Exhibit No.:	_____
Issue(s):	Rate of Return (ROR)/ Return on Equity (ROE)/ Capital Structure
Witness/Type of Exhibit:	Murray/Rebuttal
Sponsoring Party:	Public Counsel
Case No.:	ER-2019-0374

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

EMPIRE DISTRICT ELECTRIC COMPANY

FILE NO. ER-2019-0374

** **

Denotes Confidential Information that has been Redacted

March 3, 2020

NON-PROPRIETARY

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company's Request for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in its Missouri Service Area	)))))	Case No. ER-2019-0374

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 3rd day of March 2020.

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-2019-0374

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) Empire's asserted compliance with Financing Conditions and Access to Records Conditions imposed in Case No. EM-2016-0213, (2) the proposed ratemaking capital structure for The Empire District Electric Company ("Empire), (3) the appropriate cost of debt to apply to the debt in the capital structure, (4) the proposed allowed return on common equity ("ROE") to apply to the equity contained in the capital structure and (5) rate of return (ROR) consideration for Empire's or Staff's proposed rate adjustment mechanisms. Empire witness Robert B. Hevert provides the main supporting testimony for Empire's requested ROE, but he also attests that Empire's requested capital structure is reasonable and that he believes Empire's requested rate of return ("ROR") complies with the Financing Conditions imposed in Case No. EM-2016-0213. Empire witness Sheri Richard is the primary witness sponsoring Empire's requested ratemaking capital structure and cost of debt. She also asserts that Empire has complied with the Financing Conditions as well as the Access to Records Conditions from Case No. EM-2016-0213. Commission Staff witness Peter Chari sponsors testimony primarily on the first three issues, but he did address one of the Financing Conditions as it relates to his recommended capital structure.

Empire and Staff recommend using Empire's per books capital structure for purposes of determining Empire's revenue requirement in this case. This capital structure is not market based, cost efficient, or consequential for purposes of raising capital. The Financing Conditions imposed in Case No. EM-2016-0213 contemplated this situation and should be controlling on this matter.

Mr. Hevert's proposed ROE of 9.95% is unreasonably high and does not reflect the significant decline in the electric utility industry's cost of equity. I will describe significant changes Mr. Hevert has made to his methodology since he started sponsoring ROR testimony in Missouri ten years ago. I will also identify statements he made in past Missouri testimonies that explain Mr. Hevert's inclination to rely less on discounted cash flow (DCF) methods because of significant increases in utility stock prices in recent years. While Mr. Chari's overall ROE recommendation of 9.25% is reasonable, I will explain why the upper end of his range should be dismissed.

Both Empire and the Staff recommend Empire's cost of debt include an affiliate note from Liberty Utilities' Company ("LUCo") and exclude a first mortgage bond issued by The Empire District Gas Company ("Empire Gas"). Although I do not agree with using Empire's per books capital structure to set its allowed ROR, if the Commission were to adopt some variant of Empire's capital structure, then the cost of debt should be adjusted as I detail in my rebuttal testimony.

Empire's witness, Ms. Richard, asserts that Empire complies with the Financing Conditions and Access to Records Conditions the Commission imposed on it in Case No. EM-2016-0213. Ms. Richard provides no detail to support her assertions. In my direct testimony, I provided a fairly extensive discussion of how my recommended approach to Empire's ROR ensures compliance with some of these conditions. However, only Empire can ensure compliance with some of the other conditions. I will address these conditions in my rebuttal testimony.

CAPITAL MARKET UPDATE AND PRELIMNARY MATTERS

Q. Can you provide an update on utility capital markets to provide context for determining a fair and reasonable allowed ROE considering implied capital costs?

A. Yes. Electric utility industry valuation levels had reached new all-time highs as of February 21, 2020 (22.9x P/E), which is an expansion of approximately 2x since December 31, 2019 (21.2x P/E).[1] Although there had been some contraction in utility stock prices during the market correction the week of February 24, 2020, utility bond yields also declined during this period (utility bond prices increased). Although I will continue to monitor recent market impacts on utility securities and provide an update in my surrebuttal testimony in the case, the long-term trend in utility capital market valuation levels shows that the utility industry's cost of capital is at record lows, lows which it has not experienced since at least the 1950s. Therefore, it is not reasonable to presume recent average allowed ROEs are a good reflection of what is a reasonable ROE to authorize Empire in this case. Allowed ROEs determined as recently as the first half of 2019 were likely based on opinions that long-term interest rates were likely to increase, causing the observed consistent decline in the utility industry's cost of capital to reverse. In fact, Mr. Hevert indicated such in his ROR testimony filed at the end of 2018 in Ameren Missouri's gas rate case before this Commission, Case No. GR-2019-0077. According to the procedural schedule in that case, the Commission would not have issued a Report and Order until the third quarter of 2019. Therefore, allowed returns during much of 2019 were based on different capital market evidence than those that exist now. Using rational inputs in a DCF analysis provides reliable feedback regarding the change in the cost of equity because a DCF analysis directly captures the higher valuation levels of utility stocks. The higher valuation levels of utility stocks has been caused by a lower discount rate (i.e. cost of equity) applied to future expected cash flows, such as dividends.

I have been a ROR witness for approximately twenty years and have observed other cycles in which investors, analysts and other ROR witnesses projected long-term interest rates could not be sustained at previous record lows. While I understood commissions'

[1] Greg Gordon, et. al., "Utility Earnings & Dividend Growth Visibility Is Generally Strong, But They Are Trading At A Significant Coronavirus Risk Off Premium," February 24, 2020, Evercore ISI.

apprehension to lower allowed returns drastically because of the aggressive monetary policy in past cycles, the sustained lower long-term interest rates can no longer be dismissed as anomalous. This begs the question as to how long must a situation persist before it is accepted as the new normal. It has been over ten years since the 2008 financial crisis. Long-term interest rates declined rather precipitously in the early part of the last decade, causing many to think they would quickly rebound to levels consistent with the pre-financial crisis levels, but the low rates not only persisted, they descended even more. At one point, Japan's low growth, low interest rate environment in the 1990s was referred to as the "lost decade" as if the conditions would not persist. However, three decades later, Japan's economy has continued its low-growth, low interest rate mode. The United States' low yield environment has now extended a decade itself and there are no signs of a rebound. The effect of low yields on utilities' cost of capital is not controversial among capital market participants. The value of utility stocks increase as yields decrease. It is a rather simple relationship that is widely accepted in the investment community. It should not be a matter of *if* utility commissions should lower allowed returns, but a matter of *when* and by *how much*. I propose that Empire's shareholders should accept a modest 25 basis point reduction to Missouri's previous authorized ROE level of approximately 9.5%. This is quite reasonable considering utility debt investors have lowered their required returns by at least 50 basis points over the last several years. In fact, if long-term interest rates persist at this lower level, a reduction to Empire's allowed ROE in this case should only be the first of many incremental reductions to close the gap between Empire's allowed ROE and its cost of equity ("COE").

COMMISSION MERGER CONDITIONS

Q. Ms. Richard asserts that Empire and the other applicants in Case No. EM-2016-0213 have complied with all of the Financing Conditions that the Commission ordered them to comply with in Case No. EM-2016-0213. Do you agree?

A. No. I reviewed those financing conditions, which are in Section A Financing Conditions of the August 4, 2016, Stipulation and Agreement that was incorporated into a later August 23, 2016, Stipulation and Agreement that the Commission approved and ordered the

signatories (including the OPC and Empire, Liberty Utilities (Central) Co., Liberty Sub Corp. and Algonquin Power & Utilities Corp.) to comply with. Empire has not complied with Financing Conditions 4, 5 and 6. I explained in detail in my Direct Testimony why my ROR recommendation complies with these conditions. However, the Company has provided scant detail as to why it believes it complies with these conditions, other than simple statements such as "Any financing provided to Empire from an affiliate has been in compliance with Missouri's Affiliate Transaction Rules" or "Please refer to the testimony of Company witness Robert Hevert."

Q. Does Mr. Hevert discuss how his recommendation specifically complies with these conditions?

A. No. Although Mr. Hevert cites Conditions 4 and 5 in his testimony,[2] he simply states that because his cost of equity analysis is based on a proxy group, this ensures that his recommended ROR has not been impacted by APUC's acquisition of Empire. Specifically, as it relates to Empire's recommended capital structure, Mr. Hevert indicates that because Empire's requested common equity ratio is consistent with his proxy group, this indicates Empire's capital structure is "reasonable and appropriate for the purpose of establishing its revenue requirement."[3] Neither Mr. Hevert nor any other Empire witness compared any of Empire's previous capital structure requests to its current request. Being that Condition 5 was very specific regarding the anticipated consolidation of Empire's financing needs with those of the rest of LUCo's subsidiaries, I expected a more detailed comparison of LUCo's capital structure to that of Empire.

Q. Have you performed this detailed analysis and comparison?

A. Yes, and I present it in my direct testimony. Instead of repeating my Direct Testimony, please see pages 3 through 17 of my Direct Testimony for my detailed analysis and comparison of Empire's and its parent companies' capital structures.

[2] Hevert Direct, p. 11.
[3] *Id.,* p. 12, ll. 10-11.

Q. What about the other conditions?

A. I believe that Empire and its affiliates have not complied with Condition 3 of Section G as it relates to my discovery in this case. I have encountered discovery issues with my requests for copies of documents/information about APUC's financial management and strategies. Empire and its affiliates agreed to cooperate with Staff and OPC as it relates to this type of information when the parties negotiated the Conditions under Section G, Access to Records. I will discuss these discovery problems as it relates to the subject areas I address in the rest of my rebuttal testimony. However, most of my discovery concerns relate to Empire's either complete withholding of APUC and LUCo materials such as Board of Director documents and affiliate financing transaction materials executed to manage LUCo's capital structure and/or refusal to provide copies of specific documents mentioned in these materials. This type of potential obstruction was the intent for imposing the Access to Records Conditions.

CAPITAL STRUCTURE

Q. Do Empire's witnesses Hevert and Richard, and Staff's witness Chari provide detailed support for their capital structure recommendations?

A. No. Ms. Richard simply attaches a schedule to her Direct Testimony (Schedule SDR-6), which shows her representation of Empire's per books capital structure as of March 31, 2019. Her recommended capital structure consists of 51.91% common equity and 48.09% long-term debt. Mr. Hevert testifies that he considers Ms. Richard's proposed capital structure to be reasonable because the common equity ratio in that structure is lower than the mean common equity ratio of his proxy group. Mr. Chari recommends Empire's per books capital structure as of September 30, 2019, which he represents has a 52.9% common equity ratio.

Q. Setting aside for the moment your disagreement with using Empire's per books capital structure, are there any apparent issues with the capital structures Ms. Richard and Mr. Chari sponsor?

A. Yes. Empire's March 31, 2019 balance sheet provided in response to Office of Public Counsel (OPC) Data Request (DR) No. 3009 shows a common equity balance of $879,968,550, which is higher than the $842,107,842 balance shown on Ms. Richard's Schedule SDR-6. Empire's September 30, 2019 balance sheet provided to me in response DR No. 3009 shows a common equity balance of $914,651,942, which is higher than the $877,206,000 balance shown on Mr. Chari's Schedule PC-5.

Empire's March 31, 2019 balance sheet provided in response to OPC DR No. 3009 shows a long-term debt balance of $829,874,532, which is higher than the $780,000,000 balance shown on Ms. Richard's Schedule SDR-6. Empire's September 30, 2019 balance sheet provided to me in response OPC DR No. 3009 shows a long-term debt balance of $829,981,060, which is higher than the $780,000,000 balance shown on Mr. Chari's Schedule PC-5.

Q. Is there a logical reason for why Ms. Richard's and Mr. Chari's capital balances are different than those shown on Empire's consolidated balance sheets?

A. Yes. Empire creates consolidated financial statements that include all of its operations, including its gas distribution subsidiary, Empire Gas. However, Empire also has deconsolidated financial statements in which it breaks out Empire Gas' distribution operations from Empire's electric, water and non-regulated operations. Ms. Richard's and Mr. Chari's capital balances are apparently based on those deconsolidated financial statements.

Q. Assuming it is appropriate to use Empire's per books balance sheet information to set Empire's ROR, is it appropriate to rely on Empire's deconsolidated balance sheets to calculate that capital structure?

A. No. Even before Alqonquin Power & Utilities Corp. ("APUC") acquired Empire, Empire financed and operated itself and all of its affiliates as one entity, that is, Empire did not finance and operate Empire Gas as a stand-alone entity; therefore, the financial community assessed Empire's risk on a consolidated level, including that of Empire Gas. The only debt Empire Gas issued was in conjunction with Empire's acquisition of Aquila, Inc.'s

Missouri gas system on June 1, 2006. Subsequently, Empire financed Empire Gas' operations at the corporate level. Therefore, its capital structure has not been actively managed for purpose of ensuring it can attract capital at reasonable costs. As of December 31, 2018, Empire Gas' per books capital structure consisted of 37.28% common equity and 62.72% long-term debt. Removing this capital from Empire's consolidated capital structure causes Empire's capital structure to have a higher common equity ratio (51.42% compared to 50.84% on a consolidated basis-see Schedule DM-R-1).

Q. Is this instructive of why the Commission should set Empire's authorized ROR based on Liberty Utility Company's (LUCo's) capital structure?

A. Yes. Now it is LUCo's consolidated capital structure that APUC's officers manage to a targeted level to maintain access to debt capital at 'BBB'-rated costs. LUCo's capital structure, as adjusted, represents the balance of capital APUC's officers consider reasonable for purposes of financing its North America regulated utility assets, including those of Empire. As APUC's officers' financing decisions demonstrate, Empire is no longer performing its own financing functions or issuing securities directly to third-party investors. Although Empire's common equity ratio is somewhat close to that which Empire had when it was an independent publicly-traded company with a 3rd party investable capital structure, Empire's targeted common equity ratio is no longer a function of balancing business and financial risk for purposes of capital access. It now a targets a common equity ratio for purposes of justifying its revenue requirement.

Q. How do Empire's, LUCo's and APUC's capital structures compare as of December 31, 2019?

A. I requested financial statements through December 31, 2019, for each of these companies so I could evaluate any changes to the companies' capital structures through year-end. In response to OPC Data Request No. 3009, Empire indicated this information would not be available until March 15, 2020 for APUC, and not until April 15, 2020 for LUCo and Empire.

Q. Will you compare and contrast Empire's, LUCo's and APUC's capital structures as of December 31, 2019 and as of January 31, 2020, in your surrebuttal/true-up testimony due March 27, 2020 in this case?

A. I will certainly try, but my ability to analyze financial data through the ordered January 31, 2020 true-up date Empire requested is dependent on the Company's cooperation in timely providing updated financial data. If the Company provides true-up data in its surrebuttal testimony, I may need to request the ability to respond to the Company's true-up position in a currently unscheduled filing of an additional round of testimony.

COST OF DEBT

Q. If the Commission were to base Empire's capital structure on Empire's per book numbers, as Staff and Empire recommend, does Empire's cost of debt per its books need to be adjusted?

A. Yes. Both Staff and Empire include a $90 million affiliate note in their capital structure recommendations. APUC assigned an interest rate of 4.53% to this debt based on its own internal methodology. APUC funded this loan to Empire through an advance on LUCo's credit facility. Under the Commission's applicable affiliate transactions rule, Empire should not be charged more than the fully distributed cost or fair market value, whichever is less. LUCo funded this loan through short-term debt, which had an average cost of 2.43% through the 12-months ended September 30, 2019. Applying this interest rate rather than the 4.53% rate APUC assigned results in an embedded cost of debt of 4.52%, compared to the 4.76% recommended by Staff.

Q. If the Commission adopts the Empire consolidated capital structure you show on page 4 of your Schedule DM-D-4, what cost of debt should it apply to this capital structure?

A. 4.75%. I adjusted Empire's consolidated embedded cost of debt (4.98%), which included the Empire Gas debt issuance, which causes a higher consolidated embedded cost of debt than the 4.76% Staff recommends.

Q. How does this 4.75% compare to the cost of debt you recommend?

A. My recommended cost of debt is 4.65%, which is based on LUCo's consolidated cost of debt. While this includes capital that has not been used to fund investments in Empire's rate base, the cost of this debt is reasonable and it is the function of arms-length transactions with third-party debt investors.

RECOMMENDED ROE'S

Robert Hevert's Recommended ROE:

Q. Do you agree with Mr. Hevert's recommended ROE range of 9.8% to 10.6% for Empire in this case?

A. No.

Q. Why not?

A. Mr. Hevert recommends his ROE range based on his opinion that it is consistent with Empire's COE. Rational use of cost of equity models, utility investor assumptions, and simple tests of reasonableness prove that Empire's COE is most likely around 6% or even less considering the recent further expansion of utility P/E ratios. A COE estimate that is at least 400 basis points higher than any rational and simple test of reasonableness can support should be summarily dismissed. It simply defies common sense to suggest that utility equity investors expect double-digit returns on bond-like utility stock investments when utility bond yields are at their lowest levels in at least 60 years and utility P/E ratios are at all-time highs.

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

A. Mr. Hevert used the following methods/models: (1) Constant-Growth Discounted Cash Flow ("DCF") method; (2) the Capital Asset Pricing Model ("CAPM") and Empirical Capital Asset Pricing Model ("ECAPM"); and (3) the Bond Yield Plus Risk Premium method.

Q. Are these generally accepted methods ROE experts use for estimating a utility's COE for purposes of recommending ROEs used in setting the rates of vertically integrated utilities?

A. Yes with the exception of the ECAPM. I am not aware of investors using the ECAPM to estimate the COE to apply to expected cash flows/dividends from utility stocks.

Q. Does Mr. Hevert acknowledge that it is important to understand how investors compare and analyze their investment opportunities?

A. Yes. He points this out when discussing recent FERC cases.[4] If this is truly important, then it is logical to seek to understand how investors actually value utility stocks and the COE they use to determine target prices for utility stocks. I have done so, and I can testify that investors do not perform analyses or make the assumptions that Mr. Hevert suggests in his direct testimony.

Q. Which COE methodologies does Mr. Hevert rely on most heavily to support his recommended ROE range of 9.8% to 10.60%?

A. He gives the most weight to his CAPM and risk premium methodologies, since his mean constant-growth DCF results are around 9%, which are below his recommended ROE range.

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

A. No. Mr. Hevert assumes that his proxy groups' dividends per share ("DPS") will grow in perpetuity at a compound annual growth rate ("CAGR") of approximately 5.80%.[5] Mr. Hevert 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.[6] They do not. Mr. Hevert's conclusion is not corroborated by actual investment analysts' practices, and assuming such causes his

[4] *Id.,* p. 16, ll. 7-9 and p. 16, l. 19 through p. 17, l. 1.
[5] *Id.* Schedule RBH-D1, p. 1
[6] *Id.,* p. 49, l. 16 through p. 51., l. 4.

COE estimates to be unreliable. As I demonstrate 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 of around 6%, or even lower, based on current market conditions.

Q. Can you provide an example of the stock price estimates that would be achieved if an investor assumed a utility stock could grow in perpetuity at the rate of analysts' estimates of a 5-year CAGR in EPS?

A. Yes. Being that I just sponsored testimony in the Ameren Missouri rate case, Case No. ER-2019-0335, and I performed a company-specific cost of equity analysis on Ameren Corporation in that case, I will use Ameren Corporation as an example. I provided investor information in the Ameren Missouri case that showed they use a COE for Ameren in the 5% to low 6% range. I cited this information on page 30 of my Direct Testimony. These reports are attached as Schedules DM-R-2 and DM-R-3 to this testimony.

Using Mr. Hevert's assumption that investors project DPS will grow in perpetuity at the same rate as analysts' projected long-term CAGR in EPS (5.87% for Ameren Corp) and applying a COE similar to that used by investors, Ameren's stock would be worth over $1,500 now.

Q. What is Ameren Corp's stock worth if you use a 6% COE and a reasonable perpetual growth rate of 3%?

A. $67.

Q. What is Ameren Corp's stock price right now?

A Around $82 to $83.

Q. Do you think Ameren Corp.'s higher stock price means that Ameren's cost of equity is likely lower or the perpetual growth rate used by investors is higher?

A. Considering the fact that the increase in Ameren's stock price since the first of the year is consistent with the changes in the stock prices of the rest of the utility industry, which was not caused by a fundamental shift in growth estimates, it can mainly be attributed to an even further decline in the utility industry's cost of equity. Considering that Ameren Missouri's 30-year bond yields are at all-time lows, now below 3%, it is reasonable to conclude that the utility industry's COE is solidly in the 5% range, if not lower. Based on bond yield data, the utility industry's cost of capital has hit its lowest point in approximately 70 years.

Q. Mr. Hevert cites to several studies to support his position that investors use EPS as a proxy for DPS in the constant-growth DCF.[7] Do these studies support his position?

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*." This academic study's conclusion 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, the Cragg and Malkiel paper does not even use the DCF valuation model 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

[7] Hevert Direct, pp. 46-47.

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 specifically indicated 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 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, in which the foundation for the study concludes that investors rely and depend on their investment advisors, and therefore, stock prices reflect these expectations, it is much more reasonable to conclude that the COE assumptions used by these investment analysts 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 analysis, is not credible. Equity analysts often use the dividend discount model ("DDM") to estimate a fair price to pay for the 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 the stock prices will reflect their estimates of future dividends and the required return from these dividends. Consequently, if one accepts the studies 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. Hevert'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 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 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.

Mr. Malkiel has been consistent with 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.[8] 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

[8] 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.

ability of the 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 discounted cash flow analysis.

Q. Which of Mr. Hevert's models seem to provide the main support for his higher COE estimates?

A. Models that use risk premium estimates, which are heavily influenced by subjective estimates in market returns.

Q. Does Mr. Hevert summarize the results of his risk premium influenced models in his direct testimony?

A. Yes. Table 3 on page 22 of his testimony shows various results for both versions of his Capital Asset Pricing Model ("CAPM") and his Bond Yield Plus Risk Premium Model.

Q. What do these results indicate?

A. Other than the standard CAPM using Bloomberg Beta Coefficients, the rest of his risk premium methodologies imply COE estimates of around 9.6% to 11%.

Q. What market risk premium does Mr. Hevert use for purposes of his CAPM analyses?

A. Mr. Hevert assumes market risk premiums of 12.15% and 12.25% for purposes of his CAPM estimates.

Q. Are market risk premiums synonymous with total expected market returns?

A. No. Market risk premiums are added to a risk-free rate to provide a projected total market return.

Q. What does Mr. Hevert suggest investors project for total equity market returns in the U.S.?

A. Mr. Hevert suggests that investors expect total market returns of 14.78% to 14.95% for U.S. broad equity indices, such as the S&P 500. Mr. Hevert adds his estimated market risk premiums to a current and projected risk-free rate of 2.63% and 2.70%, respectively, to arrive at these expected market returns.

Mr. Hevert's estimate of total returns on the S&P 500 is twice that of expectations from such reputable sources as The Survey of Professional Forecasters and JP Morgan Asset Management. They are even higher than JP Morgan Asset Management's expected returns for emerging markets of 9.2% to 11.15%.[9]

Q. Does Mr. Hevert testify in his direct testimony that he derives his market risk premium estimates by using data from two sources, Bloomberg and Value Line?

A. Yes. However, it is important to clarify that Mr. Hevert did not rely on these sources for direct market risk premium estimates. He simply used these sources to extract financial data that he incorporated into his own method of estimating market risk premiums.

Q. Why is this important to clarify?

A. Because the market risk premiums I rely on for my COE estimates are direct market risk premium estimates from investor-recognized sources. To be clear, my market risk premium estimates are corroborated by those actually used by investors.

Q. How did Mr. Hevert achieve market risk premium estimates of 12.15% and 12.25% using financial data from these sources?

A. Mr. Hevert adds consensus 5-year CAGR in EPS of over 12% to a current dividend yield to determine a projected return for the S&P 500. 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 do not recommend using a growth rate

[9] https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/2019/survq119; and
https://am.jpmorgan.com/us/en/asset-management/gim/protected/adv/ltcma/executive-summary

higher than GDP for purposes of determining the expected return for a broad index, such as the S&P 500.

Q. Can you provide an example?

A. Yes. The 2010 curriculum for Level III of the Chartered Financial Analyst ("CFA") Program discussed 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 provided the following formula for estimating the constant growth rate with an 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.[10]

Considering the fact that the S&P 500's dividend yield is approximately 2% and projected growth in U.S. nominal GDP is approximately 4.0%, it seems most investment professionals' forecasts of returns in the 6% range are consistent with above-prescribed formula.

Q. What long-term growth rate is embedded in Mr. Hevert's expected market returns?

A. Based on my analysis of Mr. Hevert's workpapers, it is in the range of 12.6% to 12.9%.

Q. Are you aware of any common valuation metrics that show how irrational Mr. Hevert's market growth rate expectations are?

[10] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.

A. Yes. This valuation metric provides a sanity check on potential growth for capital markets. Warren Buffett made this metric popular in 2001 when he provided insight on how high the market, as measured by the Wilshire 5000, became valued as a multiple of U.S. GDP. At that time, the Wilshire 5000 was around 1.4x that of GDP. As of December 31, 2019, it was approximately 1.5x GDP.

Q. What would this ratio be in 50 years if the market grew at the midpoint of Mr. Hevert's suggested market growth rates?

A. The Wilshire 5000 index would be approximately 67.5x times the GDP level. Based on the market capitalization of the Wilshire 5000 of approximately $32.9 trillion as of December 31, 2019, the Wilshire 5000 would have a market capitalization of $13.3 quadrillion in 50 years. U.S. GDP was $21.7 trillion as of the same date. Based on a 4.5% long-term growth rate for the U.S. economy, GDP would be approximately $196.3 trillion in 50 years. This shows the magnitude of Mr. Hevert's irrational market growth rate assumptions.

Q. Are Mr. Hevert's 12% market risk premium estimates consistent with those equity analysts use to make utility stock investment recommendations?

A. No. Most equity analysts use market risk premiums that are approximately half of those assumed by Mr. Hevert. I reviewed the equity research reports Empire provided in response to OPC DR No. 3001. Among those equity research reports, I discovered market risk premium estimates in the range of 5.5% to 7.0%.[11] Being that these are market risk premium estimates, they need to be adjusted for the lower risk associated with utility stock investments. Adjusting these market risk premium estimates by a beta of approximately 0.55, results in an appropriate risk premium for utility stocks in the range of 3% to 3.85%. This adjusted risk premium is slightly lower than the 4% equity risk premium the National Bank of Canada added to the 12-month forecast of the 10-year United States Treasury bond

[11] Julien Dumoulin-Smith, "Atlantica Yield: Revealing the new sponsorship dynamic," May 14, 2019, Bank of America Merrill Lynch; Mark Jarvi and Ollie Primak, "Algonquin Power & Utilities Corp.," March 3, 2019, CIBC World Markets.

yield to estimate APUC's cost of equity at 6.25%.[12] Considering that APUC has higher business risk due to its non-regulated and international investments, this cost of equity estimate is higher than what is reasonable for APUC's U.S. regulated utility assets.

Q. Why are Mr. Hevert's ECAPM results so much higher than those using the standard CAPM?

A. The results are higher because Mr. Hevert's ECAPM gives 25% weight to the unadjusted market risk premium and 75% weight to the utility beta adjusted market risk premium. Being that utility betas currently imply the equity risk premium should be cut in half, this amplifies the bias inherent in Mr. Hevert's high risk premium estimates.

Q. Does this mean that the larger the market risk premium estimate, the more widely divergent the ECAPM results will be from those of the standard CAPM?

A. Yes.

Q. Can you illustrate with an example?

A. Yes. If Mr. Hevert had used a more reasonable market risk premium of 6%, his ECAPM results using a 0.5 beta and a 2.65% risk-free rate would have been approximately 6.4% compared to a standard CAPM result of 5.65%, a difference of 75 basis points. Using Mr. Hevert's mid-point 12.2% equity risk premium, his ECAPM results would be approximately 10.28% compared to a standard CAPM estimate of 8.75%, a difference of 153 basis points. While the adjustment to the risk premium is proportional to the total risk premium in both circumstances, the absolute value of the difference grows with higher market risk premium estimates.

Q. Has Mr. Hevert testified for Empire in a Missouri rate case before this case?

A. No.

[12] Rupert M. Merer, Adnan Waheed and Hassaan Khan, "Algonquin Power and Utilities Corp. Q2-19 Outlook: Unfavourable weather negated by one-time gain," August 11, 2019, National Bank of Canada.

Q. Has Mr. Hevert sponsored testimony on behalf of any of Empire's affiliates in the past?

A. Yes. He sponsored ROR testimony on behalf of Liberty Utilities (Midstates Natural Gas) Corp. in 2014 (Case No. GR-2014-0152) and testimony on policy/rate mechanism issues on behalf of Liberty Utilities (Midstates Natural Gas) Corp. in 2018 (Case No. GR-2018-0013).

Q. Has Mr. Hevert sponsored ROR testimony for any other Missouri utilities in the past?

A. Yes. Mr. Hevert has consistently sponsored ROR testimony in Missouri for approximately the last decade. He has sponsored ROR testimony in Ameren Missouri's general rate cases since 2010, as well as KCPL and GMO rate cases since 2014. (*See* pages 9-10 of Attachment A to Mr. Hevert's Direct Testimony for a list of all rate cases in which Mr. Hevert has sponsored ROR testimony in Missouri).

Q. Has Mr. Hevert changed how he estimates utilities' cost of equity over the past decade or so?

A. Yes. In the past, Mr. Hevert placed much more weight on his DCF methods to inform his recommended ROEs. For testimonies he sponsored in Missouri during the period 2010 through 2018, Mr. Hevert sponsored a very detailed multi-stage DCF analysis in which he allowed for a variation in estimated cash flows over time. He then estimated a terminal cash flow by either using a constant-growth DDM or an estimated terminal P/E multiple.

Q. Have you asked Mr. Hevert why he no longer includes a multi-stage DCF analysis in his testimony to inform his recommended ROE?

A. No.

Q. Why not?

A. I think the reason speaks for itself. My analysis of current financial and market data Mr. Hevert typically included in his multi-stage DCF analysis, including a 5.04% long-term

economic growth rate he identified in the Ameren Missouri rate case, Case No. ER-2019-0335,[13] shows his multi-stage DCF results would have been in the 8% range. These lower results are not supportive of an ROE recommendation of 9.8% to 10.6%. In my opinion, my discussion of the changes in Mr. Hevert's analysis and testimony over the years will be more useful to the Commission for purposes of assessing the creditability of Mr. Hevert's ROE recommendation. Being that Mr. Hevert's position is that setting the allowed ROE at parity with the COE is just and reasonable, [14] methods that show a lower COE do not support his cause.

Q. Had Mr. Hevert embraced DCF approaches in the past when making ROE recommendations to this Commission?

A. Yes. In Ameren Missouri's 2012 rate case, Case No. ER-2012-0166, Mr. Hevert indicated he was placing primary weight on both his multi-stage DCF analysis and his constant-growth DCF analysis because he understood that the Missouri Public Service Commission placed primary weight on these approaches in their decision in Ameren Missouri's 2011 rate case, Case No. ER-2011-0028.[15]

Q. How did Mr. Hevert determine the terminal expected cash flow when he performed his multi-stage DCF analyses in Case No. ER-2011-0028?

A. Mr. Hevert estimated the terminal value using two methods. In the first method, he used the constant-growth DCF to estimate the terminal value. In the second method, he applied a P/E multiple to his terminal EPS estimate to determine the terminal cash flow to the investor. For purposes of estimating this terminal P/E multiple, he applied an historical median P/E multiple of 13.56x to the terminal EPS estimate.[16]

Q. Has Mr. Hevert always estimated the terminal cash flow using an historical median terminal P/E ratio?

[13] Robert Hevert Rebuttal, Case No. ER-2019-0335, Schedule RBH-R11.
[14] *Id.*, p. 9, ll. 13-15.
[15] Robert Hevert Direct, Case No. ER-2012-0166, p. 3, ll. 12-14
[16] Robert Hevert Direct, Case No. ER-2011-0028, Schedule RBH-E2.

A. No. He ceased using an historical median in Missouri rate cases after the 2011 rate case. Subsequent to the 2011 rate case, utility P/E ratios increased well above the historical medians, which if Mr. Hevert had continued to assume such, this would have caused his multi-stage DCF results to be very low.

Q. Did he still estimate a terminal value using a P/E multiple in subsequent rate cases?

A. Not in Case Nos. ER-2012-0166 and ER-2014-0258, but he resumed doing so in Case No. ER-2016-0179.

Q. What terminal P/E multiple did he use in that case?

A. 19.54x.[17]

Q What was Mr. Hevert's support for this terminal P/E multiple?

A. Mr. Hevert calculated a recent 30-day average P/E multiple for his proxy group near the time he filed his testimony.[18] He assumed that his proxy group's P/E multiple would remain the same at the terminal year, in 2031.

Q. What was the last rate case in Missouri in which Mr. Hevert performed multi-stage DCF analyses for purposes of arriving at his ROE recommendation?

A. The KCPL rate case, Case No. ER-2018-0285.

Q. What terminal multiple did he use in that case?

A. He used a terminal P/E multiple of 23.56x in his direct testimony.

Q. If Mr. Hevert had still performed a multi-stage DCF analyses in this case and estimated a terminal cash flow based on a current P/E ratio, what would this P/E ratio be?

[17] Robert Hevert Direct, Case No. ER-2016-0179, Schedule RBH-2.
[18] *Id.,* p. 56, ll. 3-4.

A. Based on the workpapers he provided with his direct testimony in this case, the average P/E ratio for his proxy group was 24.57x in June 2019. Therefore, if Mr. Hevert used a current P/E multiple to estimate a terminal cash flow, then his terminal cash flow would be determined using the electric utility industry's recent all-time high valuation levels.

Q. Why is this information relevant to evaluating Mr. Hevert's recommendation in this case?

A. It tests his credibility. This information is relevant because Mr. Hevert is placing more weight on his methodologies that use irrational equity risk premiums. In the past, when utility stocks had much lower valuation levels, due to higher costs of capital, it was easier and more credible to justify a higher cost of equity using lower terminal P/E ratios. Not that I personally consider current utility P/E multiples irrational, considering the current and expected prolonged period of low long-term interest rates. The quandary for Mr. Hevert is that in past testimonies, he consistently indicated that utility valuation levels were unsustainably high and would eventually revert to an historic mean. However, at the same time, for purposes of estimating the COE using his DCF methods, he made the contradicting assumption that they will remain high. If Mr. Hevert were to factor in an expected contraction in P/E ratios, this implies that utility investors would actually receive lower capital gains than those implied by underlying dividend and earnings growth rates. However, if one makes the assumption that current P/E ratios will be sustained, which is consistent with the efficient markets hypothesis, then one is admitting that investors expect the cost of capital to remain low for a sustained period.

Q. Mr. Hevert indicates that the sudden decline in interest rates appears more transitory than a fundamental change in investor sentiment. Do you agree?

A. No, but more importantly, the market doesn't agree. Again, although I perform my own cost of common equity studies, I also recognize that I am not an asset manager or providing professional stock advice. This is why it is important to be aware and knowledgeable of investors' analyses and communications. Although the fact that electric utility stocks have been trading at sustained P/E ratios of at least 22x provides a fairly clear signal that

investors accept lower long-term rates as a fundamental change, there is no need to just rely on my or Mr. Hevert's interpretation of this market data when this information is readily available. My review of this information shows that investors are factoring in a fundamental change in long-term interest rates. While there may have been merit in not factoring in a "lower for longer" situation when the Fed took extraordinary quantitative easing measures earlier in the last decade, this is no longer the case. Low long-term rates are now a function of market forces, both domestic and international.

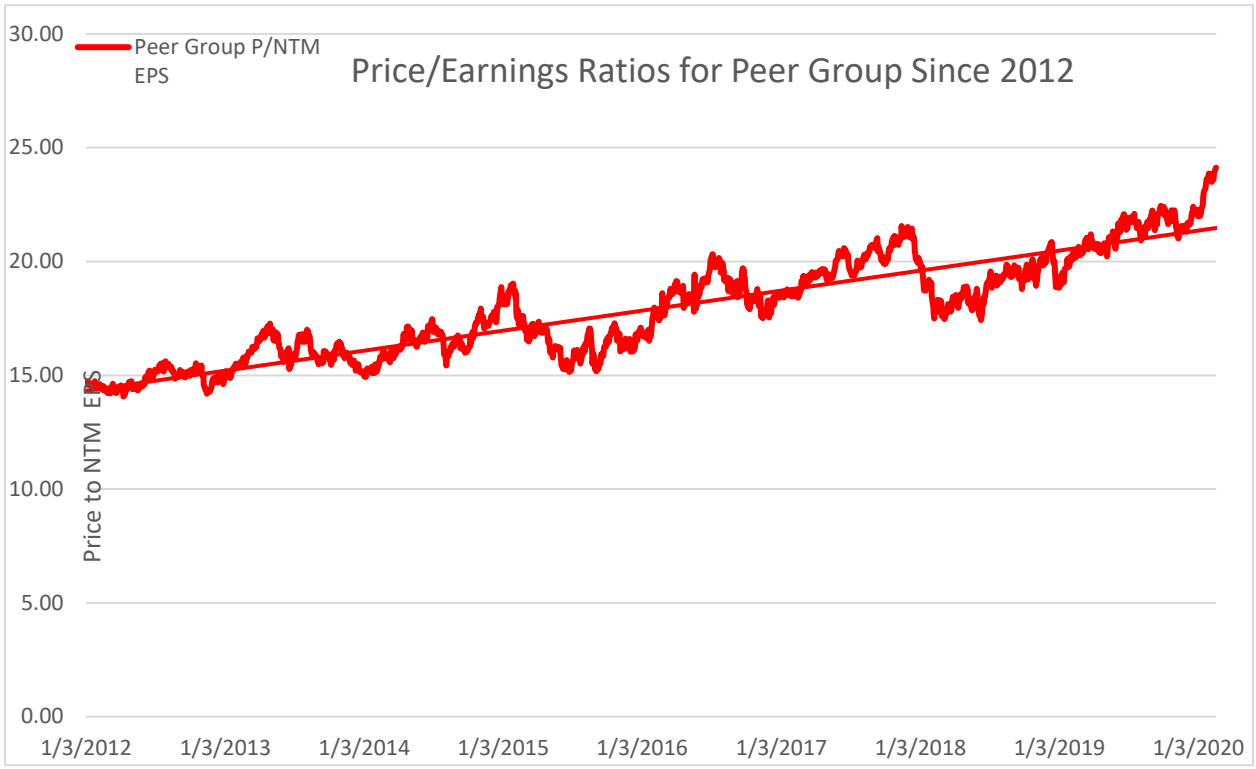
Q. Does Mr. Hevert express concern about the current high utility P/E ratio situation?

A. Yes. Mr. Hevert indicates that "utility valuations have a limit, even when investors look to them for an alternate source of income as interest rates fall."[19] He further states that "investors will not accept the incremental risk of capital losses when utility valuation levels become 'stretched'."[20]

Q. Has the absolute value of utility P/E ratios been increasing over the last decade?

A. Yes. The following chart shows the consistent and gradual increase in the price-to-next twelve months (P/NTM) EPS since January 1, 2012, for the 2012/2014 Group I identified in my Direct Testimony.[21]

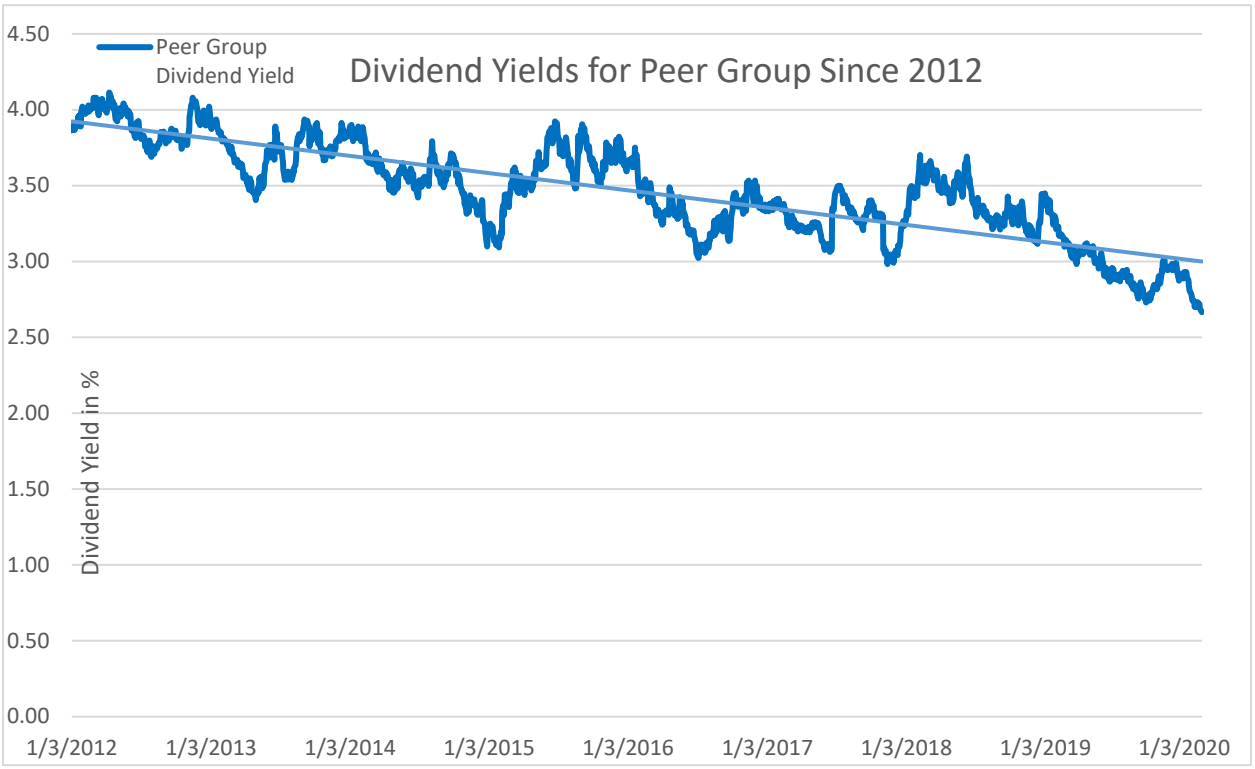
[19] Hevert Direct, p. 39, ll. 7-9.
[20] *Id,* p. 38, ll. 5-6.
[21] Murray Direct, p. 23, footnote 12.



As is obvious from the above chart, electric utility stocks haven't suddenly increased to their current high valuation levels. While there have been intermediate expansions and contractions during this period, the trend has been a consistent and sustained expansion. I added a trend line to show the directional trend of expanding valuations of electric utility stocks during the past decade.

Q. Have utility dividend yields reacted as would be expected with a consistent expansion in P/E ratios?

A. Yes. Please see the below chart showing the downward trend in dividend yields:



Q. Do you and Mr. Hevert have a fundamental difference in opinion about how the Commission should consider the expansion in utility valuation levels in setting a fair and reasonable allowed ROE?

A. Yes. Utility share prices are increasing significantly because the present value of utilities' expected cash flows are higher due to lower costs of equity. The increase in P/E ratios is not due to a fundamental shift in utility industry's growth rates, but rather a structural shift in the cost of capital. Lower costs of capital cause higher utility share prices if returns to shareholders aren't reduced. If bond prices increase due to macroeconomic factors, utility bond yields decrease. When an investor buys a bond, they are offered a return consistent with the required yield to attract debt investors, not the historical coupon rate at which the bond was issued. Utility equity investors should not be immune from this relationship. The value of utility stocks has increased because the required return on equity has decreased. It is a matter of fairness to recognize the lower cost of this equity in the allowed ROR charged to ratepayers.

Q. Has Mr. Hevert been reducing his reliance on DCF methods to estimate the COE?

A. Yes. While Mr. Hevert still performed his multi-stage DCF analyses in all Missouri rate cases until 2018, before he eliminated the multi-stage DCF altogether, he advised the Commission not to place too much weight on the implied COE estimates derived from DCF analyses. Mr. Hevert had the same opinion five years ago, because in his opinion utility P/E ratios were too high and not sustainable then.

Q. What did Mr. Hevert state in Ameren Missouri's 2014 rate case, Case No. ER-2014-0258, about high valuation levels then?

A. Mr. Hevert stated the following in his rebuttal testimony in Case No. ER-2014-0258:

> For example, the market prices used to calculate the dividend yield portion of the Constant Growth Discounted Cash Flow model were taken from a period during which utilities in general, and the proxy companies in particular, traded at unusually high, and likely unsustainable, levels.
>
> In fact, during Opposing ROE Witnesses' study period, utility Price/Earnings ("P/E") ratios exceeded their long-term average, to the point that they were greater than the market P/E ratio (as measured by the Standard & Poor's ("S&P") 500). As would be expected, utilities (including the proxy group companies), generally have traded below the market P/E ratio; there is no reason to believe that the currently elevated P/E ratios will remain in perpetuity. Yet, several of the Opposing ROE Witnesses give considerable weight to the Constant Growth Discounted Cash Flow model, which assumes that the current P/E ratio will not change, ever. The inconsistency between model assumptions and market data should cause us to view those results with great caution rather than giving them undue weight in developing ROE recommendations.[22]

Mr. Hevert went on to state the following in his surrebuttal testimony:

[22] ER-2014-0258, Hevert Rebuttal, p.5, l. 9 – p. 6, l. 2.

> The notion that the Commission should dramatically reduce the Company's ROE based on the current utility valuation multiples also is misplaced. P/E ratios tend to revert back toward their mean over time; various forward-looking market indices support that view. If the Opposing ROE Witnesses believe that the current levels represent a fundamental shift in how investors value stocks in general, and utility stocks in particular, they have not explained that position. If they see the shift as temporary change based on trading, rather than fundamental valuation precepts, they have not adequately reflected that change in the assumptions included in their ROE estimation methods and recommendations. In either case, the conclusion that the Commission should reduce the Company's ROE simply is not supported by observable and relevant market data.[23]

Consequently, Mr. Hevert has been consistent in his denial of the obvious decline in the utility industry's COE, which is clearly and logically captured using the DCF method. While I understand that the Commission may not want to react suddenly and dramatically to each extreme expansion and contraction in utility valuations, the above chart of P/E ratios shows that the overall trend since 2012 has been a gradual and steady expansion.

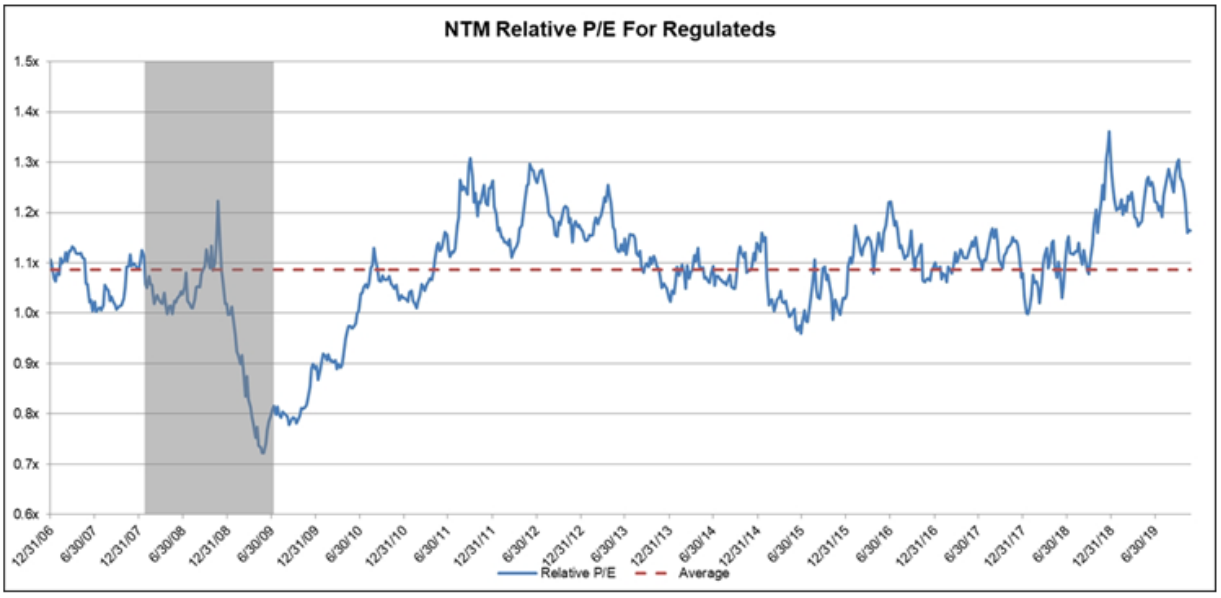
Q. Is there anything in Mr. Hevert's previous testimony about P/E ratios that may provide insight about why he abandoned his multi-stage DCF analyses?

A. Yes. He indicates that utility P/E ratios tend to revert to their mean over time. This was consistent with how Mr. Hevert approached his multi-stage DCF analyses in 2011, but not in 2016.

Q. Mr. Hevert also indicates that it isn't normal for utilities' P/E ratios to trade at a premium to the S&P 500. Do you agree?

A. Yes. This was not normal until the past decade. The following table was included in a recent Evercore ISI report:

[23] ER-2014-0258, Hevert Surrebuttal, p. 13, l. 15 – p. 14, l. 2.



[24]

As shown, utilities have been trading at a premium to the S&P 500 for almost the entire period since the U.S. economy entered the current era of low long-term rates. This is not because utilities are expected to have higher earnings growth than the S&P 500, it is simply because regulated utilities' low-risk cash flows are valued much higher in a low cost of capital environment. Of course, it is because of the current paradigm that investors should price in an expectation that regulatory commissions will eventually lower utility companies' allowed ROEs to reflect this sustained lower cost of capital. In fact, some investors have expressed some bewilderment as to the "stickiness" of allowed ROEs in light of the clear and obvious evidence that allowed ROE and long-term interest rate levels have widened considerably in recent years. Although I am not familiar with a policy goal or economic theory that suggests utility stock P/E ratios should revert to the traditional discount to the S&P 500, it is certainly intriguing. In my opinion, the fact that the S&P 500 trades at a lower P/E ratio than utilities, despite their higher growth expectations, supports lowering allowed ROEs. Allowing the utility industry's allowed ROE to COE spread to widen only perpetuates such distortions.

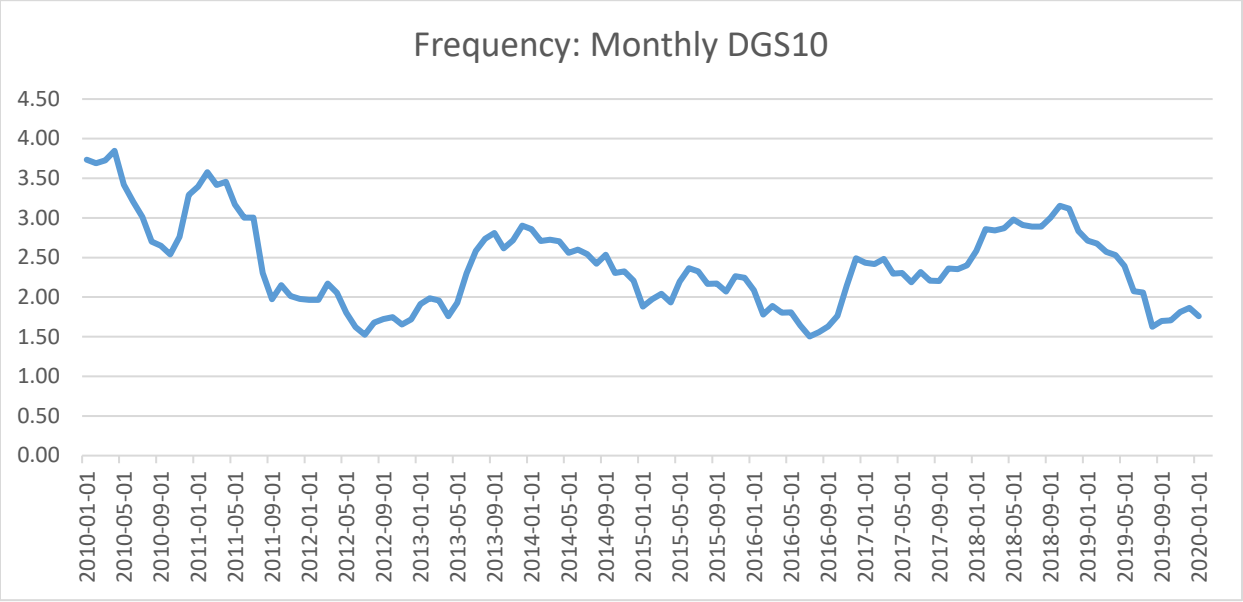
[24] Greg Gordon, et. al, "Regulatory Risk Is Starting To Be More Pronounced. Utilities Have Lagged The S&P 500 By 6.6% Since Late October," November 27, 2019, Evercore ISI, p. 9.

Q. At what interest rate levels do utilities typically trade at a premium to the S&P 500?

A. As consistently discussed by Goldman Sachs in its equity research, this relationship typically occurs when 10-year United States Treasury ("UST") trade at yields below 3%.

Q. How often has the 10-year UST been yielding less than 3% over the past decade?

A. Most of the time, as can be seen in the below chart:



There was a brief surge in late 2018, but as concerns grew once again about the sustainability of higher long-term growth, 10-year UST yields returned to levels significantly below 3%, which drove the utility industry's relative premium to the S&P 500 back to around 1.3x, near all-time highs.

Q. Does Mr. Hevert's Bond-Yield-Plus Risk Premium approach perpetuate the market distortion Mr. Hevert observes as being abnormal?

A. Yes. Mr. Hevert's Bond-Yield-Plus Risk Premium is a regression analysis of allowed ROEs to interest rates. Mr. Hevert's 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 the premium at which utilities trade to the S&P 500.

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 Spire Missouri allowed ROE of 9.8%[25] as his starting point for determining whether Empire should be authorized a different ROE. He analyzes macroeconomic and capital market conditions to determine if the current environment still supports a 9.8% ROE for gas utilities. After concluding it does not, he then compares the risk levels of gas utilities and electric utilities to determine that a 9.25% allowed ROE is reasonable for Empire's electric utility assets.

Q. Do you agree that the Commission's 9.8% allowed ROE for Spire Missouri's gas assets is the appropriate reference to determine what is fair and reasonable for Empire?

A. No. The Commission indicated in its Report & Order in the Spire Missouri case that 9.8% was reasonable because this was a recent average allowed ROE for gas utilities. As a witness in that case, I testified that Spire Missouri should be authorized a lower ROE than Missouri's vertically-integrated electric utilities because its gas distribution operations have lower business risk. Although there was a slight increase in interest rates at the time of the Spire Missouri gas rate case, the overall trend since 2015 has been a continued decline in the cost of capital. To be frank, the Commission went in the wrong direction in that case. Also, I note the Commission indicated that it believed it was authorizing an ROE consistent with average allowed ROEs for gas distribution companies. In fact, the average allowed ROE for gas companies then was closer to 9.6% after eliminating the 11.88% outlier that was included in the average at that time.[26] For this reason, the relevant

[25] Case Nos. GR-2017-0215 and GR-2017-0216.
[26] RRA Regulatory Focus, Major Rate Case Decisions January – September 2017, October 26, 2017.

benchmark for this case is the approximate 9.5% allowed ROEs the Commission initially authorized other Missouri vertically-integrated electric utility companies in 2015.

Q. Does Mr. Chari recommend an ROE range?

A. Yes. Mr. Chari recommends an ROE range of 9.05% to 9.80%. The most material difference between my recommended ROE compared to Mr. Chari's recommended ROE is the upper end of the range of reasonableness. The evidence I provide in my direct testimony proves that the Commission's previous 9.5% allowed ROEs for Missouri electric utilities is no longer reasonable. The capital market evidence overwhelmingly proves that the cost of capital has declined significantly since the Commission deemed 9.5% fair and reasonable for Missouri's electric utilities. Therefore, the upper end of Mr. Chari's ROE range should be dismissed, because it does not adequately recognize the decline in capital costs.

CONSIDERATION FOR EMPIRE'S AND STAFF'S PROPOSED REVENUE STABILIZATION MECHANISMS

Q. Are Empire and Staff proposing rate mechanisms made possible through Senate Bill 564 (SB 564)?

A. Yes. Please see OPC witness Lena Mantle's Rebuttal Testimony for OPC's position regarding whether Empire needs these mechanisms.

Q. Are these rate mechanisms viewed favorably by rating agencies, such as Moody's?

A. Yes. Moody's indicated the following about Empire's ability to elect a revenue stabilization mechanism 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.[27]

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. Has Moody's relaxed any of Empire's credit metric thresholds to specifically recognize the reduced business risk that would accompany a revenue stabilizing rate design?

A. No. However, I note that Moody's CFO pre-WC/debt threshold was already at a lower level of 17% for a 'Baa1' credit rating. This threshold is particularly insightful considering I argued in Ameren Missouri's pending rate case, Case No. ER-2019-0335, that Ameren Missouri's Moody's CFO pre-WC/debt metric should have been relaxed due to Ameren Missouri's lower business risk subsequent to its election of plant-in-service accounting (PISA). Instead, Moody's lowered Ameren Corp's metric to 17% rather than Ameren Missouri's. These inconsistencies and disparities in the thresholds Moody's assigns to Missouri's utilities solidify my opinion that, but for the fact that Missouri's electric utilities are owned by holding companies, their capital structures would contain more leverage. Consequently, it is very important to scrutinize whether a company's recommended capital structure is consistent with the risk of the assets it supports.

Q. Have Empire's actual CFO pre-WC/debt ratios been consistently above the 17% threshold?

A. Yes. They have been in the low 20% range, which is more consistent with an 'A' rating rather than a 'Baa' rating.

[27] Credit Opinion, The Empire District Electric Company, Moody's Investor Service, January 16, 2019, p. 3.

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 capital structure. In fact, I would characterize it as being detrimental because 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 made to Empire from LUCo.

Q. How can the Commission ensure that Empire's ratepayers receive appropriate consideration for Empire's lower business risk profile and at the same time help protect Empire from affiliate financing transaction concerns?

A. At the very least, the Commission should adopt my current capital structure recommendation, which captures the amount of debt capacity LUCo considers appropriate for its low-risk regulated utility assets. However, because Empire's business risk would be even lower under a revenue normalized rate design, if the Commission adopts such a rate design, I recommend the Commission adjust the allowed equity ratio to the low end of APUC's targeted range for its regulated utility assets, which is 45%.

Q. If the Commission were to adjust the allowed ROE rather than lower Empire's authorized capital structure to 45% from 46%, what is the equivalent adjustment in terms of basis points?

A. A 1% reduction in the allowed common equity ratio is equivalent to an approximate 10 to 15 basis point reduction (0.10% to 0.15%) in the allowed ROE. Therefore, if the Commission adopted my original recommended capital structure, I recommend the allowed ROE be reduced to 9.15%.

Q. What is the pro forma impact on Empire's CFO pre-WC/debt ratio if the Commission adopts either your lower recommended equity ratio or the lower allowed ROE?

A. Using the same figures I used in my Direct Testimony, the pro forma impact would be to reduce the CFO pre-WC/debt ratio to approximately ** _____ ** in 2020.

Q. Would this put Empire's Moody's credit rating at risk for a possible downgrade?

A. I don't believe so, but I note that Empire's projected financial information provided to me in response to my data requests is somewhat dated (financial projections as of February 2018). I requested Empire update its response to OPC DR No. 3000 in which I requested the most recent financial projections provided to rating agencies. Assuming I receive such information in a timely manner, I plan to provide an update to my pro forma analysis in my surrebuttal testimony.

Q. What would Empire's Moody's credit rating be if it were downgraded?

A. It would be 'Baa2.'

Q. Is this credit rating consistent with that which APUC targets for LUCo?

A. Yes. Ian Robertson indicated the following during a November 8 – 9, 2017 APUC BOD meeting:

> **_____
> _____
> _____
> _____ ** [28]

Q. Have you requested copies of APUC's and LUCo's BOD materials as it relates to APUC's financial strategies?

A. Yes. As a follow-up to the information Empire made available for me to review in response to OPC DR No. 3003, I requested copies of additional information as it relates to APUC's

[28] APUC November 8-9 Board of Director Materials, p. 3.

financial strategies. Empire objected to these requests based on their position that this information is not relevant to the Empire rate case.[29]

Q. Have APUC's corporate strategies impacted how Empire's capital structure is managed?

A. Yes. Empire is no longer an independent, stand-alone company. If it were, then documents related to its corporate financing strategies, such as dividend payout ratios and targeted credit metrics, would be maintained at Empire. This is no longer the case. Information related to APUC's corporate financing strategies should be made available for OPC's review in order to provide the Commission with information to allow it to make an informed decision on the reasonableness and the credibility of the Company's claims that Empire should be allowed a capital structure that contains much more equity than its immediate parent company, LUCo. Empire's, and by extension APUC's, lack of cooperation with at a minimum making this type of material available for OPC review in response to OPC Data Request No. 3003 and follow-up data requests thereto (3022 – 3028), is an example of Empire and its owners not complying with the Access to Records conditions in Case No. EM-2016-0213.

Q. Based on APUC's current financing strategy in which it is consolidating all of the utility companies' debt financing at LUCo, is there any practical impact on Empire's debt cost if Moody's did downgrade Empire's credit rating to 'Baa2'?

A. No. If Empire is downgraded to a 'Baa2,' this does not mean that LUCo's or APUC's rating would be downgraded. Although, reduced cash flows from Empire would obviously result in lower FFO/debt ratios at LUCo and APUC.

Q. What could APUC do to improve LUCo's FFO/debt metrics?

A. Reduce the amount of debt issued or guaranteed by LUCo. If APUC demonstrated that it is committed to maintaining a more conservative capital structure to finance its regulated

[29] OPC Data Request No's 3019 through 3028.

utility assets, including Empire, then I would support recommending a more equity-rich capital structure. However, not only is APUC not targeting a more conservative capital structure, but it is using financing schemes that move the leverage off of LUCo's balance sheet to make it appear that it is more conservatively capitalized. The Commission should not allow a revenue requirement based on a less leveraged capital structure its owners aren't committed to maintaining.

Q. Are you aware of any other APUC financing decisions that could impact Empire's ability to have ready access to short-term capital?

A. Yes. Empire now relies on LUCo for its liquidity needs. Empire had its own $200 million credit facility until February 23, 2018, when LUCo increased the capacity under its consolidated credit facility to $500 million from $200 million. Although Empire no longer had its own credit facility, Empire's commercial paper investors relied on LUCo's credit facility as a backstop to Empire's commercial paper obligations. Although Empire's commercial paper program had not been formally terminated as of January 3, 2020, the Company indicated in response to OPC DR No. 3029 that it would be terminated after Illinois and Massachusetts finalize their approval of the Liberty Utilities Money Pool Agreement.

Although LUCo only intends to use its $500 million credit facility as a backstop for the consolidated commercial paper program it established in July 2019, the ability to draw on this credit facility is important to ensure access to the commercial paper market. Therefore, it is important to have as few restrictions as possible on the ability to draw on this credit facility. However, according to Moody's recent commentary regarding LUCo's credit facility, its facility has a material adverse change ("MAC") clause. Empire's independent credit facility did not have a MAC clause. Moody's noted this restriction as not being credit supportive if Empire were to need direct access to liquidity. This is another example of APUC's corporate financing strategies potentially having a negative impact on Empire's ability to have ready access capital independent of its affiliates, which was Staff's and OPC's concern when they required Condition 6 in Case No. EM-2016-0213.

SUMMARY AND CONCLUSIONS

Q. Can you summarize your main conclusions?

A. Yes. Company witnesses, Mr. Hevert and Ms. Richard, have failed to adequately address how Empire's requested ROR complies with the Financing Conditions imposed in Case No. EM-2016-0213. I provided a detailed analysis of the Financing Conditions in my Direct Testimony. My recommended use of LUCo's adjusted capital structure and its cost of debt eliminates the detriment caused by APUC's management of Empire's capital structure, which serves to bolster cash flow to LUCo and APUC to support their credit metrics. Empire's ratepayers do not receive any benefit from financing Empire's higher cost capital structure.

Mr. Hevert abandoned one version of his DCF approaches since 2018. Because the DCF is less prone to manipulation as compared to methods using subjective market risk premiums, it is not surprising Mr. Hevert has done so. Who knows when he may abandon the DCF altogether. Because the DCF uses utility stock prices and fundamentals, it should be embraced rather than abandoned. Utility industry long-term growth rates don't change much so a declined in utility dividend yields provides a fairly clear view of the decline in the cost of equity. The correlation of utility stock prices (and therefore the COE) to debt yields is not controversial among capital market participants. In fact, they continue to openly express surprise and bewilderment that commissions haven't lowered allowed ROEs to respond to the obvious decline in the cost of capital.

Q. Does this conclude your testimony?

A. Yes.

Capital Structures as of December 31, 2018
for The Empire District Electric Company and Segments
FERC Accounting Basis

The Empire District Electric Company (Consolidated)

(thousands of United States dollars)

Capital Component		Dollar Amount	Percentage of Capital
Common Stock Equity	$	855,492	50.84%
Long-Term Debt	$	827,329	49.16%
Short-Term Debt	$	-	0.00%
Total Capitalization	**$**	**1,682,821**	**100.00%**

The Empire District Electric Company (Electric and Water)

(thousands of United States dollars)

Capital Component		Dollar Amount	Percentage of Capital
Common Stock Equity	$	820,496	51.42%
Long-Term Debt	$	775,248	48.58%
Short-Term Debt	$	-	0.00%
Total Capitalization	**$**	**1,595,744**	**100.00%**

The Empire District Gas Company

(thousands of United States dollars)

Capital Component		Dollar Amount	Percentage of Capital
Common Stock Equity	$	32,687	37.28%
Long-Term Debt	$	55,000	62.72%
Short-Term Debt	$	-	0.00%
Total Capitalization	**$**	**87,687**	**100.00%**

Sources: Response to Staff Data Request No. 0003 and The Empire District Gas Company's 2018 FERC Form No. 2 Filed with its 2018 Missouri Public Service Commission Annnual Report.

Case No. ER-2019-0374

Schedule DM-R-2 to David Murray's Rebuttal Testimony has been deemed "Confidential" in its entirety

Case No. ER-2019-0374

Schedule DM-R-3 to David Murray's Rebuttal Testimony has been deemed "Confidential" in its entirety