What empirical evidence is there that Company's proposed size**  
5 **adjustment is unwarranted?**

6 A: As Company noted empirical evidence shows that capital markets are  
7 efficient. (Hanley, Dir. Test., pp. 16-18). As a result, a firm's size is  
8 already reflected in the prices investors pay for an asset.

9 **Q: Is there other empirical evidence that Company's proposed size**  
10 **adjustment is unwarranted?**

11 A: Yes. For example, Morin, whom Company cites, summed up the  
12 empirical research on a firm's size, stating:

13 One plausible explanation for the size effect is the  
14 higher information search costs incurred by investors  
15 for small companies relative to large companies.  
16 This effect is likely to be negligible for all but the  
17 very small public utilities whose equity market is less  
18 than \$60 million.<sup>5</sup>

19  
20 **Q: How large are Alliant and Interstate?**

21 A: Alliant has a market capitalization of more than \$2.4 billion and Interstate  
22 has a rate base of more than \$1.7 billion. Firms these sizes are well  
23 beyond the magnitude where there may be any justification for a

---

<sup>5</sup> Roger A. Morin, *Regulatory Finance*, Public Utilities Reports, Inc., 1994, p. 330.

1 speculative size adjustment to the cost of common equity estimate, even if  
2 one ignored the fact that markets are efficient.

3 **Q: Has the Board rejected a size adjustment to the cost of common**  
4 **equity?**

5 A: Yes. The Board has rejected adjustments to the cost of common equity  
6 for one factor, such as the difference in size of the sample firms compared  
7 to the firm whose utility rates are being set. The Board noted:

8 Because the various models consider so many  
9 factors, it is difficult to isolate any one item, such as  
10 size, and make that the basis for an additional  
11 adjustment.<sup>6</sup>  
12

13 **Q: How does Company justify its upward adjustment to its cost of**  
14 **common equity estimates for financial risk? (Hanley, Dir. Test.,**  
15 **pp. 21, 58).**

16 A: Company justifies its upward adjustment to its cost of common equity  
17 estimate by a mistaken reliance on bond rating opinions. Company then  
18 erroneously “converts” ordinal qualitative bond rating opinions to precise  
19 quantitative numbers. Company’s “conversion,” however, is  
20 mathematical nonsense. It is impossible to convert an opinion to a  
21 meaningful number, as explained on Schedule G.

---

<sup>6</sup> *Interstate Power and Light Company*, Docket Nos. RPU-02-3, RPU-02-8 and ARU-02-1, “Final Decision and Order,” p. 63, April 15, 2003.

1 **Q: What other evidence is there that Company's financial risk**  
2 **adjustment to its cost of common equity estimates is unwarranted?**

3 A: According to Company, there is a precise, meaningful and reliable  
4 difference between returns and bond rating opinions. Schedule H  
5 demonstrates that Company's assumed relationship is speculative at best.  
6 For example, the utility with the lowest bond rating opinion had the  
7 second lowest cost of common equity. This result contradicts Company's  
8 claim that a cost of common equity adjustment based on bond rating  
9 opinions is warranted. Company's financial risk adjustment to its cost of  
10 common equity estimates is unwarranted.

11 **Growth Rates**

12 **Q: Does the DCF cost of common equity require judgment?**

13 A: Yes. The DCF cost of common equity does require reasoned analysis and  
14 judgment. For the most part, this judgment, based on analysis, centers on  
15 estimating a sustainable growth rate.

16 **Q: What growth rate did you rely on in your DCF analysis?**

17 A: Common equity is outstanding indefinitely and in principle, is a  
18 perpetuity. As a result, the growth rate needs to reflect common equity's  
19 long-run horizon. The expected long-run growth rate is not, however,  
20 directly observable and must be estimated.

1 **Q: Do investors take into consideration that common equity is**  
2 **outstanding potentially long into the future?**

3 A: Yes. Some investors, including Warren Buffett, one of the world's most  
4 successful investors, invest with a long-term "buy and hold" strategy,  
5 aware that common equity is potentially perpetually outstanding. This  
6 long-term horizon is also reflected in professional journals, textbooks and  
7 in the financial press.

8 **Q: Does Company agree that common equity is a long-lived asset?**

9 A: Yes. Company does acknowledge the price set by investors reflects a  
10 long-term future horizon. (Hanley, Dir. Test., pp. 6, 28-29, 33, 34-35, 49-  
11 50). Nevertheless, Company incorrectly, arbitrarily and exclusively only  
12 considered growth over the next few years in its cost of common equity  
13 estimates. (Exhibit \_\_\_ (FJH-1), Schs. G, J). Company's sole reliance on  
14 short-term growth rates is not, however, economically meaningful.

15 **Q: How does Company's partial analysis of the next few years' growth**  
16 **rate affect its proposed cost of common equity?**

17 A: Common equity is generally outstanding indefinitely, well beyond the few  
18 years Company considered. By only considering the next few years,  
19 Company's partial analysis creates an inherent flaw which cannot result in  
20 a reliable estimate of investors' cost of common equity. At best,

1 Company's claimed cost of common equity estimates are short-run earned  
2 return estimates which have not proven to be reliable.

3 **Q: Why does Company's exclusive use of a short-term projected growth**  
4 **rate result in an unreliable estimate of the cost of common equity?**

5 A: An investment needs to be considered over its expected life. Company's  
6 partial analysis does not reflect investors' returns over common equity's  
7 expected life. This is demonstrated on Schedule I.

8 **Q: How did you estimate the expected long-run growth rate?**

9 A: I began with the earnings, dividends and book value growth rates each  
10 firm has been able to achieve as well as each firm's internal growth rates.  
11 Each of these growth rates are a potential indicator of a firm's long-run  
12 growth rate. Next, I consider the factors that drove these results, making  
13 allowances for atypical results that are not representative or not likely to  
14 be relevant in the future. Judgment, based on this analysis, is then used to  
15 estimate each firm's long-run sustainable growth rate.

16 **Q: What is the internal growth rate?**

17 A: The internal growth rate is driven by earnings that are retained by the  
18 firm. By retaining some of its earnings, book value increases beyond  
19 what it would have been. Growth in book value reflects stockholders'  
20 additional investment, which provides the underlying basis for growth in

1 earnings. In turn, the growth in earnings provides a sustainable basis for  
2 growth in dividends. That is, all of these growth rates are linked together  
3 and are relevant as more fully discussed on Schedule J.

4 **Q: Why is an analysis of realized growth rates relevant?**

5 A: A reliable estimate of a firm's sustainable growth begins with its own  
6 record of growth, an analysis of the underlying factors that drive these  
7 results and the factors that are currently expected to affect its growth.

8 **Q: Do investors rely on a company's actual performance?**

9 A: Yes. Investors, credit rating agencies and financial publications such as  
10 *Value Line* rely on a firm's track record, making allowances for any  
11 unrepresentative results. For example, Graham, one of the founders of  
12 modern investing, stated the procedures he used this way:

13 In the absence of indications to the contrary, we  
14 accept the past record as at least a starting basis for  
15 judging the future.<sup>7</sup>

16 This quotation aptly describes the achieved trends that I and other  
17 investors rely upon to begin our analysis.

18 **Q: What growth rates did Company use?**

19 A: Company mechanically relied primarily on analysts' projected five-year  
20 earnings forecasts. Company, for the most part, ignored its own sample

---

<sup>7</sup> Benjamin Graham, David Dodd and Sidney Cottle, *Security Analysis: Principles and Techniques*, McGraw-Hill Book Company, 1962, p. 475.

1 companies' actual track records.

2 **Q: Is the sustainable growth rate determined solely by mechanical**  
3 **calculations?**

4 A: No. Mechanically using projected short-term earnings, earned returns or  
5 other forecasts as an estimate of the long-run growth rate is not reliable as  
6 noted on Schedules A and I.

7 **Q: Does the Board rely on mechanical calculations to estimate the cost of**  
8 **common equity?**

9 A: No. The Board has noted the cost of common equity should be based on  
10 specific facts and not on mechanical calculations.<sup>8</sup>

11 **Q: Did you consider using the five-year earnings growth rate forecasts in**  
12 **your DCF analysis?**

13 A: Yes, but reliance on these forecasts to estimate the cost of common equity  
14 as Company has done is unwarranted. These five-year forecasts are not  
15 indicators of sustainable growth, create a mismatch that distorts analysis  
16 and lead to unreliable estimates of the cost of common equity and  
17 investors' expected returns.

---

<sup>8</sup> *Interstate Power and Light Company*, Docket Nos. RPU-02-3, RPU-02-8 and ARU-02-1, "Final Decision and Order," p. 61, June 4, 2003.

1 **Q: Why do five-year earnings forecasts create a mismatch, distort**  
2 **analysis and lead to unreliable estimates of the cost of common**  
3 **equity?**

4 A: Common equity is potentially outstanding indefinitely. Company's  
5 exclusive focus on five-year forecasts creates a mismatch between the five  
6 years considered and the life of the investment. This distorts common  
7 equity investment decisions, is known to be economically unsound and  
8 cannot result in a reliable estimate of the cost of common equity. Reliable  
9 analysis needs to match the life of the investment as noted on Schedule I.

10 **Q: How do analysts' projected growth rates compare to actually**  
11 **achieved growth rates?**

12 A: Analysts' forecasts are consistently higher than actually achieved growth  
13 rates. This fact is routinely noted in academic publications and reflected  
14 in the financial press. A *Wall Street Journal* article is representative,  
15 noting:

16 Yet stock analysts are unshaken in their optimistic, if  
17 delusional, belief that most of the companies they  
18 cover will have above average, double-digit growth  
19 rates during the next several years. That is, of  
20 course, highly unlikely. Historically, corporate  
21 earnings have grown at about the same rate as the  
22 economy over time, and few expect the economy to  
23 grow at a double-digit rate any time soon.<sup>9</sup>

---

<sup>9</sup> *Wall Street Journal*, "Analysts: Still Coming Up Rosy," January 27, 2003, p. C1.

1 **Q: Why did Company rely on forecasted five-year earnings growth**  
2 **rates?**

3 A: Company claims forecasts already reflect the relevance, if any, of  
4 historical growth rates, are readily available, and that earnings are the  
5 most significant measure of value. (Hanley, Dir. Test., pp. 28-29).

6 **Q: Are forecasted five-year growth rates likely to be representative of**  
7 **investors' expectations?**

8 A: No. Investors do not rely on five-year forecasts as Company has. Among  
9 other reasons, analysts' forecasts are known to be overstated and cover  
10 only the next few years. Investors would take these facts into account, but  
11 Company, for the most part, failed to do so.

12 **Q: Are analysts' forecasts still overstated after the 2002 financial market**  
13 **regulatory reforms?**

14 A: Yes. Despite the fact that the regulatory reforms in 2002 were due put in  
15 place to address analysts' conflict of interest abuses, analysts' upwardly  
16 biased forecasts persist.

17 **Q: What evidence is there that investors take into account the fact that**  
18 **analysts' earnings growth forecasts are overstated?**

19 A: The financial press repeatedly notes analysts' projected growth rates are  
20 overstated. Since capital markets are efficient, this publicly available

1 information would be taken into account by investors and would  
2 undermine their reliance on these overstated earnings forecasts that  
3 Company uses.

4 **Q: Do institutional investors rely on analysts' forecasts?**

5 A: No. Institutional investors are well aware analysts' forecasts are  
6 overstated and instead, often rely on their own in-house analysis.  
7 Nevertheless, Company relies on overly optimistic forecasts and assumes  
8 investors, including institutional investors, which own more than 50% of  
9 Alliant's common equity, ignore information about analysts' overstated  
10 forecasts.

11 **Q: Are projected five-year earnings growth forecasts more reliable than  
12 historical growth rates?**

13 A: No. Projecting the historical long-run growth rate of the economy as a  
14 firm's growth rate was often more accurate than using analysts' projected  
15 five-year earnings forecasts.

16 **Q: Does a statistical correlation between stock prices and forecasts mean  
17 earnings growth forecasts are accurate?**

18 A: No. If analysts lowered their forecasts and the stock market price fell,  
19 stock prices and forecasts would be correlated, or move in relation to each  
20 other. Correlation, of course, is not causation. This correlation, however,

1 does not imply anything about the accuracy of analysts' initial or revised  
2 forecasts or that investors believe these forecasts are accurate. Rather,  
3 any correlation of forecasts with prices reflects investors' response to this  
4 new information and capital market efficiency. In this instance, a price  
5 drop would be a reaction to analysts' warning of an anticipated decline in  
6 expected short-run earnings, not their accuracy or the relevance of these  
7 short-run forecasts to investors' cost of common equity which is  
8 outstanding indefinitely.

9 **Q: If some investors did rely on changes in short-run forecasts, would**  
10 **Company's exclusive reliance on these forecasts to estimate the cost of**  
11 **common equity be warranted?**

12 A: No. Investors relying on changes in short-run forecasts would be trying to  
13 enhance their short-run return. Company, however, claims to estimate the  
14 cost of common equity by its exclusive and erroneous focus on the next  
15 few years forecast. Common equity is outstanding well beyond this  
16 period. As a result of this inherent and fundamental flaw, Company's  
17 methods are incapable of estimating investors' cost of common equity. At  
18 best, what Company relies on as its cost of equity estimate is a short-run  
19 forecast of earned return. Short-run forecasts and earned returns have not  
20 proven to be a reliable indicator of growth or the cost of common equity.

1 **Q: If analysts' five-year earnings forecasts were accurate, would they be**  
2 **a reliable indicator of sustainable growth in the DCF analysis?**

3 A: No. Even if there were any merit to Company's use of overly optimistic  
4 short-run projected five-year earnings forecasts, the exclusive use of these  
5 forecasts as an indicator of the sustainable growth rate results in a  
6 mismatch. Common equity is potentially outstanding indefinitely and  
7 requires analysis that matches this long horizon. Analysts' forecasts  
8 relied upon by Company only cover the next five years. This distorts  
9 Company's analysis and is not an indicator of sustainable growth nor a  
10 reliable method to estimate the cost of common equity. Reliable analysis  
11 needs to match the life of the investment as noted on Schedules A and I.

12 **Q: Does Company agree that analysis needs to match the life of the**  
13 **investment?**

14 A: Yes. Company claimed to consider the long-term consistent with an  
15 investment in common equity, but then ignored this fundamental issue by  
16 relying on five year projected earned returns. (Hanley, Dir. Test., pp. 5,  
17 28-29). Common equity, however, is outstanding well beyond the period  
18 Company relied upon. As a result, Company's estimate cannot result in a  
19 reliable cost of common equity.

20 **Q: Are studies relevant which purport to demonstrate that forecasts are**

1 **better than historical growth rates as an indicator of growth?**

2 A: No. What I have done and what is commonly done in these studies differ.  
3 I have taken into account the fact that a firm's historical record is the  
4 starting point of reliable analysis and not the end of analysis, which is  
5 common in these studies. The mechanical use of growth rates, which are  
6 simply extrapolated in these studies, does not conform to what I have  
7 done in my analysis. The mechanical extrapolations used in these studies  
8 also does not conform to what is taught in academic textbooks, what the  
9 financial press advocates or more importantly, what investors do.

10 **Q: Does Company distinguish between the mechanical extrapolation of**  
11 **growth rates used in the studies it cites and your analyses?**

12 A: No. In the past, Company did not distinguish between these studies and  
13 my analysis. Instead, Company treated the analysis as if it were a mere  
14 extrapolation of historical trends like those in the studies it cites, even  
15 though those studies are not germane to what I have done or real investors  
16 do. (RPU-08-1, Hanley, Rebut. Test., p. 52).

17 **Q: Are historical growth rates readily available to investors?**

18 A: Yes. Historical growth rates are commonly provided by publicly traded  
19 firms in their stockholders' annual reports, on their websites and in the  
20 financial press. For example, *Value Line* includes historical growth rates

1 in earnings, dividends and book value as well as the underlying data as  
2 depicted on Schedule K. This provides a more reliable basis than  
3 analysts' forecasts to estimate a sustainable growth rate.

4 **Q: Why does a firm's track record provide a more complete and reliable**  
5 **basis to estimate a sustainable growth rate than analysts' forecasts?**

6 A: Forecasts are known to be overstated. Short-term forecasts also create a  
7 mismatch with the underlying common equity investment which is  
8 outstanding indefinitely. Finally, forecasts are commonly provided  
9 without supporting information such as the assumptions, data or analysis  
10 that was relied upon to generate these forecasts.

11 **Q: How did you determine the growth rates used in your DCF analysis?**

12 A: I began with each firm's historical record, taking into account the  
13 underlying factors that drove these results as well as current and likely  
14 circumstances. This conforms to what investors, analysts, *Value Line* and  
15 others do; they make allowances to reflect normal circumstances just as I  
16 have done with each of the growth rates I estimated.

17 **Q: How would this analysis apply to Alliant's expected growth rate?**

18 A: For example, in estimating a likely sustainable growth rate for Alliant, I  
19 took into effect the factors that have driven Alliant's growth rates in the  
20 past and whether these factors were likely to persist. For example on

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23

Schedule L, page 3, I stated:

The ten-year book value per share growth rate appears to have been driven by a series of unrepresentative returns that do not reflect either Alliant's current returns or current authorized returns for regulated utilities.

As a result, Alliant' ten-year book value growth rate was not relied upon as representative of current or likely circumstances. Schedule L, page 3, has a complete analysis of what Alliant actually has achieved, which of these achievements are most likely to persist, and which will be a useful indicator of sustainable growth.

**Q: Did you use this same analysis to estimate the expected growth rates for the other combination electric and gas utilities?**

A: Yes. I also used this same approach for the other utilities I relied upon, beginning with an analysis of what each firm has achieved, the factors behind these achievements and whether these factors could persist and be a likely indicator of sustainable growth. This is explained in detail on Schedule L pages 4 though 6.

**Q: How does this analysis of each firm's sustainable growth rate compare with the bases for Company's growth rates?**

A: Literally, there is no comparison. Company did not provide any analyses of the bases for any of the forecasted growth rates used in its testimony or

1 why these growth rates would be plausible to investors.

2 **Q: Why did Company fail to provide the basis for the growth rates it**  
3 **used?**

4 A: For the most part, Company cannot provide the assumptions, data, or the  
5 methods relied upon to support the forecasted growth rate opinions used  
6 in its testimony. This information is generally not public. In short, there  
7 is no way to review the reasonableness of these forecasts. Investors,  
8 including institutional investors, according to Company, are supposed to  
9 rely on these forecasts merely because they exist, not because they are  
10 relevant, explained or plausible.

11 **Q: What are the implications of Company's estimates based on forecasts**  
12 **that are provided without a reasoned foundation?**

13 A: According to Company, investors ignore reasoned analysis, ignore the  
14 known limitations of short-term forecasts, ignore analysts' track records,  
15 which are spotty at best, and ignore analysts' ongoing optimism of future  
16 growth. Investors, however, consider these known factors.

17 **Q: What are the results of your DCF analysis?**

18 A: My analysis supports a DCF cost of common equity for Alliant of about  
19 10.0%. The sample combination electric and gas utilities' DCF cost of  
20 common equity range from about 9.7% to 10.8% and averaged about

1 10.4%. A summary of each firm's DCF costs of common equity is on  
2 Schedule M; supporting details are found on Schedules E and L.

3 **Q: How do these results compare to Company's estimated DCF cost of**  
4 **common equity for its sample utilities?**

5 A: These results fall within the unusually wide range of Company's  
6 estimates. Company's sample utilities' cost of common equity ranged  
7 from 7.9% to 29.9% with a median, which is not distorted by  
8 unrepresentative estimates, of 10.7%. Company also estimated a 10.8%  
9 cost of common equity for Alliant based on its upward adjustment to the  
10 indicated dividend. (Exhibit \_\_\_ (FJH-1), Sch G).

11 **Q: Is Company's unusually high estimate of a cost of common equity of**  
12 **29.9% for a low-risk utility plausible?**

13 A: No. A 29.9% cost of common equity would be implausible even as the  
14 market's cost of common equity, an unregulated firm's cost of common  
15 equity, and more to the point, particularly implausible for a low-risk  
16 regulated utility's cost of common equity. Company's 29.9% estimated  
17 cost of common equity for a low-risk utility underscores the limitations of  
18 Company's mechanical use of unsustainable short-term forecasts.

19

## Capital Asset Pricing Model

**Q: Did you consider the use of any other methods to estimate the cost of common equity?**

A: Yes. I also relied upon the capital asset pricing model (CAPM). The CAPM is another market-based approach used to estimate the cost of common equity.

**Q: Is one method better than another to estimate the cost of common equity?**

A: Yes. DCF analysis most directly estimates the cost of common equity and best describes common equity investors' return: dividends, if any, and the price when the stock is sold. DCF analysis directly focuses on investors' cash flows and how they make financial decisions.

**Q: What evidence is there that the DCF analysis cost of common equity is preferred?**

A: For example, the author Morin, whom Company cites, stated:

[D]CF is the most accurate approach to valuation because it takes into account the amount, timing and risks of the future expected cash flows of an investment project.<sup>10</sup>

**Q: How does the CAPM differ from DCF analysis?**

---

<sup>10</sup> Roger A. Morin and Sherry L. Jarrell, *Driving Shareholder Value*, McGraw-Hill Companies, 2001, p. 313.

1 A: In contrast to DCF analysis, which more directly estimates investors'  
2 expected returns, the CAPM indirectly estimates the cost of common  
3 equity by estimating other factors. Each of these estimates, however,  
4 creates its own measurement issues and introduces some uncertainty. The  
5 CAPM can also be unduly influenced by factors that affect credit markets  
6 generally and interest rates but are not typically germane to public  
7 utilities. Nevertheless, the CAPM is still a useful indicator of the cost of  
8 common equity.

9 **Q: How is the CAPM cost of common equity estimated?**

10 A: The CAPM cost of common equity is based on estimates of the risk-free  
11 interest rate, the market return, beta (a measure of risk), and the equity  
12 risk premium. The CAPM is written as:  $K = I + (b * RP)$  where K is the  
13 cost of common equity, I is the risk-free interest rate, b is beta and RP is  
14 the equity risk premium. The equity risk premium is the market return  
15 (MR) less the risk-free interest rate. These and other details of the CAPM  
16 are found on Schedule N.

17 **Q: How is the risk-free interest rate measured?**

18 A: A U.S. Treasury security is commonly used as a measure of the risk-free  
19 rate. Shorter-term Treasury bills would be the best indicator of the risk-  
20 free rate, except that these rates are more directly affected by the Federal

1 Reserve Board's policy actions and may not reflect interest rates  
2 determined by investors in capital markets.

3 **Q: What did you rely on as an indicator of the risk-free interest rate?**

4 A: I relied on 20-year Treasury bonds as an indicator of the risk-free interest  
5 rate, even though the yield on longer-term bonds is typically higher than  
6 shorter-term bonds.

7 **Q: Why is the yield higher for longer-term Treasury bonds than for  
8 shorter-term Treasury bills?**

9 A: Because it is harder to be certain of events further into the future, longer-  
10 term bonds are riskier than shorter-term bonds, all other things being  
11 equal. As a result, longer-term bonds usually have a higher yield than  
12 shorter-term bonds, since investors knowingly take on risks only if returns  
13 are commensurate with that risk.

14 **Q: What yield did you use in your CAPM as a measure of the risk-free  
15 rate?**

16 A: According to Morningstar's estimates, the long-run 20-year Treasury  
17 bond yield is 5.7% (geometric mean).

18 **Q: What is the current yield on 20-year Treasury bonds?**

19 A: Recent yields on 20-year Treasury bonds reflect both the Federal Reserve  
20 Board's actions to lower interest rates and investors' current flight to

1 safety as a result of the collapse of collateralized mortgage securities. As a  
2 result, 20-year Treasury bond yields may not be representative. As of  
3 May 2009, the current yield on 20-year Treasury bonds is 4.2%. The  
4 average yield on 20-year Treasury bonds for the 12 months ending May  
5 2009 is 4.1%. This average yield is more likely to be representative as it  
6 is not unduly affected by the current flight to safety. Other yields are  
7 depicted on Schedule O.

8 **Q: Why has the Federal Reserve Board been lowering interest rates?**

9 A: The Federal Reserve Board has been lowering interest rates, among other  
10 efforts, in an attempt to reduce the recessionary effects of the collapse of  
11 subprime mortgage securities. This collapse is now affecting access to  
12 credit markets, stock markets, employment, income and earnings.

13 **Q: How is the market return determined?**

14 A: This return is commonly estimated based on a broad market index such as  
15 the Standard & Poor's 500. The Standard & Poor's 500 is used as a rough  
16 proxy for all possible investments.

17 **Q: What is the market return for the Standard & Poor's 500?**

18 A: According to Morningstar's estimates, the long-run geometric mean for  
19 the Standard & Poor's 500, which has a beta of 1, is 9.6%.

20 **Q: Why do you rely on the geometric mean as a measure of the long-run**

1 **market return?**

2 A: As Morningstar, whom Company cites, noted, the geometric mean is the  
3 best measure of past performance. (Exhibit \_\_\_ (FJH-1), Sch. L, p. 2).

4 As a result, the geometric mean is the best indicator of past returns for  
5 long-lived assets like common equity stocks. The geometric mean always  
6 correctly measures the average rate of return from an initial investment to  
7 its cumulative value.

8 **Q: Can you demonstrate how the geometric mean correctly measures the**  
9 **rate of return on an investment?**

10 A: Yes. The examples on Schedule P demonstrate how the geometric mean  
11 growth rate always correctly measures and describes investors' returns  
12 from the initial investment to its cumulative value.

13 **Q: Is the geometric mean commonly used in finance?**

14 A: Yes. Investors, financial publications and academicians rely, at least in  
15 part, on the geometric mean to measure actual growth, compounded  
16 returns, and expected returns especially for long-lived assets like common  
17 equity.

18 **Q: Did Company rely on the geometric mean in its CAPM?**

19 A: No. Company erroneously relied on a projected arithmetic average  
20 market return of 12.3%. (Hanley, Dir. Test., p. 51). This is well in excess

1 of the long-run market return of 9.6% (geometric) and even more than the  
2 overstated 11.7% (arithmetic average) market return estimated by  
3 Morningstar, an authority whom Company cites.

4 **Q: Why is the arithmetic average return Company relies on in its CAPM**  
5 **overstated and erroneous?**

6 A: As Morningstar noted, returns are not normally distributed.<sup>11</sup> As a result,  
7 the arithmetic average is greater than the geometric average and is not  
8 representative of typical returns. As more fully explained on Schedule Q,  
9 use of the arithmetic average is erroneous in these circumstances.

10 **Q: How do investors reflect the fact that returns are not normally**  
11 **distributed?**

12 A: Current market volatility underscores that extreme events are possible.  
13 These extreme events are examples of how returns differ from a normal  
14 distribution as commonly assumed in research. Investors would take this  
15 information as reflected in their current experience of the precipitous  
16 decline in stock, bond and other financial markets into account. In relying  
17 on the arithmetic return of 12.3%, Company incorrectly assumes investors  
18 ignore market volatility, including their recent experience, in forming  
19 their expectations. This assumption is, at best, unlikely.

---

<sup>11</sup> *Ibbotson SBBI 2009 Classic Yearbook*, Morningstar, p. 135.

1 **Q: What did you rely on as an indicator of the expected market return?**

2 A: I relied upon the 9.6% geometric average market return estimated by  
3 Morningstar as the best measure of past returns as well as the best  
4 indicator of expected returns. The use of the geometric average as both  
5 the best measure of past returns and likely expected returns is more fully  
6 discussed on Schedules P and Q.

7 **Q: Is the 9.6% historical return on the stock market typical?**

8 A: No. The author Ibbotson, whom Company cites, stated:

9 We've had two centuries of remarkably constant  
10 average returns. But we've been the most successful  
11 country over the past two centuries, so it may be a  
12 high estimate of the performance going forward.<sup>12</sup>

13 Morningstar, whom Company also cites, noted that the last few decades  
14 had "impressive" returns and that these are not likely to persist.<sup>13</sup>

15 **Q: What evidence is there that prospective returns are likely to be lower  
16 than the recent past?**

17 A: Ibbotson's and Morningstar's warnings of lower stock market returns is  
18 supported by an analysis of returns over longer periods, including what  
19 drove these returns, and factors that are likely to persist in the future. For  
20 example, Warren Buffett, a particularly successful investor, analyzed past

---

<sup>12</sup> *Wall Street Journal*, "History 101: Past Is Imperfect Guide," May 23, 2000, p. C1.

<sup>13</sup> *Ibbotson SBBI 2009 Classic Yearbook*, Morningstar, 2009, p. 143.

1 returns, the factors that drove these returns and the improbability of those  
2 factors persisting in the future. His analysis is presented in Schedule R.

3 **Q: How is the equity risk premium estimated?**

4 A: The equity risk premium is estimated as the difference between the  
5 estimated market return and the estimated risk-free rate of return.

6 **Q: What equity risk premium did you rely on in your analysis?**

7 A: Based on Morningstar's estimates, the equity risk premium is about 3.9%,  
8 which is the difference between the estimated geometric market return of  
9 9.6% and the estimated geometric yield of about 5.7% on 20-year  
10 Treasury bonds. This is depicted on Schedule S, Table I.

11 **Q: Are equity risk premiums stable over time?**

12 A: No. Risk premiums are quite volatile. This is documented on Schedule T  
13 which is based on data Morningstar estimated. According to Morningstar,  
14 the risk premium over Treasury bills ranged from about 53.5% to -44.4%  
15 over the 1926 to 2008 period with a standard deviation of approximately  
16 21%.

17 **Q: What is the significance of the volatility in risk premiums?**

18 A: As a result of this volatility, risk premiums, such as those used in the  
19 CAPM, are not statistically meaningful.

20 **Q: How is statistical significance determined?**

1 A: Generally, if the standard deviation is more than half of the estimate of its  
2 average, the average is not statistically significant and inferences based on  
3 this data would not be reliable. For example, according to Morningstar's  
4 estimates, the market risk premium over Treasury Bills averaged 8.1%  
5 over the years 1926 to 2008. The market risk premium's standard  
6 deviation was about 21%. Since the standard deviation is several times  
7 larger than the average, the average risk premium is not reliable  
8 statistically. This data is documented in Schedule T, page 1.

9 **Q: Does the inherent volatility of risk premiums mean the CAPM should**  
10 **not be used to estimate the cost of common equity?**

11 A: No. The CAPM is still useful as a systematic way to estimate the cost of  
12 common equity even though the risk premium routinely used is not  
13 statistically meaningful. However, as a result of this volatility and  
14 statistical insignificance, the CAPM and other risk premium methods  
15 Company used are not reliable enough to emphasize as a method to  
16 estimate the cost of common equity.

17 **Q: How are betas calculated?**

18 A: Beta is a measure of the correlation between the market return and a  
19 firm's stock return. In practice, weekly or monthly prices are commonly  
20 used as a proxy for returns which are then used to measure this

1 correlation. This is an objective estimate of the variability of a firm's  
2 price compared to the market and is an indicator of risk. *Value Line*  
3 calculates its betas over a five year period. Beta, as a measure of risk,  
4 however, is surrounded by controversy over how the beta should be  
5 measured, if it should be adjusted and, if so, how it should be adjusted.

6 **Q: Are utilities' betas stable over time?**

7 A: No. Utilities' estimated betas vary over time, sometimes increasing and  
8 decreasing without any consistent trend.

9 **Q: What betas did you rely on in the CAPM?**

10 A: I relied on *Value Line's* adjusted betas. Since beta is an estimate of risk,  
11 the higher the beta, the higher the risk and the higher the cost of common  
12 equity. Alliant's *Value Line* beta is .70. The combination electric and gas  
13 utilities' betas ranged from .65 to .75 and averaged about .70. This is  
14 depicted on Table II of Schedule S. These betas reflect the somewhat  
15 lower risks of combination electric and gas utilities compared to the  
16 riskier Standard & Poor's 500, which has a beta of 1.

17 **Q: What betas does Company rely on in its CAPM?**

18 A: Company also relied on adjusted betas from *Value Line*.  
19 (Exhibit \_\_\_ (FJH-1), Sch. O, p. 2).

1 **Q: Why did Company adjust the traditional CAPM and use ECAPM to**  
2 **estimate the cost of common equity?**

3 A: The cost of common equity has been found to be higher than what the  
4 traditional CAPM suggests for firms with a beta lower than 1 and lower  
5 than what was suggested by the traditional CAPM for firms with a betas  
6 greater than 1. The estimated risk-free rate of return has also been found  
7 to be higher than suggested by the traditional CAPM. Company's  
8 ECAPM is an attempt to reflect these empirical results which, graphically,  
9 is a flatter line depicting the relationship between beta and the estimated  
10 cost of common equity. (Hanley Dir. Test., p. 48).

11 **Q: Should an adjusted CAPM (ECAPM) be used to estimate the cost of**  
12 **common equity as Company has done?**

13 A: No. The concerns Company claims to address by using the ECAPM have  
14 already been addressed through (1) the use of 20-year Treasury bond  
15 yields as the risk-free rate of return, and (2) the use of *Value Line's*  
16 adjusted betas.

17 **Q: Why does using the yield on 20-year Treasury bonds as an estimate of**  
18 **the risk-free interest rate better conform to empirical results?**

19 A: Empirical studies suggest a risk-free rate of return greater than short-term  
20 Treasury bills traditionally used in the CAPM. In the process of using the

1 higher yields of 20-year Treasury bonds as an indicator of the risk-free  
2 rate in the CAPM, both Company and I already conform to empirical  
3 results.

4 **Q: How does using an adjusted beta as a measure of a stock's risk**  
5 **conform to empirical results?**

6 A: The beta adjustments made by *Value Line* increase the cost of common  
7 equity suggested by the traditional CAPM for firms with a beta less than 1  
8 as observed empirically. Similarly, *Value Line's* adjusted betas decrease  
9 the cost of common equity suggested by the traditional CAPM for firms  
10 with betas above 1 as observed empirically. In the process of using *Value*  
11 *Line's* adjusted betas, the CAPM both Company and I relied upon already  
12 conforms to these empirical results. This is depicted on Schedule U.

13 **Q: Should the Board adjust the traditional CAPM that you use?**

14 A: No. Because of the methods used, the CAPM both Company and I relied  
15 upon to estimate the cost of common equity already reflects empirical  
16 results. Since the CAPM estimates already conform to empirical results,  
17 Company's additional explicit adjustments would be redundant and  
18 unwarranted.

19 **Q: Based on this analysis, what is Alliant's CAPM cost of common**  
20 **equity?**

1 A: Alliant's CAPM cost of common equity is 8.4%. This cost of common  
2 equity conforms to the sample combination electric and gas utilities'  
3 CAPM cost of common equity which ranged from about 8.2% to 8.6%,  
4 and averaged about 8.4%. These results are depicted on Table III of  
5 Schedule S.

6 **Q: Did you compare these results to Company's CAPM cost of common**  
7 **equity estimates?**

8 A: No. Company's CAPM estimates of the cost of common equity are not  
9 comparable. Company relied on an improbable forecasted five-year  
10 market earned return of about 29% in its CAPM. (Exhibit \_\_\_ (FJH-1),  
11 Schedule O, p. 3, note 1).

12 **Q: Why is Company's use of a projected market return of about 29% in**  
13 **its CAPM improbable?**

14 A: Company's 29% forecasted market earned return is improbable when  
15 compared to Morningstar's estimated market returns of 9.6% (geometric)  
16 and even the overstated 11.7% (arithmetic average) return for the period  
17 1926 to 2008. Company's projected market earned return of about 29% is  
18 also improbable over the next few years that Company exclusively  
19 focuses on as the economy works through a major recession. In addition,  
20 Company's improbable 29% projected market earned return over the next

1 few years is not sustainable over the long period that common equity is  
2 outstanding.

3 **Q: Can short-term earned returns differ from expected long-run average**  
4 **market returns?**

5 A: Yes. Earned returns can be higher or lower than the average market  
6 return over any one period. The author Morin, whom Company cited as  
7 an authority, advocated relying on a complete economic cycle in order to  
8 rely on earned returns that are more likely to be representative. Over the  
9 long-run period applicable to common equity, which is outstanding  
10 indefinitely, returns will converge to the average return as boom and bust  
11 periods of financial activity offset each other. Company failed to follow  
12 its own authority's recommendation, however. As a result, Company's  
13 optimistic short-term projections do not represent likely returns that  
14 reflect investors' expected long-run cost of common equity.

15 **Q: How does Company's use of an unlikely market return affect its**  
16 **CAPM estimates of the cost of common equity?**

17 A: Risk premiums are measured as the market return less the risk-free rate of  
18 return. Company's use of an improbable forecast of a short-term market  
19 earned return of about 29% results in an unrealistically high risk premium  
20 estimate of more than 25%. As a result of Company's limited use of this

1 overstated and unlikely risk premium, Company's CAPM cost of common  
2 equity is overstated. (Exhibit \_\_\_ (FJH-1), Schedule O, p. 3).

3 **Q: What risk premium does Morningstar's estimated data support?**

4 A: Using the geometric return on the Standard & Poor's 500 and the  
5 geometric yield on 20-year Treasury bonds estimated by Morningstar  
6 would support a risk premium of 3.9%. Even assuming there was any  
7 merit in using the arithmetic market return and average long-term  
8 Treasury bond yield in estimating risk premiums, Morningstar's analysis  
9 would still only support a risk premium of 5.6%. Company relies in part  
10 on an estimated risk premium more than four times even the arithmetic  
11 average estimate of the market risk premium.

12 **Q: What is the significance of Company's risk premium estimate that is  
13 more than four times higher than historical risk premium estimates?**

14 A: In spite of recent events, the long-run risk of stocks has been decreasing  
15 and the long-run risk of bonds has been increasing. Since returns follow-  
16 risk, and risk premiums are the market return less the bond return, risk  
17 premiums, as a mathematical necessity, must decline. Company's risk  
18 premium estimates do not reflect this decline.

19 **Declining Risk Premiums**

20 **Q: What evidence is there that the risks of investing in stocks have**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30

**decreased?**

A: Volatility in the stock market, an indicator of risks, has decreased according to Morningstar. Company cites Morningstar, yet apparently ignores or disagrees with the conclusion:

The volatility of stocks and long-term government bonds is shown by the bar graphs of monthly returns in Graph 6-1. The stock market was tremendously volatile in the first few years studied; this period was marked by the 1920s boom, the crash of 1929-1932, and the Great Depression years. The market settled after World War II and provided more stable returns in the postwar period. In the 1970s and 1980s, stock market volatility increased, but not to the extreme levels of the 1920s and 1930s. In the 1990s and 2000s, volatility was relatively moderate.<sup>14</sup>

This decline in the volatility of stock returns is depicted in Schedules T and V.

**Q: Has the risks of investing in bonds changed?**

A: Yes. According to Morningstar,

Bonds present a mirror image. Long-term government bonds were extremely stable in the 1920s and remained so through the crises years of the 1930s, providing shelter from the storms of the stock markets. Starting in the late 1960s and early 1970s, however, bond volatility soared; in the 1973-1974 stock market decline, bonds did not provide the shelter they once did. Bond pessimism (i.e., high yields) peaked in 1981 and subsequent returns were sharply positive. While the astronomical interest

---

<sup>14</sup> *Ibbotson SBBI 2008 Classic Yearbook*, Morningstar, 2009, p. 95.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

rates of the 1979 to 1981 period have passed, the volatility of the bonds market remains higher.<sup>15</sup>

This increase in the volatility of bond returns is also depicted in Schedules T and V.

**Q: What caused the volatility of bonds to increase?**

A: In the late 1970's to early 1980's, the Federal Reserve Board changed its focus from managing interest rates to managing the money supply. This added to the volatility of investing in bonds.

**Q: What caused the volatility of stocks to decrease?**

A: Factors that led to a less volatile stock market included a growing awareness of investors about the advantages of investing in stocks. Investors were more willing to invest in stocks just about the time that brokerage fees were being lowered and mutual funds became available. These factors in turn, lowered the costs of diversification, which decreases the risks of investing in common equities.

**Q: Why is the volatility in the stock and bond markets important?**

A: As a result of the increased risks in bonds and the decrease in risk of stocks over the long-run, the expected risk premium is smaller than the average measured in the past.

**Q: How does the decrease in stock volatility and the increase in bond**

---

<sup>15</sup> *Ibid.* p. 95.

1 **volatility affect risk premiums?**

2 A: Risks are indicated by volatility. As long-run stock volatility has  
3 declined, the risk of investing in stocks has declined. Since return follows  
4 risks, there is a decline in investors' expected stock returns. As the  
5 volatility in bonds has increased, the long-run risks of investing in bonds  
6 have increased. As a consequence, expected bond returns have increased.  
7 Since risk premiums are measured by subtracting the now relatively  
8 higher bond returns from the now relatively smaller stock returns, risks  
9 premiums, as a mathematical necessity, decline.

10 **Q: Can you demonstrate how the current risks of stocks and bonds have**  
11 **changed?**

12 A: Yes. The Morningstar data depicted on Schedule V reveals a declining  
13 standard deviation for large stocks such as those included in the Standard  
14 & Poor's 500 Index and an increasing standard deviation for long-term  
15 Treasury bonds. Since the standard deviation is one indicator of risk, the  
16 relative risks of stocks included in the Standard & Poor's 500 have  
17 decreased and the relative risks of long-term bonds have increased.

18 **Q: Are investors aware risk premiums are declining?**

19 A: Yes. The decline in risk premiums has been noted in professional  
20 journals and in the financial press. Alan Greenspan, former Chair of the

1 Federal Reserve Board, discussed the decline in risk premiums as long  
2 ago as 1999.<sup>16</sup>

3 **Q: Does Company propose any other increase in risk premiums?**

4 A: Yes. Company compounds its error of relying on unusually high risk  
5 premiums by also advocating that the Board use a higher risk premium  
6 than what it has used in the past. (Exhibit \_\_\_ (FJH-1), Sch. O, p. 2;  
7 Hanley Dir Test., p. 45). But this proposal, like Company's comparable  
8 earnings method, is not market based and cannot result in an estimate of  
9 investors' expected premium over bonds or their cost of common equity.  
10 Investors determine their expected return on equity in capital markets.

11 **Q: How does Company justify increasing the Board's risk premium  
12 range when the long-run trend has been a decrease in risk premiums?**

13 A: Company erroneously relied on a review of authorized returns determined  
14 by regulators as support for increasing the Board's risk premium range.

15 **Q: Why is Company's reliance on authorized returns determined by  
16 regulators to justify increasing risk premiums erroneous?**

17 A: As Company noted, but then ignored, authorized return on equity of other  
18 regulated firms should not be relied upon to establish a cost of equity  
19 because this would be an exercise in circularity. (Hanley, Dir. Test., p.

---

<sup>16</sup> The Outlook, *Wall Street Journal*, Dow Jones & Company, November 1, 1999, p. C1.

1 53). Nevertheless, Company relies on authorized returns to justify  
2 increasing the Board's risk premium range. In turn, this new range would  
3 be used to establish the return on equity in this proceeding. Company's  
4 proposed use of authorized returns to determine a higher risk premium  
5 without any reference to market prices determined by investors that reflect  
6 their expected returns is, however, incapable of estimating a fair return.

### 7 **Company's Comparable Earnings**

8 **Q: Is Company's comparable earnings approach a reliable indicator of**  
9 **investors' cost of common equity?**

10 **A:** No. Contrary to Company's erroneous assertions, the comparable  
11 earnings approach is not market based. (Hanley, Dir Test., p. 54).

12 Company's reliance on its comparable earnings approach is similar to its  
13 reliance on authorized returns. Neither of these approaches is market-  
14 based and as a result, neither is capable of estimating investors' market  
15 determined cost of common equity. As the author Morin, whom  
16 Company cites, but apparently disagrees, stated:

17 There are four broad generic methodologies available  
18 to measure the cost of equity: DCF, Risk Premium,  
19 and Capital Asset Pricing Model (CAPM), which are  
20 market-oriented, and Comparable Earnings, which is  
21 accounting-oriented.<sup>17</sup>  
22

---

<sup>17</sup> Roger A. Morin, *Regulatory Finance*, Public Utilities Reports, Inc., 1994, p. 238.

1 **Q: Why is Company's comparable earnings approach not a market-**  
2 **based cost of common equity?**

3 A: Company's comparable earnings estimates of the cost of common equity  
4 are based solely on book value. Company's comparable earnings  
5 estimates do not take into account market prices or changes in market  
6 prices which reflect investors' expected returns. If, for example, the  
7 market price for a firm included in Company's non-utility sample changed  
8 by 10%, 100%, or any other amount, there would be no effect on  
9 Company's comparable earnings estimate of the cost of common equity  
10 for that firm.

11 **Q: Why is it important to rely on the market price to determine the cost**  
12 **of common equity?**

13 A: Investors' expected returns are based on the market prices they pay, not  
14 book value. The price paid by investors reflects the common equity return  
15 they expect to earn. Since Company's earnings approach is based solely  
16 on book value, it is not relevant to an estimate of the cost of common  
17 equity investors expect.

18 **Q: Does the Board consider the comparable earnings approach a**  
19 **market-based estimate of investors' cost of common equity?**

1 A: No. The Board has consistently rejected claims that the comparable  
2 earnings approach was a market-based method to estimate the cost of  
3 common equity. As long ago as 1968, the Board's predecessor, the Iowa  
4 State Commerce Commission, stated:

5 Realized returns on book equity do not tell us,  
6 however, what return the investor demands on his  
7 money before he will commit it to equity investment.  
8 This is what we are after in determining the required  
9 return on equity and this information is reflected in  
10 the market place in the prices paid for common  
11 stocks. Realized earnings on book equity do not tell  
12 us whether such earnings are reasonable or what  
13 reasonable earnings would be nor furnish any clue to  
14 the investor's view of such earnings. Without resort  
15 to market data, reliance on earnings ignores the  
16 investor's appraisal of risk and return requirements  
17 based on such appraisal, and is not a valid basis  
18 conceptually.<sup>18</sup>

19 This precedent was most recently reflected in the Board's order in Docket  
20 No. RPU-07-3.<sup>19</sup>

21 **Q: Does Company rely on its comparable earnings estimate of the cost of**  
22 **common equity?**

23 A: No. Even Company rejected its own comparable earnings cost of  
24 common equity estimates in this docket. (Hanley, Dir. Test., p. 56).

25

---

<sup>18</sup> *Davenport Water Co.*, 76 PUR3d 209, 241 (Iowa State Commerce Commission 1968).

<sup>19</sup> *Iowa-American Water Company*, Docket No. RPU-07-3, "Order Setting Temporary Rates and Approving Corporate Undertaking," pp. 6-7, November 28, 2007.

1 **Authorized Returns**

2 **Q: How do Company's projected cost of common equity estimates**  
3 **compare with authorized utility returns?**

4 A: Company's projected earned return estimate of 11.8% as its cost of  
5 common equity exceeds the authorized returns depicted on Schedule W.  
6 Electric and gas utility authorized returns averaged about 10.3% from  
7 December 2007 to November 2008.

8 **Q: Are authorized returns a reliable basis for estimating the cost of**  
9 **common equity?**

10 A: No. The cost of common equity is best estimated by analysis of financial  
11 markets. Authorized returns in other jurisdictions, like comparable  
12 earnings based on book value, are not likely to reflect the cost of common  
13 equity, investors' expected returns, or a fair return.

14 **Q: Are there other factors that limit relying on authorized returns from**  
15 **other jurisdictions to determine the cost of common equity?**

16 A: Yes. There is no guarantee of comparable test years, similar regulatory  
17 principles, or similar factual circumstances, each of which limits the  
18 usefulness of any comparison. These limitations were noted by the author  
19 Phillips, whom Company cited. (Hanley Dir. Test., p. 18). Phillips states:

20 In discussing allowed rates of return, however, it  
21 must be emphasized that any rate by itself is

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

meaningless unless considered in connection with a  
commission's entire order;....<sup>20</sup>

**Q: Are authorized returns on equity taken out of context from the whole  
order a reliable indicator of the cost of common equity?**

A: No. For example, Standard & Poor's notes:

Regulators' authorizing high rates of return is of little  
value unless the returns are earnable.<sup>21</sup>

The only way to determine if returns are earnable is to take the whole  
order into account as well as that regulatory body's precedents.

**Q: Should the Board rely on authorized returns in other jurisdictions to  
determine the return on equity in this docket?**

A: No. Authorized returns are determined by regulators and can reflect many  
factors besides the cost of common equity. The cost of common equity is  
determined by investors in capital markets and is best estimated from  
market data that reflect investors' expectations.

**Concluding Comments & Recommendations**

**Q: What cost of common equity does your market-based DCF and  
CAPM analysis support for a regulated utility?**

A: According to my DCF analysis, Alliant's cost of common equity is 10%.  
This estimate is consistent with the DCF cost of cost common equity I

---

<sup>20</sup> Charles F. Phillips, Jr., *The Regulation of Public Utilities, Public Utilities Reports Inc.*, 1988, p. 365.  
<sup>21</sup> Standard & Poor's *Corporate Ratings Criteria*, p. 31 included in (Exhibit \_\_ (FJH-1), Sch B, pp. 1-9).

1 estimated for my sample combination electric and gas utilities which  
2 ranged from 9.7% to 10.8% and averaged 10.4%. I also considered the  
3 CAPM estimates of the cost of common equity which ranged from 8.2%  
4 to 8.6% and average 8.4%. Taken together, these results suggest that the  
5 DCF cost of common equity I estimated for Alliant of 10% is a reasonable  
6 estimate of the cost of common equity for a low-risk combination electric  
7 and gas utility. This estimate is consistent with my DCF analysis and  
8 given my CAPM analysis, is taken as the upper bound of Alliant's cost of  
9 common equity for its regulated Iowa utility.

10 **Q: Why should the 10% cost of common equity be the upper bound on**  
11 **Alliant's Iowa utility?**

12 **A:** This estimate of the cost of common equity is based on Alliant and other  
13 combination electric and gas utilities. Other utilities generally do not  
14 have the preapproval of a return on equity, among other things, for their  
15 new generation plants over the life of the plant, like Alliant's Iowa  
16 subsidiary does. The certainty of the authorized return for the life of the  
17 plant lowers the risk of these assets. A cost of common equity based on  
18 the lower end of my DCF analysis or the Board's analysis should be taken  
19 as a high estimate of the cost of common equity for a utility with so much

1 of its rate base locked into a return with predictable and stable long-term  
2 cash flows.

3 **Q: How much of Interstate’s rate base is under the certainty of a return**  
4 **on equity under advanced ratemaking principles?**

5 A: According to Company, by the end of 2009, about 28% of Interstate’s  
6 generation will be built with advanced ratemaking principles.<sup>22</sup>

7 **Q: How does a 10% cost of common equity for a regulated utility**  
8 **compare with yields on other investments?**

9 A: A 10% cost of common equity also compares favorably to the yield on  
10 20-year Treasury bonds. These bonds are also outstanding over a long  
11 period and are more relevant to a common equity investment which is  
12 outstanding indefinitely far into the future. The yield on 20-year Treasury  
13 bonds averaged about 4.1% for the 12-month period ending in May 2009.  
14 Twenty-year Treasury bonds were yielding only about 4.2% in May 2009.  
15 Because of investors’ flight to safety in late 2008, the yield on long-run  
16 Treasury bonds may not, however, be representative at this time.

17 **Q: How does a 10% cost of common equity for a regulated utility**  
18 **compare with yields on “A-rated” utility bonds?**

---

<sup>22</sup> *Interstate Power and Light Company*, Docket No. RPU-08-1, Company Response to Board Data Request No. 8.

1 A: A 10% cost of common equity compares favorably to long-term “A-rated”  
2 public utility bonds. The yield on “A-rated” utility bonds averaged about  
3 6.6% for the 12-month period ending in May 2009. These utility bonds  
4 were yielding about 6.5% in May 2009, which was about what they were  
5 yielding in September 2008 before concerns about collateralized mortgage  
6 securities unduly affected utility bond yields.

7 **Q: Does a 10% cost of common equity you estimated for Alliant reflect**  
8 **on-going and likely yields?**

9 A: Yes. A 10% return on equity for a low-risk regulated utility is also  
10 supported by the current trend in Treasury yields and by the fact that the  
11 cost of capital routinely declines in a recession.

12 **Q: How does your estimated cost of common equity compare to stock**  
13 **market returns?**

14 A: A 10% cost of common equity for Alliant, whose primary operations are  
15 low-risk regulated utilities, compares favorably with stock return. For  
16 example, Alliant, which has a beta of .70 compares favorably with the  
17 riskier Standard & Poor’s 500 which has a beta of 1. The long-run average  
18 market return for Standard & Poor’s 500 is 9.6%.

19 **Q: Does a 10% cost of common equity you estimated for Alliant reflect**  
20 **on-going and likely stock market returns?**

1 A: Yes. A 10% cost of common equity also compares favorably with stock  
2 market returns when you consider recent comments by the author  
3 Ibbotson who stated:

4 We've had two centuries of remarkably constant  
5 average returns. But, we've been the most successful  
6 country over the past two centuries, so it may be a  
7 high estimate of the performance going forward.<sup>23</sup>

8 Warren Buffett, one of the most successful investors of all times, also  
9 noted:

10 [T]he American public should expect equity returns  
11 over the next decade or two (with dividends included  
12 and 2% inflation assumed) of perhaps 7%.<sup>24</sup>

13 Similarly, Morningstar noted that many studies are anticipating lower  
14 stock returns in the future, including its own study which anticipates stock  
15 market returns of about 9.0%.<sup>25</sup> In this light, a 10% cost of common  
16 equity I estimated for a low-risk regulated utility like Alliant seems  
17 reasonable.

18 **Q: Are there other indicators that support the cost of common equity**  
19 **you are recommending?**

20 A: Yes. Regardless of how one estimates the cost of common equity,  
21 common equity investors' returns are based on the earnings and the cash

---

<sup>23</sup> *Wall Street Journal*, "History 101: Past Is Imperfect Guide," May 23, 2000, p. C1.

<sup>24</sup> Carol Loomis, "Investor's Guide 2002," *Fortune*, December 10, 2001.

<sup>25</sup> *Ibbotson SBBI 2009 Classic Yearbook*, Morningstar, p. 145.

1 flows these earnings support. Cash flows are composed of dividends, if  
2 any, and the selling price for common equity. For a stock like Alliant  
3 with a dividend yield of about 5.0% that Company relied upon  
4 (Exhibit \_\_ (FJH-1), Sch. G), Company's 11.8% cost of common equity  
5 (Exhibit \_\_ (FJH-1), Sch. A) implies a 6.8% sustainable growth rate.  
6 Company's rate increase, however, actually relies on an 11.4% cost of  
7 common equity (Bacalao, Dir. Test., pp. 8-9) which implies a 6.4%  
8 sustainable growth rate.

9 **Q: Is Company's implied growth rate of 6.4% to 6.8% likely for Alliant?**

10 A: No. A growth rate of this magnitude is generally not likely during the  
11 next five years that Company focuses exclusively upon, especially during  
12 a major recession. Company's implied growth rates are even less likely  
13 for the period common equity is outstanding beyond the five years  
14 Company emphasizes.

15 **Q: What is the significance of Company's implausible forecasted five-**  
16 **year earnings growth rate of 6.4% to 6.8% for Alliant?**

17 A: The plausibility of the growth rate, since this is estimated, determines to a  
18 large extent the confidence one can have in the estimated cost of common  
19 equity. Company's growth rate is implausible for all of the reasons I

1 previously noted. Since Company's cost of common equity relies on this  
2 growth rate, it in turn, is also implausible.

3 **Q: Is Company's estimated five-year earnings growth rate of 6.4% to**  
4 **6.8% likely for other combination electric and gas utility firms?**

5 A: No. Recent economic setbacks are lowering expectations of growth over  
6 the projected five-year period Company relied exclusively upon in  
7 estimating its costs of common equity. In addition, with a renewed focus  
8 on energy efficiency, electric and gas utility sales growth is also likely to  
9 slow from its historical levels. Finally, it is impossible for any firm or  
10 even one industry to grow at a sustained rate of 6.4% to 6.8% indefinitely  
11 into the future as Company assumes.

12 **Q: How does Company's implied growth rate for Alliant compare to the**  
13 **growth rate you relied upon in your cost of common equity estimate?**

14 A: The 10% cost of common equity I estimated for Alliant, given its  
15 dividend yield of about 6.4%, implies a sustainable growth rate of around  
16 3.6%. A growth rate of 3.6% better reflects what Alliant has achieved in  
17 the past and its likely growth prospects than Company's projected growth  
18 rate of 6.4% to 6.8%.

19 **Q: What are the consequences of authorizing a cost of common equity**  
20 **higher than a fair return based on Company's unlikely forecasts?**

1 A: The cost of common equity would be overstated. Even an unwarranted  
2 return on equity of one tenth of one percent (0.1%) above a fair return on  
3 common equity for Alliant's Iowa utility operations would result in an  
4 annual rate increase to customers of around \$1.5 million.

5 **Q: Do capital markets recognize constructive regulation that allows**  
6 **utilities an opportunity to earn a fair return?**

7 A: Yes. For example, both Standard & Poor's and Moody's credit rating  
8 opinions noted Iowa's credit-enhancing regulation and supportive  
9 regulatory environment.<sup>26</sup>

10 **Q: Is there supportive regulation that the Board could provide Company**  
11 **without imposing unwarranted extra costs on ratepayers by**  
12 **authorizing a return on equity in excess of a fair return?**

13 A: Yes. The Board could require or encourage a better separation between  
14 Alliant's riskier non-utility operations and its Iowa utility. A more  
15 comprehensive separation would better protect Interstate's utility  
16 operations from the more cyclical market forces of Alliant's non-utility  
17 operations, debt and credit rating.

18 **Q: How does the 10% cost of common equity supported by your analysis**  
19 **compare with current authorized returns?**

---

<sup>26</sup> Standard & Poor's *RatingsDirect*, Standard & Poor's, August 11, 2008, pp. 1 - 7; Global Credit Research, Summary Opinion, Interstate Power and Light Company, Moody's Investors Services, Sept 23, 2007, pp. 1-2.

1 A: Though the cost of common equity is best estimated with market data, the  
2 10% cost of common equity I recommend for Alliant 's Iowa utility  
3 operations is consistent with currently published, but dated, authorized  
4 returns which average about 10.3%.

5 **Q: Does this conclude your direct testimony?**

6 A: Yes, it does.

	<u>Company</u>	<u>Docket</u>	<u>Date</u>	<u>Utility</u>	<u>Subject(s)</u>
1	Iowa Electric	RPU-85-31	02-26-1986	Gas	Statistics
2	Iowa Electric	RPU-86-7	07-07-1986	Electric	Cost of Common Equity
3	Interstate Power	RPU-87-1	05-13-1988	Electric	Demand Estimation
4	Iowa Public Service	RPU-87-3	12-09-1987	Gas	Weather Normalization
5	Northwestern Bell	RPU-88-6	09-01-1988	Telecom	Cost of Capital
6	Telecommunication	INU-88-8	02-07-1989	Telecom	Calling Features, Competition
7	Iowa Electric	RPU-89-3	09-25-1989	Gas	Demand, Weather Estimation
8	Contel of Iowa	RPU-89-8	02-15-1990	Telecom	Cost of Capital
9	Iowa Electric	RPU-89-9	04-02-1990	Electric	Cost of Capital
10	Telecommunication	INU-90-1	06-11-1990	Telecom	Intralata Issues
11	GTE North	RPU-90-4	08-23-1990	Telecom	Cost of Capital
12	Iowa Electric	RPU-90-7	10-09-1990	Gas	Cost of Capital
13	United Telephone	RPU-86-3	07-09-1991	Telecom	Cost of Capital
14	US West	RPU-91-3	07-31-1991	Telecom	CLASS Features
15	Interstate Power	RPU-91-7	12-31-1991	Electric	Cost of Capital
16	Iowa Electric	RPU-91-9	01-06-1992	Electric	Cost of Capital
17	Iowa Southern	RPU-91-8	02-10-1992	Electric	Management Efficiency
18	US West	INU-91-3	03-20-1992	Telecom	Voice Messaging, Competition
19	Iowa Power	RPU-92-2	06-15-1992	Electric	Management Efficiency
20	Iowa Southern	RPU-92-8	10-05-1992	Gas	Cost of Capital
21	Iowa Electric	RPU-92-9	10-05-1992	Gas	Cost of Capital
22	Interstate	RPU-92-11	02-17-1993	Gas	Cost of Capital
23	Iowa-American	RPU-93-3	07-21-1993	Water	Cost of Capital
24	Midwest Gas	RPU-93-10	11-17-1993	Gas	New Town Rates
25	US West	RPU-93-9	02-04-1994	Telecom	Management Efficiency
26	Midwest Gas	RFU-94-2	04-22-1994	Gas	Financial Issues
27	IES & MWG	PGA-94-24	06-13-1994	Gas	Financial Issues
28	IES Utilities	RPU-94-2	10-21-1994	Electric	Management Efficiency
29	Midwest Gas	RPU-94-3	11-22-1994	Gas	Management Efficiency
30	Midwest Power	RPU-94-4	01-06-1995	Electric	Management Efficiency
31	Interstate	RPU-95-1	07-06-1995	Electric	Management Efficiency
32	Telecommunication	INU-95-3	01-30-1996	Telecom	Competition Issues
33	US West	SPU-96-3	03-10-1996	Telecom	Financial Analysis
34	Mount Pleasant	E-21312&3	05-21-1996	Electric	Financial Analysis
35	MidAmerican	RPU-96-8	11-08-1996	Electric	Management Efficiency
36	MidAmerican	APP-96-1	10-26-1998	Electric	Incentive Pay Plans
37	Iowa Telephone	SPU-99-29	11-29-1999	Telecom	Financial Analysis
38	US West-Citizens	SPU-99-31	01-25-2000	Telecom	Financial Analysis
39	Frontier	RPU-99-4	03-27-2000	Telecom	Economic Analysis-Price Cap
40	MidAmerican	RPU-01-3	03-14-2001	Electric	Cost of Capital

41	MidAmerican	RPU-01-9	02-25-2002	Electric	Cost of Common Equity-New Plant
42	Aquila	RPU-02-5	11-01-2002	Gas	Cost of Capital
43	MidAmerican	RPU-02-10	03-07-2003	Electric	Cost of Common Equity-New Plant
44	Aquila	SPU-03-7	07-18-2003	Gas	Financial Issues
45	Aquila	RPU-05-2	08-02-2005	Gas	Cost of Capital
46	Aquila	RPU-05-2	05-15-2006	Gas	Cost of Equity - Capital Additions
47	Aquila	SPU-07-12	06-04-2007	Gas	Economic Issues
48	Interstate	RPU-08-1	07-08-2008	Electric	Cost of Common Equity-New Plant
49	Black Hills	RPU-08-3	12-03-2008	Gas	Cost of Common Equity
50	Interstate	RPU-09-2	07-17-2009	Electric	Cost of Common Equity
51	Iowa-American	RPU-09-4	Pending	Water	Cost of Common Equity

The date refers to the date the analysis was done, the time direct testimony was filed, when a settlement was filed or the Board's order approving a settlement or approximately. Subjects are meant to be indicative and not exhaustive.

