

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

**In the Matter of the Application and)
Request of Cunningham Telephone)
Company for an Increase in its Cost-)
Based Kansas Universal Service Fund)
Support)** **Docket No.
25-CNHT-185-KSF**

DIRECT TESTIMONY

PREPARED BY

Adam H. Gatewood

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

February 13, 2025

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

11 A. Adam H. Gatewood, 1500 Arrowhead Road, Topeka, Kansas 66604.

12 **Q. Who is your employer, and what is your title?**

13 A. I am a Senior Managing Financial Analyst for the Kansas Corporation Commission
14 (Commission).

15 **Q. What is your educational and professional background?**

16 A. I graduated from Washburn University with a B.A. in Economics in 1987 and a Master of
17 Business Administration in 1996. I have filed testimony on cost of capital, capital structure,
18 and related issues before the Commission in more than 150 proceedings. I have also filed
19 cost of capital testimony before the Federal Energy Regulatory Commission in natural gas
20 pipeline and electric transmission revenue requirement complaint dockets.

21 **Q. What is the purpose of your testimony?**

1 A. My testimony contains Staff's rate of return (ROR) for Cunningham Telephone Company,
 2 Inc. (Cunningham or Applicant). The ROR is an input to Staff's revenue requirement study
 3 that determines Cunningham's Kansas Universal Service Fund (KUSF) annual support.

4 **Executive Summary**

5 **Q. Please summarize your recommendation.**

6 A. I recommend that the Commission adopt an allowed ROR of 7.65% to set the Applicant's
 7 KUSF revenue requirement, incorporating a 9.75% return on equity, a 60% equity ratio,
 8 and a 4.50% cost of debt. Staff's recommendation is the result of a comprehensive analysis
 9 that adjusts the Applicant's proposed cost of equity and debt and the weighting of both
 10 sources of capital.

Staff Cost of Capital Recommendation Cunningham Telephone Company, Inc. 25-CNHT-185-KSF			
	Weight	Cost	Weighted Avg Cost
Equity	60.00%	9.75%	5.85%
Debt	40.00%	4.50%	1.80%
Rate of Return			7.65%

11

12 **Q. How did you conclude that a 9.75% return on equity (ROE) is a just and reasonable**
 13 **return for rural local exchange carriers (RLEC)?**

14 A. I performed an economic analysis to verify that a 9.75% ROE is just and reasonable
 15 compensation for the RLECs' equity investors in line with the legal principles espoused in
 16 several landmark cases specific to this issue. My methodology is the same type of analysis

1 investors perform to evaluate returns available in the capital markets. It is consistent with
2 Staff's analyses of rate cases of gas and electric utilities and all previous KUSF dockets.

3 Investors' expectations for the economy and capital markets have not changed significantly
4 over the past month since Staff's last KUSF testimony. Therefore, Staff's ROR testimony
5 in this docket is essentially the same and draws the same conclusions as that filed in January
6 of 2025 in Docket 25-MTLT-161-KSF, except for the data unique to Cunningham. Staff is
7 mindful that consumers ultimately bear the costs of KUSF investigations; Staff strives to
8 keep those costs as low as possible while completing a thorough review of capital markets
9 and an application-specific analysis to determine a reasonable ROR.

10 As has been Staff's goal of KUSF dockets during the past decade, Staff wants to balance
11 accurately reflecting the prevailing cost of equity capital and applying a return uniformly
12 across Kansas RLECs. Staff is willing to recommend a uniform number across the KUSF
13 dockets if it is appropriate and supported by rigorous analysis. Based on the market data of
14 the recent months, Staff finds that a 9.75% ROE continues to be reasonable and provides
15 Applicant's owners with a return significantly above that available in fixed-income
16 investments and the broad equity market. Staff demonstrates in each KUSF docket that its
17 ROE recommendation provides the RLEC a just and reasonable return while being fair to
18 all Kansans contributing to the KUSF.

19 **Q. Please summarize the Applicant's rate of return request.**

20 **A.** The Applicant requests the Commission grant a ROR equal to the 9.75% ROR authorized

1 by the Federal Communications Commission (FCC) to calculate federal high-cost support;¹
 2 Section 7 of the Application does not state a specific ROE, just a 9.75% ROR.²

Rate of Return Requested By Cunningham Telephone Company, Inc. 25-CNHT-185-KSF				
	Balance	Weight	Cost	Weighted Avg Cost
Equity	\$ 4,351,035	100.00%		
Debt		0.00%		
	\$ 4,351,035			
Cunningham Telephone Co. Requested RoR				9.75%
Source: Section 7; Schedule 1 of Application				
Requested ROR based on FCC authorized ROR effective July 1, 2021				

3

4 Since the beginning of KUSF audits, Staff has argued that the FCC's generic ROR does not
 5 meet the cost-based standard set by Kansas law that this Commission must apply when
 6 setting revenue requirements for KUSF support. Because the FCC's ROR does not
 7 differentiate between the costs of debt and equity capital that a specific RLEC employs, it
 8 does not recognize the cost savings that can result from utilizing debt capital. Nor does the
 9 FCC's ROR reflect changes in the capital markets as the FCC issued the Order in July of
 10 2016. A review of the FCC's Order indicates that the 10.75% ROR set by the FCC for
 11 2017, dropping to 10.00% in 2020 and 9.75% in 2021, incorporates an ROE greater than
 12 the cost of equity set by this Commission since the early 2000s. By some measures, using
 13 data from Kansas RLECs, the FCC's generic allowed ROR would result in an ROE over

¹ Connect America Fund, WC Docket No. 10-90, Rate of Return Order, March 23, 2016.

² Application at Section 7; 25-CNHT-185-KSF.

1 14.00% mainly because it does not recognize an RLEC's actual cost of debt.³ Based on the
 2 cost of capital studies I have prepared from 2016 to the present, even with the uptick in
 3 capital costs that began in 2022 and continued through 2024, the FCC's annual reduction
 4 does not reflect the current cost of capital.

Phase in of Authorized RoR Reduction From 11.25% to 9.75%		
Effective Date of Rate of Return	Authorized Rate of Return	
2016	11.00%	*Authorized rate of return is set at 9.75% and phased in over time
2017	10.75%	
2018	10.50%	*9.75% WACC embodies a 5.87% cost of debt 14.37% ROE with a 54.34% debt ratio
2019	10.25%	
2020	10.00%	
2021	9.75%	
FCC Report and Order and Order on Reconsideration, and Further Notice of Proposed Rulemaking; March 30, 2016 FCC 16-33; para 319-326		

5

6 The Applicant's requested rate of return has no link to returns available in the capital
 7 markets and the Applicant's embedded cost of debt. Therefore, it fails to conform to the
 8 Commission's established practice and the basic principles set out in the critical legal
 9 decisions rendered by the U.S. Supreme Court, commonly referred to as the "Hope and

³ Report and Order, Order and Order on Reconsideration, and Further Notice of Proposed Rulemaking In the Matter of Connect America Fund ETC Annual Reports and Certifications Developing a Unified Intercarrier Compensation Regime (WC Docket No. 10-90; WC Docket No. 14-58; and CC Docket No. 01-92) Released March 30, 2016. See paragraph 322.

322. We note that the WACC is supposed to compensate equity holders and debtholders who provide the funds used to finance the firm's assets. Given a rate of return set equal to 9.75 percent, an average capital structure based on our estimates of 54.34 percent debt, and a cost of debt based on our estimates of 5.87 percent, the implied cost of equity is 14.37percent. We find that not only is the WACC of 9.75 percent high enough adequately to compensate the firm's debtholders, but the implied rate of return on equity also provides equity holders with the opportunity to earn a reasonable rate of return on their investment. As support for our finding that a 9.75 percent rate of return is reasonable, we examine some benchmarks.

1 Bluefield” decisions that are the cornerstone to establishing a fair return.⁴ For these reasons,
2 the Commission should reject the FCC ROR, as it has in all past KUSF Dockets. The
3 Applicant cites several states that adopted the FCC ROR for state support calculation.⁵
4 Kansas has not, and that is simply a difference in public policy decisions of state legislatures
5 and public utility commissions.

6 **Q. Does Staff have any additional concerns surrounding this issue?**

7 A. The Kansas Legislature established a cap on aggregate annual KUSF support to RLECs.
8 Applying the FCC ROR to KUSF support calculations could cause a substantial shift in
9 support dollars among the Kansas RLECs, transferring support dollars to those RLECs with
10 the greatest leverage in their capital structures and away from RLECs with balanced,
11 conservative capital structures. Staff believes such an outcome is far from desirable for
12 stakeholders to the KUSF support system. Staff urges the Commission not to waiver from
13 its past, established practice of rejecting the FCC ROR and instead looking closely at the
14 RLECs’ actual capital costs.

⁴ See *Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia*, 262 U.S. 679, 692-3 (1923) (Bluefield); *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591, 603 (1944) (Hope): “The rate-making process under the Act, i.e., the fixing of ‘just and reasonable’ rates, involves a balancing of the investor and the consumer interests. Thus, we stated in the *Natural Gas Pipeline Co.* case that ‘regulation does not insure that the business shall produce net revenues.’ But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view, it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard, the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. The conditions under which more or less might be allowed are not important here. Nor is it important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint.”

⁵ Direct Testimony of Stacey Brigham; 25-CNHT-185-KSF.

1 **Q. How do KUSF Dockets in which the Commission sets the KUSF support level for an**
2 **RLEC differ from a typical rate case?**

3 A. A typical rate case collects the revenue requirement from a utility's customers. In
4 determining an RLEC's KUSF support, the Commission is not setting a revenue
5 requirement to determine rates *solely* paid by the RLEC customers; instead, the KUSF
6 support is coming from all Kansans who pay into the KUSF, which transfers money from
7 users of telecommunications services in Kansas to the ratepayers of an RLEC so that they
8 do not have to pay the total cost of those RLEC telephony services. All Kansans, directly
9 or indirectly, are paying a portion of the RLECs' revenue requirements. In setting revenue
10 requirements for any rate-regulated industry, a regulatory agency must balance the interests
11 of a regulated entity and the consumer. In this instance, "consumers' interests" encompass
12 all who contribute to the KUSF support mechanism.

13 **Q. When establishing a reasonable rate of return for RLECs in KUSF Dockets, are there**
14 **unique issues that the Commission should be aware of that are not present in gas and**
15 **electric rate cases?**

16 A. Yes, in KUSF Dockets, we estimate the capital costs of providing a very narrow set of
17 telecommunications services.⁶ The foremost challenging issue is a lack of publicly traded
18 companies whose primary business is providing land-line telephony services in rural areas.

⁶ In Kansas, Universal Service is defined by K.S.A. 66-1,187(p): "Universal service" means telecommunications services and facilities which include: single party, two-way voice grade calling; stored program controlled switching with vertical service capability; E911 capability; tone dialing; access to operator services; access to directory assistance; and equal access to long distance services."

1 Of the few companies that provide landline services to rural areas, that segment of their
2 operations is a small percent of their total revenues and earnings. As a result of this limited
3 exposure to RLEC services, investors do not evaluate those companies based on the risks
4 associated with providing RLEC services but instead on the risks and growth potential of
5 other telecommunications services such as cellular, internet, and cable television. Despite
6 these difficulties, it is possible to estimate the cost of equity for companies providing RLEC
7 services, with the caveat that the stakeholders in this process must accept a less precise
8 estimate than we would otherwise have if we had access to a robust proxy group for the
9 analysis. This data limitation creates a challenge, and it is a matter of fact that parties must
10 accept. Despite these challenges, Staff can demonstrate that there is ample evidence that its
11 recommended rate of return meets the legal requirements of a just and reasonable return to
12 the Applicant.

13 **Q. How did you overcome those challenges?**

14 A. Staff overcomes these challenges by relying on data that reflects long-run, forward-looking
15 returns in capital markets measured by the capital asset pricing model (CAPM) and similar
16 risk premium models. Seasoned financial industry experts and institutional investors
17 universally rely on these and similar models to evaluate investment opportunities. Staff is
18 not using a discounted cash flow (DCF) model as typically seen in gas and electric rate
19 cases and previous KUSF dockets. There are specific data requirements for a DCF analysis,
20 and, at this time, several of those requirements cannot be met by the small number of
21 publicly traded telecommunications companies that provide landline services. The

1 companies in that group currently exhibit volatile earning growth projections and several
2 with negative earnings growth projections; those two characteristics are counter to the tenets
3 of the DCF model. Removing the DCF model is not a substantial change in Staff's cost of
4 capital study as Staff has emphasized for several years that it was putting little weight on
5 the DCF model for the same reason.

6 **Risk-Premium Provided by a 9.75% ROE**

7 **Q. How does your recommendation in this Docket compare to those in past KUSF**
8 **Dockets?**

9 A. A picture of this comparison is the risk premium that the allowed ROE provides the RLEC
10 investors over bond yields that we observe in the capital markets and returns set for other
11 regulated utilities. This table contains the KUSF Dockets since 2006. Staff's
12 recommendations have been 10.50% in these Dockets, decreasing to 9.60% as interest rates
13 fell. As a clearer picture of the economy in the post-Global Financial Crisis (GFC)
14 materialized, with slower economic growth rates and lower capital costs, Staff
15 recommended an ROE of 9.60% to 9.75%.

Staff Positions in Recent KUSF Dockets 25-CNHT-185-KSF						
Docket	Testimony Date	Company	Equity Ratio	Staff ROE	Baa/BBB Yields*	Resulting Rp**
06-H&BT-1007-AUD	10/10/2006	H&B Communications, Inc.	60.00%	12.00%	6.47%	5.53%
06-RNBT-1322-AUD	2/9/2007	Rainbow Telephone Association, Inc.	60.00%	12.15%	6.33%	5.82%
07-MDPT-195-AUD	3/2/2007	Madison Telephone, LLC	6.46%	12.30%	6.16%	6.14%
07-PLTT-1289-AUD	10/26/2007	Peoples Telephone, LLC	60.00%	12.00%	6.39%	5.61%
08-MRGT-221-KSF	12/19/2007	Moundridge Telephone Co.	60.00%	12.00%	6.60%	5.40%
09-MTLT-091-KSF	11/26/2008	Mutual Telephone Co.	60.00%	14.00%	9.05%	4.95%
09-BLVT-913-KSF	9/30/2009	Blue Valley Telecommunications, Inc.	46.60%	12.50%	6.17%	6.33%
10-HVDT-288-KSF	6/24/2010	Haviland Telephone Co, Inc.	30.00%	11.00%	6.22%	4.78%
11-PRNT-315-KSF	5/25/2011	Pioneer Telephone Association, Inc.	54.40%	10.00%	5.77%	4.23%
11-RNBT-608-KSF	7/26/2011	Rainbow Telecommunications Assoc.	55.00%	10.00%	5.75%	4.25%
11-CNHT-659-KSF	9/2/2011	Cunningham Telephone Co., Inc.	37.40%	10.25%	5.20%	5.05%
12-S&TT-234-KSF	8/15/2012	S&T Telephone Assoc., Inc.	57.40%	10.50%	5.07%	5.43%
12-GRHT-633-KSF	10/18/2012	Gorham Telephone Company	29.69%	10.50%	4.58%	5.92%
12-LHPT-875-AUD	12/19/2012	LaHarpe Telephone Company	90.00%	10.00%	4.71%	5.29%
13-CRKT-268-KSF	3/13/2013	Craw-Kan Telephone Cooperative, Inc.	60.00%	10.00%	4.89%	5.11%
13-ZENT-065-AUD	5/17/2013	Zenda Telephone Company, Inc.	Confidential	10.00%	4.76%	5.24%
13-JBNT-437-KSF	5/23/2013	J.B.N. Telephone Company, Inc.	46.50%	9.75%	4.79%	4.96%
13-PLTT-678-KSF	9/24/2013	Peoples Telecommunications, LLC	55.83%	9.75%	5.35%	4.40%
14-WTCT-142-KSF	2/5/2014	Wamego Telecommunications Co.	61.43%	9.60%	5.12%	4.48%
14-S&TT-525-KSF	9/25/2014	S&T Telephone Cooperative, Inc.	54.86%	9.75%	4.79%	4.96%
15-MRGT-097-KSF	1/20/2015	Moundridge Telephone Co.	Confidential	9.75%	4.43%	5.32%
15-TWVT-213-AUD	9/4/2015	Twin Valley Telephone Co.	47.81%	9.75%	5.28%	4.47%
17-RNBT-555-KSF	10/26/2017	Rainbow Telecomm Assoc. Coop	60.00%	9.75%	4.37%	5.38%
19-GNBT-505-KSF	10/11/2019	Golden Belt Telephone Assoc. Cooperative	60.00%	9.60%	3.98%	5.62%
20-UTAT-032-KSF	12/13/2019	United Telephone Association	60.00%	9.60%	3.84%	5.76%
20-BLVT-218-KSF	3/20/2020	Blue Valley Telecommunications, Inc.	60.00%	9.60%	5.15%	4.45%
22-CRKT-087-KSF	12/15/2021	Craw-Kan Telephone Cooperative, Inc.	60.00%	9.60%	3.30%	6.30%
22-COST-546-KSF	10/6/2022	Columbus Communications Services, LLC	60.00%	9.60%	5.99%	3.61%
24-SNKT-131-KSF	12/14/2023	South Central Telephone Association, Inc.	60.00%	9.75%	5.49%	4.26%
24-TTHT-343-KSF	2/22/2024	Totah Communications, Inc.	55.87%	9.75%	5.82%	3.93%
25-MTLT-161-KSF	1/24/2025	Mutual Telephone Co. Assoc.	60.00%	9.75%	6.14%	3.61%
Average Risk Premium of Recent KUSF Dockets						5.05%
Median						5.18%
*Moody's Seasoned Baa Corporate Bond Yield [DBAA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org						
**Risk premium of Staff's ROE Recommendation over the Baa/BBB Corporate Bond Yield						

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In the right column is the resulting risk premium provided by the return on equity advocated by Staff in each docket; Staff recommended ROE minus the average yield on Baa/BBB corporate bonds. For those years after the GFC, from 2010 to the present, the risk premium averaged 490 basis points. The downward trend of bond yields during 2019, 2020, and 2021 and ROE of 9.60% provided RLECs with a progressively higher risk premium, almost justifying a lower ROE than the 9.60% that Staff recommended. The higher interest rates in 2022 through the present produce a lower risk premium, providing the Applicant with a

1 risk premium of approximately 385 basis points.

2 As a point of comparison, the following table contains the risk premium derived in gas and
 3 electric utility cases. The broad trends observed in electric and natural gas rate cases are
 4 the same as that observed in the KUSF dockets.

Risk Premium of Recent Electric and Gas Dockets							
Docket	Testimony Date	Company	Equity Ratio	Staff Recmnd	*BBB/Baa Corporate		Resulting Rp
					Bond Yld.		
15-KCPE-116-RTS	5/11/2015	Kansas City Power & Light	50.48%	9.25%	4.94%		4.31%
15-WSEE-115-RTS	7/9/2015	Westar Energy	53.12%	9.25%	5.20%		4.05%
16-KGSG-491-RTS	9/7/2016	Kansas Gas Service	55.00%	8.75%	4.19%		4.56%
16-ATMG-079-RTS	12/21/2016	Atmos Energy	56.12%	9.10%	4.81%		4.29%
18-KCPE-095-MER	1/29/2018	Kansas City Power & Light	*	9.30%	4.29%		5.01%
18-WSEE-328-RTS	6/11/2018	Westar Energy	51.24%	9.30%	4.85%		4.45%
18-KCPE-480-RTS	9/12/2018	Kansas City Power & Light	49.09%	9.30%	4.86%		4.44%
18-KGSG-560-RTS	10/29/2018	Kansas Gas Service	55.00%	9.15%	5.10%		4.05%
19-EPDE-223-RTS	5/13/2019	Empire District Electric Co	51.65%	9.30%	4.65%		4.65%
19-ATMG-525-RTS	10/31/2019	Atmos Energy	56.32%	9.10%	3.87%		5.23%
21-BHCG-418-RTS	9/10/2021	Black Hills Energy	42.96%	9.20%	3.23%		5.97%
23-ATMG-359-RTS	1/17/2023	Atmos Energy	59.16%	9.40%	5.44%		3.96%
23-EKCE-775-RTS	8/29/2023	Evergy, Inc.	48.50%	9.30%	5.96%		3.34%
24-KGSG-610-RTS	7/1/2024	Kansas Gas Service	60.21%	9.60%	6.03%		3.57%
Average Risk Premium from Recent Gas & Electric Dockets							4.42%
Median							4.38%

*Moody's Seasoned Baa Corporate Bond Yield [DBAA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org>

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6 Providing investors with a risk premium over less risky debt investments, as Staff has done,
 7 follows the principles espoused by the Supreme Court in its *Hope* and *Bluefield* decisions.
 8 These high dividend, income-producing securities are considered alternatives to
 9 investments in utility stocks because, like utility stocks, bonds offer stable valuations and
 10 higher current income relative to the equity market. Risk premiums vary over time and
 11 across economic and capital market conditions; thus, no benchmark risk premium or
 12 formula sets a reasonable return on equity at a given interest rate. Risk premium
 13 calculations place the allowed return in context with prevailing interest rates that are

1 market-determined and observable. The Court’s decision makes it clear that a fair and
 2 reasonable return for a utility’s equity investors must offer the opportunity for investors to
 3 earn a premium over less risky investment vehicles such as bonds used in the previous
 4 tables. The following table demonstrates that Staff’s proposed 9.75% ROE meets that
 5 standard in each instance; Staff’s recommendation provides a premium ranging from 407
 6 to 564 basis points over the returns offered by less risky fixed-income investments.

KCC Staff's Risk Premium Over Fixed Income Yields Based on a 9.75% Return on Equity 25-CNHT-185-KSF			
Monthly Averages	10-Year T-Bond	30-Year T-Bond	Baa Corporate Bond Yield
July, 2024	4.25%	4.46%	5.85%
August, 2024	3.87%	4.15%	5.63%
September, 2024	3.72%	4.04%	5.42%
October, 2024	4.10%	4.38%	5.60%
November, 2024	4.36%	4.54%	5.77%
December, 2024	4.39%	4.58%	5.79%
Average	4.12%	4.36%	5.68%
Staff's Risk Premium Over the Average 10-Year Treasury Bond Yield			
		Staff Recommended Allowed ROE	9.75%
		Six Month Average 10-Year Treasury Bond Yield	4.12%
		Premium Over Average 10-Year Treasury Bond Yield	5.64%
Staff's Risk Premium Over the Average 30-Year Treasury Bond Yield			
		Staff Recommended Allowed ROE	9.75%
		Six Month Average 30-Year Treasury Bond Yield	4.36%
		Premium Over Average 30-Year Treasury Bond Yield	5.39%
Staff's Risk Premium Over the Average BBB/Baa Corporate Bond Yield			
		Staff Recommended Allowed ROE	9.75%
		Six-Month Average BBB/Baa Corporate Bond Yield	5.68%
		Premium Over Average BBB/Baa Utility Bond Yield	4.07%
Sources:			
1) Yield on U.S. 10-Year Treasury Bond reported at https://fred.stlouisfed.org/			
2) Yield on U.S. 30-Year Treasury Bond reported at https://fred.stlouisfed.org/			
3) Yield on Baa Corporate Bonds reported at https://fred.stlouisfed.org/			

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1 **Q. For comparison, could you please summarize ROE decisions across the country?**

2 A. There is ample information on the allowed returns granted to gas distribution and electric
3 utilities; unfortunately, there is no reporting of the returns granted to local exchange carriers
4 across the nation as most telephony services are deemed competitive or operate under some
5 price cap regulation. This comparison to other rate-of-return regulated industries is helpful
6 because it shows that allowed returns on other rate-of-return regulated industries have
7 moved in parallel with broad measures of capital costs. Thus, regulatory commissions have
8 had many opportunities to evaluate evidence on investors' required returns. This data shows
9 that regulatory commissions concluded that capital costs of regulated utilities have trended
10 downward over the past 24 years.

Median Allowed Return on Equity		
Natural		
Date	Gas	Electric
2000	11.16	11.50
2001	11.00	11.00
2002	11.00	11.28
2003	11.00	10.75
2004	10.50	10.70
2005	10.40	10.35
2006	10.50	10.23
2007	10.20	10.20
2008	10.45	10.30
2009	10.26	10.50
2010	10.10	10.30
2011	10.03	10.17
2012	10.00	10.08
2013	9.72	9.95
2014	9.78	9.78
2015	9.68	9.65
2016	9.50	9.75
2017	9.60	9.60
2018	9.60	9.58
2019	9.70	9.65
2020	9.44	9.45
2021	9.60	9.38
2022	9.60	9.50
2023	9.60	9.50
2024	9.70	9.70

Source: S&P Market Intelligence; RRA

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2 This table highlights that for rate-of-return regulated companies, public service
3 commissions nationwide recognize the decline in capital costs over the past two decades.
4 Decisions by this Commission have followed the same trend.

5 **Macro-Economic Environment & Investor Expectations**

6 **Q. Is it necessary for the Commission to create a forecast of the broad economy to**
7 **determine a reasonable return?**

1 A. No, I advise the Commission that determining a fair and reasonable allowed return does not
2 require it to make an independent forecast of the economy's future or even adopt a specific
3 perspective on the economy's direction. The focus of setting a fair and reasonable allowed
4 return is on the *investors'* required return, which is a product of the *investors'* expectations
5 for the economy (not the Commissioners'). Investors' expectations for the economy are
6 captured within the Commission's cost of capital decision, provided the Commission's
7 decision is based on market-derived data such as current stock prices, interest rates, and
8 other market data that conveys investors' outlook for the economy. Staff's recommendation
9 is based on current market-derived data. It is not necessary, and very likely
10 counterproductive, for regulators and cost of capital witnesses to second-guess the capital
11 markets. It is a well-accepted premise that our capital markets are efficient, where investors
12 factor all available information into their decisions to buy and sell debt and equity securities.
13 Furthermore, rational, profit-maximizing investors are forward-looking. Accordingly,
14 investors incorporate their forecasts of the economy into their decisions in their best attempt
15 to maximize returns.

16 **Q. Do you believe the Commission benefits from some discussion of economic forecast**
17 **when setting allowed returns?**

18 A. Yes, particularly with the global events of the past five years beginning with the Covid-19
19 pandemic followed by the Russian/Ukrainian war. The economic issues facing
20 governments and their central banks directly relate to the fallout from these two global
21 events as both caused disruptions of long-established global supply chains and trade

1 patterns; disruptions that up reduced economic growth and spiked inflation rates to levels
2 not witnessed in 40 years.

3 Equity and fixed income investors watch actions of the Federal Reserve Open Market
4 Committee (FOMC) of the U.S. Federal Reserve Board (Fed) very close, likely more so
5 than any other published report on the U.S. economy. The opinions and expectations of the
6 FOMC members and staff economists are published weeks after each meeting and as of the
7 recent meetings in November and December of 2024, the Federal Reserve members'
8 economic perspective reflects cautious optimism amid ongoing inflationary pressures and a
9 slowing, but resilient economy as summarized in their views on inflation, growth and
10 unemployment.

- 11
- 12 • **Inflation:** The Fed remains focused on bringing inflation down to its 2% target.⁷
13 While inflation has moderated from the highs of 2022, it is still above target,
14 particularly in core areas like services and shelter. Some members noted that the
15 process could take longer than previously expected.⁸ The FOMC recognizes the
16 need for careful monitoring of price pressures, particularly as demand in the
17 economy remains relatively strong. While some members noted that the
18 disinflationary process may have stalled temporarily, they also highlighted the risk
19 that it could take longer than previously anticipated to return to target levels.⁹
 - 20 • **Economic Growth:** U.S. economic growth has slowed but remains positive, with a
21 noticeable slowdown in the labor market, particularly in sectors like housing and
22 manufacturing. However, consumer spending has been relatively stable, supported
23 by a strong labor market and wages growing at a moderate pace.
 - 24 • **Labor Market:** The job market is showing signs of cooling, with job growth
slowing and the unemployment rate remaining low. The Fed is watching for signs

⁷ Minutes of the Federal Open Market Committee, November 6, 2024; p.12

⁸ Minutes of the Federal Open Market Committee, November 6, 2024; p. 8.

⁹ Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.

1 of a more sustainable labor market balance, as it is concerned about potential wage-
2 price spirals that could sustain inflation.

- 3 • **Monetary Policy Decision:** The decision to reduce the federal funds rate was finely
4 balanced. Some participants favored maintaining the previous target range, citing
5 concerns about stalled progress in lowering inflation. Ultimately, the Committee
6 voted 11–1 in favor of the rate cut.¹⁰
- 7 • **Future Policy Considerations:** Given the uncertainty surrounding potential
8 changes in trade and immigration policies under the incoming administration, the
9 Committee emphasized a careful approach to future rate adjustments. Most
10 participants indicated that the Committee was at or near the point at which it would
11 be appropriate to slow the pace of policy easing.¹¹
- 12 • **Long-run Targets:** The FOMC members’ long-run targets are, for a return of pre-
13 pandemic levels of inflation at 2.00% annually, real GDP at an annual growth of
14 1.80%, and unemployment at 4.20%.
- 15 • **Federal Funds Rate:** In its December meeting, acting on the totality of the data,
16 the FOMC reduced the federal funds rate by 25 basis points, bringing it to a target
17 range of 4.25% - 4.50%. This marks the third rate cut since September.

18 FOMC members acknowledge several risks, including global economic conditions, the
19 possibility of a more pronounced slowdown in consumer spending, and geopolitical
20 uncertainties that could disrupt markets. There is also concern about long-term inflation
21 expectations becoming unanchored if price pressures do not ease.¹² The FOMC’s
22 perspective is one of caution—acknowledging that progress has been made in controlling
23 inflation but recognizing that more work is needed to ensure it moves sustainably toward
24 the 2% target without triggering a severe economic downturn. The FOMC members
25 expressed cautious optimism about the economy while maintaining a measured approach to
26 monetary easing, actions that reflect its dual mandate to achieve maximum employment *and*
27 stable prices. Almost all FOMC members judged the risks to attaining their dual-mandate

¹⁰ Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.

¹¹ Minutes of the Federal Open Market Committee of its December 17-18, 2024, Meeting; Released January 8, 2025.

¹² Minutes of the Federal Open Market Committee, November 6, 2024; p.12

1 objective to be roughly in balance.¹³ There are other views and forecasts published, though
2 most are in line with the expectations published by FOMC members.

3 **Corporate Structure**

4 **Q. Please describe Applicant, Cunningham Telephone Company.**

5 A. The Applicant is a subsidiary of Cunningham Management Company, a closely held
6 company that owns the Applicant and Cunningham Communications, Inc. The Applicant
7 serves parts of Jewell, Mitchell, Cloud, Ottawa, Lincoln, and Republic Counties in Kansas.

Standards for a Just & Reasonable Rate of Return

8 **Q. What standards should public utility commissions consider when authorizing a rate
9 of return?**

10 A. The standards for setting a just and reasonable rate of return require that, to be reasonable,
11 the allowed return must reflect the risks associated with an equity investment in the utility.
12 For the allowed return to be in that reasonable range, it must compensate for risks while
13 capturing a fair proportion of benefits for consumers. The allowed ROE is best described
14 as the forward-looking discount rate necessary to induce equity investors to commit their
15 capital to the enterprise. Standards used to gauge the fairness and reasonableness of an
16 allowed ROE have been stated by courts as the result of appeals of decisions issued by
17 regulatory agencies. Financial analysts and policymakers rely on the courts' decisions to

¹³ Minutes of the Federal Open Market Committee, November 6, 2024; pp.10,12

1 estimate the appropriate allowed return. The opinions do not articulate precisely how to
2 calculate or model a reasonable cost of capital. Instead, the decisions provide critical
3 questions for policymakers and analysts to consider in determining a reasonable return for
4 a regulated utility. There are several court cases that, as a group, are viewed as the keystone
5 to measuring the adequacy of a utility's allowed return. The earliest of these decisions go
6 back to an era when it was not only the "rate of return" at issue but also the fundamental
7 measurement of the investment in the utility enterprise, commonly referred to as rate base.
8 This is less of an issue today as regulators, utility management, and investors readily accept
9 historic depreciated value as the measure of investment to estimate the value of a utility's
10 rate base (as opposed to reproduction cost or market value). The Court's decision in
11 *Bluefield* addressed both rate base and ROR.¹⁴

12 United States Supreme Court decisions state that returns granted to regulated public utilities
13 should: 1) be commensurate with returns on investments of similar risk; 2) be sufficient to
14 assure the financial integrity of the utility under efficient economic management; and 3)
15 change over time with changes in the money market and business conditions.¹⁵ An
16 important takeaway from these decisions is that the United States Supreme Court has
17 afforded regulatory agencies significant latitude in establishing an appropriate ROR and
18 ROE for a utility. The Kansas Supreme Court has recognized and follows this body of

¹⁴ See *Bluefield*, 262 U.S. 579, 692-93.

¹⁵ See *id.*; *Hope*, 320 U.S. 591, 603; *Smyth v. Ames*, 169 U.S. 466 (1898); *Wilcox v. Consolidated Gas Co.*, 212 U.S. 19, 48-49 (1909).

1 law.¹⁶ This Commission has noted this fact in Orders issued in previous dockets.¹⁷

2 **Q. How do financial analysts apply the standards established by the Court?**

3 A. For an allowed ROE to meet the legal standards, the return should be as specific as possible
4 to the utility in question. Financial analysts achieve this goal by analyzing not only the
5 utility in question when it is possible to do so but also a proxy group of similarly situated
6 utilities. Treatises on rate of return for public utilities, such as The Cost of Capital – A
7 Practitioner’s Guide, agree that *Bluefield* lays out the four standards for a fair return.

- 8 1) *Comparable Earnings* – a utility is entitled to a return similar to that
9 being earned by other enterprises with similar risks but not as high
10 as those earned by highly profitable or speculative ventures;
11 2) *Financial Integrity* – a utility is entitled to a return level reasonably
12 sufficient to assure financial soundness;
13 3) *Capital Attraction* – a utility is entitled to a return sufficient to
14 support its credit and raise capital; and
15 4) *Changing Level of Returns* – a fair return can change along with
16 economic conditions and capital markets.¹⁸

17 As a financial analyst formulating rate of return analyses for our state commission, I take
18 from *Bluefield* that the Court requires a rate Order that allows a utility an opportunity to
19 earn a return consistent with the utility’s risk profile and consistent with observations in the

¹⁶ *Kansas Gas & Elec. Co. v. State Corp. Comm’n*, 239 Kan. 483, 491, 720 P. 2d 1063, 1072 (1986).

¹⁷ Order: 1) Addressing Prudence; 2) Approving Application, in Part; and 3) Ruling on Pending Requests, pp. 37-38, Docket No. 10-KCPE-415-RTS (Nov. 22, 2010).

¹⁸ *The Cost of Capital – A Practitioner’s Guide* by David C. Parcell, Prepared for the Society of Utility and Regulatory Financial Analysts, 1997, pp. 3-13 to 3-14.

1 capital markets. The Court's decision in *Hope*,¹⁹ like that in *Bluefield*, dealt with both the
2 valuation of the rate base, as well as the rate of return on that rate base. With respect to the
3 rate of return, the Court in *Hope* affirmed the four standards set out in *Bluefield*.

4 **Capital Structure**

5 **Q. Please describe Applicant's capital structure presented in Section 7 of its Application.**

6 A. Applicant reports a capital structure with 100% equity and no long-term debt.²⁰

7 **Q. Did you use 100% equity ratio to calculate the ROR?**

8 A. No, I did not. Instead, I recommend that the Commission rely on a hypothetical capital
9 structure that contains 40% debt capital and 60% equity capital to calculate the ROR.

10 **Q. Why are you recommending something other than the Applicant's actual capital**
11 **structure?**

12 A. Because Staff's hypothetical capital structure balances the interests of the RLEC and Kansas

¹⁹ *Hope*, 320 U.S. 591, 603: "The rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests. Thus, we stated in the Natural Gas Pipeline Co. case that 'regulation does not insure that the business shall produce net revenues.' But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view, it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard, the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. The conditions under which more or less might be allowed are not important here. Nor is it important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint."

²⁰ Application, Section 7; Docket 25-CNHT-185-KSF.

1 telecommunications consumers the Applicant, like most Kansas RLECs, has access to
2 relatively low-cost debt capital. The KUSF subsidy should recognize that RLECs can
3 employ a lower cost capital structure than one that is nearly all equity. Establishing a
4 subsidy payment out of the KUSF must balance the interests of the RLECs that receive the
5 subsidy and Kansas telephony consumers who fund that subsidy. That balancing act
6 requires that the revenue requirement be estimated using reasonable and cost-effective
7 inputs. There is no evidence that a 100% equity capital structure is cost-effective for the
8 Applicant or any RLEC, thus it should not be used in the KUSF calculations.

9 **Q. Did the Applicant provide evidence that its capital structure is cost-effective?**

10 A. No, it did not.

11 **Q. Is Staff recommending that the Applicant's management alter its equity ratio?**

12 A. No. My recommendation pertains only to the capital structure used to calculate the KUSF
13 subsidy. Staff is not requesting that Cunningham change its equity ratio. Staff leaves
14 capitalization decisions to management while establishing an annual KUSF support subsidy
15 demands public policy considerations that encompass those who fund the KUSF support
16 mechanism.

17 **Q. How did you conclude that a hypothetical capital structure with 60% equity is**
18 **reasonable?**

19 A. Over the course of performing KUSF audits during the past decades, I have found that an

1 equity ratio of 60% has been the high-end of the range observed for publicly traded
2 telecommunications companies. These publicly traded companies create the proxy group
3 for Staff's analysis. Thus, a capital structure has been tested in the capital markets by
4 successful companies in this industry. This, coupled with the fact that Kansas RLECs have
5 access to debt capital at reasonable interest rates, leads me to conclude that a balanced
6 capital structure for Kansas RLECs should include a significant portion of debt. Staff
7 believes the 60% equity ratio provides RLECs with a reasonable return and cost structure
8 for the KUSF subsidy.

9 **Cost of Debt**

10 **Q. What cost of debt do you use in Applicant's ROR?**

11 A. I recommend using 4.50% for the Applicant's cost of debt, which is comparable to
12 embedded debt costs Staff has observed in recent KUSF audits. I believe this is a reasonable
13 estimate of an embedded cost of debt. It is not intended to reflect only the current, prevailing
14 cost of debt in the market but rather an embedded cost that an RLEC would have incurred
15 during the past decade.

16 **Summary of Cost of Equity Models**

17 **Q. Please provide an overview of the methods you relied on to arrive at 9.75% ROE.**

18 A. To estimate the RLEC's cost of equity, I used the same financial models as I do for regulated
19 natural gas distribution and electric utilities. I also performed a CAPM analysis and

1 reviewed the options for applying DCF models to a group of telecommunications
2 companies.

3 **Q. Which models do you believe are the most informative in estimating an RLEC's cost**
4 **of equity capital?**

5 A. The CAPM is the most informative for estimating an allowed return for the Applicant and
6 similar RLECs. At this point, it is impossible to apply a DCF analysis to the publicly traded
7 companies that could serve as the proxy group for Kansas RLECs and produce meaningful
8 information. The DCF model requires a positive growth rate in earnings and dividends at
9 a singular, constant rate or occurring in several distinct, predictable phases. All the
10 potential proxy group members fail this requirement, exhibiting growth forecasts that are
11 either negative or far too to expect them to continue beyond the analysts' three-to-five-year
12 horizon. The DCF model is merely an equation; with negative or volatile growth forecasts,
13 the DCF equation falls apart and cannot produce informative results. The CAPM is
14 instructive, particularly in this instance, because it can look at investors' required return in
15 the current capital markets without relying on analysts' forecasted earnings growth rates.

16 **Discussion of Staff's Cost of Equity Analysis**

17 **Q. Please describe the CAPM?**

18 A. The CAPM is a valuable financial tool because it offers a tested explanation of the positive

1 relationship between risk and equity returns required by investors.²¹ It is one of the
2 cornerstone financial models. For example, every merger and acquisition analysis
3 performed by an investment banker involving a Kansas utility has incorporated a CAPM
4 analysis as a critical component of the valuation process. It appeals to regulators because
5 it meets the legal standards I discussed above, as it includes current data from the financial
6 markets and the unique risks of the utility in question.

7

8

$$K_e = R_f + \text{Beta} (R_m - R_f) \text{ or}$$

9

$$K_e = R_f + \text{Beta} (R_p)$$

10

Where:

11

K_e = required return on equity

12

R_f = return on a risk-free security

13

R_m = an expected return from the equity market as a whole

14

R_p = risk premium available to investors through purchasing common stocks instead of risk-free securities, often calculated as $R_m - R_f$

15

16

Beta = volatility of the security's or portfolio's return relative to the volatility of the market's return with the market beta equal to 1.0

17

18

Rf

19

The R_f estimate is the interest rate investors believe represents a riskless return that is

20

readily available in the financial markets. Although it is a simple concept, the answer is not

21

universally agreed upon. It is widely accepted that a debt instrument issued by the U.S.

22

Government is risk-free as there is no default risk even though the market price varies over

23

time. An investment in U.S. Treasury Bonds is risk-free if the investor plans to hold it until

24

maturity. From this base risk-free return that is universally available to investors, investors

²¹ The theoretical support for the CAPM is the work done by Harry Markowitz ("Portfolio Selection," *Journal of Finance*, March, 1952). W.F. Sharpe added the concept of a risk-free rate of return to the Markowitz model ("A Simplified Model of Portfolio Analysis," *Management Science*, January, 1963).

1 add a premium to justify taking on additional risks of an investment in equity securities,
2 namely accepting the volatility of stock prices as opposed to stable, periodic interest
3 payments from U.S. Treasury Bonds.

4 **Beta**

5 The beta coefficient measures the volatility of the return earned by the utility's stock relative
6 to the volatility of the returns earned by the broader equity market. This measure provides
7 a look at the risk and volatility of a stock relative to other investments. A stock with a beta
8 of 1 is equally volatile as the market. A stock with a beta of 0.5 is half as volatile as the
9 market. Most regulated utilities and telecommunications services companies exhibit beta
10 coefficients less than the broad market indexes and, therefore, less risky.

11 **Rm**

12 Rm is the expected return on the stock market as measured by a broad market index such
13 as the S&P 500. It represents the total return consisting of the index's price change plus
14 dividends earned for the year. In most instances, the CAPM relies on investors' expected or
15 forecasted return on the market for this variable; historical data is also used to estimate the
16 market return. I will discuss the application of both sources of data.

17 **Rp**

18 The risk premium is the difference between investors' expected return from the stock
19 market and their expected return from the risk-free investment over the same time. The risk

1 premium is written as $R_m - R_f$. The market return and the risk-free return should be taken
2 from the same period to accurately measure the additional return investors require to take
3 on the risk of common stocks over the risk-free investment over that forecasted or historic
4 period. The risk premium itself is an important topic in financial research as it signals the
5 additional return investors demand when taking the added risks of investing in equity capital
6 instead of a U.S. Treasury Bond.

7 **Q. Does the CAPM meet the *Hope-Bluefield* legal standards discussed earlier in your**
8 **testimony?**

9 A. Yes, a cost of equity estimate derived from the CAPM meets those legal standards if the
10 model incorporates information from the capital markets that investors rely on to evaluate
11 the potential returns of investment. This market-based information ensures the cost of
12 equity estimates evaluate investors' required rate of return or discount rate that reflects the
13 current economic environment for a given level of risk. In the CAPM analysis, such
14 information is the expected returns in the broad equity market and the return available on
15 risk-free investment vehicles.

16 **Q. Please discuss your CAPM analysis.**

17 A. I took two approaches to the CAPM analysis commonly found in both cost of capital studies
18 in regulatory and asset-valuation arenas. The approaches are distinct perspectives of the
19 securities market, and analysts use both methods to make investment decisions. One
20 approach incorporates forecasted returns on the broad equity market indexes and

1 government fixed-income securities published by institutional investment services. The
2 second offers a perspective of capital costs using purely historical measures of returns from
3 the stock and bond markets over the past 96 years. The two approaches highlight the
4 difference in returns earned in the past relative to the returns institutional investors expect
5 going forward. There is support for the use of forecasted returns over the historical data as
6 the forecasted returns embody the institutional investors' forecasts for growth in the broad
7 economy most frequently measured government GDP accounts.

8 **Q. How did you determine a beta coefficient representative of the KUSF services?**

9 A. I relied on beta coefficients reported for the telecommunications services industry as well
10 as electric and gas utilities since they operate in rate of return regulated industries. The first
11 observation is that reported for the telecommunications services which has beta coefficient
12 of 0.78; granted, most companies in that group have little if any rate-regulated services.²²
13 In many respects, the KUSF services resemble traditional, rate-of-return regulated utility
14 services more so than those of competitive telecommunications services that make up most
15 of the telecommunications industry's earnings; therefore, I believe it is reasonable to
16 include the average beta coefficient of those regulated industries. I completed cost of capital
17 analyses for both electric utilities and natural gas distribution utilities during the past two
18 years. My analysis in those dockets includes carefully selecting proxy groups representative
19 of that industry; as a result, all the proxy group members derive a vast majority of their
20 earnings from their rate of return regulated services. The natural gas and electric utilities in

²² Beta coefficients for the telecommunications services industry of 0.78 and utility services (not water) of 0.58 reported at January 2024; https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html

1 those proxy groups used in my analyses exhibited beta coefficients averaging 0.87 and a
2 range of 0.75 to 1.05.²³ In my analyses one company had a beta coefficient just above 1.00
3 while most of the proxy companies' beta coefficients fall in the range of 0.80 to 0.90. There
4 is no beta coefficient derived from securities specific to the RLEC services, so my CAPM
5 analyses incorporate the range of beta coefficients discussed above derived from rate of
6 return regulated utilities.

7 **Q. Please describe your CAPM analyses that use forecasted returns.**

8 A. For the forecasted CAPM analyses, I obtained forecasts of long-run returns for common
9 equity and U.S. Treasury Bonds from three sources: J.P. Morgan Asset Management
10 (JPMAM), BlackRock Investments (BlackRock), and Kroll Corporation (Kroll).
11 BlackRock and JPMAM have over \$11 trillion of assets under management with individual
12 and institutional clients worldwide. Other asset managers like Vanguard Group, which has
13 over \$9 trillion in assets under management, have similar expectations for long-term returns.
14 Given the amount of money that these firms manage, it is reasonable to assume that their
15 published forecasts are not only the expectations of sophisticated money managers but also
16 influence investors' expectations beyond their client base. JPMAM and BlackRock each
17 annually publish their views of long-run (more than 15 years) returns available of numerous
18 asset classes. Their respective forecasts are similar, though not identical, but taken together,
19 they provide a range for long-run returns on asset classes by the largest asset management
20 companies. As a third input of projected returns, I looked to Kroll, a global advisory and

²³ Direct Testimony of Adam H. Gatewood in dockets 23-EKCE-775-RTS filed August 29, 2023; and 24-KGSG-610-RTS filed July 1, 2024.

1 asset valuation service provider to the financial industry and corporations. The table below
 2 summarizes the cost of equity estimates derived from the CAPM application using data
 3 from these three sources.

Summary of Staff's Cost of Equity Estimates			
Capital Asset Pricing Models			
25-CNHT-185-KSF			
	Low	High	Midpoint
Based on Historical Return Data, gathered from 1928 to 2023, Reported by Damodaran Online			
Geometric Returns	8.83%	10.46%	9.65%
Arithmetic Returns	10.00%	12.10%	11.05%
Based on Forecasted Return Data, gathered from J.P. Morgan Asset Management Long-Term Capital Market Assumptions (2025 edition)			
	6.20%	7.12%	6.66%
Based on Forecasted Return Data, gathered from BlackRock Investments Projected Long-run Returns Market Assumptions - Geometric Returns (2023 edition)			
	6.05%	6.94%	6.49%
Based on Forecasted Return Data, gathered from Kroll Projected Market Risk Premium & Risk Free Return			
	8.66%	10.16%	9.41%

4

5 **Q. How is JPMAM data applied to the CAPM analysis?**

6 A. For this CAPM analysis, we are interested in their forecasted returns on common stock in
 7 the U.S. and U.S. Treasury Bonds published by JPMAM to establish the expected return for
 8 the market. JPMAM publishes 10 to 15-year forecasts of expected returns on investment
 9 asset classes in its annual publication, the Long-Term Capital Market Return Assumptions
 10 (LTCMRA).²⁴ In its 2025 edition, JPMAM forecasts an annual return on common stocks

²⁴ J.P. Morgan Asset Management, Long-term Capital Market Return Assumptions, 2025 Edition, J.P. Morgan Asset Management (published October of 2024)

1 of 6.87% during the next decade. Following the calculations and inputs through the CAPM
 2 equation in line 2 of the following table, the forecasted return on a risk-free investment, 10-
 3 year U.S. Treasury Bonds, is subtracted from the expected return on common stocks
 4 resulting in a risk premium of 3.07%. This risk premium is the additional return necessary
 5 to induce investors to take on the added risk associated with common stocks over the risk-
 6 free investment in a U.S. Treasury Bond. The beta coefficient is applied to the risk premium
 7 to ascertain how much of a risk premium is necessary for investors to take on the risks of
 8 investing in utility stocks as opposed to the risk-free U.S. Treasury Bond.

Capital Asset Pricing Model -- Forecasted Risk Premium Using Forecasted Market Returns & Treasury Bond Yields 25-CNHT-185-KSF			
		Low Beta	High Beta
1)	Forecasted Returns on Common Stocks	6.87%	6.87%
2)	Forecasted Total Return on 10-Year T-Bonds	-	3.80%
3)	Equity Risk Premium	3.07%	3.07%
4)	Beta Coefficient	X	0.75
5)	Beta Adjusted Risk Premium	2.30%	3.22%
6)	Forecasted Yield on 10-Year T-Bonds	+	3.90%
7)	For Cost of Equity	6.20%	7.12%
<hr/>			
1)	Forecasted 10 to 15-year annual geometric return on stocks J.P. Morgan Asset Management, 2025 Edition.		
2)	Forecasted 10 to 15-year annual geometric return on intermediate term U.S. Government bonds by J.P. Morgan Asset Management 2025 Edition.		
3)	Resulting risk premium (1-2).		
4)	Range of beta coefficient range of regulated gas and electric utilities as well as telecom services companies		
5)	Row 3 x Row 4 = asset specific risk premium.		
6)	Forecasted yield on 10-Year U.S. Treasury bonds forecasted by J.P. Morgan Asset Management, 2025 Edition (page 10).		
7)	Forecasted cost of equity capital row 5 + row 6.		
<hr/>			
Sources: J.P. Morgan Asset Management, Long-term Capital Market Return Assumptions, 2025 Edition, J.P. Morgan Asset Management			

9

1 The expected risk-free yield of 3.90% forecasted by JPMAM is added to the beta-specific
2 risk premium to arrive at the cost of equity for the given beta coefficients.

3 As you can see in the following table, a CAPM analysis that incorporates BlackRock's long-
4 term return projections are slightly lower than those published by JPMAM. The application
5 of the CAPM using the BlackRock data is the same as that discussed above.

Capital Asset Pricing Model -- Forecasted Risk Premium Forecasted Market Returns & Treasury Bond Yields by BlackRock Investments 25-CNHT-185-KSF			
		Low Beta	High Beta
1) Forecasted Returns on Common Stocks		6.40%	6.40%
2) Forecasted Total Return on 10+ Year U.S. T-Bonds	-	3.42%	3.42%
3) Equity Risk Premium		2.98%	2.98%
4) Beta Coefficients of Proxy Group	x	0.75	1.05
5) Beta Adjusted Risk Premium		2.24%	3.13%
6) Forecasted Yield on 10-Year T-Bonds	+	3.81%	3.81%
7) Cost of Equity		6.05%	6.94%
<hr/> 1) Forecasted 25-year annual geometric returns on U.S. common stocks; November 2024 2) Forecasted 25-year annual geometric return on intermediate term Treasury bonds 3) Resulting risk premium (1-2) 4) Beta coefficient range observed in Telecommunications Services companies 5) Proxy Group risks premium 6) Survey of Prof. Forecasters; Median, Table 1; November 2024, Q4 7) Forecasted cost of equity capital row 5 + row 6.			
Sources:			
https://www.blackrockblog.com/blackrock-capital-markets-assumptions/ https://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/			

6

7 **Q. What is the third data source used in the forward-looking CAPM analyses?**

8 A. I relied on data published by Kroll, a global financial services company. Specific to the
9 cost of capital estimation, Kroll provides forward-looking estimates of an equity risk
10 premium (ERP) and a risk-free return. As in the previous CAPM equations, the ERP plus

1 the risk-free return equates to the expected return on common stocks. Kroll develops its
 2 forecast risk-free rate as a normalized risk-free return that investors can expect across the
 3 current economic cycle. The beta coefficient of the particular asset (in this case, the proxy
 4 group) is applied to the ERP, and the product is added to the forecasted risk-free rate of
 5 return. As capital markets change, Kroll adjusts its ERP and risk-free return estimates.

Capital Asset Pricing Model -- Kroll Forecasted Risk Premium Using Forecasted Market Returns & Treasury Bond Yields 25-CNHT-185-KSF			
		Low Beta	High Beta
1) Kroll U.S. ERP		5.00%	5.00%
2) Beta Coefficient	x	0.75	1.05
3) Proxy Group Risk Premium		3.75%	5.25%
4) Kroll U.S. Risk-Free Rate of Return*	+	4.91%	4.91%
5) Proxy Group Cost of Equity		8.66%	10.16%
1) Kroll U.S. Equity Risk Premium as of June 5, 2024 2) Beta coefficient range observed in Telecommunications Services companies 3) Resulting risk premium for proxy group (1-2). 4) Kroll U.S. Risk-Free Rate of Return 20 Year Treasury Bond January 17, 2025. 5) Forecasted Cost of Equity Range for Proxy Group			
Kroll recommends a risk-free rate of the higher of 3.50% OR spot market yield on 20-Year U.S. Treasury Bond. At January 17, 2025 spot yield was 4.91% (Federal Reserve H.15)			
Sources: https://www.kroll.com/-/media/kroll-images/pdfs/kroll-increases-us-risk-free-rate.pdf https://www.federalreserve.gov/releases/h15/			

6

7 **Q. Does the CAPM using historical data corroborate the findings of your forecasted**
 8 **CAPM analyses?**

9 A. Only to a degree, JPMAM's and BlackRock's views of lower returns in the future relative
 10 to the historic returns are universally accepted across the investment banking and asset
 11 management industry. The cost of equity or expected returns calculated using purely
 12 historical data are greater than scenarios using forecasted returns and that is because

1 economists and the capital management industry forecast lower economic growth in the
 2 future than what was witnessed in the past nine decades. There is a clear connection
 3 between broad measures of economic growth and potential returns on common stocks,
 4 particularly over multi-year horizons. Even though historical growth rates are unlikely to
 5 repeat, surveys of financial professionals reveal a significant percentage of them utilizing
 6 historical returns. For the historical CAPM, I relied on data on returns earned from 1928
 7 through 2024, consistent with the period used by financial professionals.

8 If we rely on purely historical data, we assume that specific trends, particularly economic
 9 growth, observed in the past 96 years will continue. It is well established that the U.S.
 10 economy is projected to grow slower than that experienced in the past. The projected long-
 11 run growth rate for nominal Gross Domestic Product (nGDP) is 4.09% compared to the
 12 historical growth rate of 6.10% over the past 94 years.²⁵ Beyond the change in economic
 13 growth, there is some issue with measuring those historical returns. Evidence shows that
 14 these frequently quoted historical returns do not present a complete picture in part due to
 15 the beginning period often used in the calculation.²⁶ The simple step of beginning the
 16 measurement period in the 1920's raises questions about whether the period represents all

Historic Nominal GDP (Billion \$'s)		
1929	\$	104.60
2023	\$	27,360.90
Annual Growth Rate		6.10%
Source: Bureau of Economic Analysis www.bea.gov		

25

²⁶ McQuarrie, Edward F, "The Myth of 1926: How Much Do We Know Long-Term Returns on U.S. Stocks?" The Journal of Investing; Winter 2009, p. 96.

1 the modern-era securities trading. Regardless of whether the 1920s is an appropriate
2 starting point for measuring historical returns, historical returns are widely reported and
3 frequently referred to in discussions of capital markets and potential returns for the future.
4 Some well-regarded financial publications focus solely on this era of recorded data and how
5 to apply it in cost of capital studies. Thus, measurements from this period influence
6 expectations despite warnings surrounding historic economic growth rates and market
7 returns. Still, it has significant limitations, and policymakers should be aware of them in
8 their final decision.

9 **Q. Please describe the two model runs you performed with the historical data.**

10 A. I prepared the historical perspective in two unique views of historical average returns:
11 arithmetic and geometric. The model calculations are identical to those presented earlier,
12 merely a different source for the data. The arithmetic average returns are the mean or
13 average of the returns occurring each year; it is what is expected in any given year and what
14 people refer to as an average. The geometric average is the compound return earned across
15 a period, in this instance, 1928 through 2024. These two return measures differ because of
16 the volatility in annual returns; the greater the volatility in annual returns, the greater the
17 difference between arithmetic and geometric averages for those observations. In applying
18 the CAPM, neither measure of returns reigns supreme as countless academic papers argue
19 each side of the issue. Both methods offer an accurate perspective of historic returns; the
20 arithmetic average is representative of a year, and the geometric average is the average
21 change over a time span. Since investors are rarely concerned with the potential return over

1 the period of just one year, the geometric averages are more important to investors. Both
 2 averages are widely reported or easily calculated from publicly published data.

**Capital Asset Pricing Model -- Historic Risk Premium
 Based on Historic Geometric Risk Premiums
 from 1928 to 2024
 25-CNHT-185-KSF**

	Low Beta	High Beta
1) Total Returns on Common Stocks	9.94%	9.94%
2) Total Return on Government Bonds	-	4.50%
3) Resulting Risk Premium	5.44%	5.44%
4) Beta Coefficient	x 0.75	1.05
5) Risk Premium	4.08%	5.71%
6) Historic Yield on Government Bonds	+ 4.75%	4.75%
7) Forecasted Cost of Equity Based on Historic Returns	8.83%	10.46%

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- 1) Historic returns on common stocks 1928-2024
 - 2) Historic returns on intermediate-term government bonds 1928-2024
 - 3) Resulting risk premium (1-2)
 - 4) Beta coefficient range observed in Telecommunications Services companies
 - 5) Row 3 x Row 4 = Asset Specific Risk Premium
 - 6) Historic year-end yield on intermediate-term government bonds 1928-2024
 - 7) Forecasted cost of equity capital, row 5 + row 6

Sources: Damodaran Online

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html

3

**Capital Asset Pricing Model -- Historic Risk Premium
Based on Historic Arithmetic Risk Premiums
from 1928 to 2024
25-CNHT-185-KSF**

		Low Beta	High Beta
1) Total Returns on Common Stocks		11.79%	11.79%
2) Total Return on Government Bonds	-	4.79%	4.79%
3) Resulting Risk Premium		7.00%	7.00%
4) Beta Coefficient	x	0.75	1.05
5) Risk Premium		5.25%	7.35%
6) Historic Yield on Government Bonds	+	4.75%	4.75%
7) Forecasted Cost of Equity Based on Historic Returns		10.00%	12.10%

-
- 1) Historic returns on common stocks 1928-2024
 - 2) Historic returns on intermediate-term government bonds 1928-2024
 - 3) Resulting risk premium (1-2)
 - 4) Beta coefficient range observed in Telecommunications Services companies
 - 5) Row 3 x Row 4 = Asset Specific Risk Premium
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 - 7) Forecasted cost of equity capital, row 5 + row 6

Sources: Damodaran Online

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html

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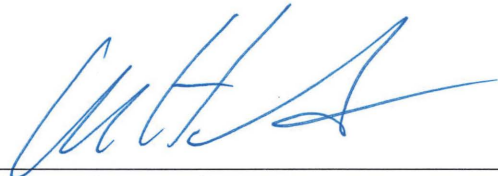
2 **Q. Does that conclude your testimony?**

3 **A. Yes, thank you.**

STATE OF KANSAS)
) ss.
COUNTY OF SHAWNEE)


VERIFICATION

Adam Gatewood, being duly sworn upon his oath deposes and states that he is a Senior Managing Financial Analyst for the Utilities Division of the Kansas Corporation Commission of the State of Kansas, that he has read and is familiar with the foregoing *Direct Testimony*, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief.




Adam Gatewood
Senior Managing Financial Analyst
State Corporation Commission of the
State of Kansas

Subscribed and sworn to before me this 11 day of February, 2025.



Notary Public

My Appointment Expires: 4/28/25

 NOTARY PUBLIC - State of Kansas
ANN M. MURPHY
My Appt. Expires 4/28/25

CERTIFICATE OF SERVICE

25-CNHT-185-KSF

I, the undersigned, certify that a true and correct copy of the above and foregoing Direct Testimony (Public) was served via electronic service this 13th day of February, 2025, to the following:

COLLEEN JAMISON
JAMISON LAW, LLC
P O BOX 128
TECUMSEH, KS 66542
colleen.jamison@jamisonlaw.legal

AARON BAILEY, ASSISTANT GENERAL COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
aaron.bailey@ks.gov

BRETT W. BERRY, LITIGATION COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
brett.berry@ks.gov

MADISEN HANE, LITIGATION COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
madisen.hane@ks.gov

NICOLE STEPHENS, KUSF ADMINISTRATOR MANAGER
VANTAGE POINT SOLUTIONS
2930 MONTVALE DRIVE SUITE B
SPRINGFIELD, IL 62704
nicole.stephens@vantagepnt.com

Ann Murphy

Ann Murphy