CONFIDENTIAL DESIGNATIONS

The Empire District Electric Company d/b/a Liberty

Case No. ER-2024-0261

RE: Surrebuttal and True-Up Direct Testimony of Daniel S. Dane, portions of pages 21

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Exhibit No.: _____
Issue: Return on Equity, Capital Structure, and Cost of Debt
Witness: Daniel S. Dane
Type of Exhibit: Surrebuttal and True-Up Direct Testimony
Sponsoring Party: The Empire District Electric Company d/b/a Liberty
Case No.: ER-2024-0261
Date Testimony Prepared: September 2025

Before the Public Service Commission
of the State of Missouri

Surrebuttal and True-Up Direct Testimony

of

Daniel S. Dane

on behalf of

The Empire District Electric Company d/b/a Liberty

September 17, 2025

Liberty™

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20 CSR 4240-2.135(2)(A)5, 8

PUBLIC VERSION

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THE EMPIRE DISTRICT ELECTRIC COMPANY D/B/A LIBERTY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2024-0261

SUBJECT **PAGE**

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I. INTRODUCTION AND PURPOSE

Q. Please state your name and business address.

A. My name is Daniel S. Dane. I am President of Concentric Energy Advisors, Inc. ("Concentric"). My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q. Did you also provide direct and rebuttal testimony in this matter on behalf of The Empire District Electric Company d/b/a Liberty ("Liberty" or the "Company")?

A. Yes.

Q. What is the purpose of your surrebuttal and true-up direct testimony in this proceeding before the Missouri Public Service Commission (the "Commission")?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of Mr. Christopher Walters on behalf of the Missouri Public Service Commission Staff ("Staff") and to the rebuttal testimony of Mr. David Murray on behalf of the Missouri Office of Public Counsel ("OPC") as it relates to the appropriate ROE, cost of debt, and capital structure for Liberty. I also discuss the Company's true-up direct proposal for capital structure and cost of debt.

Q. How is your surrebuttal testimony organized?

A. My surrebuttal testimony is organized by issue rather than by witness. For example, both Mr. Walters and Mr. Murray questioned the growth rate used in my Constant Growth DCF model, the forward-looking market risk premium ("MRP") in my capital asset pricing model ("CAPM") analysis, and my assessment of Liberty's business risk

relative to the proxy group companies. I respond to the points made by those witnesses and explain why my methodologies produce reasonable results that can be relied on by the Commission in establishing the cost of capital for Liberty in this proceeding.

II. EXECUTIVE SUMMARY

Q. Please summarize your primary conclusions and recommendations.

A. My primary conclusions and recommendations are as follows:

- Nothing in the rebuttal testimony of Messrs. Walters or Murray changes my recommendations or conclusions in this proceeding.
- Liberty's proposed capital structure in this proceeding (i.e., 53.0 percent) is calculated consistently with Commission precedent and merger conditions and is aligned with authorized capital structures for similar risk utilities.
- Mr. Walters adopted the Company's proposed capital structure. Mr. Murray recommends a hypothetical, or imputed, capital structure. Such capital structures are typically used when regulators have concerns that a utility's actual capital structure is inconsistent with industry peers. I recommend that the Commission consider objective benchmarks of what an appropriate regulated capital structure for a utility operating company such as Liberty should be and not follow Mr. Murray's recommendations to rely on an outdated investor presentation from Liberty's parent company.
- In addition, as I demonstrated in my rebuttal testimony, Liberty's equity ratio is lower than LUCo's and APUC's equity ratios, which is why I recommend Liberty's capital structure as the "most economical," consistent with merger commitments made in EM-2016-0213.

- Mr. Murray states that "[Algonquin Power & Utilities Corp.'s ("APUC's")] market-based capital structure provides an objective measure of the amount of financial risk (*i.e.* debt in the capital structure) APUC believes its regulated utilities can support and still maintain a 'BBB' credit rating."[1] Mr. Murray, however, ignores the fact that credit ratings agencies make significant adjustments to APUC's capital structure in assigning it a BBB rating. When adjusted consistently with ratings agency analyses of APUC's capital structure, APUC's equity ratio is higher than that proposed by Liberty in this case.
- Rather than relying on the holding company two levels above Liberty, as Mr. Murray has done, data from the proxy group indicates that a capital structure "consistent with the low business risks of their regulated assets"[2] is provided by that group, which shows average equity ratios of approximately 52 percent (i.e., reasonably in line with Liberty's proposed capital structure of 53 percent).
- The cost of debt is an observable and quantifiable rate that represents the return required by investors based on the prevailing market interest rates, credit spreads, and the borrower's risk profile. Further, while the majority (but not all) of Liberty's long-term debt is provided through intercompany promissory notes with LUCo, the cost of debt for those notes is set with direct market inputs, and approval of Liberty's debt issuances is subject to regulatory approval. As such, there is no need to (a) rely on LUCo's cost of debt rather

[1] Rebuttal testimony of David Murray, at p. 47.
[2] *Id.*, at p. 5.

than Liberty's; or (b) make subjective or illusory adjustments to the cost of debt, as Mr. Murray proposes.

- My ROE analyses are based on objective, market-based analyses, such as actual market returns and analyst earnings per share ("EPS") growth rates, which are widely available to the investment community. In developing his cost of capital proposals, Mr. Murray relies not on market evidence but rather focuses on anecdotal and/or outdated inputs and ultimately abandons his own results. Further, for Mr. Murray to be correct that the cost of equity is significantly lower than authorized ROEs for regulated utilities in the U.S. requires the incorrect conclusion that essentially every regulatory decision over the last 30 years by commissions relying on the fair return standard and the principles of *Hope* and *Bluefield* was simply wrong.
- Mr. Walters and Mr. Murray criticize certain of my inputs to the ROE models and specifications of those models, and purport to demonstrate that more reasonable results can be achieved when those inputs and specifications are adjusted. However, the adjusted ROEs that they calculate using their allegedly more "reasonable" assumptions are well below the ROE recommendations for Messrs. Walters and Murray, demonstrating their unreasonableness for the purposes of establishing an authorized ROE for Liberty in this proceeding.
- I continue to disagree with many of the assumptions and model specifications used by Messrs. Walters and Murray. The majority of those areas of disagreements were discussed in my August 18, 2025 rebuttal testimony. My surrebuttal, therefore, is limited to certain of Messrs. Walters' and Murray's

statements in their rebuttal testimonies. My silence on any issue does not indicate my agreement thereon.

- Mr. Murray asserts that it is reasonable for the Commission to authorize an ROE below any of the recommendations proposed by the experts in this proceeding, citing one example of a small water company in South Carolina as support for that proposal.[3] I disagree for two primary reasons. First, such an approach would be inconsistent with the *Hope* and *Bluefield* decisions and unsound from a regulatory policy perspective, providing incentives for skewed results to be put forward in the hopes of expanding the range of evidence upon which a Commission makes its decisions. Second, the cost of capital recommendations of Messrs. Walters and Murray (i.e., 9.50 percent and 9.25 percent, respectively) are already unreasonably low and are 31 and 56 basis points, respectively, below the prevailing average ROE in the U.S. for vertically integrated utilities of 9.81 percent. As such, there is no rational justification to set Liberty's ROE even lower than those already unreasonably low recommendations.

III. CAPITAL STRUCTURE

Q. Please summarize your surrebuttal position with regard to the Company's capital structure.

A. Liberty's proposed capital structure is the "most economical" among Liberty, LUCo, and APUC, as demonstrated in my direct and rebuttal testimonies, satisfying the merger

[3] *Id*., at pp. 43-46.

commitments from EM-2016-0213. Further, the Company's proposed equity ratio of 53.0 percent is highly consistent with the average equity ratio of peer utilities. For those reasons, Mr. Murray's proposal to use a hypothetical capital structure that reflects much greater financial risk should be rejected.

Q. Mr. Murray asserts that APUC's and LUCo's capital structures as of September 30, 2023, are no longer relevant for the purposes of establishing the "most economical" capital structure in this case because they are almost two years old.[4] What is your response?

A. In rebuttal, I updated my capital structure recommendation to match Liberty's proposed capital structure as of the end of the True-Up Period, March 31, 2025. See Rebuttal Schedule DSD-8, as well as my rebuttal testimony, for the updated capital structure. By comparison, Mr. Murray's capital structure recommendation continues to rely on an investor presentation made by APUC to debt investors in September 2017 – eight years ago. As discussed in my rebuttal testimony, the information in that investor presentation is outdated and not relevant to setting the capital structure for Liberty in this proceeding.[5]

Q. Mr. Murray contends that your capital structure recommendation for Liberty "failed to specifically address Financing Condition 4 [of the Stipulation and Agreement in Case No. EM-2016-0023] as it relates to APUC's request for Empire

[4] *Id*. at p. 3.
[5] *Id*. at p. 18.

to be authorized a higher equity ratio than that which Empire requested (~49%) before it was acquired by APUC."[6] Do you agree with this concern?

A. No, I do not agree. First of all, Mr. Murray's interpretation of Financing Condition 4 adds language, concepts, and conditions that don't appear in the Stipulation and Agreement. Financing Condition 4 relates to the "cost of capital," not just the equity ratio. Further, nowhere in Financing Condition 4 does it say Liberty's authorized capital structure is capped at 49.0 percent, as Mr. Murray suggests. Financing Condition 4 provides protections to Missouri ratepayers from having to pay higher utility rates *due to the* merger with APUC, which occurred nearly ten years ago. In this proceeding, Liberty is proposing cost of capital parameters based on the stand-alone principle that align with independent benchmarks regarding the ROE, cost of debt, and capital structure and reflect current market data and Liberty-specific risk factors. As such, Liberty is not seeking a higher cost of capital due to the acquisition by APUC in 2016. In addition, for practical purposes, Regulatory Research Associates reports that Liberty's last Commission-authorized equity ratio and ROE as of the time of the 2016 merger were 50.78 percent and 10.80 percent,[7] for a weighted cost of equity of 5.48 percent. Liberty's proposed weighted cost of equity in this proceeding is lower than that, at 5.30 percent.[8] While I disagree that the Stipulation and Agreement in EM-2016-0213 created a cap on the cost of capital for Liberty, in this case it is a moot point.

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[6] *Id*. at p. 3.
[7] Source: Regulatory Research Associates, summarizing ER-2008-0093.
[8] Rebuttal testimony of Daniel S. Dane, at p. 3.

Q. Mr. Murray argues that "the primary focus should be whether APUC's and/or LUCo's capital structures and costs of debt are consistent with the low business risks of their regulated utility assets, including Empire."[9] What is your response?

A. The primary focus should rather be whether *Liberty's* cost of capital (inclusive of the ROE, cost of debt, and capital structure) is consistent with the business risks of a regulated utility operating company, particularly when the capital structure has been demonstrated to be "more economical" than those of LUCo or APUC. I demonstrated the consistency of Liberty's cost of capital parameters with those of other regulated utilities in my direct and rebuttal testimonies, providing evidence regarding prevailing authorized ROEs for vertically-integrated utilities, authorized capital structures for the proxy group, and multiple indicators of the cost of debt, all of which demonstrated the reasonableness of Liberty's proposals and their consistency with the business risks of regulated operations. Mr. Murray, on the other hand, recommends a hypothetical, or imputed capital structure. Such capital structures are typically used when regulators have concerns that a utility's actual capital structure is not consistent with industry peers. Liberty's proposed capital structure, however, is consistent with the mean and median equity ratios established for the operating companies held by the proxy group, and is thus aligned with the capital structure and financial risk of peers. This objective benchmark, rather than the outdated investor presentation prepared by the parent company relied on by Mr. Murray, or the analyses of the capital structures of a parent

[9] Rebuttal testimony of David Murray, at pp. 4-5.

company two corporate levels above the subject utility, provides a reliable benchmark for assessing the reasonableness of Liberty's proposed capital structure.

Further, while I disagree it is necessary in this case, if the Commission is inclined to consider the capital structure of Liberty's parent companies, there is no reason to look further "upstream" than LUCo, which the Commission has considered in the past. This is because there is no reason why LUCO is *less* relevant as a comparator for Liberty at this time than in those prior decisions.

Q. Mr. Murray discusses acquisitions activity that he asserts has affected the capital structure at LUCo.[10] What is your response?

A. My response is twofold. First, activity at LUCo would flow upstream to APUC through the consolidation process, so Mr. Murray's pointing to acquisition activity at LUCo as a reason to not rely on LUCo's capital structure for purposes of establishing rates for Liberty applies equally to APUC. Second, the concern Mr. Murray expresses about transactions at the parent company level support a focus on the regulated operating company on a stand-alone basis, which I have done in my cost of capital recommendations.

Q. Mr. Murray focuses on the timing of LUCo's and APUC's financial transactions with Liberty, describing them as "arbitrary."[11] Do you share that concern?

A. No. In this proceeding, the Commission will establish the rate of return, including the capital structure, for the purposes of setting rates. The *Hope* and *Bluefield* decisions provide the guiding principles for establishing that the rate of return meets the financial

[10] *Id*. at p. 16.
[11] *Id*. at p. 9.

integrity, access to capital, and comparable return components of those standards, and that it is the end result that must be just and reasonable. Further, the commitments made in the Stipulation and Agreement in EM-2016-0213 provide for certain evidence that must be provided related to the cost of capital in a rate case. In this proceeding, Liberty's proposed capital structure has been shown to be both consistent with capital structures at other utility operating companies and the "most economical" when compared to LUCo's and APUC's capital structures, and is thus consistent with the fair return standard and the merger commitments.

There are myriad factors that affect the timing of financings (whether through the money pool or through long-term debt and equity) and the management thereof, including liquidity needs, maintenance of credit ratings, adherence to debt covenants, regulatory approvals (as a Kansas corporation, Liberty must receive approvals from the Kansas Corporation Commission to issue long-term debt, including in the form of intercompany promissory notes), and market conditions, among others. Liberty must weigh all of these factors in balancing its capital structure. Further, ratings agencies closely monitor Liberty's capital structure and financial transactions to ensure consistency with Liberty's credit ratings, and changes in Liberty's debt balances have real consequences for Liberty's credit profile, despite Mr. Murray claiming otherwise.[12] For instance, Moody's recently commented that "Empire's credit metrics have improved over the past two years since a temporary decline driven by the impact of elevated natural gas prices during winter storm Uri in February 2021."[13] Just because

[12] *Id*. at p. 7.
[13] Moody's Ratings, "Empire District Electric Company (The)," April 29, 2025, at p. 1.

the exact timing of Liberty's financial transactions doesn't match Mr. Murray's expectations does not make them "arbitrary." In fact, certain of the Company's financial decisions that Mr. Murray apparently disagrees with, such as not paying a dividend for twelve months, are credit supportive and help to maintain the financial integrity of the utility operating company.[14]

Q. Do you agree with Mr. Murray's assertion that the use of Liberty's actual capital structure rather than its authorized equity ratio affects the reliability of its Financial Surveillance Monitoring Reports ("FSMR")?[15]

A. No, I do not. Mr. Murray argues that Liberty's FSMRs are skewed by the use of the Company's actual capital structure instead of the 46.0 percent common equity ratio that the Commission authorized in ER-2019-0374, implying that Liberty "earned a lower ROE than the ROE it achieved based on its authorized capital structure and cost of debt methodology."[16] In his assessment, Mr. Murray fails to recognize that Liberty's earnings are based on its actual capital structure, as this is how the Company finances its operations. Furthermore, credit rating agencies base their assessments on companies' actual financial metrics, which are driven by the *actual* debt and equity balances supporting operations. Therefore, providing earnings calculations based on actual capital structures creates transparency and accountability, rather than any skewed presentation of the Company's earnings, as Mr. Murray implies. The same is true for the Company's cost of debt, which Mr. Murray also asserts skews the

[14] Rebuttal testimony of David Murray, at p. 13.
[15] *Id*., at pp. 11-13.
[16] *Id*., at p. 11.

Company's reported earnings.[17] In fact, the opposite is true, as locking in the cost of debt at the last Commission-authorized rate would potentially misrepresent the Company's actual earnings, since interest expense will vary over time depending on, for example, new debt issuances and/or debt retirements.

IV. COST OF DEBT

Q. Does Mr. Murray agree with the Company's proposed cost of debt?[18]

A. No. Even though Mr. Murray finds the rate to be reasonable,[19] he instead recommends a cost of debt based on his calculation of LUCo's embedded cost of debt that reflects his own subjective adjustments to LUCo's actual cost of debt. While Mr. Murray does not recommend the Commission rely on Liberty's embedded cost of debt, he also subjectively adjusts that rate as well. Mr. Murray's primary concern with Liberty's cost of debt relates to the method by which the cost of debt is determined for Liberty's intercompany promissory notes with LUCo.

Q. Do you share that concern?

A. No. While its recent borrowings are from an affiliate, the Company's embedded cost of debt reflects market data from third party investors (either directly from the cost of third-party borrowing at LUCo or through indicative debt pricing provided by investment banks). Further, as described in my direct testimony, the Company's embedded cost of debt is reasonably and directly comparable to utility benchmarks. As such, I continue to recommend that the Company's proposed cost of debt, as updated

[17] *Id*., at pp. 12-13.
[18] *Id*., at p. 18.
[19] *Id*., at p. 24.

through the True-Up Period ending March 31, 2025, be used for the purposes of establishing rates in this proceeding.

V. ROE – OVERVIEW OF RECOMMENDATIONS

Q. What is your ROE recommendation in this proceeding?

A. I recommend that the Commission approve Liberty's proposed ROE of 10.00 percent. That is within, albeit at the lower end, of my analytical range of results from 9.75 percent to 11.00 percent. My ROE analyses are based on objective, market-based data, such as actual market returns and analyst EPS growth rates, which are widely available to the investment community. Liberty's proposed ROE of 10.00 percent is somewhat above the prevailing level of authorized ROEs for vertically-integrated utilities of 9.81 percent, which is reasonable given Liberty's small size and relatively greater business risks.

Q. What is Mr. Walters' ROE recommendation in this proceeding and what is your summary response?

A. Mr. Walters' ROE recommendation is 9.50 percent.[20] As I discussed in my rebuttal testimony, while there are several similarities between mine and Mr. Walters' ROE analyses, Mr. Walters makes certain unreasonable assumptions and relies on certain flawed specifications of models that result in an unreasonably low ROE recommendation. Focusing on Mr. Walters' more reasonable specifications of his models results in an ROE that is within my recommended range of results, albeit higher than the Company's proposed 10.00 percent ROE. In addition, Mr. Walters has not

[20] Direct testimony of Christopher Walters, at p. 4.

adequately considered Liberty's elevated level of business risk compared to the proxy companies. As such, I recommend the Commission reject Mr. Walters' recommended ROE.

Q. What is Mr. Murray's ROE recommendation in this proceeding and what is your summary response?

A. Mr. Murray's ROE recommendation is 9.25 percent.[21] That is the same ROE that the Commission authorized in ER-2019-0374, despite the fact that interest rates, based on the 30-year Treasury bond, have increased from 1.47 percent to 4.92 percent (i.e., 345 basis points), and, based on Baa-rated utility bonds, have increased from 3.47 percent to 6.17 percent (i.e., 270 basis points) since the Commission issued its order in that case. Mr. Murray asserts in his rebuttal that many of the specifications, inputs, and assumptions used in my ROE analyses are unreasonable, yet he ultimately abandons his own analyses in developing his ROE recommendation. For these reasons, I recommend the Commission reject Mr. Murray's recommended ROE.

VI. ROE – PROXY GROUP

Q. Please summarize Mr. Murray's position regarding the proxy group that you relied on for Liberty.

A. Mr. Murray states that I did not recognize or discuss that some of the companies in my proxy group have or have had in the past five years "significant exposure" to non-regulated operations or international business exposure.[22]

[21] *Id*., at p. 4.
[22] Rebuttal testimony of David Murray, at p. 26.

Q. What is your response?

A. As discussed in my direct testimony, I applied a screening criterion that required a company derive at least 60 percent of its operating income from regulated operations.[23] This is a standard proxy group screen. However, as shown in Direct Schedule DSD-3 and Rebuttal Schedule DSD-2, the average percentage of regulated operations for the proxy group, at over 98 percent, is much higher than the minimum threshold. As such, the proxy group, as a whole, is highly reflective of "pure-play" regulated utility operations.

I also compared the 30-day average Constant Growth DCF results as of August 31, 2024 contained in Direct Schedule DSD-4 of my direct testimony for the four companies noted by Mr. Murray as having substantial unregulated operations (i.e., NextEra Energy Inc., Entergy Corporation, OGE Energy Corporation, and PPL Corporation) to the remaining companies in my proxy group. The average Constant Growth DCF result excluding those four companies is 10.18 percent, or two basis points *higher* than the average Constant Growth DCF result including those four companies of 10.16 percent. Further, the company with the highest Constant Growth DCF result (Portland General Electric Company at 13.69 percent) has 100 percent regulated electric operations. As such, Mr. Murray's implication that those companies are skewing my ROE results upwards is unfounded.

[23] Direct testimony of Daniel S. Dane, at p. 12.

VII. DISCOUNTED CASH FLOW MODEL GROWTH RATES

Q. Both Mr. Walters and Mr. Murray question the growth rate used in your Constant Growth DCF model.[24] What is your response?

A. Messrs. Walters and Murray challenge whether it is reasonable to use analysts' forecasts of EPS growth in the Constant Growth DCF model. While noting its limitations, however, Mr. Walters also presents a Constant Growth DCF analysis using analysts' projected EPS growth rates. In addition, neither Mr. Walters nor Mr. Murray is able to substantially rely on the results of their own DCF analyses (mean and median results ranging from 8.59 percent to 9.30 percent for Mr. Walters – excluding his specification using analyst EPS growth rates – and 7.80 percent to 8.10 percent for Mr. Murray) when establishing their ROE recommendations. Those results fall below their ROE recommendations and are approximately 50 to 200 basis points below the average authorized ROE for vertically integrated electric utilities since January 2024 of 9.81 percent.

Q. Is there additional evidence regarding the importance of earnings projections to utility rates of return that you can provide in response to Messrs. Walters and Murray's rebuttal testimonies?

A. Yes. As described in Dr. Roger Morin's *New Regulatory Finance*, "[p]ublished studies in the academic literature demonstrate that growth forecasts made by security analysts represent an appropriate source of DCF growth rates, are reasonable indicators of investor expectations and are more accurate than forecasts based on historical

[24] Rebuttal testimony of Christopher Walters, at p. 6; Rebuttal testimony of David Murray, at pp. 27-31.

growth."[25] As explained in my direct testimony, over the long term, dividend growth can only be sustained by earnings growth.[26] Importantly, when providing guidance to investors regarding the overall total return targets in their investor presentations, companies define the total return as the dividend yield plus *earnings* growth, not dividend, book value, or sustainable growth.[27] Also, academic studies suggest that investors base their investment decisions on analysts' expectations of growth in earnings.[28] Lastly, the only forward-looking growth rates that are available on a consensus basis are analysts' EPS growth rate projections. The fact that earnings growth projections are the only widely reported and accepted estimates of growth further supports the finding that earnings growth is the most meaningful measure of growth among the investment community.

Q. Mr. Walters and Mr. Murray also contend that you should have considered a Multi-Stage DCF analysis because, they assert, the EPS growth rates for the proxy group are not sustainable as compared to projected GDP growth.[29] Please respond.

A. In my rebuttal testimony, I included the results of a Multi-Stage DCF model in response to Mr. Walters and Mr. Murray's concerns about whether the EPS growth rates for the

[25] Morin, Roger, *New Regulatory Finance*, Public Utility Reports, Inc. (2006), at p. 298.
[26] Direct testimony of Daniel S. Dane, at p. 16.
[27] *See, e.g.,* American Electric Power Company, Inc., May 6, 2025, Investor Presentation, at 4; Duke Energy Corporation, May 6, 2025, Earnings Review and Business Update, at 10; Xcel Energy, April 24, 2025, Investor Presentation, at p. 15.
[28] *See*, *e.g*., Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts Growth Forecasts,* Financial Management, Summer 1992, at p. 65; and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management, Spring 1988, at p. 81. Please note that while the original study was published in 1988, it was updated in 2004 under the direction of Dr. Vander Weide. The results of that updated study are consistent with Vander Weide and Carleton's original conclusions.
[29] Rebuttal testimony of Christopher Walters, at p. 6, and Rebuttal testimony of David Murray, at pp. 27-28.

proxy group companies are sustainable. As shown in Rebuttal Schedule DSD-4, the mean results of my Multi-Stage DCF model ranged from 9.62 to 9.69 percent, which is somewhat lower, albeit reasonably in the range of my ROE recommendation, and, when considered along with and in the context of the other ROE analyses I performed in my direct and rebuttal testimonies, continues to support an ROE of 10.00 percent for Liberty. The long-term growth rate in my Multi-Stage DCF model is 5.44 percent, based on the historical average of real GDP growth from 1929-2024 plus projected inflation.

Mr. Walters and Mr. Murray argue for a long-term growth rate in the Multi-Stage DCF model that produces ROE estimates well below their ultimate ROE recommendations for Liberty in this proceeding. For example, Mr. Walters proposes a projected GDP nominal growth rate of 4.1 percent,[30] and Mr. Murray contends that GDP nominal growth should be no higher than 4.0 percent and uses growth rates of 3.0 percent and 3.5 percent in his Multi-Stage DCF analysis.[31] Messrs. Walters and Murray, however, don't substantially rely on their Multi-Stage DCF analyses, as their recommendations are significantly higher than the results of those analyses.

As explained in my rebuttal testimony, the method I used to calculate nominal GDP (i.e., historical real GDP growth plus projected inflation) is consistent with the approach recommended by Morningstar, a leading provider of investment information which previously published data on historical stock and bond returns from Ibbotson and Associates, prior to that publication being acquired by Kroll.[32]

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[30] *Id*., at p. 6.
[31] Direct testimony of David Murray, at p. 43.
[32] Rebuttal testimony of Daniel S. Dane, at p. 42.

Lastly, the actual historical EPS and DPS growth rates for electric utilities have consistently exceeded the projected nominal GDP growth rate used by Mr. Walters of 4.1 percent, as well as the 3.0 percent and 3.5 percent perpetual growth rates that Mr. Murray suggests are reasonable. In fact, the average actual EPS and DPS growth rates for the electric utility companies in my proxy group from 2009 through 2024 were 4.82 percent and 5.02 percent, respectively. For that reason, I believe that the long-term growth rates used in Messrs. Walters' and Murray's Multi-Stage DCF models are understated.

VIII. MARKET RISK PREMIUM IN CAPITAL ASSET PRICING MODEL

Q. Mr. Walters and Mr. Murray both question the reasonableness of the MRP used in your CAPM analysis. What is your response?

A. Mr. Walters focuses much of his attention on critiquing a calculation of the forward-looking MRP that I ultimately did not rely on in my CAPM analysis,[33] while Mr. Murray argues that my MRP is not sensitive to changes in government bond yields.[34] Specifically, Mr. Murray observes that even though my risk-free rate changes by as much as 18 basis points, my CAPM estimates only vary by five basis points. Mr. Murray also claims that the expected market returns used in my analysis cannot be expected to be reasonably sustained over the long term.[35]

In response to Mr. Walters' concern, as noted above I did not place substantial reliance on the specification of the MRP that he critiques, because I found that "[g]iven the degree to which the top end of that range currently provides CAPM results that are

[33] Rebuttal testimony of Christopher Walters, at pp. 9-10.
[34] Rebuttal testimony of David Murray, at pp. 31-32.
[35] *Id*., at p. 34.

difficult to reconcile with the results of other ROE estimation models, I focus on the lower end of that range."[36] As such, I share certain of Mr. Walters' concerns but have already made adjustments for them in my recommendations.

Regarding Mr. Murray's rebuttal testimony, the MRP is partly a function of interest rates. Given the inverse relationship between the two variables, it is logical that as interest rates decrease, the MRP will increase, muting the overall impact on the CAPM.

Further, the total market return used in my calculation of the forward-looking MRP is reasonable when compared against the historical returns for large company stocks in the U.S. from 1926-2024. As shown in Figure 5 of my direct testimony, the annual return for the S&P 500 has exceeded 11.25 percent in 56 percent of the years (i.e., 55 out of 98 years) since 1926. In addition, my forward-looking MRP is lower than the historical MRP of 7.31 percent reported by Kroll, indicating that my forward-looking MRP is conservative relative to that benchmark. Since current and projected Treasury bond yields are lower than the historical average of about 5.0 percent, the MRP should be higher than the historical level of 7.31 percent, given the inverse relationship between interest rates and the MRP.

Q. Mr. Murray makes repeated references to APUC's 2022 internal calculations of its weighted average cost of capital ("WACC") as corroborating his cost of equity estimates,[37] apparently accepting APUC's inputs and assumptions to its

[36] Direct testimony of Daniel S. Dane, at p. 22.
[37] *See*, e.g., Rebuttal testimony of David Murray, at pp. 46-47.

calculations. Do APUC's inputs and assumptions corroborate Mr. Murray's approach to estimating the cost of capital?

A. No. In fact, APUC's inputs and assumptions in APUC's calculations directly contradict Mr. Murray's analysis. ** [redacted] **,[38] whereas Mr. Murray uses an MRP that is 2.00 percent lower at 5.5 percent based on "Kroll's recommended equity risk premium."[39] Further, ** [redacted] ** to both LUCo and APUC (which are *larger* than stand-alone Liberty operations),[40] whereas Mr. Murray claims that a size premium is unwarranted for Liberty.[41]

Q. What is the impact on Mr. Murray's CAPM results if those more reasonable assumptions (i.e., an ** [redacted] **) had been used?

A. Mr. Murray's CAPM results would have increased from a range of 7.88 percent to 8.96 percent (a range that Murray ultimately abandons in coming up with his ROE recommendation) to 9.93 percent to 10.51 percent, which are much more consistent with my recommendations and corroborate Empire's 10.00 percent proposed ROE in this proceeding.

IX. RISK PREMIUM MODEL

Q. Mr. Murray does not agree with the use of a risk premium model to estimate the cost of equity for Liberty because he contends that the model "does not allow sufficient compression of allowed ROEs versus the utility industry's COE" and

[38] Exhibit DM-D-10 HC, at p. 1.
[39] Direct testimony of David Murray, at p. 47.
[40] Exhibit DM-D-10 HC, at p. 1.
[41] Rebuttal testimony of David Murray, at pp. 38-40.

"only serves to support current utility stock valuation levels."[42] What is your response?

A. To begin, when Mr. Murray refers to the "utility industry's COE," he is referring to his estimation of the COE, which is at odds with both more reasonable assessments of the COE and actual regulatory decisions. My risk premium model is designed to estimate the cost of equity for integrated electric utilities based on the relationship between Treasury bond yields and authorized ROEs for vertically-integrated electric utilities. The risk premium is based on a regression equation that compares authorized ROEs from over 750 rate cases for integrated electric utilities since 1992 to the corresponding Treasury bond yield at the time of the decisions. The regression has an R^2 of 0.81, which indicates that the model can be used to predict the authorized return for an integrated electric utility at varying levels of Treasury bond yields. While Treasury bond yields are projected to decrease from current levels, the result of my Risk Premium analysis using long-term projected Treasury bond yields is 10.48 percent, as was shown in my Rebuttal Schedule DSD-6. Furthermore, Mr. Murray's position rests on his repeated assertion that the industry's cost of equity is substantially different (i.e., approximately 130 to 200 basis points lower) than the allowed ROE. This is despite the fact that regulators consider broad sets of data, analyses, and recommendations from both utility and consumer advocate experts when setting authorized returns. Further, regulators, including the Commission, also commonly consider prevailing levels of authorized returns when setting the ROE. For these reasons, I continue to

[42] *Id*., at p. 37.

believe that my bond yield plus risk premium provides meaningful evidence regarding the appropriate ROE in this proceeding.

X. EXPECTED EARNINGS ANALYSIS

Q. How did you use the Expected Earnings analysis in your direct and rebuttal testimonies?

A. As described in my direct testimony, I used the Expected Earnings analysis to corroborate my DCF and CAPM analyses and to provide further context for the cost of equity for Liberty.[43] As described below, I continue to believe it is reliable for those purposes.

Q. Mr. Walters challenges the use of an Expected Earnings analysis on the grounds that it "does not measure the return an investor requires in order to make an investment,"[44] and Mr. Murray argues that the expected earnings analysis should be rejected because it is circular.[45] What is your response?

A. The *Hope* and *Bluefield* standards establish that a utility should be granted the opportunity to earn a return that is commensurate with the return on other investments of similar risk. Therefore, it is reasonable to consider the returns that investors expect to earn on the common equity of the electric utility companies in the proxy group as a benchmark for a just and reasonable return because that is the expected earned ROE that an investor will consider in determining whether to purchase shares in the company or to seek alternative investments with a better risk/reward profile. As Dr. Morin notes:

> The Comparable Earnings standard has a long and rich history in regulatory proceedings, and finds its origins in the fair return doctrine

[43] Direct testimony of Daniel S. Dane, at p. 26.
[44] Rebuttal testimony of Christoper Walters, at p. 15.
[45] Rebuttal testimony of David Murray, at p. 37.

> enunciated by the U.S. Supreme Court in the landmark Hope case. The governing principle for setting a fair return decreed in Hope is that the allowable return on equity should be commensurate with returns on investments in other firms having comparable risks, and that the allowed return should be sufficient to assure confidence in the financial integrity of the firm, in order to maintain creditworthiness and ability to attract capital on reasonable terms. Two distinct standards emerge from this basic premise: a standard of Capital Attraction and a standard of Comparable Earnings. The Capital Attraction standard focuses on investors' return requirements, and is applied through market value methods described in prior chapters, such as DCF, CAPM, or Risk Premium. The Comparable Earnings standard uses the return earned on book equity investment by enterprises of comparable risks as the measure of fair return.[46]

Mr. Walters fails to note in his critique of the Expected Earnings analysis that the authorized ROE that is established in this case will be applied to the net book value of Liberty's rate base (subject to certain regulatory adjustments). In this regard, the Expected Earnings approach provides valuable insight into the opportunity cost of investing in Liberty's electric utility operations. If investors devote capital to the Company (which would offer a return of only 9.25 percent on book value if Mr. Murray's recommendation were adopted), they forgo the opportunity for that same capital to earn a potentially greater return on book value through investment in the proxy companies. As a result, the Expected Earnings approach is informative because it provides a measure of the return on book value that is available to investors through other investments with comparable risk to Liberty.

Q. Has Dr. Morin also commented on the relevance of the Expected Earnings analysis for regulated utilities?

A. Yes, he has. According to Dr. Morin:

[46] New Regulatory Finance, Roger A. Morin Ph.D., Public Utility Reports, 2006, at p. 381.

> The Comparable Earnings approach is far more meaningful in the regulatory arena than in the sphere of competitive firms. Unlike industrial companies the earnings requirement of utilities is determined by applying a percentage rate of return to the book value of a utility's investment, and not on the market value of that investment. Therefore, it stands to reason that a different percentage rate of return than the market cost of capital be applied when the investment base is stated in book value terms rather than market value terms. In a competitive market, investment decisions are taken on the basis of market prices, market values, and market cost of capital. **If regulation's role was to duplicate the competitive result perfectly, then the market cost of capital would be applied to the current market value of rate base assets employed by utilities to provide service. But because the investment base for ratemaking purposes is expressed in book value terms, a rate of return on book value, as is the case with Comparable Earnings, is highly meaningful.**[47]

Q. How do you respond to Mr. Walters' assertion that FERC rejected the Expected Earnings analysis.[48]

A. Although FERC did not include the Expected Earnings analysis in Opinion No. 569-A for electric transmission companies, FERC left the door open for presentation of an Expected Earnings analysis on a case-by-case basis.[49] In my view, the Expected Earnings analysis provides a more stable picture of the returns that investors are expecting for companies in the Electric Utility sector based on Value Line data. This stability is due to Value Line's analysis and projections that change when updated, in contrast to the CAPM and DCF results which shift with more volatile market data. Moreover, the use of accounting returns is appropriate because the authorized ROE is being applied to an accounting rate base to determine the net income a company is authorized to recover in rates. In addition, the Expected Earnings approach provides

[47] New Regulatory Finance, Roger A. Morin Ph.D., Public Utility Reports, 2006, at pp. 394-395. (emphasis added)
[48] Rebuttal testimony of Christoper Walters, at pp. 15-16.
[49] Federal Energy Regulatory Commission, Opinion No. 569-A, Order on Rehearing, issued May 21, 2020, at para. 132.

an expected return for like-risk companies, which is a core strength of the model and consistent with the basic tenets of *Hope.* For these reasons, I continue to support the use of an Expected Earnings analysis as one model to estimate the cost of equity for Liberty in this proceeding.

Q. Mr. Murray also questions the adjustment you make to your Expected Earnings calculation to account for changes in the number of shares outstanding in the Value Line data.[50] What is your response?

A. The adjustment I have made to the Value Line data is consistent with the adjustment that FERC previously approved to the Expected Earnings approach, and is required in order properly state average returns.[51] In short, the number of shares outstanding is projected to change for the proxy group companies between now and the 2028-2030 data used to estimate the Expected Earnings estimate for each proxy group company, and it is necessary to make an adjustment to account for that change. Not doing so would cause an understatement of the return required by investors in the proxy group companies.

XI. BUSINESS RISK AND OTHER CONSIDERATIONS

Q. Did either Mr. Walters or Mr. Murray compare the business risks of Liberty to the companies in their respective proxy groups?

A. No, neither Mr. Walters nor Mr. Murray conducted a risk assessment of Liberty as compared with the proxy group companies. Mr. Walters claims that Liberty has the same business risk as the proxy group companies because Liberty has the same credit

[50] Rebuttal testimony of David Murray, at p. 37.
[51] FERC Opinion No. 531-B, issued March 3, 2015, at para. 126.

rating as the average for the proxy group.[52] While I agree with Mr. Walters that credit ratings are a measure of investment risk for debt investors, they do not fully reflect considerations related to the residual risk faced by equity investors. In addition, I do not agree that credit ratings should be used as a substitute for a more detailed scrutiny of business and regulatory risk, such as I provided in the risk assessment presented in my direct testimony. Based on my risk assessment, I concluded that Liberty has higher relative risk than the proxy group companies, even though my ROE recommendation for Liberty is toward the lower end of the range for the proxy group companies.

Q. Mr. Murray asserts that Liberty does not have higher than average risk due to the Company's adoption of Plant in Service Accounting ("PISA").[53] Similarly, Mr. Walters argues that your risk assessment is outdated because it does not account for the passage of Senate Bill 4, which will allow electric utilities to request construction work in progress ("CWIP") for certain capital investments, thereby reducing regulatory lag for companies like Liberty.[54] What is your response?

A. As indicated in my direct testimony, I agree that PISA reduces the risk of delayed recovery of invested capital, which is a common cause of regulatory lag.[55] However, as shown in Direct Schedule DSD-9, 75 percent of the operating companies held by my proxy group have capital cost recovery mechanisms and 76 percent have the ability to include CWIP in rate base and earn a cash return on that amount. Therefore, my conclusion is that the implementation of PISA and the passage of Senate Bill 4 do not

[52] Rebuttal testimony of Christopher Walters, at p. 17.
[53] Rebuttal testimony of David Murray, at p. 40.
[54] Rebuttal testimony of Christopher Walters, at p. 17.
[55] Direct testimony of Daniel S. Dane, at p. 39.

make Liberty relatively less risky when compared to the proxy group. Rather, Liberty has similar capital cost recovery risk as the majority of proxy group companies, and the substantial capital expenditure program means that Liberty will need continued access to capital on reasonable terms.

Q. Mr. Murray testifies that he is not aware of academic literature that supports an upward adjustment to the cost of equity for a company's smaller size, and that you have not provided any evidence to support this claim.[56] What is your response?

A. First, even though it would be reasonable to do so I have not made an upward adjustment to my recommended ROE for Liberty, even though the Company is smaller than the proxy group companies that I used to estimate the equity return for companies with similar business and financial risk as Liberty. Nonetheless, a 1995 article published in Public Utility Fortnightly by an analyst at Ibbotson and Associates specifically discussed the small size effect as it pertains to public utilities.[57] In discussing how smaller size affects utilities, the article states:

> One explanation for the higher returns is the lack of information on small companies. Investors must search more diligently for data. 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]

[56] Rebuttal testimony of David Murray, at p. 38. Further, Mr. Murray states that a small size premium is inapplicable in the context of the DCF model but then confusingly goes on to attempt to disprove the size effect by using my DCF results. *Id*., at pp. 38-39.

[57] Dr. Morin also provides a summary of academic literature regarding the size effect. *See,* Morin, Roger, *New Regulatory Finance*, Public Utility Reports, Inc. (2006), at pp. 181-187.

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

Ibbotson determines the size premium based on the actual historical returns of companies, which are divided into deciles based on their market capitalization. In addition, consideration of the size effect is consistent with the factors considered by ratings agencies in evaluating Liberty. For instance, Moody's stated that its "assessment of Empire also incorporates the utility's small size and limited geographic diversity on a stand-alone basis."[59]

In summary, I continue to believe that Liberty's smaller size relative to the proxy group companies is an important consideration when setting the Company's authorized ROE, consistent with the comparability standard of *Hope* and *Bluefield*.

Q. Mr. Walters and Murray also disagree that flotation costs should be considered in an analysis of Liberty's cost of equity. Please respond.

A. Like the small size premium, I did not explicitly include a flotation cost adjustment in my ROE recommendation. However, I disagree that flotation costs should not be a factor when considering where, within a reasonable range of results, a utility's ROE should be set. As described in my direct testimony, flotation costs are not expenses that flow through the income statement, but instead reduce the proceeds of the securities issuances, resulting in a permanent net reduction to the common equity portion of the balance sheet. As a result, flotation costs should be recovered through a return adjustment, regardless of whether an issuance occurs during, or is planned for, the test year. It is also appropriate to consider flotation costs even if the operating utility does not directly issue equity, because the source of capital used by the Company

[59] Moody's Ratings, Empire District Electric Company (The), April 29, 2025, at p. 1.

was the result of a public issuance by its parent organization, which led to the issuance costs. As such, while I did not make an explicit adjustment for flotation costs, I continue to recommend they be considered when determining where, within a reasonable range of results, the ROE is set.

XII. TRUE-UP CAPITAL STRUCTURE AND COST OF DEBT

Q. Was the Company ordered to true up its capital structure and cost of debt?

A. Yes. Per the Commission Order issued on April 23, 2025, the Company is to update its capital structure and cost of debt, among other items, to reflect the balances as of March 2025.

Q. Please describe that true up to the capital structure.

A. As described in my rebuttal testimony, I updated my capital structure analysis through March 2025. Rebuttal Schedule DSD-8 shows that: (1) Liberty's equity ratio has decreased slightly from 53.10 percent to 53.00 percent, which reflected a planned debt issuance in 2025; and (2) Liberty's capital structure continues to be the "most economical" when compared to the capital structures of APUC and LUCo.

Q. What is the Company's proposed true-up period cost of long-term debt?

A. As included in Company witness Charlotte T. Emery's true-up direct testimony, True-Up Direct Schedule CTE-1,[60] the cost of long-term debt is 4.53%. This update reflects the cost of debt for the Company's planned 2025 debt issuance.

[60] True-Up Direct Schedule CTE-1, p.101.

XIII. CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize your conclusions and recommendations regarding the appropriate ROE for Liberty in this proceeding.

A. I continue to support the results of the ROE analyses presented in my direct testimony, and updated and supplemented in my rebuttal testimony, which resulted in a reasonable range of ROE for Liberty of 9.75 percent to 11.00 percent. Considering the financial and business risk factors facing Liberty, Liberty's ROE could reasonably be set above the midpoint of this range. The Company's proposed ROE of 10.00 percent, therefore is a reasonable, if not conservative estimate of the return required for equity investments in the Company.

Q. What is your recommendation regarding a reasonable capital structure and cost of long-term debt for Liberty?

A. I support Liberty's proposed pro forma capital structure as of March 31, 2025 of 53.0 percent common equity and 47.0 percent long-term debt. As shown in my direct and rebuttal testimonies, the proposed equity ratio of 53.0 percent is reasonable when compared to the actual equity ratios of the operating companies held by proxy group, as well as the authorized equity ratios of those companies. I also support Liberty's requested cost of long-term debt of 4.53 percent, which is reasonable, if not conservative relative to industry benchmarks.

Q. Does this conclude your surrebuttal and true-up direct testimony?

A. Yes, it does.

VERIFICATION

I, Daniel S. Dane, under penalty of perjury, on this 17th day of September, 2025, declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Daniel S. Dane