**BEFORE THE**

**IDAHO PUBLIC UTILITIES COMMISSION**

| | | |
|---|---|---|
| **IN THE MATTER OF THE APPLICATION OF AVISTA CORPORATION FOR AUTHORITY TO INCREASE ITS RATES AND CHARGES FOR ELECTRIC AND NATURAL GAS SERVICE TO ELECTRIC AND NATURAL GAS CUSTOMERS IN THE STATE OF IDAHO.** | ) | **CASE NO. AVU-E-04-1/ AVU-G-04-1** |

# DIRECT TESTIMONY OF TERRI CARLOCK

**IDAHO PUBLIC UTILITIES COMMISSION**

**JUNE 21, 2004**

Q. Please state your name and address for the record.

A. My name is Terri Carlock. My business address is 472 West Washington Street, Boise, Idaho.

Q. By whom are you employed and in what capacity?

A. I am employed by the Idaho Public Utilities Commission as the Accounting Section Supervisor.

Q. Please outline your educational background and experience.

A. I graduated from Boise State University in May 1980, with a B.B.A. Degree in Accounting and in Finance. I have attended various regulatory, accounting, rate of return, economics, finance and ratings programs. I chaired the National Association of Regulatory Utilities Commissioners (NARUC) Staff Subcommittee on Economics and Finance for over 3 years. Under this subcommittee, I also chaired the Ad Hoc Committee on Diversification. I am currently a member of the NARUC Staff Subcommittee on Accounting and Finance. I have been a presenter for the Institute of Public Utilities at Michigan State University and for many other conferences. Since joining the Commission Staff in May 1980, I have participated in audits, performed financial analysis on various companies and have presented testimony before

this Commission on numerous occasions.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to present the Staff's recommendation related to the overall cost of capital for Avista Corporation (Avista) to be used in the revenue requirement in these case, AVU-E-04-1 and AVU-G-04-1. I will address the appropriate capital structure, cost rates and the overall rate of return.

Q. Please summarize your recommendations.

A. I am recommending a return on common equity in the range of 9.5% - 10.9% with a point estimate of 10.4%. The recommended overall weighted cost of capital is in the range of 8.87% - 9.46% with a point estimate of 9.25% to be applied to the rate base for the test year.

Q. Are you sponsoring any exhibits to accompany your testimony?

A. Yes, I am sponsoring Staff Exhibit No. 135 consisting of 3 schedules.

Q. Have you reviewed the testimony and exhibits of Avista witnesses Avera and Malquist?

A. Yes. Much of the theoretical approach used by witnesses Avera and Malquist in their testimonies and exhibits is generally the same as I have used. My judgment in some areas of application results in

different outcomes.

Q. What legal standards have been established for determining a fair and reasonable rate of return?

A. The legal test of a fair rate of return for a utility company was established in the *Bluefield Water Works* decision of the United States Supreme Court and is repeated specifically in *Hope Natural Gas*.

In *Bluefield Water Works and Improvement Co. v. West Virginia Public Service Commission*, 262 U.S. 679, 692, 43 S.Ct. 675, 67 L.Ed. 1176 (1923), the Supreme Court stated:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

The Court stated in *FPC v. Hope Natural Gas Company*, 320 U.S. 591, 603, 64 S.Ct. 281, 88 L.Ed. 333 (1944):

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock.
>
> ... By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. (Citations omitted.)

The Supreme Court decisions in *Bluefield Water Works* and *Hope Natural Gas* have been affirmed in *In re Permian Basin Area Rate Case*, 390 U.S. 747, 88 S.Ct 1344, 20 L.Ed 2d 312 (1968), and *Duquesne Light Co.* v. *Barasch*, 488 U. S. 299, 109 S.Ct. 609, 102 L.Ed.2d. 646 (1989). The Idaho Supreme Court has also adopted the principles established in *Bluefield Water Works* and *Hope Natural Gas*. See *In re Mountain States Tel. & Tel. Co.* 76 Idaho 474, 284 P.2d 681 (1955); *General Telephone Co.* v. *IPUC*, 109 Idaho 942, 712 P.2d 643 1986); *Hayden Pines Water Company* v. *IPUC*, 122 ID 356, 834 P.2d 873 (1992).

As a result of these United States and Idaho Supreme Court decisions, three standards have evolved for determining a fair and reasonable rate of return:

(1) the Financial Integrity or Credit Maintenance Standard; (2) the Capital Attraction Standard; and, (3) the Comparable Earnings Standard. If the Comparable Earnings Standard is met, the Financial Integrity or Credit Maintenance Standard and the Capital Attraction Standard will also be met, as they are an integral part of the Comparable Earnings Standard.

Q. Have you considered these standards in your recommendation?

A. Yes. These criteria have been seriously considered in the analysis upon which my recommendations are based. It is also important to recognize that the fair rate of return that allows the utility company to maintain its financial integrity and to attract capital is established assuming efficient and economic management, as specified by the Supreme Court in *Bluefield Water Works*.

Q. Please summarize the parent/subsidiary relationships for Avista Utilities.

A. Avista Utilities' common stock is not traded. Avista Utilities is wholly owned by Avista Corporation (Avista Corp.). Due to this parent/subsidiary relationship there is no direct market data available for utility operations at Avista Utilities. The only direct stock market information available to utilize in

determining the cost of equity capital is for Avista Corp.

Q. What approach have you used to determine the cost of equity for Avista specifically?

A. I have primarily evaluated two methods: the Discounted Cash Flow (DCF) method and the Comparable Earnings method.

Q. Please explain the Comparable Earnings method and how the cost of equity is determined using this approach.

A. The Comparable Earnings method for determining the cost of equity is based upon the premise that a given investment should earn its opportunity costs. In competitive markets, if the return earned by a firm is not equal to the return being earned on other investments of similar risk, the flow of funds will be toward those investments earning the higher returns. Therefore, for a utility to be competitive in the financial markets, it should be allowed to earn a return on equity equal to the average return earned by other firms of similar risk. The Comparable Earnings approach is supported by the *Bluefield Water Works* and *Hope Natural Gas* decisions as a basis for determining those average returns.

Industrial returns tend to fluctuate with

business cycles, increasing as the economy improves and decreasing as the economy declines. Utility returns are not as sensitive to fluctuations in the business cycle because the demand for utility services generally tends to be more stable and predictable. However, returns have fluctuated since 2000 when prices in the electricity markets dramatically increased. Electricity prices have not seen the dramatic spikes lately so earnings are beginning to stabilize again.

Q. Please evaluate the recent price index trends.

A. The trends for price indexes are shown on Staff Exhibit No. 135, Schedule 1. The consumer price index percent change has averaged 1.9% for 2001-2003 and was 1.9% for 2003. This is less than historical averages.

Q. Please evaluate interest rate trends.

A. The prime interest rate ranges by year are shown on Staff Exhibit No. 135, Schedule 2. Interest rates continue to be near historical lows with prime at 4%.

Q. Please provide the current index levels for the Dow Jones Industrial Average and the Dow Jones Utility Average.

A. The Dow Jones Industrial Average (DJIA)

closed at 10,380 on June 16, 2004. The DJIA increased 31% since the beginning of 2003. The Dow Jones Utility Average closed at 274 on June 16, 2004.

Q. Please explain the risk differentials between industrials and utilities.

A. Risk is a degree of uncertainty relative to a company. The lower risk level associated with utilities is attributable to many factors even though the difference is not as great as it used to be. Utilities continue to have limited competition for distribution of utility services within the certificated area. With limited competition for regulated services, there is less chance of losses related to pricing practices, marketing strategy and advertising policies. The competitive risks for electric utilities have changed with increasing non-utility generation, deregulation in some states, open transmission access, and changes in electricity markets. However, competitive risks are limited for Avista utility operations. The demand for utility services is relatively stable and certain or increasing compared to that of unregulated firms and even other utility industries.

Competitive risks continue to be lower for Avista than for many other electric companies primarily because of the low-cost source of power and the low

retail rates. The investment risk for Avista is less due to recovery levels for power supply costs reflected in the Power Cost Adjustment mechanism (PCA). However, the investment risk for Avista's other affiliates is higher than for the utility, causing much of the risk investors now see. The risk differential between Avista and other electric utilities is based on the resource mix and the cost of those resources. All resource mixes have risks specific to resources chosen. The demand for electric utility services of Avista is relatively stable. This low demand risk is partially due to the low-cost power and the customer mix of the power users.

Under regulation, utilities are generally allowed to recover through rates, reasonable, prudent and justifiable cost expenditures related to regulated services. Unregulated firms have no such assurance. Utilities in general are sheltered by regulation for reasonable cost recovery risks, making the average utility less risky than the average unregulated industrial firm.

Many of the risks experienced by Avista have been and continue to be primarily due to non-regulated operations and decisions that were made to expand those affiliate activities. This is one reason Avista restructured and sold some of the subsidiary operations.

Considering all of these comparisons, I believe a reasonable return on equity attributed to Avista Utilities is 10.0% - 11.0% under the Comparable Earnings method. Due to these various risk components, Avista Utilities continues to experience high cost of debt with refinancing requirements as the debt matures.

Q. You indicated that the Discounted Cash Flow method is utilized in your analysis. Please explain this method.

A. The Discounted Cash Flow (DCF) method is based upon the theory that (1) stocks are bought for the income they provide (i.e., both dividends and/or gains from the sale of the stock), and (2) the market price of stocks equals the discounted value of all future incomes. The discount rate, or cost of equity, equates the present value of the stream of income to the current market price of the stock. The formula to accomplish this goal is:

$$P_o = PV = \frac{D_1}{(1+k_s)^1} + \frac{D_2}{(1+k_s)^2} + \ldots + \frac{D_N}{(1+k_s)^N} + \frac{P_N}{(1+k_s)^N}$$

$P_o$ = Current Price

D = Dividend

$k_s$ = Capitalization Rate, Discount Rate, or Required Rate of Return

N = Latest Year Considered

The pattern of the future income stream is the key factor that must be estimated in this approach. Some simplifying assumptions for ratemaking purposes can be made without sacrificing the validity of the results. Two such assumptions are: (1) dividends per share grow at a constant rate in perpetuity and (2) prices track earnings. These assumptions lead to the simplified DCF formula, where the required return is the dividend yield plus the growth rate (g):

$$k_s = \frac{D}{P_o} + g$$

Q. Have you factored flotation costs in with your cost of capital analysis?

A. Yes, I have considered direct flotation costs in my analysis by increasing the dividend yield component of the DCF analysis. Since only direct costs should be considered, I have used a flotation factor of 4% with 2% assigned to the utility operations. This practice continues to be reasonable since all subsidiaries of Avista Corp should be responsible for some of actual flotation costs. I have therefore adjusted the DCF formula to include the direct flotation costs as "df".

$$k_s = \left[\frac{D}{P_o}(1 + df)\right] + g$$

Q. What is your estimate of the current cost of capital for Avista using the Discounted Cash Flow method?

A. The current cost of equity capital for Avista, using the Discounted Cash Flow method is between 8.8% - 11.3% during various time intervals. Due to ongoing capital requirements, including refinancing maturities, I believe the projected dividend yield of 3.5% to 3.7% with a growth rate of 6% is the most representative.

The dividend yield for the Value Line Utility West Industry of 3.4% is comparable to the dividend yield for Avista. The Dow Jones Public Utility Average (DJUA) expected average dividend yield is 4.36%. The higher dividend yield and a lower expected growth rate of 5% for the DJUA produces a DCF return on equity of 9.36%, also within the DCF range of 8.8% - 11.3% shown above for Avista.

Q. How is the growth rate (g) determined?

A. The growth rate is the factor that requires the most extensive analysis in the DCF method. It is important that the growth rate used in the model be consistent with the dividend yield so that investor

expectations are accurately reflected and the growth rate is not too large or too small.

I have used an expected growth rate of 6% - 6.5%. This expected growth rate was derived from an analysis of various historical and projected growth indicators, including growth in earnings per share, growth in cash dividends per share, growth in book value per share, growth in cash flow and the sustainable growth for Avista.

Q. What is the capital structure you have used for Avista to determine the overall cost of capital?

A. I have utilized the embedded capital structure at December 31, 2003 consisting of 50.08% debt, 5.57% trust preferred securities, 1.76% preferred stock and 42.59% common equity as shown on Schedule 3 of Staff Exhibit No. 135. Avista witness Malquist reflects this capital structure on Exhibit No. 2. I haven't accepted the proforma capital structure recommended by Avista in this case (also shown on Malquist Exhibit No. 2) since the proforma changes are not adequately known to be included as a known and measurable adjustment in this case. This capital structure is shown on Staff Exhibit No. 135, Schedule 2, Columns 2 and 3.

Q. What are the costs related to the capital structure for debt, trust preferred securities and

preferred stock?

A. I have evaluated and accepted the embedded cost rates used in Malquist Exhibit No. 2. The cost of debt is 8.68%, the cost of trust preferred securities is 6.15% and the cost of preferred stock is 7.35%.

Q. You indicated the cost of common equity range for Avista is 10.0% - 11.0% under the Comparable Earnings method and 8.8% - 11.3% under the Discounted Cash Flow method. What is the cost of common equity capital you are recommending?

A. The fair and reasonable cost of common equity capital I am recommending for Avista is in the range of 9.5% - 10.9%. Although any point within this range is reasonable, the return on equity granted would not normally be at either extreme of the fair and reasonable range. I utilized a point estimate of 10.4% in calculating the overall rate of return for the revenue requirement.

Q. What is the basis for your point estimate being 10.4% when your range is 9.5% - 10.9%?

A. The 10.4% return on equity point estimate utilized is based on a review of the market data and comparables, average risk characteristics for Avista, including the past and current impact from non-regulated operations and the capital structure.

Q. What is the overall weighted cost of capital you are recommending for Avista?

A. I am recommending an overall weighted cost of capital in the range of 8.87% - 9.46%. For use in calculating the revenue requirement, a point estimate consisting of a return on equity of 10.4% and a resulting overall rate of return of 9.25% was utilized as shown on Schedule 3, Staff Exhibit No. 135.

Q. Does this conclude your direct testimony in this proceeding?

A. Yes, it does.

## PRICE INDEXES

| | (A) Consumer Price Index[1] | (B) CPI Percent Change | (C) Producer Price Index[2] | (D) PPI Percent Change |
|---|---|---|---|---|
| 1980 | 82.4 | 12.5 | 88.0 | 11.8 |
| 1981 | 90.9 | 8.9 | 96.1 | 7.1 |
| 1982 | 96.5 | 3.8 | 100.0 | 3.6 |
| 1983 | 99.6 | 3.8 | 101.6 | .6 |
| 1984 | 103.9 | 3.9 | 103.7 | 1.7 |
| 1985 | 107.6 | 3.8 | 104.7 | 1.8 |
| 1986 | 109.6 | 1.1 | 103.2 | -2.3 |
| 1987 | 113.6 | 4.4 | 105.4 | 2.2 |
| 1988 | 118.3 | 4.4 | 108.0 | 4.0 |
| 1989 | 124.0 | 4.6 | 113.6 | 4.9 |
| 1990 | 130.7 | 6.1 | 119.2 | 5.7 |
| 1991 | 136.2 | 3.1 | 121.7 | -.1 |
| 1992 | 140.3 | 2.9 | 123.2 | 1.6 |
| 1993 | 144.5 | 2.7 | 124.7 | .2 |
| 1994 | 148.2 | 2.7 | 125.5 | 1.7 |
| 1995 | 152.4 | 2.5 | 127.9 | 2.3 |
| 1996 | 156.9 | 3.3 | 131.3 | 2.8 |
| 1997 | 160.5 | 1.7 | 131.8 | -1.2 |
| 1998 | 163.0 | 1.6 | 130.7 | .0 |
| 1999 | 166.6 | 2.7 | 133.0 | 2.9 |
| 2000 | 172.2 | 3.4 | 138.0 | 3.6 |
| 2001 | 177.1 | 1.6 | 140.7 | -1.6 |
| 2002 | 179.9 | 2.4 | 138.9 | 1.2 |
| 2003 | 184.0 | 1.9 | 143.3 | 4.0 |

[1]All items; Index, 1982 - 1984 = 100 (Ratio Scale)
[2]Total Finished Goods; Index, 1982 = 100 (Ratio Scale)
Source: Economic Indicators, pages 22-24.

Exhibit No. 135
Case No. AVU-E-04-1/
AVU-G-04-1
T. Carlock, Staff
6/21/04 Schedule 1

## BANK PRIME INTEREST RATES

| Year | Rate | |
|---|---|---|
| 1970 | 6.75% | 8.50% |
| 1971 | 5.25 | 6.75 |
| 1972 | 4.50 | 6.00 |
| 1973 | 6.00 | 10.00 |
| 1974 | 8.75 | 12.00 |
| 1975 | 7.00 | 10.50 |
| 1976 | 6.25 | 7.25 |
| 1977 | 6.25 | 7.75 |
| 1978 | 7.75 | 11.75 |
| 1979 | 11.50 | 15.75 |
| 1980 | 10.15 | 21.50 |
| 1981 | 15.50 | 20.50 |
| 1982 | 11.00 | 17.00 |
| 1983 | 10.50 | 11.50 |
| 1984 | 10.75 | 13.00 |
| 1985 | 9.50 | 10.75 |
| 1986 | 7.50 | 9.00 |
| 1987 | 7.50 | 9.25 |
| 1988 | 8.50 | 10.50 |
| 1989 | 10.50 | 11.50 |
| 1990 | 10.00 | 10.50 |
| 1991 | 6.50 | 9.50 |
| 1992 | 6.00 | 6.50 |
| 1993 | 6.00 | |
| 1994 | 6.00 | 8.50 |
| 1995 | 8.50 | 9.00 |
| 1996 | 8.25 | 8.50 |
| 1997 | 8.25 | 8.50 |
| 1998 | 7.75 | 8.50 |
| 1999 | 7.75 | 8.50 |
| 2000 | 8.50 | 9.50 |
| 2001 | 4.75 | 9.50 |
| 2002 | 4.25 | 4.75 |
| 2003 | 4.00 | 4.25 |
| 2004 Through 5/17/04 | 4.00 | |

Source: Federal Reserve Bulletin
Wall Street Journal

Exhibit No. 135
Case No. AVU-E-04-1/
AVU-G-04-1
T. Carlock, Staff
6/21/04 Schedule 2

**AVISTA CORPORATION**
**Capital Structure and Overall Rate of Return**
**Embedded Cost of Capital**
**as of December 31, 2003**

| Line No. | (1) | (2) Amount | (3) Percent of Total Capital | (4) Cost | (5) Component |
|---|---|---|---|---|---|
| 1 | Total Long Term Debt | $ 898,822,426 | 50.08% | 8.68% | 4.35% |
| 2 | Trust Preferred Securities | 100,000,000 | 5.57% | 6.15% | 0.34% |
| 3 | Preferred Stock | 31,500,000 | 1.76% | 7.35% | 0.13% |
| 4 | Common Equity | 764,290,875 | 42.59% | 10.40% | 4.43% |
| 5 | TOTAL | $1,794,613,301 | 100.00% | | 9.25% |

Exhibit No. 135
Case No. AVU-E-04-1/
AVU-G-04-1
T. Carlock, Staff
6/21/04 Schedule 3

# CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 21ST DAY OF JUNE 2004, SERVED THE FOREGOING **DIRECT TESTIMONY OF TERRI CARLOCK,** IN CASE NO. AVU-E-04-1/AVU-G-04-1, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

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