Exhibit No.: _____
Issue(s): Rate of Return (ROR)/Capital Structure/ Return on Equity (ROE)
Witness/Type of Exhibit: Murray/Rebuttal
Sponsoring Party: Public Counsel
Case No.: ER-2021-0312

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

THE EMPIRE DISTRICT ELECTRIC COMPANY
D/B/A LIBERTY

FILE NO. ER-2021-0312

** **

Denotes Confidential Information that has been Redacted

December 20, 2021

PUBLIC

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Request of The Empire District Electric Company d/b/a Liberty for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area	))))))	Case No. ER-2021-0312

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

David Murray, of lawful age and being first duly sworn, deposes and states:

1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

David Murray
Utility Regulatory Manager

Subscribed and sworn to me this 20th day of December 2021.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2023.

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REBUTTAL TESTIMONY

OF

DAVID MURRAY

EMPIRE DISTRICT ELECTRIC COMPANY

FILE NO. ER-2021-0312

Q. Please state your name and business address.

A. My name is David Murray and my business address is P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same David Murray who previously filed Direct Testimony in this case?

A. Yes.

Q. Why are you testifying in rebuttal?

A. I am responding to direct testimonies that address the following issues: (1) the proposed ratemaking capital structure for The Empire District Electric Company ("Empire), (2) the appropriate cost of debt to apply to the debt ratio in the capital structure, and (3) the proposed allowed return on common equity ("ROE") to apply to the equity ratio in the capital structure. Empire witness John Reed provides the main supporting testimony for Empire's requested ROE, but he also attests that Empire's requested capital structure is reasonable. Empire witness Todd Mooney is the primary witness sponsoring Empire's requested ratemaking capital structure and cost of debt. He attests that his recommended capital structure complies with Conditions 4 and 5 in the Commission's Order, in Case No. EM-2016-0213, approving Algonquin Power & Utilities Corp.'s ("APUC") purchase of Empire. The Commission's Staff witness Peter Chari sponsors testimony as it relates to all of the aforementioned rate of return ("ROR") components.

Empire and Staff recommend adopting Empire's per books capital structure, for purposes of determining Empire's revenue requirement in this case. Empire's capital structure recommendation is based on pro forma balance sheet data at March 31, 2021. Staff adopted Empire's recommended capital structure for purposes of its direct testimony. Staff cited Empire's response to Staff Data Request 0258 in support of its capital structure

recommendation. In response to Staff Data Request No. 0258, Mr. Mooney updated his comparison of APUC's, Liberty Utilities Company's ("LUCo") and Empire's capital structures for the update period, June 30, 2021, in this case. I disagree with Empire's and Staff's recommendation to the Commission to adopt Empire's capital structure. Empire's capital structure is not market based, cost efficient, or consequential for purposes of raising capital. Additionally, I do not agree with limiting a comparison of each company's capital structures to a specific point-in-time, whether it is at the end of the test year or the updated test year, for purposes of determining a fair and reasonable authorized ratemaking capital structure in this case.

Mr. Reed's proposed ROE of 10.00% is unreasonably high and does not reflect the electric utility industry's sustained lower cost of equity over the last several years. It is Mr. Reed's position that the low interest rates, and consequently, higher valuations for utility stocks, are not sustainable. He believes utility companies' cost of capital will increase subsequent to the effective date of new rates established in this case, which is his main rationale for dismissing lower implied COE estimates using current securities' prices in favor of using projected securities' prices.

Staff witness, Mr. Chari, recommends the Commission authorize Empire a ROE in the range of 9.25% to 9.75% with a point recommendation of 9.5%. In his opinion, Empire's previous authorized ROE of 9.25% should be increased due to his view that the cost of capital has increased since Empire's last rate case. As I will discuss further in responding to Mr. Chari's testimony, the utility industry's cost of capital has been in a declining trend over the long-term. This is true for the cost of debt capital and equity capital. In fact, the United States Federal Reserve and the United States Congress pulled out all of the stops subsequent to the onset of the Covid-19 pandemic to support capital markets and allow for extremely low costs. Additionally, Empire has elected plant-in-service accounting ("PISA") after the Commission set Empire's ROE at 9.25% on July 1, 2020, in its last rate case. PISA is recognized as an investor-friendly ratemaking mechanism that allows electric utilities in Missouri to ramp up capital expenditures while significantly reducing regulatory lag. It simply makes no sense to increase Empire's authorized ROE from 9.25%

based on a few months of limited contraction to utility P/E ratios after they reached all-time highs immediately prior to the Covid-19 pandemic, as well as the fact that Empire has been able to reduce its business risk through its PISA election.

I also update my capital structure recommendation based on data I analyzed through September 30, 2021, which includes the ordered update period in this case. As a result of analyzing updated financial data for purposes of my rebuttal testimony, I discovered some errors in my direct testimony. Therefore, I also correct information from my direct testimony in this rebuttal testimony.

UPDATE AND CORRECTIONS

Q. What elements of rate of return are you updating in your rebuttal testimony?

A. Capital structure and the embedded cost of debt. I have been able to perform a more detailed analysis of the quarterly changes in APUC's, LUCo's and Empire's capital structures for the quarterly periods from the test year, September 30, 2020, through the most recent period in which capital structure data is available, September 30, 2021. While the September 30, 2021, balance sheet information is beyond the updated test period, because this information is available, it is prudent to analyze this financial data to determine a fair and reasonable authorized capital structure for this case. Mr. Mooney's capital structure recommendation in his direct testimony is based on his *pro forma* estimated capital structures through March 31, 2021. I expect Mr. Mooney to provide his updated capital structure recommendation through June 30, 2021 in his rebuttal testimony and I will respond accordingly in my surrebuttal testimony.

Q. What is your updated recommended ROR?

A. As seen in Schedule DR-R-1, my updated recommended after-tax ROR is 6.44%, which applies LUCo's third-party embedded cost of long-term debt of 4.05% to my recommended long-term debt ratio of 51.75% and my recommended 9% ROE to a 48.25% common equity ratio.

Q. What errors did you discover in your direct testimony?

A. I reported a higher debt balance for Empire as of June 30, 2020 and March 31, 2020 in Schedules DM-D-3 and Schedule DM-D-4, respectively. The Excel formula I used to determine the debt balances included itemized cells embedded/hidden in the Excel spreadsheet Empire provided in response to Staff Data Request No. 70. When presenting financial statement information the Excel "hide" tool allows the user to present aggregate amounts that are disclosed for broader categories on the balance sheet. I simply overlooked the fact that Empire's spreadsheet had used the "hide" Excel tool for the detailed financial data.

I also failed to include $100 million of capital classified as short-term debt on Empire's June 30, 2020 Balance Sheet. This error was due to my oversight.

Q. After making these corrections, how did this impact the capital structures implied from Empire's balance sheet?

A. At March 31, 2020, Empire's common equity ratio increased from 47.06% to 52.06%. At June 30, 2020, Empire's common equity ratio increased from 50.65% to 53.25%. The average common equity ratio for the test year period ended September 30, 2020, increased from 52.51% to 54.03% (*See* Schedule DM-R-2.2).

Q. Has your updated analysis of APUC's, LUCo's and Empire's financial statements caused you to change your recommendation to rely on LUCo's adjusted capital structure to set a fair and reasonable ROR for Empire in this case?

A. No. I am attaching schedules that show my detailed comparison of LUCo's and Empire's capital structures over the original test year and the updated test year. I did not include APUC capital structure information in my updated schedules because no witness is currently proposing APUC's capital structure be directly or indirectly used to set Empire's ROR. However, I remain concerned about APUC's increased holding company financing activity, the complexity of APUC's holding company financing activity and off-balance sheet activity. This complexity is due to many factors such as project-level financing,

which includes tax equity arrangements for APUC's non-regulated power projects, and unique investment arrangements which cause capital from related parties to be recorded on APUC's balance sheet. That being said, at least for purposes of this case, I consider LUCo's typical adjusted actual and targeted capital structures to be consistent with Empire's low business risk and BBB-rated cost of debt.

Q. What does your updated analysis of LUCo's and Empire's capital structures indicate?

A. That Empire's equity ratio varied widely in the range of 45% to approximately 60% over the test year period and update period (*see* Schedule DM-R-2.2). However, as of the end of the ordered update period in this case, if short-term debt and tax equity is excluded from Empire's capital structure, Empire's common equity ratio approximates 53%, which is consistent with Empire's 53.07% common equity ratio as of the true-up date in Empire's last rate case, Case No. ER-2019-0374.[1]

LUCo's adjusted equity ratio also had a wider range, but with less volatility due to the fact that it gradually increased over the period September 30, 2019 (44.11%) through March 31, 2021 (51.5%) until it dropped back to 47.28% at June 30, 2021 (*see* Schedule DM-R-2.2). LUCo's lower common equity ratio as of June 30, 2021, is due to LUCo's issuance of a considerable amount of short-term debt, which made up 12.33% of LUCo's capital structure as of the same date.

Q. Based on your analysis of the updated capital structure information, are you changing your recommended ratemaking capital structure for Empire?

A. Yes. I now recommend a common equity ratio range of 47.5% to 49% (high-end is based on Empire's common equity ratio before being acquired by APUC), which gives consideration to the fact that APUC is still supporting LUCo's common equity balance with debt capital guaranteed by LUCo. Based on my additional analysis of LUCo's adjusted capital structures since Empire's 2019 rate case, APUC has increased financing

[1] Case No. ER-2019-0374, Sheri Richard True-up Direct Testimony, p. 21, lines 11-15.

activities at its level in order to fund equity infusions into LUCo to increase LUCo's common equity ratio. Unlike the debt capital issued by LUCo's financing affiliate, Liberty Utilities Finance GP1 ("GP1"), LUCo is not guaranteeing APUC's debt. Although APUC's use of holding company debt for equity investments causes me concern, I also recognize APUC has been willing to issue third-party equity or equity-like instruments in order to balance its capital structure. Therefore, I recommend the Commission apply Empire's authorized ROE in this case to a higher common equity ratio of 48.25% compared to the 46% I recommended in Empire's last rate case.

COMMISSION MERGER CONDITIONS

Q. Mr. Mooney asserts that he addressed Financing Conditions 4 and 5 ordered in Case No. EM-2016-0213. Do you agree?

A. I agree that he did the analysis required by Financing Condition 5 in Case No. EM-2016-0213, but I do not agree with his conclusions. Additionally, Mr. Mooney failed to specifically address Financing Condition 4 as it relates to APUC's request for Empire to be authorized a higher equity ratio than that which Empire requested (~49%) before it was acquired by APUC. A capital structure with a higher equity ratio is typically less economical than one with a lower equity ratio, other than in situations in which a company is in financial distress and has highly speculative credit ratings. This is not the case for Empire. Consequently, due to lack of evidence that Empire's business risks in 2021 requires a higher common equity cushion than it had in 2016, this sets a cap on Empire's common equity ratio at 49%.

CAPITAL STRUCTURE

Q. What is the basis for Staff's and the Company's recommended ratemaking capital structure for Empire in this case?

A. Both Staff and the Company recommend Empire's per books capital structure as of specific dates. In his direct testimony, Mr. Mooney recommends the use of his estimate of Empire's *pro forma* capital structure as of March 31, 2021, which contains an equity ratio of 52.44%.

Mr. Chari recommends the same capital structure ratios as Mr. Mooney, but cites Mr. Mooney's response to Staff DR No. 258, which indicates Empire's capital structure consists of 52.79% common equity as of June 30, 2021 (Schedule DM-R-3).

Q. Have Empire's facts and circumstances changed since Empire's last rate case as it relates to Empire performing its own financing functions and issuing its own long-term debt?

A. No. Empire continues to rely indirectly on LUCo for access to long-term debt, indirectly on APUC for access to equity markets, and directly on LUCo for access to short-term debt. At the time of Empire's last rate case, Empire still had independent access to commercial paper, but APUC was transitioning all of its United States' regulated utilities to consolidated short-term debt access through a consolidated credit facility and a consolidated commercial paper program. This transition is now complete, with Empire relying entirely on LUCo, GP1, and APUC for all of its financing needs. Empire currently has $515 million of affiliate long-term notes on its books, and no clearly identifiable short-term debt.

Q. Does the fact that Empire's access to debt financing is now completely consolidated with LUCo's other regulated utilities further validate the Commission's decision in Empire's last rate case to adopt LUCo's adjusted capital structure as a proxy for a fair and reasonable ratemaking capital structure for Empire?

A. Yes. It should be further noted that the Commission's decision as it relates to Empire's authorized ratemaking capital structure was upheld on July 27, 2021, by the Missouri Western District Court of Appeals.[2]

Q. Are Empire's financial statements reliable for purposes of interpreting its financial position?

A. No. Empire's quarterly balance sheets for the period September 30, 2020, through June 30, 2021, indicate Empire did not have any short-term debt outstanding over this period.

[2] *Empire Dist. Elec. Co. v. P.S.C.*, 630 S.W.3d 887 (Mo. App. 2021).

However, after I analyzed Empire's calculations to verify the rate it used for allowance for funds used during construction ("AFUDC") for the same period, I discovered Empire's calculation indicates an average monthly short-term debt balance outstanding over this period of approximately $300 million. This average short-term debt balance over this period exceeded Empire's construction work in progress ("CWIP") balance of approximately $150 million. Although CWIP is the primary short-term asset to which consistent short-term debt balances are typically attributed, Empire incurred extraordinary fuel and purchase power costs due to Winter Storm Uri ("Storm Uri") in February 2021. Although I do not recommend the use of Empire's capital structure for ratemaking, if the Commission were to accept Empire's capital structure, the short-term debt balance should be adjusted to consider Storm Uri costs.

Q. Why was it not possible to determine Empire had short-term debt supporting its investments based on analyzing short-term debt on Empire's balance sheets?

A. Because it was not reported as short-term debt. It is recorded under the balance sheet account "Accounts Payable and Accrued Liabilities." Because I noticed the balance under this account increased substantially at March 31, 2021, and at June 30, 2021, I requested further detailed information related to these accounts. In Empire's response to OPC DR Nos. 3040 and 3041, I discovered $574,607,455 and $432,351,554 for March 31, 2021, and June 30, 2021, were attributed to money pool borrowings. LUCo set up a shared regulated money pool in September 2020 to allocate internal and/or externally generated liquidity to affiliates that need funds. It is certainly logical that Empire required significant capital infusions during this period to fund extraordinary costs related to Storm Uri expenditures, completing the Wind Projects, and its increased capital spend in conjunction with Empire's election of PISA.

Q. If you included these amounts in Empire's capital structure as of these dates, what are the resulting capital structure ratios?

A. As of June 30, 2021, Empire's capital structure consisted of 45.04% common equity, 39.95% long-term debt and 15.01% short-term debt. After adjusting short-term debt for

the approximate $105 million of CWIP outstanding on the same date and Storm Uri costs of approximately $207 million, Empire's adjusted capital structure consists of 50.51% common equity, 44.80% long-term debt, and 4.69% short-term debt.

As of March 31, 2021, Empire's capital structure consisted of 46.05% common equity, 30.17% long-term debt, and 23.78% short-term debt. After adjusting short-term debt for the approximate $171.5 million of CWIP outstanding on the same date and Storm Uri costs of approximately $207 million, Empire's adjusted capital structure consists of 54.57% common equity, 35.77% long-term debt, and 9.62% short-term debt.

Q. Did Mr. Mooney clearly identify short-term debt in Empire's capital structure in his direct testimony?

A. No. The body of Mr. Mooney's testimony neither identified nor discussed short-term debt. Footnote 2 in his Schedule TM-3 indicates that funds used to finance extraordinary costs related to Storm Uri were not included in the capital structure, but it does not identify the amount of funds required for Storm Uri costs as it compares to Empire's total money-pool borrowings.

Q. Did Staff identify the short-term debt in Empire's capital structure in its direct testimony?

A. No. Staff adopted the Company's recommended capital structure. In response to OPC Data Request No. 375, Staff said:

> Staff relied on the data and explanation provided by Mr. Mooney in his direct testimony, as well as past financial statements of APUC, LUCo and Empire to verify the reasonableness, accuracy, and reliability of the pro forma capital structures presented by Mr. Mooney.

Because Empire's financial statements do not identify the affiliate money pool borrowings as short-term debt, this likely explains why Mr. Chari did not discuss this in his testimony.

Q. Is this another example of why the Commission should not rely on Empire's per books capital structure to set Empire's capital structure?

A. Yes. APUC has been consistent in managing Empire's per books long-term capital ratios (common equity and long-term debt) to target an approximate 53% common equity ratio. Because these capital ratios are the result of internal bookkeeping, APUC can simply reclassify these money-pool borrowings as affiliate long-term loans and common equity infusions to achieve its desired targeted ratemaking capital structure for Empire, which, based on Empire's last two rate cases under APUC's ownership, appears to be 53% common equity and 47% long-term debt. APUC's ability to adjust these internal capital balances provides additional support for setting Empire's ROR based on a current investable, market-tested capital structure, of which there are two alternatives, LUCo's adjusted capital structure and APUC's consolidated capital structure.

Q. If APUC's or LUCo's capital structures were not consistent with the low business-risk profile related to Empire's electric utility operations, are there any alternative approaches to setting Empire's ratemaking capital structure?

A. Yes. If this were the case, then another option would be to use a purely hypothetical capital structure with a corresponding hypothetical cost of debt.

Q. Is it necessary to use a purely hypothetical capital structure for Empire in this case?

A. No. Although a correct calculation of Empire's capital structure causes Empire's per books capital structure to have a lower common equity ratio than that implied by Mr. Mooney and Staff, I still consider the adjusted LUCo capital structure to be the most appropriate for setting Empire's ROR.

Q. Considering the significant allocation of short-term debt to investments in Empire's electric utility, do you think it is appropriate to include short-term debt in Empire's ratemaking capital structure?

A. No.

Q. Why not?

A. Since the effective date of the Commission's order in Case No. ER-2019-0374, APUC has been capitalizing Empire's entire CWIP balance based on a short-term debt rate. Because Empire's CWIP as a percentage of net plant has typically been higher than the percentage of short-term debt in LUCo's capital structure, ratepayers are receiving fair and reasonable consideration for Empire's short-term debt costs through Empire's lower AFUDC rate.

Q. Should the Commission order Empire to use a short-term debt rate to determine the AFUDC rate to capitalize CWIP?

A. Yes. As my testimony explains, Empire's capital structure continues to be a function of internal bookkeeping assignments. Because these internal bookkeeping assignments are not a function of market transactions, the best safeguard for ratepayers is to require all CWIP be capitalized at a short-term debt rate.

Q. What capital structure does Mr. Mooney recommend the Commission use to set Empire's allowed ROR?

A. Mr. Mooney recommends the Commission set Empire's authorized ROR based on a capital structure consisting of 52.44% common equity and 47.56% long-term debt.

Q. What is the premise for Mr. Mooney's recommended ratemaking capital structure in this case?

A. Mr. Mooney determined Empire's, LUCo's, and APUC's actual capital structures as of September 30, 2020, and then made *pro forma* adjustments to these capital structures to reflect Empire's acquisition of the wind projects, which closed before March 31, 2021. Mr. Mooney also adjusted common equity balances to reflect expected changes in these balances through March 31, 2021, due to expected increases in retained earnings and other *pro forma* financing activities. Mr. Mooney also made adjustments to LUCo's capital structure consistent with the adjustments I made in Empire's last rate case to reflect the debt LUCo guarantees. GP1 either directly or indirectly loans these proceeds to LUCo, or loans them to its immediate parent company, Liberty Utilities (America) Holdco Inc.

("LUA Holdco"), which then uses the proceeds to purchase equity in LUCo. These financial transactions give the appearance that LUCo has less financial risk than it actually has.

Q. Do you know why Mr. Mooney did not make *pro forma* adjustments to estimate each company's expected capital structures as of the ordered update period, June 30, 2021?

A. No, but considering he prefiled his direct testimony on May 28, 2021, he may not have been comfortable projecting these balances.

Q. Should all of the parties be in a position to discuss each company's capital structures through June 30, 2021, for purposes of rebuttal testimony?

A. Yes.

Q. Why?

A. Because all parties have concurrent access to the updated data.

Q. Has Mr. Mooney provided information subsequent to his direct testimony that provides insight on his estimate of each company's capital structures through June 30, 2021?

A. Yes. Using the same approach he used in his Direct Testimony, in response to Staff Data Request No. 0258 (Schedule DM-R-2), Mr. Mooney provided Staff with his estimate of each company's capital structures as of June 30, 2021. Mr. Mooney's updated calculations indicate the following capital structures for the companies as of June 30, 2021: Empire – 52.79% common equity and 47.21% long-term debt; LUCo – 58.12% common equity, 41.59% long-term debt and 0.29% redeemable non-controlling interest; and APUC – 64.73% common equity, 31.91% long-term debt, 0.74% preferred stock, 2.48% redeemable non-controlling interest held be related party, and 0.14% redeemable non-controlling interest.

Q. Do you agree with Mr. Mooney's representation of APUC's adjusted capital structure?

A. No. Although I agree with Mr. Mooney that APUC typically has less financial risk in its capital structure than LUCo, I do not agree with the magnitude implied by Mr. Mooney's adjusted capital structure. However, because our primary disagreement is whether the Commission should adopt a capital structure based on LUCo's adjusted capital structure or Empire's per books capital structure, I am limiting my rebuttal testimony to comparing and contrasting our analyses of and conclusions about these two companies.

Q. Do you agree with Mr. Mooney's adjusted LUCo common equity ratio of 58.12%?

A. No. First, Mr. Mooney includes $553,241 of tax equity supporting the wind projects in LUCo's common equity balance. If he had removed this amount from common equity, his starting common equity ratio would have been 57.55% (including redeemable non-controlling interests), or 57.72% (excluding redeemable non-controlling interests). Mr. Mooney further adjusted LUCo's adjusted capital structure by removing $742 million of short-term debt ($499 million of commercial paper and $243 million of credit facility borrowings), which implies LUCo's per books common equity ratio as a percentage of total long-term capital (equity and long-term debt) is 65.83%. After further adjusting for the $628.5 million of LUCo guaranteed debt used to purchase common equity in LUCo, the final implied common equity ratio is 53.92% as of June 30, 2021.

Q. Do you agree with Mr. Mooney that it is appropriate to eliminate all short-term debt from LUCo's capital structure as of June 30, 2021 for purposes of comparing LUCo's capital structure as of that date to a typical capital mix targeted by LUCo for purposes of capitalizing its regulated utilities, which includes Empire?

A. No. As can be seen in my Schedule DM-R-2.2, short-term debt comprised 12.33% of LUCo's capital structure as of June 30, 2021. This is an aberration that doesn't represent how LUCo is typically capitalized. LUCo's capital structure typically consists of a short-term debt ratio of approximately 4% to 5%, which is lower than Empire's typical CWIP/total capital ratio.

Q. What common equity ratio does APUC communicate to debt investors that it considers consistent with the lower-risk of LUCo's regulated utilities?

A. ** _____
_____
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_____ **

Q. Why is it important to be aware of APUC's targeted capital structure for LUCo rather than simply observing LUCo's recent actual capital structures?

A. Because of the fact that LUCo's recent actual capital structures have contained a significant percentage of short-term debt, it is important to be aware of LUCo's targeted long-term capital ratios. Because LUCo targets a long-term debt ratio of up to ** ____ ** this implies LUCo is most likely to refinance short-term debt with long-term debt. Mr. Mooney's capital structure calculations imply LUCo will not refinance short-term debt with long-term debt, which causes the equity ratio to appear higher than APUC's target for LUCo.

Q. Is there more recent financial statement information available that allows you to analyze LUCo's current mix of capital?

A. Yes. APUC has closed its books for September 30, 2021. Although this date is beyond the ordered update period in this case, as is evident from both Empire's and LUCo's capital structures during the first two quarters in 2021, they have been impacted by several different activities occurring at the same time, with Storm Uri being unexpected. Therefore, it would be imprudent not to analyze how APUC has managed LUCo's capitalization situation since these events. As of September 30, 2021, LUCo reduced its short-term debt balance by $243 million (the balance outstanding on its credit facility) through the use of operating cash flows. LUCo still had $499 million of commercial paper outstanding as of September 30, 2021, which accounts for 8.1% of LUCo's capital structure. LUCo's common equity ratio as of September 30, 2021, was 46.93%. If LUCo,

refinances the commercial paper with long-term debt, LUCo's common equity ratio would remain within its targeted range.

Q. Considering the aberration of LUCo's higher than normal short-term debt ratios recently, what is an alternative approach to evaluating LUCo's typical capital structure?

A. Simply excluding the data during these extraordinary periods in determining LUCo's normalized capitalization situation is such an alternative. After I did so, I determined that LUCo's common equity as percentage of total long-term capital ranged from 46.23% at the beginning of the original test year to 53.85% as of March 31, 2021. The average 5-quarter common equity ratios covering the annual periods ending September 30, 2020, December 31, 2020, and March 31, 2021 were 48.85%, 49.57% and 50.61%, respectively. Because I consider a 49% common equity ratio as the upper limit of allowable equity ratios based on Condition 4 in Case No. EM-2016-0253, I these common equity ratios support an authorized equity ratio of up to 49%.

Q. Before you get into the details of Mr. Mooney's calculations of Empire's capital structure, are there qualitative reasons the Commission should no longer use Empire's capital structure for purposes of setting Empire's ROR?

A. Yes. As it relates to Missouri's other large utilities, such as Spire Missouri and Ameren Missouri, I have taken the position that the Commission should consider the parent company's consolidated capital structure for purposes of determining a reasonable balance of debt and equity in the ratemaking capital structure. While I am taking a similar position in this case, there are facts and circumstances specific to Empire that make it even more compelling to not use Empire's unadjusted book capital structure for ratemaking. Empire's relationship to its intermediate and ultimate parent company is different from Spire Missouri's and Ameren Missouri's to their parents. Spire Missouri and Ameren Missouri still issue their own long-term debt, whereas Empire no longer does so. Empire relies entirely on APUC and LUCo for all of its financing needs. APUC directly accesses equity markets, LUCo uses Liberty Utilities Finance GP1 ("GP1") to raise long-term debt, and

LUCo issues short-term debt. Therefore, all financing provided to Empire is now a function of affiliate loan transactions. APUC formed GP1 to directly access third-party long-term debt markets and then loan the proceeds to LUCo's immediate parent company, LUA Holdco. LUA Holdco then either loans these debt proceeds directly to LUCo through an affiliate loan transaction, or uses the proceeds to purchase equity in LUCo. Regardless of how LUA Holdco infuses the capital into LUCo, LUCo guarantees all of this debt. Consequently, the cost of this debt is based on LUCo's risk profile, which is based on the amount of debt it supports and the regulated utility subsidiaries it owns (including Empire). In response to OPC DR No. 3014, Empire said the following:

> ** _____
> _____
> _____
> _____
> _____
> _____
> _____
> _____ **[3]

Although not indicated in the above DR response, the debt capital is provided indirectly to LUCo by loans to LUA Holdco. Empire's response to OPC DR No. 3004 where I requested information on LUCo's embedded cost of debt confirmed such. The primary consideration as it relates to this arrangement is the fact that long-term debt investors rely on LUCo's credit quality to determine their required return on debt (i.e. interest payments through coupons) they purchase from GP1. However, in order to attempt to understand the rationale for GP1 executing loans with LUA Holdco rather than directly with LUCo, I issued OPC DR No. 3004.1. Empire's response follows:

> LU America Holdco is a holding company and the parent company for Liberty Utilities Co. or LUCO. LUCO is the holding company for all of Liberty's regulated utility businesses in the US. Liberty Utilities Finance GP1 or GP1 is the special purpose finance subsidiary for LUCO. The proceeds from all debt issued by GP1 is used to either acquire regulated utilities or provide ongoing financing to these utilities post acquisition. Therefore, all debt issued by GP1 is guaranteed by LUCO.

[3] Empire Response to OPC DR No. 3014.

> Typically, new acquisitions of additional regulated utilities will require interim financing to close the transactions in a timely fashion prior to GP1 new permanent debt being raised. The interim financing is generally provided by the parent company Algonquin Power & Utilities Corp. or APUC but some amounts can also be provided directly through other companies. **The APUC interim financings typically flow to LU America Holdco and then are contributed to LUCO in the form of either debt or common equity.** Other companies at times also may fund directly to LUCO or its subsidiaries for acquisitions or other capital funding needs but the source of these funds is either GP1 debt or common equity. **In order to pay back the interim financings to APUC, GP1 debt proceeds will at times flow to LU America Holdco who will repay APUC for the interim acquisition financings. At other times GP1 debt will flow through other companies and be loaned or contributed to LUCO or its subsidiaries. All long term debt notes issued from LU America Holdco or other companies to LUCO or its subsidiaries reflect GP1's actual effective interest cost.** The following affiliate loan agreements were used to distribute the proceeds to LUCO and its subsidiaries from the LUF GP1 debt issuances outstanding as of September 30, 2020 and June 30, 2021…(emphasis added)

As is evident from Mr. Mooney's above explanation of why GP1 does not execute affiliate loans directly with LUCo, it is extremely difficult to understand the purpose for each affiliate financing transaction, even at the intermediate holding company level (LUCo) for APUC's regulated United States' utility subsidiaries. This complex and confusing web of transactions involves the entity, LUCo, which explicitly guarantees GP1 debt issued to third parties. At least as it relates to LUCo's adjusted capital structure, there is at least assurance that debt investors and rating agencies are scrutinizing the various transactions in order to determine the required return on the debt they purchase from GP1. This is one of the primary reasons I have more confidence in relying on my analysis and assessment of LUCo's adjusted capital structure to determine the true amount of financial risk underlying LUCo's capital structure supporting its regulated utilities, which includes Empire.

Although APUC still maintains a Moody's credit rating for Empire, it is unclear why, given that Empire no longer accesses capital markets directly. Empire gave the following response to OPC Data Request No. 3011 regarding its perceived need to continue to incur costs (charged to ratepayers) to maintain credit ratings from S&P and Empire:

> The Empire District Electric Company ("Liberty-Empire" or "Company") commercial paper program requires ratings from two rating agencies, and currently the two rating agencies employed are Moody's and S&P. Customers receive value from the Company's ability to access capital markets. Public debt ratings are also required by the Company's existing first mortgage bond private debt placements and value of the rating, i.e., the use of lower capital costs in rates to fund the investment and operation of the utility, was passed onto customers at the time of issuance. Finally, the Merger Stipulation approved by the Commission in Case No. EM-2016-0213 contemplated that Liberty-Empire would take certain steps in the event that its S&P credit rating was downgraded to below BBB-, and thus the Company also relies on the S&P rating to satisfy this compliance requirement. The Company's customers receive the benefit of lower capital costs by Liberty-Empire maintaining its credit rating. [4]

Empire no longer has its own separate commercial paper program. Therefore, it does not need Empire-level commercial paper ratings. Additionally, in Empire's 2019 rate case, Empire amended its response to a similar data request in that case to eliminate Empire's claim that first mortgage bond debt placements required Empire to maintain credit ratings.[5] Therefore, the only potential valid reason for Empire to continue to incur costs for maintaining a credit rating is for purposes of the conditions imposed in Case No. EM-2016-0213. However, because Empire's S&P credit rating is assigned based on APUC's consolidated family credit profile, it is not necessary to maintain a separate S&P credit rating for Empire to comply with the conditions the Commission imposed in Case No. EM-2016-0213.

Q. Is Empire charged fees for ratings services provided to its parent companies?

A. Yes. Not only is Empire direct-charged $431,779/year (Empire's Missouri electric utility's 89.06% allocation of Empire's aggregate direct-charge of $495,955.85), but it is also allocated $102,650 of rating agency fees incurred for purposes of procuring ratings for LUCo, GP1 and APUC.[6] Empire's customers are being charged for multiple ratings assigned to multiple companies within the APUC family of companies. At the very least, to the extent Empire continues to rely exclusively on its affiliates for access to financing, it should not be charged ratings agency fees for ratings assigned to Empire. These ratings

[4] Empire Response to OPC Data Request No. 3011.
[5] Case No. ER-2019-0374, Empire's Updated Response to OPC Data Request No. 3012, April 7, 2020.
[6] Empire Response to OPC Data Request No. 3035.

provide no value to Empire's customers, and they are an example of inefficient costs caused by multiple layers of financing activities within APUC's complex corporate structure. Therefore, I recommend Empire's direct-charged rating agency expense of $431,779 be disallowed from Empire's revenue requirement.

Q. Does Mr. Mooney provide accurate calculations for Empire's per books capital structure?

A. No. While Mr. Mooney did remove the tax equity associated with the wind projects from his capital structure calculation, he did not identify the short-term debt on Empire's books. This may be due to the fact that APUC is not booking affiliate money pool borrowings to capital accounts for purposes of its internal balance sheets. Rather, Empire's money-pool borrowings are booked as an accounts payable on Empire's balance sheet. If Mr. Mooney had accurately included the money pool borrowings in his capital structure calculations, he would have determined that Empire's common equity ratio at June 30, 2021 was 45.04%.

Q. If you netted Empire's approximate $105 million CWIP balance and $207 million of Storm Uri costs from the approximate $432 million short-term debt balance at June 30, 2021, what common equity ratio is implied from Empire's per books capital structure?

A. 50.51% (see Schedule DM-R-2.2).

Q. How does the inclusion of Empire's money-pool borrowings impact its capital structure as of March 31, 2021, which is the date of the capital structure Mr. Mooney estimated in his direct testimony?

A. The outstanding balance on Empire's money pool borrowing at March 31, 2021 was $574.6 million, or 23.78%, of Empire's consolidated capital structure at the same date. After deducting a CWIP balance of $171.5 million and Storm Uri costs of $207 million, Empire still has a net short-term debt balance of $196 million, or 9.62%, of Empire's consolidated capital structure at March 31, 2021.

Q. If short-term debt were included in Empire's authorized capital structure, what is the cost of this capital?

A. Approximately 0.25%.[7]

Q. Do you recommend the Commission include short-term debt in Empire's ratemaking capital structure?

A. No. I am providing this information to illustrate the issues caused by affiliate financing transactions. While I have attempted to audit the various financing transactions between Empire, LUCo, and APUC, to understand the rationale for them, because Empire's capital structure is no longer maintained for purposes of raising capital, I do not consider it objective or market-tested. At least LUCo's capital structure is consistently analyzed by current and prospective debt investors to determine the underlying financial risk associated with third-party debt financings, through both the issuance of commercial paper and long-term debt. For this reason, I recommend the Commission continue to rely on LUCo's adjusted capital structure for ratemaking purposes.

Q. Has LUCo consistently used a high percentage of short-term debt in its capital structure to finance its regulated utility subsidiaries?

A. No.

Q. Is it necessary to debate the nuances of APUC's financial management of its operating subsidiary balance sheets to determine a fair and reasonable authorized capital structure for Empire for ratemaking purposes?

A. No. While it is important to understand the unique issues in this case, such as the use of tax equity to fund the wind projects, the impact of the extraordinary costs related to Storm Uri, and appropriate capitalization rates for PISA, APUC communicates to LUCo's debt investors that it considers a common equity ratio of ** _____ ** to be appropriate for the lower business risk profile of its regulated utility investments. Additionally, in the

[7] Empire's response to Staff Data Request No. 0072.

Commission's Order approving APUC's acquisition of Empire, parameters were set for a fair and reasonable ratemaking capital structure, which is that Empire shall note seek a higher cost of capital as a result of APUC's acquisition of Empire (Condition 4) AND if the entities on which Empire relies for financing have a more economical capital structure than Empire's capital structure, then APUC shall provide evidence as to why this is necessary (Condition 5). With the proper inclusion of Empire's money-pool loans from LUCo, Empire's capital structure is more economical than LUCo's capital structure. However, Empire's capital structure is a consequence of various affiliate financing transactions that allow Empire's capital structure to be managed specifically for ratemaking. Consequently, I still consider LUCo's market-tested capital structure to be the most appropriate for setting Empire's ROR. Because Empire's capital structure had a 49% common equity ratio before it was acquired by APUC (This was Empire's requested common equity ratio in its last rate case before it was acquired by APUC.), this sets the upper limit of an acceptable common equity ratio for setting Empire's ROR. To the extent APUC and/or LUCo utilize more leverage to cause an equity ratio lower than 49%, then this lower equity ratio should be considered for purposes of setting Empire's ROR. Based on the range and average of LUCo's common equity ratios over the original and updated test year period in this case, I recommend Empire's ratemaking capital structure consist of 48.25% common equity and 51.75% long-term debt.

COST OF DEBT

Q. Why is your recommended cost of long-term debt higher than what Empire and Staff recommend?

A. Because I recommend Empire's ROR be set based on LUCo's capital structure, which includes its cost of debt. My cost of debt recommendation is based on all of the third-party debt issuances GP1, LUCo, and LUCo's various operating subsidiaries issued. While much of this debt has not been used to fund Empire's rate base, much of the capital currently assigned to Empire's book capital structure also has not been used to fund Empire's rate base. For example, on pages 20-21 of his direct testimony, Mr. Mooney explains his cost of debt recommendation. Mr. Mooney testifies that the proceeds from a

$600 million LUF 2.05% bond issuance on September 23, 2020 were immediately used to pay down short-term debt (presumably LUCo's short-term debt, but Mr. Mooney's testimony doesn't specify the entity) and for other LUCo corporate purposes. According to Mr. Mooney's response to OPC Data Request No. 3016 (Schedule DM-R-5), $131.5 million of the proceeds were used to provide either direct or indirect loans to LUCo through the following transactions: (1) LUF GP1 loaned $100 million to LUCo on September 23, 2020, at an interest rate of 2.30%, (2) Liberty Utilities Finance (US) LLC loaned $25 million to LUCo on September 23, 2020, at an interest rate of 2.3%, and (3) Liberty Utilities (America) Holdco Inc. loaned $6.5 million to LUCo at an interest rate of 2.55%. Mr. Mooney's response indicates the rest of the remaining proceeds were provided to LUA Holdco in the form of an equity investment. Mr. Mooney also characterizes the initial use of the proceeds as a "pre-funding" of the wind projects.[8]

Q. Do you know why three different APUC affiliates loaned funds to LUCo for purposes of transferring $131.5 million of the proceeds from the $600 million bond?

A. No. I am uncertain as to why GP1 would not be the sole affiliate lending party for purposes of the affiliate loan transactions.

Q. Do you know why the remaining $468.5 million was not distributed to LUCo either directly or indirectly as a loan to LUCo?

A. No. Mr. Mooney indicates these remaining proceeds were distributed to LUA Holdco through a purchase of its equity, but he did not explain the purposes of executing the transaction as an equity infusion rather than a loan.

Q. How much equity was infused into LUCo for the 3-month period ending September 30, 2020?

A. ** _____ ** This accounts for at least the $468.5 million that wasn't loaned to LUCo.

[8] Mooney Direct, p. 20, lns. 14-15.

Q. Did LUCo reserve $425 million of cash to pre-fund the purchase of the wind projects?

A. I found no evidence in LUCo's September 30, 2020 financial statements that it did.

Q. Did Empire receive any funds from LUCo during the 3-month period ending September 30, 2020?

A. Yes. According to Empire's Statement of Cash Flows, it received $100 million.

Q. Do you know how LUCo funded this $100 million infusion of equity into Empire?

A. Not exactly considering the facts that LUCo received $131.5 million through loans from the LUF bond issuance and the other $468.5 million through equity infusions,

Q. Is it likely that LUCo's $100 million equity infusion into Empire ultimately was funded by the $600 million external bond issuance?

A Yes. Therefore, if the goal of determining a proper ratemaking capital structure is to match the capital used to fund rate base, then this $100 million capital infusion should not have been transferred to Empire via a common equity purchase, but rather as a loan with a cost of 2.05%. However, this is not necessary or advisable in my opinion. The simplest, most objective, and market-tested approach is to match the cost of debt from the third-party debt issuances to the capital structure in which they reside. This forms the basis for my recommended cost of debt of 4.05%, which eliminates all affiliate loan transactions between LUA Holdco, LUCo, GP1, and any other downstream subsidiaries.

Q. Do all of the convoluted affiliate financing transactions APUC executes to provide funding to its regulated utility subsidiaries support your approach of recommending a capital structure and debt costs that are the function of arms-length transactions?

A. Yes. Although Empire has been more responsive to my discovery requests in this case as compared to its 2019 general rate case, the number and complexity of the transactions between APUC and its family of companies make it extremely difficult to understand their financial statements, books and records. Investors have also explained their own

difficulties in analyzing APUC's financial condition and prospects due to its complexity and off-balance sheet activity.[9] Therefore, the Commission should be wary of authorizing a ROR that is not clearly consistent with a market-based cost of capital associated with Empire's low-risk regulated utility profile.

RECOMMENDED ROE

John Reed's Recommended ROE:

Q. Do you agree with Mr. Reed's recommended ROE of 10.0% based on a range of reasonableness of 9.5% to 10.4%?

A. No.

Q. Do you and Mr. Reed agree on some facts related to current capital-market conditions?

A. Yes. We both agree that utility stocks have been trading at historically high valuation levels over the last several years, reaching all-time highs right before the onset of the COVID-19 pandemic. We also agree that these high valuation levels are primarily driven by a continued low long-term interest rate environment.

Q. If you both agree that utility stock valuation levels are higher due to lower long-term interest rates, why do you arrive at distinctly different conclusions about the implications such market conditions should have on utilities' cost of capital and, therefore, your recommended allowed ROEs?

A. I accept the signals the market is providing to us, which is that utilities' cost of capital is at historically low levels, justifying lower allowed ROEs. Mr. Reed dismisses low long-term interest rates as temporary and unsustainable. Therefore, he concludes that high utility stock valuation levels are not sustainable. Consequently, he gives less weight to his low

[9] Richard W. Sunderland, et. al., "Algonquin Power & Utilities Corp. – 2021 Investor Day Marks a Plan Transition to New Renewables Opportunities; Spotlight on LT EPS Growth Outlook," JP Morgan, December 14, 2021 and Julien Dumoulin-Smith, et. al., "Algonquin Power & Utilities Corp – Groundhog Day: Another Expectation Reset," Bank of America Securities, December 16, 2021.

and mean DCF results, which directly incorporate utility stock prices into a COE estimate. Instead, he gives more weight to his CAPM and Bond Yield Plus Risk Premium ("BYPRP") methods.[10] These methods are more easily manipulated by using irrational inputs, such as unreasonable expected market returns, to justify a higher COE estimate.

Q. What about Mr. Reed's proxy group?

A. I have concerns with it to the extent that he doesn't recognize or discuss the fact that some of the companies in his proxy group have significant exposure to non-regulated operations. Utilities that are diversified into non-regulated operations typically have exposure to segments related to the utility supply-chain, such as the supply of energy through procuring natural gas and/or non-regulated power generation. This non-regulated exposure to energy prices typically causes these utility holding companies' business risks to be more correlated to economic cycles as compared to pure-play regulated electric utilities. A few companies in Mr. Reed's proxy group that have significant non-regulated energy/commodity exposure (significant enough to cause the companies to report financial metrics on these specific segments) are Entergy Corporation, Exelon Corporation, Nextera Energy Inc., and OGE Energy Corporation. Additionally, Mr. Reed includes Otter Tail Corporation, which is diversified into manufacturing and plastics businesses as well as Hawaiian Electric, which has significant exposure to banking operations.

If Mr. Reed had at least acknowledged the fact that part of his proxy group had these riskier non-regulated business segments, then his inclusion of these companies wouldn't have been as disturbing. Instead, Mr. Reed claims Empire has higher business-risk than his proxy group. Mr. Reed limits his comparison of his proxy groups' business risk to his focus on each of his proxy companies' regulated utility subsidiaries. Not only does he limit his comparison of his proxy group's business risk to that of Empire's based solely on his proxy group's regulated subsidiaries, but he also limits his assessment of a reasonable amount of debt in Empire's capital structure to that of the proxy group's subsidiaries. As I have consistently discovered, holding companies of regulated utilities typically recognize

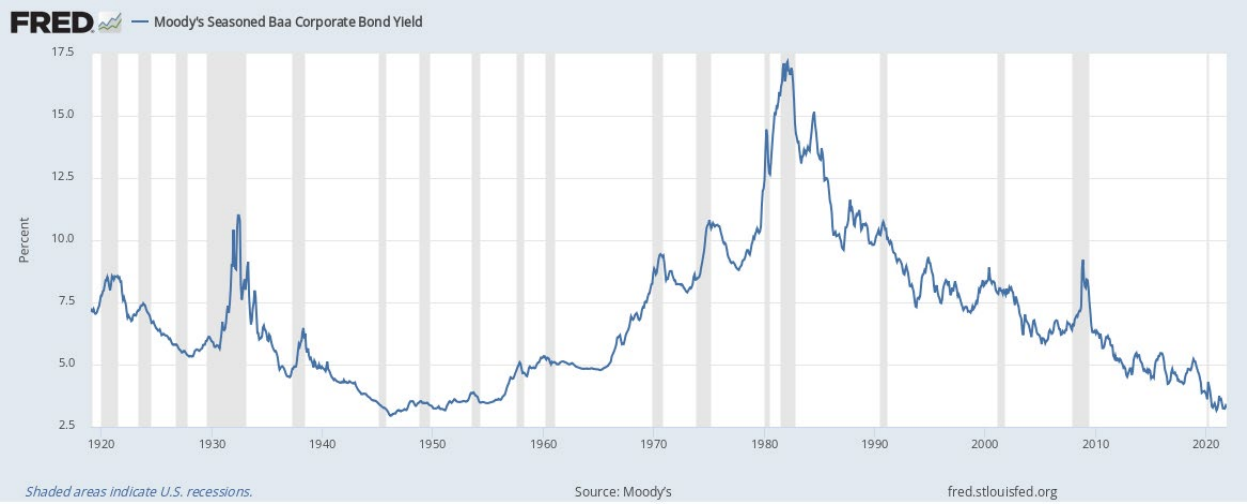
[10] Reed Direct, p. 6, ln. 7 – p. 7, ln. 9.

that the low business-risk of their regulated subsidiaries allows for more debt capacity than is typically shown on regulated subsidiaries' books. This is exactly what I discovered in Empire's last rate case when analyzing how LUCo was capitalizing its regulated subsidiaries. Mr. Reed's testimony does not explain how he considered the fact that Empire is a pure-play utility as compared to the fact that his proxy group has exposure to non-regulated operations. Therefore, Mr. Reed's opinion that Empire has a higher COE than his proxy group because it has more risk should be dismissed.

Q. What is your primary disagreement with Mr. Reed as it relates to his recommended authorized ROE?

A. Mr. Reed's recommended ROE range is based on his opinion that it is consistent with Empire's COE. Rational use of COE models, utility investor assumptions, and simple tests of reasonableness prove that Empire's COE is most likely in the 6% range. A COE estimate that is 300 basis points higher than any rational and simple test of reasonableness can support should cause concern about Mr. Reed's credibility. It defies common sense to suggest that utility equity investors expect double-digit returns on bond-like utility stock investments when, as Mr. Reed attests, utility bond yields reached all-time lows in the summer of 2020.[11] While I agree with Mr. Reed that bond yields have achieved historically low levels, based on the below graph, corporate bond yields last reached these levels over 75 years ago shortly after World War II.

[11] Mr. Reed Response to OPC DR No. 3032.



Although Mr. Reed admits that interest rates are at historically low levels, he encourages the Commission to set Empire's ROE based on his opinion that the cost of capital should increase during the period rates are in effect in this case. Apparently, Mr. Reed claims to have insight that corporate bond yields will reverse their long secular decline since 1980. The Commission should disregard Mr. Reed's use of higher projected interest rates to estimate the cost of capital. This has been a consistent argument by many ROR witnesses over the past decade, but interest rates have yet to reverse their long-term downward trend over the shorter-period of the past decade or the longer-period of the past four decades. While I agree with Mr. Reed that investors do not expect interest rates to continue in perpetuity at these extremely low levels, I completely disagree with Mr. Reed that investors haven't already factored potential increases in interest rates into the price they are willing to pay for utility securities, including utility stocks. Consequently, the Commission should dismiss Mr. Reed's opinion that COE methods, such as the DCF, which reflect investor expectations, should be given less weight in determining a fair and reasonable authorized ROE based on current capital market conditions.[12] Based on the observation of the above graph showing the secular decline in interest rates, the Commission's decision to authorize Empire an ROE of 9.25%, which was lower than the approximate 9.5% ROE the Commission had deemed reasonable for Ameren Missouri and Evergy Metro (fka Kansas

[12] Reed Direct, p. 6, lns. 12-14; p. 7, lns. 5-6; p. 11, lns. 11-19; p. 26, ln. 3 – p. 27, ln. 10; p. 42, ln. 1 – p. 47, ln. 2

City Power & Light Company) over five years ago in Case Nos. ER-2014-0258 and ER-2014-0370, respectively, was well supported by the sustained decline in the cost of capital.

Q. How did Mr. Reed estimate Empire's COE?

A. Mr. Reed used the following methods/models: (1) discounted cash flow ("DCF") methods – a constant-growth DCF and a multi-stage DCF method; (2) the Capital Asset Pricing Model ("CAPM"); (3) the bond-yield-plus-risk-premium ("BYPRP") method and (4) and an expected earnings analysis.

Q. Are these generally accepted methods ROE experts use for estimating a utility's COE for purposes of recommending ROEs to set rates for vertically integrated electric utilities?

A. Yes with the exception of the expected earnings analysis. I am not aware of investors using the expected earnings analysis to estimate the COE for utilities.

Q. Does Mr. Reed acknowledge that estimating the COE requires understanding investors' views of general financial markets and utility stock investments specifically?

A. Yes. He discusses this on page 34 of his direct testimony.[13] I agree with Mr. Reed on that point. Consequently, I have thoroughly researched equity analysts' research and recommendations regarding utility stocks in order to understand how investors actually value utility stocks, including the COE they use to determine target prices for utility stocks. Investors do not perform analyses or make the assumptions that Mr. Reed suggests in his direct testimony.

[13] *Id.,* p. 34, lns. 7-15. 7-9 and p. 16, l. 19 through p. 17, l. 1.

Q. Which COE methodologies does Mr. Reed rely on most heavily to support his recommended ROE range of 9.5% to 10.40%?

A. Because Mr. Reed believes the DCF currently underestimates the utility industry's COE, he gives the most weight to his CAPM and risk premium methodologies to justify a ROE higher than 9.5%. Mr. Reed estimates Empire's COE to be as high as in the 12% range using the CAPM.

Q. Is Mr. Reed's opinion that the DCF currently underestimates the COE accurate?

A. No. Based on Mr. Reed's theory investors are purchasing utility stocks with the knowledge that utility P/E ratios are likely to contract. If investors in utility stocks expect P/E ratios to decline, then a constant-growth DCF actually overestimates their required returns.

Q. Is there a means to adjust the constant-growth DCF method to account for Mr. Reed's anticipated changes to utilities' P/E ratios?

A. Yes. The constant-growth model can be extended to include expected changes in the P/E ratio. This version of the constant-growth DCF is referred to as the "Grinold- Kroner" model.[14] It is expressed algebraically as:

$$k = D_1/P_0 + g + \Delta PE$$

Where:
k = the cost of equity;
D_1 = the expected next 12 months dividend;
P_0 = the current price of the stock;
g = the dividend growth rate; and
ΔPE = the per period change in the P/E multiple

Q. If Mr. Reed had used this derivative of the constant-growth DCF method to estimate the cost of common equity, how would this impact his cost of equity estimates?

A. They would be lower.

[14] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 35.

Q. How much lower would Mr. Reed's constant-growth DCF estimates be if he had factored in his expectation of a contraction in the P/E ratios, pursuant to the information he shows on pages 26-27 of his direct testimony?

A. 2.64% lower. Mr. Reed indicates that based on Value Line projected P/E ratios, investors in his proxy group are expecting a 2x contraction (19.7x to 17.7x) in their average P/E ratios over the next four years. This is equivalent to an annual stock price decline of 2.64% per year over the next four years. If Mr. Reed is correct that this is consistent with investors' expectations, then this translates into an investor COE of 6.86% rather than the approximate 9.5% mean he estimates for his constant-growth DCF.

Q. Do you agree with Mr. Reed's constant-growth DCF assumptions?

A. No. As it relates to his mean constant-growth DCF results, Mr. Reed assumes that his proxy groups' dividends per share ("DPS") will grow in perpetuity at a compound annual growth rate ("CAGR") of approximately 5.71%.[15] For purposes of his "mean-high" constant-growth DCF results, Mr. Reed assumes that his proxy groups' DPS will grow in perpetuity at a CAGR of approximately 6.73%.[16] Mr. Reed claims that because stock prices reflect consensus equity analysts' estimates, this proves investors use these analysts' projected CAGR in earnings per share ("EPS") as a proxy for expected growth in DPS in perpetuity.[17] They do not. Mr. Reed's conclusion is not corroborated by actual investment analysts' practices, and his assuming they do causes his COE estimates to be unreliable. As I demonstrated in my Direct Testimony, equity analysts do not expect DPS will grow at a rate consistent with these higher near-term forecasted growth rates in EPS. They assume DPS will grow in perpetuity at a rate consistent with long-term industry averages, which is closer to 3%. They then discount these expected dividends by a cost of equity in the 6% range.

[15] See Schedule? attached to my rebuttal, which is based on data in Mr. Reed's Schedule JJR-4 attached to his Direct Testimony.
[16] *Id*.
[17] Reed Direct, p. 37, l. 1 – p. 40, l. 5.

Q. Mr. Reed indicates academic studies support his position that investors use EPS as a proxy for DPS in the constant-growth DCF.[18] Do they?

A. No. The studies simply show and conclude that equity analysts' recommendations influence stock prices.

Q. What foundational study is used to support the proposition that investors use equity analysts' EPS CAGR estimates as a proxy for constant-growth in DPS?

A. The foundational study cited to support the use of equity analysts' 5-year EPS growth rate forecasts in the DCF is that of Burton G. Malkiel and John G. Cragg, "*Expectations and the Structure of Share Prices*." Their conclusion in that academic study was that equity analysts' expectations had a greater influence on stock prices compared to simple extrapolations of historical financial data. This conclusion is logical considering the vast amount of resources dedicated to the discipline of securities analysis. However, I am not sure how subsequent studies leapt to the conclusion that the results of this study somehow translated into a proof that investors use 5-year EPS forecasts as a constant growth rate in the single-stage DCF methodology. In fact, Cragg and Malkiel did not even use the DCF valuation model in that study when testing their hypothesis regarding the influence of analysts' projections on stock prices. It is more plausible to conclude that, because investors rely on equity analysts' expectations, they rely on these analysts' investment recommendations (e.g. buy, sell or hold). Equity analysts' investment recommendations are based on their assessment of the intrinsic value of a given stock. Analysts' methodologies for estimating a fair price varies, but most at least assess the current price-to-forward earnings ratios both on a consensus basis and on the analysts' own estimates.

Cragg and Malkiel stated the following in their study:

> We would not argue that these estimates necessarily give an accurate picture of general market expectations. It would, however, seem reasonable to suggest that they are representative of opinions of some of the largest professional investment institutions and that they may not be wholly unrepresentative of more general expectations. **Since investors consult**

[18] *Id.*, p. 38, lns. 7-12.

> **professional investment institutions in forming their own expectations, individuals' expectations may be strongly influenced—and so reflect—those of their advisers**. That several of our participating firms find it worthwhile to publish these projections and provide them to their customers provides prima facie evidence that a certain segment of the market places some reliance on such information in forming its own expectations. Also, insofar as other security analysts and investors follow the same sorts of procedures as those used by our sample analysts in forming expectations, general investors' expectations would resemble those of the analysts. Consequently, these predictions may well serve as acceptable proxies for general expectations and surely seem worthy of detailed analysis. (Emphasis added.)

Considering the above, where the foundational study concludes that investors rely and depend on their investment advisors, and therefore, that stock prices reflect these expectations, it is much more reasonable to conclude that the COE assumptions underlying security analysts' recommendations are reflected in share prices. To assume that investors utilize the information provided by equity analysts in a way that is wholly inconsistent with how these analysts use the data in their own analyses, is not credible. Equity analysts often use the dividend discount model ("DDM") to estimate a fair price to pay for a stock. The DDM is synonymous with the DCF in utility ratemaking settings. The DCF in utility ratemaking is simply solving for the required return/cost of equity variable. In valuation, the goal is to solve for the fair price of the stock. Consequently, if equity analysts are of value to their clients, then stock prices will reflect their estimates of future dividends and the required return from these dividends. Consequently, if one accepts that security analysts' expectations influence investors, which is Malkiel and Cragg's conclusion, then this means that stock prices reflect the cost of equity used by these very same analysts. My experience has been that these equity discount rates are much lower than Mr. Reed's cost of equity estimates, and even lower than my own COE estimates.

However, equity analysts do not expect commissions to set ROEs equivalent to the market-implied cost of equity. If allowed ROEs were set equal to the cost of equity, this would cause downward pressure on the stock price of a company whose earnings rely primarily on its regulated utility operations. This downward pressure is because investors are

accustomed to regulators showing resistance to reducing allowed ROEs, even if market evidence supports them doing so.

Consider further how one of the co-authors of the Cragg and Malkiel paper has estimated required returns on stocks in his past studies, and how he has estimated required returns recently. In his May 1979 study, "*The Capital Formation Problem in the United States*," Malkiel estimated the required returns on the Dow Jones Industrial Average by using Value Line growth rates for the first five years. He then reduced this growth rate over time to that of the expected real growth rate of the economy, which was 3.6% at the time. The Harris article cited by Mr. Reed specifically cites the fact that this was the method Mr. Malkiel used to estimate market risk premiums.[19]

Mr. Malkiel has been consistent in his views on constraints on long-term growth for the market. Mr. Malkiel has provided expected long-term market returns at various times during the past decade.[20] In his long-term return projection that he made at the end of 2012, he used a projected growth rate of 5% based on the long-run history of earnings and dividend growth in the United States. Mr. Malkiel simply added the long-term growth rate of 5% to the S&P 500 dividend yield of approximately 2% for a total return estimate of 7%.

Investors' focus on earnings growth rates is understandable in the context of security analysts' stock price estimates derived from P/E multiples. Security analysts provide this information to evaluate potential P/E ratios as they compare to consensus P/E ratios. The ability of an analyst to accurately project future earnings and justified P/E ratios will determine whether that analyst is successful. Consequently, the focus on analysts' EPS projections is understandable in this context, but not in the context of absolute valuation methods such as a DCF analysis.

[19] Roger S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return," *Financial Management*, Spring 1986, p. 60.
[20] Burton G. Malkiel, "Where to Put Your Money in 2012," *Wall Street Journal*, January 5, 2012; Burton G. Malkiel, "A 2015 'Rebalancing' Act for Investors," *Wall Street Journal,* December 31, 2014.

Q. Are you aware of COE estimates used by equity analysts that provide recommendations on APUC's stock?

A. Yes. BMO Capital Markets, which follows and provides recommendations regarding a fair price to pay for APUC's stock, has used a COE in the range of 6.9% to 7.7% when applying a DCF to APUC's expected cash flows.[21] These lower COE estimates are similar to those I observed in discovery during Empire's last rate case.[22] Considering the fact that APUC's current operations also consist of approximately 30% non-regulated utility exposure through Algonquin Power Company, as well as exposure to international utilities, APUC's COE should be considered a high-end test of reasonableness for Empire's fully-regulated, vertically integrated electric utility operations.

Q. Do you have any concerns as to how Mr. Reed estimated Empire's COE using a multi-stage DCF approach?

A. Yes. However, I do not consider Mr. Reed's approach to be severely flawed. In fact, when I sponsored testimony on behalf of Staff of the Missouri Public Service Commission, my multi-stage DCF analysis approach was very similar to Mr. Reed's. My main dispute as it relates to Mr. Reed's multi-stage analysis is his assumed perpetual growth rate of 5.49%. This growth rate is not supported by the utility industry's realized historical DPS and EPS growth rates, logic, or practical investor examples.

Q. Why is Mr. Reed's assumption that utilities can grow at the same rate as the economy illogical?

A. The simplest way to illustrate the fallacy of Mr. Reed's use of GDP growth in his DCF analyses as a proxy for long-term growth of the regulated electric utility industry is to consider the impact of the appropriate application of this logic to the S&P 500 index. Because the S&P 500 index is considered a proxy for the U.S. stock market, it intuitively

[21] Ben Pham, CFA, et. al., "Algonquin Power & Utilities – Correction: Highlights From Management Meetings; Target to US$16.50 vs. US$16," May 13, 2021, BMO Capital Market; Ben Pham, CFA, et. al., "Algonquin Power & Utilities – Q2 – EPS Beat Supports 2021 Guidance and 5-Year Capex Plan Intact," August 13, 2021, BMO Capital Market.
[22] Case No. ER-2019-0374, Murray Rebuttal, p. 19, l. 14 – p. 20, l. 3.

makes sense that the expected long-term growth of the S&P 500 would be consistent with the expected growth in GDP. However, because on average, the companies in the S&P 500 tend to have better growth prospects than the electric utility industry, the dividend payout ratio and the dividend yield is lower than that of the electric utility industry. This implies that the growth rate for the electric utility industry would have to be lower than an aggregate growth rate, *i.e.*, the GDP, used for the U.S. market, *i.e.*, the S&P 500. Adding Mr. Reed's expected GDP growth rate of 5.49% to the current S&P 500 dividend yield of 1.5%, results in a market COE estimate of approximately 7%. Because electric utilities have a higher dividend yield due to the fact that they have a higher payout ratio and lower growth expectations than the S&P 500, adding the same GDP growth rate of 5.49% to Mr. Reed's 3.77% dividend yield for his electric utility proxy group, results in a COE estimate of approximately 9.25%. These results are illogical based on the well-accepted and supported understanding that the regulated utility industry is the lowest-risk sector in the S&P 500.

Q. For sake of argument, assume that electric utility companies can grow in perpetuity at the same rate of expected GDP growth. Given that assumption would investors expect GDP to grow at a rate of 5.49% for the long-term?

A. No. Several entities provide long-term GDP growth rate forecasts, such as the Congressional Budget Office ("CBO"), the Federal Open Market Committee ("FOMC"), the Energy Information Administration ("EIA"), the Survey of Professional Forecasters, and the Livingston Survey. The CBO projects a compound annual growth rate in nominal GDP of approximately 3.70% through 2030;[23] EIA projects an annual compound growth rate in real GDP of 2.1% for the period 2020 through 2050; [24] the Survey of Professional Forecasters projects a 10-year annual compound growth rate in real GDP of 2.25%;[25] the Livingston Survey projects an average annual compound growth rate of 2.2% over the next ten years;[26] and the FOMC projects a central tendency long-term real GDP growth of 1.8%

[23] https://www.cbo.gov/system/files/2021-02/56970-Outlook.pdf
[24] https://www.eia.gov/outlooks/aeo/assumptions/pdf/macroeconomic.pdf
[25] https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/spf-q1-2021
[26] https://www.philadelphiafed.org/-/media/frbp/assets/surveys-and-data/livingston-survey/2021/livjun21.pdf

to 2.0%.[27] In each case in which the sources do not project a nominal GDP growth rate, I recommend compounding the real GDP growth rate by the CBO's projected GDP price deflator of 2.0%.

Based on the various sources I reviewed, Mr. Reed's self-calculated 5.49% average annual GDP growth is not supported by reputable sources. Although I do not agree that investors assume utilities will grow in perpetuity at the same CAGR as overall GDP, if GDP growth were to be assumed, a growth rate of around 4% is more consistent with expectations.

Q. Which COE approaches support Mr. Reed's highest COE estimates?

A. His COE analysis using the Capital Asset Pricing Model ("CAPM").

Q. What are his COE estimates using the CAPM?

A. As shown in Figure 1 on page 5 of his direct testimony, Mr. Reed estimates Empire's COE in a range of 12.35% to 12.55% using the CAPM.

Q. What causes Mr. Reed's COE estimates to be so high?

A. He estimates that investors' expect a market return of 13.71% from investing in the S&P 500 over the long-term. Mr. Reed's market risk premium estimates are then determined by subtracting three different 30-year United States Treasury yields from his expected market return – a current 30-year UST yield, a near-term projected 30-year UST yield and a long-term projected 30-year UST yield. Although Mr. Reed uses risk-free rates that vary by as much as 30 basis points, his COE estimates using the CAPM only vary by 5 basis points. This is a function of his use of the same risk-free rate to determine the market risk premium as well as the first variable in the CAPM formula. As a reminder, the CAPM formula follows:

[27] https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20210616.pdf

$$K_e = Rf + \beta\ (RPm)$$

Where: K_e = the cost of equity for a security;
Rf = the risk-free rate;
β = beta; and
RP_m = market risk premium.

The market risk premium (RP_m) is more specifically defined as the expected return on the market (e.g. the S&P 500) less the expected return on the risk-free investment (e.g. a 30-year UST bond). There are several different approaches to estimating the market-risk premium, with some analysts using an historical earned return spread between the a broad domestic stock index, such as the S&P 500, and a risk-free investment, such as a 30-year UST bond. In these circumstances, the RP_m is constant. If the RP_m is a constant, then using differing risk-free rates for the first variable has a much larger impact on COE estimates.

As an example of the relative insignificant impact of the assumed Rf rate using Mr. Reed's approach, an assumed 1% risk-free rate would still cause COE estimate above 12% because this would also cause a corresponding 131 basis point increase to his estimated market risk premium estimate (12.71%).

Q. Does the current yield on 30-year UST bonds reflect investors' expectations of risk-free return over the long-term?

A. Yes. Otherwise why would an investor purchase a 30-year UST bond? If investors knew for certain that yields on 30-year UST bonds would increase, then they would maximize returns by shorting UST bonds to the maximum extent possible (limited by the amount of collateral he/she could post for the short position). If this was a certainty, no rational investor would purchase long-term UST bonds at current yields.

Q. If 30-year UST yields increased to 2.8% as Mr. Reed assumes in one of his CAPM scenarios, how would this impact the value of current 30-year UST bonds?

A. The value of a current UST bond would decline considerably. 30-year UST bonds are currently trading at a yield-to-maturity ("YTM") of 1.9%. If 30-year UST rates increased to 2.8% over the next few years (I specifically assumed the end of 2024 for my figures), as

Mr. Reed assumes in his CAPM estimates, then current 30-year UST bonds would decline in value by approximately $172 based on a $1000 par value. After coupons over the next three years are considered, investors in 30-year UST bonds would lock in a negative compound annual return of -4.5% over the next three years. No rational investor would purchase a 30-year UST bond today if he/she were certain to lock in a negative return.

Q. How did Mr. Reed achieve his high expected market return estimate of 13.71%?

A. He applies the constant-growth DCF to all companies in the S&P 500 that pay a dividend. Mr. Reed assumed the cap-weighted Value Line 3-5-year EPS growth rates for companies in the S&P 500 are consistent with investors' expected perpetual growth in DPS for these companies. His assumption results in his view that investors assume that the S&P 500 will achieve a compound annual growth rate (i.e. growth in index value) of 12.11% forever into the future.

Q. Are you aware of any authoritative sources, academic or practical, that use Mr. Reed's approach for estimating market returns?

A. No. I know of no authoritative source that suggests this is a rational or reasonable approach for purposes of estimating market returns. In fact, I know of several authoritative sources that recommend against using a growth rate higher than GDP for purposes of determining the long-term expected return for a broad index, such as the S&P 500.

Q. Of what academic support are you aware?

A. The 2010 curriculum for Level III of the Chartered Financial Analyst ("CFA") Program discusses how analysts often use the Gordon growth model (synonymous with the constant growth DCF model used in utility ratemaking) to formulate the long-term expected return for the broader equity markets. In the case of a broad-based equity index, such as the S&P 500, it is reasonable to estimate the long-term potential capital gains for the index by using estimated nominal GDP over a long-term period. The curriculum specifically provides the following formula for estimating the constant growth rate and explanation that follows:

> Earnings growth rate = GDP growth rate + Excess corporate growth (for the index companies)
>
> where the term *excess corporate growth* may be positive or negative depending on whether the sectoral composition of the index companies is viewed as higher or lower growth than that of the overall economy. If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small.[28]

Considering that Mr. Reed's estimate of the S&P 500's dividend yield is approximately 1.5% and projected long-term growth in U.S. nominal GDP is around 4.0%, it seems that investment professionals' forecasts of long-term returns for the S&P 500 of around 5%[29] are consistent with the above-prescribed formula.

Q. Are you aware of any common valuation metrics that illustrate the unreasonableness of Mr. Reed's growth rate assumption?

A. Yes. It is common to analyze the total capitalization of a broad domestic stock market index as it compares to the economy in which the companies in the index operate. Warren Buffett made it popular when he provided insight on how high the market, as measured by the Wilshire 5000 (one of the broadest United States stock market indices), became valued as compared to U.S. GDP at the time of the "dot com" bubble around March 2000. At that time, the Wilshire 5000 was around 1.4x that of GDP. Currently it is around 2x, implying a very low market cost of equity.

Q. What would this ratio be in 50 years if the market grew at the 12.11% compound annual growth rate Mr. Reed suggests is appropriate?

A. The Wilshire 5000 index would be approximately 85x times the GDP level. Based on the market capitalization of the Wilshire 5000 of approximately $45.99 trillion as of September 30, 2021, the Wilshire 5000 would have a market capitalization of $13.96 quadrillion in 50 years. U.S. GDP was $23.19 trillion as of the same date. Based on a 4.0% long-term growth rate for the U.S. economy, GDP would be approximately $164.78 trillion in 50

[28] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.
[29] Murray Direct, p. 33, lines 5-6.

years. It is not rational to assume corporate wealth will become much larger than the economy in which it operates, let alone 85x the size of the economy. This explains why the CFA Program advises not using a perpetual growth rate much, if any, higher than the GDP growth rate of the economy(ies) in which a company operates.

Q. Do you know of any other sanity checks on the reasonableness of Mr. Reed's assumptions?

A. Mr. Reed's expected perpetual growth rate for S&P 500 stocks implies capital gains will approximate 88% of investors total returns in the market going forward (12.11%/13.71%). Over the period from 1926 through 2020, the return attribution for the market was approximately 66% capital gains and 33% dividends. It is simply illogical to expect a significant departure from these return attributes, especially considering the lower expected growth in the United States economy going forward compared to higher historical growth rates.

Q. Does Mr. Reed's Bond-Yield-Plus Risk Premium approach perpetuate the dynamic of allowed ROEs being set at a substantial margin over the COE?

A. Yes. Mr. Reed's Bond-Yield-Plus Risk Premium is a regression analysis of allowed ROEs to interest rates. Mr. Reed concludes from his analysis that because allowed ROEs do not fall as much as interest rates, an offsetting adjustment needs to be made to smooth out the reduction in allowed ROEs for this convexity. This approach does not allow sufficient compression of allowed ROEs versus the utility industry's COE. It only serves to support current utility stock valuation levels.

Q. What is your response to Mr. Reed's expected earnings analysis?

A. Mr. Reed's expected earnings analysis should be rejected because it is circular. Investors' projections for earned ROEs are heavily dependent on expected rate case outcomes. If investors believe commissions will lower allowed ROEs, then they will lower their expected ROEs. If they expect commissions to hold allowed ROEs constant, then they will project ROEs based on current levels.

Not only is Mr. Reed using projected ROE's that are already circular in nature, but he is making a further upward adjustment to Value Line's ROE projections because he believes the book value of the equity is overstated in Value Line's projections. Mr. Reed makes an adjustment to Value Line's projected equity amount for the period 2024 to 2026 in order to provide his own projection of lower common equity balance in this period. Mr. Reed already uses projected figures that are based on a 3-year average for the years 2024 through 2026. Mr. Reed's additional adjustment to Value Line's projected ROE causes him to increase the projected ROE for his proxy group by another 25 basis points from 10.22% to 10.47%.

Peter Chari's Recommended ROE:

Q. How does Mr. Chari approach his recommended allowed ROE in this case?

A. Mr. Chari uses the Commission's authorized ROE of 9.25% in Empire's 2019 electric rate case[30] as his starting point for determining whether he believes capital market conditions justify authorizing Empire a different ROE in this case. Mr. Chari relies primarily on implied DCF COE estimates from the period of Empire's 2019 rate case to implied DCF COE estimates in the current case in order to conclude that the COE has increased by 25 to 42 basis points since the Commission made its decision in the 2019 rate case, which he indicates supports his recommended ROE of 9.25% to 9.75%.

Q. Do you agree that it is appropriate to consider the Commission's 9.25% allowed ROE in the recent Empire rate case for determining a fair and reasonable ROE in this case?

A. Yes.

[30] Case No. ER-2019-0374, Report and Order, July 1, 2020.

Q. Do you agree that capital market conditions justify increasing Empire's allowed ROE from 9.25%?

A. No. Considering the long-term trends in capital markets, specifically as it relates to interest rates and bond yields, the Commission's authorized ROE of 9.25% in Empire's last rate case should be the upper limit of what is appropriate now. General capital market conditions for the electric utility industry have continued to be quite favorable, as discussed by Empire's own ROR witness, due to tremendous corporate credit support from the Federal Reserve and US Congress. Additionally, despite Mr. Reed's attempt to characterize Missouri's legislative and regulatory environment as riskier than other electric utility companies, Empire's business risk has declined since its 2019 rate case through its election of PISA. Otherwise, Empire would not be deploying significant amounts of capital in its system.

EMPIRE'S COMPANY-SPECIFIC RISKS

Q. Has Empire been able to take advantage of any investor-friendly ratemaking mechanisms since its last rate case, which the Commission decided on July 23, 2020, effective August 2, 2020?

A. Yes. Empire elected PISA immediately after the conclusion of that case.

Q. Is PISA viewed favorably by rating agencies, such as Moody's?

A. Yes. Moody's indicated the following about Empire's ability to elect PISA or revenue decoupling under the new law:

> On a positive note, Missouri Senate Bill 564, passed in June 2018, is expected to provide more supportive regulatory framework, thereby reducing regulatory lag and opening the possibility of greater spend in Missouri. The bill provides the ability for electric utilities to update their rates in between general rate cases to account for changes in customer usage due to weather or conservation. Alternatively, utilities can institute plant in service accounting to defer and recover 85% of total depreciation expense and return on qualifying electric plant placed in-service. These mechanisms should work towards shortening regulatory lag, a credit

positive. Empire intends to utilize the decoupling mechanism now available to electric utilities.[31]

Q. Why did Empire change course and elect PISA?

A. Because the Commission did not authorize it to institute decoupling in its 2019 rate case.

Q. What are the general implications of a reduced business-risk profile as it relates to a company's debt capacity?

A. As a company's business risk profile improves (less risk), the company's debt capacity increases.

Q. What cash-flow-from-operations pre-working capital to debt (CFO pre-WC/debt)[32] threshold does Moody's currently require for Empire's assigned credit rating of 'Baa1'?

A. 18%.

Q. Have Empire's actual CFO pre-WC/debt ratios been consistently above the 18% threshold?

A. Yes. During the last three years they have been in the mid-20% range, which is more consistent with an 'A' rating rather than the 'Baa1' rating assigned to Empire.

Q. What credit rating does APUC targets for itself?

A. 'BBB' (equivalent to a Moody's 'Baa2'), one notch below 'Baa1'.

[31] Credit Opinion, The Empire District Electric Company, Moody's Investor Service, January 16, 2019, p. 3.
[32] Moody's CFO pre-WC/debt ratio is similar to Standard & Poor's funds-from-operation to debt ("FFO/debt") ratio. Often both rating agencies' ratios are generally referred as FFO/debt. Both rating agencies give primary consideration to this ratio when assessing a company's credit quality.

Q. Based on the fact that LUCo has consolidated Empire's financing needs with the rest of its affiliates, is there any benefit to Empire and its ratepayers of maintaining a financial profile consistent with an 'A' rating?

A. No. Considering that Empire's debt financing is now funded at the LUCo level, there is no specific benefit to Empire's more conservative book capital structure. In fact, I would characterize it as being detrimental because, if relied upon, it results in a higher revenue requirement charged to ratepayers, with no offsetting benefit of financial strength/flexibility. In fact, as demonstrated by Empire's own inaction as it relates to evaluating debt financing options, Empire is not pursuing separate bids to determine if it could issue bonds at a lower cost than the cost assigned to intercompany loans from LUCo to Empire.

Q. How can the Commission ensure that Empire's ratepayers receive appropriate consideration for Empire's lower business risk profile from the ability to use PISA?

A. The Commission should adopt a common equity ratio below that which Empire had when it was a stand-alone company at the time of its 2016 rate case. Due to the fact that APUC has a higher business risk profile than Empire and can maintain a 'BBB' credit rating with an FFO/debt ratio of around 15%, Empire's current higher equity ratio and FFO/debt ratios are not consistent with the expectation that lower business-risk investments can support more debt. In fact, APUC itself recognizes that its regulated utility assets can support up to ** ___ ** long-term debt in their capital structures. Therefore, my recommended capital structure containing 51.75% long-term debt is less than the proportion of long-term debt APUC considers reasonable for its regulated utilities. Considering such, as well as the continued low cost of capital in general, I recommend the Commission should also reduce the allowed ROE applied to my recommended common equity ratio.

SUMMARY AND CONCLUSIONS

Q. Would you summarize your main conclusions?

A. Yes. My updated recommended after-tax ROR is 6.44%, which applies LUCo's third-party embedded cost of long-term debt of 4.05% to my recommended long-term debt ratio of 51.75% and my recommended 9% ROE to a 48.25% common equity ratio.

Empire is no longer operating as a stand-alone entity as it relates to the management of its capital structure and its access to capital. Although APUC is no longer assigning hypothetical debt costs to affiliate loans assigned to Empire's balance sheet, the costs it does assign to capital invested in Empire is not attributed to the original capital invested. As I explained, Empire received proceeds from the $600 million bond GP1 issued a year before it was actually assigned to Empire's capital structure. These circumstances illustrate the necessity and importance of "looking through" internally managed capital structures to investable capital structures, which at the very least starts at the entity contractually responsible for servicing third-party debt. In Empire's case that starts at LUCo, with potential consideration for APUC's activities. Based on my analysis of LUCo's typical adjusted capital structures, APUC's communicated targeted common equity ratios for LUCo and the 49% common equity ratio Empire last requested when it was a stand-alone company, I consider a 48.25% ratemaking common equity ratio to be reasonable in this case. However, the appropriate ratemaking common equity ratio depends on whether Empire is willing to incur any risks related to unexpected events, such as Storm Uri. If not, then the Commission should set Empire's authorized equity ratio at the low-end of my recommended range, which is 47.5%.

Empire's authorized ROE should not be higher than that which the Commission deemed reasonable at the end of July 2020 in Empire's 2019 rate case. Capital markets continue to be quite accommodative due to aggressive monetary and fiscal policies. While some may argue this causes concern about inflationary impacts on interest rates, current yields do not reflect such. The Commission should authorize a ROR based on known and fairly measurable costs of capital, and these are clearly low in the current market environment.

Empire has lower business risk due to its election of PISA, which allows it more debt capacity as well as a lower cost of equity. Therefore, a 9.0% authorized ROE is fair and reasonable considering my recommended equity ratio of 48.25%.

Q. Does this conclude your rebuttal testimony?

A. Yes.