Exhibit No.: ______________
Issue(s): Rate of Return (ROR)/Capital Structure
Witness/Type of Exhibit: Murray/Rebuttal
Sponsoring Party: Public Counsel
Case No.: GR-2021-0320

REBUTTAL TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

THE EMPIRE DISTRICT GAS COMPANY D/B/A LIBERTY

FILE NO. GR-2021-0320

** **

Denotes Confidential Information that has been Redacted

March 17, 2022

PUBLIC

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of The Empire District Gas Company's d/b/a Liberty Request to File Tariffs to Change its Rates for Natural Gas Service	))))	Case No. GR-2021-0320

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 15th day of March 2022.

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.

TABLE OF CONTENTS

Testimony	Page
Commission Merger Conditions	5
Capital Structure	8
Cost of Debt	24
Recommended ROE	26
EDG Specific Risks	32
Summary and Conclusions	35

REBUTTAL TESTIMONY

OF

DAVID MURRAY

THE EMPIRE DISTRICT GAS COMPANY

FILE NO. GR-2021-0320

1 **Q. Please state your name and business address.**

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

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by the Missouri Office of the Public Counsel ("OPC") as a Utility
6 Regulatory Manager.

7 **Q. On whose behalf are you testifying?**

8 A. I am testifying on behalf of the OPC.

9 **Q. Did you file direct testimony in this case?**

10 A. No.

11 **Q. What issues are you addressing in rebuttal testimony?**

12 A. A fair and reasonable rate of return ("ROR") to authorize The Empire District Gas Company
13 ("EDG") for purposes of determining its revenue requirement.

14 **Q. What experience, knowledge and education qualify you to address these issues?**

15 A. Please see Appendix A for my qualifications as well as a summary of the cases in which I
16 have sponsored testimony on ROR and other financial issues.

17 **Q. Why are you testifying in rebuttal?**

18 A. I am responding to direct testimonies that address the following issues: (1) the proposed
19 ratemaking capital structure for EDG, (2) the appropriate cost of debt to apply to the debt

1 ratio in the capital structure, and (3) the proposed allowed return on common equity
2 ("ROE") to apply to the common equity ratio in the capital structure. EDG witness John
3 Reed provides the main supporting testimony for EDG's requested ROE, but he also attests
4 to the reasonableness of EDG's requested ratemaking capital structure. EDG witness Todd
5 Mooney is the primary witness sponsoring EDG's requested ratemaking capital structure
6 and cost of debt. The Commission's Staff witness Seoung Joun Won, PhD, sponsors
7 testimony as it relates to all of the aforementioned rate of return ("ROR") components.

8 Mr. Mooney and Dr. Won recommend adopting The Empire District Electric Company's
9 ("Empire") per books consolidated capital structure, for purposes of establishing EDG's
10 revenue requirement in this case. Mr. Mooney's capital structure recommendation is based
11 on his estimate of Empire's *pro forma* consolidated balance sheet data at September 30,
12 2021. Schedule TM-1 attached to Mr. Mooney's direct testimony shows his recommended
13 capital structure of 52.44% common equity and 47.56% long-term debt. Dr. Won's capital
14 structure recommendation is based on Mr. Mooney's response to Staff Data Request No.
15 187, in which Mr. Mooney provided his updated calculation of Empire's capital structure
16 at September 30, 2021 using actual data. Mr. Mooney's updated calculations indicate
17 Empire's capital structure at September 30, 2021, contained 53.84% common equity and
18 46.16% long-term debt.[1] I disagree with Mr. Mooney's and Dr. Won's recommendations
19 to use Empire's capital structure to set EDG's authorized ROR. Empire's capital structure
20 is not market-based, cost-efficient, or consequential for purposes of raising capital. It is
21 also inconsistent with the amount of debt capacity Algonquin Power & Utilities Corp.
22 ("APUC") considers appropriate and sustainable for the low-risk profile of its North
23 American regulated utilities, while still allowing for a stable investment grade credit rating
24 of around 'BBB.' Considering APUC's view that its regulated utilities can be capitalized
25 with a long-term debt ratio of up to ** ___ ** in its capital structure, Empire's point-in-
26 time capital structure that contains only 46.16% long-term debt is inconsistent with the
27 debt capacity of EDG's lower business risk profile.

[1] Mooney's response to Staff Data Request No. 187.

1 Mr. Reed's proposed ROE of 10.00% is unreasonably high and does not reflect the local
2 natural gas distribution industry's lower cost of equity ("COE") over the last several years.
3 It is Mr. Reed's position that low interest rates, and consequently, higher valuations for
4 utility stocks, are not sustainable. He believes the utility industry's cost of capital will
5 increase subsequent to the effective date of new rates established in this case. This is his
6 main rationale for dismissing lower implied COE estimates using current securities' prices
7 in favor of using projected securities' prices.

8 Staff's witness, Dr. Won, recommends the Commission authorize for EDG a ROE in the
9 range of 9.25% to 9.75% with a point recommendation of 9.5%. In his opinion, the COE
10 for local natural gas distribution companies ("LDC") has not changed significantly since
11 the Commission authorized for Spire Missouri a ROE of 9.37%. I agree the COE hasn't
12 changed much since the Spire Missouri case. Therefore, EDG does not need a higher
13 awarded ROE.

14 **Q. How did you assess Mr. Mooney's and Dr. Won's capital structure**
15 **recommendations?**

16 **A.** I independently analyzed APUC's, LUCo's, Empire's, and EDG's capital structures. I
17 analyzed APUC's, LUCo's, and Empire's quarterly balance sheets for the period December
18 31, 2019 through December 31, 2020, which captures the original test year for the 12-
19 months ended December 31, 2020 and the updated test year for the 12-months ended
20 September 30, 2021 (attached as Schedules DM-R-1.1 to DM-R-1.10). I also compare
21 EDG's recorded balance sheet figures with the other companies at specific dates to
22 highlight that, similar to Empire now, its capital structure is a function of internal
23 bookkeeping transactions. Although I accept that each of these companies has an
24 identifiable per books capital structure, Empire's and EDG's capital structures are not a
25 function of arms-length financing transactions. Therefore, I do not recommend EDG's
26 authorized ROR be set based on Empire's or EDG's per books capital structures.

1 **Q. Based on your analysis and consideration of the various capital structures and**
2 **APUC's current financing strategies, what company's capital structure is actively**
3 **managed for purposes of targeting a fair and reasonable debt ratio afforded from the**
4 **low business risk of EDG's monopoly utility operations?**

5 A. LUCo's adjusted capital structure. While APUC's capital structure is actively managed
6 (and is the only capital structure in which third-party public equity funds are raised), it is
7 also typically more conservatively managed (i.e. less leverage) to offset the higher business
8 risk associated with its non-regulated investments, which mainly consists of independent
9 power projects (APUC refers to this business segment as its "Renewable Services Group").
10 This is supported by the Commission's decision to adopt LUCo's adjusted capital structure
11 as a proxy for Empire's capital structure for ratemaking in Empire's 2019 case, Case No.
12 ER-2019-0374, a decision which the Missouri Western District Court of Appeals upheld
13 on July 27, 2021.[2] LUCo indirectly wholly-owns EDG through its indirect 100%
14 ownership of Empire.

15 **Q. Based on your review of the direct testimonies of Staff's and the Company's ROR**
16 **witnesses in this case, the testimony you sponsored in the concurrent Empire electric**
17 **rate case (Case No. ER-2021-0312), the Commission's decision in the Spire Missouri**
18 **rate case (Case No. GR-2021-0108), the testimonies you sponsored in Ameren**
19 **Missouri's recent electric and natural gas rate cases (Case Nos. ER-2021-0240 and**
20 **GR-2021-0241) and the analysis you performed to prepare this rebuttal testimony,**
21 **what do you consider a fair and reasonable authorized ROR for purposes of setting**
22 **EDG's revenue requirement in this case?**

23 A. 6.56%, calculated by applying a ROE of 9.25% to my recommended common equity ratio
24 of 48.25%, and LUCo's embedded cost of long-term debt of 4.05% to my recommended
25 long-term debt ratio of 51.75% (*see* Schedule DM-R-2). My recommended common
26 equity ratio is the mid-point of my recommended range of 47.5% to 49% (high-end is based
27 on Empire's common equity ratio before being acquired by APUC and low-end is based

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

1 on the mid-point of the stated target for LUCo of 45% to 50%). LUCo's embedded cost
2 of long-term debt of 4.05% is based purely on third-party debt issued under the LUCo debt
3 platform as well as legacy operating subsidiary debt LUCo assumed when it acquired the
4 subsidiaries. Applying this cost of debt allows for the proper matching of the third-party
5 debt issuances to the capital structure in which they reside.

6 **COMMISSION MERGER CONDITIONS**

7 **Q. Mr. Mooney asserts that he addressed Financing Conditions 4 and 5 ordered on**
8 **Empire in Case No. EM-2016-0213. Do you agree he addressed these conditions?**

9 A. I agree he addressed Financing Condition 5 by performing an analysis of APUC's, LUCo's
10 and Empire's capital structures, but I do not agree with his calculations and conclusions.
11 However, Mr. Mooney failed to specifically address Financing Condition 4, which requires
12 evidence that any potential requested higher cost of capital is not caused by APUC's
13 ownership of Empire.

14 **Q. Mr. Mooney states that Financing Conditions 4 and 5 require a comparison of EDG's,**
15 **LUCo's and APUC's capital structures.[3] Did Mr. Mooney analyze EDG's capital**
16 **structure?**

17 A. No. Mr. Mooney analyzed Empire's consolidated capital structure.

18 **Q. Do Financing Conditions 4 and 5 require a separate and distinct analysis of EDG's**
19 **capital structure for purposes of determining a benchmark cost of capital for**
20 **purposes of setting EDG's rates?**

21 A. No. I believe it was generally accepted by the signatory parties to the August 4, 2016, and
22 August 23, 2013, Stipulation and Agreements in Case No. EM-2016-0213, which were
23 approved by the Commission on September 7, 2016, that when Empire was an independent
24 company, it funded EDG through internal financial transactions. This formed the basis for
25 relying on Empire's consolidated capital structure in past EDG rate cases to determine an

[3] Mooney Direct, p. 3, lns. 11-14.

appropriate ratemaking capital structure. However, Mr. Mooney's current position to rely on Empire's capital structure to set EDG's ROR is at odds with this previous understanding. Now LUCo performs the financing functions for Empire's electric and gas operations and transfers funds through affiliate accounting transactions. If Mr. Mooney's position is that it is more appropriate to use internal per books capital structures to estimate a company's cost of capital, then he should have considered EDG's per books capital structure. Following Mr. Mooney's logic, because EDG's common equity ratio was only around 37% before APUC acquired Empire, this would serve as the benchmark of EDG's capital structure for analyzing the impact of APUC's ownership of EDG on its requested cost of capital based on a higher common equity ratio of 52% to 53%. Regardless, as I explain later, it is more appropriate to use Empire's consolidated common equity ratio of 49% before it was acquired by APUC as the benchmark for purposes of applying Financing Condition 4.

Q. When was EDG's last general rate case?

A. EDG last filed a general rate case in June of 2009, which was assigned Case No. GR-2009-0434.

Q. What common equity ratio did EDG request be used to set its ROR in that case?

A. 48%.[4]

Q. What company's capital structure was that 48% based on?

A. Empire's consolidated capital structure as of December 31, 2008.

Q. What was EDG's per books common equity ratio then?

A. Approximately 45%. For comparison, Empire's consolidated common equity ratio was 43.54% at June 30, 2009. However, during that timeframe Empire's consolidated capital

[4] Case No. GR-2009-0434, Rob Sager Direct Testimony.

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1 structure included 4% of trust preferred stock, which is a hybrid between debt and preferred
2 stock.[5]

3 **Q. What common equity ratio did Empire last request for its electric utility operations**
4 **before APUC acquired Empire?**

5 A. 49.01% in October of 2015.[6]

6 **Q. Has Mr. Mooney provided evidence to support EDG's request for a higher common**
7 **equity ratio than the ratio Empire requested for EDG when EDG was not affiliated**
8 **with APUC?**

9 A. No.

10 **Q. Do you agree with Mr. Mooney that the analysis required by Financing Condition 5**
11 **is prescriptive for purposes of determining a fair and reasonable capital structure for**
12 **EDG for ratemaking purposes?**

13 A. No. Although I disagree with Mr. Mooney's calculated capital structures, even if I did not,
14 the purposes of these conditions was to require Empire to submit evidence comparing and
15 contrasting Empire's capital structure to the companies on which it relies for financing.
16 While the potential fact that these companies use more debt than is internally allocated to
17 Empire is certainly a consideration as to a fair and reasonable authorized ratemaking capital
18 structure, it should not be the only consideration.

19 **Q. Based on your interpretation of the Financing Conditions, what do you view to be the**
20 **upper limit on EDG's common equity ratio for purpose of setting its authorized**
21 **ROR?**

22 A. Approximately 49%. A capital structure with a higher common equity ratio is generally
23 less economical than one with a lower common equity ratio, other than in situations where

[5] Case No. GR-2009-0434, Staff Cost of Service Report, Appendix 2, Schedule 8.
[6] Case No. ER-2016-0023, Robert W. Sager Direct, p. 2.

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1 a company is in financial distress and has highly speculative credit ratings. This has not
2 been the case for Empire.

3 **Q. Were the Financing Conditions created in anticipation of the potential that APUC**
4 **might use a more economically efficient capital structure to capitalize Empire than**
5 **that which APUC assigns to Empire's per books balance sheet?**

6 A. Yes. This explains Financing Condition 5. I provide more detail as to my analysis and my
7 response to the other parties' analyses of each company's capital structures next.

8 CAPITAL STRUCTURE

9 **Q. What is the basis for Staff's and EDG's recommended capital structure for EDG in**
10 **this case?**

11 A. Both Staff and EDG recommend Empire's per books capital structure as of the end of the
12 updated test year, September 30, 2021. In his direct testimony, Mr. Mooney recommends
13 a common equity ratio of 52.44%, which is based on his *pro forma* estimate of Empire's
14 capital structure as of the end of the updated test year, September 30, 2021. Mr. Mooney's
15 estimated *pro forma* equity ratio in this case is the same as his *pro forma* estimate of
16 Empire's common equity ratio at March 31, 2021, in Empire's pending electric rate case,
17 Case No. ER-2021-0312.[7] Dr. Won's recommended capital structure is also premised on
18 Empire's capital structure as of September 30, 2021. Dr. Won cites Mr. Mooney's
19 response to Staff DR No. 187 to support his specific recommended capital structure ratios
20 of 53.84% common equity and 47.16% long-term debt at September 30, 2021.

21 **Q. Do you agree with using Empire's per books capital structure to set EDG's authorized**
22 **ROR?**

23 A. No. Empire's capital structure is no longer market-based. Empire's current facts and
24 circumstances are similar to the facts and circumstances applicable to EDG even before
25 APUC acquired Empire on January 1, 2017. EDG has been a subsidiary of Empire since

[7] Case No. ER-2021-0312, Mooney Direct, Schedule TM-3.

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1 Empire acquired the gas systems from Aquila Inc. in 2006. In order to partially fund its
2 acquisition of the natural gas distribution assets, Empire caused its newly-formed
3 subsidiary at the time, EDG, to issue $55 million of 30-year mortgage bonds concurrent
4 with the closing of Empire's purchase of these assets. However, subsequent to this debt
5 issuance, EDG has had no independent third-party financing activity. EDG's capital
6 structure has not been managed for cost efficiency, financial stability, third-party capital
7 access or ratemaking since this initial bond issue. I discussed this in Empire's 2019 electric
8 rate case, Case No. ER-2019-0374.[8]

9 **Q. Would you elaborate?**

10 A. Yes. Before APUC acquired Empire, Empire financed itself and all of its affiliates on a
11 consolidated basis. That is, Empire did not finance EDG as a stand-alone entity; therefore,
12 the financial community assessed Empire's risk on a consolidated level, including that of
13 EDG. The only debt EDG issued was the $55 million first mortgage bond used to fund the
14 acquisition of the gas utility assets from Aquila, Inc. on June 1, 2006. Subsequently,
15 Empire financed EDG's operations directly itself. Since 2015, EDG's year-end common
16 equity ratios have been in the range of 33% to 38%. Clearly, neither Empire's previous
17 stand-alone financial management (before APUC acquired Empire on January 1, 2017) nor
18 Empire's current financial management (under APUC's ownership) have actively managed
19 EDG's capital structure for the purpose of accessing independent third-party capital
20 markets.

21 **Q. Is this analogous to Empire's current relationship with its parent companies?**

22 A. Yes. Now LUCo's consolidated capital structure is actively managed to targeted levels to
23 maintain efficient and economic access to debt capital at 'BBB'-rated costs. LUCo's
24 capital structure, as adjusted, represents the balance of capital APUC considers
25 economically efficient for purposes of financing its North American regulated utility
26 subsidiaries, including Empire. As APUC's financing decisions demonstrate, Empire is no
27 longer performing its own financing functions or issuing securities directly to third-party

[8] Case No. ER-2019-0374, Murray Rebuttal, p. 7, l. 21, - p. 8, l. 20.

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1 investors. Empire's targeted common equity ratio is not a function of balancing business
2 and financial risk for purposes of accessing capital markets. It is now primarily managed
3 for ratemaking targets.

4 **Q. Has EDG's common equity ratio increased recently?**

5 A. Yes. EDG needed significant amounts of capital during February 2021 to fund excess gas
6 costs incurred during Winter Storm Uri ("Storm Uri"). APUC decided to book the $23.8
7 million affiliate capital transfer as a credit to "Capital in Excess of Par Value," which
8 increased EDG's per books common equity balance. This infusion of capital caused
9 EDG's common equity ratio to increase to 52.45% at March 31, 2021, which is fairly
10 consistent with APUC's targeted common equity ratio for Empire of around 53%.

11 **Q. How did Empire fund this equity infusion into EDG?**

12 A. Empire received funds from LUCo's shared money pool (i.e. short-term debt). Therefore,
13 EDG's internal equity infusion was funded by money pool borrowings that are assigned a
14 cost consistent with commercial paper, which had been around 0.25%. Again, this
15 demonstrates the ease of achieving per books capital structure ratios desired for
16 ratemaking.

17 **Q. Before this capital infusion, typically, how had funds been transferred between EDG**
18 **and Empire?**

19 A. Usually they were transferred through the use of affiliate accounts payables and accounts
20 receivables transactions. For example, at December 31, 2012, EDG had a $25.923 million
21 balance for affiliate accounts receivable. In order to settle this affiliate accounts receivable
22 balance, Empire chose to eliminate the accounts receivable balance by debiting (a decrease)
23 the equity account "Capital in Excess of Par Value" by a similar amount.

1 **Q. Is Empire's current relationship with LUCo essentially the same as EDG's**
2 **relationship to Empire before APUC acquired Empire?**

3 A. Yes, with the exception that LUCo also has a parent company, which also raises financing
4 for LUCo. However, LUCo issues long-term debt (through Liberty Utilities Finance GP1)
5 directly to independent third party investors, similar to the financing strategy of Ameren
6 Missouri, Spire Missouri, Evergy Metro and Evergy Missouri West. Before APUC
7 acquired Empire, Empire issued debt and equity to third-party investors to fund all its
8 companies. Consequently, the same rationale for dismissing EDG's per books capital
9 structure for ratemaking now applies as it relates to Empire's per books capital structure.
10 Empire's capital structure is no longer reliable for purposes of authoring a ROR based on
11 a market-tested cost of capital, evaluated and priced based on arms-length, third-party
12 investment transactions.

13 **Q. Assuming that Empire's capital structure is relevant for purposes of accessing third-**
14 **party capital markets, would third-party investors be able to rely on Empire's**
15 **balance sheets to determine the types of capital currently supporting Empire's assets?**

16 A. No, because, as I discussed in Empire's concurrent electric rate case, Case No. ER-2021-
17 0312, Empire's balance sheets do not clearly show the various forms of capital used to fund
18 Empire's assets, whether through affiliate or third-party financing transactions.[9]

19 **Q. Would you elaborate on why Empire's balance sheets do not clearly show the various**
20 **forms of capital used to fund Empire's assets?**

21 A. Empire's affiliate short-term debt is recorded under the balance sheet account "Accounts
22 Payable and Accrued Liabilities." The balances reported under this account increased
23 substantially for the quarterly periods ending March 31, 2021, June 30, 2021 and
24 September 30, 2021. After performing more detailed discovery in Empire's concurrent
25 electric rate case[10] I requested further detailed information related to these accounts. In
26 Empire's response to OPC DR Nos. 3040 and 3041, I discovered $574,607,455,

[9] Case No. ER-2021-0312, Murray Rebuttal, p. 7, l. 23 – p. 9, l. 8.
[10] Case No. ER-2021-0312, Empire responses to OPC DR Nos. 3040, 3041 and 3047.

1 $432,351,554, and $400,562,592 for March 31, 2021, June 30, 2021, and September 30,
2 2021, respectively, were attributed to money pool borrowings. LUCo set up a shared
3 regulated money pool in September 2020 to allocate internal and/or externally generated
4 liquidity to affiliates that need funds. Empire needed these significant capital advances
5 during this period to fund extraordinary costs related to Storm Uri expenditures, completing
6 the acquisition of the Kings Point, North Fork Ridge, and Neosho Ridge wind projects, and
7 its increased capital spend in conjunction with Empire's election of plant in service
8 accounting ("PISA").

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

11 A. As of September 30, 2021, Empire's capital structure consisted of 46.59% common equity,
12 39.62% long-term debt and 13.79% short-term debt. After adjusting short-term debt for
13 the approximate $119 million of construction work in progress ("CWIP") outstanding on
14 the same date and Storm Uri costs of approximately $207 million, Empire's adjusted
15 capital structure consists of 52.48% common equity, 44.63% long-term debt, and 2.89%
16 short-term debt.

17 As of June 30, 2021, Empire's capital structure consisted of 45.04% common equity,
18 39.95% long-term debt and 15.01% short-term debt. After adjusting short-term debt for
19 the approximate $105 million of CWIP outstanding on the same date and Storm Uri costs
20 of approximately $207 million, Empire's adjusted capital structure consists of 50.51%
21 common equity, 44.80% long-term debt, and 4.69% short-term debt.

22 As of March 31, 2021, Empire's capital structure consisted of 46.05% common equity,
23 30.17% long-term debt, and 23.78% short-term debt. After adjusting short-term debt for
24 the approximate $171.5 million of CWIP outstanding on the same date and Storm Uri costs
25 of approximately $207 million, Empire's adjusted capital structure consists of 54.57%
26 common equity, 35.77% long-term debt, and 9.62% short-term debt.

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

3 A. No. Other than footnote 1 in his Schedule TM-1 that funds used to finance extraordinary
4 costs related to Storm Uri were not included in the capital structure, without identifying
5 the amount of the funds, he does not even mention short-term debt.

6 **Q. Did Dr. Won identify the short-term debt in Empire's capital structure in his direct**
7 **testimony?**

8 A. No. Dr. Won relied on Company witness Mooney's response to Staff Data Request No.
9 0187 for purposes of his recommended capital structure.[11] Mr. Mooney's response did not
10 identify short-term debt in Empire's capital structure.

11 **Q. Are these examples of why the Commission should dismiss Empire's per books capital**
12 **structure for purposes of setting EDG's ratemaking capital structure?**

13 A. Yes. APUC consistently has managed Empire's per books long-term capital ratios
14 (common equity and long-term debt) to target an approximate 53% common equity ratio.
15 Because these capital ratios are the result of internal bookkeeping, APUC can simply
16 reclassify these money-pool borrowings as a mix of affiliate long-term loans and common
17 equity contributions to achieve its desired targeted ratemaking capital structure for Empire,
18 which, based on Empire's last two electric rate cases under APUC's ownership, appears to
19 be approximately 53% common equity and 47% long-term debt. APUC's ability to easily
20 adjust these internal capital balances provides additional support for setting Empire's ROR
21 based on a current investable, market-tested capital structure, of which there are two
22 alternatives, LUCo's adjusted capital structure and APUC's consolidated capital structure.

[11] Won Direct Testimony, Schedule SJW-6-2.

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1 **Q. Does APUC identify the capital structures it targets for itself and LUCo?**

2 A. Yes. APUC expressly recognizes that its "Regulated Services Group" (APUC's general
3 classification for LUCo's regulated utilities)[12] should be able to support its assets with a
4 higher proportion of debt due to the low business risk associated with regulated
5 monopolies. APUC communicates to investors that it considers a ** ________________
6 ____ __
7 ____
8 ____
9 ____
10 __________________________________ **

11 **Q. Have APUC's capital structures been consistent with these targets?**

12 A. Generally, but APUC's capital structure is much more complicated than implied from
13 APUC's expressed targets. APUC is a diversified company with two primary business
14 segments – APUC's Regulated Services Group is invested in Canada, United States, Chile,
15 and Bermuda. LUCo is the primary holding company for APUC's investments in its
16 United States regulated utilities with other companies holding its regulated utilities in Chile
17 and Bermuda. APUC's Renewable Energy Group is mainly invested in projects in North
18 America, but through its 44.2% ownership interest in Atlantica Sustainable Infrastructure
19 plc ("Atlantica"), it is also indirectly invested throughout Europe, South America and
20 Africa. APUC has the following forms of capital on its balance sheet: common equity,
21 60-year subordinated debt, multiple short-term debt credit facilities, mandatory convertible
22 equity units, project level debt, third-party redeemable non-controlling interests (project
23 level tax equity), third-party non-redeemable non-controlling interests (project level tax
24 equity), related party redeemable non-controlling interests and related party non-
25 controlling interests. APUC's unique financing arrangements are due to many factors such
26 as project-level financing, which includes tax equity arrangements for APUC's regulated
27 and non-regulated power projects, and investments through joint venture agreements, such

[12] Algonquin Power & Utilities Corp., Annual Information Form For the Year Ended December 31, 2021, March 3, 2022, p. 6.

1 as that related to APUC's interest in Atlantica, which causes its indirect preference share
2 in Atlantica to be consolidated on APUC's balance sheet.[13] There is no consensus among
3 rating agencies regarding how to treat these unique financial instruments for purposes of
4 assessing the amount of debt in APUC's capital structure. There is also no consensus
5 among the witnesses in this case as to whether the redeemable non-controlling interests
6 (related and third party) and non-redeemable non-controlling interests (related and third
7 party) should be included in APUC's capital structure.[14]

8 Although I had to make several assumptions and adjustments to APUC's capital structure
9 to simplify it for purposes of comparing it to those of LUCo and Empire, based on my
10 analysis, I believe APUC is generally using less leverage on average than it targets and
11 employs at LUCo. For purposes of comparing APUC's capital structure to LUCo, I
12 assigned a 50% common equity weight to APUC's 60-year subordinated debt and its
13 preferred stock. I assigned the other half of the balance of these securities to the debt ratios
14 in APUC's capital structure. Based on my understanding that the related party and non-
15 related party non-controlling interests are not direct investments in APUC, I eliminated
16 these balances from APUC's capital structure. The results of my analysis indicate that with
17 the inclusion of short-term debt, APUC's capital structure at the end of the last 3 quarters
18 through September 30, 2021 has consisted of approximately 45% equity, 45% long-term
19 debt and 10% short-term debt.

20 Although APUC's recent equity ratios are lower than APUC's expressed targets, APUC's
21 long-term debt at June 30, 2021, and September 30, 2021, contained $1.140 billion of
22 mandatorily convertible equity units ("MCEU"). The MCEU are convertible to APUC
23 common equity in June 2024, at which time APUC's common equity balance will increase
24 by the same amount. S&P provides 100% equity treatment to the MCEU when it assesses
25 APUC's financial risk. Fitch and DBRS do not assign any equity weighting to the MCEU
26 in their analysis, but because Fitch's and DBRS' (and all rating agencies for that matter)
27 assessment of financial risk includes assessing projected credit metrics (e.g., use of

[13] Algonquin Power & Utilities Corp. December 31, 2021 Consolidated Financial Statements, Note 16(b)
[14] Mooney Direct Schedule TM-3 and Won Direct Schedules SJW-5-1, SJW-5-2, and SJW-6-2.

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1 leverage), the conversion of the MCEU would be reflected in forward credit metric
2 estimates.

3 If 100% equity weight is assigned to the MCEU, this causes APUC's implied equity ratio
4 to increase from 44.48% to 54%. Consequently, the treatment of this hybrid security is a
5 material consideration as it relates to assessing APUC's credit quality. Before APUC
6 decided to issue the MCEU, it typically had an equity ratio in the low to mid 50% range.
7 Therefore, it appears that although APUC is issuing hybrid securities that require a more
8 detailed assessment for purposes of quantifying financial risk, APUC's consolidated
9 capitalization mix continues to be more conservative than that which is targeted for LUCo.

10 **Q. How did Mr. Mooney and Dr. Won treat APUC's various unique forms of capital in**
11 **their representations of APUC's capital structures?**

12 A. For the year-end December 31, 2020, Mr. Mooney included the $458.612 million of non-
13 controlling interests (both related and non-related party) in his representation of APUC's
14 common equity balance of $5,477.891 million. Mr. Mooney disaggregates the redeemable
15 non-controlling interests (both related and non-related party), preferred stock and debt.
16 However, Mr. Mooney did not disaggregate APUC's short-term debt of $345.507 million
17 from his indicated long-term debt balance of 4,538.47 million.[15]

18 Schedule SJW-5-1 and SJW-5-2 shows Dr. Won's representation of APUC's year-end
19 capital structures for the years 2018 through 2020, as well as quarter-end September 30,
20 2021.[16] Dr. Won does not include either the redeemable non-controlling interests (related
21 and 3rd party) or the non-redeemable non-controlling interests (related and 3rd party) in his
22 representation of APUC's capital structures. Dr. Won also does not disaggregate APUC's
23 short-term debt from the indicated long-term debt balance.

24 The non-controlling interests for the periods shown on Dr. Won's Schedules SJW-5-1 and
25 SJW-5-2 consistently represent around 10% of APUC's capital structure. Because of the

[1515] Mooney Direct, Schedule TM-3, p. 1.
[16] They indicate year-end capital structures for 2017 through 2020, but according to Dr. Won's response to OPC DR No. 0223, the data is for year-end 2018 through 2020 with the final column being quarter-end September 30, 2021.

1 sizeable tax equity investment in Empire's wind projects, the non-controlling interests
2 represent 12.88% of APUC's capital structure at September 30, 2021. Dr. Won shows
3 APUC's total capitalization at September 30, 2021 at $11.5 billion, whereas Mr. Mooney's
4 response to Staff DR No. 187 indicates APUC has a total capitalization of $13.756 billion
5 at September 30, 2021. The difference is primarily due to the $1.776 billion of non-
6 controlling interest with the remaining difference attributed to current maturities of long-
7 term debt.

8 **Q. Did you include non-controlling interests in APUC's common equity balance in the**
9 **analysis you filed in your direct testimony in Empire's concurrent electric rate case,**
10 **Case No. ER-2021-0312?**

11 A. Yes.

12 **Q. Are you now?**

13 A. No. Subsequent to my filing of direct testimony in Case No. ER-2021-0312, I recognized
14 that APUC's non-controlling interests were related to the tax equity arrangements similar
15 to Empire's arrangement for its wind projects. Although this capital is consolidated on
16 APUC's books, it represents equity interests directly in projects, not in APUC. For further
17 discussion on this matter, please see pages 18 through 22 of my surrebuttal testimony in
18 Case No. ER-2021-0312. Although I am not recommending the use of APUC's capital
19 structure in this case, because Mr. Mooney's and Dr. Won's representation of LUCo's
20 capital structures includes tax equity in their reported balance of LUCo common equity,[17]
21 it is important to consider such when determining a fair and reasonable ratemaking capital
22 structure for EDG.

23 **Q. Does APUC include non-controlling tax equity interests in its common equity ratios**
24 **for purposes of presentations to rating agencies?**

25 A. No. As shown on page 15 of Schedule DM-R-3, non-controlling tax equity interests are
26 reported separately to rating agencies. As of September 30, 2020, APUC represented to

[17] Mooney Direct, Schedule TM-2 and Won Direct, Schedule SJW-6-2.

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1 Moody's that ** ____
2 ______________________ **

3 **Q. Is LUCo's capital structure as complicated as APUC's capital structure?**

4 A. No. The forms of capital used by LUCo are much simpler, with the exception of LUCo's
5 use of third-party redeemable and non-redeemable, non-controlling interests related to tax
6 equity financing invested at the project level. While this capital is consolidated on LUCo's
7 balance sheet, these non-controlling interests do not support assets included in LUCo's
8 operating utility companies' rate bases. The non-redeemable, non-controlling interests
9 relate to the tax equity investors' investment in Empire's wind projects. The redeemable,
10 non-controlling interests relate to tax equity investors' interests in LUCo's subsidiary,
11 Calpeco's, solar generation project. Because this capital does not support LUCo's rate
12 base investments, it should not be included in LUCo's capital structure.

13 Although the types of capital LUCo uses to support its investments are not as complicated
14 as APUC, the affiliate financing agreements used to transfer capital create complexity in
15 analyzing LUCo's capital structure. However, LUCo's per books capital structure can be
16 adjusted to determine the true proportion of debt supported by LUCo. LUCo explicitly
17 guarantees all debt issued by the financing subsidiary Liberty Utilities Finance GP1
18 ("GP1"). The funds raised through these debt issuances are used to purchase common
19 equity in LUCo. Therefore, adding this additional debt to LUCo's debt balance and
20 subtracting it from its equity balance provides a more accurate reflection of the financial
21 risk contained in LUCo's capital structure.

22 The other recent complicating factor as it relates to assessing LUCo's recent capital
23 structures is the increased amount and proportion of short-term debt it has used during 2020
24 and 2021. Inclusion of short-term debt materially dilutes the percentage of common equity
25 indicated in LUCo's actual capital structures. In these circumstances, it is important to
26 consider the cause for the increased use of short-term debt and the likely forms of capital
27 which may be used to refinance the short-term debt. In these situations, it is logical to rely

1 on the companies' communications to investors and rating agencies as to their targeted
2 capital structures.

3 **Q. What do you conclude from your analysis of LUCo's actual adjusted capital**
4 **structures over the period December 31, 2019, through September 30, 2021?**

5 A. LUCo's adjusted common equity ratio gradually increased from around 45% in early 2020
6 to 51.5% on March 31, 2021. Due to LUCo's significant increase in it its use of short-term
7 debt since March 31, 2021, its common equity ratio has been approximately 47% for the
8 quarters-ended June 30, 2021 and September 30, 2021. The average quarterly common
9 equity ratio for the original test year period was 46.86% and 48.65% for the updated test
10 year period. The quarterly average common equity ratio over the entire original test year
11 period and updated period (19 months ended September 30, 2021) was 47.5%.

12 **Q. Does including short-term debt in LUCo's capital structures significantly impact**
13 **LUCo's common equity ratios?**

14 A. Yes. The approximate 47% common equity ratio at June 30, 2021, and September 30,
15 2021, increases to approximately 54% if short-term debt is excluded. LUCo's average
16 quarterly common equity ratio for the original test year period increased to 49.57% from
17 46.86%. LUCo's average quarterly common equity ratio for the updated test year period
18 increased to 52.16% from 48.65%. The quarterly average common equity ratio over the
19 entire original test year period and updated period (19 months ended September 30, 2021)
20 increased to 51.24% from 47.5%.

21 **Q. How should LUCo's short-term debt be considered when determining a fair and**
22 **reasonable ratemaking capital structure for EDG?**

23 A. It should be considered as it relates to setting a fair and reasonable common equity ratio,
24 but assuming the Commission sets EDG's ratemaking capital structure based on LUCo's
25 capital structure policies and targets, short-term debt should not be included as a separate
26 component and cost for setting EDG's ROR.

1 **Q. Why not?**

2 A. Since the effective date of the Commission's order in Case No. ER-2019-0374, APUC has
3 been capitalizing Empire's gas and electric utility CWIP balances based solely on a short-
4 term debt rate. Empire's consolidated CWIP balances as a percentage of net plant and total
5 capitalization has typically been higher than the percentage of short-term debt in LUCo's
6 capital structure (other than significant increases in short-term debt during the second
7 quarter of 2020 due to Covid-19 and the second and third quarters of 2021 due to Storm
8 Uri costs). Therefore, it does not appear that LUCo is consistently using short-term debt
9 to support its subsidiaries' rate bases, including that of EDG.

10 **Q. Did Mr. Mooney and Dr. Won eliminate all of LUCo's short-term debt for purposes**
11 **of evaluating LUCo's capital structure at September 30, 2021?**

12 A. Yes. Dr. Won presents LUCo's capital structure at September 30, 2021, on Schedule SJW-
13 6-1. Dr. Won relied on Mr. Mooney's calculations of LUCo's capital structure he provided
14 in response to Staff Data Request No. 187 (attached as Schedule DM-R-4). As is clearly
15 shown in Mr. Mooney's calculations, he did not include any short-term debt.

16 **Q. Do Mr. Mooney's and Dr. Won's representations of LUCo's capital structure at**
17 **September 30, 2021 include any capital that should not have been included in LUCo's**
18 **capital structure?**

19 A. Yes. Mr. Mooney's represents that LUCo had a common equity balance of $4,067,332,000
20 at September 30, 2021. However, Mr. Mooney's representation of LUCo's common equity
21 balance includes $549,093,000 of non-controlling interests, which represents the tax equity
22 investment directly into Empire Wind Holding Company, LLC ("Wind Holdings"), not in
23 LUCo. As I explained in Empire's electric rate case, the tax equity investors have priority
24 over LUCo debt investors due to the fact that their investment is directly in the wind
25 projects. These tax equity investors' financial interests are specifically defined in the LLC
26 agreement they executed with Empire at Wind Holdings.

1 **Q. What do Dr. Won and Mr. Mooney show LUCo's common equity ratio to be at**
2 **September 30, 2021?**

3 A. Mr. Mooney shows 58.4% and Dr. Won shows 58.55%. The slight difference is attributed
4 to the fact that Dr. Won does not include $14,970,000 of redeemable non-controlling
5 interest in his capital structure (this represents the tax equity investment in LUCo's
6 subsidiary Calpeco).

7 **Q. Does a LUCo capital structure consisting of over 58% common equity accurately**
8 **represent LUCo's typical targeted capital structure?**

9 A. No. Considering this capital structure is nowhere near the LUCo's communicated target
10 to rating agencies and investors, this should cause one to seek to understand and explain
11 the cause for this anomaly.

12 **Q. Is LUCo's capital structure at September 30, 2021, as heavily weighted in common**
13 **equity as Dr. Won and Mr. Mooney show?**

14 A. No. After including short-term debt and eliminating the non-controlling interests in
15 LUCo's September 30, 2021, LUCo's common equity ratio is approximately 47%.

16 **Q. Is this common equity ratio consistent with LUCo's targeted capital structure?**

17 A. Yes. This is at the mid-point of LUCo's stated targeted common equity ratio of 45% to
18 50%.

19 **Q. Is there anything anomalous about LUCo's September 30, 2021 capital structure?**

20 A. Yes. The short-term debt ratio was at its highest level in the last couple of years at a ratio
21 of 13.53%. As shown on page 2 of Schedule DM-R-1, LUCo had a similar large proportion
22 of short-term debt on June 30, 2020 (12.90%) and June 30, 2021 (12.33%).

1 **Q. If LUCo continues to target a 45% to 50% common equity ratio (i.e. ** ________**
2 **____________________ **), what is the implication for how short-term debt will be**
3 **refinanced?**

4 A. With long-term debt, which would cause its common equity ratio to continue to be
5 consistent with the mid-point of the targeted range.

6 **Q. What was LUCo's common equity ratio subsequent to its refinancing of the**
7 **significant amount of short-term debt it had outstanding for the quarter-ended, June**
8 **30, 2020?**

9 A. 48.97% at September 30, 2020. GP1 issued a $600 million bond on September 23, 2020,
10 which was largely used to refinance the $614.51 million of short-term debt LUCo had
11 outstanding on June 30, 2020.

12 **Q. Why are you recommending a range of common equity ratios rather than specific**
13 **ratio?**

14 A. Because of the significant fluctuations in the proportion of short-term debt in LUCo's
15 capital structure. My decision to make a recommendation based on a range is consistent
16 with APUC's own policy of communicating a range of targeted capital structures over time.
17 Obviously, over the last couple of years, unexpected events such as Covid-19 and Storm
18 Uri have caused APUC to alter the way in which it has funded its capital needs. Before
19 excess costs incurred related to Storm-Uri, LUCo's common equity ratio had increased to
20 the upper half of its targeted range of 45% to 50%. For this reason, it is fair to authorize a
21 ratemaking common equity ratio above the mid-point of LUCo's target. However, EDG's
22 ratemaking common equity ratio should be capped at 49% because this was Empire's
23 requested common equity ratio before it was acquired by APUC. Additionally, the last
24 time LUCo's short-term debt was completely refinanced, LUCo had a common equity ratio
25 of approximately 49%.

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1 **Q. If the Commission chooses to use Empire's capital structure at September 30, 2021,**
2 **to set EDG's ROR as EDG witness Mooney and Staff witness Won recommend, what**
3 **should the Commission use for Empire's internal per books capital structure?**

4 A. Rather than Mr. Mooney's and Dr. Won's recommended capital structures the Commission
5 should, after adjusting for the tax equity capital and internal money pool borrowings netted
6 for CWIP and Storm Uri, use Empire's capital structure at September 30, 2021, composed
7 of 52.48% common equity, 44.63% long-term debt and 2.89% short-term debt. Applying
8 my recommended ROE of 9.25%, Empire's cost of long-term debt of 3.76% and a cost of
9 short-term debt of 0.22%[18] to these respective ratios results in an after-tax ROR of 6.54%.

10 **Q. How does this compare to your recommended ROR based on LUCo's targeted capital**
11 **structure and a 4.05% cost of long-term debt?**

12 A. It is lower. Applying a 9.25% ROE to a 48.25% common equity ratio and LUCo's cost of
13 long-term debt to a 51.75% long-term debt ratio results in an after-tax ROR of 6.56%.

14 **Q. Should the Commission adopt the lower ROR based on Empire's capital structure?**

15 A. No. First and foremost, as I testified earlier, Empire obtains its financings through LUCo
16 which is the entity that obtains the capital from independent third parties used by its
17 subsidiaries, including Empire; therefore, Empire's capital structure is not market-based.
18 Further, as I have discussed, Empire can simply reclassify its outstanding money pool
19 borrowings as either affiliate promissory notes or affiliate equity capital contributions to
20 return Empire's capital structure to the internal targets. Empire's capital structure is no
21 longer managed for purposes of targeting efficient balances for raising third-party debt
22 capital. Therefore, although the conditions imposed on APUC when it acquired Empire
23 require it to provide evidence analyzing its companies' capital structures, these conditions
24 are not controlling for ratemaking. They simply anticipated the likelihood that Empire's
25 capital structure may be managed specifically for rate making rather than for purposes of
26 cost efficiency in raising third-party capital.

[18] EDG Response to Staff Data Request No. 52.

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1 **Q. Hypothetically, if EDG were a stand-alone LDC company, would it use short-term**
2 **debt to support the gas inventories in its rate base?**

3 A. I would expect it to. This is a typical financing strategy for LDC companies because gas
4 inventories are not a long-term asset. Typically, LDC companies increase their inventories
5 before the heating season and then draw them down during the heating season. This had
6 been the main rationale for including short-term debt in Spire Missouri's authorized
7 ratemaking capital structure before 2002 when its gas inventory investments were
8 recovered through general rates rather than through the PGA/ACA recovery mechanism.

9 **Q. What percentage of EDG's rate base is related to gas inventories?**

10 A. Approximately 5%.

11 **Q. What does this imply regarding EDG's required ROR?**

12 A. That it would be lower if the gas inventories in EDG's rate base were supported by short-
13 term debt, as this would cause an even lower cost of capital because of the lower cost of
14 short-term debt.

15 **Q. If this is how LDCs are typically capitalized, why did you not reflect that in the ROR**
16 **you recommend for EDG?**

17 A. Because by extension this approach would require further assumptions that are divorced
18 from LUCo's actual corporate financing practices. For example, because the LDC industry
19 on average has stronger credit ratings than LUCo, this may require adjustments to LUCo's
20 cost of long-term debt as well. This approach is counter to my recommendation to set
21 EDG's ROR based on LUCo's market-driven, investable capital structure.

22 **COST OF DEBT**

23 **Q. What issues do you have with EDG's and Staff's recommended costs of debt?**

24 A. Staff's recommended cost of debt of 3.76% is based on Empire's consolidated embedded
25 cost of debt at September 30, 2021. Because Staff recommends the use of Empire's per

1 books capital structure to set EDG's ROR, it recommends the cost of the debt assigned to
2 Empire's capital structure. Consequently, this cost of debt includes affiliate loan
3 transactions executed between Empire and LUCo, which includes the recent $425 million
4 affiliate loan from LUCo, which was assigned a cost of 2.08% based on GP1's $600 million
5 bond issued in June 2020. Because I consider it appropriate to set EDG's ROR based on
6 LUCo's investable capital structure, I recommend the Commission set EDG's cost of debt
7 based on LUCo's embedded cost of debt. LUCo's embedded cost of debt is a function of
8 all third-party debt transactions supported by LUCo's credit profile, whether the debt is
9 issued by GP1 or at the operating subsidiary level. This embedded cost of debt is 4.05%.
10 My cost of debt recommendation is based on all of the third-party debt issuances GP1,
11 LUCo, and LUCo's operating subsidiaries issued.

12 Mr. Mooney recommends an embedded cost of debt of 6.76% be applied to the debt ratios
13 in his recommended capital structure. Mr. Mooney's recommended cost of debt is based
14 on only one 30-year bond issued by EDG in June 2006 to partially fund Empire's
15 acquisition of the Missouri gas distribution assets previously owned by Aquila Inc. As I
16 discussed earlier in my testimony, EDG has not been financially managed as a stand-alone
17 entity since Empire created the company to hold its gas distribution system. Consequently,
18 EDG's ratepayers should not be assigned a debt cost based on only one debt issuance from
19 eighteen years ago. Furthermore, Mr. Mooney recommends this cost of debt be applied to
20 Empire's consolidated capital structure, which includes all third-party and affiliate debt
21 assigned to Empire. This is illogical considering Mr. Mooney's disaggregation of EDG's
22 debt from Empire's consolidated debt. Although I do not consider Mr. Mooney's
23 recommended cost of debt of 6.87% to be reasonable, if the Commission were to consider
24 adopting such, it should be applied to EDG's capital structure, which until it received
25 capital to fund excess gas costs in early 2021, contained approximately 37% common
26 equity.

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1 **RECOMMENDED ROE**

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

4 A. No.

5 **Q. Do you agree with Dr. Won's recommended ROE of 9.50% based on a range of 9.25%**
6 **to 9.75%?**

7 A. No, but the lower half of his range is reasonable if compared to the Commission's recent
8 authorized ROE of 9.37% for Spire Missouri in Case No. GR-2021-0108.

9 **Q. Do you agree with some of Mr. Reed's factual observations related to current capital-**
10 **market conditions?**

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

15 **Q. Do you agree with Mr. Reed's interpretation of how these market conditions should**
16 **affect the determination of a fair and reasonable authorized ROE in this case?**

17 A. No. Mr. Reed dismisses low long-term interest rates as temporary and unsustainable.
18 Therefore, he concludes that high utility stock valuation levels are not sustainable.
19 Consequently, he expresses concerns about his DCF results, which directly incorporate
20 utility stock prices into a COE estimate, causing lower dividend yields.[19]

21 **Q. Why do you disagree with Mr. Reed's interpretation?**

22 A. Lower dividend yields on utility stocks are caused by lower required returns rather than
23 higher expected growth in the utility industry. In fact, although dividend yields for the

[19] Reed Direct, p. 6, lns. 3-17.

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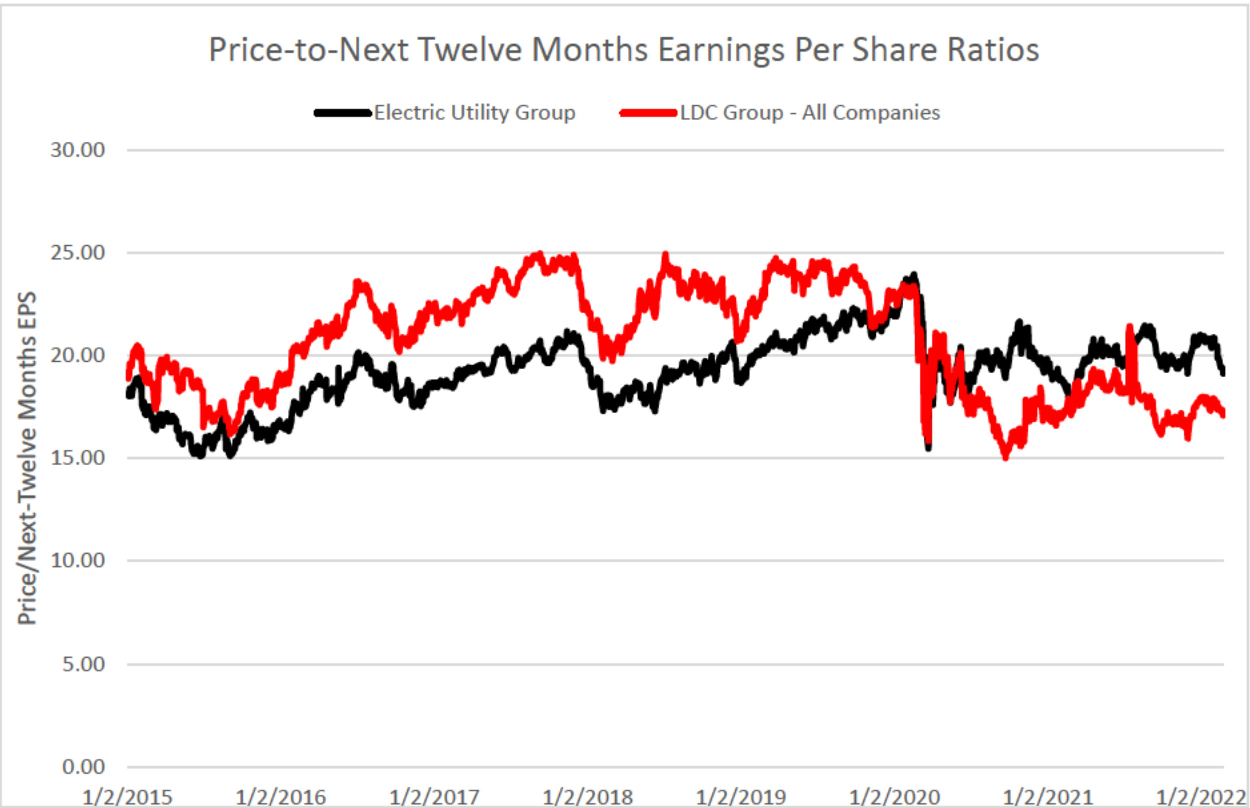
1 LDC industry have recently been higher than those of the electric utility industry, based on
2 investor commentary, it appears that the decline in LDC utility stock prices is due in part
3 to investors' concerns related to the long-term viability of the industry. This debate has
4 caused investors to evaluate scenarios in which the LDC industry is not assumed to have a
5 positive expected earnings and/or dividend growth in the long-term. In fact, investors have
6 even evaluated scenarios in which the LDC industry has no terminal value by 2060.[20]
7 However, this lack of certainty related to the future viability of the LDC industry can also
8 imply a higher cost of capital. Consequently, other cost of capital indicators, such as
9 differences in LDC and electric utility betas, should be analyzed to provide an informed
10 opinion as to potential authorized ROE differences between Empire's electric and natural
11 gas utility systems.

12 **Q. Can you provide recent valuation comparisons of the LDC industry compared to the**
13 **electric utility industry?**

14 A. Yes. See below:

[20] Sarah Akers, et. al., "Gas Utilities: Exploring Recent Underperformance + LDCs in an ESG Era," September 27, 2020, Wells Fargo.



As illustrated in the above chart, LDCs have been trading at around a two turn discount (~17x P/E vs. ~19x P/E) to electric utilities recently. LDCs P/E ratios have been around 2 to 3.5x lower than electric utilities since August 2021.

Q. What may be causing LDC's to trade at lower P/E ratios than electric utilities?

A. A lower P/E ratio can be explained by a few factors. The two most important for purposes of evaluating a fair and reasonable authorized ROE for electric utilities relative to natural gas utilities is COE and long-term growth. If LDCs P/E ratios are trading lower because of a higher COE, then LDCs should be awarded higher ROEs relative to electric utilities (assuming those awarded ROEs are applied to a capital structure consistent with that influencing the stock price, which is that of the publicly-traded parent company). If LDCs' P/E ratios are trading lower due to investors projecting low to even a potentially declining growth rate for the LDC industry, then this may be the more influential factor explaining lower P/E ratios.

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Q. Should the ROE used to set rates for EDG be materially different than that used to set rates for Empire's electric utility operations?

A. No. While the capital market information I analyzed implies LDCs may have a slightly higher ROE than electric utilities, it is not materially higher, especially based on evaluating market data over longer holding periods.

Q. Have you provided an opinion recently regarding the reasonable difference between an authorized ROE for a Missouri company's LDC assets compared to its electric utility assets?

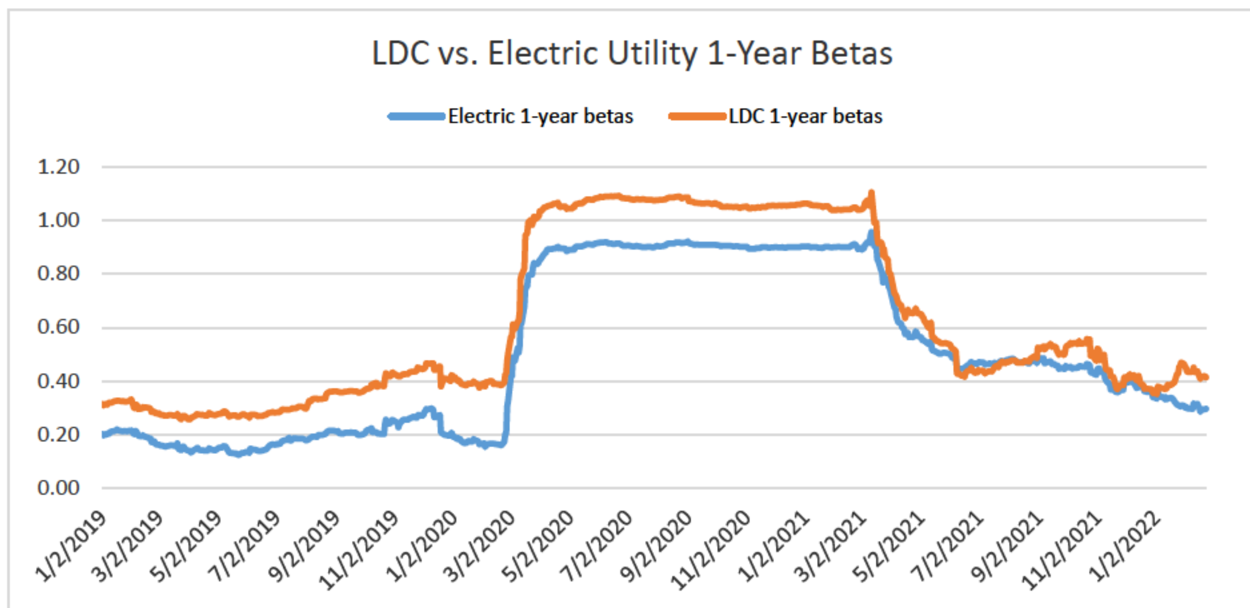
A. Yes. Ameren Missouri recently had concurrent rate cases for its electric and gas utilities, Case Nos. ER-2021-0240 and GR-2021-0241, respectively. I recommended a 9.0% authorized ROE for Ameren Missouri's electric utility system and a 9.25% for Ameren Missouri's natural gas utility system.

Q. How did you quantify this difference?

A. My 25 basis point estimate was not determined by a mechanical formula. I evaluated the differences in my electric proxy group COE analysis and my gas proxy group COE analysis. My multi-stage DCF COE analysis in the Ameren Missouri cases implied a COE spread of around 25 basis points. At the time, my CAPM COE estimates did not imply much of a difference in the COE differences between the LDC and electric utility proxy groups. Considering the CAPM method does not rely on assumptions for generic perpetual growth rates for the two industries, I considered this information to support the reasonableness of authorizing gas utilities and electric utilities similar ROEs. However, the companies in my LDC proxy group also use less leverage (i.e. debt) than those in my electric utility proxy group. Therefore, it is likely that if the LDC industry used as much leverage as is consistent with that targeted by LUCo, it is reasonable to conclude that this would cause their betas to be slightly higher. Consequently, this explains my rationale for concluding an LDC with more leverage should be awarded a slightly higher ROE. My conclusion is supported by the current discount at which LDCs trade relevant to the electric utility industry.

1 **Q. How have LDC betas and electric utility betas compared recently?**

2 A. It depends on the length of historical data analyzed. Recent 1-year beta information implies
3 that investors are requiring a higher return for LDC's as compared to electric utilities. The
4 below chart of raw betas illustrates this relationship:



5

6 As is evident from above, LDC raw betas are currently around 0.4 with electric utility betas
7 around 0.3. Applying a 0.1 beta difference to Dr. Won's estimate market risk premium
8 range of 4.63% to 6.43% implies a 0.46% to 0.64% higher COE for LDCs.

9 **Q. What do the differences in betas using longer time frames, such as 5-years, imply**
10 **about the difference in the COE between LDCs and electric utilities?**

11 A. That the required ROE (i.e. COE) is about the same. Betas using 5-years of data indicate
12 that electric utilities and LDCs have adjusted betas of around 0.80. Although the longer-
13 term beta data indicate a similar COE, because LDC market valuation data indicates LDCs
14 are trading at a discount to electric utilities and the fact that shorter-term betas for the LDC
15 industry are higher than electric utilities, it is reasonable to award a slightly higher ROE
16 for LDCs in the current capital market environment.

1 **Q. Does the quantification of the differences in LDCs and electric utilities COEs implied**
2 **by the short-term beta depend on any other estimates?**

3 A. Yes. As illustrated from the range 0.46% to 0.64% I provided above based on Staff's
4 market risk premium estimates, the lower the market risk premium, the lower the estimated
5 required return difference. For example, Mr. Reed's irrational market risk premium
6 estimates of 10.2% to 11.4%[21] imply an extra required ROE of 1.02% to 1.14% based on a
7 0.1 beta difference between LDCs and electric utilities.

8 **Q. Why are Mr. Reed's estimated market risk premiums irrational?**

9 A. Because they don't reflect any reputable investor expectations of required returns for the
10 S&P 500 going forward. Mr. Reed's market risk premium estimates are premised on an
11 expected compound annual return for the S&P 500 of 13.7% over the long-term. Goldman
12 Sachs recently provided its estimates for potential year-end 2022 S&P 500 index levels. In
13 estimating these year-end targets, Goldman Sachs used market (i.e. S&P 500) COE
14 estimates in the range of 6.5% to 7.7%, with a current estimate of 6.9%. The COE is
15 representative of investors' long-term required returns on the S&P 500 based on current
16 market valuation levels. Goldman Sachs' current market COE estimate of 6.9% was based
17 on a 10-year UST yield of 2.0%. This translates into a market risk premium of 4.9%.
18 Applying a beta difference of around 0.1 to this market risk premium suggests that
19 investors would not require higher than a 0.5% extra return to invest in LDC stocks as
20 compared to electric utility stocks.

21 **Q. What does Goldman Sachs' market COE estimates suggest about the utility**
22 **industries' COE?**

23 A. That it is much lower than Mr. Reed's 10% estimate. Applying a typical average adjusted
24 utility beta of around 0.75 to a 4.9% market risk premium indicates utility investors require
25 a 3.675% risk premium over a 10-year UST to invest in utility stocks. Adding this adjusted
26 risk premium to a 2% UST yield indicates a 5.675% COE for utilities. This estimate is

[21] Reed Direct, p. 48, ll. 9-11.

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1 over 100 basis points (i.e. 1%) lower than the mid-point (6.875%) of my estimated COE
2 range of 6.5% to 7.25% in Empire's concurrent electric rate case.[22]

3 **Q. In light of the foregoing information as it relates to your analysis and consideration**
4 **of LDC market information compared to electric utility information, what is a**
5 **reasonable relative difference in an authorized ROE for Empire's electric versus gas**
6 **utilities?**

7 A. Around 25 basis points. Therefore, relative to my ROE recommendation in Empire's
8 concurrent electric rate case, Case No. ER-2021-0312, I consider a 9% to 9.5% authorized
9 ROE as fair and reasonable to set EDG's revenue requirement.

10 **EDG SPECIFIC RISKS**

11 **Q. Mr. Reed argues that because of EDG's smaller size and higher regulatory risk, its**
12 **cost of equity is higher than the mean results for his proxy group.[23] Do you agree?**

13 A. No. First, Mr. Reed's argument for consideration of EDG's smaller size is based on the
14 hypothetical that it is a stand-alone company. As I discussed in my capital structure
15 testimony, if EDG were a stand-alone LDC, then I'd argue that approximately 5% of its
16 rate base should be capitalized with short-term debt. In fact, as I testified in Spire
17 Missouri's recent rate case, Case No. GR-2021-0108, I found that more than 5% of their
18 rate base was capitalized with short-term debt. Because as a practical matter EDG has not
19 been financially managed as a stand-alone entity since at least before EDG's 2008 rate
20 case, I recommend the Commission ignore Mr. Reed's suggestion that EDG needs a higher
21 ROE because it is a smaller company.

22 As it relates to Mr. Reed's argument that EDG is subject to higher regulatory risk than
23 operating subsidiaries in his proxy group, there are a few key issues he failed to consider
24 which would offset his higher "Regulatory Risk Assessment" analysis. First, the mere fact
25 that EDG hasn't filed a rate case since 2009 contradicts all of his listed concerns related to

[22] Case No. ER-2012-0312, Murray Direct, p. 2, lns. 17-20.
[23] Reed Direct, p. 54, l. 1 – p. 58, l. 21.

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1 Missouri's regulatory environment. Based on my analysis of EDG's financial statements, 2 it had been regularly distributing funds to Empire through its affiliate accounts receivable 3 account. As I indicated in my capital structure discussion, Empire made this internal 4 transfer of funds permanent when it debited (decreased) the "Capital in Excess of Par 5 Value" account in 2013, which caused EDG's equity ratio decline to approximately 33% 6 at December 31, 2013, from approximately 50% at December 31, 2012. EDG only recently 7 required a capital infusion related to excess gas costs in conjunction with Storm Uri. 8 Second, Mr. Reed indicates that EDG does not have a capital cost tracking mechanism.[24] 9 While it is true that EDG has not applied for an infrastructure system replacement 10 surcharge ("ISRS"), this is not due to it being prohibited from doing so. In fact, it is my 11 understanding that EDG may take advantage of such mechanism subsequent to this rate 12 case. Third, Mr. Reed's comparison of his proxy group's regulated subsidiaries to EDG 13 completely ignores the fact that the publicly-traded holding company's risk profile is that 14 which impacts the stock prices of his proxy group. Only one of the companies in his LDC 15 proxy group, ONE Gas Inc., is a pure-play regulated LDC company. Although Atmos 16 Energy Company is not a pure-play LDC, its other operations are interstate natural gas 17 pipelines regulated by the Federal Energy Regulatory Commission ("FERC"). However, 18 the remaining five companies in his proxy group have exposure to riskier non-regulated 19 operations, which causes a higher cost of capital. For example, Southwest Gas 20 Corporation's operations include a significant exposure to non-regulated utility 21 infrastructure construction under its subsidiary Centuri Group Inc., which it is in the 22 process of divesting. Also, South Jersey Industries has significant exposure to non-23 regulated investments in Energy Management and Energy Production.[25]

24 **Q. Does Mr. Reed discuss Moody's assessment of Empire's credit quality?**

25 A. Yes.

[24] Reed Direct, p. 58, ll. 4-7.
[25] South Jersey Industries 2021 SEC Form 10-K Filing, pgs. 107-111.

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1 **Q. Does he provide any details regarding Empire's financial credit metrics?**

2 A. No.

3 **Q. What cash-flow-from-operations pre-working capital to debt (CFO pre-WC/debt)[26]**
4 **threshold does Moody's currently require for Empire's assigned credit rating of**
5 **'Baa1'?**

6 A. 18%.

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

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

11 **Q. What credit rating does APUC targets for itself?**

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

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

16 A. No. Considering that Empire's debt financing is now funded at the LUCo level, there is
17 no specific benefit to Empire's more conservative book capital structure. In fact, it is
18 detrimental to Empire's ratepayers because, if relied upon, it results in a higher revenue
19 requirement charged to ratepayers, with no offsetting benefit of financial
20 strength/flexibility. In fact, as demonstrated by Empire's own inaction as it relates to
21 evaluating debt financing options, Empire is not pursuing separate bids to determine if it

[26] 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.

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1 could issue bonds at a lower cost than the cost assigned to intercompany loans between
2 LUCo and Empire.

3 **Q. How can the Commission ensure that EDG's ratepayers are charged a fair and**
4 **reasonable ROR consistent with the capital structure that funds its rate base?**

5 A. Set EDG's ratemaking capital structure consistent with LUCo's targets. Considering the
6 fact that APUC has a higher business risk profile than Empire and can maintain a 'BBB'
7 credit rating with an FFO/debt ratio of around 15% and a targeted common equity ratio of
8 ** __________ **, Empire's current higher equity ratio of 53.84% and FFO/debt ratios
9 are not consistent with its low-risk regulated utility assets. In fact, APUC itself recognizes
10 that its regulated utility assets can support up to ** ___ ** consolidated long-term debt at
11 the LUCo corporate level. Therefore, my recommended capital structure containing
12 51.75% long-term debt is quite reasonable based on APUC's own recognition of the higher
13 capacity afforded by its Regulated Service Group, which includes EDG.

14 **SUMMARY AND CONCLUSIONS**

15 **Q. Would you summarize your views on EDG's and Staff's Direct Testimonies?**

16 A. Yes. Mr. Mooney's and Dr. Won's recommendation to use Empire's capital structure to
17 set EDG's authorized ROR would result in higher than necessary rates under APUC's
18 ownership. Fortunately, the conditions imposed on the conditional approval of APUC's
19 acquisition of Empire had the objective of protecting Empire's ratepayers from potential
20 adjustments to Empire's capital structure caused by its affiliation with APUC. While
21 Financing Condition 5 required EDG to compare Empire's capital structure to those of the
22 entities on which it relies for financing, this certainly is not the only matter to consider as
23 it relates to setting a fair and reasonable authorized ROR for EDG. Although Mr.
24 Mooney's and Dr. Won's representation of LUCo's capital structures imply that it is
25 heavily weighted in common equity, the fact that their indications of LUCo's common
26 equity ratios are not even close to APUC's communicated targets should be sufficient to
27 dismiss the reliability of these assessments. The Commission should simply rely on the

1 APUC's own identified targets for LUCo to determine a reasonable ratemaking capital
2 structure for EDG.

3 Mr. Reed's recommended ROE of 10% is beyond a reasonable ROE considering the
4 declining cost of capital for the utility industry. The Commission just set an ROE of 9.37%
5 for Spire Missouri in Case No. GR-2021-0108 based on Staff's recommendation in that
6 case. Dr. Won testifies that the cost of equity hasn't changed since the Commission's
7 decision. There is no reason for the Commission to deviate much from this recent decision.

8 **Q. Would you summarize your ROR recommendation?**

9 A. Yes. I recommend the Commission set EDG's after-tax ROR at 6.56%. My recommended
10 ROR is slightly higher than the 6.44% ROR I recommended for Empire's electric utility
11 operations in the concurrent electric rate case, Case No. ER-2021-0312. This is due to the
12 fact that I recommend a 25 basis point higher ROE in this case (9.25% compared to 9.0%
13 in the electric rate case). Because Empire's electric and gas utilities are financed under the
14 same LUCo capital structure, which is a pure-play regulated utility holding company, I
15 consider it fair and reasonable to use the same capital structure and consolidated debt cost
16 for purposes of setting the ROR for Empire's electric and gas utilities. .

17 The facts and circumstances for EDG are no different than for Empire, other than the fact
18 that it is one level removed from LUCo in APUC's holding company structure. Therefore,
19 the Commission's decision in Case No. ER-2019-0374 to adopt LUCo's capital structure
20 to set Empire's ROR is relevant to this case. For that matter, the Commission's decision
21 to adopt LUCo's capital structures to set EDG's affiliates, Liberty Utilities (Midstates
22 Natural Gas) Corp. and Liberty Utilities (Missouri Water) LLC, in Case Nos. GR-2014-
23 0083 and WR-2018-0170, respectively, authorized ROR is relevant to this case. All of
24 these companies are owned and financed by LUCo. Unless there is proof that LUCo's
25 capital structure and cost of capital is unduly influenced by risks or financial management
26 inconsistent with that of low-risk regulated utilities, the Commission should not depart
27 from its past decisions as it relates to Missouri utilities which are financed at the corporate
28 level.

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1 **Q. Does this conclude your rebuttal testimony?**

2 A. Yes.

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