BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR AUTHORITY TO INCREASE ITS RATES AND CHARGES FOR ELECTRIC SERVICE IN THE STATE OF IDAHO AND FOR ASSOCIATED REGULATORY ACCOUNTING TREATMENT.	)	CASE NO. IPC-E-23-11

IDAHO POWER COMPANY

DIRECT TESTIMONY

OF

ADRIEN M. MCKENZIE, CFA

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I. INTRODUCTION

Q. Please state your name and business address.

A. Adrien M. McKenzie, 3907 Red River, Austin, Texas, 78751.

Q. In what capacity are you employed?

A. I am President of Financial Concepts and Applications, Inc. ("FINCAP"), a firm providing financial, economic, and policy consulting services to business and government.

Q. Please describe your educational background and qualifications.

A. A description of my background and qualifications, including a resume containing the details of my experience, is attached as Exhibit 7.

A. Overview

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

A. The purpose of my testimony is to present to the Idaho Public Utilities Commission ("IPUC" or "Commission") my independent assessment of the just and reasonable return on equity ("ROE") for the jurisdictional utility operations of Idaho Power Company ("Idaho Power" or the "Company"). In addition, I also examine the reasonableness of Idaho Power's

common equity ratio, considering both the specific risks faced by the Company and other industry guidelines.

Q. Please summarize the information and materials you rely on to support the opinions and conclusions contained in your testimony.

A. To prepare my testimony, I use information from a variety of sources that would normally be relied upon by a person in my capacity. I am familiar with the organization, finances, and operations of Idaho Power from my involvement in prior proceedings before the IPUC, the Public Utility Commission of Oregon ("OPUC"), and the Federal Energy Regulatory Commission ("FERC"). In connection with this filing, I consider and rely upon corporate disclosures, publicly available financial reports and filings, and other published information relating to Idaho Power. I also review information relating generally to capital market conditions and specifically to investor perceptions, requirements and expectations for utilities. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of the issues relevant to investors' required return for Idaho Power, and they form the basis of my analyses and conclusions.

Q. How is your testimony organized?

A. First, I summarize my conclusions and recommendations, giving special attention to the importance of financial strength and the implications of regulatory mechanisms and other risk factors. I also comment on the reasonableness of the Company's proposed capital structure.

Next, I briefly review Idaho Power's operations and finances. I discuss current conditions in the capital markets and their implications in evaluating a just and reasonable return for the Company. I then explain the development of the proxy group of electric utilities used as the basis for my quantitative analyses. With this as a background, I discuss well-accepted quantitative analyses to estimate the current cost of equity for the proxy group of electric utilities. These include the discounted cash flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the empirical CAPM ("ECAPM"), an equity risk premium approach based on allowed ROEs, and reference to expected earned rates of return for electric utilities, which are all methods that are commonly relied on in regulatory proceedings.

Based on the results of my analyses, I evaluate a fair ROE for Idaho Power. My evaluation takes into account the specific risks for the Company's utility operations and Idaho Power's requirements for financial strength. Further, consistent with the fact that utilities must compete for

capital with firms outside their own industry, I corroborate my utility quantitative analyses by applying the DCF model to a group of low-risk non-utility firms.

B. Summary and Conclusions

Q. What is your recommended ROE for Idaho Power?

A. I apply the DCF, CAPM, ECAPM, risk premium, and expected earnings analyses to a proxy group of electric utilities, with the results being summarized on Exhibit 8. As shown there, I recommend a cost of equity range for the Company's electric operations of 10.0 percent to 11.0 percent, or 10.1 percent to 11.1 percent after adjusting for the impact of common equity flotation costs. It is my conclusion that the 10.6 percent midpoint of this range represents a just and reasonable ROE that is adequate to compensate Idaho Power's investors, while maintaining the Company's financial integrity and ability to attract capital on reasonable terms.

II. RETURN ON EQUITY FOR IDAHO POWER

Q. What is the purpose of this section?

A. This section presents my conclusions regarding the fair ROE applicable to Idaho Power's jurisdictional utility operations. I also describe the relationship between ROE and preservation of a utility's financial integrity and the ability to attract capital. Finally, I discuss the reasonableness of the Company's capital structure request in this case.

A. Importance of Financial Strength

Q. What is the role of the ROE in setting a utility's rates?

A. The ROE is the cost of attracting and retaining common equity investment in the utility's physical plant and assets. This investment is necessary to finance the asset base needed to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. Moreover, a just and reasonable ROE is integral in meeting sound regulatory economics and the standards established by the U.S. Supreme Court. The Bluefield case set the standard against which just and reasonable rates are measured:

> 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. . . . The return should be reasonable, 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 money necessary for the proper discharge of its public duties.[1]

[1] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) ("*Bluefield*").

The *Hope* case expanded on the guidelines for a reasonable ROE, reemphasizing its findings in *Bluefield* and establishing that the rate-setting process must produce an end-result that allows the utility a reasonable opportunity to cover its capital costs. The Court stated:

> 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 credit and attract capital.[2]

In summary, the Supreme Court's findings in *Hope* and *Bluefield* established that a just and reasonable ROE must be sufficient to 1) fairly compensate the utility's investors, 2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and 3) maintain the utility's financial integrity. These standards should allow the utility to fulfill its obligation to provide reliable service while meeting the needs of customers through necessary system replacement and expansion, but the Supreme Court's requirements can only be met if the utility has a reasonable opportunity to actually earn its allowed ROE.

[2] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").

While the *Hope* and *Bluefield* decisions did not establish a particular method to be followed in fixing rates (or in determining the allowed ROE),[3] these and subsequent cases enshrined the importance of an end result that meets the opportunity cost standard of finance. Under this doctrine, the required return is established by investors in the capital markets based on expected returns available from comparable risk investments. Coupled with modern financial theory, which has led to the development of formal risk-return models (*e.g.*, DCF and CAPM), practical application of the *Bluefield* and *Hope* standards involves the independent, case-by-case consideration of capital market data in order to evaluate an ROE that will produce a balanced and fair end result for investors and customers.

Q. Throughout your testimony you refer repeatedly to the concepts of "financial strength," "financial integrity" and "financial flexibility." Would you briefly describe what you mean by these terms?

A. These terms are generally synonymous and refer to the utility's ability to attract and retain the capital that is necessary to provide service at reasonable cost, consistent with the Supreme Court standards. Idaho Power's plans call for

[3] *Id.* at 602 (finding, "the Commission was not bound to the use of any single formula or combination of formulae in determining rates." and, "[I]t is not theory but the impact of the rate order which counts.)

a continuation of capital investments to preserve and enhance service reliability for its customers. The Company must generate adequate cash flow from operations, together with access to capital from external sources, to fund these requirements and for repayment of maturing debt.

Rating agencies and potential debt investors tend to place significant emphasis on maintaining strong financial metrics and credit ratings that support access to debt capital markets under reasonable terms. This emphasis on financial metrics and credit ratings is shared by equity investors who also focus on cash flows, capital structure and liquidity, much like debt investors. Investors understand the important role that a supportive regulatory environment plays in establishing a sound financial profile that will permit the utility access to debt and equity capital markets on reasonable terms in both favorable financial markets and during times of potential disruption and crisis.

Q. What part does regulation play in ensuring that Idaho Power has access to capital under reasonable terms and on a sustainable basis?

A. Regulatory signals are a major driver of investors' risk assessment for utilities. Investors recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity. Security

analysts study commission orders and regulatory policy statements to advise investors about where to put their money. As Moody's Investors Service ("Moody's") noted, "the regulatory environment is the most important driver of our outlook because it sets the pace for cost recovery."[4] Similarly, S&P Global Ratings ("S&P") observed that, "Regulatory advantage is the most heavily weighted factor when S&P Global Ratings analyzes a regulated utility's business risk profile."[5] The Value Line Investment Survey ("Value Line") summarizes these sentiments:

> As we often point out, the most important factor in any utility's success, whether it provides electricity, gas, or water, is the regulatory climate in which it operates. Harsh regulatory conditions can make it nearly impossible for the best run utilities to earn a reasonable return on their investment.[6]

In addition, the ROE set by regulators impacts investor confidence in not only the jurisdictional utility, but also in the ultimate parent company that is the entity that actually issues common stock.

Q. Do customers benefit from the utility's financial flexibility?

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[4] Moody's Investors Service, *Regulation Will Keep Cash Flow Stable As Major Tax Break Ends*, Industry Outlook (Feb. 19, 2014).

[5] S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).

[6] Value Line Investment Survey, *Water Utility Industry* (Jan. 13, 2017) at p. 1780.

A. Yes. Providing an ROE sufficient to maintain the Company's ability to attract capital under reasonable terms, even in times of financial and market stress, is not only consistent with the economic requirements embodied in the U.S. Supreme Court's Hope and Bluefield decisions, but it is also in customers' best interests. Customers enjoy the benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are required to ensure safe and reliable service.

B. Conclusions and Recommendations

Q. What are your findings regarding the fair ROE for Idaho Power?

A. Considering the economic requirements necessary to support continuous access to capital under reasonable terms and the results of my analysis, I recommend a 10.6 percent ROE for Idaho Power's electric utility operations, which is consistent with the case-specific evidence presented in my testimony. The bases for my conclusion are summarized below:

- In order to reflect the risks and prospects associated with Idaho Power's electric utility operations, my analyses focus on a proxy group of twenty other electric utilities.
- Because investors' required ROE is unobservable and no single method should be viewed in isolation, I apply the DCF, CAPM, ECAPM, and risk premium methods to estimate a just and reasonable ROE for Idaho Power, as well as referencing the expected earnings approach.

- As summarized on Exhibit 8, considering the results of these analyses, and giving less weight to extremes at the high and low ends of the range, I conclude that the cost of equity for a regulated electric utility is in the 10.0% to 11.0% range.
- My evaluation of a fair ROE also incorporated an upward adjustment of 10 basis points to account for flotation costs, which are a legitimate cost incurred to raise equity capital supporting Idaho Power's investment in utility infrastructure. Incorporating this flotation cost adjustment resulted in my recommended ROE range of 10.1% to 11.1%.
- My ROE recommendation for Idaho Power's electric operations is the midpoint of this range, or 10.6%.

Q. What did the DCF results for your select group of non-utility firms indicate with respect to your evaluation?

A. As shown on page 3 of Exhibit 18, average DCF estimates for a low-risk group of firms in the competitive sector of the economy ranged from 10.4 percent to 10.9 percent. While I did not base my recommendations on these results, they confirm that an ROE of 10.6 percent falls in a reasonable range to maintain Idaho Power's financial integrity, provide a return commensurate with investments of comparable risk, and support the Company's ability to attract capital.

III. FUNDAMENTAL ANALYSES

Q. What is the purpose of this section?

A. This section briefly reviews the operations and finances of Idaho Power. As a predicate to my quantitative

analyses, it examines conditions in the capital markets and the general economy. An understanding of the fundamental factors driving the risks and prospects of electric utilities is essential in developing an informed opinion of investors' expectations and requirements that are the basis of a fair rate of return.

A. Idaho Power

Q. Briefly describe Idaho Power and its utility operations.

A. Idaho Power is a wholly-owned subsidiary of IDACORP, Inc. ("IDACORP") and is principally engaged in providing integrated retail electric utility service to approximately 618,000 customers in a 24,000 square mile area in southern Idaho and eastern Oregon. Approximately 95 percent of Idaho Power's retail revenue is attributable to customers located in Idaho. During 2022, Idaho Power's energy deliveries totaled 17.1 million megawatt-hours ("MWh"). Sales to residential customers comprised 39 percent of operating revenues, with 21 percent to commercial, 13 percent to industrial end-users, and 10 percent attributable to irrigation pumping. Idaho Power also participates in the wholesale power market, with wholesale energy sales accounting for 4 percent of operating revenues during 2022. At year-end 2022, Idaho Power

had total assets of $7.4 billion, with total revenues amounting to approximately $1.6 billion.

In addition to its three natural gas-fired generating facilities in southern Idaho and interests in two coal-fired plants located in Wyoming and Nevada, Idaho Power's existing generating units include 17 hydroelectric generating plants located in southern Idaho and eastern Oregon with a nameplate capacity of 1,799 Megawatts ("MW"), or 51.6 percent of Company-owned generating capacity. The electrical output of these hydro plants, which has a significant impact on total energy costs, is dependent on stream flows. The Company has experienced prolonged periods of persistent below-normal water conditions, with hydroelectric generation supplying approximately 31 percent of total energy needs in 2022, versus an average of about 43 percent over the 2017 to 2021 period. Additionally, Idaho Power has undertaken a substantial capital program for new capacity and energy resources, and in 2022 began construction of two utility-scale battery storage facilities.

Idaho Power's retail electric operations are subject to the jurisdiction of the IPUC and the OPUC, with the interstate jurisdiction regulated by FERC. Additionally, Idaho Power's hydroelectric facilities are subject to licensing under the Federal Power Act, which is administered by FERC, as well as the Oregon Hydroelectric Act. Relicensing is not automatic

under federal law, and Idaho Power must demonstrate that it has operated its facilities in the public interest, which includes adequately addressing environmental concerns.

Q. What credit ratings have been assigned to Idaho Power?

A. Moody's has assigned the Company an issuer rating of Baa1, while S&P has assigned a corporate credit rating of BBB to Idaho Power.

Q. Has Idaho Power made significant capital investments in its system?

A. Yes. Idaho Power has made significant new investments to maintain and modernize its utility infrastructure, and to otherwise meet customer demand and provide adequate and reliable service. Since its last rate case in 2011, Idaho Power's rate base has increased by more than one-third.[7]

Q. Does Idaho Power anticipate the need for capital going forward?

A. Yes. The Company must undertake investments for necessary replacement and expansion of its electric utility system as it continues to provide safe and reliable service to its customers. For 2023 to 2027, Idaho Power is estimating

[7] IDACORP, Inc., *Spring 2023 Investor Outreach*, Investor Information (February/March 2023) at 6.

annual capital expenditures of approximately $650 million.[8] This represents almost a two-fold increase over the previous five years. In addition, the Company remains obligated to repay maturing long-term debt. Continued support for Idaho Power's financial integrity and flexibility will be instrumental in attracting the capital necessary to fund these projects in an effective manner.

B. Outlook for Capital Costs

Q. Please summarize current economic conditions.

A. U.S. real GDP contracted 3.4% during 2020, but with the easing of COVID-19 lockdowns, the economic outlook improved significantly in 2021, with GDP growing at a pace of 5.7 percent. Regional increases in COVID-19 cases, expiration of government assistance payments, and declines in wholesale trade led GDP to decline in the first two quarters of 2022. More recently, expanding exports and higher consumer spending led real GDP to grow by 3.2 percent and 2.6 percent in the third and fourth quarters of 2022, respectively.[9] Meanwhile, indicators of employment remained stable, with the national unemployment rate at 3.5 percent in March 2023.[10]

[8] *Id.* at 5.
[9] https://www.bea.gov/news/2023/gross-domestic-product-fourth-quarter-and-year-2022-third-estimate-gdp-industry-and (last visited Apr. 22, 2023).
[10] https://www.bls.gov/news.release/pdf/empsit.pdf (last visited Apr. 16, 2023).

The underlying risk and price pressures associated with the COVID-19 pandemic were overshadowed by a dramatic increase in geopolitical risks in early 2022. These events have also been accompanied by heightened economic uncertainties as inflationary pressures due to COVID-19 supply chain disruptions were further stoked by sharp increases in global commodity prices. The substantial disruption in the energy economy and dramatic rise in inflation led to sharp declines in global equity markets as investors reacted to the related exposures. S&P concluded that:

> The balance of risks is firmly on the downside—with rapid monetary tightening potentially pushing major economies into recession; growing geopolitical tensions exacerbating Europe's energy crisis; lingering high prices pressuring costs and eroding households' purchasing power; and China grappling with structural factors that are undermining its economic growth.[11]

Stimulative monetary and fiscal policies, coupled with economic ramifications stemming from supply-chain disruptions and rapid price rises in the energy and commodities markets, have led to increasing concern that inflation may remain significantly above the Federal Reserve's longer-run benchmark of 2 percent. In June 2022, inflation, as measured by the Consumer Price Index ("CPI"), peaked at its highest level since November 1981. Since then, CPI inflation has gradually

[11] S&P Global Ratings, *Global Credit Conditions Q4 2022: Darkening Horizons*, Comments (Sept. 29, 2022).

moderated to 5.0 percent in March 2023[12]. The so-called "core" price index, which excludes more volatile energy and food costs, rose at an annual rate of 5.6 percent in March 2023. Similarly, Personal Consumption Expenditures ("PCE") inflation rose 5.0 percent in February 2023, or 4.6 percent after excluding more volatile food and energy costs[13]. As Federal Reserve Chair Powell has noted:

> Although inflation has moderated recently, it remains too high. The longer the current bout of high inflation continues, the greater the chance that expectations of higher inflation will become entrenched.[14]

More recently, turmoil in the banking sector has shaken investor confidence and increased volatility in bond and equity markets. The Federal Reserve and U.S. Treasury took quick and dramatic action to shore up banks' liquidity needs and strengthen public confidence in the banking system, but as Moody's noted, "bank stress has added uncertainty to the outlook."[15]

Q. How have these developments impacted the Federal Reserve's monetary policies?

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[12] https://www.bls.gov/news.release/cpi.nr0.htm (last visited Apr. 14, 2023).
[13] https://www.bea.gov/news/2023/personal-income-and-outlays-february-2023 (last visited Apr. 14, 2023).
[14] Federal Reserve, *Transcript of Chair Powell's Press Conference* (Feb. 1, 2023), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf (last visited Feb. 21, 2023).
[15] Moody's Investors Service, *Baseline US macro forecasts unchanged but outlook more uncertain*, Sector Comment (Apr. 12. 2023).

A. As of its policy meeting in May 2023, the Federal Open Market Committee ("FOMC") has responded to concerns over accelerating inflation by raising the benchmark range for the federal funds rate by a total of 5.00 percent since March 2022.[16] In addition to these increases, Chair Powell has surmised that the significant draw-down of its balance sheet holdings that began in June 2022 could be the equivalent of another one quarter percent rate hike over the course of a year.[17] Chair Powell noted that, "The process of getting inflation back down to 2 percent has a long way to go and is likely to be bumpy,"[18] with the recent banking crisis amply demonstrating these latent risks.

Q. What impact do rising inflation expectations have on the return that equity investors require from Idaho Power?

A. Implicit in the required rate of return for long-term capital—whether debt or common equity—is compensation for expected inflation. This is highlighted in the textbook, *Financial Management, Theory and Practice*:

[16] The FOMC is a committee composed of twelve members that serves as the monetary policymaking body of the Federal Reserve System.
[17] Federal Reserve, *Transcript of Chair Powell's Press Conference* (May 4, 2022), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20220504.pdf.
[18] https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230322.pdf.

> The four most fundamental factors affecting the cost of money are (1) production opportunities, (2) time preferences for consumption, (3) risk, and (4) inflation.[19]

In other words, a part of investors' required return is intended to compensate for the erosion of purchasing power due to rising price levels. This inflation premium is added to the real rate of return (pure risk-free rate plus risk premium) to determine the nominal required return. As a result, higher inflation expectations lead to an increase in the cost of equity capital.

Q. Have these developments impacted the risks faced by utilities and their investors?

A. Yes. Concerns over weakening credit quality prompted S&P to revise its outlook for the regulated utility industry from "stable" to "negative."[20] As S&P explained:

> Even before the current downturn and COVID-19, a confluence of factors, including the adverse impacts of tax reform, historically high capital spending, and associated increased debt, resulted in little cushion in ratings for unexpected operating challenges.[21]

Meanwhile, rising inflation expectations also pose a challenge for utilities, with S&P recently noting that "the threat of

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[19] Eugene F. Brigham, Louis C. Gapenski, and Michael C. Ehrhardt, *Financial Management, Theory and Practice*, Ninth Edition (1999) at 126.
[20] S&P Global Ratings, *COVID-19: The Outlook For North American Regulated Utilities Turns Negative*, RatingsDirect (April 2, 2020).
[21] S&P Global Ratings, *North American Regulated Utilities Face Tough Financial Policy Tradeoffs To Avoid Ratings Pressure Amid The COVID-19 Pandemic*, RatingsDirect (May 11, 2020).

inflation comes at a time when credit metrics are already under pressure relative to downside ratings thresholds."[22] S&P noted that "risk will continue to pressure the credit quality of the industry in 2022."[23] As S&P elaborated:

> Recently, several new credit risks have emerged, including inflation, higher interest rates, and rising commodity prices. Persistent pressure from any of these risks would likely lead to a further weakening of the industry's credit quality in 2022.[24]

Similarly, on November 10, 2022, Moody's revised its outlook for the regulated utilities sector to "negative" from "stable," citing "increasingly challenging business and financial conditions stemming from higher natural gas prices, inflation and rising interest rates."[25]

In affirming its negative outlook on the industry, S&P recently cited weak financial measures, rising energy prices and capital spending, and increased environmental risks as key challenges, noting that, "The industry outlook remains negative and has been negative since early 2020."[26] Value Line

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[22] S&P Global Ratings, *Will Rising Inflation Threaten North American Investor-Owned Regulated Utilities' Credit Quality?* (Jul. 20, 2021).
[23] S&P Global Ratings, *For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category*, RatingsDirect (Jan. 20, 2022).
[24] *Id.*
[25] Moody's Investors Service, *Regulated Gas Utilities--US, 2023 outlook negative due to higher natural gas prices, inflation and rising interest rates,* Outlook (Nov. 10, 2022).
[26] S&P Global Ratings, *North American Regulated Utilities, The industry's outlook remains negative*, Industry Top Trends (Jan. 23, 2023).

echoed these sentiments for electric utilities in the Western US, concluding that:

> The current macroeconomic environment is a challenging period for this group. The main difficulties are wage inflation, higher interest rates, and high commodity prices for raw materials and purchased power.[27]

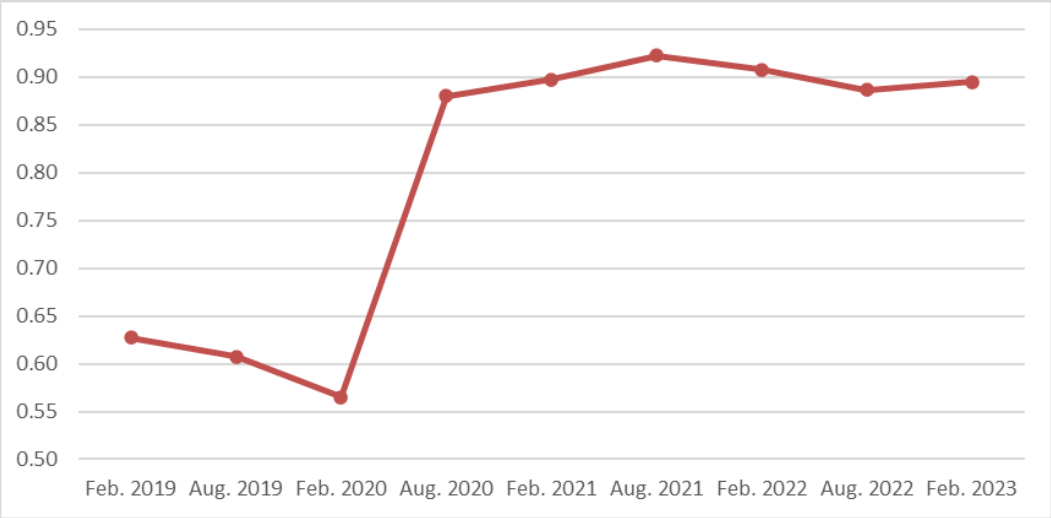
Q. Do changes in utility company beta values corroborate an increase in industry risk?

A. Yes. Beta measures a utility's stock price volatility relative to the market as a whole and reflects the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. Beta is the only relevant measure of investment risk under modern capital market theory and is widely cited in academics and in the investment industry as a guide to investors' risk perceptions. As shown later in my testimony in Table 2, the average beta for the Electric Group is 0.89.[28] Prior to the pandemic, the average betas for this same group of electric utilities was 0.57.[29] The significant shift in pre- and post-pandemic beta values for the Electric Group is further exemplified in Figure 1 below. As illustrated there, the average beta value for the

[27] The Value Line Investment Survey, *Electric Utility (West) Industry* (Apr. 21, 2023).
[28] As indicated on Exhibit 13, this is based on data as of March 31, 2023.
[29] The Value Line Investment Survey, *Summary & Index* (Feb. 14, 2020).

Electric Group increased significantly with the beginning of the pandemic in March 2020, continued to increase during 2021, and have remained elevated. This dramatic increase in a primary gauge of investors' risk perceptions is further proof of the rise in the risk of utility common stocks.

FIGURE 1
ELECTRIC GROUP BETA VALUES



Q. Have increased risks and higher inflation resulted in higher capital costs?

A. Yes. While the cost of equity is unobservable, yields on long-term bonds provide a widely referenced benchmark for the direction of capital costs, including required returns on common stocks. Table 1 below compares the average yields on Treasury securities and Baa-rated public utility bonds during March 2023 with those prevailing in 2021.

TABLE 1
BOND YIELD TRENDS

Series	March 2023	2021	Change (bps)
10-Year Treasury Bonds	3.66%	1.44%	222
30-Year Treasury Bonds	3.77%	2.05%	172
Baa Utility Bonds	5.68%	3.35%	233

Source: https://fred.stlouisfed.org/series/GS30; Moody's Credit Trends.

As shown above, trends in bond yields document a substantial increase in the returns on long-term capital demanded by investors. With respect to utility bond yields—which are the most relevant indicator in gauging the implications for the Company's common equity investors—average yields are now over 230 basis points above the level prevailing during 2021.

Q. What implications do these trends have in evaluating a fair ROE for Idaho Power?

A. The upward move in interest rates suggests that long-term capital costs—including the cost of equity—have increased significantly. Exposure to rising interest rates, inflation, and capital expenditure requirements also reinforce the importance of buttressing Idaho Power's credit standing. Considering the potential for financial market instability, competition with other investment alternatives, and investors' sensitivity to risk exposures in the utility industry,

maintaining credit strength is a key ingredient in maintaining access to capital at reasonable cost.

Q. Would it be reasonable to disregard the implications of current capital market conditions in establishing a fair ROE for Idaho Power?

A. No. They reflect the reality in which Idaho Power must attract and retain capital. The standards underlying a fair rate of return require an authorized ROE for the Company that is competitive with other investments of comparable risk and sufficient to preserve its ability to maintain access to capital on reasonable terms. These standards can only be met by considering the requirements of investors over the time period when the rates established in this proceeding will be in effect. If the upward shift in investors' risk perceptions and required rates of return for long-term capital is not incorporated in the allowed ROE, the results will fail to meet the comparable earnings standard that is fundamental in determining the cost of capital. From a more practical perspective, failing to provide investors with the opportunity to earn a rate of return commensurate with Idaho Power's risks will weaken its financial integrity, while hampering the Company's ability to attract the capital necessary to provide safe and reliable service.

IV. COMPARABLE RISK PROXY GROUP

Q. What is the purpose of this section of your testimony?

A. This section explains the basis of the proxy group of publicly traded companies I use to estimate the cost of equity, examines alternative objective indicators of investment risk for these firms, and compares the investment risks applicable to Idaho Power with my reference group.

Q. What key principles underpin the evaluation of a proxy group?

A. The United States Supreme Court's *Hope* and *Bluefield* decisions[30] establish a standard of comparison between a subject utility and other companies of comparable risk in determining a just and reasonable ROE. The generally accepted approach is to select a group of companies that are of similar risk to the subject utility (the "proxy group"), and then to perform various quantitative analyses based on the proxy group to estimate investors' required returns. The results of these analyses, in turn, are used to evaluate a range of reasonableness and a final recommendation for the ROE attributable to the subject utility.

[30] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) (*Bluefield*); *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) (*Hope*).

Q. As an initial matter, does the fact that Idaho Power is wholly owned by IDACORP alter these fundamental standards?

A. No. While the Company has no publicly traded common stock and IDACORP is Idaho Power's only shareholder, this does not change the standards governing the determination of a just and reasonable ROE for the Company. Ultimately, the common equity required to support the utility operations of Idaho Power must be raised in the capital markets, where investors consider the Company's ability to offer a rate of return that is competitive with other risk-comparable alternatives. Idaho Power must compete with other investment opportunities and unless there is a reasonable expectation that investors will have the opportunity to earn returns commensurate with the underlying risks, capital will be allocated elsewhere, the Company's financial integrity will be weakened, and investors will demand an even higher rate of return. Idaho Power's ability to offer a reasonable return on investment is a necessary ingredient to ensure that customers continue to enjoy economical rates and reliable service and, by extension, the preservation of the Company's ability to attract equity capital.

A. Determination of the Proxy Group

Q. How do you implement quantitative methods to estimate the cost of common equity for Idaho Power?

A. Application of quantitative methods to estimate the cost of common equity requires observable capital market data, such as stock prices and beta values. Moreover, even for a firm with publicly traded stock, the cost of common equity can only be estimated. As a result, applying quantitative models using observable market data only produces an estimate that inherently includes some degree of observation error. Thus, the accepted approach to increase confidence in the results is to apply quantitative methods to a proxy group of publicly traded companies that investors regard as risk-comparable. The results of the analysis on the sample of companies are relied upon to establish a range of reasonableness for the cost of equity for the specific company at issue.

Q. How do you identify the proxy group of electric utilities relied on for your analyses?

A. To reflect the risks and prospects associated with Idaho Power's jurisdictional electric operations, I begin with those companies included in the Electric Utility industry

groups compiled by Value Line.[31] Value Line is one of the most widely available sources of investment advisory information, and its industry groups provide an objective source to identify publicly traded firms that investors would regard to be similar in operations. I then apply the following criteria to identify a proxy group of utilities:

1. Corporate credit ratings from Moody's and S&P within one notch of the Company's current ratings. For Moody's, this resulted in a ratings range of Baa2, Baa1, and A3; for S&P the range is BBB-, BBB, and BBB+.

2. A Value Line Safety Rank of 1 or 2.

3. No cuts in common dividend payments during the past six months and no announcement of a dividend cut since that time.

4. No ongoing involvement in a major merger or acquisition that would distort quantitative results.

These criteria result in a proxy group composed of twenty companies, which I refer to as the "Electric Group."

B. Relative Risks of the Electric Group and Idaho Power

Q. How do you evaluate the risks of the Electric Group relative to Idaho Power?

A. My evaluation of relative risk considers four published benchmarks that are widely relied on by investors—

[2] In addition to the companies included in Value Line's electric utility industry groups, I also considered Algonquin Power & Utilities Company and Emera, Inc, which would both be regarded as comparable utility investment opportunities by investors. Neither of these companies met my required screening criteria.

credit ratings from Moody's and S&P, along with Value Line's Safety Rank, Financial Strength Rating, and beta values. Credit ratings are assigned by independent rating agencies for the purpose of providing investors with a broad assessment of the creditworthiness of a firm. Ratings generally extend from triple-A (the highest) to D (in default). Other symbols (*e.g.*, "+" or "-") are used to show relative standing within a category. Because the rating agencies' evaluation includes all of the factors normally considered important in assessing a firm's relative credit standing, corporate credit ratings provide broad, objective measures of overall investment risk that are readily available to investors. Widely cited in the investment community and referenced by investors, credit ratings are also frequently used as a primary risk indicator in establishing proxy groups to estimate the cost of common equity.

While credit ratings provide the most widely referenced benchmark for investment risks, other quality rankings published by investment advisory services also provide relative assessments of risks that are considered by investors in forming their expectations for common stocks. Value Line's primary risk indicator is its Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk measure is intended to capture the total risk of a stock and incorporates

elements of stock price stability and financial strength. Given that Value Line is perhaps the most widely available source of investment advisory information, its Safety Rank provides useful guidance regarding the risk perceptions of investors.

The Financial Strength Rating is designed as a guide to overall financial strength and creditworthiness, with the key inputs including financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings range from "A++" (strongest) down to "C" (weakest) in nine steps. These objective, published indicators incorporate consideration of a broad spectrum of risks, including financial and business position, relative size, and exposure to firm-specific factors.

As previously mentioned, beta measures a utility's stock price volatility relative to the market as a whole and reflects the tendency of a stock's price to follow changes in the market.

Q. How does the overall risk of your proxy group compare to Idaho Power?

A. Table 2 compares the Electric Group with the Company across the four key indices of investment risk discussed above. Because Idaho Power has no publicly traded

common stock, the Value Line risk measures shown reflect those published for its parent, IDACORP.

TABLE 2
COMPARISON OF RISK INDICATORS

	Credit Ratings		Value Line Safety Financial		
	S&P	Moody's	Rank	Strength	Beta
Electric Group	BBB+	Baa2	2	A	0.89
Idaho Power	BBB	Baa1	1	A+	0.80

Q. What does this comparison indicate regarding investors' assessment of the relative risks associated with your Electric Group?

A. The average S&P credit rating corresponding to the Electric Group is one notch higher than those of Idaho Power, while the average Moody's credit ratings for the proxy group is one notch lower, indicating about the same amount of risk overall. With respect to Value Line's Safety Rank, Financial Strength and beta measures, the average values for the Electric Group indicate slightly greater risk than Idaho Power. Considered together, a comparison of these objective measures, which incorporate a broad spectrum of risks, including financial and business position, relative size, and exposure to company specific factors, indicates that investors would likely conclude that the overall investment risks for

Idaho Power are generally comparable to, or slightly less than those of the firms in the Electric Group.

Q. How does Idaho Power's generating resource mix affect investors' risk perceptions?

A. Because a significant portion of Idaho Power's total energy requirements are provided by hydroelectric facilities, the Company is exposed to a level of uncertainty not faced by most utilities. While hydropower confers advantages in terms of fuel cost savings and diversity, reduced hydroelectric generation due to below-average water conditions forces the Company to rely more heavily on wholesale power markets or more costly thermal generating capacity to meet its resource needs. As S&P explained:

> A reduction in hydro generation typically increases an electric utility's costs by requiring it to buy replacement power or run more expensive generation to serve customer loads. Low hydro generation can also reduce utilities' opportunity to make off-system sales. At the same time, low hydro years increase regional wholesale power prices, creating potentially a double impact – companies have to buy more power than under normal conditions, paying higher prices.[32]

With respect to Idaho Power specifically, S&P recently observed that:

[32] Standard & Poor's Corporation, *Pacific Northwest Hydrology And Its Impact On Investor-Owned Utilities' Credit Quality*, RatingsDirect (Jan. 28, 2008).

> The company relies heavily on hydropower generation and purchased power. Low-cost hydropower provides more than 50% of the company's generation under normal water-level conditions, leading to lower electricity rates. However, when hydroelectric generation is low, the company relies on more expensive purchased power, which exposes the company to the volatile spot power market. Idaho Power saw reduced hydropower generation in both 2021 and 2020 due to precipitation and snow conditions.[33]

Q. Have utilities and their customers recently experienced increased uncertainty in energy markets?

A. Yes. The onset of military conflict in Ukraine led to a dramatic rise in energy market volatility. As with major weather events, market conditions that lead to significant spikes in energy prices can place extraordinary pressure on liquidity as utilities seek to fund higher procurement costs and maintain service to customers. With respect to Idaho Power specifically, the Pacific Northwest recently faced a dramatic increase in gas costs. As the Energy Information Administration reported:

> On December 21, 2022, daily natural gas spot prices at three major trading hubs in the western United States—Pacific Gas & Electric ("PG&E") Citygate, Sumas on the Canada-Washington border, and Malin, Oregon—settled higher than $50.00 per million British thermal units ("MMBtu"), the highest level of any other market and an average

[33] S&P Global Ratings, *Idaho Power Co.*, RatingsDirect (May 26, 2022).

of $48.12/MMBtu above Henry Hub, the national benchmark natural gas price.[34]

While prices have since moderated, investors recognize that volatile energy markets, unpredictable stream flows, and Idaho Power's reliance on wholesale purchases to meet a significant portion of its resource needs can expose the Company to the risk of reduced cash flows and unrecovered power supply costs. The Company's reliance on purchased power to meet shortfalls in hydroelectric generation magnifies the importance of strengthening financial flexibility, which is essential to guarantee access to the cash resources and interim financing required to cover inadequate operating cash flows.

Q. How has climate change impacted investors' assessment of Idaho Power's risk exposure?

A. The risk posed by climate-related weather events has served to magnify concerns over Idaho Power's exposure to below-average water conditions. S&P concluded that "water-intensive assets like power plants [are] especially vulnerable in the absence of adaptation," and concluded that Idaho Power had the highest exposure to water stress of any U.S. utility.[35]

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[34] Energy Information Administration, *Natural Gas Weekly Update* (Dec. 22, 2022). https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2022/12_22/#itn-tabs-1 (last visited Apr. 25, 2023).

[35] S&P Global Ratings, *Keeping The Lights On: U.S. Utilities' Exposure To Physical Climate Risks*, RatingsDirect (Sep. 16, 2021).

While noting that the risks of such events are generally manageable under recovery mechanisms that allow related costs to be recuperated, S&P also observed that:

> In the most extreme events, including those of late, utility companies' exposure to acute and chronic climate risks can damage assets or disrupt supplies, which can weaken their financial position and ultimately credit quality.[36]

Q. Do financial pressures associated with Idaho Power's planned capital expenditures also impact investors' risk assessment?

A. Yes. Idaho Power's customer growth and regional transmission constraints are driving the need for additional resources to meet projected energy and capacity deficits. As noted earlier, Idaho Power's capital additions are expected to total approximately $650 million annually over the 2023 to 2027 period. This represents a substantial investment given the Company's current rate base of approximately $3.8 billion. As Value Line recently observed:

> The company's system is stressed, and new capacity resources are entering the pipeline and they do not come cheap. . . . All this pressure comes at a time when inflation is still well higher than usual and the interest on borrowings is more punishing to the bottom line.[37]

[36] *Id.*

[37] The Value Line Investment Survey, *IDACORP, Inc.* (Apr. 21, 2023).

In addition, Idaho Power remains obligated to repay maturing long-term debt. Continued support for the Company's financial integrity and flexibility will be instrumental in attracting the capital necessary to fund these projects and debt repayments in an effective manner.

Q. Do utilities such as Idaho Power continue to face environmental risks?

A. Yes. Environmental concerns are leading to a profound transformation in the utility industry. In the electricity sector, the generation segment is undergoing material changes in fuel mix, as natural gas and renewable sources increasingly supplant coal. Over the next decade, renewable sources are widely expected to account for a rising share of the electricity generated in the U.S., including a significant expansion in distributed generation, which will accompany declining costs and increased efficiency of energy storage technologies. Accommodating efforts to decarbonize electric generation will also require significant investment to modernize the transmission grid. And while this disruption offers the potential for growth through increased capital investment, it also conveys higher risks. With respect to Idaho Power, the Company's carbon emission targets call for achieving 100 percent clean electricity by 2045.

Q. What other consideration is relevant to investors' risk assessment?

A. Rising temperatures and reduced rainfall have led to unusually large and damaging wildfires in the Pacific Northwest. While Idaho Power does not face the same degree of exposure attributed to California utilities due to that state's inverse condemnation laws, S&P nonetheless classifies the Company as having the second highest exposure to wildfires in the nation.[38]

C. Regulatory Mechanisms

Q. What regulatory mechanisms are applicable to Idaho Power's utility operations?

A. In addition to a mechanism that accounts for changes in power supply costs ("PCA"), Idaho Power operates under the Fixed Cost Adjustment mechanism ("FCA"), which is designed to break the link between a utility's revenues and the energy usage of residential and small commercial customers. The IPUC has also authorized a rider to collect most of the Company's energy efficiency program costs and a deferral account for wildfire resiliency costs.

Q. Would investors consider the implications of regulatory mechanisms in evaluating a utility's relative risks?

[38] S&P Global Ratings, *Keeping The Lights On: U.S. Utilities' Exposure To Physical Climate Risks*, RatingsDirect (Sep. 16, 2021).

A. Yes. In response to increasing sensitivity over fluctuations in costs and the importance of advancing other public interest goals such as reliability, energy conservation, and safety, utilities and their regulators have sought to mitigate cost recovery uncertainty and align the interest of utilities and their customers. As a result, decoupling mechanisms, cost trackers, and future test years have been increasingly prevalent in the utility industry in recent years, along with alternatives to traditional ratemaking such as formula rates and multi-year rate plans. S&P Global Market Intelligence, *RRA Regulatory Focus* concluded in its recent review of adjustment clauses that:

> More recently and with greater frequency, commissions have approved mechanisms that permit the costs associated with the construction of new generation or delivery infrastructure to be used, effectively including these items in rate base without the need for a full rate case. In some instances, these mechanisms may even provide the utilities a cash return on construction work in progress.
> . . . [C]ertain types of adjustment clauses are more prevalent than others. For example, those that address electric fuel and gas commodity charges are in place in all jurisdictions. Also, about two-thirds of all utilities have riders in place to recover costs related to energy efficiency programs, and roughly half of the utilities have some type of decoupling mechanism in place.[39]

[39] S&P Global Market Intelligence, *Adjustment Clause: A state-by-state overview*, RRA Regulatory Focus (Jul. 18, 2022).

Q. How do the regulatory mechanisms approved for Idaho Power compare to other firms operating in the utility industry?

A. A broad array of adjustment mechanisms is also available to the companies in my proxy group of electric utilities. As documented on Exhibit 9, the companies in the Electric Group operate under a wide variety of cost adjustment mechanisms, which encompass revenue decoupling and adjustment clauses designed to address rising capital investment outside of a traditional rate case, increasing costs of environmental compliance measures, as well as riders to address the costs of energy conservation programs, bad debt expenses, certain taxes and fees, post-retirement employee benefit costs, storms, and transmission-related charges. The majority of these proxy firms also operate in regulatory jurisdictions that allow for future test years, formula rates, and multi-year rate plans.

Meanwhile, under the PCA that currently governs recovery of electric supply costs for the Company's Idaho-jurisdictional electric utility operations, 95 percent of the difference between actual costs and base level costs are passed through to customers, with 5 percent absorbed/retained by shareholders.[40] Thus, in addition to the fact that recovery is deferred when power costs rise above the level included in

[40] Amounts related to power supplied by Qualifying Facilities are not subject to cost sharing under the PCA.

current retail rates, investors recognize that this sharing mechanism exposes the Company to unrecovered electric supply costs. Both of these considerations can adversely affect Idaho Power's operating cash flow and liquidity.

In contrast to many of the specific operating companies associated with the firms in the Utility Group, Idaho Power does not have an approved cost tracking mechanisms to address ongoing investment in new generation capacity. Further, the Idaho jurisdiction has routinely relied on a historical test year approach, which also creates a lag in cost recovery. Thus, while investors would consider Idaho Power's regulatory mechanisms to be supportive of the Company's financial integrity, they are more limited than those approved for other firms in the industry.

D. Capital Structure

Q. Is an evaluation of a utility's capital structure relevant in assessing its return on equity?

A. Yes. Other things equal, a higher debt ratio and lower common equity ratio, translates into increased financial risk for all investors. A greater amount of debt means more investors have a senior claim on available cash flow, thereby reducing the certainty that each will receive their contractual payments. This increases the risks to which lenders are exposed, and they require correspondingly higher rates of

interest. From common shareholders' standpoint, a higher debt ratio means that there are proportionately more investors ahead of them, thereby increasing the uncertainty as to the amount of cash flow that will remain.

Q. What common equity ratio is implicit in Idaho Power's capital structure?

A. As discussed in the direct testimony of Company Witness Mr. Brian Buckham, the capital structure used to compute the overall rate of return for Idaho Power includes 51.0 percent common equity.

Q. How does this compare to the average equity ratios maintained by the Electric Group?

A. As shown on page 1 of Exhibit 10, common equity ratios for the individual firms in the Electric Group ranged between 33.3 percent and 63.5 percent and averaged 45.0 percent. Meanwhile, the three-to-five-year forecasts published by Value Line result in common equity ratios ranging from 33.0 percent to 59.5 percent for the Electric Group, with an average of 45.8 percent.

Q. Are there other industry benchmarks that are more relevant in evaluating Idaho Power's capital structure?

A. Yes. Because this proceeding focuses on the ROE for the regulated electric utility operations of Idaho Power,

the capital structures maintained by other operating electric utilities provide a consistent basis of comparison.

Q. What capitalization ratios are maintained by comparable utility operating companies?

A. Pages 2 and 3 of Exhibit 10 display capital structure data for the group of electric utility operating companies owned by the firms in the Electric Group. As shown there, common equity ratios for these utilities range from 42.8 percent to 60.9 percent and average 51.8 percent. This benchmark provides a direct guide to financing policies that are consistent with industry-specific risks and the need to maintain adequate borrowing capacity and financial flexibility.

Q. Do ongoing economic and capital market uncertainties also influence the appropriate capital structure for Idaho Power?

A. Yes. Financial flexibility plays a crucial role in ensuring the wherewithal of a utility to meet funding needs. Utilities with higher financial leverage may be foreclosed from or have limited access to additional borrowing, especially during times of financial market stress. As Moody’s observed:

> Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to capital markets to assure adequate sources of funding and to maintain financial flexibility. During times of distress and when capital markets are exceedingly volatile and tight, liquidity becomes critically important because access to capital markets may be difficult.[41]

S&P recently reiterated these concerns, noting that:

> Because of the industry's high capital spending and consistent dividends, negative discretionary cashflow is regularly more than $100 billion annually. To fund this large deficit, the industry requires consistent access to the capital markets. Rising interest rates, decreasing equity prices, and inflation could hamper consistent access to the capital markets, potentially pressuring credit quality.[42]

As a result, the Company's capital structure must maintain adequate equity to preserve the flexibility necessary to maintain continuous access to capital even during times of unfavorable energy or financial market conditions.

Q. What other factors do investors consider in their assessment of a company's capital structure?

A. Utilities, including Idaho Power, are facing significant capital investment plans. Coupled with the potential for turmoil in capital markets, this warrants a

[41] Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).
[42] S&P Global Ratings. *North American Regulated Utilities, The industry's outlook remains negative*, Industry Top Trends (Jan. 23, 2023).

stronger balance sheet to deal with an uncertain environment. As S&P recently noted:

> Under our base case, we expect that by 2024 the industry's capital spending will exceed $180 billion. Because of the industry's continued robust capital spending, we expect that industry will continue to generate negative discretionary cash flow. This requires that the industry has consistent access to the capital markets to finance capital spending and dividends requirements.[43]

In addition, the investment community also considers the impact of other considerations, such as postretirement benefit and asset retirement obligations, in its evaluation of a utility's financial standing.

A conservative financial profile, in the form of a reasonable common equity ratio, is consistent with the need to accommodate these uncertainties and maintain continuous access to capital under reasonable terms that is required to fund operations and necessary system investment, even during times of adverse capital market conditions.

Q. What does this evidence suggest with respect to Idaho Power's proposed capital structure?

A. Idaho Power's ratemaking capital structure falls within the range of capital structure ratios maintained by the proxy group and is consistent with industry benchmarks for

[43] S&P Global Ratings, *For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The 'BBB' Category*, RatingsDirect (Jan. 20, 2022).

other electric utility operating companies. While industry guidelines provide one benchmark for comparison, each firm must select its capitalization based on the risks and prospects it faces, as well as its specific needs to access the capital markets. Idaho Power's proposed capital structure reflects the Company's ongoing efforts to maintain its credit standing and support access to capital on reasonable terms. The reasonableness of the Company's capital structure is reinforced by the ongoing uncertainties associated with the utility industry and the importance of supporting continued system investment, even during times of adverse industry or market conditions. Based on this evidence, I conclude that the Company's capital structure represents a reasonable mix of capital sources from which to calculate Idaho Power's overall rate of return.

V. CAPITAL MARKET ESTIMATES AND ANALYSES

Q. What is the purpose of this section of your testimony?

A. This section presents capital market estimates of the cost of equity. First, I address the concept of the cost of common equity, along with the risk-return tradeoff principle fundamental to capital markets. Next, I describe the quantitative analyses I conducted to estimate the cost of common equity for the Electric Group.

A. Economic Standards

Q. What fundamental economic principle underlies the cost of equity concept?

A. The concept of the cost of equity is based on the tenet that investors are risk averse. In capital markets where relatively risk-free assets are available (e.g., U.S. Treasury securities), investors will hold riskier assets only if they are offered an additional return, or risk premium, above the rate of return on a risk-free asset. Because all assets compete for investor funds, riskier assets must yield a higher expected rate of return than safer assets to induce investors to invest and hold them.

Given this risk-return tradeoff, the required rate of return (k) from an asset (i) can generally be expressed as:

$$k_i = R_f + RP_i$$

where: R_f = Risk-free rate of return, and
RP_i = Risk premium required to hold asset i.

Thus, the required rate of return for a particular asset at any time is a function of: (1) the yield on risk-free assets, and (2) the asset's relative risk, with investors demanding correspondingly larger risk premiums for bearing greater risk.

Q. Is there evidence that the risk-return tradeoff principle actually operates in the capital markets?

A. Yes. The risk-return tradeoff can be documented in segments of the capital markets where required rates of

return can be directly inferred from market data and where generally accepted measures of risk exist. Bond yields, for example, reflect investors' expected rates of return, and bond ratings measure the risk of individual bond issues. Comparing the observed yields on government securities, which are considered free of default risk, to the yields on bonds of various rating categories demonstrates that the risk-return tradeoff does, in fact, exist.

Q. Does the risk-return tradeoff observed with fixed income securities extend to common stocks and other assets?

A. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends to all assets. Documenting the risk-return tradeoff for assets other than fixed income securities, however, is complicated by two factors. First, there is no standard measure of risk applicable to all assets. Second, for most assets—including common stock—required rates of return cannot be observed. Yet there is every reason to believe that investors demonstrate risk aversion in deciding whether or not to hold common stocks and other assets, just as when choosing among fixed-income securities.

Q. Is this risk-return tradeoff limited to differences between firms?

A. No. The risk-return tradeoff principle applies not only to investments in different firms, but also to

different securities issued by the same firm. The securities issued by a utility vary considerably in risk because they have different characteristics and priorities. As noted earlier, the last investors in line are common shareholders. They share in the net earnings, if any, that remain after all other claimants have been paid. As a result, the rate of return that investors require from a utility's common stock, the most junior and riskiest of its securities, must be considerably higher than the yield offered by the utility's senior, long-term debt.

Q. What are the challenges in determining a just and reasonable ROE for a utility?

A. The actual return investors require is not directly observable. Different methodologies have been developed to estimate investors' expected return on capital, but these theoretical tools produce a range of estimates, based on different assumptions and inputs. The DCF method, which is frequently referenced and relied on by regulators, is only one theoretical approach to evaluate the return investors require. There are a number of other accepted methodologies for estimating the cost of capital and the ranges produced by these approaches can vary widely.

Q. Is it customary to consider the results of multiple methods when evaluating a just and reasonable ROE?

A. Yes. In my experience, financial analysts and regulators routinely consider the results of alternative approaches in evaluating a fair ROE. No single method can be regarded as failsafe, with all approaches having advantages and shortcomings. As FERC has noted, "[t]he determination of rate of return on equity starts from the premise that there is no single approach or methodology for determining the correct rate of return."[44] Similarly, a publication of the Society of Utility and Regulatory Financial Analysts concluded that:

> Each model requires the exercise of judgment as to the reasonableness of the underlying assumptions of the methodology and on the reasonableness of the proxies used to validate the theory. Each model has its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises, most of which cannot be validated empirically. Investors clearly do not subscribe to any singular method, nor does the stock price reflect the application of any one single method by investors.[45]

As this treatise observed, "no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models."[46] Similarly, *New Regulatory Finance* concluded that:

[44] *Northwest Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 4 (1997).
[45] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 84.
[46] *Id.*

> There is no single model that conclusively determines or estimates the expected return for an individual firm. Each methodology possesses its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises that cannot be validated empirically. Investors do not necessarily subscribe to any one method, nor does the stock price reflect the application of any one single method by the price-setting investor. There is no monopoly as to which method is used by investors. In the absence of any hard evidence as to which method outdoes the other, all relevant evidence should be used and weighted equally, in order to minimize judgmental error, measurement error, and conceptual infirmities.[47]

Thus, while the DCF model is a recognized approach, it is not without shortcomings and does not otherwise eliminate the need to ensure that the "end result" is fair. The Indiana Utility Regulatory Commission has recognized this principle:

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[47] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 429.

> There are three principal reasons for our unwillingness to place a great deal of weight on the results of any DCF analysis. One is. . . the failure of the DCF model to conform to reality. The second is the undeniable fact that rarely if ever do two expert witnesses agree on the terms of a DCF equation for the same utility – for example, as we shall see in more detail below, projections of future dividend cash flow and anticipated price appreciation of the stock can vary widely. And, the third reason is that the unadjusted DCF result is almost always well below what any informed financial analysis would regard as defensible, and therefore require an upward adjustment based largely on the expert witness's judgment. In these circumstances, we find it difficult to regard the results of a DCF computation as any more than suggestive.[48]

More recently, FERC recognized the potential for any application of the DCF model to produce unreliable results.[49] As this discussion indicates, consideration of the results of alternative approaches reduces the potential for error associated with any single method. Just as investors inform their decisions through the use of a variety of methodologies, my evaluation of a fair ROE for the Company considered the results of multiple financial models.

Q. What does this discussion imply with respect to estimating the ROE for a utility?

A. Although the ROE cannot be observed directly, it is a function of the returns available from other alternatives

[48] *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).
[49] *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

and the risks of the investment. Because it is not readily observable, the ROE for a particular utility must be estimated by analyzing information about capital market conditions generally, assessing the relative risks of the company specifically, and employing alternative quantitative methods that focus on investors' required rates of return. These methods typically attempt to infer investors' required rates of return from stock prices, interest rates, or other capital market data.

B. Discounted Cash Flow Analysis

Q. How is the DCF model used to estimate the cost of common equity?

A. DCF models are based on the assumption that the price of a share of common stock is equal to the present value of the expected cash flows (i.e., future dividends and stock price) that will be received while holding the stock, discounted at investors' required rate of return. Rather than developing annual estimates of cash flows into perpetuity, the DCF model can be simplified to a "constant growth" form:[50]

[50] The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never met. These include a constant growth rate for both dividends and earnings; a stable dividend payout ratio; the discount rate exceeds the growth rate; a constant growth rate for book value and price; a constant earned rate of return on book value; no sales of stock at a price above or below book value; a constant price-earnings ratio; a constant discount rate (*i.e.*, no changes in risk or interest rate levels and a flat yield curve); and all of the above extend to infinity. Nevertheless, the DCF method provides a workable and practical approach to estimate investors' required return that is widely referenced in utility ratemaking.

$$P_0 = \frac{D_1}{k_e - g}$$

where: P_0 = Current price per share;
D_1 = Expected dividend per share in coming year;
k_e = Cost of equity; and,
g = Investors' long-term growth expectations.

The cost of common equity (k_e) can be isolated by rearranging terms within the equation:

$$k_e = \frac{D_1}{P_0} + g$$

This constant growth form of the DCF model recognizes that the rate of return to stockholders consists of two parts: 1) dividend yield (D_1/P_0); and 2) growth (g). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through price appreciation.

Q. What steps are required to apply the constant growth DCF model?

A. The first step in implementing the constant growth DCF model is to determine the expected dividend yield (D_1/P_0) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second, and more controversial, step is to estimate investors' long-term growth expectations (g) for the firm. The final step is to add the

firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of common equity.

Q. How do you determine the dividend yields for the utilities in the Electric Group?

A. I rely on Value Line's estimates of dividends to be paid by each of these utilities over the next twelve months as D_1. This annual dividend is then divided by a 30-day average stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Electric Group are presented on page 1 of Exhibit 11. As shown there, dividend yields for the firms in the Electric Group range from 2.5 percent to 5.0 percent and averaged 3.9 percent.

Q. What is the next step in applying the constant growth DCF model?

A. The next step is to evaluate long-term growth expectations, or "g", for the firm in question. In constant growth DCF theory, earnings, dividends, book value, and market price are all assumed to grow in lockstep, and the growth horizon of the DCF model is infinite. But implementation of the DCF model is more than just a theoretical exercise; it is an attempt to replicate the mechanism investors used to arrive at observable stock prices. A wide variety of techniques can be

used to derive growth rates, but the only "*g*" that matters in applying the DCF model is the value that investors expect.

Q. What are investors most likely to consider in developing their long-term growth expectations?

A. When I implement the DCF model, we are solely concerned with replicating the forward-looking evaluation of real-world investors. In the case of utilities, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations. Utility dividend policies reflect the need to accommodate business risks and investment requirements in the industry, as well as potential uncertainties in the capital markets. As a result, dividend growth in the utility industry generally lags growth in earnings as utilities conserve financial resources.

A measure that plays a pivotal role in determining investors' long-term growth expectations is future trends in earnings per share ("EPS"), which provide the source for future dividends and ultimately support share prices. The importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community, and surveys of analytical techniques relied on by professional analysts indicate that growth in earnings is far more influential than trends in dividends per share ("DPS").

The availability of projected EPS growth rates is also key to investors relying on this measure as compared to future trends in DPS. Apart from Value Line, investment advisory services do not generally publish comprehensive DPS growth projections, and this scarcity of dividend growth rates relative to the abundance of earnings forecasts attests to their relative influence. The fact that securities analysts focus on EPS growth, and that DPS growth rates are not routinely published, indicates that projected EPS growth rates are likely to provide a superior indicator of the future long-term growth expected by investors.

Q. Do the growth rate projections of security analysts also consider historical trends?

A. Yes. Professional security analysts study historical trends extensively in developing their projections of future earnings. Hence, to the extent there is any useful information in historical patterns, that information is incorporated into analysts' growth forecasts.

Q. What growth rates are security analysts currently projecting for the firms in the proxy group?

A. EPS growth projections for each of the firms in the Electric Group reported by Value Line, IBES,[51] and Zacks

[51] Formerly Institutional Brokers Estimate System, IBES growth rates are now compiled and published by Refinitiv.

Investment Research (Zacks) are displayed on page 2 of Exhibit 11.

Q. What other technique can be used to estimate investors' expectations of future long-term growth when applying the constant growth DCF model?

A. In constant growth theory, growth in book equity is equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant, growth in earnings and dividends will be equal to growth in book value. Despite the fact that these conditions are never met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects and is sometimes proposed in regulatory proceedings.

The sustainable growth rate is calculated by the formula, g = br+sv, where "b" is the expected retention ratio, "r" is the expected earned return on equity, "s" is the percent of common equity expected to be issued annually as new common stock, and "v" is the equity accretion rate. Under DCF theory, the "sv" factor is a component of the growth rate designed to capture the impact of issuing new common stock at a price above, or below, book value. The sustainable, "br+sv" growth rates for each firm in the proxy group are summarized

on page 2 of Exhibit 11, with the underlying details being presented on Exhibit 12.

The sustainable growth rate analysis shown on Exhibit 12 incorporates an "adjustment factor" because Value Line's reported returns are based on year-end book values. Since earnings is a flow over the year while book value is determined at a given point in time, the measurement of earnings and book value are distinct concepts. It is this fundamental difference between a flow (earnings) and a point estimate (book value) that makes it necessary to adjust to mid-year in calculating the ROE. Given that book value will increase or decrease over the year, using year-end book value (as Value Line does) understates or overstates the average investment that corresponds to the flow of earnings. To address this concern, earnings must be matched with a corresponding measure of book value, or the resulting ROE will be distorted. The adjustment factor determined in Exhibit 12 is solely a means of converting Value Line's end-of-period values to an average return over the year, and the formula for this adjustment is supported in recognized textbooks and has been adopted by other regulators.[52]

[52] *See,* Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 305-306; *Bangor Hydro-Electric Co. et al.*, 122 FERC ¶ 61,265 at n.12 (2008).

Q. Are there significant shortcomings associated with the "br+sv" growth rate?

A. Yes. First, in order to calculate the sustainable growth rate, it is necessary to develop estimates of investors' expectations for four separate variables; namely, "b", "r", "s", and "v." Given the inherent difficulty in forecasting each parameter and the difficulty of estimating the expectations of investors, the potential for measurement error is significantly increased when using four variables, as opposed to referencing a direct projection for EPS growth. Second, empirical research in the finance literature indicates that sustainable growth rates are not as significantly correlated to measures of value, such as share prices, as are analysts' EPS growth forecasts.[53] The "sustainable growth" approach is included for completeness, but evidence indicates that analysts' forecasts provide a superior and more direct guide to investors' growth expectations. Accordingly, I give less weight to cost of equity estimates based on br+sv growth rates in evaluating the results of the DCF model.

Q. What cost of common equity estimates are implied for the Electric Group using the DCF model?

A. After combining the dividend yields and respective growth projections for each utility, the resulting

[53] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 307.

cost of common equity estimates are shown on page 3 of Exhibit 11.

Q. In evaluating the results of the constant growth DCF model, is it appropriate to eliminate illogical estimates at the extreme low or high end of the range?

A. Yes. It is essential that the cost of equity estimates produced by quantitative methods pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated.

Q. Have other regulators employed such tests?

A. Yes. FERC has noted that adjustments are justified where applications of the DCF approach and other methods produce illogical results. FERC evaluates low-end DCF results against observable yields on long-term public utility debt and has recognized that it is appropriate to eliminate estimates that do not sufficiently exceed this threshold.[54] FERC's current practice is to exclude low-end cost of estimates that fall below the six-month average yield on Baa-rated utility bonds, plus 20 percent of the CAPM market risk premium.[55] In addition, FERC also excludes estimates that are

[54] *See, e.g.*, *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010).

[55] Based on the six-month average yield at March 2023 of 5.75 percent and the 7.8 percent market risk premium shown on Exhibit 13, this implies a current low-end threshold of approximately 7.3 percent.

"irrationally or anomalously high."[56] Similarly, the Staff of the Maryland Public Service Commission ("MDPSC") has also eliminated DCF values where they do not offer a sufficient premium above the cost of debt to be attractive to an equity investor.[57]

Q. Do you exclude any estimates at the low or high end of the range of DCF results?

A. Yes. As highlighted on page 3 of Exhibit 11, after considering these benchmarks and the distribution of individual estimates, I eliminate low-end DCF estimates ranging from -7.6 percent to 7.3 percent, as well as a high-end DCF result of 19.8 percent. After removing these illogical values, the lower end of the DCF results is set by a cost of equity estimate of 7.4 percent, while the upper end is established by a cost of equity estimate of 14.9 percent. While a 14.9 percent cost of equity estimate may exceed the other values, low-end DCF estimates in the 7.4 percent to 8.1 percent range are assuredly far below investors' required rate of return. Taken together and considered along with the balance of the results, the remaining values provide a reasonable basis on which to frame the range of plausible DCF estimates and evaluate investors' required rate of return.

[56] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 171 FERC ¶ 61,154 at P 152 (2020).
[57] See, *e.g.*, Maryland Public Service Commission, Case No. 9670, *Direct Testimony and Exhibits of Drew M. McAuliffe* (Dec. 2, 2021) at 15-16.

Q. What cost of equity estimates are implied by your DCF results for the Electric Group?

A. As shown on page 3 of Exhibit 11 and summarized in Table 3, below, after eliminating illogical values, application of the constant growth DCF model resulted in the following ROE estimates:

TABLE 3
DCF RESULTS – ELECTRIC GROUP

Growth Rate	Average	Midpoint
Value Line	9.2%	9.4%
IBES	10.3%	10.2%
Zacks	10.0%	11.5%
br + sv	9.0%	9.4%

C. Capital Asset Pricing Model

Q. Please describe the CAPM.

A. The CAPM is a theory of market equilibrium that measures risk using the beta coefficient. Assuming investors are fully diversified, the relevant risk of an individual asset (e.g., common stock) is its volatility relative to the market as a whole, with beta reflecting the tendency of a firm's stock price to follow changes in the market. A stock that tends to respond less to market movements has a beta of less than 1.0, while stocks that tend to move more than the market have betas greater than 1.0. The CAPM is mathematically expressed as:

$$R_j = R_f + \beta_j(R_m - R_f)$$

where: R_j = required rate of return for stock j;
R_f = risk-free rate;
R_m = expected return on the market portfolio; and,
β_j = beta, or systematic risk, for stock j.

Under the CAPM formula above, a stock's required return is a function of the risk-free rate (R_f), plus a risk premium that is scaled to reflect the relative volatility of a firm's stock price, as measured by beta (β). Like the DCF model, the CAPM is an *ex-ante,* or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the CAPM must be applied using estimates that reflect the expectations of actual investors in the market, not with backward-looking, historical data.

Q. Why is the CAPM approach relevant when evaluating the cost of equity for Idaho Power?

A. The CAPM approach (which also forms the foundation of the ECAPM) generally is considered to be the most widely referenced method for estimating the cost of equity among academicians and professional practitioners, with the pioneering researchers of this method receiving the Nobel Prize in 1990. Because this is the dominant model for estimating the cost of equity outside the regulatory sphere, the CAPM (and ECAPM) provides important insight into investors' required rate of return for utility stocks.

Q. How do you apply the CAPM to estimate the ROE?

A. Application of the CAPM to the Electric Group based on a forward-looking estimate for investors' required rate of return from common stocks is presented in Exhibit 13. In order to capture the expectations of today's investors in current capital markets, the expected market rate of return is estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500.

The dividend yield for each firm is obtained from Value Line, and the growth rate is equal to the average of the earnings growth projections for each firm published by IBES, Value Line, and Zacks, with each firm's dividend yield and growth rate being weighted by its proportionate share of total market value. After removing companies with growth rates that were negative or greater than 20 percent, the weighted average of the projections for the individual firms implies an average growth rate over the next five years of 9.5 percent. Combining this average growth rate with a year-ahead dividend yield of 2.1 percent results in a current cost of common equity estimate for the market as a whole (R_m) of 11.6 percent. Subtracting a 3.8 percent risk-free rate based on the average yield on 30-year Treasury bonds for the six-months ending March 2023 produces a market equity risk premium of 7.8 percent.

Q. What is the source of the beta values you use to apply the CAPM?

A. I rely on the beta values reported by Value Line, which in my experience Value Line is the most widely referenced source for beta in regulatory proceedings. As noted in *New Regulatory Finance*:

> Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors. … Value Line betas are computed on a theoretically sound basis using a broadly based market index, and they are adjusted for the regression tendency of betas to converge to 1.00.[58]

Q. What else should be considered in applying the CAPM?

A. Financial research indicates that the CAPM does not fully account for observed differences in rates of return attributable to firm size. Accordingly, a modification is required to account for this size effect. As explained by Morningstar:

> One of the most remarkable discoveries of modern finance is the finding of a relationship between firm size and return. On average, small companies have higher returns than large ones. . . . The relationship between firm size and return cuts across the entire size spectrum; it is not restricted to the smallest stocks.[59]

[58] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 71.
[59] Morningstar, *2015 Ibbotson SBBI Classic Yearbook*, at 99.

According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this, researchers have developed size premiums that need to be added to account for the level of a firm's market capitalization in determining the CAPM cost of equity.[60] Accordingly, my CAPM analysis also incorporates an adjustment to recognize the impact of size distinctions, as measured by the market capitalization for the firms in the Electric Group.

Q. What is the basis for the size adjustment?

The size adjustment required in applying the CAPM is based on the finding that *after controlling for risk differences reflected in beta*, the CAPM overstates returns to companies with larger market capitalizations and understates returns for relatively smaller firms. The size adjustments utilized in my analysis are sourced from Kroll, who now publish the well-known compilation of capital market series originally developed by Professor Roger G. Ibbotson of the Yale School of

[60] Originally compiled by Ibbotson Associates and published in their annual yearbook entitled, *Stocks, Bonds, Bills and Inflation*, these size premia are now developed by Kroll and presented in its *Cost of Capital Navigator*.

Management, and most recently published by Kroll. Calculation of the size adjustments involve the following steps:

1. Divide all stocks traded on the NYSE, NYSE MKT, and NASDAQ indices into deciles based on their market capitalization.
2. Using the average beta value for each decile, calculate the implied excess return over the risk-free rate using the CAPM.
3. Compare the calculated excess returns based on the CAPM to the actual excess returns for each decile, with the difference being the increment of return that is related to firm size, or "size adjustment."

New Regulatory Finance observed that "small market-cap stocks experience higher returns than large market-cap stocks with equivalent betas," and concluded that "the CAPM understates the risk of smaller utilities, and a cost of equity based purely on a CAPM beta will therefore produce too low an estimate."[61]

Q. What is the implied ROE for the Electric Group using the CAPM approach?

A. As shown on Exhibit 13, after adjusting for the impact of firm size, the CAPM approach implies an average ROE for the Electric Group of 11.2 percent.

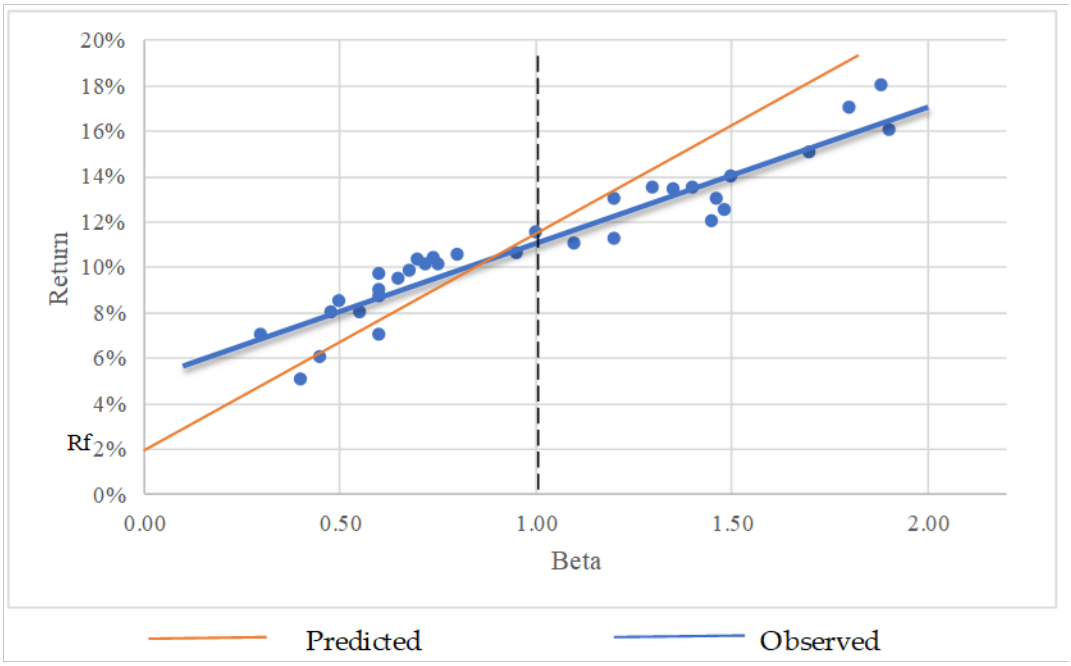
D. Empirical Capital Asset Pricing Model

Q. How does the ECAPM approach differ from traditional applications of the CAPM?

[61] Roger A. Morin, *New Regulatory Finance,* Pub. Utils. Reports, Inc. (2006) at 187.

A. Empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. In other words, the CAPM tends to overstate the actual sensitivity of the cost of capital to beta, with low-beta stocks tending to have higher returns and high-beta stocks tending to have lower risk returns than predicted by the CAPM. This is illustrated graphically in the figure below:

FIGURE 2
CAPM – PREDICTED VS. OBSERVED RETURNS



Because the betas of utility stocks, including those in the Electric Group, are generally less than 1.0, this implies that cost of equity estimates based on the traditional CAPM would understate the cost of equity. This empirical finding is

widely reported in the finance literature, as summarized in *New Regulatory Finance*:

> As discussed in the previous section, several finance scholars have developed refined and expanded versions of the standard CAPM by relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically produce a risk-return relationship that is flatter than the CAPM prediction in keeping with the actual observed risk-return relationship. The ECAPM makes use of these empirical relationships.[62]

Based on a review of the empirical evidence, *New Regulatory Finance* concluded the expected return on a security is represented by the following formula:

$$R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

Like the CAPM formula presented earlier, the ECAPM represents a stock's required return as a function of the risk-free rate (R_f), plus a risk premium. In the formula above, this risk premium is composed of two parts: (1) the market risk premium ($R_m - R_f$) weighted by a factor of 25 percent, and (2) a company-specific risk premium based on the stock's relative volatility [$\beta_j(R_m - R_f)$] weighted by 75 percent. This ECAPM equation, and its associated weighting factors, recognizes the observed relationship between standard CAPM estimates and the cost of capital documented in the financial

[62] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 189.

research, and corrects for the understated returns that would otherwise be produced for low beta stocks.

Q. Have other regulators relied on the ECAPM?

A. Yes. Staff witnesses for the MDPSC have relied on this approach in prior testimony, noting that "the ECAPM model adjusts for the tendency of the CAPM model to underestimate returns for low Beta stocks," and concluding that, "the ECAPM gives a more realistic measure of the ROE than the CAPM model does."[63] The Staff of the Colorado Public Utilities Commission has recognized that, "The ECAPM is an empirical method that attempts to enhance the CAPM analysis by flattening the risk-return relationship,"[64] and relied on the same ECAPM equation presented above.[65]

The New York Department of Public Service also routinely incorporates the results of the ECAPM approach, which it refers to as the "zero-beta CAPM."[66] The Regulatory Commission of Alaska has also relied on the ECAPM approach, noting that:

> Tesoro averaged the results it obtained from CAPM and ECAPM while at the same time providing empirical testimony that the ECAPM results are more accurate then [sic] traditional CAPM

[63] *Direct Testimony and Exhibits of Julie McKenna*, Maryland PSC Case No. 9299 (Oct. 12, 2012) at 9.
[64] Proceeding No. 13AL-0067G, *Answer Testimony and Schedules of Scott England* (July 31, 2013) at 47.
[65] *Id.* at 48.
[66] *See, e,g.,* New York Department of Public Service, Cases 19-E-0065 19-G-0066, *Prepared Fully Redacted Testimony of Staff Finance Panel* (May 2019) at 94-95.

> results. The reasonable investor would be aware of these empirical results. Therefore, we adjust Tesoro's recommendation to reflect only the ECAPM result.[67]

The Wyoming Office of Consumer Advocate, an independent division of the Wyoming Public Service Commission, has also relied on this ECAPM formula,[68] as has a witness for the Office of Arkansas Attorney General.[69] In a 2018 decision, the Montana Public Service Commission determined that "[t]he evidence in this proceeding has convinced the Commission that the [ECAPM] should be the primary method for estimating . . . the cost of equity."[70]

Q. What cost of equity estimate is indicated by the ECAPM?

A. My application of the ECAPM was based on the same forward-looking market rate of return, risk-free rates, and beta values discussed earlier in connections with the CAPM. As shown on Exhibit 14, applying the forward-looking ECAPM approach to the firms in the Electric Group results in an average cost of equity estimate of 11.4 percent, after

[67] Regulatory Commission of Alaska, Order No. P-97-004(151) (Nov. 27, 2002) at 145.
[68] Wyoming Public Service Commission, Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53.
[69] Arkansas Public Service Commission, Docket No. 17-071-U, *Direct Testimony of Marlon F. Griffing, PH.D.* (May 29, 2018) at 33-35.
[70] Montana Public Service Commission, Docket No. D2017.9.80, Order No. 7575c (Sep. 26, 2018) at P 114.

incorporating the size adjustment corresponding to the market capitalization of the individual utilities.

E. Utility Risk Premium

Q. Briefly describe the risk premium method.

A. The risk premium method extends the risk-return tradeoff observed with bonds to estimate investors' required rate of return on common stocks. The cost of equity is estimated by first determining the additional return investors require to forgo the relative safety of bonds and to bear the greater risks associated with common stock, and then adding this equity risk premium to the current yield on bonds. Like the DCF model, the risk premium method is capital market oriented. However, unlike DCF models, which indirectly impute the cost of equity, risk premium methods directly estimate investors' required rate of return by adding an equity risk premium to observable bond yields.

Q. Is the risk premium approach a widely accepted method for estimating the cost of equity?

A. Yes. The risk premium approach is based on the fundamental risk-return principle that is central to finance, which holds that investors will require a premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and

in academia and regulatory proceedings and provides an important tool in estimating a fair ROE for Idaho Power.

Q. How do you implement the risk premium method?

A. I estimate equity risk premiums for utilities based on surveys of previously authorized ROEs. Authorized ROEs presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order. Such ROEs should represent a balanced and impartial outcome that considers the need to maintain a utility's financial integrity and ability to attract capital. Moreover, allowed returns are an important consideration for investors and have the potential to influence other observable investment parameters, including credit ratings and borrowing costs. When considered in the context of a complete and rigorous analysis, this data provides a logical and frequently referenced basis for estimating equity risk premiums for regulated utilities.

Q. How do you calculate the equity risk premiums based on allowed returns?

A. The ROEs authorized for electric utilities by regulatory commissions across the U.S. are compiled by S&P Global Market Intelligence and published in its *RRA Regulatory Focus* report. On page 2 of Exhibit 15, the average yield on public utility bonds is subtracted from the average allowed ROE

for electric utilities to calculate equity risk premiums for each year between 1974 and 2022.[71] As shown there, over this period these equity risk premiums for electric utilities average 3.89 percent, and the yields on public utility bonds average 7.83 percent.

Q. Is there any capital market relationship that must be considered when implementing the risk premium method?

A. Yes. The magnitude of equity risk premiums is not constant and equity risk premiums tend to move inversely with interest rates. In other words, when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for a 1 percent increase or decrease in interest rates, the cost of equity may only rise or fall some fraction of 1 percent. When implementing the risk premium method, adjustments are required to incorporate this inverse relationship if the current interest rates is different from the average interest rate over the study period.

Current bond yields are lower than those prevailing over the risk premium study period. Given that equity risk premiums move inversely with interest rates, these lower bond

[71] My analysis encompasses the entire period for which published data is available.

yields also imply an increase in the equity risk premium. In other words, higher required equity risk premiums partially offset the impact of declining interest rates on the ROE.

Q. Is this inverse relationship confirmed by published financial research?

A. Yes. There is considerable empirical evidence that when interest rates are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums are greater. This inverse relationship between equity risk premiums and interest rates has been widely reported in the financial literature. As summarized by *New Regulatory Finance*:

> Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates – rising when rates fell and declining when rates rose.[72]

Other regulators have also recognized that, while the cost of equity trends in the same direction as interest rates,

[72] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 128.

these variables do not move in lock-step.[73] This relationship is illustrated in the figure on page 3 of Exhibit 15.

Q. What ROE is implied by the risk premium method using surveys of allowed returns?

A. Based on the regression output between the interest rates and equity risk premiums displayed on page 3 of Exhibit 15, the equity risk premium for electric utilities increases by approximately 43 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated on page 1 of Exhibit 15 with an average yield on public utility bonds for the six-months ending March 2023 of 5.75 percent, this implies a current equity risk premium of 4.89 percent for electric utilities. Adding this equity risk premium to the average yield on Baa-rated utility bonds implies a current ROE of 10.64 percent.

F. Expected Earnings Approach

Q. What other analysis do you conduct to estimate the ROE?

A. I also evaluate the ROE using the expected earnings method. Reference to rates of return available from alternative investments of comparable risk can provide an

[73] *See, e.g.*, California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan FRP-7, https://www.entergy-mississippi.com/userfiles/content/price/tariffs/eml_frp.pdf (last visited Apr. 25, 2023); *Martha Coakley et al. v. Bangor Hydro-Elec. Co. et al.*, 147 FERC ¶ 61,234 at P 147 (2014).

important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This expected earnings approach is consistent with the economic underpinnings for a just and reasonable rate of return established by the U.S. Supreme Court in *Bluefield* and *Hope*. Moreover, it avoids the complexities and limitations of capital market methods and instead focuses on the returns earned on book equity, which are readily available to investors.

Q. What economic premise serves as the foundation for the expected earnings approach?

A. The simple, but powerful concept underlying the expected earnings approach is that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. This outcome would violate the *Hope* and *Bluefield* standards and undermine the utility's access to capital on reasonable terms.

Q. How is the expected earnings approach typically implemented?

A. The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by recognized investment advisory publications (*e.g.*, Value Line). Because these projected returns on book value equity are analogous to the forward-looking allowed ROE on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison.

Moreover, regulators do not set the returns that investors earn in the capital markets, which are a function of dividend payments and fluctuations in common stock prices—both of which are outside their control. Regulators can only establish the allowed ROE, which is applied to the book value of a utility's investment in rate base, as determined from its accounting records. This is analogous to the expected earnings approach, which measures the return that investors expect the utility to earn on book value. As a result, the expected earnings approach provides a meaningful guide to ensure that

the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This expected earnings test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

Q. What ROE is indicated for Idaho Power based on the expected earnings approach?

A. For the firms in the Electric Group, the year-end returns on common equity projected by Value Line over its forecast horizon are shown on Exhibit 16. As I explained earlier in my discussion of the br+sv growth rates used in applying the DCF model, Value Line's returns on common equity are calculated using year-end equity balances, which understates the average return earned over the year.[74] Accordingly, these year-end values were converted to average returns using the same adjustment factor discussed earlier and

[74] For example, to compute the annual return on a passbook savings account with a beginning balance of $1,000 and an ending balance of $5,000, the interest income would be divided by the average balance of $3,000. Using the $5,000 balance at the end of the year would understate the actual return.

developed on Exhibit 12. As shown on Exhibit 16, Value Line's projections for the Electric Group suggest an average ROE of 11.0 percent.

G. Flotation Costs

Q. What other consideration is relevant in setting the return on equity for a utility?

A. The common equity used to finance the investment in utility assets is provided from either the sale of stock in the capital markets or from retained earnings not paid out as dividends. When equity is raised through the sale of common stock, there are costs associated with "floating" the new equity securities. These flotation costs include services such as legal, accounting, and printing, as well as the fees and discounts paid to compensate brokers for selling the stock to the public. Also, some argue that the "market pressure" from the additional supply of common stock and other market factors may further reduce the amount of funds a utility nets when it issues common equity.

Q. Is there an established mechanism for a utility to recognize equity issuance costs?

A. No. While debt flotation costs are recorded on the books of the utility, amortized over the life of the issue, and thus increase the effective cost of debt capital, there is no similar accounting treatment to ensure that equity flotation

costs are recorded and ultimately recognized. No rate of return is authorized on flotation costs necessarily incurred to obtain a portion of the equity capital used to finance plant. In other words, equity flotation costs are not included in a utility's rate base because neither that portion of the gross proceeds from the sale of common stock used to pay flotation costs is available to invest in plant and equipment, nor are flotation costs capitalized as an intangible asset. Unless some provision is made to recognize these issuance costs, a utility's revenue requirements will not fully reflect all of the costs incurred for the use of investors' funds. Because there is no accounting convention to accumulate the flotation costs associated with equity issues, they must be accounted for indirectly, with an upward adjustment to the cost of equity being the most appropriate mechanism.

Q. Is there academic evidence that supports a flotation cost adjustment?

A. Yes. The financial literature and evidence in this case provides a sound theoretical and practical basis to include consideration of flotation costs for Idaho Power. An adjustment for flotation costs associated with past sales of common stock is appropriate, even when the utility is not contemplating any new sales of common stock. The need for a flotation cost adjustment to compensate for past common stock

offerings has been recognized in the financial literature. In a *Public Utilities Fortnightly* article, for example, Brigham, Aberwald, and Gapenski demonstrated that even if no further stock issues are contemplated, a flotation cost adjustment in all future years is required to keep shareholders whole, and that the flotation cost adjustment must consider total equity, including retained earnings.[75] Similarly, *New Regulatory Finance* contains the following discussion:

> Another controversy is whether the flotation cost allowance should still be applied when the utility is not contemplating an imminent common stock issue. Some argue that flotation costs are real and should be recognized in calculating the fair rate of return on equity, but only at the time when the expenses are incurred. In other words, the flotation cost allowance should not continue indefinitely, but should be made in the year in which the sale of securities occurs, with no need for continuing compensation in future years. This argument implies that the company has already been compensated for these costs and/or the initial contributed capital was obtained freely, devoid of any flotation costs, which is an unlikely assumption, and certainly not applicable to most utilities. … The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered.[76]

[75] E. F. Brigham, D. A. Aberwald, and L. C. Gapenski, *Common Equity Flotation Costs and Rate Making*, Pub. Util. Fortnightly (May 2, 1985).
[76] Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 335.

Q. Can you illustrate why investors will not have the opportunity to earn their required ROE unless a flotation cost adjustment is included?

A. Yes. Assume a utility sells $10 worth of common stock at the beginning of year 1. If the utility incurs flotation costs of $0.48 (5 percent of the net proceeds), then only $9.52 is available to invest in rate base. Assume that common shareholders' required rate of return is 10.5 percent, the expected dividend in year 1 is $0.50 (*i.e.*, a dividend yield of 5 percent), and that growth is expected to be 5.5 percent annually. As developed in Table 4 below, if the allowed rate of return on common equity is only equal to the utility's 10.5 percent "bare bones" cost of equity, common stockholders will not earn their required rate of return on their $10 investment, since growth will only be 5.25 percent, instead of 5.5 percent:

TABLE 4
NO FLOTATION COST ADJUSTMENT

Year	Common Stock	Retained Earnings	Total Equity	Market Price	M/B Ratio	Allowed ROE	EPS	DPS	Payout Ratio
1	$9.52	$ -	$ 9.52	$10.00	1.050	10.50%	$1.00	$0.50	50.0%
2	$9.52	$0.50	$10.02	$10.52	1.050	10.50%	$1.05	$0.53	50.0%
3	$9.52	$0.53	$10.55	$11.08	1.050	10.50%	$1.11	$0.55	50.0%
Growth			5.25%	5.25%			5.25%	5.25%	

The reason that investors never really earn 10.5 percent on their investment in the above example is that the $0.48 in flotation costs initially incurred to raise the

common stock is not treated like debt issuance costs (*i.e.*, amortized into interest expense and therefore increasing the embedded cost of debt), nor is it included as an asset in rate base.

Including a flotation cost adjustment allows investors to be fully compensated for the impact of these costs. One commonly referenced method for calculating the flotation cost adjustment is to multiply the dividend yield by a flotation cost percentage. Thus, with a 5 percent dividend yield and a 5 percent flotation cost percentage, the flotation cost adjustment in the above example would be approximately 25 basis points. As shown in Table 5 below, by allowing a rate of return on common equity of 10.75 percent (a 10.5 percent cost of equity plus a 25 basis point flotation cost adjustment), investors earn their 10.5 percent required rate of return, since actual growth is now equal to 5.5 percent:

TABLE 5
INCLUDING FLOTATION COST ADJUSTMENT

Year	Common Stock	Retained Earnings	Total Equity	Market Price	M/B Ratio	Allowed ROE	EPS	DPS	Payout Ratio
1	$9.52	$ -	$ 9.52	$10.00	1.050	10.75%	$1.02	$0.50	48.9%
2	$9.52	$0.52	$10.04	$10.55	1.050	10.75%	$1.08	$0.53	48.9%
3	$9.52	$0.55	$10.60	$11.13	1.050	10.75%	$1.14	$0.56	48.9%
Growth			5.50%	5.50%			5.50%	5.50%	

The only way for investors to be fully compensated for issuance costs is to include an ongoing adjustment to account for past flotation costs when setting the return on common

equity. This is the case regardless of whether the utility is expected to issue additional shares of common stock in the future.

Q. What is the magnitude of the adjustment to the "bare bones" cost of equity to account for issuance costs?

A. The most common method used to account for flotation costs in regulatory proceedings is to apply an average flotation-cost percentage to a utility's dividend yield. In Exhibit 17, I present a survey of recent open-market common stock issues for each company in Value Line's electric and gas utility industries. For all companies in the electric and gas industries, flotation costs averaged 2.7 percent, or 2.6 percent for electric utilities. Applying the average 2.6 percent expense percentage for electric utilities to the Electric Group dividend yield of 3.8 percentage produces a flotation cost adjustment on the order of 10 basis points.

Q. Have other regulators recognized flotation costs in evaluating a fair and reasonable ROE?

A. Yes. For example, In Case No. INT-G-16-02 the IPUC staff noted that applying a flotation cost percentage to the dividend yield "is referred to as the 'conventional' approach. Its use in regulatory proceedings is widespread, and the formula is outlined in several corporate finance

textbooks."[77] In Docket No. UE-991606 the Washington Utilities and Transportation Commission concluded that a flotation cost adjustment of 25 basis points should be included in the allowed return on equity.[78]

More recently, the Wyoming Office of Consumer Advocate, an independent division of the Wyoming Public Service Commission, recommended a 10 basis point flotation cost adjustment.[79] Similarly, the South Dakota Public Utilities Commission has recognized the impact of issuance costs, concluding that, "recovery of reasonable flotation costs is appropriate."[80] Another example of a regulator that approves common stock issuance costs is the Mississippi Public Service Commission, which routinely includes a flotation cost adjustment in its Rate Stabilization Adjustment Rider formula.[81] The Public Utilities Regulatory Authority of Connecticut[82] the Minnesota Public Utilities Commission,[83] and

[77] Idaho Public Utilities Commission, Case No. INT-G-16-02, *Direct Testimony of Mark Rogers* (Dec. 16, 2016) at 18.
[78] Washington Utilities and Transportation Commission Docket No. UE-991606, *et al., Third Supplemental Order* (September 2000) at 95.
[79] Wyoming Public Service Commission, Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53.
[80] South Dakota Public Utilities Commission, *Northern States Power Co*, EL11-019, Final Decision and Order at P 22 (2012).
[81] *See, e.g.*, Entergy Mississippi Formula Rate Plan FRP-7, https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_frp.pdf (last visited Apr. 25, 2023).
[82] *See, e.g.*, The Public Utilities Regulatory Authority of Connecticut, Docket No. 14-05-06, Decision (Dec. 17, 2014) at 133-134.
[83] *See, e.g.*, Minnesota Public Utilities Commission, Docket No. E001/GR-10-276, Findings of Fact, Conclusions, and Order at 9.

the Virginia State Corporation Commission[84] have also recognized that flotation costs are a legitimate expense worthy of consideration in setting a fair and reasonable ROE.

VI. NON-UTILITY BENCHMARK

Q. What is the purpose of this section of your testimony?

A. This section presents the results of my DCF analysis for a group of low-risk firms in the competitive sector, which I refer to as the "Non-Utility Group." This analysis is not directly considered to arrive at my recommended ROE range of reasonableness; however, it is my opinion that this is a relevant consideration in evaluating a fair ROE for the Company.

Q. Do utilities have to compete with non-regulated firms for capital?

A. Yes. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. Clearly, the total capital invested in utility stocks is only a small fraction of total common stock investment, and there is a plethora of other alternatives available to investors. Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk. This

[84] Virginia State Corporation Commission, Roanoke Gas Company, Case No. PUR-2018-00013, *Final Order*, (Jan. 24, 2020) at 6.

understanding is consistent with modern portfolio theory, which is built on the assumption that rational investors will hold a diverse portfolio of stocks and not just companies in a single industry.

Q. Is it consistent with the *Bluefield* and *Hope* cases to consider investors' required ROE for non-utility companies?

A. Yes. The cost of equity capital in the competitive sector of the economy forms the very underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to "business undertakings attended with comparable risks and uncertainties." It does not restrict consideration to other utilities. Similarly, the *Hope* case states:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[85]

As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

[85] *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 391 (1944).

Q. Does consideration of the results for the Non-Utility Group improve the reliability of DCF results?

A. Yes. Growth estimates used in the DCF model depend on analysts' forecasts. It is possible for utility growth rates to be distorted by short-term trends in the industry, or by the industry falling into favor or disfavor by analysts. Such distortions could result in biased DCF estimates for utilities. Because the Non-Utility Group includes low risk companies from more than one industry, it helps to insulate against any possible distortion that may be present in results for a particular sector.

Q. What criteria do you apply to develop the Non-Utility Group?

A. My comparable risk proxy group was composed of those United States companies followed by Value Line that:

1) pay common dividends;
2) have a Safety Rank of "1";
3) have a Financial Strength Rating of "A" or greater;
4) have a beta of 0.95 or less; and
5) have investment grade credit ratings from S&P and Moody's.

Q. How do the overall risks of your Non-Utility Group compare to the proxy group of electric utilities?

A. Table 6 compares the Non-Utility Group to the Electric Group and Idaho Power across the four key indices of investment risk discussed earlier.

TABLE 6
COMPARISON OF RISK INDICATORS

	Credit Ratings		Value Line		
			Safety	Financial	
	S&P	Moody's	Rank	Strength	Beta
Non-Utility Group	A-	A2	1	A+	0.81
Electric Group	BBB+	Baa2	2	A	0.89
Idaho Power	BBB	Baa1	1	A+	0.80

Note: Idaho Power's Value Line ratings are for its parent company, IDACORP.

As shown above, the risk indicators for the Non-Utility Group suggest equivalent or less risk than for the Electric Group and Idaho Power.

The companies that make up the Non-Utility Group are representative of the pinnacle of corporate America. These firms, which include household names such as Coca-Cola, Kellogg, Procter & Gamble, and Walmart, have long corporate histories, well-established track records, and conservative risk profiles. Many of these companies pay dividends on a par with utilities, with the average dividend yield for the group at 2.3 percent.[86] Moreover, because of their significance and name recognition, these companies receive intense scrutiny by the investment community, which increases confidence that published growth estimates are representative of the consensus expectations reflected in common stock prices.

[86] Exhibit 18 at page 1.

Q. What are the results of your DCF analysis for the Non-Utility Group?

A. I apply the DCF model to the Non-Utility Group using the same analysts' EPS growth projections described earlier for the Electric Group, with the results being presented on page 3 of Exhibit 18. As summarized in Table 7, below, after eliminating illogical values, application of the constant growth DCF model results in the following cost of equity estimates:

TABLE 7
DCF RESULTS – NON-UTILITY GROUP

Growth Rate	Average	Midpoint
Value Line	10.9%	11.9%
IBES	10.4%	10.7%
Zacks	10.9%	12.1%

As discussed earlier, reference to the Non-Utility Group is consistent with established regulatory principles. Required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition. Because the actual cost of equity is unobservable, and DCF results inherently incorporate a degree of error, cost of equity estimates for the Non-Utility Group provide an important benchmark in evaluating a fair ROE for Idaho Power.

Q. Does this conclude your direct testimony?

A. Yes, it does.

DECLARATION OF Adrien M. McKenzie, CFA

I, Adrien M. Mckenzie, CFA, declare under penalty of perjury under the laws of the state of Idaho:

1. My name is Adrien M. McKenzie. I am President of Financial Concepts and Applications, Inc. ("FINCAP"), a firm providing financial, economic, and policy consulting services to business and government.

2. On behalf of Idaho Power, I present this pre-filed direct testimony in this matter.

3. To the best of my knowledge, my pre-filed direct testimony and exhibits are true and accurate.

I hereby declare that the above statement is true to the best of my knowledge and belief, and that I understand it is made for use as evidence before the Idaho Public Utilities Commission and is subject to penalty for perjury.

SIGNED this 1st day of June 2023, at Austin, Texas.

Signed: _____

Adrien M. McKenzie