BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF
THE APPLICATION OF BLACK HILLS POWER, INC.
FOR AUTHORITY TO INCREASE ITS ELECTRIC RATES

DOCKET NO. EL09-018

DIRECT TESTIMONY OF DONALD L. FRANKENFELD

ON BEHALF OF
THE RESIDENTIAL CONSUMERS COALITION
(BOBBIE HANDLEY, LILIAS JARDING, CARLA KOCK, AND
THE SOUTH DAKOTA PEACE AND JUSTICE CENTER)

APRIL 28, 2010

I. INTRODUCTION

Q. Please state your name and business address.

A. Donald L. Frankenfeld, 815 St. Joseph Street, Rapid City, SD 57701.

Q. In what capacity are you employed?

A. I am the Principal of Frankenfeld Associates, a sole proprietorship providing economic consulting services and testimony on behalf of individuals, attorneys and businesses.

A. QUALIFICATIONS

Q. Please describe your education, qualifications and experience.

A. I attended a South Dakota country school through eighth grade, then graduated from Rapid City High School, where I was named a National Merit Scholar and a Presidential Scholar. I attended Yale University, graduating with an A.B. in American Studies in 1970. At Yale I took the normal quotient of economics classes, and learned practical economics first as a delivery person, and ultimately as Chair, of the Yale Student Laundry, which at the time was the largest undergraduate business organization in the United States. In 1973 I attended Harvard Business School, from which I received a Master in Business Administration degree in 1975. In 1987 I was named a Bush Foundation Leadership Fellow, which allowed me to return to Harvard to attend the John F. Kennedy School of Government, from which I received a Master in Public Administration degree. I have also taken and taught numerous courses or modules on economics and investment analysis over the years.

In 1970 I joined Criterion Capital Management, the multibillion-dollar money management subsidiary of Connecticut Bank and Trust in Hartford, Connecticut, where I served, among other duties, as associate economist and utilities analyst. In the latter capacity I oversaw several hundred million dollars in public utility holdings, including a small holding in what was then known as Black Hills Power and Light. While in Hartford I taught Securities Analysis and Utilities Analysis for insurance professionals enrolled in the Chartered Life Underwriter program.

In 1972 I took a similar position with New York Stock Exchange member firm and mutual fund manager William O'Neil and Company in Los Angeles. I left that position in the fall of 1973 to attend Harvard Business School.

Returning to Rapid City after earning my MBA, I served as the Controller for Duhamel Broadcasting Enterprises. Later I worked for Piper Jaffray and Hopwood as a financial services representative, until I started the local office for investment firm E.F. Hutton in 1979. At Hutton, I served at various times as branch office manager, broker, and national trainer for Hutton's New York financial planning and limited partnership departments. My job entailed a great deal of "due diligence" analysis as well as investment analysis.

I was elected to South Dakota's state senate in 1976, and served four, two-year terms, with six years as chair of the senate tax committee. In about 1984, as I was leaving the legislature, I was invited by Black Hills Corporation Chair Larry Owen to consider serving on the BHC board. I declined, as I planned to run for the Public Utilities Commission, for the seat ultimately sought and won by the

late Laska Schoenfelder. I maintained my interest in government, politics and regulatory matters, however, chairing the Yes on 4 Campaign, the success of which made South Dakota first in the nation to deregulate certain telecommunications services. In 1990 I was the Republican nominee for Congress, losing to now-Senator Tim Johnson.

I began my career as a forensic economist/testimonial expert in about 1979. While other enterprises have occasionally occupied my time—principally an Internet startup and the formation of a small South Dakota venture capital company—my work as a consulting or testifying economist has gradually grown until today it occupies substantially all of my career time. I have developed particular expertise in the development of economic loss models, and it was that work which led me, in the wake of the September 11, 2001 tragedy, to testify more than 70 times before the Federal September 11th Victim Compensation Fund. The Fund ultimately awarded more than $7 billion to approximately 3,000 claimants. I appeared before the Fund more than any other expert or attorney.

A résumé containing the details of my experience and qualification is attached as Exhibit DLF-1.

B. OVERVIEW

Q. What is the purpose of your testimony?

A. I have been asked to review the testimony of Mr. William Avera, who appears on behalf of Black Hills Power, with a particular view to examining, and if appropriate, challenging, his conclusions regarding the Company's capital

structure, and fair rate of return on equity for the jurisdictional electric utility operation of the Company.

Q. What information did you review in order to fulfill your mission?

A. I carefully examined Mr. Avera's written testimony, submitted in this case on September 29, 2009, together with his submitted exhibits. I procured most of the academic source material cited by Mr. Avera, and studied those sources which seemed to me to be pertinent. I also examined a good deal of additional information that would normally be relied upon by a person in my capacity, including annual reports and other SEC filings, corporate disclosures and management discussions available publicly from the Company. Additionally, I reviewed a great deal of third-party information from investment firms or publications, bearing on economic conditions generally, and the electric utility industry specifically. I sought to learn about investor expectations for the Company, for its competitors, and for non-utility comparators. As pertinent, I also examined the testimony and voluminous filings associated with the instant case.

C. Summary of Conclusions

Q. Do you concur with Mr. Avera's conclusions regarding a fair rate of return on equity for Black Hills Power?

A. No. Mr. Avera recommends a range of 11.5 to 12.5 percent. Given the particular circumstances of the Company today, and viewed in the context of current economic conditions, which have a mitigating effect on investors' expectations of return, Mr. Avera's range is much too high.

Q. Please justify your conclusion that Mr. Avera's ROE range is too high, and suggest an alternative you believe is appropriate.

A. Asked if the determination of ROE is subjective, Mr. Avera asserts "Absolutely not." (p. 21) Yet his arguments are based on many subjective judgments. For example, he compared Black Hills to a "proxy group" of 16 utilities, which he chose from a possible universe of 209 investor owned utilities. Moreover, even among the subjectively chosen group of 16, Mr. Avera cites estimates of the cost of equity from a group of subjectively chosen analysts whom he believes are credible; yet whose estimates vary sharply from one utility to another, and from one analytical firm to another. The broad ranges produced by Avera's analysis render it of little practical use. For example, Center Point Energy is estimated to have a cost of equity of 9.6% by one of Avera's sources, Value Line, and 24.6% by another, First Call. Great Plains Energy, perhaps most similar to Black Hills Power within Mr. Avera's select 16 because of its comparable utility service population, its core demographics, and its market capitalization, has according to Avera's method an estimated cost of equity ranging from 4.7% to 10.5%, with an average of 7.38%. Mr. Avera then applies an arithmetic average to his own subjective universe, with no adjustment to weight relative capitalization, to reach a range of 10.7% to 11.6%. Without making this market capitalization adjustment, Avera treats small utilities identically with large ones, and outliers identically with those arguably in the mainstream.

While Mr. Avera's proxy analysis on Exhibit WEA-2 is fraught with methodological and statistical risk, even if one accepted the validity of the core

analysis, one would draw a different conclusion about a fair rate of return. After all, Mr. Avera's premise is that firms must compete for capital, so the right question for a regulator is not what is the maximum rate, or the average rate, but what is the minimum rate sufficient to attract capital? The apparent answer may be 4.7%, as that is the cost attributed to Great Plains Energy by Value Line, one of Mr. Avera's sources. More reasonably, one might look at the average cost (as estimated by Mr. Avera's analysts) of the five least-cost utilities. By this logic, the fair rate lies somewhere between 7.38% (Great Plains Energy, the least expensive based on the composite of Mr. Avera's sources) and 9.78% (Westar Energy, the fifth least expensive by the same measure).

While a careful comparative analysis of Mr. Avera's utility proxies is of small value, a similar comparison of non-utility proxies (in WEA-4) is of even less practical significance. This is because the universe of 61 non-utility companies ranges across the board, with size, growth and risk characteristics that are not applicable to utilities. Mr. Avera is correct, of course, that there is a general correlation between risk and return, and because almost any non-utility holding would generally be regarded as riskier than a regulated utility (because a utility's quasi-monopoly status provides a stable financial "floor," while regulation presumably constrains financial potential with a "ceiling,") one would expect capital costs for a non-utility to be higher. Indeed, looking again at the five lowest cost non-utility companies, all of whom, most analysts would agree, offer more potential return (because they are unregulated), but at greater risk (because they are unregulated) than Black Hills Power, one derives a range of roughly 11%

to roughly 13%. This figure, applying as it does to the next higher tier of investment risk, confirms the general range for utility cost of equity, of from 7.38% to 9.78%.

Q. How do you view Mr. Avera's use of Discounted Cash Flow (DCF) and Capital Asset Pricing Model (CAPM) to determine cost of equity?

A. If properly applied, the DCF approach is pristine, although it necessarily requires judgments as to the appropriate discount rate, the initial dividend rate, growth in dividends over time, and some accounting (perhaps by making projections in perpetuity) for terminal values. Mr. Avera uses a "constant growth" model, which manifestly is not reflective of the Company's actual experience, and which, in Mr. Avera's words, "…is dependent on a number of strict assumptions, which in practice are never met." The so-called CAPM, also frequently employed by business appraisers, is really DCF by another name, with an attempt to quantify the appropriate discount rate by means of disciplined comparisons against other competing investments. Mr. Avera's CAPM approach relies heavily on "beta," a measure of historical volatility; the usefulness of this statistic is somewhat controversial, as "beta" will vary depending on the approach of a particular analyst who employs it, and will vary also with time; moreover it is manifestly not an "ex-ante" statistic. Mr. Avera correctly insists that any CAPM "…must be applied using estimates that reflect the expectations of actual investors in the market." While historical "beta" information might be useful on projecting future betas, the inescapable problem of subjectivity remains.

While either the DCF or CAPM approach is useful, particularly in the evaluation of closely-held or thinly capitalized enterprises where public market data is unavailable, neither approach is dispositive, because of the substantial subjective judgments required. Indeed, the proof of this is the wild differences among analysts cited by Mr. Avera in their estimates of a single critical variable, the cost of equity. Mr. Avera contends, "While assumptions and judgment underlie these methods to estimate the cost of common equity, this does not imply that they are subjective…" yet this statement is itself internally contradictory.

In any case, having laid claim to the credibility of DCF, Mr. Avera then abandons the central tenet of the DCF method theory, which is that values are determined partly by dividends and partly by dividend growth. "In the case of utilities," says Mr. Avera, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations." In other words, dividends don't count any more, at least with respect to utility capitalizations. Instead, he insists, it is earnings, not dividends that matter. Earnings are important of course, as they are the chief determinant over time of cash flow, which ultimately determines the magnitude of dividends. But dividends, current and future, are the only ultimate source of value to an investor. Mr. Avera's focus on earnings is at strong variance with conventional wisdom and most analytical theory. Critically, ignoring actual cash flow is a direct contradiction of the Discounted Cash Flow method upon which he relies. Using earnings rather than dividends as the measure of value negatively affects the credibility and reliability of Mr. Avera's conclusions.

Q. If neither DCF nor CAPM provide a useful estimate of the cost of capital, what alternative remains?

A. Unlike Mr. Avera, I believe cost of equity is, in some proportion, inherently subjective. Thus, no method or group of methods will supply the answer with the kind of precision one would like. With that caveat, I believe the best method is to look to the Company itself. If one can reasonably estimate its past cost of equity, and reasonably relate its past costs to its future costs, the result will be a cost estimate that does not rely on unreliable comparisons to external measures. Like any company, Black Hills Power is unique, and we may be able to employ that uniqueness to our advantage.

Cost of equity measures capitalization costs from the point of view of the seeker of capital. Its obverse, return on equity investment, represents the same measure from the point of view of the provider of capital. Put simply, if an investor requires a 10% return on his or her capital, 10% is the cost of capital to the seeker.

Return on investment, in turn, is a function of the dividend yield and the growth rate. An investor who receives a dividend of 5% on his or her money, and who sees that dividend grow at 4% per year, will in fact achieve a 9% return on investment.

Calculating the first part of the equation, the dividend yield, is simplicity itself: simply divide the dividend by the price of the stock. According to Standard and Poors, the C.ompany's dividend as of year-end 2009 was $1.58. Yahoo Finance indicates that the closing price of Black Hills Corporation stock was

$26.63, for a year-end yield of 5.93%. Note, however, that dividend yield is a moving target, a function of both dividend payout, which typically changes in a way that is glacial and predictable, and stock price, a variable which changes every day. I have chosen year-end 2009 as a measuring point, but acknowledge that an adjustment as of the time of the hearing may be appropriate.

Calculating the growth rate is somewhat more challenging, as this is a function of return on equity, payout ratio and the passage of time. The Company's return on equity has been distorted by losses in 2008 and below-par performance in 2009. Normalized returns have averaged 8.28% from 2004 through 2007, and 29.27% of earnings have been retained and reinvested in the Company over this period, according to historical information supplied by Standard and Poors. Multiplying return on equity of 8.28% by the retention rate of 29.27% leads to a calculated theoretical growth rate of 2.42%.

The theoretical return on equity investment to an investor, and thus the cost of equity to the Company, is equal to the dividend yield of 5.93% plus the growth rate of 2.42%, or 8.35%. This is my recommended fair rate of return on equity, within a recommended range of 7.38% to 9.78% as derived on page 6 above.

Q. Is the recommended return on equity of 8.35% reasonable?

A. Comparisons with other financial standards suggest that the 8.35% rate is reasonable, although somewhat low by historical standards, owing to a comparatively low interest rate environment and a continuing "rush to safety" on the part of investors following the recent economic crises. Note that interest-

bearing investments available to conservative investors, the kind who may find utility stocks a reasonable alternative, remain very low by historical standards.

Since an economic entity would prefer to avail itself of debt before equity so long as its financial ratings are not unduly impaired, the cost of debt is an important determinant of the cost of equity. There is good news from this quarter, as the Company recently placed long-term debt at 6.18%, substantially below its initially estimated cost. Because interest expense is tax deductible, the net after tax cost of incremental debt was less than 4%. One would expect equity to command a substantial premium, and at 8.35% it does just that.

Of course, we are discussing here only that portion of the Company's capitalization that is dedicated to its regulated electric utility operations in the regulated jurisdiction. Other Company activities are high risk, and can reasonably be expected to incur higher capital costs for both debt and equity.

Q. Do you agree with Mr. Avera's analysis of Black Hills Power's proposed capital structure?

A. Yes, in general, although the Company's proposed capital structure is at the conservative end of the range for regulated utilities. Note, however, that if the Company is committed to earning a higher return on equity than I suggest as fair, they have the means to achieve this, through higher financial leverage. The Company could comfortably increase its debt to, say, 60% of electric utility capitalization, which would then place it on the aggressive end of the spectrum among regulated utilities. Depending on cost of debt assumptions, increased leverage would result in an increase of 1% to 1.5% in return on equity. This

would be a reasonable option available to Black Hills Power, and, all other things being equal, would be a benefit to rate-payers, because the Company would be improving its profits through higher financial leverage rather than higher electricity rates.

Q. Does this conclude your pre-filed direct testimony?

A. Yes.

Exhibit DLF-1

Donald L. Frankenfeld
Economist/Financial Expert

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PROFILE

Harvard- and Yale-trained economist Frankenfeld testified more than any other expert before the federal September 11th Victim Compensation Fund. With engagements balanced between plaintiff and defense, Frankenfeld testifies and consults on economic, financial and investment matters and serves as an NASD securities arbitrator and mediator. He testified in Mirapex Multi-District Litigation; at a Texas settlement hearing valuing $262 million (face value) in coupons; and consulted on the Microsoft California class action. Ten percent of his otherwise billable time is pro bono.

EDUCATION

Yale AB cum laude, Harvard Business School MBA, Kennedy School of Government (Harvard) MPA. Study at Harvard as a Bush Foundation Fellow included Advanced Torts, Economics and the Law, Strategy and Conflict, Negotiation, Venture Capital, Harvard Program on Negotiation workshop. Former associate member, New York Society of Security Analysts.

CURRENT EXPERIENCE

Frankenfeld Associates **1984 to Present**

Forensic economist, financial analyst and securities arbitrator. Prepare detailed economic analyses. Extensive state and federal court experience. Experienced in mediation and negotiation. Court-appointed Receiver, Golden Hills Resort (for Homestake Mining Company). Designated NASD arbitrator and mediator. Website includes online interactive economic damage calculations, economics library, and extensive database of economic experts.

FAI, Inc. **1997 to Present**

CEO of Internet-based marketing and consulting firm with proprietary skills in virtual intelligence and database-driven websites. Developed first Internet-based voter contact and persuasion system. Principal speaker in multi-state seminar, "Using the Internet to Improve Your Legal Practice."

Dakota Ventures, Incorporated (DVI) **1991 to 2001**

Founder and CEO of bank-sponsored venture fund providing equity to startups. *Managing general partner* of Frankenfeld Partners, organized to sponsor DVI.

PAST EXPERIENCE

E. F. Hutton **1979 to 1987**

Direct Investment Marketing Manager for California, Texas and Florida. Developed and presented public seminars and training sessions. Annually placed $50 million, traveled 150,000 miles. *National Direct Investment Manager* for fee-based Financial Planning Division; coordinated nationwide broker training. Also *Branch Office Manager, Registered Options Principal* and *Account Executive*.

Prior

Investment analyst/economist for multi-billion dollar trust department; *senior securities analyst* for NYSE firm; *financial relations consultant; television station controller*.

GOVERNMENT AND CIVIC PARTICIPATION

Chair and campaign manager, People for YES on #4 (ATT/Qwest, first-in-nation telecommunications deregulation, 1988). State Senator (1977-1984). Chair, tax committee (authored nationally significant interest rate reforms which caused CitiGroup to locate credit card headquarters in South Dakota); Co-chair, Republicans for Daschle (2004); Chair, NIX on SIX statewide issue campaign (2006).

Former board member: Western Providers (PHO); Wellspring (adolescent counseling); SD Investment Council ($6 billion fund); Crippled Children's Hospital and School; Rapid City Regional Hospital; United Way of the Black Hills; Center for Restorative Justice. Current board member: Equality South Dakota. Volunteer financial advisor to St. Martin Monastery.

Frequent public speaker. Former reporter for Harvard Business School *Harbus News.*