

December 8, 2006

By Hand Delivery

Honorable Vernon A. Williams  
Secretary  
Surface Transportation Board  
1925 K Street NW  
Room 700  
Washington DC 20423

218239



RE: Ex Parte No. 664 – Methodology To be Employed In Determining The  
Railroad Industry's Cost of Capital

Dear Secretary Williams,

Enclosed for filing please find the original and ten copies of the Comments of  
Snavely King Majoros O'Connor & Lee, Inc. submitted in the above captioned  
proceeding.

We have enclosed an extra copy to be date-stamped and returned to our  
messenger.

Respectfully submitted,

Kim Hillenbrand

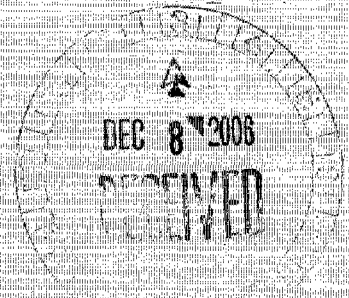
ENTERED  
Office of Proceedings

DEC 8 - 2006

Part of  
Public Record

**SK Snavely King Majoros O'Connor & Lee, Inc.**

Economic and Management Consultants



218239

**SURFACE TRANSPORTATION BOARD  
EX PARTE 664 – RAILROAD COST OF CAPITAL  
VERIFIED STATEMENT OF  
CHARLES W. KING**

Snavely King Majoros O'Connor & Lee, Inc.  
1111 14<sup>th</sup> Street NW  
Suite 300  
Washington, DC 20005

**December 8, 2006**

ENTERED  
Office of Proceedings  
DEC 8 - 2006  
Part of  
Public Record

**SURFACE TRANSPORTATION BOARD  
EX PARTE 664 – RAILROAD COST OF CAPITAL  
VERIFIED STATEMENT OF CHARLES W. KING**

My name is Charles W. King. I am President of the economic and management consulting firm of Snavely King Majoros O'Connor & Lee, Inc. ("Snavely King"). Snavely King was founded by the late Carl M. Snavely, Jr. and me in 1970 to conduct research on a consulting basis into the rates, revenues, costs and economic performance of regulated firms and industries. The firm has a professional staff of 12 economists, accountants, engineers and cost analysts. Most of its work involves the development, preparation and presentation of expert witness testimony before federal and state regulatory agencies.

Qualifications

Attachment A to this statement is a brief resume of my professional experience. Attachment B is a listing of my expert witness appearances (more than 300) before state and federal regulatory agencies. While not all of these appearances dealt with the cost of capital, many of them did. The following appearances, all of which occurred since January 1, 2000, addressed the cost of capital of public utilities:

| <u>Commission</u>      | <u>Case No.</u> | <u>Utility</u>                   |
|------------------------|-----------------|----------------------------------|
| Delaware P.S.C.        | 04-152          | Tidewater Utilities (water)      |
| Illinois Commerce Com. | 02-0690         | Illinois-American Water Company  |
| Kentucky P.S.C.        | 2002-145        | Columbia Gas of Kentucky         |
| Kentucky P.S.C.        | 2004-67         | Delta Gas Company                |
| Maryland P.S.C.        | 9036            | Baltimore Gas & Electric Company |
| Michigan P.S.C.        | U-14547         | Consumers Energy Company         |
| Missouri P.S.C.        | ER-2006-0315    | Empire District Electric Company |
| New Jersey B.P.U.      | TMO02080739     | United Telephone Company         |
| North Dakota P.S.C.    | PU-400-00-521   | Xcel Energy, Inc.                |
| North Dakota P.S.C.    | PU-399-01-186   | Montana-Dakota Utilities (Elec)  |
| North Dakota P.S.C.    | PU-399-02-183   | Montana-Dakota Utilities (Gas)   |
| North Dakota P.S.C.    | PU-04-97        | Montana-Dakota Utilities (Gas)   |
| Wisconsin P.S.C.       | 2055-TR-102     | CenturyTel of Central Wisconsin  |
| Wisconsin P.S.C.       | 5846-TR-102     | Telephone USA, LLC               |

Summary

This statement addresses two aspects of the procedure by which the Surface Transportation Board (STB or Board) determines the cost of capital of the railroad industry:

- The determination of the growth component of the DCF formula; and
- The problems of regulatory circularity wherein the Board's findings of revenue adequacy influence the calculation of the rate of return by which that revenue adequacy is assessed.

I demonstrate that the 15.18% return to equity found in the Board's September 15, 2006 decision is unrealistically and unreasonably high. First, it is well above the market's overall experienced returns to equity as measured from 1926 and from 1971. Also, it is well above the estimates of the market's current required returns as measured by four other utility rate-of-return witnesses. This difference exists notwithstanding that, by two Value Line measures, railroads are less risky than the market overall. Additionally, the 15.18% return vastly exceeds any return to electric or gas utilities awarded by state regulatory commissions during the past year.

Additionally, the 12.2% overall cost of capital that results from applying the very high 15.18% equity cost to the market value of the railroads' equity is well above the cost of railroad capital as estimated by two Wall Street analyst firms. Those estimates are in the range of 6.1% to 9.2%.

The cause of the Board's extraordinarily high rate of return to equity is the growth factor, derived from I/B/E/S' survey of investment analysts. Those analysts estimate that the railroads will enjoy a 13.66% annual rate of earnings growth. The reasons for this rapid growth – reduced trucking competition and growth of intermodal traffic – cannot be expected to last forever, as implicitly assumed by the Board's procedure. Ultimately,

railroad earnings growth will have to trend toward the rate of earnings growth in the economy.

For this reason, I recommend that the Board adopt the two-step growth factor estimation procedure used by FERC for pipeline companies. FERC computes a growth factor based two-thirds on analysts' forecasts and one-third on projected nominal GDP growth. Using this approach, the railroads' rate of earnings growth would be 10.61% rather than 13.66%. When the 1.52% dividend yield is added, the return to equity would be 12.13%. This return bears a reasonable relationship to the market's overall returns.

In its *Hope Natural Gas* decision, the Supreme Court struck down the use of a "fair value" rate base on the grounds that it made regulation circular: the regulators' actions affected the determination of the fair value. Because market-dominant traffic, potentially subject to the Board's regulation, is now a much larger portion of the railroads' traffic and accounts for the overwhelming proportion of their profits, the Board should consider two sources of regulatory circularity.

The first source of circularity is the DCF formula, where the increased profitability of market-dominant traffic influences the forecasts of analysts which are used in the DCF formula. The inflation of the growth factor that results from the use of these forecasts is largely responsible for the Board's findings of revenue insufficiency and the relaxed regulation which results from that finding. This source of circularity is the growth factor, reflective of analysts' forecasts. The impact of these forecasts can be mitigated by the adoption of FERC's two-step formulation for the growth factor.

The second source of circularity is the use of market values, rather than book values to determine the capital structure used in weighting debt and equity costs. Because of the greatly increased profitability of market-dominant traffic, the stock prices of the railroads have been bid up to quite high levels, well above book values. When these stock values are used to weight debt and equity in computing the overall rate of

return, the much higher cost of equity inflates the return, contributing to findings of revenue inadequacy. This source of circularity can be eliminated by reverting to the use of book values in weighting debt and equity in the capital structure.

Using book value weights for debt and equity, the 12.13% equity cost developed using the FERC two-step DCF procedure and the Board's 5-year average cost of debt at 5.70%, I arrive at an overall cost of capital of 8.91%, which is within the capital costs estimated for the railroads by two investment analyst firms. Under this benchmark, the BNSF would be found revenue adequate.

In summary, I recommend that the Board:

- Continue to use the DCF formulation to determine the cost of capital for the railroads.
- Adopt the two step procedure used by FERC for identifying the growth factor in the DCF formula.
- Use the book value of debt and equity in determining the capital structures of the railroads.

The Board's Decision in Ex Parte 552 (Sub-No. 10)

On September 15, 2006, the STB found that the cost of capital to the railroad industry was 12.2%, based on: (1) a current cost of debt of 5.36%; (2) a current cost of common equity capital of 15.18%; and (3) a capital structure mix of 30.41% debt and 69.59% common equity. The 12.2% reflects the weighted average of the debt and equity costs and the market value of the capital structure components of four U.S. Class 1 railroads: the Burlington Northern Santa Fe (BNSF), the Union Pacific (UP), the Norfolk Southern (NS), and the CSX.

The cost of debt was based on (1) the current monthly prices and yields during 2005 for the 63 issues of railroad bonds that were publicly traded during the year; (2) yields on government securities for Equipment Trust Certificates and Conditional Sales

agreements; and (3) book value for capitalized leases and miscellaneous debt. The cost of debt also included a 0.16% adder for flotation costs.

The STB employed a somewhat mechanical Discounted Cash Flow (DCF) procedure for determining the cost of equity. The DCF procedure determines the discount rate that equates all future cash flows, in the form of dividends, to the current market price of the common stock of the subject companies. The STB determines this discount rate by adding an estimate of the next year's dividend yield to the consensus view of the 5-year annual rate of earnings growth as shown in the survey conducted by the Institutional Brokers Estimation System, or I/B/E/S. The Board found that the weighted average dividend yield of the four railroads was 1.52% (weighting by stock market value) and that the weighted average of the I/B/E/S earnings forecasts was 13.66%, yielding a DCF cost of equity of 15.18%.

#### I. The Cost of Equity

##### A. The 15.18% Return on Equity Found by the Board is Unrealistically and Unreasonably High.

Certainly, 15.18% exceeds the total market's experienced return on equity capital. Ibbotson Associates has measured the return on stocks and bonds each year (in fact, each month) since 1926. For the entire period 1926 to 2003, the average (arithmetic mean) return to large company stocks was 12.4%. For the shorter period, 1971 to 2003, the mean return was 13.0%. These experienced returns are, respectively, 278 and 218 basis points lower than the Board's 15.18% return to railroad common equity.

The performance of S&P's 500 stocks is another test of market returns. Standard & Poor's reports that the average dividend yield on its 500 stock series for the 11 years, 1995-2005, was 1.62% and the average annual increase in the index was 11.22%. Combining these two indicators yields a total return on S&P 500 stocks of 12.84%. This return is 234 basis points below the Board's 15.18% return to railroad common equity.

These experienced returns are, if anything, high relative to estimates of the overall market return in 2005. I can point to four such estimates presented by utility witnesses in the rate of return cases in which I have participated during the last two years. In each case, the witness has implemented the Capital Asset Pricing Model (CAPM). This procedure requires an estimate of the overall market's risk premium for stocks relative to risk-free investments, which the witnesses define as long-term government bonds. The table on the following page is a summary of the overall market returns for 2005 as estimated by each of four utility witnesses:

| Utility Witness   | Date of Testimony | State | Case No.    | Equity Premium | Long-term Treasury Bond Yield <sup>1</sup> | Market Return |
|-------------------|-------------------|-------|-------------|----------------|--------------------------------------------|---------------|
| Katheleen McShane | July 2006         | MO    | GR 2007-003 | 7.10%          | 4.64%                                      | 11.74%        |
| James VanderWeide | July 2006         | MO    | ER 2007-002 | 7.10%          | 4.64%                                      | 11.74%        |
| William Avera     | April 29, 2005    | MD    | 9036        | DCF Analysis   |                                            | 13.90%        |
| Wayne M. Leja     | July 2005         | MI    | U-14547     | 7.17%          | 4.64%                                      | 11.81%        |

A railroad return that is more than 100 basis point above any objective measure of the overall market's return might be justified if it could be demonstrated that railroads are more risky than the overall market and therefore require a higher return. Such a demonstration, however, cannot be made.

Value Line, a widely respected and independent investment firm, has two relevant measures of risk. The first, called "beta," measures the co-variance of fluctuations in the stock's price relative to the market's overall price fluctuations. A beta of 1.00 means that the stock fluctuates to the same degree as the market. A beta less than 1.00 means that the stock's fluctuations are less extreme than the market's. Since fluctuations in price, particularly relative to the overall market, are a major source of investment risk, the beta is widely recognized as an important measure of relative risk.

---

<sup>1</sup> Yield on 20-Year Treasury bonds, 2005, Source: [federalreserve.gov/releases/h15/data](http://federalreserve.gov/releases/h15/data).

Value Line's other measure of relative risk is its "safety" ranking. The Safety Rank is computed by averaging two other Value Line indices – the Price Stability Index and the Financial Strength Rating. Safety Ranks range from 1 (highest) to 5 (lowest). Presumably, the average for the market is the mid-point Safety Ranking, which is 3.

The following are the current Value Line ratings for the four railroads studied by the Board:

| Railroad | Value Line |        |
|----------|------------|--------|
|          | beta       | Safety |
| BNSF     | 0.95       | 2      |
| CSX      | 1.00       | 3      |
| NS       | 1.05       | 3      |
| UP       | 0.90       | 1      |
| Average  | 0.98       | 2.25   |

As the table demonstrates, both Value Line's ratings suggest that the railroads are slightly less risky than the overall market. If so, then the appropriate rate of return to railroad stocks should be less, not more, than the average return to all stocks in the market.

The awards given to electric and gas distribution utilities during 2005 provide still another test of the propriety of the Board's 15.18% equity return finding. Each year, the utility industry's trade publication Public Utilities Fortnightly (PUF) produces a survey of the returns to common equity awarded during the past year to electric and gas utilities by state public utility commissions. The latest survey appears in PUF's November 2006 issue. This survey reports on 53 rate-of-return findings by 29 state commissions. The average (mean) return award was 10.6%; the median award was 10.54%. The highest awarded was 11.75% to two Florida electric utilities.<sup>2</sup>

---

<sup>2</sup> Florida PSC Case Nos. 05-0045-EI and 05-0078-EI, involving Florida Power & Light and Progress Energy Florida, respectively.

To be sure, a case could be made that public utilities are less risky than railroads because of their franchised monopoly service territories and their legally enforceable right to an opportunity to earn a reasonable return on investment. But the Value Line betas for these utilities average 0.90 and their Safety Ranks are in the 1 to 3 range, not much lower than the railroads. Even if it is conceded that railroads are more risky than utilities, the degree of risk difference would not justify a spread of 468 basis points between the railroads' required return and the average return allowed public utilities.

**B. The 12.2% Composite Cost of Capital Exceeds Estimates of the Railroads' Capital Costs Developed by Independent Investment Analysts.**

The very high cost of equity, combined with the use of market values for determining the capital structure, results in a correspondingly overstated composite cost of capital: 12.2%.

This figure is totally out of scale with independent estimates of the railroads' cost of capital developed by Wall Street analysts. I have been able to identify two such estimates, one from Citigroup, the other from Legg Mason.<sup>3</sup> Their estimates of the railroads' capital costs are as follows:

|               | <b>Citibank<sup>4</sup></b> | <b>Legg Mason<sup>5</sup></b> |
|---------------|-----------------------------|-------------------------------|
| BNSF          | 6.1%                        | 8.3%                          |
| UP            | 6.2%                        | 8.0%                          |
| CSX           | 6.3%                        | 8.8%                          |
| NS            | 6.3%                        | 9.2%                          |
| CN            | 6.2%                        |                               |
| CP            | 6.6%                        |                               |
| All Railroads | 6.2%                        |                               |

<sup>3</sup> Legg Mason has been acquired by Citigroup Smith Barney. At the time these estimates were made, however, Legg Mason was functioning independently of Citigroup.

<sup>4</sup> "C'mon, Do the Locomotion," by George Kartsonas, Citigroup Research, September 19, 2006.

<sup>5</sup> "The Budding Railroad Renaissance," Legg Mason presentation to the AAR Treasury/Finance Division, November 18, 2005.

C. The High Proportion of Forecast Earnings Growth Relative to Dividend Yield Makes the DCF Model a Weak Indicator of Equity Return Requirements.

How is it possible for the DCF model to yield a rate or return to the railroads that is so vastly out of scale with observed market rates of return and with the rates of return awarded to utilities? To answer this question, it is useful to review the theory of the DCF model.

The theory underlying the DCF model is that the discount rate which reconciles all future flows of cash from the stock investment equals the investor's required (expected) rate of return. Cash flows take two forms: the immediate return (the dividend yield next year) and the future growth in dividends. The future growth in dividends is usually constrained by the future growth in earnings, so that future earnings growth is conventionally adopted as the measure of future growth.

To estimate future growth in earnings, the Board has adopted the consensus of analysts' forecasts. The FCC has described this formulation as the "Classic DCF,"<sup>6</sup> and it is used in virtually all utility rate-of-return proceedings. This classic DCF methodology has been acknowledged fairly universally as the best available technique for estimating the cost of equity.

The preference of regulators for the DCF approach is not because it is without problems. Rather, it is because the alternative methodologies are fraught with conceptual and statistical problems. One alternative, the Capital Asset Pricing Model, (CAPM), requires the very bold assumption that there is a single measure, the beta, of the relative risk of any stock. It also requires considerable judgment as to the selection of inputs. The other alternative, the risk premium procedure, conventionally makes the totally unsupportable assumption that past risk premiums, measured over a long period of time, equate to future risk premiums.

---

<sup>6</sup> Notice Initiating a Prescription Proceeding and Notice of Proposed Rulemaking, CC Docket No. 98-166, October 5, 1998.

The power of the DCF method to estimate equity cost is directly related to the relative size of the two components that make up the formula: the dividend yield and the forecast earnings growth. That is because only dividend yield uses the market's current valuation of the stock as an input. The growth component is estimated without relation to the current market price. Therefore, when the dividend yield is a large component of the two-part calculation, the formulation provides a reasonably reliable estimate of the cost of equity. Conversely, when the dividend yield is a very small component of the calculation and the forecast growth quite large, the predictive capability of the formula declines.

Because the railroads' dividend yields are very small, the DCF formula, applied uncritically, provides a weak estimate of the railroads' cost of capital. The railroads' dividend yields in 2005 ranged from 0.99% to 1.79%. The yields averaged only 1.42%, which is less than the rate of inflation. The overwhelming proportion of the DCF return is the forecast earnings growth rate, which the Board's computes as 13.66%.

This forecast of 13.66% earnings growth contains no reflection of investors' current valuation of the railroads' stock. Yet, it is this forecast that generates the extraordinarily high 15.18% return to equity. For this reason, it is appropriate to examine critically the propriety of this growth projection.

D. The 13.66% Earnings Growth Forecast Cannot Be Expected to Last Indefinitely.

The analysts' reports on the respective railroads and on the railroad industry in general are quite explicit as to the reasons for their highly optimistic predictions on the railroads' future profitability

- The railroads' principal competitors, the motor carriers, are suffering from high fuel prices, a shortage of drivers, and increasing congestion on the nation's highways.

- These difficulties of the motor carrier industry provide "headroom" for the railroads to increase rates without fear of significant loss of market share.
- The very substantial increase in containerized imports is providing the railroads with dramatic growth in long-haul intermodal traffic.
- The practice of scheduling freight trains, initiated by the Illinois Central, holds the promise of significantly improved service quality, further enhancing the railroads' competitive position.
- Regulatory constraints on the railroads' pricing power are weak.

All of these factors, with the exception of the final one, are relatively recent developments. Each can be expected to benefit the railroads during the coming three to five years, as the analysts predict. But ultimately, they will run their course. They may continue to generate increased earnings, but the rate of earnings growth cannot continue in the double digits indefinitely. Unless new and yet more beneficial developments arise, the rate of railroad earnings growth must necessarily plateau to the level of earnings growth for the economy overall.

Herein lies the weakness of the Board's formulation of the DCF model. Effectively, the Board assumes that the railroads' earnings, and hence their dividends, will continue to grow at a rate of 13.66% indefinitely. This is a totally unrealistic assumption. In time, the railroads' earnings growth will moderate and trend downward toward the rate of earnings growth of the rest of corporate America.

E. The Board Should Adopt the FERC's Two-step Earnings Growth Formulation.

In establishing authorized equity returns for pipeline companies, the Federal Energy Regulatory Commission (FERC) uses a two-step procedure. The first step is the same I/B/E/S forecast used by the Board, and the second step is an estimate of long-term nominal rate of growth in Gross Domestic Product (GDP).<sup>7</sup> This procedure

---

<sup>7</sup> See for example, *Wilston Basin Interstate Pipeline*, FERC Docket No. RP00-107-000, 104 FERC 61,036, 61,099.

acknowledges that disparities between the short-term rate of growth and the growth in the overall economy cannot last forever. Ultimately, earnings growth will trend toward the rate of increase in the total market.

The Congressional Budget Office (CBO) produces forecasts of most of the major economic indicators. CBO's current forecast for the years 2010 through 2015 calls for an annual rate of increase of 4.5% in nominal GDP. Using the FERC's two-thirds/one-third weighting of short and long term growth rates, the resultant growth factor is 10.61%, as follows:

| Term       | Rate   | Weighting | Composite |
|------------|--------|-----------|-----------|
| Short-Term | 13.66% | 0.6667    | 9.11%     |
| Long-term  | 4.5%   | 0.3333    | 1.50%     |
| Total      |        |           | 10.61%    |

When this 10.61% two-step rate of growth is added to the 1.52% dividend yield in the DCF formula, the resultant return to equity is 12.13%.

I submit that 12.13% is a far more realistic estimate of the likely cost of equity capital to the railroads than the 15.13% found in the Board's September 15, 2006 decision. It is slightly below the 12.4% to 13.0% experienced rates of return to large company stock investments as measured by Ibbotson Associates, which is where one would expect that industry's return requirement to fall, given its less risky characteristics. Moreover, this return is within the 11.8% to 13.0% estimated for the total market currently by the utility rate-of-return witnesses. Also, as one would expect, it is above – but not unreasonably above – the returns awarded electric and gas utilities by state regulatory commissions.

## II. The Problem of Circularity

In *Federal Power Commission v. Hope Natural Gas Co.* ("Hope"), the Supreme Court ruled out the use of "fair value" rate bases on the grounds that the return awarded

to this value influenced the value itself. In other words, the regulatory process became circular:

“...fair value” is the end product of the process of rate-making not the starting point as the Circuit Court of Appeals held. The heart of the matter is that rates cannot be made to depend upon “fair value” when the value of the going enterprise depends on earnings under whatever rates may be anticipated.<sup>8</sup>

In its 1990 revenue adequacy decision, the Interstate Commerce Commission (ICC), the STB’s predecessor, determined that it would incorporate acquisition values, rather than book values, into the investment base to which the rate of return would be applied. The ICC justified this treatment on the grounds that “most rail rates are not subject to maximum rate regulation” and therefore the circularity problem posed by *Hope* did not apply.<sup>9</sup>

A. Recent Developments Require that the Board Reconsider Its Prior Findings as Regards Circular Regulation

The STB currently uses a standard that potentially market-dominant traffic is that for which the revenue recovery exceeds 180% of variable cost, as measured by the Uniform Rail Costing System (URCS). STB data show that in 2004 only 30% of all rail revenue was derived from R/VC >180 traffic. These data would appear to justify the ICC’s explicit finding (and the Board’s implicit finding) that the *Hope* concern about circularity does not apply.

Two considerations require the Board to revisit that finding. First, although R/VC >180 traffic may account for only 30% of all rail revenue, this traffic generates almost two thirds of operating profit, that is, the margin of revenue over variable cost. This means that the minority of traffic that is potentially market dominant provides the majority of the railroads’ profit. If so, then the regulatory treatment of that minority of

---

<sup>8</sup> 320 U.S.591, 601 (1944).

<sup>9</sup> *Railroad Revenue Adequacy – 1988 Determination*, 6 I.C.C.2d 933 at 941 (1990).

traffic disproportionately influences the profitability, and hence the earnings and stock prices, of the railroads.

The second consideration that warrants reconsideration of the *Hope* circularity issue is the enormous growth in railroad profitability in the last three years. The following table shows quarterly reports of the annualized returns to equity for the four large U.S. railroads:

| Railroad | 6/2006 | 3/2006 | 12/2005 | 9/2005 | 6/2005 | 3/2005 | 12/2004 |
|----------|--------|--------|---------|--------|--------|--------|---------|
| BNSF     | 18.0%  | 17.0%  | 16.2%   | 14.9%  | 14.0%  | 13.1%  | 12.0%   |
| CSX      | 12.7%  | 10.3%  | 9.3%    | 8.7%   | 8.4%   | 8.0%   | 7.0%    |
| NS       | 14.2%  | 15.2%  | 14.6%   | 14.0%  | 14.4%  | 12.3%  | 12.2%   |
| UP       | 9.0%   | 8.0%   | 6.9%    | 6.5%   | 6.2%   | 5.7%   | 6.0%    |

Source: A.G. Edwards & Sons, Inc. (Figures are from consolidated financial reports that include non-railroad activities of the companies.)

All four railroads show dramatic and progressive increases in profitability since the end of 2004. This means that the 30% of traffic in the R/VC>180 category has unquestionably increased since 2004, as has the two-thirds of operating profit generated by this traffic. For reasons outlined above – weaker truck competition and growth in intermodal traffic--the Board is confronted with a situation in which the potential amount of market-dominant traffic has probably increased. The Board's prior assumption that most traffic is competitively priced now requires reconsideration.

**B. The Board's Procedures for Finding Revenue Adequacy Create Circular Regulation.**

If earnings growth is now being driven by market-dominant traffic potentially subject to price regulation, then the DCF calculation used to find revenue adequacy becomes circular:

- Increases in rates for market-dominant traffic lead to high earnings forecasts by investment analysts,
  - Which in turn lead to high DCF-based returns on equity,
  - Which then results in findings of revenue inadequacy,
  - Which then provides the railroads with relief from most maximum rate regulation,
  - Which then allows the railroads to increase rates on regulated traffic without Board interference,
- Which leads to high earnings growth forecasts by investment analysts.

The circularity is compounded by the use of market values, not invested capital, in the capital structure weighting:

- Because of the growth in earnings from market-dominant traffic, the railroads' stock value is bid well above book value.
  - This inflated market value is then used by the Board in weighting equity and debt capital.
  - The much higher equity weighting increases the composite rate of return.
  - The higher composite rate of return produces a finding of revenue inadequacy.
  - The finding of revenue inadequacy allows the railroads to increase their earnings from market-dominant traffic, and
- The higher returns from market-dominant traffic inflate the market value of the stock.

I believe that the Board's current procedures for finding revenue adequacy violate the spirit, and maybe even the letter, of *Hope's* prohibition against circular regulation. This condition did not exist in the past, owing to the presence of fairly vigorous competition from other modes of transportation. But as I have discussed, the difficulties in the motor carrier industry have weakened competitive constraints on rail pricing to the point that market-dominant traffic is currently providing a much larger share of the

railroads' overall revenue than in the past, and that traffic generates the overwhelming majority of the railroads' profits. In that condition, regulation is in a position to influence overall railroad earnings.

C. The Board Can Mitigate the Circularity of the DCF Procedure by Adopting the Two-Step Procedure for Estimating the Growth Factor in the DCF Formula.

As I have discussed, the principal form of circularity in the Board's current approach to finding revenue adequacy is through the use of investment analyst reports as the source of the growth factor in the DCF formula. This circularity cannot be eliminated altogether, since the classic DCF formulation calls for the use of analysts' growth forecasts.

The circularity can, however, be mitigated by reducing the impact of analysts' forecasts on the final result. Under present procedures, those forecasts are the overwhelming determinant of the DCF return. If the Board adopts the two-step procedure for developing the growth factor, described above, this impact is reduced, although it is not altogether eliminated.

D. The Board Can Eliminate the Circularity Caused by the Use of Market Value for the Railroads' Capital Structure by Using Book Values Instead.

The circularity associated with the Board's use of market values for purposes of determining the railroads' capital structures can easily be removed by the simple expedient of using book values in the weighting of debt and equity. This was the procedure originally used by the ICC when it first established the revenue adequacy standard following the passage of the *Staggers Act* in 1980. It is the procedure used by the FCC<sup>10</sup> and by the FERC<sup>11</sup>, as well as almost all state regulatory commissions.<sup>12</sup> Book

<sup>10</sup> FCC Uniform System of Accounts, Ch I Pt 101 §114.

<sup>11</sup> FERC Uniform System of Accounts, Sec 2-15 §(c) (1).

# ***SK Snavely King Majoros O'Connor & Lee, Inc.***

Economic and Management Consultants

value has the virtue of not being directly influenced by the company's current profitability. It also represents the amount of capital actually invested by shareholders and bondholders.

The use of book values, rather than market values, in determining the capital structure yields a much more reasonable composite cost of capital than the 12.2% developed by the Board. Specifically, it yields a cost of capital that is within the range of capital costs developed by the two Wall Street analyst firms noted above: Legg Mason and Citibank. Using the 12.13% equity cost, developed through the use of the FERC two-step DCF procedure, and the average of the last five years' cost of debt found by the Board in its annual Ex Parte No. 558 decisions, I derive a composite rate of return to total capital of 8.74%, as follows:

|                | <b>Shareholders<br/>Equity</b> | <b>Long Term<br/>Debt</b> | <b>Total</b>        |
|----------------|--------------------------------|---------------------------|---------------------|
| BNSF           | \$16,574,144                   | \$12,029,032              | \$28,603,176        |
| CSX            | \$9,927,851                    | \$8,317,211               | \$18,245,062        |
| NS             | \$9,889,930                    | \$11,284,800              | \$21,174,730        |
| UP             | <u>\$13,250,913</u>            | <u>\$18,209,592</u>       | <u>\$31,460,505</u> |
| Four Railroads | \$49,642,838                   | \$49,840,635              | \$99,483,473        |
| Percent        | 49.90%                         | 50.10%                    | 100.00%             |
| Cost           | 12.13%                         | 5.70%                     |                     |
| Weighted Cost  | 6.05%                          | 2.86%                     | 8.91%               |

Sources: Equity & Debt - AAR

Debt Cost: STB Ex Parte 558 (Sub-Nos. 5-9)

Decision, Sept 15, 2006, Table 8.

I have used an average of the Board's last five findings as to the cost of debt as a surrogate for the appropriate debt cost, which would be the embedded cost of debt using the yield-to-maturity approach. This value may be higher or lower than the 5.7% I have used.

---

<sup>12</sup> The Arizona Corporation Commission, for example, uses a "fair value" standard, but it is ultimately tied to the book value of the rate base.

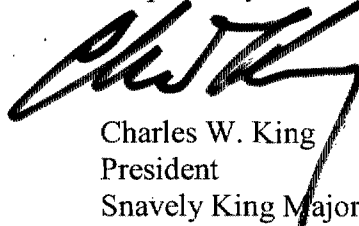
Assuming, however, the propriety of the 8.91%, the effect would be to convert the BNSF to revenue adequate. In its October 17, 2006 decision in Ex Parte No. 552 (Sub-No. 10), the Board reported that the Return On Investment (ROI) of the BNSF was 10.32% during 2005. This value is 141 basis points greater than my estimate of the railroads' rate of return. Additionally, the Soo Line, including all Canadian Pacific U.S. affiliates, had an ROI of 8.89%, just two basis points below the debt cost I have calculated.

III. Recommendations

To conclude, I recommend that the Board

- Continue to use the DCF formulation to determine the cost of capital for the railroads.
- Adopt the two step procedure used by FERC for identifying the growth factor in the DCF formula.
- Use the book value of debt and equity in determining the capital structures of the railroads.

Respectfully Submitted,



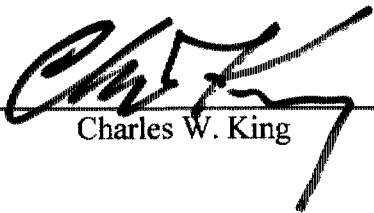
Charles W. King  
President  
Snavely King Majoros O'Connor & Lee,  
Inc.

Suite 300  
1111 14<sup>th</sup> Street, N.W.  
Washington, DC 20005

## VERIFICATION

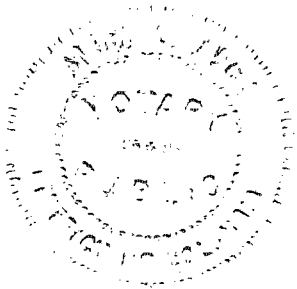
I, Charles W. King, declare that the foregoing statement is true and correct and was prepared by me. Further, I certify that I am qualified and authorized to file this statement.

Executed on December 1, 2006.

  
Charles W. King

Subscribed and sworn to before me this first day of December 2006 in the District of Columbia.

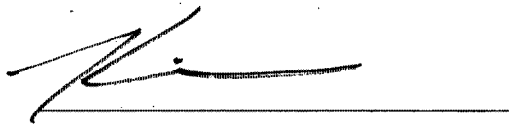
Angel Foxich, Notary Public  
My Commission Expires: March 14, 2011



**Certificate of Service**

I certify that this filing was served this day on all parties of record by first class US Mail or more expeditious method of delivery.

December 8, 2006.

A handwritten signature in black ink, appearing to read 'Kim', is written over a horizontal line.

Kim Hillenbrand

### Experience

#### **Snively King Majoros O'Connor & Lee, Inc. Washington, DC**

***President (1989 to Present)  
Vice President (1970 - 1989)***

Mr. King, a founder of the firm and acknowledged authority on regulatory economics, brings over thirty years of experience in economic consulting to his direction of the firm's work in transportation, utility and telecommunications economics.

Mr. King has appeared as an expert witness on over 300 separate occasions before more than thirty state and nine U.S. and Canadian federal regulatory agencies, presenting testimony on rate base calculations, rate of return, rate design, costing methodology, depreciation market forecasting, and ratemaking principles. Mr. King has also testified before House and Senate Committees on energy and telecommunications legislation pending before the U.S. Congress.

In telecommunications, Mr. King has testified before the Federal Communications Commission on a number of policy issues, service authorization, competitive impacts, video dialtone, and prescription of interstate depreciation rates. Before state regulatory bodies, he has presented testimony in proceedings on intrastate rates, costs earnings and depreciation.

Mr. King has testified in electric, gas and water utility cases on virtually every aspect of regulation, including cost of capital, revenue requirements, depreciation, cost allocation and rate design. Mr. King is one of the nation's leading authorities on utility depreciation practices, having testified on this subject in several dozen cases before state regulatory bodies.

In addition to his appearances as a witness in judicial and administrative proceedings, Mr. King has negotiated settlements among private parties and between private parties and regulatory offices. Mr. King also has directed depreciation studies, investment cost benefit analyses, demand forecasts, cost allocation studies and antitrust damage calculations. Mr. King directed analyses of the prices of services under Federal Government's FTS2000 long distance system.

In Canada, Mr. King designed and directed an extended inquiry into the principles and procedures for regulating the telecommunication carriers subject to the jurisdiction of the Canadian Transport Commission. He also was the principal investigator in the Canadian Transport Commission's comprehensive review of rail costing procedures.

#### **EBS Management Consultants, Inc., Washington, DC**

***Director, Economic Development Department  
(1968-1970)***

Mr. King organized and directed a five-person staff of economists performing research, evaluation, and planning relating to economic development of depressed areas and communities within the U.S. Most of this work was on behalf of federal, state, and municipal agencies responsible for community or regional economic development.

***Principal Consultant (1966-1968)***

Mr. King conducted research on a broad range of economic topics, including transportation, regional economic development, communications, and physical distribution.

#### **W.B. Saunders & Company, Inc., Washington, DC**

***Staff Economist (1962-1966)***

For this economic consulting firm, which later merged with EBS Management Consultants, Inc., Mr. King engaged in numerous research efforts relating primarily to economic development and transportation.

#### **U.S. Bureau of the Budget, Office of Statistical Standards**

***Analytical Statistician (1961-1962)***

Mr. King was responsible for the review of all federal statistical and data-gathering programs relating to transportation.

### Education

*Washington & Lee University, B.A. in Economics*

*The George Washington University, M.A. in  
Government Economic Policy*

CHARLES W. KING  
Snavelly King Majoros O'Connor & Lee, Inc.  
1220 L Street, N.W., Suite 410  
Washington, D.C. 20005  
(202) 371-1111  
Appearances before State Regulatory Agencies

| State | Electric, Gas, Water Utility Cases                                                                                                                                                                                                                                                                                     |                                                                                                         |                                                                                                                                                                                                           | Date of Cross-Examination                                                                                                                             |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | Client                                                                                                                                                                                                                                                                                                                 | Case                                                                                                    |                                                                                                                                                                                                           |                                                                                                                                                       |
|       |                                                                                                                                                                                                                                                                                                                        | Case Number                                                                                             | Utility                                                                                                                                                                                                   |                                                                                                                                                       |
| AK    | Exxon USA                                                                                                                                                                                                                                                                                                              | P-89-1,2                                                                                                | Trans Alaska Pipeline System                                                                                                                                                                              | October 18, 1990                                                                                                                                      |
| AZ    | Arizona Corporation Commission<br>Arizona Retailers Association                                                                                                                                                                                                                                                        | U-1345-I<br>U-1345-II                                                                                   | Arizona Public Service Co.<br>Arizona Public Service Co.                                                                                                                                                  | December 16, 1980<br>January 15, 1981                                                                                                                 |
| CA    | California Retailers Association<br>California Retailers Association<br>California Retailers Association<br>California Retailers & California Manufacturers<br>California Retailers Association                                                                                                                        | 57666<br>57602<br>59351<br>59351<br>61138                                                               | Pacific Gas & Electric Co.<br>Southern California Edison<br>Pacific Gas & Electric Co.<br>Southern California Edison<br>Southern California Edison                                                        | March 6, 1978<br>April 25, 1978<br>June 12, 1981<br>May 20, 1982<br>May 28, 1982                                                                      |
| CO    | U. S. Department of Defense<br>J.C. Penney Company<br>U.S. Department of Defense<br>U. S. Department of Defense<br>U.S. Department of Defense<br>U.S. Department of Defense<br>U.S. Department of Defense                                                                                                              | I&S 1100<br>5693<br>I&S 1339<br>I&S 1540<br>C. Council<br>C. Council<br>C. Council                      | Colorado Springs (Elec)<br>All Electric Utilities<br>Colorado Springs DPU (Gas)<br>Colorado Springs DPU (Gas)<br>Colorado Springs DPU (Gas)<br>Colorado Springs DPU (Elec)<br>Colorado Springs DPU (Elec) | June 14, 1977<br>March 8, 1978<br>October 18, 1979<br>February 9, 1982<br>September 30, 1984<br>June 6, 1985<br>May 19, 1986<br>June 30, 1987         |
| CT    | Retailers Merchants Association<br>Division of Consumer Counsel<br>Public Utilities Control Auto<br>Division of Consumer Counsel<br>Division of Consumer Counsel<br>Division of Consumer Counsel<br>Division of Consumer Counsel<br>Coalition of Hotels, Alloys & Retailers<br>Coalition of Hotels, Alloys & Retailers | 72-0204<br>76-0604,5<br>78-0303<br>80-0403,4<br>81-0413<br>81-0602,4<br>82-0701<br>85-10-22<br>87-07-01 | Various Electric Utilities<br>CL&P and HELCO<br>Bridgeport Hydraulic Co.<br>CL&P and HELCO<br>United Illuminating Company<br>CL&P and HELCO<br>CL&P<br>CL&P<br>CL&P                                       | July 22, 1976<br>November 10, 1977<br>(none)<br>August 11, 1980<br>July 20, 1981<br>October 5, 1981<br>September 28, 1982<br>(none)<br>April 25, 1988 |

| Electric, Gas, Water Utility Cases |                                         |             |                                   | Date of Cross-Examination |
|------------------------------------|-----------------------------------------|-------------|-----------------------------------|---------------------------|
| State                              | Client                                  | Case        |                                   |                           |
|                                    |                                         | Case Number | Utility                           |                           |
| DC                                 | D.C. People's Counsel                   | 685         | Potomac Electric Power Company    | March 6, 1978             |
|                                    | D.C. People's Counsel                   | 715         | Potomac Electric Power Company    | (none)                    |
|                                    | D.C. People's Counsel                   | 725         | Potomac Electric Power Company    | April 4, 1980             |
|                                    | D.C. People's Counsel                   | 737         | Potomac Electric Power Company    | January 1, 1981           |
|                                    | Washington Metro Area Transit Authority | 748         | Potomac Electric Power Company    | June 26, 1981             |
|                                    | Washington Metro Area Transit Authority | 758         | Potomac Electric Power Company    | December 15, 1981         |
|                                    | D.C. People's Counsel                   | 785         | Potomac Electric Power Company    | September 21, 1982        |
|                                    | Washington Metro Area Transit Authority | 759         | Potomac Electric Power Company    | March 29, 1984            |
|                                    | D.C. People's Counsel                   | 685 Remand  | Potomac Electric Power Company    | June 10, 1985             |
|                                    | D.C. People's Counsel                   | 905         | Potomac Electric Power Company    | August 20, 1991           |
|                                    | D.C. People's Counsel                   | 912         | Potomac Electric Power Company    | May 7, 1992               |
|                                    | D.C. People's Counsel                   | 834, III    | Potomac Electric Power Company    | May 22, 1992              |
|                                    | D.C. People's Counsel                   | 917         | Potomac Electric Power Company    | September 24, 1992        |
|                                    | D.C. People's Counsel                   | 922         | Washington Gas Light Company      | June 15, 1993             |
|                                    | D.C. People's Counsel                   | 929         | Potomac Electric Power Company    | December 16, 1993         |
|                                    | D.C. People's Counsel                   | 934         | Washington Gas Light Company      | Filed April 22, 1994      |
|                                    | D.C. People's Counsel                   | 939         | Potomac Electric Power Company    | March 16, 1995            |
|                                    | D.C. People's Counsel                   | 917         | Potomac Electric Power Company    | April 16, 1995            |
|                                    | D.C. People's Counsel                   | 951         | Potomac Electric Power Company    | February 20, 1997         |
|                                    | D.C. People's Counsel                   | 945         | Potomac Electric Power Company    | September 29, 1999        |
|                                    | D.C. People's Counsel                   | 847         | Washington Gas Light Company      | June 27, 2001             |
|                                    | D.C. People's Counsel                   | 989         | Washington Gas Light Company      | May 22, 2002              |
|                                    | D.C. People's Counsel                   | 1016        | Washington Gas Light Company      | September 23, 2003        |
| DE                                 | Delaware PSC Staff                      | 94-164      | Artesian Water Company            | Filed March 10, 1995      |
|                                    | Delaware PSC Staff                      | 94-149      | Wilmington Suburban Water Company | March 10, 1995            |
|                                    | Delaware PSC Staff                      | 04-152      | Tidewater Utilities Company       | Filed July 26, 2004       |
| FL                                 | Florida Retail Federation               | 790593-EU   | All Electric Utilities            | March 5, 1981             |
|                                    | Florida Retail Federation               | 810002-EU   | Florida Power and Light Company   | July 23, 1981             |
|                                    | Florida Retail Federation               | 820097-EU   | Florida Power and Light Company   | September 22, 1982        |
|                                    | Florida Retail Federation               | 820097-EU   | Florida Power and Light Company   | April 11, 1983            |
|                                    | Florida Retail Federation               | 830012-EU   | Tampa Electric Company            | August 19, 1983           |
|                                    | Florida Retail Federation               | 830465-EI   | Florida Power and Light Company   | April 19, 1984            |
|                                    | Florida Retail Federation               | 830465-EI   | Tampa Electric Company            | (none)                    |

CHARLES W. KING  
Appearances before State Regulatory Agencies

| State | Electric, Gas, Water Utility Cases                                                          |                   |                                                        | Date of Cross-Examination       |
|-------|---------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------|---------------------------------|
|       | Client                                                                                      | Case              |                                                        |                                 |
|       |                                                                                             | Case Number       | Utility                                                |                                 |
| GA    | Georgia Retail Federation                                                                   | 3270-U            | Georgia Power Company                                  | September 3, 1981               |
|       | Georgia Public Service Commission                                                           | 4007-U            | Georgia Power Company                                  | August 21, 1991                 |
|       | Georgia Public Service Commission                                                           | 4384-U            | All Electric Utilities                                 | August 1, 1993                  |
|       | Georgia Public Service Commission                                                           | 4755-U            | Georgia Power Company                                  | January 25, 1994                |
|       | Georgia Public Service Commission                                                           | 4697-U            | All Utilities                                          | May 10, 1994                    |
|       | Georgia Public Service Commission                                                           | 9355-U            | Georgia Power Company                                  | November 4, 1998                |
|       | Georgia Public Service Commission                                                           | 14000-U           | Georgia Power Company                                  | October 23, 2001                |
|       | Georgia Public Service Commission                                                           | 14618-U           | Savannah Electric & Power Company                      | March 27, 2002                  |
|       | Georgia Public Service Commission                                                           | 14311-U           | Atlanta Gas Light Company                              | April 8, 2002                   |
|       | Georgia Public Service Commission                                                           | 17066-U           | Georgia Power Company                                  | July 31, 2003                   |
|       | Georgia Public Service Commission                                                           | 18300-U           | Georgia Power Company                                  | October 26, 2004                |
|       | Georgia Public Service Commission                                                           | 18638-U           | Atlanta Gas Light Company                              | March 14, 2005                  |
|       | Georgia Public Service Commission                                                           | 19758-U           | Savannah Electric & Power Company                      | March 29, 2005                  |
|       | Georgia Public Service Commission                                                           | 20298-U           | Atmos Energy Corp.                                     | October 11, 2005                |
| HI    | Public Utilities Department                                                                 | 2793              | All Electric Utilities                                 | February 14, 1978               |
|       | Hawaii Consumer Advocate                                                                    | 4536              | Hawaiian Electric Company                              | February 1, 1983                |
| IL    | Illinois Retail Merchants Association ("IRMA")/<br>Chicago Bldg. Mgrs. Association ("CBMA") | 76-0698           | Commonwealth Edison                                    | June 22, 1977                   |
|       | IRMA/CBMA                                                                                   | 76-0568           | All Electric Utilities                                 | (none)                          |
|       | IRMA/CBMA                                                                                   | 80-0546           | Commonwealth Edison                                    | March 5, 1981                   |
|       | IRMA/CBMA                                                                                   | 82-0026           | Commonwealth Edison                                    | July 22, 1982                   |
|       | IRMA/CBMA                                                                                   | 83-0537           | Commonwealth Edison                                    | March 19, 1984                  |
|       | IRMA/CBMA                                                                                   | 87-0427           | Commonwealth Edison                                    | March/April 22, 1988            |
|       | IRMA/CBMA                                                                                   | 90-0169           | Commonwealth Edison                                    | October 29, 1990                |
| IN    | City of O'Fallon, IL                                                                        | 02-0690           | Illinois-American Water Company                        | Filed Feb.5, Apr.11,2003        |
|       | Indiana Retail Council                                                                      | 35780-S2          | N. Ind. Public Service co.                             | June 1, 1980                    |
|       | Indiana Retail Council<br>Indiana Retail Council                                            | 35780-S1<br>36318 | Public Service of Indiana<br>Public Service of Indiana | October 15, 1980<br>May 4, 1982 |
| KS    | J.C. Penney Company                                                                         | 115,379-U         | All Kansas Utilities                                   | January 22, 1981                |
| KY    | Seven Kentucky Retailers                                                                    | 7310              | Louisville Gas & Electric Co.                          | April 25, 1979                  |
|       | Attorney General of Kentucky                                                                | 2002-145          | Columbia Gas of Kentucky                               | Filed August 8, 2002            |
|       | Attorney General of Kentucky                                                                | 2003-252          | Union Heat Light & Power Co.                           | September 30, 2003              |
|       | Attorney General of Kentucky                                                                | 2004-67           | Delta Gas Company                                      | August 18, 2004                 |

CHARLES W. KING  
Appearances before State Regulatory Agencies

| State | Electric, Gas, Water Utility Cases |             |                                  | Date of Cross-Examination       |
|-------|------------------------------------|-------------|----------------------------------|---------------------------------|
|       | Client                             | Case Number | Case<br>Utility                  |                                 |
| MA    | Coalition of Municipalities        | 20279       | Western Massachusetts Electric   | March 19, 1980                  |
|       | Coalition of Municipalities        | 557/558     | Western Massachusetts Electric   | May 14, 1981                    |
|       | Coalition of Municipalities        | 957         | Western Massachusetts Electric   | March 9, 1982                   |
|       | Coalition of Municipalities        | 1300        | Western Massachusetts Electric   | January 1, 1983                 |
|       | Coalition of Municipalities        | 85-270      | Western Massachusetts Electric   | March 26, 1986                  |
| MD    | Maryland People's Counsel          | 6977        | Washington Gas & Light Company   | September 17, 1976              |
|       | Maryland People's Counsel          | 6814        | Potomac Electric Power Company   | September 1, 1977               |
|       | Maryland People's Counsel          | 6807        | All Electric Utilities           | (none)                          |
|       | Maryland People's Counsel          | 6882        | Baltimore Gas & Electric Company | September 28, 1976              |
|       | Maryland People's Counsel          | 6985        | Baltimore Gas & Electric Company | December 20, 1976               |
|       | Maryland People's Counsel          | 7070        | Baltimore Gas & Electric Company | April 18, 1978                  |
|       | Maryland People's Counsel          | 7149        | Potomac Electric Power Company   | January 17, 1979                |
|       | Maryland People's Counsel          | 7163        | All Electric Utilities           | October 23, 1978                |
|       | Maryland People's Counsel          | 7236        | Delmarva Power & Light Company   | June 20, 1980                   |
|       | Maryland People's Counsel          | 7397        | Baltimore Gas & Electric Company | September 8, 1980               |
|       | Retail Merchants of Baltimore      | 7427        | Delmarva Power & Light Company   | December 2, 1981                |
|       | Maryland People's Counsel          | 7574        | Baltimore Gas & Electric Company | February 18, 1982               |
|       | Maryland People's Counsel          | 7597        | Potomac Electric Power Company   | April 20, 1982                  |
|       | Organization of Consumer Justice   | 7604        | Potomac Electric Power Company   | October 19, 1982                |
|       | Maryland People's Counsel          | 7663        | Potomac Electric Power Company   | November 22, 1982               |
|       | Maryland People's Counsel          | 7685        | Baltimore Gas & Electric Company | April 12, 1983                  |
|       | Retail Merchants of Baltimore      | 7878        | Potomac Electric Power Company   | December 9, 1985                |
|       | Genstar Stone Products, et al.     | 7878        | Potomac Electric Power Company   | June 28/July 1986               |
|       | Industrial Intervenor              | 7983        | Baltimore Gas & Electric Company | March 4, 1987                   |
|       | Maryland People's Counsel          | 8855        | Baltimore Gas & Electric Company | January 8, 2003                 |
|       | Giant Foods, Inc.                  | 9036        | Baltimore Gas & Electric Company | September 29, 2005              |
| MI    | General Services Administration    | U-10102     | Detroit Edison Company           | March 22, 1993                  |
|       | Michigan Attorney General          | U-11722     | Detroit Edison Company           | November 6, 1998                |
|       | Michigan Attorney General          | U-11772     | Consumers Energy/Detroit Edison  | November 16, 1998               |
|       | Michigan Attorney General          | U-11495     | Detroit Edison Company           | December 8, 1999                |
|       | Michigan Attorney General          | U-11956     | Consumer Energy/Detroit Edison   | December 15, 1999               |
|       | Michigan Attorney General          | U-12505     | Consumers Energy Company         | September 7, 2000               |
|       | Michigan Attorney General          | U-12478     | Detroit Edison Company           | October 5, 2000                 |
|       | Michigan Attorney General          | U-12639     | Consumers Energy/Detroit Edison  | July 18, 2001                   |
|       | Michigan Attorney General          | U-13000     | Consumers Energy Company         | January 29, 2002                |
|       | Michigan Attorney General          | U-13380     | Consumers Energy Company         | September 9, 2002               |
|       | Michigan Attorney General          | U-13715     | Consumers Energy Company         | April 24, 2003                  |
|       | Michigan Attorney General          | U-13808     | Detroit Edison Company           | Dec 12, 2003; Jan 30, Mar 5, 04 |

CHARLES W. KING  
Appearances before State Regulatory Agencies

| Electric, Gas, Water Utility Cases |                                                                                                                               |                                   |                                                                            |                                                          | Date of Cross-Examination |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------|---------------------------|
| State                              | Client                                                                                                                        | Case                              |                                                                            | Utility                                                  |                           |
|                                    |                                                                                                                               | Case Number                       |                                                                            |                                                          |                           |
| MI<br>(Cont'd)                     | Michigan Attorney General                                                                                                     | U-12999                           | Consumers Energy Company                                                   | March 10, 2004                                           |                           |
|                                    | Michigan Attorney General                                                                                                     | U-13898.9                         | Michigan Consolidated Gas Co.                                              | August 23, 2004                                          |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14201                           | Detroit Edison Company                                                     | Filed December 5, 2004                                   |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14274                           | Consumers Energy Company                                                   | Filed February 15, 2005                                  |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14148                           | Consumers Energy Company                                                   | Filed March 2, 25, 2005                                  |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14399                           | Consumers Energy Company                                                   | July 29, 2005                                            |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14428                           | Detroit Edison Company                                                     | September 7, 2005                                        |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14292                           | All Michigan Utilities                                                     | September 27, 2005                                       |                           |
|                                    | Michigan Attorney General                                                                                                     | U-13808-R                         | Detroit Edison Company                                                     | November 7, 2005                                         |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14547                           | Consumers Energy Company                                                   | Nov. 7, 2005; Mar. 22, 2006                              |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14701                           | Consumers Energy Company                                                   | March 21, 2006                                           |                           |
| MN                                 | Michigan Attorney General                                                                                                     | U-14526                           | Consumers Energy Company                                                   | April 11, 2006                                           |                           |
|                                    | Michigan Attorney General                                                                                                     | U-14561                           | All Gas Distribution Utilities                                             | June 1, 2006                                             |                           |
|                                    | Minnesota Retail Federation                                                                                                   | EOO2/6R-77-611                    | Northern States Power                                                      | 1979                                                     |                           |
|                                    | Missouri Retailers Association<br>Missouri Public Counsel                                                                     | EO-78-161<br>ER-2006-0315         | Kansas City Power & Light Company<br>Empire District Electric Company      | February 19, 1981<br>September 14, 2006                  |                           |
|                                    | North Carolina Merchants Association                                                                                          | E-100                             | All Electric Utilities                                                     | December 18, 1975                                        |                           |
| ND                                 | North Dakota Public Service Commission                                                                                        | PU-400-00-521                     | Xcel Energy, Inc.                                                          | April 20, 2001                                           |                           |
|                                    | North Dakota Public Service Commission                                                                                        | PU-399-01-186                     | Montana-Dakota Utilities (Electric)                                        | February 25, 2002                                        |                           |
|                                    | North Dakota Public Service Commission                                                                                        | PU-399-02-183                     | Montana-Dakota Utilities (Gas)                                             | October 7, 2002                                          |                           |
|                                    | North Dakota Public Service Commission                                                                                        | PU-399-02-183                     | Montana-Dakota Utilities (Gas Depr.)                                       | Filed April 7, 2003                                      |                           |
|                                    | North Dakota Public Service Commission                                                                                        | PU-399-03-296<br>PU-04-97         | Montana-Dakota Utilities (Electric)<br>Montana-Dakota Utilities (Gas)      | Filed October 15, 2003<br>Filed July 6, 2004             |                           |
| NH                                 | Business & Industry Association of N.H.<br>Business & Industry Association of N.H.<br>Business & Industry Association of N.H. | 79-187-II<br>80-260<br>82-333     | Public Service of N.H.<br>Public Service of N.H.<br>Public Service of N.H. | February 6, 1981<br>February 5, 1981<br>November 2, 1983 |                           |
|                                    | NJ                                                                                                                            | N.J. Retail Merchants Association | 803-151                                                                    | All New Jersey Utilities                                 | March 31, 1981            |
|                                    |                                                                                                                               | Department of Public Advocate     | 815-459                                                                    | N.J. Natural Gas Company                                 | (none)                    |
| Resorts International Hotel, Inc.  |                                                                                                                               | 8011-827                          | Atlantic City Sewerage Co.                                                 | (none)                                                   |                           |
| Dept. of Public Advocate           |                                                                                                                               | 822-116                           | Atlantic City Electric Co.                                                 | August 11, 1982                                          |                           |
| Dept. of Public Advocate           |                                                                                                                               | 355-87                            | Elizabethtown Gas                                                          | June 9, 1987                                             |                           |
| Dover Township Fire Chiefs         | 88-080967                                                                                                                     | Tom's River Water Company         | February 22, 1989                                                          |                                                          |                           |

CHARLES W. KING  
Appearances before State Regulatory Agencies

| State | Client                                                                                                                                                                                                                      | Electric, Gas, Water Utility Cases |                                                      | Date of Cross-Examination            |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------------------|--------------------------------------|
|       |                                                                                                                                                                                                                             | Case                               |                                                      |                                      |
|       |                                                                                                                                                                                                                             | Case Number                        | Utility                                              |                                      |
| NY    | N.Y. Council of Retail Merchants<br>Metropolitan N.Y. Retail Council<br>Metropolitan N.Y. Retail Council<br>N.Y. Metro. Transit Authority                                                                                   | 26806                              | All Electric Utilities                               | February 3, 1976                     |
|       |                                                                                                                                                                                                                             | 27029                              | Consolidated Edison Company                          | (none)                               |
|       |                                                                                                                                                                                                                             | 27136                              | Long Island Lighting Company                         | July 1, 1977                         |
|       |                                                                                                                                                                                                                             | 27353                              | Consolidated Edison Company                          | September 5, 1980                    |
| OH    | Ohio Council of Retail Association<br>Ohio Council of Retail Association                                                                                                                                                    | 88-170-EL                          | Cleveland Elec. Illuminating                         | (none)                               |
|       |                                                                                                                                                                                                                             | 83-1529-EL                         | Cincinnati Gas & Electric                            | February 15, 1992                    |
| PA    | Pennsylvania Retail Association<br>Southeastern Pa. Transp. Authority<br>Eastern Penn Energy Users Group<br>Eastern Penn Energy Association<br>Penn Business Utility User Group<br>Pennsylvania Office of Consumer Advocate | 76-PRMD-7                          | All Electric Utilities                               | September 7, 1977                    |
|       |                                                                                                                                                                                                                             | R-811626                           | Philadelphia Electric Company                        | December 11, 1981                    |
|       |                                                                                                                                                                                                                             | R-822169                           | Penn. Power & Light Company                          | March/April 1983                     |
|       |                                                                                                                                                                                                                             | R-842651                           | Penn. Power & Light Company                          | December 3, 1984                     |
|       |                                                                                                                                                                                                                             | R-850152                           | Philadelphia Electric Company                        | February 19, 1986                    |
|       |                                                                                                                                                                                                                             | R-00016339                         | Pennsylvania-American Water Co.                      | September 19, 2001                   |
| TX    | Houston Retailers Association<br>Houston Retailers Association<br>Cities for Fair Utility Rates                                                                                                                             | 5779                               | Houston Lighting Company                             | October 19, 1984                     |
|       |                                                                                                                                                                                                                             | 6765<br>8425/8431                  | Houston Lighting Company<br>Houston Lighting Company | September 25, 1986<br>April 25, 1989 |
| UT    | Div. Of Public Utilities Dept of Commerce<br>Div. Of Public Utilities Dept of Commerce                                                                                                                                      | 98-2035-33                         | Pacific Corp                                         | Filed August 16, Sept 22, 1999       |
|       |                                                                                                                                                                                                                             | 05-057-T01                         | Questar Gas Company                                  | May 17, 2006                         |
| VA    | Consumer Congress of Virginia<br>Consumer Congress of Virginia<br>Va. Business Committee on Energy<br>Virginia Pipe Trades Council                                                                                          | 19426                              | Virginia Electric Power Company                      | July 1, 1975                         |
|       |                                                                                                                                                                                                                             | 19960                              | Virginia Electric Power Company                      | September 19, 1978                   |
|       |                                                                                                                                                                                                                             | PUE 7900012                        | Virginia Electric Power Company                      | February 25, 1981                    |
|       |                                                                                                                                                                                                                             | PUE 8900051                        | Old Dominion Electric Corp. &                        | October 31, 1989                     |
| WI    | Wisconsin Merchants Federation                                                                                                                                                                                              | 6630-ER-2                          | Wisconsin Electric Power Company                     | May 15, 1978                         |

| Telecommunications Cases   |                                                          |                                   |                                                                  |                                                 | Date of Cross-Examination |
|----------------------------|----------------------------------------------------------|-----------------------------------|------------------------------------------------------------------|-------------------------------------------------|---------------------------|
| State                      | Client                                                   | Case                              |                                                                  | Utility                                         |                           |
|                            |                                                          | Case Number                       |                                                                  |                                                 |                           |
| AL                         | U.S. Department of Defense                               | 24472                             | All Telephone Companies                                          | June 14, 1995                                   |                           |
| AK                         | GCI Communications, Inc.<br>GCI Communications, Inc.     | U-97-82, U-97-143<br>U-05-46      | Alaska Communications Systems<br>Matanuska Telephone Association | Filed Feb 25, April 5, 2004<br>October 28, 2005 |                           |
| AZ                         | Arizona Burglar & Fire Alarm Association                 | 9981-E-<br>1051-80-64             | Mountain State Telephone                                         | (none)                                          |                           |
|                            | Federal Executive Agencies<br>U.S. Department of Defense | E-1051-88-146<br>T-01051B-99-0105 | Mountain State Telephone<br>US WEST Communications               | (none)<br>Filed July 26, Sept 8, 2000           |                           |
| CA                         | Western Burglar & Fire Alarm Association                 | 59849                             | Pacific Telephone & Telegraph                                    | March 25, 1981                                  |                           |
|                            | Western Burglar & Fire Alarm Association                 | 5984cont.                         | Pacific Telephone & Telegraph                                    | June 23, 1982                                   |                           |
|                            | Western Burglar & Fire Alarm Association                 | A83-01-22                         | Pacific Telephone & Telegraph                                    | June 29, 1983                                   |                           |
|                            | Western Burglar & Fire Alarm Association                 | A83-02-02                         | General Telephone of California                                  | January 17, 1984                                |                           |
|                            | Western Burglar & Fire Alarm Association                 | A82-11-07                         | Pacific Telephone & Telegraph                                    | Jan. 18, Oct. 31, Nov 28, 1984                  |                           |
|                            | Western Burglar & Fire Alarm Association                 | A85-01-034                        | Pacific Telephone & Telegraph                                    | June 4, 1985, October 2, 1986                   |                           |
|                            | Western Burglar & Fire Alarm Association                 | A87-01-02                         | General Telephone of California                                  | October 22, 1987                                |                           |
|                            | Western Burglar & Fire Alarm Association                 | A88-07-17019                      | Pac. Bell Tel. & GTE of CA.                                      | January 23, 1989                                |                           |
|                            | California Cellular Resellers                            | A.88-11-1040                      | All Cellular Carriers                                            | August 11, 1989                                 |                           |
|                            | Federal Executive Agencies                               | 1.87-11-033                       | All Telephone Companies                                          | March 6-7, 1991                                 |                           |
|                            | California Cellular Resellers                            | 1.88-11-040                       | All Cellular Carriers                                            | August 19, 1991                                 |                           |
|                            | Cellular Services, Inc.                                  | 1.88-11-040                       | All Cellular Carriers                                            | October 3, 1991                                 |                           |
| Federal Executive Agencies | A92-05-004                                               | Pacific Telephone & Telegraph     | June 9, 1993                                                     |                                                 |                           |
| CO                         | U.S. Department of Defense                               | I&S 717                           | Mountain Bell Telephone Company                                  | 1972                                            |                           |
|                            | U.S. Department of Defense                               | I&S 1700                          | Mountain Bell Telephone Company                                  | (none)                                          |                           |
|                            | U.S. Department of Defense                               | Appl.                             | Mountain Bell Telephone Company                                  | September 18, 1986                              |                           |
|                            | U.S. Department of Defense                               | I&S 1766                          | Mountain Bell Telephone Company                                  | November 28, 1988                               |                           |
|                            | Colorado Municipal League                                | Appl 36883                        | Mountain Bell Telephone Company                                  | December 13, 1988                               |                           |
|                            | U.S. Department of Defense                               | I&S 891-082T                      | Mountain Bell Telephone Company                                  | February 21, 1990                               |                           |
|                            | U.S. Department of Defense                               | 905-544T                          | U.S. West Communications                                         | July 17, 1991                                   |                           |
|                            | U.S. Department of Defense                               | 90A-665T                          | U.S. West Communications                                         | October 23, 1991                                |                           |
|                            | U.S. Department of Defense                               | 92M-039T                          | U.S. West Communications                                         | February 24-24, 1992                            |                           |
|                            | U.S. Department of Defense                               | 92S-229T                          | U.S. West Communications                                         | July 30-31, 1992                                |                           |
|                            | U.S. Department of Defense                               | 90A-665T                          | U.S. West Communications                                         | November 6, 1996                                |                           |
|                            | AT&T                                                     | 96S-331T                          | U.S. West Communications                                         | April 17, 1997                                  |                           |

| Telecommunications Cases |                                   |                       |                                    |                        | Date of Cross-Examination |
|--------------------------|-----------------------------------|-----------------------|------------------------------------|------------------------|---------------------------|
| State                    | Client                            | Case                  |                                    |                        |                           |
|                          |                                   | Case Number           | Utility                            |                        |                           |
| CT                       | Connecticut Consumer Counsel      | 770526                | Southern New England Telephone Co. | November 10, 1977      |                           |
|                          | CT Cellular Resellers Assn.       | 89-12-05              | Southern New England Telephone Co. | (none)                 |                           |
|                          | CT Cellular Resellers Coalition   | 94-03-27              | Springwich Cellular/Bell Atlantic  | May 16, June, 1994     |                           |
|                          | AT&T                              | AT&T/SNET Arbitration | Southern New England Telephone Co. | Filed October 28, 1996 |                           |
|                          | Connecticut Consumer Counsel      | 96-04-07              | Southern New England Telephone Co. | February 10, 1998      |                           |
|                          | Connecticut Consumer Counsel      | 00-07-17              | Southern New England Telephone Co. | December 5, 2000       |                           |
| DC                       | D.C. People's Counsel             | 729                   | Chesapeake & Potomac Tel. Co.      | May 13, 1980           |                           |
|                          | D.C. People's Counsel             | 798                   | Chesapeake & Potomac Tel. Co.      | July 18, 1983          |                           |
|                          | General Services Administration   | 827                   | Chesapeake & Potomac Tel. Co.      | May 7, 1985            |                           |
|                          | General Services Administration   | 854                   | Chesapeake & Potomac Tel. Co.      | April 16, 1987         |                           |
|                          | General Services Administration   | 850                   | Chesapeake & Potomac Tel. Co.      | October 7, 1991        |                           |
|                          | General Services Administration   | 926                   | Chesapeake & Potomac Tel. Co.      | October 7, 1993        |                           |
| DE                       | Public Service Commission         | Depr. Repr<br>86-20   | Diamond State Telephone Co.        | April 1, 1985          |                           |
|                          | Federal Executive Agencies        | Depr. Repr            | Diamond State Telephone Co.        | July 31, 1987          |                           |
| FL                       | Public Service Commission         |                       | Diamond State Telephone Co.        | March 8, 1988          |                           |
|                          | GTE Sprint Communications Company | 720536-TP             | All Telephone Companies            | September 12, 1983     |                           |
|                          | Office of Public Counsel          | Depr. Repr            | Southern Bell                      | July 30, 1986          |                           |
|                          | Federal Executive Agencies        | 880069-TL             | Southern Bell                      | July 21, 1988          |                           |
|                          | Federal Executive Agencies        | 880069-TL             | Southern Bell                      | November 30, 1990      |                           |
|                          | Federal Executive Agencies        | 880069-TL             | Southern Bell                      | February 11, 1992      |                           |
| GA                       | Georgia Attorney General          | 3893-U                | Southern Bell Telephone Co.        | January 8, 1990        |                           |
|                          | Federal Executive Agencies        | 3905-U                | Southern Bell Telephone Co.        | June 12, 1990          |                           |
|                          | Federal Executive Agencies        | 3987-U                | Southern Bell Telephone Co.        | February 13, 1992      |                           |
|                          | Georgia Public Service Commission | 4018-U                | Southern Bell Telephone Co.        | Jan 14, Feb 10, 1993   |                           |
| HI                       | Hawaii Public Utility Commission  | 1871                  | Hawaiian Telephone Company         | July 8, 1971           |                           |
|                          | Four Hawaii Counties              | 4588                  | Hawaiian Telephone Company         | December 15, 1983      |                           |
|                          | Department of Defense             | 7579                  | Hawaiian Telephone Company         | April 26, 1994         |                           |
|                          | Department of Defense             | 94-0093               | Oceanic Communications             | March 13, 1995         |                           |
|                          | Department of Defense             | 7702                  | All Communications Carriers        | June 2, 1995           |                           |
|                          | Department of Defense             | 94-0298               | GTE Hawaiian Telephone Company     | May 7, 1996            |                           |
|                          | Department of Defense             | 7720                  | Verizon-Hawaii                     | November 15, 2000      |                           |

| Telecommunications Cases |                                                                                                                                                                                                            |                                                      |                                                                                                                                                                             |                                                                                                                    | Date of Cross-Examination |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------|
| State                    | Client                                                                                                                                                                                                     | Case                                                 |                                                                                                                                                                             |                                                                                                                    |                           |
|                          |                                                                                                                                                                                                            | Case Number                                          | Utility                                                                                                                                                                     |                                                                                                                    |                           |
| ID                       | U.S. Department of Energy<br>U.S. Department of Energy                                                                                                                                                     | U-1000-63<br>U-1000-70                               | Mountain Bell Telephone Co.<br>Mountain Bell Telephone Co.                                                                                                                  | May 16, 1983<br>March 6, 1984                                                                                      |                           |
| IL                       | Illinois Alarm Companies<br>Attorney General of Illinois<br>GTE Sprint Communications Co.<br>Federal Executive Agencies                                                                                    | 79-0143<br>81-0478<br>83-0142<br>89-0033             | Illinois Bell Telephone<br>Illinois Bell Telephone<br>All Telephone Companies<br>Illinois Bell Telephone                                                                    | September 26, 1979<br>December 28, 1981<br>August 4, 1983<br>June 12, 1989                                         |                           |
| KS                       | State Corporation Commission<br>Federal Executive Agencies<br>Federal Executive Agencies                                                                                                                   | Depr. Repr.<br>166.856-U<br>190, 492                 | Southwestern Bell<br>Southwestern Bell<br>All Telephone Companies                                                                                                           | May 12-14, 1986<br>November 7, 1989<br>November 4, 1994                                                            |                           |
| KY                       | Kentucky Cable Telecommunications Assn.<br>Kentucky Cable Telecommunications Assn.                                                                                                                         | 2000-414<br>2000-39                                  | Blue Grass Energy Cooperative<br>Cumberland Valley Electric, Inc.                                                                                                           | January 11, 2001<br>January 11, 2001                                                                               |                           |
| MD                       | Maryland People's Counsel<br>Maryland People's Counsel<br>Maryland People's Counsel<br>Maryland People's Counsel<br>Federal Executive Agencies<br>Federal Executive Agencies<br>Federal Executive Agencies | 6813<br>6881<br>7025<br>7467<br>7851<br>8106<br>8274 | C&P Telephone Company<br>C&P Telephone Company<br>C&P Telephone Company<br>C&P Telephone Company<br>C&P Telephone Company<br>C&P Telephone Company<br>C&P Telephone Company | 1975<br>December 17, 1975<br>March 15, 1975<br>October 20, 1981<br>March 20, 1985<br>May 9, 1988<br>August 2, 1990 |                           |
| MI                       | Michigan Attorney General<br>Michigan Attorney General                                                                                                                                                     | U-8911<br>U-9553                                     | Michigan Bell Telephone Co.<br>AT&T Communications/MCI                                                                                                                      | November 7, 1988<br>December 4, 1990                                                                               |                           |
| MN                       | GTE Sprint Communications Co.<br>U.S. Department of Defense                                                                                                                                                | 83-102-HC<br>87-021-BC                               | All Telephone Companies<br>Northwest Bell Telephone Co.                                                                                                                     | August 5, 1983<br>(none)                                                                                           |                           |

| State | Telecommunications Cases                                                                                                                                          |                                                                                   |  |                                                                                                                                                                                               | Date of Cross-Examination                                                                                |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|       | Client                                                                                                                                                            | Case                                                                              |  | Utility                                                                                                                                                                                       |                                                                                                          |
|       |                                                                                                                                                                   | Case Number                                                                       |  |                                                                                                                                                                                               |                                                                                                          |
| MO    | GTE Sprint Communications Co.<br>Federal Executive Agencies<br>Federal Executive Agencies                                                                         | TR83-253<br>TC-89-14<br>TO-89-56                                                  |  | Southwestern Bell Tel. Co.<br>Southwestern Bell Tel. Co.<br>Southwestern Bell Tel. Co.                                                                                                        | September 5, 1983<br>(none)<br>November 7, 1990                                                          |
| MS    | Federal Executive Agencies                                                                                                                                        | U-5453                                                                            |  | South Central Bell Tel. Co.                                                                                                                                                                   | May 15, 1990                                                                                             |
| NJ    | Department of Public Advocate<br>Department of Public Advocate<br>Department of Public Advocate<br>Department of Public Advocate<br>Department of Public Advocate | Depr. Repr.<br>815-458<br>Depr. Repr.<br>Depr. Repr.<br>T092030358<br>TMO05080739 |  | N.J. Bell Telephone Company<br>N.J. Bell Telephone Company<br>N.J. Bell Telephone Company<br>N.J. Bell Telephone Company<br>N.J. Bell Telephone Company<br>United Telephone Co. of New Jersey | Mar-79<br>October 15, 1981<br>March 1, 1982<br>February 1, 1985<br>September 30, 1992<br>January 5, 2006 |
| NM    | New Mexico Corporation Commission<br>New Mexico Corporation Commission                                                                                            | 1032<br>86-151-TC                                                                 |  | Mountain Bell Telephone Co.<br>General Telephone of Southwest                                                                                                                                 | November 14, 1983<br>February 5, 1987                                                                    |
| NV    | Prime Cable of Las Vegas<br>Prime Cable of Las Vegas                                                                                                              | 95-8034/8035<br>96-9035                                                           |  | Central Telephone - NV<br>Sprint/Centel, Nevada Bell                                                                                                                                          | Filed November 22, 1995<br>June 2, 1997                                                                  |
| NY    | Holmes Protection, Inc.<br>Holmes Protection, Inc.<br>5 Alarm Companies<br>GTE Sprint Communications Co.                                                          | 27350<br>27469<br>27710<br>28425                                                  |  | New York Telephone Company<br>New York Telephone Company<br>New York Telephone Company<br>All Telephone Companies                                                                             | October 17, 1978<br>May 17, 1979<br>July 24, 1980<br>July 8, 1983                                        |
| PA    | City of Philadelphia                                                                                                                                              | R-832316                                                                          |  | Pennsylvania Bell Telephone                                                                                                                                                                   | September 20, 1983                                                                                       |
| SC    | Office of Consumer Advocate<br>Office of Consumer Advocate<br>Office of Consumer Advocate<br>Office of Consumer Advocate                                          | Depr. Repr.<br>86-511-C<br>86-541-C<br>Depr. Repr.<br>89-180-C                    |  | Southern Bell<br>Southern Bell<br>General Telephone of South<br>Southern Bell<br>ALL TEL of South Carolina                                                                                    | July 1, 1986<br>December 11, 1986<br>April 8, 1987<br>July 10, 1989<br>September 26, 1989                |

CHARLES W. KING  
Appearances before State Regulatory Agencies

| State                           | Telecommunications Cases                                                             |                                          |                         |                                                                                  | Date of Cross-Examination                          |
|---------------------------------|--------------------------------------------------------------------------------------|------------------------------------------|-------------------------|----------------------------------------------------------------------------------|----------------------------------------------------|
|                                 | Client                                                                               | Case                                     |                         | Utility                                                                          |                                                    |
|                                 |                                                                                      | Case Number                              |                         |                                                                                  |                                                    |
| TX                              | U.S. Department of Defense                                                           | 8585/8218                                |                         | Southwestern Bell Telephone Co.                                                  | (none)                                             |
| VA                              | U.S. Dept. Of Defense, GSA, et<br>Federal Executive Agencies                         | 19696<br>PUC 890014                      |                         | C&P Telephone Company<br>All Telephone Companies                                 | October 6, 1976<br>February 13, 1989               |
| VI                              | V.I. Department of Commerce<br>V.I. Public Service Commission                        | 205<br>341                               |                         | Virgin Islands Telephone Co.<br>Virgin Islands Telephone Co.                     | April 29, 1980<br>March 20, 1991                   |
| WA                              | U.S. Department of Defense                                                           | U-72-39                                  |                         | Pacific Northwest Bell                                                           | 1973                                               |
|                                 | U.S. Department of Defense                                                           | U-87-796-T                               |                         | Pacific Northwest Bell                                                           | December 20, 1983                                  |
|                                 | U.S. Department of Defense                                                           | U-88-20524                               |                         | Pacific Northwest Bell                                                           | November 8, 1988                                   |
|                                 | U.S. Department of Defense                                                           | U-89-2698-F                              |                         | US West Communications                                                           | November 28, 1989                                  |
|                                 | WA Attorney General/TRACER                                                           | UT-940641                                |                         | US West Communications                                                           | Filed October 14, 1994                             |
|                                 | U.S. Department of Defense                                                           | UT-941464                                |                         | US West Communications                                                           | June 22, 1995                                      |
|                                 | U.S. Department of Defense                                                           | UT-951425                                |                         | US West Communications                                                           | January 22, 1996                                   |
|                                 | WA Attorney General/TRACER                                                           | UT-961632                                |                         | US West Communications                                                           | Filed June 23, 1997                                |
|                                 | WA Attorney General/TRACER                                                           | UT-021120                                |                         | GTE Northwest, Inc                                                               | July 29, 1997                                      |
|                                 | U.S. Department of Defense                                                           | UT-040788                                |                         | Qwest Communications                                                             | May 22, 2003                                       |
| WA Attorney General/WaBTEC/AARP | UT-040520                                                                            |                                          | Verizon Northwest, Inc. | August 12, 2004                                                                  |                                                    |
| WA Attorney General             | UT-050814                                                                            |                                          | Verizon Northwest, Inc. | February 2, 2005                                                                 |                                                    |
| WA Attorney General             |                                                                                      |                                          | Verizon - MCI Merger    | November 2, 2005                                                                 |                                                    |
| WI                              | GTE Sprint<br>Wisconsin Consumers Utility Board<br>Wisconsin Consumers Utility Board | 6720-TR-38<br>2055-TR-102<br>5846-TR-102 |                         | All Telephone Companies<br>CenturyTel of Central Wisconsin<br>Telephone USA, LCC | October 20, 1983<br>June 26, 2002<br>June 26, 2002 |

| Federal Communications Commission                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Client                                                                                                                                                                                                                                                                                                                                                                                                                                     | Docket                                                                                                                                                                                       | Subject                                                                                                                                                                                                                                                                                                                                       | Date of Cross-Examination                                                                                                                                                                                                                                     |  |
| Department of Defense<br>Airline Parties<br>Airline Parties<br>National Data Corporation<br>Press Wire Services<br>Aeronautical Radio<br>Department of Defense<br>State of Hawaii<br>International Record Carriers<br>ITT World Communications<br>Aeronautical Radio<br>MCI<br>Ind. Data Com. Mfg. Assn.<br>Tymnet, Inc.<br>Adelphia Jones Intercable, et. al.<br>Adelphia Jones Intercable, et. al.<br>Adelphia Jones Intercable, et. al. | 16020<br>16258<br>18128<br>19989<br>19919<br>20814<br>20690<br>21263<br>CC78-97<br>CC84-633<br>CC78-72<br>CC84-800<br>CC85-26<br>ENF84-22<br>Bell Atlantic<br>Bell Atlantic<br>Bell Atlantic | Consat Rate of Return<br>Bell System Rates<br>TELPAC<br>WATS<br>Private Line Rates<br>Private Line Rates<br>1,544 Mbps Service<br>Interstate Separation<br>Telex/TWX Rates<br>Rate of Return<br>Access Line Charges<br>Rate of Return<br>AT&T Accounting Plan<br>Packet Switching Costs<br>Video Dialtone<br>Video Dialtone<br>Video Dialtone | 1973<br>July 22, 1968<br>3/22, 10/15 1971, Feb. 22, 1972<br>(none)<br>(none)<br>October 5, 1978<br>January 30, 1979<br>February 7, 1979<br>March 6, 1980<br>(none)<br>(none)<br>(none)<br>(none)<br>(none)<br>Filed 7/29/94<br>Filed 8/23/94<br>Filed 2/21/95 |  |
| Nuclear Regulatory Commission                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                               |  |
| Fauquier League for Environment Protection                                                                                                                                                                                                                                                                                                                                                                                                 | 50-328<br>50-329                                                                                                                                                                             | Va. Electric Power Co.                                                                                                                                                                                                                                                                                                                        | 1976                                                                                                                                                                                                                                                          |  |
| Postal Rate Commission                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                               |  |
| Association of Third Class Mail Users<br>Dow Jones & Company<br>Dow Jones & Company<br>Dow Jones & Company<br>Dow Jones & Company<br>Dow Jones & Company<br>Warshawsky & Company<br>Dow Jones & Company<br>Dow Jones & Company<br>Dow Jones & Company<br>Dow Jones & Company<br>Dow Jones & Company                                                                                                                                        | R71-1<br>R72-1<br>R74-1<br>MC76-2<br>MC79-3<br>R80-1<br>C82-1<br>R84-1<br>R87-1<br>R90-1<br>MC91-1<br>MC91-3                                                                                 | Rates<br>Rates<br>Rates<br>Rate Structure<br>Rate Structure<br>Rates<br>Rate Structure<br>Postal Costs<br>Rate Structure Costs<br>Rate Structure Costs<br>Pre-barcoding Discounts<br>Palletization Discounts                                                                                                                                  | 1970<br>1972<br>September 13, 1974<br>January 6, 1979<br>September 12, 1979<br>November 25, 1980<br>(none)<br>June 14, 1984<br>November 2, 1987<br>Sept 12, Oct 10, 1990<br>November 19, 1991<br>March 2, 1992                                                |  |

CHARLES W. KING  
Appearances before Federal Regulatory Agencies

| Client                                                                                                                                                                               | Docket                                                                                | Subject                                                                                                                 | Date of Cross-Examination                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| U.S. Congress                                                                                                                                                                        |                                                                                       |                                                                                                                         |                                                                        |
| National Retail Merchants Association<br>National Wireless Resellers Association                                                                                                     | House/Senate<br>Hearings<br>House Commerce<br>Committee                               | Electric Rate Reform Legislation<br>Interconnection & Resale of<br>Wireless Services                                    | 1976, 1977 & 1979<br>October 12, 1995                                  |
|                                                                                                                                                                                      |                                                                                       |                                                                                                                         |                                                                        |
| Federal Maritime Commission                                                                                                                                                          |                                                                                       |                                                                                                                         |                                                                        |
| State of Hawaii<br>Foss Alaska Line<br>Palmetto Shipping and Stevedoring                                                                                                             | 71-18<br>79-54<br>85-20                                                               | Ocean Shipping Rates<br>Barge Rate Increase<br>Vessel Charge Liability                                                  | October-71<br>July 1979<br>October 27, 1986                            |
| Interstate Commerce Commission                                                                                                                                                       |                                                                                       |                                                                                                                         |                                                                        |
| Western Coal Traffic League<br>Western Coal Traffic League<br>Western Coal Traffic League<br>Arkansas Power & Light Co.<br>Central Illinois Light Co.<br>Western Coal Traffic League | Ex Parte 349<br>Ex Parte 357<br>Ex Parte 375 (Sub1)<br>37276<br>37450<br>Ex Parte 347 | R.R. Rate Increase<br>R.R. Rate Increase<br>R.R. Rate Increase<br>Cost of Capital<br>Cost of Capital<br>Costing Methods | May-76<br>Oct-78<br>June 1, 1980<br>(none)<br>March 10, 1981<br>(none) |
| Civil Aeronautics Board                                                                                                                                                              |                                                                                       |                                                                                                                         |                                                                        |
| Thomas Cook, Inc.                                                                                                                                                                    | 36595                                                                                 | Air Fare Deregulation                                                                                                   | (none)                                                                 |
| Copyright Royalty Tribunal                                                                                                                                                           |                                                                                       |                                                                                                                         |                                                                        |
| Public Broadcasting Service                                                                                                                                                          | 88-2-86CD                                                                             | Television Valuation                                                                                                    | (none)                                                                 |
| Federal Energy Regulatory Commission                                                                                                                                                 |                                                                                       |                                                                                                                         |                                                                        |
| Exxon USA                                                                                                                                                                            | OR89-2-000                                                                            | Pipeline Quality Bank                                                                                                   | October 18, 1990                                                       |
| Canadian Transport Commission                                                                                                                                                        |                                                                                       |                                                                                                                         |                                                                        |
| Rail Costing Inquiry, 1967-1969<br>Telecommunications Costing Inquiry, 1972-1975                                                                                                     |                                                                                       |                                                                                                                         |                                                                        |
| Surface Transportation Board                                                                                                                                                         |                                                                                       |                                                                                                                         |                                                                        |
| Williams Energy Services, Inc.                                                                                                                                                       | Ex Parte 582, Sub 1                                                                   | Rail Merger Guidelines                                                                                                  | April 5, 2001                                                          |