STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DE 23-039

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Distribution Service Rate Case
Return on Equity

DIRECT TESTIMONY

OF

ANN E. BULKLEY

AND

CHRISTOPHER M. WALL

The Brattle Group

May 5, 2023

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I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your names and business addresses.

A. My name is Ann E. Bulkley. I am a Principal at The Brattle Group ("Brattle"). My business address is One Beacon Street, Suite 2600, Boston, Massachusetts.

My name is Christopher M. Wall. I am a Senior Associate of The Brattle Group, located at One Beacon Street, Suite 2600, Boston, Massachusetts.

Q. On whose behalf are you submitting this direct testimony?

A. We are submitting this direct testimony before the New Hampshire Public Utilities Commission ("Commission") on behalf of Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty ("Liberty" or the "Company").

Q. Ms. Bulkley, please describe your education and experience.

A. I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, with over 25 years of experience consulting to the energy industry. I have advised numerous energy and utility clients on a wide range of financial and economic issues with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. My resume and a listing of the testimony that I have filed in other proceedings are included in Attachment AEB/CMW-1.

Q. Mr. Wall, please describe your education and experience.

A. I hold a B.A. in Mathematics and Economics from Saint Peter's College, where I graduated Summa Cum Laude, and a Master's degree in Economics from Northeastern University. I have more than ten years of experience consulting in the energy industry; I have been involved with a variety of projects, mostly involving cost of capital, cost of service, demand forecasting, and rate design for natural gas, water, and electric utilities in North America. Many of my assignments over the past few years have focused on the determination of the cost of capital for ratemaking purposes. My resume and a listing of the testimony I have filed in other proceedings are also included in Attachment AEB/CMW-1.

II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q. Please describe the purpose of your direct testimony.

A. The purpose of our direct testimony is to present evidence and provide a recommendation regarding the appropriate return on equity ("ROE") to be used for ratemaking purposes for the Company in this proceeding. The Company is proposing a capital structure that is composed of 55.00 percent common equity and 45.00 percent long-term debt, and our testimony also reviews the appropriateness of the Company's proposed capital structure.

Q. Are you sponsoring any exhibits in support of your direct testimony?

A. Yes. Our analysis and recommendations are supported by the data presented in Attachments AEB/CMW-2 through AEB/CMW-16, which have been prepared by us or under our direction.

Q. Please provide a brief overview of the analyses that led to your ROE recommendation.

A. We have estimated the Company's cost of equity by applying several traditional estimation methodologies to a proxy group of comparable utilities, including the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), and a Bond Yield Risk Premium ("BYRP" or "Risk Premium"). Our recommendation also takes into consideration the following factors: (1) the Company's capital expenditure requirements; (2) the regulatory environment in which the Company operates; (3) the Company's automatic rate adjustment mechanisms; (4) flotation costs; and (5) the Company's proposed capital structure as compared to the capital structures of the proxy group companies. While we did not make specific adjustments to our ROE recommendation for these factors, we did consider them in the aggregate when determining where our recommended ROE falls within the range of the analytical results.

Q. How is the remainder of your direct testimony organized?

A. The remainder of our direct testimony is organized as follows:

- Section III provides a summary of our analyses and conclusions.
- Section IV reviews the regulatory guidelines pertinent to the development of the cost of capital.
- Section V discusses current and projected capital market conditions and the effect of those conditions on the Company's cost of equity.
- Section VI explains our selection of a proxy group of electric utilities.

- Section VII describes our analyses and the analytical basis for our recommendation of the appropriate ROE for Liberty.
- Section VIII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for Liberty in this case.
- Section IX assesses the Company's proposed capital structure.
- Section X presents our conclusions and recommendations.

III. SUMMARY OF ANALYSES AND CONCLUSIONS

Q. Please summarize the key factors considered in your analyses and upon which you base your recommended ROE.

A. The key factors that we considered in our cost of equity analyses and recommended ROE for the Company in this proceeding are:

- The United States Supreme Court's Hope and Bluefield decisions[1] established the standards for determining a fair and reasonable authorized ROE for public utilities, including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result leads to just and reasonable rates.
- The effect of current and prospective capital market conditions on the cost of equity estimation models and on investors' return requirements.

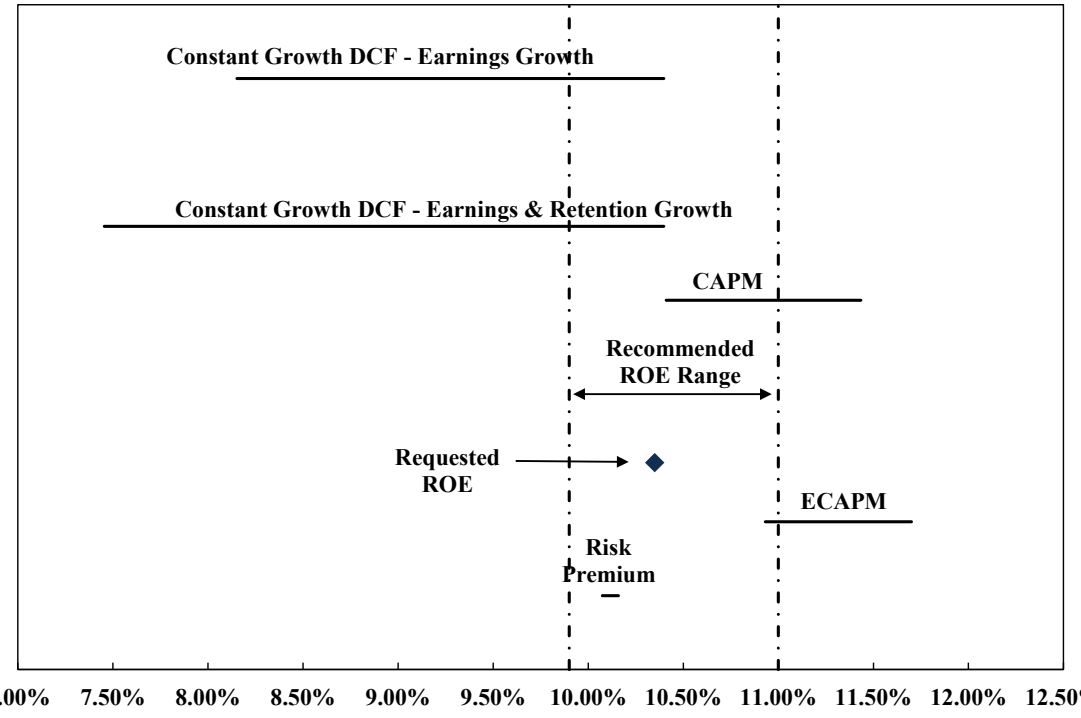
[1] *Federal Power Commission v. Hope Natural Gas Co*., 320 U.S. 591 (1944) ("*Hope*"); *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*").

- The results of several analytical approaches that provide estimates of the Company's cost of equity. Because the Company's authorized ROE should be a forward-looking estimate over the period during which the rates will be in effect, these analyses rely on forward-looking inputs and assumptions (e.g., projected analyst growth rates in the DCF model, forecasted risk-free rate and market risk premium in the CAPM analysis).
- Although the companies in our proxy group are generally comparable to Liberty, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, we considered the Company's regulatory, business, and financial risks relative to the proxy group of comparable companies in determining where the Company's ROE should fall within the reasonable range of analytical results to appropriately account for any residual differences in risk.

Q. What are the results of the models that you have used to estimate the cost of equity for Liberty?

A. Figure 1 summarizes the range of results produced by the DCF, CAPM, ECAPM, and Risk Premium analyses based on data through the end of January 2023.

***Figure 1**. Summary of Cost of Equity Analytical Results.*



As shown in Figure 1 (and in Attachment AEB/CMW-2), the range of results produced by the models used to estimate the cost of equity is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies.

Q. Are prospective capital market conditions expected to affect the results of the cost of equity for the Company during the period in which the rates established in this proceeding will be in effect?

A. Yes. Capital market conditions are expected to affect the results of the cost of equity estimation models. Specifically:

- Inflation is expected to persist over the near-term, which increases the operating risk of the utility during the period in which rates will be in effect.
- Long-term interest rates have increased substantially in the past year and are expected to remain relatively high at least over the next year in response to inflation.
- Since utility dividend yields are now less attractive than the risk-free rates of government bonds, and interest rates are expected to remain near current levels over the next year, and since utility stock prices are inversely related to changes in interest rates, it is likely that utility share prices will decline.
- Rating agencies have responded to the risks of the utility sector, with Moody's Investors Service ("Moody's") most recently indicating its outlook for the industry in 2023 is "negative," citing increasing interest rates, inflation, and high natural gas prices, all of which create pressure for customer affordability and prompt rate recovery.
- Similarly, equity analysts have noted the increased risk for the utility sector as a result of rising interest rates and expect the sector to underperform over the near-term.
- Consequently, the results of the DCF model, which relies on current utility share prices, are likely to understate the cost of equity during the period that the Company's rates will be in effect.

It is appropriate to consider all these factors when estimating a reasonable range of the investor-required cost of equity and the recommended ROE for the Company.

Q. What is your conclusion regarding the appropriate authorized ROE for Liberty in this proceeding?

A. Considering the analytical results presented in Figure 1, current and prospective capital market conditions, as well as the level of regulatory, business, and financial risk faced by the Company's electric operations in New Hampshire relative to the proxy group, we recommend a range from 9.90 percent to 11.00 percent for the Company's ROE, and within that range, recommend an ROE of 10.35 percent.

Q. Is Liberty's requested capital structure reasonable and appropriate?

A. Yes. The Company's proposed equity ratio of 55.00 percent is within the range of equity ratios for the proxy group. Further, the Company's proposed equity ratio is reasonable considering that credit rating agencies have identified the outlook for the utility sector as "negative" due to the negative effect on the cash flows and credit metrics associated with increasing interest rates, inflation, and commodity costs, and the pressure that those factors place on customer affordability and utilities' prompt rate recovery.

IV. REGULATORY PRINCIPLES

Q. Please describe the guiding principles to be used in establishing the cost of capital for a regulated utility.

A. The U.S. Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's authorized ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support

credit quality and access to capital; and (3) that the end result, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates.[2]

Q. Has the Commission provided similar guidance in establishing the appropriate ROE?

A. Yes, it has. In its decision in Docket No. DG 08-009, the Commission stated that it adheres to the capital attraction standard discussed in *Hope* and *Bluefield's* decisions.[3] Additionally, the Commission noted that it is:

> [B]ound to set a rate of return that falls within a zone of reasonableness, neither so low to result in a confiscation of company property, nor so high as to result in extortionate charges to customers. A rate falling within that zone should, at a minimum, be sufficient to yield the cost of debt and equity capital necessary to provide the assets required for the discharge of the company's responsibility.[4]

This guidance is in accordance with our view that an allowed rate of return must be sufficient to enable regulated companies, like Liberty, the ability to attract capital on reasonable terms.

Q. Is fixing a fair rate of return just about protecting the utility's interests?

A. No. As the court noted in *Bluefield*, a proper rate of return not only assures "confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit [but also] enable[s the utility]

[2] *Bluefield*, 262 U.S. at 692-93; *Hope*, 320 U.S. at 603.

[3] New Hampshire Public Utilities Commission, Docket No. DG 08-009, Order No. 24,972, May 29, 2009, at 54–55.

[4] *Id*., at 54. *See also*, Appeal of Conservation Law Foundation, 127 N.H. 606, 635 (1986).

to raise the money necessary for the proper discharge of its public duties."[5] As the Court went on to explain in *Hope*, "[t]he rate-making process … involves balancing of the investor and consumer interests."[6]

Q. Why is it important for a utility to be allowed the opportunity to earn an ROE that is adequate to attract capital at reasonable terms?

A. A return that is adequate to attract capital at reasonable terms enables the utility to continue to provide safe and reliable electric service while maintaining its financial integrity. That return should be commensurate with returns required by investors elsewhere in the market for investments of comparable risk. If it is not, debt and equity investors will seek alternative investment opportunities for which the expected return reflects the perceived risks, thereby inhibiting the Company's ability to attract capital at a reasonable cost.

Q. Is a utility's ability to attract capital also affected by the ROEs authorized for other utilities?

A. Yes. Utilities compete directly for capital with other investments of similar risk, which include other utilities. Therefore, the ROE authorized for a utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk. The cost of capital represents an opportunity cost to investors. If higher returns are available for

[5] *Bluefield*, 262 U.S. at 679, 693.

[6] *Hope*, 320 U.S. at 591, 603.

other investments of comparable risk, over the same time period, investors have an incentive to direct their capital to those alternative investments. Thus, an authorized ROE significantly below authorized ROEs for other utilities can inhibit the utility's ability to attract capital for investment.

Q. Is the regulatory framework, including the authorized ROE and equity ratio, important to the financial community?

A. Yes. The regulatory framework is one of the most important factors in debt and equity investors' assessments of risk. Specifically, regarding debt investors, credit rating agencies consider the authorized ROE and equity ratio for regulated utilities to be very important for two reasons: (1) they help determine the cash flows and credit metrics of the regulated utility; and (2) they provide an indication of the degree of regulatory support for credit quality in the jurisdiction. To the extent that the authorized returns in a jurisdiction are lower than the returns that have been authorized more broadly, credit rating agencies will consider this in the overall risk assessment of the regulatory jurisdiction in which the company operates. Not only do credit ratings affect the overall cost of borrowing, but they also act as a signal to equity investors about the risk of investing in the equity of a company.

Q. What are your conclusions regarding the regulatory principles to be used in establishing the cost of capital in this proceeding?

A. The ratemaking process is premised on the principle that, in order for investors and companies to commit the capital needed to provide safe and reliable utility services, a

utility must have a reasonable opportunity to recover the return of, and the market-required return on, its invested capital. Accordingly, the Commission's order in this proceeding should establish rates that provide the Company with a reasonable opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises with similar risk. It is important for the ROE authorized in this proceeding to take into consideration current and projected capital market conditions, as well as investors' expectations and requirements for both risks and returns. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at reasonable terms under a variety of economic and financial market conditions. Providing the opportunity to earn a market-based cost of capital supports the financial integrity of the Company, which is in the interest of both customers and shareholders.

V. CAPITAL MARKET CONDITIONS

Q. Why is it important to analyze capital market conditions?

A. The models used to estimate the cost of equity rely on market data that are specific either to the proxy group, in the case of the DCF model, or to the expectations of market risk, in the case of the CAPM. The results of the cost of equity estimation models can be affected by prevailing market conditions at the time the analysis is performed. While the ROE established in a rate proceeding is intended to be forward-looking, the analyst uses current and projected market data, specifically stock prices, dividends, growth rates, and

interest rates, in the cost of equity estimation models to estimate the investor-required return for the subject company.

As a result, it is important to consider the effect of the market conditions on these models when determining an appropriate range for the ROE and the recommended ROE for ratemaking purposes for a future period. If investors do not expect current market conditions to be sustained in the future, it is possible that the cost of equity estimation models will not provide an accurate estimate of investors' required return during that rate period. Therefore, it is very important to consider projected market data to estimate the return for that forward-looking period.

Q. What factors are affecting the cost of equity for regulated utilities in the current and prospective capital markets?

A. The cost of equity for regulated utility companies is being affected by several factors in the current and prospective capital markets, including: (1) changes in monetary policy; (2) relatively high inflation; and (3) increased interest rates that are expected to remain relatively high over the next few years. These factors affect the assumptions used in the cost of equity estimation models.

Q. What effect do current and prospective market conditions have on the cost of equity for Liberty?

A. As is discussed in more detail in the remainder of this section, the combination of persistently high inflation and the Federal Reserve's changes in monetary policy contributes to an expectation of increased market risk and an increase in the cost of the

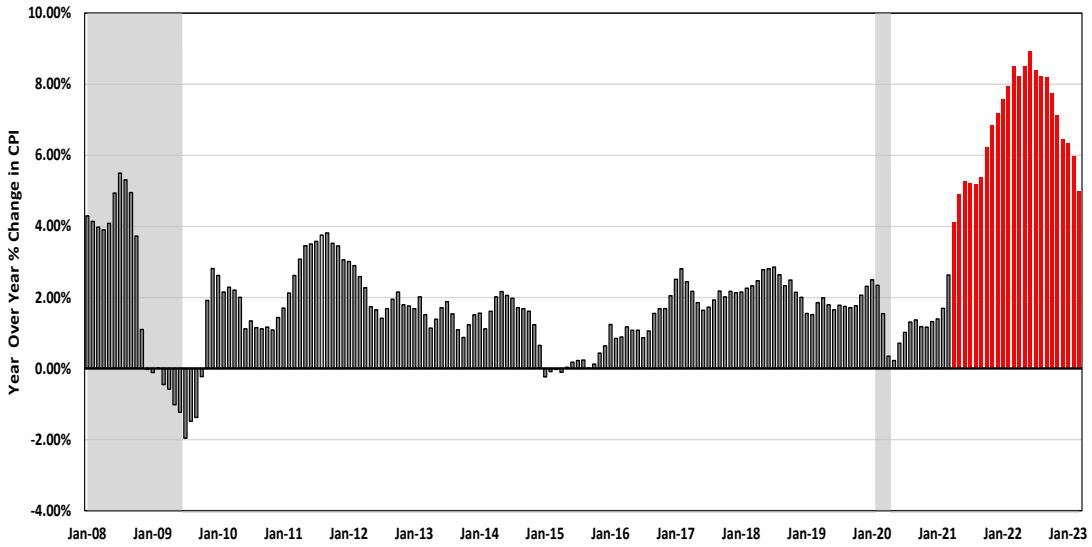
investor-required return. These factors must be considered in setting a forward-looking ROE. Inflation has recently been at some of the highest levels seen in approximately 40 years. Interest rates, which have increased from the pandemic lows seen in 2020, are expected to continue to increase in direct response to the Federal Reserve's monetary policy. Since there is a strong historical inverse correlation between interest rates and the share prices of utility stocks (*i.e.*, share prices of utility stocks typically fall when interest rates rise and vice versa), it is reasonable to expect that investors' required return for utility companies will also continue to increase. Therefore, cost of equity estimates based solely on current market conditions will understate the cost of equity required by investors during the future period that the Company's rates determined in this proceeding will be in effect.

A. Inflationary Expectations in Current and Projected Capital Market Conditions

Q. Has inflation increased significantly over the past year?

A. Yes. As shown in Figure 2, the year-over-year ("YOY") change in the Consumer Price Index ("CPI") published by the Bureau of Labor Statistics has increased steadily since the beginning of 2021, rising from 1.37 percent in January 2021 to a high of 9.0 percent in June 2022, which was the largest 12-month increase since 1981 and significantly greater than any level seen since January 2008. As shown in Figure 2, since that time, while inflation has declined in response to the Federal Reserve's monetary policy, inflation continues to remain elevated above the Federal Reserve's target levels.

Figure 2. *YOY Percent Change in the Consumer Price Index, January 2008 – March 2023*[7]



Q. What are the expectations for inflation over the near-term?

A. The Federal Reserve has indicated that it expects inflation will remain elevated above its target level over at least the next year and that it will continue to increase short-term interest rates to reduce inflation. For example, Federal Reserve Chair Powell at the Federal Open Market Committee ("FOMC") meeting in February 2023 anticipated further increases in the federal funds rate and observed that while inflation is off of its recent highs, it remains significantly above the Federal Reserve's long-term target:

> We continue to anticipate that ongoing increases will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time.
>
> …..
>
> Inflation remains well above our longer-run goal of 2 percent. Over the 12 months ending in December, total PCE prices rose 5.0 percent; excluding

[7] Bureau of Labor Statistics, shaded area indicates a recession.

> the volatile food and energy categories, core PCE prices rose 4.4 percent. The inflation data received over the past three months show a welcome reduction in the monthly pace of increases. And while recent developments are encouraging, we will need substantially more evidence to be confident that inflation is on a sustained downward path.
>
> …..
>
> With today's action, we have raised interest rates by 4-1/2 percentage points over the past year. We continue to anticipate that ongoing increases in the target range for the federal funds rate will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time.
>
> …..
>
> At the December meeting, we all wrote down our best estimates of what we thought the ultimate level would be [of the federal funds rate], and that's obviously back in December. And the median for that was between five and five and a quarter percent. At the March meeting, we're going to update those assessments. We did not update them today. We did, however, continue to say that we believe ongoing rate hikes will be appropriate to attain a sufficiently restrictive stance of policy to bring inflation back down to 2 percent. We think we've covered a lot of ground, and financial conditions have certainly tightened. I would say we still think there's work to do there. We haven't made a decision on exactly where that will be. I think, you know, we're going to be looking carefully at the incoming data between now and the March meeting and then the May meeting. I don't feel a lot of certainty about where that will be. It could certainly be higher than we're writing down right now. If we come to the view that we need to write down to -- you know, to move rates up beyond what we said in December we would certainly do that. At the same time, if the data come in, in the other direction then we'll -- you know, we'll make data-dependent decisions at coming meetings, of course.[8]

Most recently, on March 22, 2023, the Federal Reserve again raised interest rates by one-quarter of a percentage point.[9] In addition, the Federal Reserve reiterated its long-term

[8] Transcript. Chair Powell Press Conference, February 1, 2023; clarification added.

[9] Federal Reserve, "Implementation Note issued March 22, 2023," March 22, 2023, https://www.federalreserve.gov/newsevents/pressreleases/monetary20230322a1.htm.

target of 2 percent inflation and its commitment to get to this target.[10] The Federal Reserve believes that there is significant progress that needs to be made to bring inflation to its long-term target of 2 percent. Indeed, as Chair Powell stated in a recent press conference, "[r]educing inflation is likely to require a period of below-trend growth and some softening in labor market conditions."[11]

B. The Use of Monetary Policy to Address Inflation

Q. What policy actions has the Federal Reserve enacted to respond to increased inflation?

A. The dramatic increase in inflation has prompted the Federal Reserve to pursue an aggressive normalization of monetary policy, removing the accommodative policy programs used to mitigate the economic effects of COVID-19. Beginning in March 2022 and through March 22, 2023, the Federal Reserve increased the target federal funds rate through a series of increases from 0.00 – 0.50 percent to 4.75 percent to 5.00 percent.[12] The Federal Reserve anticipates the continued need to maintain the Federal Funds rate at a restrictive level in order to achieve its goal of 2 percent inflation over the long run.[13]

[10] Federal Reserve, Press Release, "Federal Reserve issues FOMC Statement," March 22, 2023, https://www.federalreserve.gov/newsevents/pressreleases/monetary20230322a.htm ("In determining the extent of future increases in the target range, the Committee will take into account the cumulative tightening of monetary policy, the lags with which monetary policy affects economic activity and inflation, and economic and financial developments. In addition, the Committee will continue reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities, as described in its previously announced plans. The Committee is strongly committed to returning inflation to its 2 percent objective").

[11] Federal Reserve, Transcript of Chair Powell's Press Conference, March 22, 2023, p. 4, https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230322.pdf.

[12] Federal Reserve, Press Releases, March 16, 2022, May 4, 2022, June 15, 2022, September 22, 2022, November 2, 2022, February 1, 2023, and March 22, 2023.

[13] Federal Reserve, Press Release, "Federal Reserve issues FOMC statement," March 22, 2023, https://www.federalreserve.gov/newsevents/pressreleases/monetary20230322a.htm.

C. The Effect of Inflation and Monetary Policy on Interest Rates and the Investor-Required Return

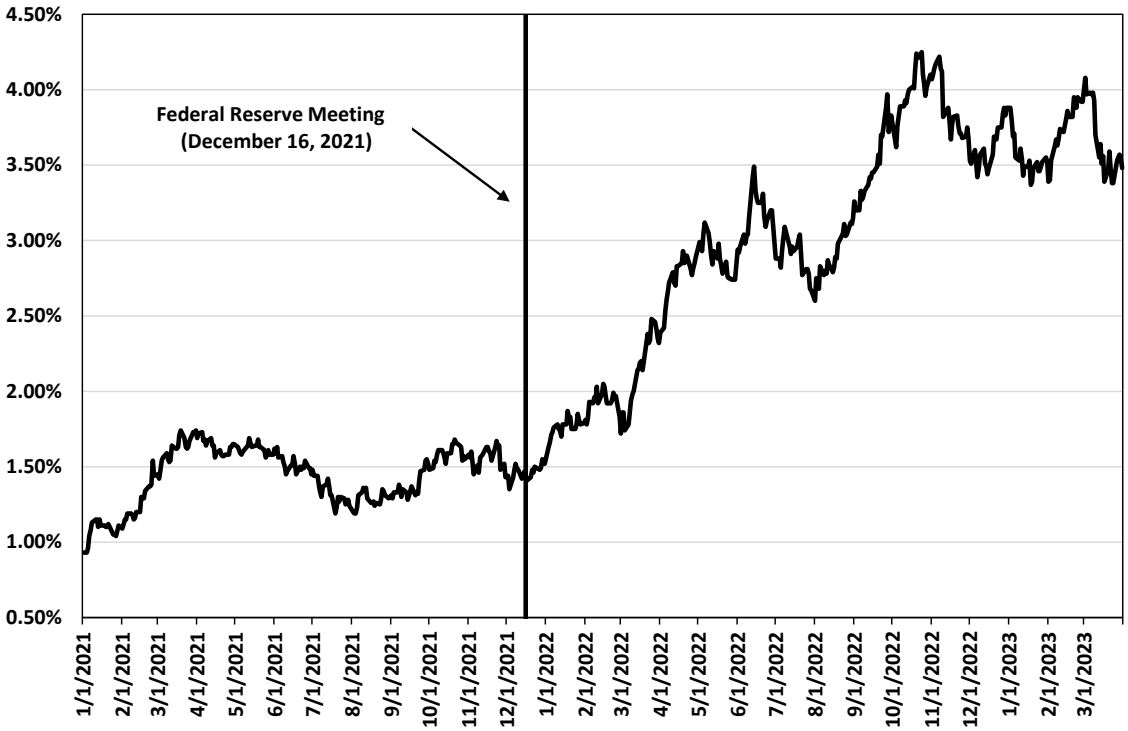
Q. What effect will inflation and the Federal Reserve's normalization of monetary policy have on long-term interest rates?

A. Inflation and the Federal Reserve's normalization of monetary policy are expected to result in long-term interest rates remaining relatively high over at least the next year. Specifically, inflation reduces the purchasing power of the future interest payments an investor expects to receive over the duration of the bond. This risk increases the longer the duration of the bond. As a result, if investors expect inflation to remain relatively high, they will require higher yields to compensate for the increased risk of inflation, which means interest rates will also remain relatively high.

Q. Have the yields on long-term government bonds increased in response to inflation and the Federal Reserve's normalization of monetary policy?

A. Yes. At the FOMC meetings throughout 2022 and thus far into 2023, the Federal Reserve has continued to note its concerns over the sustained increased levels of inflation and has continued to accelerate the process of normalizing monetary policy to combat inflation. As shown in Figure 3, since the Federal Reserve's December 2021 meeting, the yield on 10-year Treasury bonds has more than doubled, increasing from 1.47 percent on December 15, 2021, to 3.48 percent on March 31, 2023. The increase is due to the Federal Reserve's announcements at each of the meetings since December 2021 and the continued elevated levels of inflation.

Figure 3. *10-Year Treasury Bond Yield, January 2021– March 2023*[14]



Q. What have equity analysts said about long-term government bond yields?

A. Leading equity analysts have noted that they expect the yields on long-term government bonds to remain elevated through at least the end of 2023. According to the most recent *Blue Chip Financial Forecasts* report, the consensus estimate of the average yield on the 10-year Treasury bond is approximately 3.40 percent through the third quarter of 2024.[15]

Q. How have interest rates and inflation changed since the Company's last rate case?

A. As shown in Figure 4, when the Commission authorized an ROE of 9.10 percent at the conclusion of the Company's 2019 rate proceeding, interest rates (as measured by the 30-

[14] S&P Capital IQ Pro.

[15] *Blue Chip Financial Forecasts*, Vol. 42, No. 4, March 31, 2023.

year Treasury bond yield) were 1.47 percent and inflation was 0.73 percent. However, since the Company's last rate proceeding, long-term interest rates have increased 2.5 times, and as discussed, inflation is also substantially higher.

Figure 4. *Change in Market Conditions Since Liberty's Last Rate Case*[16]

Docket	Date	Federal Funds Rate	30-Day Avg of 30-Year Treasury Bond Yield	Inflation Rate	Auth'd ROE
DE 19-064	6/30/2020	0.08%	1.47%	0.72%	9.10%
Current	3/31/2023	4.65%	3.81%	5.99%	

D. Expected Performance of Utility Stocks and the Investor-Required Return on Utility Investments

Q. Are utility share prices correlated to changes in the yields on long-term government bonds?

A. Yes. Interest rates and utility share prices are inversely correlated, which means that increases in interest rates result in declines in the share prices of utilities and vice versa. For example, Goldman Sachs and Deutsche Bank examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative

[16] St. Louis Federal Reserve Bank; Bureau of Labor Statistics.

relationships with bond yields (*i.e.*, increases in bond yields resulted in the decline of utility share prices).[17]

Q. How do equity analysts expect the utilities sector to perform in an increasing interest rate environment?

A. Equity analysts project that utilities will underperform the broader market given high inflation and the recent increases in interest rates. Fidelity classifies the utility sector as underweight,[18] and Keybanc Capital Markets analyst Sophie Karp recently noted she had a negative view of the sector in 2023 and expects a decline in the relative valuation of the utilities sector as compared to the S&P 500:

> The utility sector's relative outperformance came on the back of the pre-recessionary environment in the U.S. in 2022, analyst Karp said. She noted that the sector now traded at a 2.8 times premium to the S&P 500 Index, which is relatively wide by historical standards.
>
> *She said the utility sector is relatively overvalued and will see a mean reversion in 2023*, adding that the last time such a premium over the S&P 500 Index happened was in 2004.
>
> "*We are therefore negative on the sector overall going into 2023 and our OW picks grow fewer*," Karp said
>
> *There has been a surprising deterioration of the regulatory environment across multiple jurisdictions, including the historically stronger ones*, she noted. Some regulatory developments, according to the analyst, are driven by the regulator's desire to moderate the impact on customer bills. "Given that power and commodity prices remain elevated, we expect to continue

[17] Lee, Justina. "Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks." Bloomberg.com, March 11, 2021.

[18] Fidelity. "First Quarter 2023 Investment Research Update." February 8, 2023.

> seeing regulators getting 'creative' with assumptions and rate mechanisms to achieve that goal," she added.
>
> Karp said she would focus on rate affordability, as inflationary pressures will likely be a factor for the foreseeable future.
>
> "As we turn to 2023, we believe that the sector will find it difficult to defend this relative valuation position, particularly as macro headwinds persist and begin to take a toll on utility earnings," she added.[19]

Similarly, Barron's recently noted that the decline in share prices can be attributed to the relatively high valuations and low dividend yields of utilities as compared to other asset classes such as Treasuries.[20] According to Barron's, even after the recent decline in share prices, the Utilities Select ETF was yielding 2.85 percent, which is a yield that will not "lure in buyers when the ultrasafe 10-year Treasury note yields close to 4%."[21]

Q. Do standard market indicators support analysts' position that utilities will underperform over the near-term?

A. Yes. As discussed, the utility sector is considered a "bond proxy" or a sector that investors view as a "safe haven" alternative to bonds, and changes in utility stock prices are therefore inversely related to changes in interest rates. For example, the utility sector tends to perform well when interest rates are low since the dividend yields for utilities offer investors the prospect of higher returns when compared to the yields on long-term government bonds. Therefore, we examined the difference between the dividend yields

[19] Market Insider. "After A 'Good Run' For Utilities In 2022, Analyst Says 'Trade Is Over – For Now,' But Retains Bullish Bias On These Stocks", January 17, 2023 (emphasis added).

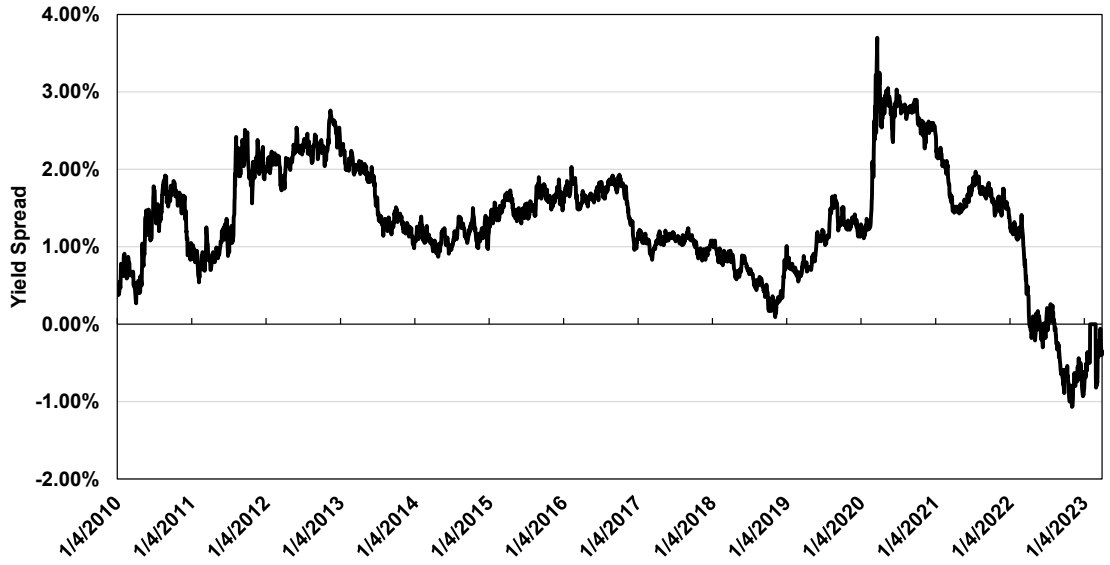
[20] Sonenshine, Jacob. "Utilities Stocks Have Fallen off a Cliff. They Just Got Downgraded, Too." Barron's, October 17, 2022.

[21] *Id*.

of utility stocks and the yields on long-term government bonds (the "yield spread"). We selected the dividend yield on the S&P Utilities Index as the measure of the dividend yields for the utility sector and the yield on the 10-year Treasury bond as the estimate of the yield on long-term government bonds.

As shown in Figure 5, the yield spread as of March 31, 2023, was negative 0.35 percent, meaning that the yield on the 10-year Treasury bond exceeds the dividend yield for the S&P Utilities Index. Furthermore, the current negative yield spread is well below the long-term average yield spread since 2010 of 1.34 percent. Given that the yield spread is currently well below the long-term average, as well as the expectation that interest rates will remain relatively high through at least through the next year, it is reasonable to conclude that the utility sector will most likely underperform over the near-term. This is because investors that purchased utility stocks as an alternative to the lower yields on long-term government bonds would otherwise be inclined to rotate back into government bonds, particularly as the yields on long-term government bonds remain elevated, thus resulting in a decrease in the share prices of utilities.

Figure 5. *Spread between the S&P Utilities Index Dividend Yield and the 10-year Treasury Bond Yield, January 2010 – March 2023*[22]



Q. Do you have any further context as to how unlikely it is to have a negative yield spread of this magnitude?

A. Yes. For further context as to how unlikely it is to have a yield spread of negative 0.35 percent, we calculated the z-score for the current yield spread, which measures the number of standard deviations from the mean. The current yield spread of negative 0.35 percent has a z-score of -2.24, indicating that a yield spread of negative 0.35 percent is over 2 standard deviations from the mean of 1.34 percent.[23] In other words, 95 percent of the daily yield spread observations from 2010 through March 2023 fall between -0.17 percent and 2.84 percent, with the current yield spread of negative 0.35 percent being

[22] S&P Capital IQ Pro and Bloomberg Professional.

[23] The z-score is calculated as: (yield spread at March 31, 2023, minus average yield spread 2010 through March 2023)/standard deviation of yield spread from 2010 through March 2023. This equals: (-0.35 minus 1.34)/ADD.

outside of that range. Thus, the current yield spread is an outlier, which is why equity analysts do not expect this current level to hold.

E. Conclusion

Q. What are your conclusions regarding the effect of current market conditions on the cost of equity for Liberty?

A. Investors expect long-term interest rates to remain relatively high through 2023, in response to continued elevated levels of inflation and the Federal Reserve's normalization of monetary policy. Because the share prices of utilities are inversely correlated to interest rates, and government bond yields are already substantially greater than utility stock dividend yields, the share prices of utilities are likely to continue to decline, which is the reason a number of equity analysts have classified the sector as either underperform or underweight. The expected underperformance of utilities means that DCF models using recent historical data likely underestimate investors' required return over the period that rates will be in effect. Therefore, this expected change in market conditions supports consideration of the higher end of the range of cost of equity results produced by the DCF models. Moreover, prospective market conditions warrant consideration of forward-looking cost of equity estimation models such as the CAPM and ECAPM, which better reflect expected market conditions.

VI. PROXY GROUP SELECTION

Q. Please provide a brief profile of Liberty.

A. Liberty provides electric-only distribution services to approximately 46,000 customers in 21 communities in New Hampshire.[24] Liberty is a wholly owned subsidiary of Liberty Utilities Company ("LUCo"), which is a wholly owned subsidiary of Algonquin Power & Utilities Corporation ("APUC"). LUCo is a utility holding company that owns electric, natural gas, water, and wastewater utilities across 13 states. APUC is based in Ontario, Canada, and its stock is traded on the New York Stock Exchange ("NYSE") and the Toronto Stock Exchange. APUC owns regulated utility companies and renewable generation assets in jurisdictions throughout North America. Liberty is not currently rated by any credit rating agency. LUCo has a long-term rating of Baa2 from Moody's (Outlook: Stable).[25] APUC has a long-term rating of BBB (Outlook: Negative) from S&P and Baa2 (Outlook: Stable) from Moody's.[26]

Q. Why have you used a proxy group of publicly traded companies to estimate the cost of equity for the Company?

A. One of the purposes of this proceeding is to estimate the cost of equity for an electric utility company that is not itself publicly traded. Because the cost of equity is a market-based concept and because Liberty's operations do not make up the entirety of a publicly traded entity, it is necessary to establish a group of companies that are both publicly

[24] Liberty Utilities (Granite State Electric Corp.), FERC Form 1, May 16, 2022.

[25] Moody's Investors Service. Credit Opinion. September 16, 2022.

[26] S&P Global Ratings. October 31, 2022; Moody's Investors Service.

traded and comparable to the Company in certain fundamental business and financial respects to serve as its "proxy" in the cost of equity estimation process.

Even if the Company were a publicly traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The companies included in the proxy group all possess a set of operating and risk characteristics that are substantially comparable to the Company's, and thus provide a reasonable basis to derive and estimate the appropriate cost of equity for Liberty.

Q. How did you select the companies included in your proxy group?

A. We began with the group of 36 companies that *Value Line* classifies as electric utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, since companies that do not cannot be analyzed using the constant growth DCF model;
- have positive long-term earnings growth forecasts from at least two equity analysts;
- have investment grade long-term issuer ratings from both S&P and Moody's;
- were not party to a merger or transformative transaction during the analytical period considered; and
- derive at least 70 percent of the Company's operating income from regulated electric operations.

Q. Did you exclude any other companies from the proxy group?

A. Yes. We also excluded Pinnacle West Capital Corporation ("PNW") and Hawaiian Electric Industries, Inc. ("HE"). Specifically, PNW should be excluded from the proxy group based on the adverse market reaction and credit rating actions resulting from a negative rate case determination for Arizona Public Service ("APS"), PNW's electric utility operating subsidiary. In APS's most recently completed rate case, the Arizona Corporation Commission ("AZCC") reduced the authorized ROE for APS from 10.00 percent to 8.70 percent, even though the Administrative Law Judge had recommended an ROE of 9.16 percent.[27] As a result of this rate case decision, credit rating agencies instituted negative ratings actions, PNW's stock price fell significantly, and the company's projected earnings growth rate estimates were reduced to zero or nearly zero. For example, after the decision, APS's projected EPS growth rates reported by IBES were reduced to nearly zero. In addition, the five-year projected EPS growth rates published by Value Line for APS fell from 5.0 percent in July 2021 prior to the deliberations in the rate proceeding to "Nil" in October 2021, and most recently are at just 0.5 percent as of January 2023. Value Line noted the following in its July 2022 report on PNW:

> Pinnacle West stock is still reeling from the regulatory thrashing the company suffered late last year. The issue has lost over 30% of its value from mid-2021, when it started to become apparent that things would not go the company's way in its general rate case. When the decision arrived in November, Pinnacle West saw its allowed return on equity (ROE) reduced from 10% to 8.7% (the lowest level in the U.S.), and its annual earning power cut by $0.90 per share. There were some strong relief rallies based

[27] Arizona Corporation Commission, ALJ Recommended Opinion and Order, August 2, 2021, at 322.

> on the hope for restitution, but that sentiment has faded, as its utility subsidiary (APS) has been unsuccessful in its bid for a judiciary appeal. In December, it filed a petition for special action with the Arizona Supreme Court, but was turned down. APS also put in a request to argue its case before the state Court of Appeals, but has received no response.[28]

In January 2023, *Value Line* reiterated PNW's difficulties in 2022 and stated that 2023 "probably won't be significantly better," noting that APS's ROE issues have been quite volatile over the past 18 months and that investors have been trying to gauge if the setback would be permanent or not.[29] Based on the fact that the assumptions used in the DCF model have been affected significantly by PNW's last rate decision, we have excluded PNW from our proxy group.

We have also excluded HE on the basis that its operations are concentrated on the islands of Hawaii, and therefore, the company faces geographic concentration risk for both its regulated and substantial unregulated operations not applicable to the other utilities considered. As HE noted in its 2021 Form10-K:

> The Company is subject to the risks associated with the geographic concentration of its businesses and current lack of interconnections that could result in service interruptions at the Utilities or higher default rates on loans held by ASB [American Savings Bank].[30]

The increased risk of service interruptions resulting from HE's geographic location that could result in revenue loss and increased costs is a risk unique to HE and would not

[28] *Value Line*, Pinnacle West, October 21, 2022.

[29] *Value Line*, Pinnacle West, January 20, 2023.

[30] Hawaii Electric Industries, Inc., 2021 Form 10-K, at 23.

apply to utilities located on the U.S. mainland. Furthermore, HE's unregulated operations, which represent approximately 33 percent of the company's operating income in 2021, are concentrated in the banking sector through the ownership of American Savings Bank ("ASB").[31] ASB also only operates in Hawaii; thus, all of the company's consumer and commercial loans are to customers in Hawaii. If Hawaii were to face an adverse economic or political event, ASB could face severe financial effects given the company's geographic concentration in Hawaii.[32] As a result, we have excluded HE from our proxy group considering HE's unique geographical risks.

Q. What is the composition of your proxy group?

A. Our proxy group consists of the 17 companies shown in Figure 6.

Figure 6. *Proxy Group*

Company	Ticker
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
Duke Energy Corporation	DUK
Edison International	EIX
Entergy Corporation	ETR
Eversource Energy	ES
Evergy, Inc.	EVRG
IDACORP, Inc.	IDA
NextEra Energy, Inc.	NEE
NorthWestern Corporation	NWE
OGE Energy Corporation	OGE
Otter Tail Corporation[33]	OTTR
Portland General Electric	POR
Xcel Energy Inc.	XEL

[31] *Id*., at 86.

[32] *Id*., at 20.

VII. COST OF EQUITY ESTIMATION

Q. Please briefly discuss the ROE in the context of the regulated rate of return.

A. The overall rate of return for a regulated utility is the weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their respective book values. The ROE is the cost of common equity capital in the utility's capital structure for ratemaking purposes. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q. How is the required cost of equity determined?

A. The required cost of equity is estimated by using analytical techniques that rely on market-based data to quantify investor expectations regarding equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the company's cost of equity falls within the range of results produced by multiple analytical techniques. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company in the context of the proxy group, in particular.

Q. What methods did you use to establish your recommended ROE in this proceeding?

A. We considered the results of the constant growth DCF model, the CAPM, and a Bond Yield Plus Risk Premium analysis. As discussed in more detail below, a reasonable cost

of equity estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

A. Importance of Multiple Analytical Approaches

Q. Is it important to use more than one analytical approach to estimate the cost of equity?

A. Yes. Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and we use multiple approaches to estimate the cost of equity. As a practical matter, however, all the models available for estimating the cost of equity are subject to limiting assumptions or other methodological constraints. Consequently, many well-regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[33] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[34] recommend the CAPM, DCF, and Bond Yield Plus Risk Premium approaches.

[33] Copeland, Tom, Tim Koller and Jack Murrin. Valuation: Measuring and Managing the Value of Companies. New York, McKinsey & Company, Inc., 3rd Ed., 2000, at 214.

[34] Brigham, Eugene and Louis Gapenski. Financial Management: Theory and Practice. Orlando, Dryden Press, 1994, at 341.

Q. Do current market conditions support your reliance on more than one analytical approach?

A. Yes. As discussed previously, interest rates have increased substantially over the past year and are expected to remain elevated over at least the next year from the lows seen during the COVID-19 pandemic. The benefit of using multiple models is that each model relies on different assumptions, certain of which may better reflect current and projected market conditions at different times. As discussed previously, CAPM, ECAPM, and Bond Yield Plus Risk Premium analysis offer some balance through the use of projected interest rates since the effect of changes in interest rates, particularly the recent increase in interest rates, may not be captured as well in the DCF model at this time. Therefore, it is important to use multiple analytical approaches to ensure that the cost of equity results reflect market conditions that are expected during the period that the Company's rates will be in effect.

B. Discounted Cash Flow (DCF) Models

Q. Please describe the DCF approach.

A. The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_\infty}{(1+k)^\infty} \qquad [1]$$

Where P_0 represents the current stock price, D1…D∞ are all expected future dividends, and k is the discount rate, or required ROE. Equation [1] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \qquad [2]$$

Equation [2] is often referred to as the constant growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q. What assumptions are required for the constant growth DCF model?

A. The constant growth DCF model requires the following four assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent that any of these assumptions are not objectively valid, considered judgment and/or specific adjustments should be applied to the results.

Q. What market data do you use to calculate the dividend yield in your constant growth DCF model?

A. The dividend yield in our constant growth DCF model is based on the proxy group companies' current annualized dividend and average closing stock prices over the most recent 30, 90, and 180 trading days ended January 31, 2023.

Q. Why do you use 30-, 90-, and 180-day averaging periods?

A. We use an average of recent trading days to calculate the term P_0 in the DCF model to reflect current market data while also ensuring that the result of the model is not skewed by anomalous events that may affect stock prices on any given trading day.

Q. Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A. Yes. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected first-year dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q. Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A. In its constant growth form, the DCF model (Equation [2]) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, one must assume that the payout ratio remains constant and that earnings per share, dividends per share, and book value per share all grow at the same constant rate. Over the long run, however, dividend growth can only be sustained by earnings growth. Therefore, it is important to consider a variety of sources in arriving at a single projected long-term earnings growth rate for the constant growth DCF model.

Q. Which sources of long-term earnings growth rates did you use in your DCF analysis?

A. We incorporate three sources of long-term earnings per share ("EPS") growth rates: (1) Zacks Investment Research; (2) Yahoo! Finance; and (3) *Value Line*.

Q. Why are EPS growth rates the appropriate growth rates to be relied on in the DCF model?

A. Earnings are the fundamental driver of a company's ability to pay dividends; therefore, projected EPS growth is the appropriate measure of a company's long-term growth. In contrast, changes in a company's dividend payments are based on management decisions related to cash management and other factors. For example, a company may decide to retain earnings rather than pay out a portion of those earnings to shareholders through dividends. Therefore, dividend growth rates are less likely than earnings growth rates to reflect accurately investor perceptions of a company's growth prospects.

Q. In the past, has the Commission relied exclusively on EPS growth rates as the estimate of long-term growth in the DCF model?

A. No. In its decision in Docket No. DE 08-009, the Commission noted that the use of additional growth rates in the DCF model such as dividend per share ("DPS") and book value per share ("BVPS") is appropriate.[35] In support of its conclusion, the Commission reasoned that an investor's return from utility stocks is based not only on stock price

[35] New Hampshire Public Utilities Commission, Docket No. DG 08-009, Order No. 24,972, May 29, 2009, at 62.

appreciation but also dividends.[36] Furthermore, the Commission noted that the assumption in the DCF model of a constant price-to-earnings ratio does not hold, and therefore complete reliance on earnings growth is not appropriate.[37]

Q. As a result of the Commission's decision, have you considered additional long-term growth rates in the development of your DCF analysis?

A. Yes. While we believe that earnings are the fundamental driver of a company's ability to pay dividends, and therefore are the appropriate measure of a company's long-term growth, we have also considered a DCF analysis that also relies on the retention growth rate.

Q. Please describe the retention growth estimate as applied in your testimony.

A. The retention growth estimate stems from the proposition that a firm's growth is a function of its expected earnings and the extent to which it retains earnings to invest in the enterprise. In its simplest form, the model represents long-term growth as the product of the retention ratio (*i.e.*, the percentage of earnings not paid out as dividends, referred to as "b") and the expected return on book equity (referred to as "r"). Thus, the simple "b x r" form of the model projects growth as a function of internally-generated funds. That form of the model is limiting, however, in that it does not provide for growth funded from external equity.

[36] *Id.*, at 63.

[37] *Id.*

The "br + sv" form of the retention growth estimate used in our DCF analysis is meant to reflect growth from both internally-generated funds (*i.e.*, the "br" term) and from issuances of equity (*i.e.*, the "sv" term). While the first term represents the portion of net income that is "plowed back" into the company as a means of funding growth, the "sv" term can be represented as:

$$(\frac{m}{b} - 1) \quad \text{x common shares growth rate [3]}$$

Where:

$\frac{m}{b}$ = the market to book ratio.

In this form, the "sv" term reflects an element of growth as the product of (i) the growth in shares outstanding and (ii) that portion of the market-to-book ratio that exceeds unity. As shown in Attachment AEB/CMW-5, all the components of the retention growth estimates for the DCF model can be derived from data provided by *Value Line*.

Q. Did you also consider DPS and BVPS growth rates for your DCF analyses?

A. While we considered DPS and BVPS growth rates, we did not rely on either of these growth rates as a long-term growth estimate in the constant growth DCF model. There are several reasons why reliance on *Value Line* projections of DPS growth and BVPS growth is not appropriate. First, the use of dividend and book value growth rates ignores the academic research demonstrating that earnings growth rates are most relevant in stock price valuation.[38] Second, projections of dividend growth are entirely dependent on

[38] *See, e.g.*, Harris, Robert S. "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return." *Financial Management*, Spring 1986, at 66; Vander Weide, James H. and Willard T. Carleton. "Investor

Continued on next page

dividend policy and only measure a portion of the growth experienced by the company, and estimates of book value growth are also highly influenced by dividend policy and how earnings are invested between assets and liabilities. Investing earnings in assets or paying down debt will both increase BVPS (all else equal) but paying dividends will decrease BVPS. Therefore, projections of earnings growth provide a more robust estimate of total company growth and are not influenced by the effects of subsequent investment and dividend payment policies as is the case with both DPS and BVPS growth rates.

Q. How did you calculate the range of results for the constant growth DCF models?

A. We calculated a low-end result for our DCF model using the minimum growth rate of the three sources (*i.e.*, the lowest of the Zacks, Yahoo Finance, and *Value Line* projected earnings growth rates) for each of the proxy group companies. We used a similar approach to calculate a high-end result, using the maximum growth rate of the three sources for each proxy group company. Lastly, we also calculated results using the average growth rate from all three sources for each proxy group company.

growth expectations: Analysts vs. history." *The Journal of Portfolio Management*, Spring, 1988; Harris, Robert S. and Felicia C. Marston. "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts." *Financial Management*, Summer, 1992; Advanced Research Center. "Investor Growth Expectations." Summer 2004; Brigham, Eugene F. and Dilip K. Shome and Steve R. Vinson. "The Risk Premium Approach to Measuring a Utility's Cost of Equity." *Financial Management*, Vol. 14, No. 1, Spring, 1985; Morin, Dr. Roger A. New Regulatory Finance. Public Utilities Reports, Inc., 2006, pp. 299-303; Liu, Jing, *et al*. "Equity Valuation Using Multiples." *Journal of Accounting Research*, Vol. 40 No. 1, March 2002; Gleason, C.A., *et al*. "Valuation Model Use and the Price Target Performance of Sell-Side Equity Analysts." *Contemporary Accounting Research*, September 2011; Jung, Boochun, *et. al*. "Do financial analysts' long-term growth forecasts matter? Evidence from stock recommendations and career outcomes." *Journal of Accounting and Economics*, Vol. 53 Issues 1-2, February-April 2012.

Q. What are the results of your DCF analyses?

A. Figure 7 summarizes the results of our DCF analyses. As shown in Figure 7, the mean DCF results using the average growth rates range from 9.09 percent to 9.46 percent, and the mean results using the maximum growth rates range from 10.33 percent to 10.48 percent. While we also summarize the DCF results using the minimum growth rates, given the expected underperformance of utility stocks going forward and thus the likelihood that the DCF model is understating the cost of equity, we do not believe it is appropriate to consider these DCF results at this time.

Figure 7. *Discounted Cash Flow Results*

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Constant Growth DCF - Earnings Growth			
30-Day Avg. Stock Price	8.09%	9.32%	10.33%
90-Day Avg. Stock Price	8.23%	9.46%	10.48%
180-Day Avg. Stock Price	8.14%	9.37%	10.38%
Average	8.15%	9.38%	10.40%
Constant Growth DCF - Earnings & Retention Growth			
30-Day Avg. Stock Price	7.39%	9.09%	10.33%
90-Day Avg. Stock Price	7.53%	9.23%	10.48%
180-Day Avg. Stock Price	7.44%	9.13%	10.38%
Average	7.45%	9.15%	10.40%

Q. Have regulatory commissions acknowledged that the DCF model might understate the cost of equity given the current capital market conditions of high inflation and increased interest rates?

A. Yes. For example, in its May 2022 decision establishing the cost of equity for Aqua Pennsylvania, Inc., the Pennsylvania Public Utility Commission concluded that the current capital market conditions of high inflation and increased interest rates have resulted in the DCF model understating the utility cost of equity, and that weight should be placed on risk premium models, such as the CAPM, in the determination of the ROE:

> To help control rising inflation, the Federal Open Market Committee has signaled that it is ending its policies designed to maintain low interest rates. Aqua Exc. at 9. Because the DCF model does not directly account for interest rates, consequently, it is slow to respond to interest rate changes. However, I&E's CAPM model uses forecasted yields on ten-year Treasury bonds, and accordingly, its methodology captures forward looking changes in interest rates.
>
> Therefore, our methodology for determining Aqua's ROE shall utilize both I&E's DCF and CAPM methodologies. As noted above, the Commission recognizes the importance of informed judgment and information provided by other ROE models. In the 2012 PPL Order, the Commission considered PPL's CAPM and RP methods, tempered by informed judgment, instead of DCF-only results. We conclude that methodologies other than the DCF can be used as a check upon the reasonableness of the DCF derived ROE calculation. Historically, we have relied primarily upon the DCF methodology in arriving at ROE determinations and have utilized the results of the CAPM as a check upon the reasonableness of the DCF derived equity return. As such, where evidence based on other methods suggests that the DCF-only results may understate the utility's ROE, we will consider those other methods, to some degree, in determining the appropriate range of reasonableness for our equity return determination. In light of the above, we shall determine an appropriate ROE for Aqua using informed judgement based on I&E's DCF and CAPM methodologies.[39]

[39] Pennsylvania Public Utility Commission, Docket Nos. R-2021-3027385 and R-2021-3027386, Opinion and Order, May 12, 2022, pp. 154–155.

> …..
> We have previously determined, above, that we shall utilize I&E's DCF and CAPM methodologies. I&E's DCF and CAPM produce a range of reasonableness for the ROE in this proceeding from 8.90% [DCF] to 9.89% [CAPM]. Based upon our informed judgment, which includes consideration of a variety of factors, including increasing inflation leading to increases in interest rates and capital costs since the rate filing, we determine that a base ROE of 9.75% is reasonable and appropriate for Aqua.[40]

Q. What are your conclusions about the results of the DCF models?

A. As discussed previously, one primary assumption of the DCF models is a constant price-to-earnings ratio, and that assumption is heavily influenced by the market price of utility stocks. Since utility stocks are expected to underperform the broader market over the near-term as interest rates remain elevated and yields on long-term government bonds exceed utility dividend yields, it is important to consider the results of the DCF models with caution. Therefore, while we have given weight to the results of the constant growth DCF model, our recommendation also gives weight to the results of other cost of equity estimation models.

C. CAPM Analysis

Q. Please briefly describe the CAPM.

A. The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security. Systematic risk is the risk inherent in the entire market or market segment, which cannot be diversified away using

[40] *Id.*, pp. 177–178.

a portfolio of assets. Unsystematic risk is the risk of a specific company that can, theoretically, be mitigated through portfolio diversification.

The CAPM is defined by four components:

$$K_e = r_f + \beta(r_m - r_f) \qquad [3]$$

Where:

K_e = the required market ROE;
β = beta coefficient of an individual security;
r_f = the risk-free rate of return; and
r_m = the required return on the market.

In this specification, the term ($r_m - r^f$) represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Non-diversifiable risk is measured by beta, which is defined as:

$$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)} \qquad [4]$$

The variance of the market return (i.e., Variance (rm)) is a measure of the uncertainty of the general market, and the Covariance between the return on a specific security and the general market (i.e., Covariance (re, rm)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, beta represents the risk of the security relative to the general market.

Q. What risk-free rate do you use in your CAPM analysis?

A. We rely on three sources for our estimate of the risk-free rate: (1) the current 30-day average yield on 30-yearTreasury bonds, which is 3.71 percent;[41] (2) the average projected 30-year Treasury bond yield for the second quarter of 2023 through the second quarter of 2024, which is 3.82 percent;[42] and (3) the average projected 30-year Treasury bond yield for 2024 through 2028, which is 3.90 percent.[43]

Q. What beta coefficients do you use in your CAPM analysis?

A. As shown in Attachment AEB/CMW-7, we use the beta coefficients for the proxy group companies as reported by Bloomberg and *Value Line*. The beta coefficients reported by Bloomberg are calculated using ten years of weekly returns relative to the S&P 500 Index. The beta coefficients reported by *Value Line* are calculated using five years of weekly returns relative to the NYSE Composite Index. Additionally, as shown in Attachments AEB-7 and AEB-8, we consider another CAPM analysis that relies on the long-term average beta coefficient for the companies in our proxy group, which is calculated as an average of the *Value Line* beta coefficients for the companies in our proxy group from 2013 through 2022.

Q. How do you estimate the market risk premium in the CAPM?

A. We estimate the market risk premium as the difference between the implied expected equity market return and the risk-free rate. As shown in Attachment AEB/CMW-9, the

[41] Bloomberg Professional as of January 31, 2023.

[42] *Blue Chip Financial Forecasts*, Vol. 42, No. 2, February 1, 2023, at 2.

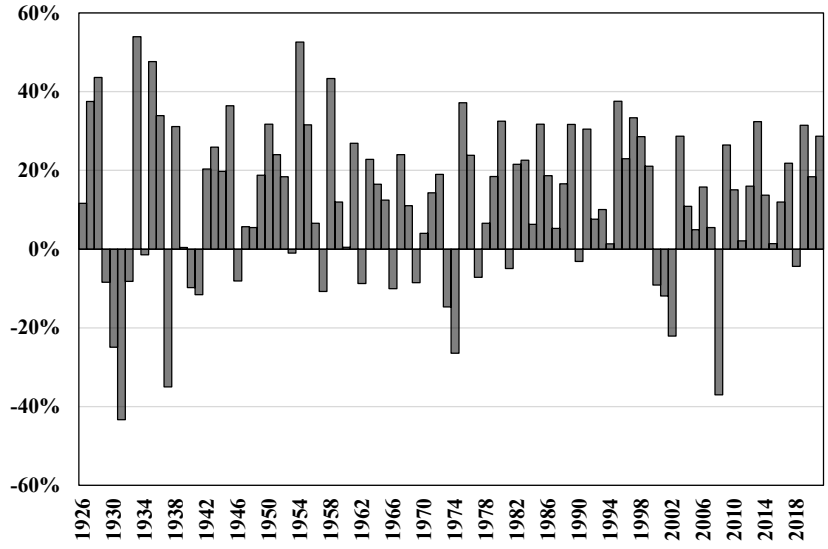
[43] *Blue Chip Financial Forecasts*, Vol. 41, No. 12, December 2, 2022, at 14.

expected market return is calculated using the constant growth DCF model discussed earlier in our testimony for the companies in the S&P 500 Index. Based on an estimated market capitalization-weighted dividend yield of 1.75 percent and a weighted long-term growth rate of 10.65 percent, the estimated required market return for the S&P 500 Index as of January 31, 2023, is 12.50 percent. Based on the three risk-free rates considered, the market risk premium ranges from 8.60 percent to 8.79 percent.

Q. How does the current expected market return compare to observed historical market returns?

A. As shown in Figure 8, given the range of annual equity returns that have been observed over the past century, a current expected market return of 12.50 percent is not unreasonable. As shown, in 50 out of the past 96 years (or roughly 52 percent of observations), the realized equity market return was 12.50 percent or greater.

Figure 8. *Realized U.S. Equity Market Returns (1926-2021)*[44]



[44] Depicts total annual returns on large company stocks, as reported in the 2022 *Kroll* SBBI Yearbook.

Q. Did you consider another form of the CAPM in your analysis?

A. Yes. We have also considered the results of an ECAPM analysis in estimating the cost of equity for Liberty.[45] The ECAPM calculates the product of the adjusted beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium without any effect from the beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \qquad [5]$$

Where:

k_e = the required market ROE
β = adjusted beta coefficient of an individual security
r_f = the risk-free rate of return
r_m = the required return on the market as a whole

In essence, the ECAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted betas in the traditional CAPM, but rather it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM underestimates the "alpha," or the constant return term.[46]

[45] *See, e.g.*, Morin, Roger A. New Regulatory Finance. Public Utilities Reports, Inc., 2006, at 189.

[46] *Id.*, at 191.

As with the CAPM, our application of the ECAPM uses the forward-looking market risk premium estimates, the three yields on 30-year Treasury securities noted earlier used as the risk-free rate, and the current Bloomberg, current *Value Line*, and long-term *Value Line* beta coefficients.

Q. What are the results of your CAPM analyses?

A. As shown in Figure 9 (*see* also Attachment AEB/CMW-7), our traditional CAPM analysis produces a range of returns from 10.41 percent to 11.43 percent, and the ECAPM analysis results range from 10.93 percent to 11.70 percent.

Figure 9. *APM and ECAPM Results*

	Current 30-Day Avg 30-Year Treasury Yield	Near-Term Projected 30-Year Treasury Yield	Longer-Term Projected 30-Year Treasury Yield
CAPM:			
Current *Value Line* Beta	11.41%	11.42%	11.43%
Current Bloomberg Beta	10.83%	10.85%	10.87%
Long-term Avg. *Value Line* Beta	10.41%	10.44%	10.46%
ECAPM:			
Current *Value Line* Beta	11.68%	11.69%	11.70%
Current Bloomberg Beta	11.25%	11.26%	11.28%
Long-term Avg. *Value Line* Beta	10.93%	10.95%	10.97%

D. Bond Yield Plus Risk Premium Analysis

Q. Please describe the Bond Yield Plus Risk Premium approach.

A. In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as bondholders. In other words, because returns

to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Thus, risk premium approaches estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In our analysis, we use actual authorized returns for electric distribution companies as the historical measure of the cost of equity to determine the risk premium.

Q. Are there other considerations that should be addressed in conducting this analysis?

A. Yes. It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach) is inversely related to the level of interest rates (*i.e.*, as interest rates increase, the equity risk premium decreases, and vice versa). Consequently, it is important to develop an analysis that: (1) reflects the inverse relationship between interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. Such an analysis can be developed based on a regression of the risk premium as a function of Treasury bond yields. When the authorized ROEs for electric utilities serve as the measure of required equity returns and the yield on the long-term Treasury bond is defined as the relevant measure of interest rates, the risk premium is the difference between those two points.[47]

[47] *See e.g.*, Berry, S. Keith. "Interest Rate Risk and Utility Risk Premia during 1982-93." Managerial and Decision Economics, Vol. 19, No. 2, March, 1998 (the author used a similar methodology, including using authorized ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates). *See also* Harris, Robert S. "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return." *Financial Management*, Spring 1986, at 66.

Q. Is the Bond Yield Plus Risk Premium analysis relevant to investors?

A. Yes. Investors are aware of authorized ROEs in other jurisdictions, and they consider those authorizations as a benchmark for a reasonable level of equity returns for utilities of comparable risk operating in other jurisdictions. Because our Bond Yield Plus Risk Premium analysis is based on authorized ROEs for utility companies relative to corresponding Treasury yields, it provides relevant information to assess the return expectations of investors in the current interest rate environment.

Q. What did your Bond Yield Plus Risk Premium analysis reveal?

A. As shown in Figure 10, from 1992 through January 2023, there was a strong negative relationship between risk premia and interest rates. To estimate that relationship, we conducted a regression analysis using the following equation:

$$RP = a + b(T) \quad [6]$$

Where:

RP = Risk Premium (difference between allowed ROEs and the yield on 30-year Treasury bonds)

a = intercept term

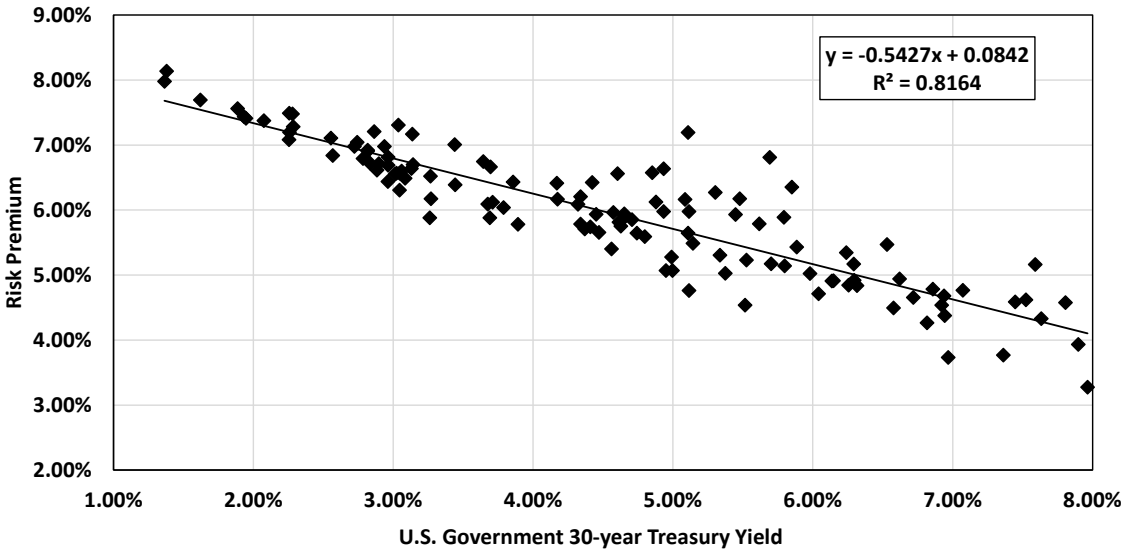
b = slope term

T = 30-year Treasury bond yield

Data regarding authorized ROEs were derived from all electric distribution rate cases from 1992 through January 2023 as reported by Regulatory Research Associates

("RRA").[48] This equation's coefficients were statistically significant at the 99.00 percent level.

Figure 10. *Risk Premium Regression Analysis*



As shown in Attachment AEB/CMW-10, based on the current 30-day average of the 30-year Treasury bond yield, the risk premium would be 6.41 percent, resulting in an estimated cost of equity of 10.12 percent. Based on the consensus estimate of the near-term (Q2/2023 – Q2/2024) projected 30-year Treasury bond yield (3.82 percent), the risk premium would be 6.35 percent, resulting in an estimated cost of equity of 10.17 percent. Based on a consensus estimate of the longer-term (2024 – 2028) projection of the 30-year Treasury bond yield (3.90 percent), the risk premium would be 6.31 percent, resulting in an estimated cost of equity of 10.21 percent.

[48] This analysis began with over 1,400 cases and was screened to eliminate limited issue rider cases, transmission-only cases, and cases that were silent with respect to the authorized ROE. After applying those screening criteria, the analysis was based on data from over 700 cases.

Q. How did the results of the Bond Yield Plus Risk Premium analysis inform your recommended ROE for Liberty?

A. We have considered the results of the Bond Yield Risk Premium analysis in setting our recommended ROE range for the Company. As noted, investors consider the authorized ROE of a company when assessing the risk of that company as compared to utilities of comparable risk operating in other jurisdictions.

VIII. REGULATORY AND BUSINESS RISKS

Q. Taken alone, do the results from the cost of equity estimation models for the proxy group provide an appropriate estimate of the cost of equity for the Company?

A. No. These results provide only a range for the appropriate estimate of the Company's cost of equity. Several additional factors must be taken into consideration when determining where the Company's cost of equity falls within the range of results. These factors, which are discussed below, should be considered with respect to their overall effect on the Company's risk profile.

A. Capital Expenditures

Q. Please summarize the Company's capital expenditure requirements.

A. As of December 31, 2022, the Company had net utility plant of approximately $242 million, and the Company currently projects capital expenditures for 2023 through 2027 of approximately $130 million.[49] Therefore, the Company's projected capital

[49] Data provided by the Company.

expenditures represent approximately 53.5 percent of its net utility plant as of December 31, 2022.

Q. How is the Company's risk profile affected by its capital expenditure requirements?

A. As with any utility faced with substantial capital expenditure requirements, the Company's risk profile may be adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q. Do credit rating agencies recognize the risks associated with elevated levels of capital expenditures?

A. Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for large capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those

jurisdictions that present an opportunity for a higher return on capital projects as an incentive to investors.[50]

While Liberty is not currently rated by the credit rating agencies, the Company's business risk is also increased as a result of elevated capital expenditures. Therefore, to the extent that the Company's rates do not permit the opportunity to recover its capital investments on a regular and timely basis, it will face increased recovery risk and thus increased pressure on its credit metrics.

Q. How do Liberty's capital expenditure requirements compare to those of the proxy group companies?

A. As shown in Attachment AEB/CMW-11, we calculated the ratio of expected capital expenditures to net utility plant for Liberty and each of the companies in the proxy group by dividing each company's projected capital expenditures for 2023–2027 by its total net utility plant as of December 31, 2022. Liberty's ratio of capital expenditures as a percentage of net utility plant is above the median.

Q. Does Liberty currently have a capital tracking mechanism to recover the costs associated with its capital expenditures plan between rate cases?

A. No. However, the Company is proposing a three-year rate plan with Rate Year 1 ending June 30, 2024, Rate Year 2 ending June 30, 2025, and Rate Year 3 ending June 30, 2026.

[50] S&P Global Ratings. "Assessing U.S. Investor-Owned Utility Regulatory Environments." August 10, 2016, at 7.

If approved the Company will be able to recover its projected capital expenditures plan through the annual rate adjustments of the multi-year rate plan.

Q. Are capital investment recovery mechanisms common among electric distribution utilities?

A. Yes. As shown in Attachment AEB/CMW-12, approximately 69 percent of the operating utility companies of the proxy group recover costs through capital investment reconciling mechanisms.

Q. What are your conclusions regarding the effect of the Company's capital spending requirements on its risk profile and cost of capital?

A. The Company's capital expenditure requirements as a percentage of net utility plant are significant and will continue to be so over the next several years. Additionally, while Liberty does not have a capital tracking mechanism to recover capital costs, the Company is able to recover a portion of its capital expenditures plan through the annual rate adjustments of the multi-year rate plan. Similarly, a majority of the operating subsidiaries of the proxy group are able to recover capital expenditures between rate cases through a capital reconciling mechanism.

B. Regulatory Risk

Q. How does the regulatory environment affect investors' risk assessments?

A. The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on,

invested capital. Regulatory authorities recognize that because utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms and doing so balances the long-term interests of investors and customers. To achieve this balance, the Company must be able to finance its operations assuming a reasonable opportunity to earn an appropriate return on invested capital to maintain an acceptable financial profile. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally-generated funds but also from efficient access to capital markets. Moreover, because fixed-income investors have many investment alternatives, even within a given market sector, the utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

In addition, equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (which is to say that

the equity return is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q. How do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A. Both Moody's and S&P consider the overall regulatory framework in establishing credit ratings. Specifically, Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity, and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating factor of 25.00 percent. Therefore, Moody's assigns regulatory risk a 50.00 percent weighting in the overall assessment of business and financial risk for regulated utilities.[51]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "One significant aspect of regulatory risk that influences credit quality is the regulatory environment in the jurisdictions in which a utility operates."[52] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability;

[51] Moody's Investors Service. Rating Methodology: Regulated Electric and Gas Utilities. June 23, 2017, at 4.

[52] Standard & Poor's Global Ratings. Ratings Direct. U.S. and Canadian Regulatory Jurisdictions Support Utilities' Credit Quality—But Some More So Than Others. June 25, 2018, at 2.

(2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[53]

Q. How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. The regulatory environment can significantly affect both access to, and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[f]or rate regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations."[54] Moody's has further highlighted the relevance of a stable and predictable regulatory environment to a utility's credit quality, noting: "[b]roadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation."[55]

Q. Have you conducted any analysis of the risk associated with the regulatory framework in New Hampshire relative to the jurisdictions in which the utility operating subsidiaries of the companies in your proxy group operate?

A. Yes. We have evaluated the regulatory framework in New Hampshire on three factors that are important in terms of providing a regulated utility a reasonable opportunity to

[53] *Id*., at 1.

[54] Moody's Investors Service. Rating Methodology: Regulated Electric and Gas Utilities. June 23, 2017, at 6.

[55] *Id*.

earn its authorized ROE: (1) test year convention (*i.e.*, forecast vs. historical); (2) use of revenue decoupling mechanisms or other clauses that provide revenue stabilization; and (3) the prevalence of capital cost recovery between rate cases. The results of this regulatory risk assessment are shown in Attachment AEB/CMW-12 and are summarized as follows:

Test Year Convention: Liberty is proposing a fully forecasted test year with Rate Year 1 being set for a 2023/2024 period. This is generally consistent with approximately 41 percent of the utility operating subsidiaries of the companies in the proxy group companies which use forecasted or partially forecasted test years.

Volumetric Risk: Liberty does have partial protection against volumetric risk in New Hampshire, through the Revenue per Customer ("RPC") revenue decoupling mechanism that was approved in the Company's last rate case. [56] In this proceeding, the Company is proposing a new electronic reconciliation adjustment mechanism ("ERAM") that would encompass the Company's existing decoupling mechanism along with the Company's other existing transmission and distribution rate adjustment mechanisms. Similarly, approximately 58 percent of the utility operating subsidiaries of the proxy group companies have some form of protection against volumetric risk.

Capital Cost Recovery: As noted above, Liberty does not have a capital tracking mechanism; however, the Company is proposing to recover a portion of its capital

[56] New Hampshire Public Utilities Commission, Order, Docket No. DE 19-064, May 26, 2020, at 11–14.

expenditures plan through the annual rate adjustments of the Company's proposed three-year multi-year rate plan. Similarly, approximately 69 percent of the utility operating subsidiaries of the proxy group companies also have some form of capital cost recovery mechanism in place.

Q. Do analysts rank the various regulatory jurisdictions in terms of their relative credit supportiveness?

A. Yes. RRA and others provide a ranking of regulatory jurisdictions. RRA assigns a ranking for each regulatory jurisdiction as "Above Average", "Average", or "Below Average", and then within each of those categories a numeric ranking from 1 to 3. Thus, the RRA rankings for each jurisdiction range from "Above Average/1," which is considered the most supportive, to "Below Average/3," which is the least supportive.

Q. How does the supportiveness of New Hampshire regulation compare with the jurisdictions where the proxy group companies operate?

A. RRA ranks New Hampshire as an Average/2, which is the middle score of the nine tiers. As shown in Attachment AEB/CMW-13, the average ranking of the proxy group is also Average/2, meaning that New Hampshire is ranked consistent with the average of the proxy group.

Q. Has RRA provided recent commentary regarding its regulatory ranking for New Hampshire?

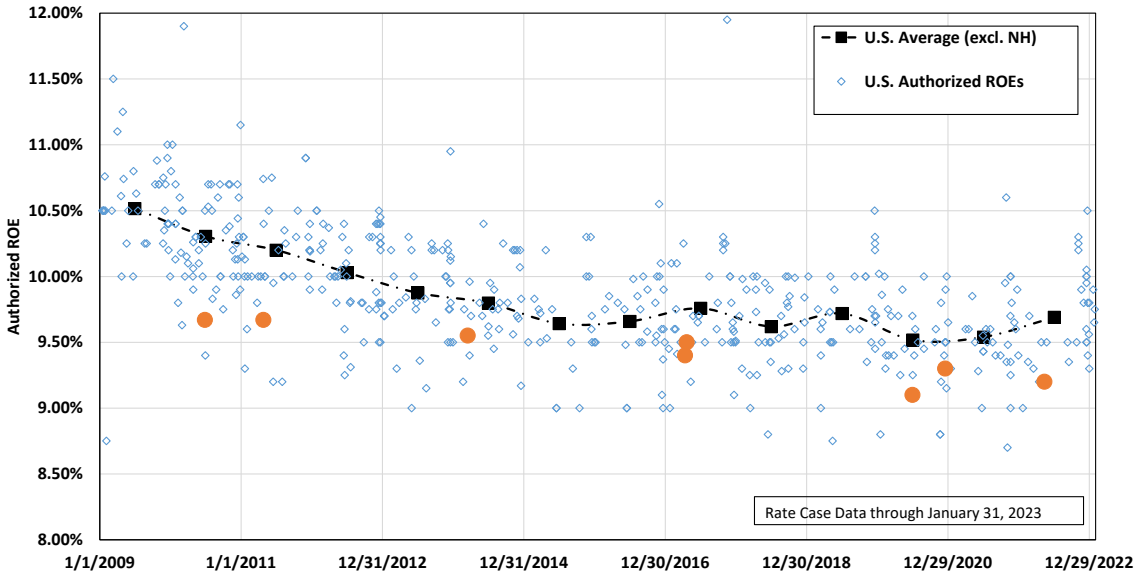
A. Yes. In December 2022, RRA updated its evaluation of the regulatory environment in New Hampshire to an Average/2 rating and noted the following:

> The New Hampshire Public Utilities Commission has opened several investigations in recent months regarding utility rate adjustments, energy procurement and net metering that warrant ongoing scrutiny. The PUC commenced an investigation into the accounting and calculation methodologies for step adjustments utilized by the state's electric and gas utilities to reflect certain changes outside of a base rate case. The proceeding could lead to substantial changes to the regulatory framework. In opening the investigation, the PUC cited the volume of step adjustment petitions submitted to the PUC and the varying methodologies used to calculate the adjustments. The investigation will review: the necessity for ongoing step adjustments for utilities; the ratemaking and calculation methodologies used; the number of step adjustments, if any, between rate cases and the resulting procedural schedules; and the processes the PUC, petitioners and participating parties use for developing data and recommendations. In response to rising energy costs for residential customers, regulators have opened a proceeding to examine the state's renewable portfolio standard and default service electric power procurement processes and methodologies, and cost-of-gas procurements utilized by New Hampshire's energy utilities. In addition, the PUC has opened an investigation into changes to the current net metering tariff structure, including how customer-generators are compensated.

Q. How do the returns that have been authorized in New Hampshire compare with the authorized returns in other jurisdictions?

A. While nearly all the approved rates of return are the result of settlement agreements approved by the Commission, as shown in Figure 11, the authorized ROEs for electric utilities in New Hampshire have been below the average authorized ROEs for electric utilities across the United States. This can pose a problem because, as noted previously, New Hampshire utility subsidiaries must compete for discretionary capital within their own corporate structures, which must, in turn, compete for capital with other utilities and businesses. Placing Liberty at the low end of authorized ROEs outside New Hampshire over the longer term could negatively affect the Company's access to discretionary capital.

Figure 11. *Comparison of New Hampshire and U.S. Authorized Returns for Electric Utilities*[57]



Q. How are credit rating agencies currently viewing the utility sector?

A. Credit rating agencies have indicated that the industry overall has increased risk, has responded with close scrutiny of the financial coverage ratios of the sector, and has a negative outlook on the industry overall for 2023. Therefore, it is critically important to consider these factors and to recognize that the investor-required ROE would be higher today than at the time of Commission decisions in the recent past. As discussed in more detail in Section V, current market conditions demonstrate greater risk than at the time the Commission authorized returns in the recent past.

[57] S&P Capital IQ Pro.

Q. Are you aware of any utilities that have been affected by negative rate case developments?

A. Yes. As discussed previously, the most recent example is the Arizona Corporation Commission's adverse decision in APS's most recent rate proceeding that resulted in negative effects, including negative ratings actions by credit ratings agencies, significant reductions in projected EPS growth rates for APS, and a sharp decline in PNW's stock price.

Q. What are your conclusions regarding the risks related to the New Hampshire regulatory environment?

A. Both Moody's and S&P have identified the supportiveness of the regulatory environment as an important consideration in developing their overall credit ratings for regulated utilities. Many of the companies in the proxy group have timely cost recovery through forecasted test years, capital cost recovery trackers, and non-volumetric rate designs/revenue stabilization mechanisms. Liberty's proposal to use a forecasted test year, and recover a portion of the Company's capital costs over the duration of the multi-year rate plan as well as the utilization of revenue stabilization that provides for protection against volumetric risk are consistent with the majority of the utility operating subsidiaries of the proxy group indicates that the Company's regulatory risk is generally consistent with the proxy group.

C. Small Size Risk

Q. Is there a risk to a firm associated with a small size?

A. Yes. Both the financial and academic communities have long accepted the proposition that the cost of equity for small firms is subject to a "size effect." While empirical evidence of the size effect often is based on studies of industries other than regulated utilities, utility analysts also have noted the risk associated with small market capitalizations. Specifically, an analyst for Ibbotson Associates noted:

> For small utilities, investors face additional obstacles, such as a smaller customer base, limited financial resources, and a lack of diversification across customers, energy sources, and geography. These obstacles imply a higher investor return.[58]

Q. How does the smaller size of a utility affect its business risk?

A. In general, smaller companies are less able to withstand adverse events that affect their revenues and expenses. The impact of weather variability, the loss of large customers to bypass opportunities, or the destruction of demand as a result of general macroeconomic conditions or fuel price volatility will have a proportionately greater impact on the earnings and cash flow volatility of smaller utilities. Similarly, capital expenditures for non-revenue producing investments, such as system maintenance and replacements, will put proportionately greater pressure on customer costs, potentially leading to customer attrition or demand reduction. Taken together, these risks affect the return required by investors for smaller companies**.**

[58] Annin, Michael. "Equity and the Small-Stock Effect." Public Utilities Fortnightly, October 15, 1995.

Q. How do Liberty's electric operations compare in size to the utility operating subsidiaries of the proxy group companies?

A. The Company's electric distribution operations are substantially smaller than the median for the proxy group companies in terms of market capitalization. While Liberty is not publicly traded on a stand-alone basis, as shown in Attachment AEB/CMW-14, we have estimated the implied market capitalization for the Company (*i.e.*, the market capitalization if the Company were a stand-alone publicly-traded entity) relative to the actual market capitalization for the proxy group companies.

Specifically, to estimate the size of the Company's implied market capitalization relative to the proxy group, we first calculated the implied equity balance of Liberty's capital structure by multiplying the Company's rate base in Rate Year 1 (2023/2024) by the Company's proposed common equity ratio of 55.00 percent in Rate Year 1. We then applied the median market-to-book ratio for the proxy group of 1.89 to the Company's implied common equity balance to estimate an implied market capitalization, which is approximately $203.54 million, or approximately 1.42 percent of the median market capitalization for the proxy group.

Q. How did you estimate the small size risk premium for the Company?

A. Given this relative size information, it is possible to estimate the impact of size on the cost of equity for the Company using *Kroll* Cost of Capital Navigator data that estimates the stock risk premia based on the size of a company's market capitalization.[59] As shown

[59] *Kroll* Cost of Capital Navigator – Size Premium; annual data as of December 31, 2022.

in Attachment AEB/CMW-14, the median market capitalization of the proxy group is approximately $14.35 billion, which corresponds to the second decile of *Kroll's* market capitalization data.[60] Based on *Kroll's* analysis, that decile corresponds to a size premium of 0.45 percent (*i.e.*, 45 basis points). In comparison, Liberty's implied market capitalization of approximately $203.54 million falls within the tenth decile, which corresponds to a size premium of 4.83 percent (*i.e.*, 483 basis points). The difference between the size premium for the Company and the size premium for the proxy group is 438 basis points (*i.e.*, 4.83 percent minus 0.45 percent).

Q. Were utility companies included in the small size risk premium study conducted by Kroll?

A. Yes. As shown in Exhibit 7.2 of the *Kroll* (formerly *Duff & Phelps*) 2019 Valuation Handbook, OGE Energy Corp. had the largest market capitalization of the companies contained in the fourth decile, which indicates that *Kroll* has included utility companies in its size risk premium study.[61]

Q. Is the size premium applicable to companies in regulated industries such as electric utilities?

A. Yes. For example, Zepp (2003) provided the results of two studies that showed evidence of the required risk premium for small water utilities. The first study, which was conducted by the Staff of the California Public Utilities Commission, computed proxies

[60] *Id*.

[61] *Kroll*. Valuation Handbook: Guide to Cost of Capital. 2019, Exhibit 7.2.

for beta risk using accounting data from 1981 through 1991 for 58 water utilities and concluded that smaller water utilities had greater risk and required higher returns on equity than larger water utilities.[62] The second study examined the differences in required returns over the period of 1987 through 1997 for two large and two small water utilities in California. As Zepp (2003) showed, the required return for the two small water utilities calculated using the DCF model was on average 99 basis points higher than the two larger water utilities.[63]

Additionally, Chrétien and Coggins (2011) studied the CAPM and its ability to estimate the risk premium for the utility industry, and in particular subgroups of utilities.[64] The article considered the CAPM, the Fama-French three-factor model, and a model similar to the ECAPM, which as previously discussed, we have also considered in estimating the cost of equity for the Company. In the study, the Fama-French three-factor model explicitly included an adjustment to the CAPM for risk associated with size. As Chrétien and Coggins (2011) show, the beta coefficient on the size variable for the U.S. utility group was positive and statistically significant indicating that small size risk was relevant for regulated utilities.[65]

[62] Zepp, Thomas M. "Utility Stocks and the Size Effect—Revisited." The Quarterly Review of Economics and Finance, Vol. 43, No. 3, 2003, at 578–582.

[63] *Id*.

[64] Chrétien, Stéphane, and Frank Coggins. "Cost Of Equity For Energy Utilities: Beyond The CAPM." Energy Studies Review, Vol. 18, No. 2, 2011.

[65] *Id.*

Q. Have regulators in other jurisdictions made a specific risk adjustment to the cost of equity results based on a company's small size?

A. Yes. In Order No. 15, the Regulatory Commission of Alaska ("RCA") concluded that Alaska Electric Light and Power Company ("AEL&P") was riskier than the proxy group companies due to small size as well as other business risks. The RCA did "not believe that adopting the upper end of the range of ROE analyses in this case, without an explicit adjustment, would adequately compensate AEL&P for its greater risk." [66] Thus, the RCA awarded AEL&P an ROE of 12.875 percent, which was 108 basis points above the highest cost of equity estimate from any model presented in the case.[67] Similarly, the RCA has also noted that small size, as well as other business risks such as structural regulatory lag, weather risk, alternative rate mechanisms, gas supply risk, geographic isolation and economic conditions, increased the risk of ENSTAR Natural Gas Company.[68] Ultimately, the RCA concluded that:

> Although we agree that the risk factors identified by ENSTAR increase its risk, we do not attempt to quantify the amount of that increase. Rather, we take the factors into consideration when evaluating the remainder of the record and the recommendations presented by the parties. After applying our reasoned judgment to the record, we find that 11.875% represents a fair ROE for ENSTAR.[69]

[66] Regulatory Commission of Alaska, Docket No. U-10-29, Order No. 15, September 2, 2011, at 37.

[67] *Id.*, at 32 and 37.

[68] Regulatory Commission of Alaska, Docket No. U-16-066, Order No. 19, September 22, 2017, at 50–52.

[69] *Id*.

Additionally, the Minnesota Public Utilities Commission ("Minnesota PUC") authorized an ROE for Otter Tail Power Company ("Otter Tail") above the mean DCF results as a result of multiple factors, including Otter Tail's small size. The Minnesota PUC stated:

> The record in this case establishes a compelling basis for selecting an ROE above the mean average within the DCF range, given Otter Tail's unique characteristics and circumstances relative to other utilities in the proxy group. These factors include the company's relatively smaller size, geographically diffuse customer base, and the scope of the Company's planned infrastructure investments.[70]

Finally, in Opinion Nos. 569 and 569-A, the Federal Energy Regulatory Commission ("FERC") adopted a size premium adjustment in its CAPM estimates for electric utilities. In those decisions, the FERC noted that "the size adjustment was necessary to correct for the CAPM's inability to fully account for the impact of firm size when determining the cost of equity."[71]

Q. How have you considered the smaller size of Liberty in your recommendation of the Company's ROE in this proceeding?

A. While we have estimated the effect of the Company's small size on the cost of equity, we are not proposing a specific adjustment for this risk factor. Rather, we believe it is important to consider the small size of the Company's electric distribution operations in the determination of where, within the range of analytical results, the Company's

[70] Minnesota Public Utilities Commission, Docket No. E017/GR-15-1033, Order, August 16, 2016, at 55.

[71] *Ass'n. of Businesses Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 171 FERC ¶ 61,154 (2020), at ¶ 75. The U.S. Court of Appeals recently vacated FERC Order No. 569 decisions that related to its risk premium model and remanded the case to FERC to reopen the proceedings. However, in its decision, the Court did not reject FERC's inclusion of the size premium to estimate the CAPM. (*See*, United States Court of Appeals Case No. 16-1325, Decision No. 16-1325, August 9, 2022, at 20).

required cost of equity falls. All else equal, the additional risk associated with the Company's small size supports an ROE toward the upper end of the range of results from the cost of equity estimation models.

D. Flotation Cost

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs.

Q. Why is it important to consider flotation costs in the allowed ROE?

A. A regulated utility must have the opportunity to earn an ROE that is both competitive and compensatory to attract and retain new investors. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diluting equity share value.

Q. Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. Flotation costs are part of the invested costs of the utility, which are properly reflected on the balance sheet under "paid in capital." They are not current expenses, and, therefore, are not reflected on the income statement. Rather, like investments in rate base or the issuance costs of long-term debt, flotation costs are incurred over time. As a result, the great majority of a utility's flotation costs are incurred prior to the test year but remain part of the cost structure that exists during the test year and beyond, and as such, should

be recognized for ratemaking purposes. Therefore, it is irrelevant whether an issuance occurs during the test year or is planned for the test year because failure to allow recovery of past flotation costs may deny the Company the opportunity to earn its required rate of return in the future.

Q. Please provide an example of why a flotation cost adjustment is necessary to compensate investors for the capital they have invested.

A. Suppose APUC issues stock with a value of $100, and an equity investor invests $100 in APUC in exchange for that stock. Further, suppose that after paying flotation costs associated with the equity issuance, which include fees paid to underwriters and attorneys, among others, APUC ends up with only $97 of net issuance proceeds rather than the $100 the investor contributed. Algonquin invests that $97 in plant used to serve its customers, which becomes part of rate base. Absent a flotation cost adjustment, the investor will thereafter earn a return on only the $97 invested in rate base, even though she contributed $100. Making a small flotation cost adjustment gives the investor a reasonable opportunity to earn the authorized return, rather than the lower return that results when the authorized return is applied to an amount less than what the investor contributed.

Q. Is the date of APUC's last issuance of common equity important in the determination of flotation costs?

A. No, the vintage of the issuance is not particularly important because an investor should have a reasonable opportunity to earn a return on the full amount of capital that she has

contributed, but without the recognition of flotation costs, the investor suffers a shortfall in every year after which the capital has been invested. For example, the last two equity issuances for APUC are shown in Attachment AEB/CMW-15. APUC closed equity issuances of approximately $800 million and $310.5 million (for a total of 67 million shares of common stock) in June 2021 and October 2019, respectively. Returning to our earlier example, the investor who contributed $100 is entitled to a reasonable opportunity to earn a return on $100 not only in the first year after the investment but in every subsequent year in which she has the $100 invested. Leaving aside depreciation, which is dealt with separately, there is no basis to conclude that the investor is entitled to earn a return on $100 in the first year after issuance, but thereafter is only entitled to earn a return on only $97. For as long as the $100 is invested, the investor should have a reasonable opportunity to earn a return on the entire amount.

Q. Is the need to consider flotation costs eliminated because Liberty is a wholly-owned subsidiary of APUC?

A. No, it is not. Although Liberty is a wholly-owned subsidiary of APUC, it is appropriate to consider flotation costs. Wholly-owned subsidiaries receive equity capital from their parent and provide returns on the capital that roll up to the parent, which is designated to attract and raise capital based upon the returns of those subsidiaries. To deny recovery of issuance costs associated with the capital that is invested in the subsidiaries ultimately penalizes the investors that fund utility operations and inhibits the utility's ability to obtain new equity capital at a reasonable cost. This is particularly important for Liberty

because, as we discussed previously, it is planning significant capital expenditures over the next five years.

Q. Is the need to consider flotation costs recognized by the academic and financial communities?

A. Yes, it is. The need to reimburse shareholders for the lost returns associated with equity issuance costs is recognized by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. This treatment is consistent with the philosophy of a fair rate of return. According to Dr. Shannon Pratt:

> Flotation costs occur when new issues of stock or debt are sold to the public. The firm usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the firm. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the firm's required returns on these proceeds equate to a higher return to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the cash flow to discount, or by incorporating the cost into the cost of capital. Because flotation costs are not typically applied to operating cash flow, one must incorporate them into the cost of capital.[72]

Q. What is the effect of flotation costs on Liberty's cost of equity?

A. Our flotation cost is estimated on the costs of issuing equity that were incurred by APUC in its two most recent common equity issuances. As shown in Attachment AEB/CMW-15, based on the flotation costs of those two issuances, the impact on the proxy group's

[72] Pratt, Shannon P. Cost of Capital Estimation and Applications. Second Edition, at 220–21.

cost of equity amounts to 12 basis points (or 0.12 percent) based on the median and 16 basis points (or 0.16 percent) based on the mean.

Q. Do your final cost of equity model results include an adjustment for flotation cost recovery?

A. No, we did not make an explicit adjustment for flotation costs to any of the quantitative results of our cost of equity models. Rather, we discuss flotation costs and provide the estimate as additional context and support for the range of results produced by our cost of equity estimation models and our ROE recommendation of 10.35 percent.

IX. CAPITAL STRUCTURE

Q. Is the Company's capital structure an important consideration in the determination of the appropriate ROE?

A. Yes. The equity ratio is the primary indicator of financial risk for a regulated utility such as Liberty. All else equal, a higher debt ratio increases the risk to equity investors. For debt holders, higher debt ratios result in a greater portion of the available cash flow being required to meet debt service, thereby increasing the risk associated with the payments on debt. The result of increased risk is a higher interest rate. The incremental risk of a higher debt ratio is more significant for common equity shareholders, whose claim on the cash flow of the Company is secondary to the claim of debt holders. Therefore, the greater the debt service requirement, the less cash flow available for common equity holders. To the extent the equity ratio is reduced, it is necessary to increase the

authorized ROE to compensate investors for the greater financial risk associated with a lower equity ratio.

Q. What is Liberty's proposed capital structure?

A. The Company is proposing a rate-making capital structure composed of 55.00 percent common equity and 45.00 percent long-term debt.

Q. Did you conduct an analysis to assess the reasonableness of the requested equity ratio?

A. Yes. We compared the Company's proposed capital structure relative to the actual capital structures of the utility operating subsidiaries of the companies in the proxy group. Since the ROE is set based on the return that is derived from the risk-comparable proxy group, it is reasonable to look to the average capital structure for the proxy group to benchmark the equity ratios for the Company.

Q. Please discuss your analysis of the capital structures of the proxy group companies.

A. We calculated the average proportion of common equity, long-term debt, short-term debt, and preferred equity for the most recent two years for each of the companies in the proxy group at the operating subsidiary level.[73] As shown in Attachment AEB/CMW-16, the average common equity ratio for the operating subsidiaries of the proxy group companies was 51.43 percent (representing a range from 41.38 percent to 60.17 percent). Given that Liberty's proposed equity ratio of 55.00 percent is within the range of equity ratios for

[73] Long-term debt includes the current portion of long-term debt, assuming that the current portion would be refinanced with debt at maturity.

the utility operating subsidiaries of the proxy group companies, we consider it to be reasonable.

Q. Are there other factors to be considered in setting the Company's capital structure?

A. Yes, other factors should be considered in setting the Company's capital structure, namely the challenges that the credit rating agencies have highlighted as placing pressure on the outlook for utilities in 2023.

For example, Moody's recently revised its 2023 outlook for the regulated gas and electric utilities sector to "negative" based on ongoing challenges of inflation, increasing interest rates, and higher natural gas prices. Moody's noted that these challenges increase the pressure on customer affordability, and thus face heightened public scrutiny and the ability of utilities to promptly recover their costs. Moody's concluded that regulated utilities' financial metrics are already under pressure with little cushion, and that sustained capital spending is likely as utilities continue to progress towards emissions reductions and net-zero goals. Moody's noted that the outlook could return to stable if regulatory support remains intact, natural gas prices are at a level where utilities can recover their fuel and purchased power costs without delay beyond 12 months, overall inflation moderates, interest rates stabilize, and/or utilities' aggregate funds from operations-to-debt ratio remains between 14% and 15%.[74]

[74] Moody's Investors Service, Outlook. "2023 outlook negative due to higher natural gas prices, inflation and rising interest rates." November 10, 2022; Moody's Investors Service. Outlook, Sector In-Depth. "Inflation, high natural gas prices complicate prospects for supportive rate increases." November 11, 2022.

Fitch Ratings ("Fitch") also highlights similar factors identified by Moody's as challenging utilities' outlook for 2023, stating that the sector faces mounting cost pressures due to "elevated commodity prices, inflationary headwinds and rising interest costs," and that some offset in managing these headwinds include "higher authorized ROEs and the use of tools such as securitization of under-recovered fuel balances."[75]

Likewise, S&P also continues to maintain a negative outlook for the utility industry, noting that downgrades have outpaced upgrades for the third consecutive year in 2022 with a median investor-owned utility credit rating of "BBB+".[76] Further, S&P expects the industry to have negative discretionary cash flow as a result of significant capital spending and consistent dividends.[77] Therefore, the utility industry will need ongoing access to capital markets to fund capital expenditures. However, S&P notes that inflation, rising interest rates and decreasing equity prices may "hamper" consistent access to capital markets and result in additional pressure on cash flows.[78] Moreover, S&P indicates that if inflation risks persist over the near-term and customer bills increase, regulatory credit support could decrease resulting in weaker financial metrics for the industry:

> Over the past decade the industry's financial measures have weakened from a combination of rising capital spending, regulatory lag, and lower authorized return on equity (ROE). The industry's return on capital was about 6% a decade ago and today is closer to 4%. More recently, we have

[75] Fitch Ratings. "North American Utilities, Power & Gas Outlook 2023." December 7, 2022, at 1–2.

[76] S&P Global Ratings. Industry Top Trends, "North American Regulated Utilities: The industries outlook remains negative." January 23, 2023.

[77] *Id*.

[78] *Id*.

> seen instances where not only is the authorized ROE lowered but also the equity ratio is lowered. These results have weakened the industry's financial measures, pressuring credit quality. Under our base case of moderating inflationary risks during 2023, we expect the industry's credit measures to generally remain flat. However, if inflationary risks persist, it may further pressure the customer bill, potentially decreasing the level of regulatory credit support, weakening the industry's financial performance.[79]

The credit ratings agencies' continued concerns over the negative effects of inflation and increased capital expenditures underscore the importance of maintaining adequate cash flow metrics for the industry as a whole, and Liberty in particular in the context of this proceeding.

X. CONCLUSIONS AND RECOMMENDATIONS

Q. What is your conclusion regarding a fair ROE for Liberty?

A. Figure 12 summarizes the results of our cost of equity analyses. Based on the quantitative and qualitative analyses presented in our direct testimony, and the business and financial risks of the Company as compared to the proxy group, our recommended ROE of 10.35 percent is reasonable.

[79] *Id*.

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Figure 12. *Summary of Analytical Results*

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Constant Growth DCF - Earnings Growth			
30-Day Avg. Stock Price	8.09%	9.32%	10.33%
90-Day Avg. Stock Price	8.23%	9.46%	10.48%
180-Day Avg. Stock Price	8.14%	9.37%	10.38%
Average	8.15%	9.38%	10.40%
Constant Growth DCF - Earnings & Retention Growth			
30-Day Avg. Stock Price	7.39%	9.09%	10.33%
90-Day Avg. Stock Price	7.53%	9.23%	10.48%
180-Day Avg. Stock Price	7.44%	9.13%	10.38%
Average	7.45%	9.15%	10.40%

	Current 30-Day Avg 30-Year Treasury Yield	Near-Term Projected 30-Year Treasury Yield	Longer-Term Projected 30-Year Treasury Yield
CAPM, ECAPM, and Bond Yield Risk Premium			
CAPM:			
Current *Value Line* Beta	11.41%	11.42%	11.43%
Current Bloomberg Beta	10.83%	10.85%	10.87%
Long-term Avg. *Value Line* Beta	10.41%	10.44%	10.46%
ECAPM:			
Current *Value Line* Beta	11.68%	11.69%	11.70%
Current Bloomberg Beta	11.25%	11.26%	11.28%
Long-term Avg. *Value Line* Beta	10.93%	10.95%	10.97%
Bond Yield Risk Premium:	10.12%	10.17%	10.21%

Q. What is your conclusion with respect to the Company's proposed capital structure?

A. Liberty's proposal to establish a capital structure consisting of 55.00 percent common equity and 45.00 percent long-term debt is within the range of actual capital structures of the proxy group companies. Taking into consideration the impact of current and projected market conditions on the cash flows of utilities as raised by the credit rating agencies, we conclude that the Company's proposal is reasonable and should be adopted for ratemaking purposes.

Q. Does this conclude your direct testimony?

A. Yes, it does.