

–BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH–

**In the Matter of Application of Corix Utah
City Heating and Cooling LLC to Establish
a Thermal Tariff with Rates and Terms of
Service**

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**Docket No. 26-2666-01
Exhibit No. DPU 2.0 DIR
Direct Testimony of Casey J. Coleman**

FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH

Direct Testimony of

Casey J. Coleman

September 3, 2026

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1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS.**

3 A. My name is Casey J. Coleman. I am employed by the Division of Public Utilities
4 (DPU) for the State of Utah. My business address is 160 East 300 South Salt Lake
5 City, UT 84114.

6 **Q. BRIEFLY OUTLINE YOUR EMPLOYMENT BACKGROUND.**

7 A. I have worked for the DPU for over twenty years, working as both a Utility Analyst
8 and a Utility Technical Consultant. One of my primary responsibilities as a Utility
9 Technical Consultant for the DPU has been testifying before the Public Service
10 Commission of Utah (Commission) on financial and policy issues.

11 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?**

12 A. I received a Bachelor of Science degree in Finance from Weber State University in
13 1996 and a Master of Business Administration from Utah State University in 2001.
14 In May of 2022, I received the Certified Rate of Return Analyst certification from the
15 Society of Utility and Regulatory Financial Analysts (SURFA).

16 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?**

17 A. Yes. I have testified before the Commission as an expert witness in several
18 telecommunications, water, and energy dockets, including Docket Nos. 02-049-82,
19 03-049-49, 03-049-50, 05-053-01, 05-2302-01, 07-2476-01, 08-2469-01, 10-049-16,
20 10-2521-01, 10-2526-01, 08-046-01, 15-042-01, 15-2302-01, 15-2302-01, 17-098-
21 01, 19-057-02, 20-035-53, 22-057-03, and 24-035-04. The most recent testimony I
22 have filed with the Commission was in Docket No. 25-057-06, Enbridge Gas Utah's
23 general rate case.

24 **SUMMARY**

25 **Q. CAN YOU BRIEFLY SUMMARIZE THE WORK AND INVESTIGATIONS THAT**
26 **YOU HAVE PERFORMED IN THIS MATTER?**

27 A. I have reviewed and analyzed the testimonies of Corix Utah City Heating and
28 Cooling LLC (Corix or the Company) witnesses Mr. Josh Figueroa, Mr. Maxwell
29 Wang, and Mr. Douglas Chong. Mr. Figueroa's testimony presents his analysis
30 regarding the appropriate return on equity (ROE) for Corix's operations, as well as
31 an assessment of its capital structure to be used for ratemaking purposes. Mr. Wang
32 provides testimony regarding Corix's cost of debt and its capital structure. Mr.
33 Chong's testimony considers how utilities are typically expected to design rates that
34 consider Bonbright's criteria of a desirable rate structure.

35 I have also performed an independent estimation of the cost of capital, particularly
36 with respect to the cost of equity¹ and an appropriate capital structure for Corix.

37 **Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY.**

38 A. The purpose of my testimony is to provide the data and analysis supporting a
39 reasonable framework for ratemaking purposes in this case. I present evidence
40 using generally accepted valuation methods including: the Capital Asset Pricing
41 Model (CAPM), the Constant Growth Discounted Cash Flow (DCF) model, and a
42 Risk Premium model.

43 In a previous order addressing the cost of equity, the Commission discussed how
44 "applying these models requires judgment at each important step."² The Commission
45 continued by stating that each "financial model analysis will provide a good
46 framework for analysis and a useful means of organizing relevant information, but
47 not objective cost-of-equity estimates. Assessments of other data, including
48 qualitative information is necessary."³ A "Cost of Capital" primer prepared by the
49 National Association of Regulatory Commissioners (NARUC) for the United States
50 Agency for International Development (USAID) made the same point:

51 An ROE recommendation by a witness or an ROE decision by a
52 regulator requires both the application of financial models and the use

¹ Throughout my testimony, I interchangeably use the terms "ROE" and "cost of equity."

² *Application of Questar Gas Co. for an Increase in Rates and Charges*, Docket No. 02-057-02, Report and Order (Dec. 30, 2002) at 20.

³ *Id.* at 20-21.

53 of informed judgment. An ROE based solely on judgment would be
54 inappropriate, as would be an ROE that relied solely on the mechanistic
55 and arbitrary application of financial models. In [our] opinion, it is
56 common for regulatory commissions to acknowledge that any financial
57 model, no matter how conceptually appealing and well-supported,
58 needs to be supplemented with informed judgment. Commissions are
59 on a constant quest to balance the theoretical with the practical.⁴

60 My direct testimony also provides additional information, including a review of the
61 ROE trend for natural gas utilities and electric utilities and what conclusions can be
62 drawn from past allowed rate of return decisions in the marketplace. Likewise, as
63 part of my testimony, a brief analysis is provided on the appropriate cost of debt and
64 the appropriate capital structure for Corix.

65 Finally, I take the data and analysis I present and suggest how that information
66 should be applied in the Company's ratemaking proceeding in this docket. My
67 testimony recommends an appropriate capital structure, an overall rate of return, and
68 an ROE that Corix should be allowed the opportunity to earn.

69 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

70 A. I have concluded that the appropriate cost of equity for Corix is 10.00 percent. The
71 current market conditions and the results of my models support a reasonable range
72 for cost of equity between 7.15 percent and 9.63 percent. Because of the greenfield
73 nature of Corix, the DPU supports an upward adjustment of 100 basis points to the
74 rate calculated by the models, resulting in a recommended ROE of 10.00 percent for
75 Corix. In other words, the nature of this new venture supports an upward deviation
76 from the financial model results in setting the allowed return.

77 As will be discussed in further detail later, the DPU supports the Company's
78 requested capital structure. To compensate for Corix's novel status as a thermal
79 public utility rather than a traditional gas or electric utility, the DPU recommends that
80 the Commission approve an initial capital structure of 50.00 percent equity and 50.00

⁴ National Association of Regulatory Utility Commissioners, A Cost of Capital and Capital Markets Primer for Utility Regulators 20 (April 2020).

percent debt.⁵ The Company proposes a long-term cost of debt calculation of 7.49 percent as presented in Mr. Wang's direct testimony.⁶ As discussed later in testimony, the DPU disagrees with Corix's calculated cost of debt of 7.49 percent and its recommended ROE of 10.50 percent.

DPU Exhibit 2.02 WACC summarizes the capital structure and cost of capital point estimates supported by the DPU. The DPU's final recommended WACC is 7.80 percent. Table 1 summarizes the DPU's recommended capital structure and cost of capital.

Table 1

	Rate	Capital Structure	Weighted Rate
Common Stock	10.00%	50.00%	5.00%
Long-term Debt	5.60%	50.00%	2.80%
WACC		100.0%	7.80%

DPU Exhibit 2.02 WACC summarizes the capital structure and cost of capital point estimates supported by the DPU. The DPU's final recommended WACC is 7.80 percent. Table 2 summarizes the DPU's recommended capital structure and cost of capital.

CORIX'S COST OF CAPITAL POSITION

Q. IN ITS DIRECT TESTIMONY, WHAT IS THE COMPANY'S POSITION REGARDING THE COST OF CAPITAL?

⁵ Direct Test. of Maxwell Wang (May 1, 2026) at 2:36 ("Wang Direct").

⁶ Wang Direct at 7:141.

97 A. In its filing dated May 4, 2026, the Company asked for cost of capital rates of return
98 as listed in Table 2.⁷

99

Table 2			
	Rate	Capital Structure	Weighted Rate
Common Stock	10.50%	50.00%	5.25%
Long-term Debt	7.49%	50.00%	3.75%
Weighted Average Cost of Capital (WACC)		100.0%	9.00%

100 As illustrated in more detail later, I could find no authorized return by a state utility
101 commission as high as 10.50 percent since 2020, (excluding the Alaska gas utility
102 Enstar Natural Gas Company's allowed rate of return in 2024).⁸ The DPU's
103 recommended reasonable range for Corix's cost of equity utilizing financial models is
104 7.15 percent to 9.63 percent. As noted, I recommend that Corix's authorized cost of
105 equity should be 10.00 percent because of its unique nature and new development.

106 **REGULATORY CHALLENGES AND RATE-SETTING FRAMEWORKS FOR CORIX**
107 **AS A THERMAL UTILITY**

108 **Q. CAN YOU DISCUSS THE NOVELTY OF THERMAL REGULATION IN UTAH?**

109 A. Yes. As the Commission evaluates the general rate case for Corix, it addresses a
110 first-of-its-kind thermal heating and cooling utility in the state. This novel
111 infrastructure model requires the Commission to shift from traditional regulatory
112 paradigms used for large-scale electric and gas monopolies to a framework that
113 accommodates localized, high-efficiency district energy.

⁷ *Id.* at 8:174-75.

⁸ *In the Matter of the Tariff Revision Filed by ENSTAR Natural Gas Company*, Docket No. U-22-081, Order No. U-22-081.14 at 35:4, Reg. Comm'n of Alaska, April 4, 2024.

The Commission's primary mandate under Utah Code section 54-4-4.1 is to establish rates that are just and reasonable and in the public interest. For a nascent thermal utility, achieving this mandate requires balancing the financial viability of a 19-year build-out with the need for rate stability for new customers. To establish a sound regulatory foundation, the Commission must first recognize the fundamental technical and operational differentiators that separate thermal utilities from traditional energy providers.

Q. WHAT ARE THE TECHNICAL AND OPERATIONAL DIFFERENTIATORS THAT SEPARATE THERMAL UTILITIES FROM OTHER REGULATED UTILITIES IN THE STATE OF UTAH?

A. The physical and operational nature of a thermal utility dictates a regulatory approach distinct from that of electric or natural gas providers. While traditional utilities focus on the upstream transport of raw commodities, a thermal utility operates as a downstream provider, delivering a final, useable form of energy—thermal heating and cooling—directly to the customer through a closed-loop network.

Below I summarize the key differentiators between traditional upstream utilities and Corix,

Table 3

Criteria	Traditional Utilities (Electric/Gas)	Thermal Utilities Corix
Position in the Energy Chain	Upstream (Bulk energy sources) to distribution	Downstream (End-use energy)
Infrastructure	Large-scale grid/transmission pipelines	4-pipe distribution; Energy Transfer Stations (ETS)
Energy Agnosticism	Usually limited to specific fuel types	High; uses geo-exchange, waste heat, or boilers
Boundary of Service	Meter at the building boundary	Heat exchanger at the Energy Transfer Station (ETS)

The Regulatory Boundary and Public Interest

These technical differences—specifically the use of heat exchangers and local energy centers—will define the boundary of Corix’s regulated service. The Commission generally has not dealt with a utility that has a regulatory and maintenance responsibility that ends at the ETS. The in-building thermal system remains the sole responsibility of the customer and would be determined by market forces. That is, a building operator may have a variety of choices about how to deploy the heat provided. Those choices are likely to be guided by market forces in various markets, such as tenant desires, varied end-uses and market appliance options, and the like. By operating as an energy agnostic platform, Corix can harness diverse sources such as geo-exchange or sewer heat, maximizing coincidental loads across residential and commercial users. This efficiency could justify the utility’s role as being in the public interest, yet these same technical complexities lead directly to unique economic challenges during the utility’s multi-decade growth phase.

Q. WHAT IS THE SIGNIFICANT ECONOMIC CHALLENGE CORIX WILL FACE DURING ITS MULTI-DECADE GROWTH PHASE AT UTAH CITY?

A. Utah City is a 350-acre master-planned development with a continuous, 19-year build-out scheduled from 2025 to 2044. This greenfield status is the most significant variable in rate stability. Unlike a mature utility with a relatively static asset base, Corix must deploy significant lumpy capital—installing energy centers and a 4-pipe network—well in advance of the buildings and customers that will eventually generate the revenue to pay for them.

Q. CAN YOU EXPLAIN WHY LUMPY CAPITAL IS A MAJOR CONSIDERATION FOR THE COMMISSION WHEN SETTING RATES FOR CORIX?

A. Yes. In traditional rate-setting, the unitized rate is calculated as: \$Cost of Service / Billed Units. In a greenfield environment, this creates extreme volatility. For example, if the initial cost of service is \$120,000 but only 6,000 kW of capacity is connected,

the unit rate is prohibitively high at \$20 per kW. As more buildings connect and economies of scale are realized, this unit cost drops dramatically. However, applying this snapshot approach in the early years would result in severe rate shock for the first residents moving into Utah City and receiving service from Corix. It could hinder development.

In contrast, mature utilities like Rocky Mountain Power or Enbridge Gas benefit from more accurate forecasting, providing the Commission with generally reliable indicators of future performance. These utilities maintain large, stable customer bases that experience minimal year-over-year variance. Due to this significant scale, the addition of a single customer usually has no material impact on their rate base.

For greenfield utilities the situation is considerably different. The forecasting is difficult, highly sensitive to dynamic real estate market shifts, and generally not easy to control by the greenfield utility. The customer base of Corix is just one customer, but consumption of its energy will be highly dependent on occupancy of the buildings by that sole customer. Finally, a single building connection (out of the 64 planned) materially impacts assets in service and annual revenues.

Applying traditional cost-of-service modeling to this greenfield utility would create an insurmountable barrier for early-phase development.

Q. WHAT HAS CORIX SUGGESTED AS A STRATEGY TO HELP WITH RATE STABILIZATION?

A. To establish just and reasonable rates, Corix has recommended the Commission adopt a levelized rate structure using a Revenue Deficiency Deferral Account (RDDA). This strategy smooths unit rate increases over the 19-year build out, preventing the massive price spikes that would otherwise occur in the project's infancy. Based on preliminary filings, the levelized rate at inception is approximately \$15.71/kW per month, which is designed to escalate 2 percent annually until the recovery of the deferral account is complete. DPU witness Mr. Thomas Allred discusses the mechanics of the RDDA in greater detail in his direct testimony.

From a cost of capital perspective, an RDDA approach would lower the financial risk to investors. This levelized approach ensures that the Present Value (PV) of revenues matches the PV of costs over the long term. This mirrors the Levelized Cost of Energy (LCOE) models used in the electric industry for Power Purchase Agreements (PPAs). By utilizing the RDDA, the utility protects early customers from an inter-generational equity imbalance, ensuring that the first building to connect does not bear a disproportionate share of the shared infrastructure costs.

Q. WHAT ELSE IS UNIQUE ABOUT CORIX AND THIS GENERAL RATE CASE?

A. The relationship between Corix and the developer, Flagborough, is a business-to-business arrangement. It is critical to note that Flagborough is currently the sole owner of the 64 lots/buildings in the development. This concentration of ownership allows for more proportional regulation, as the utility is dealing with a single, sophisticated counterparty as its customer during the high-risk growth phase. This single customer structure is unlike anything the Commission has dealt with before when regulating a utility and is unique because Corix's customer is not the end user of the energy.

Q. HOW CAN THE COMMISSION BALANCE STAKEHOLDER INTERESTS WHILE CREATING JUST AND REASONABLE SAFEGUARDS FOR RESIDENTS OF UTAH CITY?

A. In its application, Corix filed an Infrastructure Agreement, which outlines some protections for both the developer and the eventual end-users. These protections include:

- **No Markup on Energy:** Through the Energy Cost Reconciliation Account (ECRA), all energy supply costs are passed through with no utility markup.
- **Prudent Expenditures:** The utility only earns a return on actual, prudently invested capital. The shareholder, not the customer, bears the risk for controllable costs and imprudent spending.
- **End-User Protections:** To protect residential tenants, the agreement stipulates that tenants bear no costs for sub-metering and prohibits the re-

218 selling of thermal energy by landlords unless specifically exempted by the
219 PSC.

220 DPU witness Mr. Imran Mohamed will discuss in further detail the safeguards Corix
221 offers to end users. The ECRA account will be discussed further by DPU witness Mr.
222 Thomas Allred. In this rate case, the Commission needs to establish mechanisms
223 that ensure the utility can recover its long-term cost of service, while also protecting
224 the end users from market volatility and forecast variances. This proportional
225 oversight effectively balances the need for utility recovery with the necessity of
226 consumer protection.

227 **CAPITAL STRUCTURE**

228 **Q. WHAT IS REQUIRED TO DEVELOP AN OVERALL RATE OF RETURN FOR A**
229 **PUBLIC UTILITY?**

230 A. The first step in developing an overall rate of return is to select the capital structure
231 ratios. Next, the cost or rate for each capital component, debt and equity, is
232 determined. The overall rate of return is the product of weighting each capital
233 component by its respective cost of capital. This procedure results in Corix's overall
234 rate of return and Weighted Average Cost of Capital (WACC) being weighted
235 properly to reflect the amount of capital and cost of capital for both debt and equity.

236 **Q. IS THERE A SET OF REGULATORY AND FINANCIAL PRINCIPLES USED TO**
237 **DETERMINE THE APPROPRIATE CAPITAL STRUCTURE FOR COST OF**
238 **CAPITAL PURPOSES?**

239 A. Yes. In Mr. Figueroa's direct testimony, he outlines some general guidelines when
240 considering capital structures for regulated utilities.⁹ The DPU generally agrees with
241 Mr. Figueroa's analysis and offers the additional supporting information below.

⁹ Direct Test. of Josh Figueroa (May 1, 2026) at 80-81:1401-11 ("Figueroa Direct").

There is a general set of regulatory and financial principles used in deciding the capital structure issue for cost of capital purposes that are consistent with both regulatory and financial theories:¹⁰

1. It is generally preferable to use a utility's actual capital structure in developing its rate of return. However, in deciding whether a departure from this general preference is warranted in a particular case, it is appropriate to first look to the issue of whether the utility is a financially independent entity. In determining whether a utility is a financially independent entity or self-financing, it is important to look to whether the utility: (1) has its own bond rating; (2) provides its own debt financing; and (3) debt financing is not guaranteed by a parent company.
2. When a utility issues its own debt that is not guaranteed by the public or private parent and has its own bond rating, regulatory and financial principles indicate to use a utility's own capital structure, unless the utility's capital structure is not representative of the utility's risk profile or where use of the actual capital structure would create atypical results. Regulatory and financial principles require the analyst to determine whether the actual capital structure is atypical when compared with the capital structure approved by the Commission for other utilities that operate in the same industry (i.e., water utility, gas distribution utility, telecommunications company, etc.), as well as those of proxy utility companies that operate in the same industry.¹¹
3. If a utility does not provide its own financing, public utility commissions often look to another entity. Generally, public utility commissions use the actual capital structure of the entity that does the financing for the regulated utility as long as it results in just and reasonable rates. This generally means using a parent company.

Once the capital structure is determined for the regulated utilities, public utility commissions should determine where to set the utility's return based upon how the utility's risk compares with that of other utilities that operate in the same industry (i.e. water utility, gas distribution utility, etc.). The risk analysis begins with the assumption that the utility generally falls within a broad range of average risk, absent highly unusual circumstances that indicate an inconsistently high or low risk as compared to other utilities that operate in the same industry. Generally, financial risk is the function of the amount of debt in an entity's capital structure used for the cost

¹⁰ See generally Roger A. Morin Ph.D., *Utilities Cost of Capital* 14-18 (1984).

¹¹ For a comprehensive overview of the regulatory process and the issues involved, see K.M. Howe & E. F. Rasmussen, *Public Utility Economics and Finance* (1982).

276 of capital purposes. When there is more debt, there is more financial risk, everything
277 else being equal.¹²

278 **Q. CAN YOU DISCUSS HOW THE FINANCIAL PRINCIPLES OUTLINED ABOVE**
279 **APPLY TO CORIX?**

280 A. Yes. Corix is ultimately owned by British Columbia Investment Management
281 Corporation (BCI), a pension fund manager.¹³ Because of the greenfield nature of
282 Corix, there is no actual equity and debt percentages for Corix adding any
283 meaningful insight to its capital structure.

284 **Q. WHAT CAPITAL STRUCTURE RATIO IS APPROPRIATE TO USE TO**
285 **DEVELOP CORIX'S OVERALL RATE OF RETURN?**

286 A. For the start-up phase of Corix, the DPU accepts a 50/50 capital structure. Once
287 there are more data and information, the DPU likely would recommend the
288 Commission use the actual capital structure of Corix.

289 **COST OF DEBT**

290 **Q. DO YOU HAVE A COMMENT ABOUT THE COMPANY'S RECOMMENDED**
291 **COST OF DEBT?**

292 A. Yes. In this docket, Mr. Wang is recommending a cost of debt of 7.49 percent.¹⁴
293 Corix has entered into an Intercompany Credit Agreement with Corix Utah City DE
294 Systems LLC (Lender).¹⁵ As explained by Mr. Wang, "Corix is a direct subsidiary of
295 the Lender. The Lender commits to fund debt requirements as provided in the
296 agreement."¹⁶

¹² See generally Alfred E. Kahn, The Economics of Regulation Principles and Institutions vols. 1 & 2 (1988).

¹³ Utah City District Energy Utility GRC Application (May 1, 2026) at 41.

¹⁴ Wang Direct at 7:141.

¹⁵ Wang Direct at 6:114.

¹⁶ *Id.* at 6:115-16.

Q. IS THE DPU COMFORTABLE WITH THIS COST OF DEBT OF 7.49 PERCENT?

A. No. Generally, whenever a utility issues its own debt, the DPU prefers to use the actual calculated cost of debt for a regulated utility. If the utility does not issue its own debt, consideration could be given to the cost of debt of the parent company. Finally, if the cost of debt is not available for the parent company, using another entity is an option available to the Commission.

Unfortunately, Corix does not issue its own debt and was unable to secure financing from an independent third-party lender, relying instead on debt sourced directly from a corporate affiliate. Under Utah law, affiliate dealings are subject to heightened regulatory scrutiny, and the utility carries a strict burden of proof to demonstrate that affiliate costs are prudent and reflective of market conditions (Discussed at length in *U.S. West Communications, Inc. v. Public Service Commission*, 901 P.2d 270 (Utah 1995) and in *Committee of Consumer Services v. Public Service Commission*, 75 P.3d 481 (Utah 2003).

Furthermore, Section D.2 of the *NARUC Guidelines for Cost Allocations and Affiliate Transactions* dictates that affiliate transfers must be priced at the lower of fully allocated cost or prevailing market prices to protect captive customers from self-dealing. Corix has presented no independent market benchmarking or auditable cost verification to justify the internally assigned 7.49 percent interest rate as its cost of debt for ratemaking purposes. Because accepting an unvetted, affiliate-set rate violates NARUC anti-subsidization principles and Utah's statutory mandate for just and reasonable rates (Utah Code § 54-3-1), the Commission should reject the proposed 7.49 percent rate.

To determine a more acceptable cost of debt that is not dependent on an affiliate, the DPU suggests using the Secured Overnight Financing Rate (SOFR) and some level of a rate spread for corporate rates such as bond rates.

The SOFR is published every business day by the Federal Reserve Bank of New York. Around 2018, the SOFR was selected to be the preferred risk-free alternative to replace the U.S. dollar London Interbank Offered Rate. As an overnight secured rate, SOFR represents the interest rate at which financial institutions lend money to one another using Treasury securities as collateral.¹⁷ The Federal Reserve also publishes monthly corporate bond rates for Moody's Aaa and Baa bonds.¹⁸

In DPU Exhibit 2.08 Comp SOFR_Bonds, the DPU looked at the published monthly rates for Moody's Aaa and Baa bonds as well as a calculated monthly average rate for the SOFR. This analysis provided data that allowed the DPU to determine a bond premium above the SOFR rate. The range of premiums was from a negative 60 basis points to a positive 437 basis points. The low end of the range happened in September 2024, and the high end of the range occurred in April 2022. For the last 24 months (July 1, 2024, to June 1, 2026) the range has been a negative 47 basis points to a positive 251 basis points.

As of June 1, 2026, the SOFR was at 3.63 percent. The DPU recommends the Commission choose a bond premium somewhere in the range of 150 to 200 basis points above the SOFR. Using this range and calculation the DPU recommends a cost of debt at 5.60 percent, which would be 197 basis points higher than the June 1, 2026, SOFR rate.

Q. HOW DOES THE DPU'S 5.60 PERCENT COST OF DEBT COMPARE TO OTHER REGULATED UTILITIES?

A. As shown in Mr. Figueroa's testimony, utility bond yields were 5.60 percent and 6.03 percent respectively at the end of 2024. Additionally, in his exhibit Workpaper #2 to Schedule No. JF-11 he calculates a bond yield summary for the proxy group of companies. All of the companies in his calculation are at either 5.60 percent or 5.80

¹⁷ <https://www.newyorkfed.org/markets/reference-rates/sofr>

¹⁸ <https://fred.stlouisfed.org/categories/32348>

percent. Therefore, the DPU's recommendation of 5.60 percent is comparable to the other regulated utilities.¹⁹

PRINCIPLES OF RATE REGULATION

Q. IN MR. CHONG'S DIRECT TESTIMONY, HE DISCUSSES SOME PRINCIPLES GUIDING FAIR RATES OF RETURN FOR REGULATED UTILITIES. DO YOU AGREE WITH HIS ANALYSIS?

A. Generally, I agree with Mr. Chong on the principles²⁰ guiding utility commissions when setting a fair rate of return. For decades there has been a developing body of opinions regarding the fair rate of return for a regulated utility.

Q. WHAT ARE YOUR OBSERVATIONS REGARDING THE PRINCIPLES GUIDING FAIR RATES OF RETURN IN THE CONTEXT OF RATE REGULATION?

A. As mentioned above, for decades there has been a developing body of opinions regarding the fair rate of return when dealing with rate regulation. Dr. James C. Bonbright, in his book *Principles of Public Utility Rates*, offered some of the first ideas dealing with utility regulation.²¹ Dr. Roger A. Morin also outlines the principles guiding fair rates of return in his book *New Regulatory Finance*.²² For decades the DPU has been discussing the fair rate of return in testimony filed with the Commission.²³

¹⁹ Figueroa Direct at 25:469-70.

²⁰ Chong Direct at 6-7:120-48.

²¹ For a general overview of the fair rate of return concept, see James C. Bonbright, *Principles of Public Utility Rates* (1961) republished on the web (July 2005) (Chapter 10 Criteria for a Fair Return and Chapter 15 The Fair Rate of Return).

²² See generally Roger A. Morin Ph.D., *New Regulatory Finance* 14-18 (2006).

²³ See *In the Matter of the Application of Questar Gas Company to File a General Rate Case*, Docket No. 07-057-13, Direct Test. Dr. Artie Powell (Mar. 31, 2008) at 3-6:35-82. See also, *In the Matter of the Application of Rocky Mountain Power for Authority to increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations*, Docket No. 11-035-200, Direct Test of Mr. Charles Peterson (Mar. 31, 2008) at 19-32:421-716 and *In the Matter of the Application of Rocky Mountain Power for Authority to increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations*, Docket No. 20-035-04, Direct Test. of Mr. Casey J. Coleman (Aug. 20, 2020) at 2-4.

The fair rate of return is developed from two landmark U.S. Supreme Court cases, *Bluefield Water Works & Improvement Co. v. Public Service Commission* (1923) and *Federal Power Commission v. Hope Natural Gas Co.* (1944). These decisions are fundamental to understanding utility regulation, particularly concerning the determination of the cost of capital and the concept of a "just and reasonable" rate of return.

Bluefield established the substantive criteria for a constitutionally permissible rate of return, emphasizing comparability with other investments of similar risk and sufficiency to maintain financial soundness and attract capital. While often associated with the "fair value" era, it laid crucial groundwork for modern cost of capital principles. *Hope* introduced the "end result" test, granting regulatory commissions greater flexibility in methodology so long as the ultimate outcome of the rate order achieved the financial integrity standards articulated in *Bluefield*.²⁴ It effectively moved federal regulation away from rigid "fair value" calculations.

Together, *Bluefield* and *Hope* define the constitutional boundaries for utility ratemaking, ensuring that utilities can recover their costs, including the cost of capital, while protecting consumers from excessive charges. Their principles remain central to balancing investor and consumer interests in a dynamic regulatory environment.

Q. WHAT CONSTITUTES A FAIR RATE OF RETURN FOR REGULATED UTILITIES?

A. In utility regulation, a "fair rate of return" is a crucial concept that balances the interests of utility investors and the consumers they serve. The *Bluefield*²⁵ and *Hope*²⁶ cases established the legal and economic standards for what constitutes a just and reasonable return.

²⁴ *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944).

²⁵ *Bluefield Water Works v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

²⁶ *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591 (1944).

Based on these seminal rulings, a fair rate of return is defined by several key criteria:

1. **Comparable Earnings:** The return should be “equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings attended by corresponding risks and uncertainties. This means the utility's allowed profit should be comparable to what investors could earn from other businesses with similar levels of risk, but it does not entitle the utility to profits from highly speculative ventures.”²⁷
2. **Financial Soundness and Credit Maintenance:** The return must be “reasonably sufficient to assure confidence in the financial soundness of the utility.”²⁸ It must also be “adequate, under efficient and economical management, to maintain and support its credit”²⁹ This ensures the utility remains financially healthy and can meet its financial obligations.
3. **Ability to Attract Capital:** The return must enable the utility “to raise the money necessary for the proper discharge of its public duties.”³⁰ This is vital for utilities to fund ongoing operations, maintain infrastructure, and invest in necessary upgrades and expansions to provide reliable service.
4. **Covering Costs:** The return must ensure “enough revenue not only for operating expenses, but also for the capital costs of the business,”³¹ which includes debt service and stock dividends.
5. **Not Excessive:** While ensuring financial viability, the return should not be excessive. Unlike ordinary enterprises, public utilities are subject to restraint

²⁷ *Bluefield Water Works v. Pub. Serv. Comm'n*, 262 U.S. 679, 692-93 (1923).

²⁸ *Id.* at 693.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Hope Nat. Gas Co.*, 320 U.S. at 603.

and must limit their profit to what is just and reasonable, given their assured market and freedom from competition.³²

6. **Dynamic Nature:** What constitutes a reasonable rate of return is not static; it can change over time due to shifts in “opportunities for investment, the money market, and business conditions generally.”³³

Emphasizing that the “end result” or “total effect” of a rate order is controlling rather than the specific calculation method, the *Hope* decision established that rates are just and reasonable as long as the outcome allows a utility to operate successfully, maintain financial integrity, attract capital, and compensate investors for risks.³⁴

Q. HOW HAVE REGULATORY COMMISSIONS GENERALLY DETERMINED A FAIR RATE OF RETURN FOR A REGULATED UTILITY?

A. Recently, Regulatory Research Associates (RRA), gave a succinct overview of the regulatory process and how various commissions have calculated a fair rate of return. The report states:

Several methodologies are in place for estimating an ROE in a rate case, although utility commissions consistently recognize only a few.

Discounted cash flow (DCF) —The DCF model calculates ROE by dividing the company’s dividend, in dollars, by its observable market price and then adding an assumed growth rate.

If a company’s dividend is expected to grow at different rates over time, a multistage DCF approach can account for this. The DCF model is one of the standard formulas for estimating ROE in rate cases, but as is the case with any formula model, the output is only as good as the input, so it is important to make reasonable assumptions regarding the growth rate.

Capital Asset Pricing Model (CAPM) — Commissions also give significant weight to the CAPM. The CAPM uses the yield on a long-term US Treasury bond as the starting point for determining the ROE. This rate is the risk-free rate of return in the formula. Since all securities

³² *Bluefield Water Works*, 262 U.S. at 692-93.

³³ *Id.* at 693.

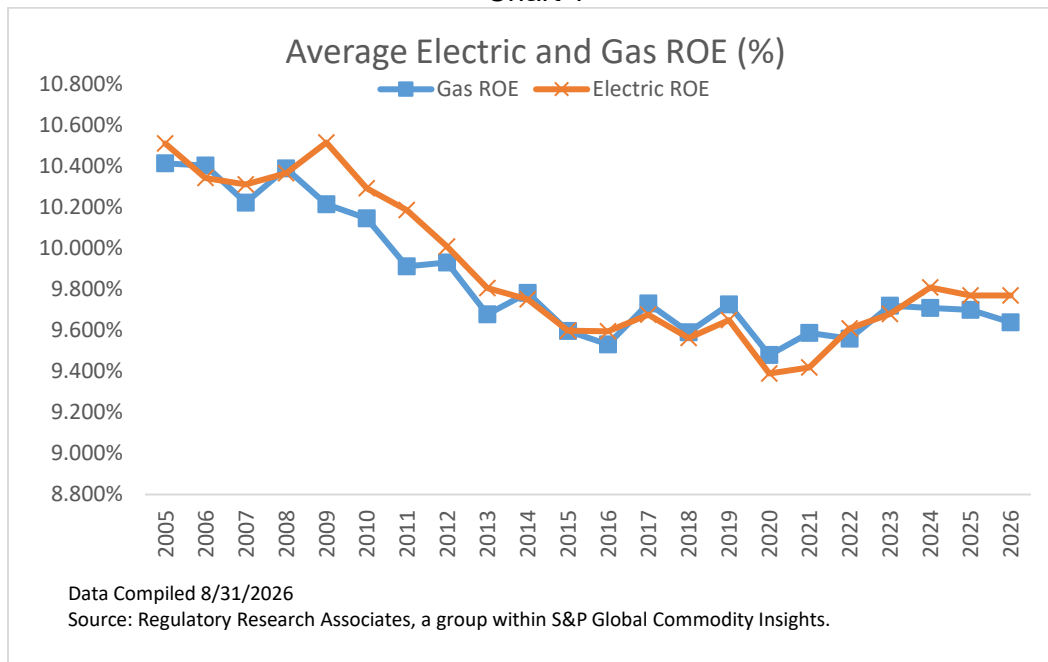
³⁴ *Hope Nat. Gas Co.*, 320 U.S. at 602-03.

are, by definition, riskier than the riskless government bond, an ROE for those securities will need to reflect a premium over the risk-free return. The CAPM approach adds the product of the stock's beta — the systematic risk factor for the company, calculated as per the relationship between the stock's historical price movements and those of the broader market — and a market return premium. The market return premium is simply the expected "excess" return for the stock market over the risk-free rate and is also calculated while considering historical price movements. The sum of the risk-free rate and the product of the stock's beta and the market return premium will give an estimate of an appropriate ROE for a utility.³⁵

Q. WHAT HAS BEEN THE AVERAGE ROE FOR GAS AND ELECTRIC UTILITIES AS CALCULATED BY RRA?

A. The chart below shows the average return of equity calculated by RRA from 2005 to the first half of 2026.

Chart 1



In the first quarter of 2026, the average authorized ROE for all electric and gas utilities decreased slightly compared to the full-year averages for 2025.

³⁵ S&P Global Market Intelligence RRA Regulatory Focus, *The rate case process: establishing a fair rate of return for regulated utilities* at 13 (July 21, 2025).

According to calculations by RRA, the overall average authorized ROE for electric utilities was 9.71% in rate cases decided in the first quarter of 2026, below the 9.84% average for full year 2025. There were 11 electric ROE authorizations in the first quarter of 2026 versus 86 in full year 2025. The average ROE authorized for gas utilities was 9.63% in rate cases decided in the first quarter of 2026, below the 9.87% in rate cases decided in full year 2025. There were seven gas ROE authorizations in the first quarter of 2026 versus 68 in full year 2025.³⁶

Q. WHAT HAS RRA OBSERVED FROM ITS DATA CONCERNING WATER COMPANY ROE AVERAGES?

A. In a report discussing ROE averages for water companies, RRA observed the following:

Year to date, seven water utility rate cases have been completed, with cost-of-capital parameters provided in four proceedings. Authorized ROEs averaged 9.64% and ranged from 9.35% to 9.80%. This is a modest decline from an average authorized ROE of 9.68% in 2025 across four decisions that included cost-of-capital parameters. While authorized ROEs appear to be modestly decreasing, discerning definitive trends is challenging with such a small dataset.³⁷

Q. WHAT HAS RRA OBSERVED FROM ITS DATA CONCERNING INDUSTRY ROE AVERAGES AND THE VARIANCE IN THOSE AVERAGES?

A. In a report dated June 29, 2020, RRA explained:

RRA tracks trends in industry ROE averages and compares commission authorized-ROEs to the industry average in the time period it was established. In some cases, authorized ROEs have been significantly above or below prevailing industry averages at the time established.

The variance in authorized ROEs over the years has remained fairly consistent, with the one standard deviation amounting to a range of roughly 40-50 basis points above and below the industry average. Statistically speaking, 68% of a sample population should occur within one standard deviation of a normal distribution; returns above and

³⁶ S&P Global Market Intelligence RRA Regulatory Focus, *Major energy rate case decisions in the US January – March 2026*. at 5 (June 2026).

³⁷ S&P Global Market Intelligence RRA Regulatory Focus, *Water utility rate case pipeline expands in 2026 as filings accelerate*. (June 25, 2026).

below one standard deviation could be viewed more significantly different than the RRA average. For example, the majority of ROE authorizations during a year when the average ROE was 9.5% would roughly fall into the range of 9.0%-10.0%.³⁸

Q. WHAT IS THE AVERAGE ROE FOR GAS AND WATER UTILITIES AS OF THE FIRST HALF OF 2026?

A. As shown above, S&P Global Market Intelligence calculated the average ROE for gas utilities as of the first quarter of 2026, at 9.63 percent and for water companies at 9.64 percent.

Q. WHAT IS THE VALUE IN KNOWING THE AVERAGE ROE FOR GAS AND WATER UTILITIES?

A. Knowing the average return on equity for gas and water utilities along with the variance analysis done by RRA enables parties to calculate the general range of ROE for gas and water utilities in the current market. Because the average year-to-date ROE, as calculated by RRA, is 9.63 percent for gas utilities and 9.64 percent for water utilities, using this data point and the 40-50 basis points in variance as determined by RRA, the reasonable range for a gas utility in the market would be between 9.13 percent on the low end to 10.13 percent on the high end. For a water utility the range is essentially the same at 9.14 percent for the bottom of the range and 10.14 percent at the top of the range. As discussed by RRA, "returns above and below one standard deviation could be viewed more significantly different than the RRA average."³⁹

Q. IS THE COMPANY'S REQUESTED ROE OF 10.50 PERCENT REASONABLE?

A. Mr. Figueroa and I have a fundamental disagreement about what is a reasonable ROE for Corix in relation to the other utility companies in the market. His ROE recommendation of 10.50 percent places the recommendation outside of one standard deviation from the yearly average calculated by RRA. This means Mr.

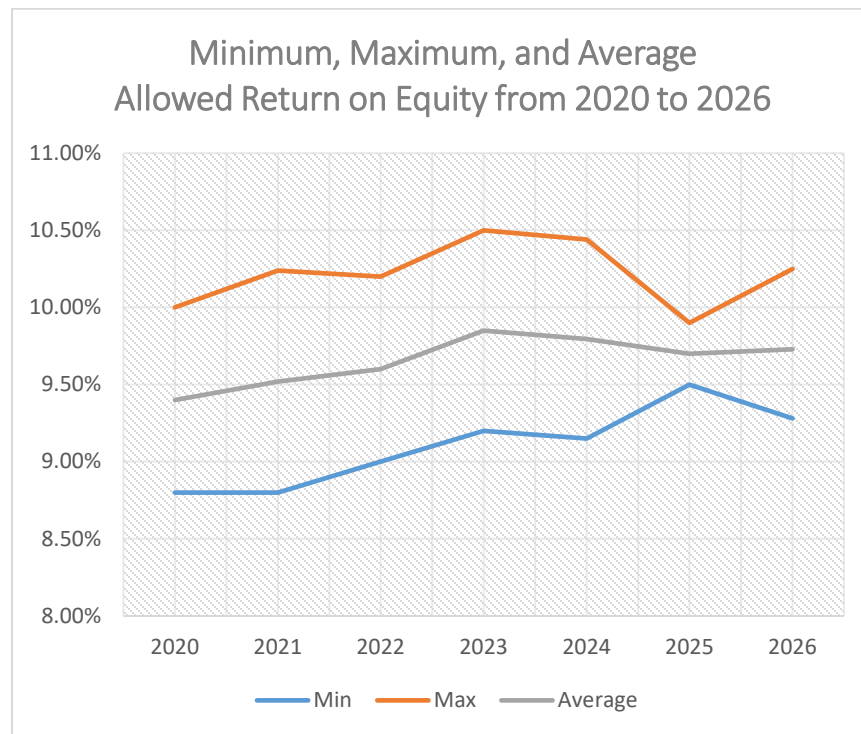
³⁸ S&P Global Market Intelligence RRA Regulatory Focus, *The rate case process: establishing a fair rate of return for regulated utilities* (June 29, 2020).

³⁹ *Id.* Emphasis added.

Figuroa's recommendation, as discussed by RRA above, could be viewed as significantly different than the RRA average. Statistically speaking, his recommendation would at minimum be higher than 68 percent of the sample population.

To further illustrate how unreasonable Mr. Figuroa's recommendation is, I looked at all of the past allowed rates of return for gas utilities from 2020 to August 31, 2026. Using data from S&P Capital IQ, I was able to compile what the allowed rate of return was for each gas utility. With each return, I could then calculate the minimum allowed rate of return and maximum allowed rate of return for the calendar years 2020 through August 31, 2026. The results of this analysis are provided in DPU Exhibit 2.07 ROE Chart and summarized in the chart below.

Chart 2



As the chart above illustrates, Corix's proposed ROE recommendation would be higher than any authorized return I have found since 2020 (excluding rates set by the Alaska Utility Commission). To accept the conclusion that Corix's cost of equity

should be 10.50 percent requires the Commission accepting the premise that investors believe Corix is a riskier investment relative to other utilities and the total stock market. Generally, if a commission agrees to a higher cost of capital, it will mean either: (1) market conditions have significantly changed or (2) Corix's risks are significantly different than other utilities, and investors are requiring a higher return because of the additional risks. Because this is the first rate case for Corix, there are no past market conditions to compare to justify a higher ROE. Additionally, because Corix is a regulated utility, it is likely not riskier than the total stock market.⁴⁰ Because of these two facts, the Commission should not allow a 10.50 percent ROE for Corix.

Q. DOES MR. FIGUEROA DISCUSS RISKS FACED BY CORIX?

A. Yes. Mr. Figueroa discusses the capital market environment, regulatory risk, and access to capital to illustrate how Corix's risk profile compares to his selected proxy group of companies. Each of these arguments will be discussed in greater detail below, but generally, none of these risk factors support a significantly higher rate than the average ROE as recommended by Mr. Figueroa.⁴¹ Often the information provided by Mr. Figueroa supports an ROE for Corix that would be similar to the peers or lower than the average ROE.

Q. WHAT DOES MR. FIGUEROA SAY REGARDING THE CHANGES IN ECONOMIC AND FINANCIAL CONDITIONS IN RECENT MONTHS?

A. Mr. Figueroa has made a few points relating to the influence of market conditions on the required cost of capital and required ROE. He explains "[s]everal key capital market factors indicate that economic and financial uncertainty remains elevated due to persistently high inflation levels, recent imposition of global tariffs, weakness in the labor markets and recent changes in the Federal Reserve's monetary policy."⁴² He continues "[t]his suggests that ongoing uncertainty in the capital market conditions is affecting the compensation required by investors to hold non-risk-free assets."⁴³ He

⁴⁰ <https://papertradingjournal.com/2026/05/21/utilities-sector-statistics/>

⁴¹ Figueroa Direct at 21:411-14.

⁴² *Id.* at 21:411-15.

⁴³ *Id.* at 21:414-15.

then outlines some of the economic conditions that have changed in the capital markets, which include:

- [I]nflation developments and expectations
- [I]nterest rate developments
- [I]nvestors' perception of the market risk premium.⁴⁴

Below, I evaluate each of these points discussed by Mr. Figueroa and how the current data in the market environment does not support the arguments Corix makes in support of higher returns for investors.

Q. WHAT DOES MR. FIGUEROA SAY ABOUT CAPITAL MARKET CONDITIONS?

A. Mr. Figueroa explains in his testimony how some important cost of equity estimation methodologies can be impacted by capital market conditions. He considers the following:

Capital market conditions are important to cost of equity estimation methodologies and can affect the inputs to the cost of equity models. For example, inputs to the DCF models are affected by the economy as economic growth will affect utility growth rates and stock prices. Consequently, the capital market developments affect the growth rates, dividend yield, and assessment of estimates' reasonableness. Furthermore, the risk-free rate is an input to the CAPM and risk premium model, so that recent and expected developments in government bond yields are important to assess the validity of any measure of the risk-free rate. Similarly, the market equity risk premium ("MRP") (e.g., volatility and changes in investors' risk perceptions) are vital for accurate determinations of the ROE. Lastly, developments in government and utility bond yields can provide valuable context when evaluating [Corix]'s cost of debt.⁴⁵

Mr. Figueroa is correct in his evaluation of capital market conditions and how those conditions can impact the risk return required by investors. The DPU agrees with the conclusion that many of the models can be impacted by different market data and

⁴⁴ *Id.* at 20:392-95.

⁴⁵ *Id.* at 21:398-408.

trends. Where the DPU differs from Mr. Figueroa is in the severity of the current market and how it impacts investors' required return.

When looking at the cost of capital in the recent past, Kroll stated in its September 2024 update the following:

The soft-landing scenario for the global economy now appears to be the base case, despite the residual overhang of restrictive monetary policies. From a historical perspective, projected global growth for 2024-2025 falls short of the pre-pandemic levels of around 3.5% (based on 1980-2019 average). The U.S. economy has continued to be stronger than expected, although a slowdown is expected in 2025, as labor markets cool down and pandemic-related excess savings are used up. The significant 0.50% interest rate cut by the U.S. central bank in September was a sign that the Fed is confident about achieving its 2.0% inflation target in the near term. The anticipation of future rate cuts and the promise of higher profits from generative artificial intelligence have propelled U.S. stock markets to new record highs. Some of this optimism could wane as we approach the U.S. general elections in November. The outcome of the presidential election may have reverberations around the globe and heighten uncertainty for financial markets . . . Other geopolitical risks such as the potential escalation of various ongoing Middle East conflicts and the Russia-Ukraine war should also be monitored, but for now equity investors appear to be largely ignoring their impact on markets.⁴⁶

Despite inflation remaining a persistent challenge and other global volatility, U.S. equities have continued to grow in value. The U.S. economy is not as strong as it's ever been, but it does continue its long-term pattern of growth and dynamism

Ms. Wolfe, an economics reporter for the Wall Street Journal, argues that the U.S. economy is regaining its swagger. In the article, she discusses how consumers recently have realized "extreme upheaval in prices and consumer spending wasn't happening. And [consumers] were sick of waiting for certainty that seemed like it would never arrive."⁴⁷ One consumer stated "[t]here was all this hyperbole that cars are going to go up 10,000%, but it seems like none of that really happened."⁴⁸

⁴⁶ Kroll, *Cost of Capital in the Current Environment* (Sept. 2024).

⁴⁷ Rachel Wolfe, *The U.S. Economy is Regaining Its Swagger*, Wall St. J. (July 20, 2025).

⁴⁸ *Id.*

626 Ms. Wolfe stated:

627 When President Trump slapped tariffs on nations across the globe this
628 spring, many economists feared higher prices and spending cuts would
629 flatten the economy.

630 Consumer sentiment collapsed. The S&P 500 stock index fell by 19%
631 between February and April. The world held its breath and waited for
632 the bottom to drop out.

633 But that didn't happen. Now businesses and consumers are regaining
634 their swagger, and evidence is mounting that those who held back are
635 starting to splurge again.

636 The stock market is reaching record highs. The University of Michigan's
637 consumer sentiment index, which tumbled in April to its lowest reading
638 in almost three years, has begun climbing again. Retail sales are up
639 more than economists had forecast, and sky-high inflation hasn't
640 materialized—at least not yet.⁴⁹

641 Despite perceived market uncertainty and the impact of ongoing tariffs, the U.S.
642 economy has continued to demonstrate resilience, rebounding effectively from
643 earlier trade policy disruptions. While the future trajectory of interest rates and
644 Federal Reserve policy remains somewhat opaque, the available data does not
645 support Mr. Figueroa's ROE recommendation

646 **Q. MR. FIGUEROA DISCUSSES HOW HIGHER BOND YIELDS AFFECT THE**
647 **ROE ESTIMATES. DO YOU AGREE WITH HIS ANALYSIS?**

648 A. In his testimony Mr. Figueroa states:

649 Debt holders in a company have a fixed claim on the assets of the
650 company and are paid prior to the company's owners (equity holders)
651 who hold the inherently variable residual claim on the company's
652 operating cash flows. Because equity holders only receive the profit that
653 is left over after the fixed debt payments are made, higher degrees of
654 debt in the capital structure amplify the variability in the expected rate
655 of return earned by equity holders. This phenomenon of debt resulting
656 in financial leverage for equity holders means that, all else equal, a
657 greater proportion of debt in the capital structure increases risk for
658 equity holders, causing them to require a higher rate of return on their

⁴⁹ *Id.*

659 equity investment, even for an equivalent level of underlying business
660 risk.⁵⁰

661 Generally, Mr. Figueroa's analysis of bond yield is accurate. The key point in what
662 was being shared, is the statement "all else equal." When determining the ROE for
663 companies, there are many factors that must be evaluated to determine the correct
664 cost of capital. It is true that if nothing else has changed except a higher bond yield,
665 the cost of capital would increase. When looking at the ROE for Corix, there are
666 several factors that the Commission should consider when setting just and
667 reasonable rates, and I discuss these below. Furthermore, this point helps illustrate
668 why part of the Commission's task in setting an overall rate of return is to evaluate a
669 utility's capital structure. A prudently run utility will manage its capital structure to
670 avoid too-heavy leverage.

671 **Q. MR. FIGUEROA DISCUSSES HOW CAPITAL ATTRACTION AND**
672 **OPPORTUNITY COSTS AFFECT THE ROE ESTIMATES. DO YOU AGREE**
673 **WITH HIS ANALYSIS?**

674 A. Yes. Another point stated by Mr. Figueroa is that the utility's ROE represents an
675 opportunity cost to investors that could impact a utility's ability to attract capital for
676 investment:

677 The cost of capital is defined as the expected rate of return in capital
678 markets on alternative investments of equivalent risk. Put differently, it
679 is the rate of return investors require based on the risk-return
680 alternatives available in competitive markets. The cost of capital is a
681 type of opportunity cost—it represents the rate of return that investors
682 could expect to earn elsewhere without bearing more risk.⁵¹

683 Mr. Figueroa then concludes "[t]he impact of risk on investors' required returns is
684 central to the financial concept of the opportunity cost of capital, and to the
685 'comparable investments' and 'capital attraction' components of the fair rate of return
686 standard."⁵² He continues "[p]ut simply, a fair rate of return must be sufficiently

⁵⁰ Figueroa Direct at 13-14:258-66

⁵¹ *Id.* at 8:155-59.

⁵² *Id.* at 9:197-99.

attractive to compensate investors for forgoing the opportunity to earn a return from an alternative investment of comparable risk.”⁵³

Even though Mr. Figueroa understands the concept of risk to investors, he recommends a rate of return that is higher than the average allowed rate of return earned by companies of comparable risk. Mr. Figueroa also concludes that establishing Corix’s authorized ROE to 10.50 percent is just and reasonable. To accept the proposed recommendation suggested by Mr. Figueroa, implicitly, one must conclude that Corix is riskier than a comparable group of regulated utilities.

As a regulated utility in the state of Utah, Corix is not markedly riskier than other comparable regulated utilities. My recommendation includes an added portion of equity return to reflect the new nature of Corix and its attendant risks. Even though Mr. Figueroa has argued in this case that Corix is a risky investment, my testimony will show that as a regulated public utility Corix has a lower risk than the entire market.

The cost of equity proposed by Mr. Figueroa for Corix is not consistent with published market returns. For example, the Company’s proposal is higher than the 10.22 percent calculated by Kroll for the returns of the total stock market.⁵⁴ A rate of return above 10.22 percent suggests that Corix has a higher risk than average market investments. As explained in further detail below, it is not reasonable to conclude that Corix has a greater investment risk than the stock market and should require a higher return. I would instead submit that a regulated utility is considerably less risky than the average stock in the market because of the benefits of utility regulation and the impact those benefits have on a company’s cash flow.

Unfortunately, because there are so few thermal heating and cooling utilities, finding acceptable companies to compare against Corix is difficult. This makes determining Corix’s rate a bit more challenging. Generally, because of the strong economy in Utah and the stable and healthy national economy, the DPU suggests Corix’s rate

⁵³ *Id.* at 9:199-201.

⁵⁴ DPU Exhibit 2.06 RP on Bond Yields.

should be no higher than a comparable set of utility companies. As will be explained in more detail later in my testimony, given the capital attraction requirements inherent in utility regulation and the objective of establishing an appropriate initial cost of equity for a thermal utility, the DPU recommends a 10.00 percent return. This figure is consistent with our internal analysis and benchmarking against a proxy group of companies.

This analysis of proxy companies introduces a level of industry-wide circularity, which is part of the reason why broader reviews of economic conditions and market-wide returns are needed.

Q. WHAT ELSE SHOULD THE COMMISSION CONSIDER WHEN TRYING TO UNDERSTAND THE ECONOMY AND ITS IMPACT TO THE ROE ESTIMATES?

A. To establish a well-informed picture of the economy, current economic conditions should be considered, instead of the narrow focus of just capital market conditions. Looking at the market as a whole provides a clearer picture of the current situation that will better inform parties on the appropriate ROE for Corix. When looking to establish what the appropriate ROE should be for regulated utilities, the Commission provided insight in a past order. In a Dominion Energy Utah rate case, Docket No. 22-057-03, the Commission shared the following,

As we consider the various ROE recommendations, we conclude that all the evidence supporting those recommendations is relevant in determining a just and reasonable ROE. To some extent, this determination is a delegated legislative function requiring us to consider the evidence and make an ultimate decision exercising judgment and discretion. Considering the appropriate balancing in this undertaking, our most recently approved ROE for DEU is at least a useful starting point in our evaluation in this case. In February 2020, we reduced DEU's authorized ROE by 35 basis points, from 9.85% to 9.50%. Our evaluation in this case considers, among other things, the extent to which financial conditions have changed since that decision, and the impact those changed conditions should have on DEU's authorized ROE. There is no real dispute that financial conditions have changed since February 2020. As identified by the parties, the impacts of the COVID-19 pandemic, the actions of the Federal Reserve, and perhaps

other issues such as the conflict in the Ukraine, have resulted in higher inflation rates, higher interest rates, supply chain disruptions, and other issues. There is no clear consensus among the parties as to the full impact of the changed economic conditions as they relate to this proceeding. However, our consideration of the totality of the effects of these changed conditions and evidence relating to other issues relevant to this proceeding indicate a higher ROE than was authorized when we issued the February 2020 decision. We find that a modest increase in DEU's authorized ROE is appropriate.⁵⁵

The Commission's standard practice is to use a utility's most recently authorized ROE as a baseline for determining equity returns. However, because Corix is a greenfield utility and this is the first time the Commission is setting an ROE for a thermal heating and cooling provider in the state, there is no historical precedent for this specific entity.

CURRENT ECONOMIC CONDITIONS

Q. GIVEN THAT THERE IS NO HISTORICAL ROE PRECEDENT FOR THIS SPECIFIC THERMAL UTILITY, HOW DOES YOUR ANALYSIS OF CURRENT NATIONAL AND STATE ECONOMIC CONDITIONS SERVE TO ESTABLISH AN APPROPRIATE RETURN?

A. To bridge this gap, I evaluate current economic indicators against historical averages. This comparison is essential, as it provides the necessary context to determine how prevailing capital market conditions—which differ significantly from the past—warrant an adjustment to the baseline. In the following section, I present specific data points regarding the health of the national and state economy to illustrate how these factors inform an appropriate, risk-adjusted ROE for Corix.

In a report by Jeff Cox, an economic reporter for CNBC, he discusses the recent economic conditions, stating that “[t]he U.S. Economy grew at a much stronger-than-expected pace in the second quarter [of 2025], powered by a turnaround in the trade

⁵⁵ *Application of Dominion Energy Utah to Increase Distribution Rates and Charges and Make Tariff Modifications*, Docket No. 22-057-03, Report and Order (Dec. 23, 2022) at 7-8.

776 balance and renewed consumer strength, the Commerce Department reported
777 Wednesday [June 30, 2025].”⁵⁶

778 Mr. Cox continues: “[g]ross domestic product, a sum of goods and services activity
779 across the sprawling U.S. economy, jumped 3 percent for the April through June
780 [2025] period, according to figures adjusted for seasonality and inflation.”⁵⁷

781 He explained that “[t]hat topped the Dow Jones estimate for 2.3 percent and helped
782 reverse a decline of 0.5 percent for the first quarter of [2025] that came largely due
783 to a huge drop in imports, which subtract from the total, as well as weak consumer
784 spending and tariff concerns.”⁵⁸

785 Mr. Cox explained why the 2025 quarter two results were important when he noted
786 “[t]he period reported Wednesday includes President Donald Trump’s ‘liberation’ day
787 tariff announcement. Imports had jumped in the first quarter as companies sought to
788 get ahead of the announcement.”⁵⁹

789 Heather Long, a chief economist at Navy Federal Credit Union, said “[t]he word for
790 the summer [of 2025] for the economy is resilient. The consumer is hanging in there,
791 but still on edge until the trade deals are done.”⁶⁰

792 National Economic Council director Kevin Hassett said “[t]he anti Trump story has
793 been that we’re going to have a recession or a depression because of the tariffs,
794 which are going to jack up prices and cause consumers to run for the exits.”⁶¹ Mr.
795 Hassett then states, “[i]n fact, every single thing about this GDP release has shown
796 strength.”⁶²

797 Mr. Cox continues detailing the national economy when he explains:

⁵⁶ Jeff Cox, *U.S. economy grew at a 3% rate in Q2, a better-than-expected pace even as Trump’s tariffs hit*, CNBC (July 30, 2025).

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

Consumer spending rose 1.4% in the second quarter [of 2025], better than the 0.5% in the prior period. While exports declined 1.8% during the period, imports fell 30.3%, reversing a 37.9% surge in Q1.

The GDP tally showed strength across key areas of the economy, as well as evidence that inflation is ebbing though not eradicated.

The personal consumption expenditures price index, the Federal Reserve's key inflation metric, showed a gain of 2.1% for the quarter, just above the central bank's 2% target. Core PCE inflation, which the Fed considers a better gauge for longer-run trends as it excludes volatile food and energy prices, increased 2.5%. The respective numbers for the first quarter were 3.7% and 3.5%.⁶³

As the information outlined above indicated, the U.S. economy was strengthening in 2025, the GDP grew faster than expected, inflation was decreasing from earlier levels, and consumer spending increased. Each of these items would be seen as a positive for the national economy, lowering the opportunity cost of investing in regulated utilities.

More recently, Kroll published in May 2026 a market update on the current market conditions. This update has been included as DPU Exhibit 2.09 Kroll Cost of Capital in the Current Environment. The data supports the conclusion that financial markets are currently stable and healthy, especially when contrasted against historical crises. However, the data also reveals a clear divergence between highly optimistic corporate/market indicators and more subdued consumer metrics.

The economic conditions are summarized below:

1. Market Stability and Risk Indicators (Healthy & Low Stress)

Market-based risk metrics indicate that the broader financial system is experiencing a period of calm, with risk measures sitting near or below historical averages:

- **Market Volatility (VIX):** The current U.S. VIX level of 18.1 is below its long-term average of 19.9. This represents a massive reduction

⁶³ *Id.*

in market fear compared to the peaks of the 2008 Global Financial Crisis (80.9) and the COVID-19 pandemic (82.7).⁶⁴

- **Corporate Credit Spreads:** At 2.3 percent, current U.S. corporate credit spreads are significantly below their long-term average of 3.6 percent. During past periods of high stress, spreads widened to 6.7 percent (COVID-19) and 14.9 percent (2008 GFC).⁶⁵
- **Resilient Stock Performance:** Global equity markets remain strong, supported in part by artificial intelligence productivity expectations, showing strong gains since the start of 2026 (e.g., the S&P 500 is up 7.4 percent as of mid-May).⁶⁶

2. Macroeconomic Growth and Labor (Steady & Normalized)

Primary macroeconomic indicators point to a normalized, post-pandemic expansion phase:

- **Steady GDP Growth:** Projected U.S. real GDP growth for 2026 is holding steady at a median estimate of 2.1 percent, representing a stable, moderate pace that is far healthier than the -2.1 percent contraction seen in 2020 during the pandemic. Long-term real GDP growth expectations remain anchored at 2.0 percent.⁶⁷
- **Stable Unemployment:** The latest available U.S. unemployment rate sits at 4.3 percent. While this is slightly higher than the tight labor market conditions of 2024 and 2025 (averaging roughly 4.1 percent), it remains exceptionally stable compared to the peak pandemic shock of 11.0 percent in June 2020.⁶⁸

3. Divergent Sentiment and Inflation Headwinds (The Moderating Factors)

While corporate and capital markets are highly stable, households are experiencing persistent pressure:

- **Subdued Consumer Sentiment:** Unlike business confidence, which has fully recovered to its long-term average of 100.0,

⁶⁴ Kroll, *Cost of Capital in the Current Environment* (May 2026).

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

U.S. consumer sentiment stands at a subdued 79.0. This is lower than the long-term average of 84.5 and significantly below the pre-COVID-19 level of 101.0.⁶⁹

- **Inflation Expectations:** Long-term inflation expectations have stabilized at 2.4 percent. While price pressures remain elevated due to geopolitical energy shocks, forecasters continue to treat these pressures as cyclical rather than a permanent structural shift.⁷⁰
- **Energy Prices:** Although retail gas prices of \$4 a gallon continue to squeeze households, they are relatively moderate when adjusted for inflation compared to the historical peaks of 2022 or the 1970s oil shocks. Furthermore, the U.S. economy has structurally transitioned to be less gasoline-intensive over time.⁷¹

On a more local level, Utah and its economy has consistently been rated as one of the top economies in the United States. A quick review of Utah's Governor's Office of Economic Development website shows that for the year 2026: Utah has the third best business climate as rated by Schweitzer Engineering Laboratories; WalletHub ranked Utah #3 for best state economy; U.S. News and World Report ranked Utah as the #1 state for the fourth consecutive year in its review of Best States; and Utah ranked #1 for the 19th year in a row in Rich States Poor States April 2026 report.⁷²

Over the last few years, Utah has shown an ability to recover from the pandemic and has a diverse 21st century economy that is vibrant and thriving.

Because the US economy is currently stable and healthy, and the Utah economy is consistently one of the top performing economies in the nation, there is no justification for a higher ROE because of economic conditions. The current economic conditions support a lower ROE for Corix. Because of the stable and healthy economic conditions and other reasons discussed in this testimony, the Commission should support setting the ROE for Corix to 10.00 percent, which is 22 basis points

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² Accolades and Rankings, Gov. Office of Econ. Dev., <https://business.utah.gov/accolades/>.

below Kroll's calculated total market return. This ROE fits the financial principle that regulated utilities are lower risk than the total market, which would suggest a lower ROE than the total market.

CAPITAL ATTRACTION

Q. IN HIS DIRECT TESTIMONY, MR. WANG RECOMMENDED A CAPITAL STRUCTURE OF 50 PERCENT DEBT AND 50 PERCENT EQUITY FOR CORIX. COULD YOU ELABORATE ON THE CHALLENGES IN ESTABLISHING THIS STRUCTURE FOR A PROJECT CURRENTLY UNDER DEVELOPMENT?

A. The primary challenge, as noted in Mr. Wang's testimony, stems from the fact that Corix is a "greenfield" project.⁷³ Unlike established utilities that can reference historical data or public markets, this utility does not currently possess any actual, third-party debt. Because it has not yet established an operational track record, traditional lenders are unwilling to offer stand-alone commercial terms.

Consequently, the utility is forced to rely on deemed capital structures and intercompany funding from its parent entity BCI. This creates a regulatory chicken and egg problem: the utility needs to set a capital structure for ratemaking purposes to initiate service, yet it lacks the actual market history—typically 12 to 18 months of operations—necessary to justify that structure through independent, third-party financing.

Q. MR. WANG ARGUES THAT THE COMMISSION SHOULD APPROVE THE 50/50 STRUCTURE BASED ON A FEE FRAMEWORK NEGOTIATED BETWEEN CORIX AND ITS DEVELOPER, FLAGBOROUGH, LLC. WHY IS THIS FRAMEWORK PRESENTED AS A BENCHMARK?

A. Mr. Wang positions the negotiated Fee Framework as a highly reliable, market-vetted benchmark. He maintains that because these terms were the product of

⁷³ Wang Direct at 5:106-10.

910 rigorous, arm's-length negotiations between sophisticated parties attempting to
911 balance risk and return, they should be viewed as an objective reference point rather
912 than an irrelevant private deal.⁷⁴ He argues that this consensus reflects a fair real-
913 world valuation of the utility's risk profile and should therefore be incorporated
914 directly into the Commission-approved revenue requirement.⁷⁵

915 **Q. WHAT WEIGHT SHOULD THE COMMISSION GIVE TO THESE PRIVATELY**
916 **NEGOTIATED RATES?**

917 A. While Mr. Wang asserts the importance of these agreements, the Commission must
918 maintain a clear distinction between private commercial arrangements and the
919 regulatory duty to set just and reasonable rates. Privately negotiated rates between
920 a developer and a utility should carry minimal weight in a formal regulatory
921 proceeding. They may provide useful data points but they are not sufficient by
922 themselves.

923 The Commission's mandate is to establish an independent revenue requirement.
924 Private parties, regardless of their sophistication, are not subject to the same public
925 interest obligations as a regulated utility. By the time a project falls under the
926 jurisdiction of the Commission, the private fee framework must be evaluated by the
927 Commission's independent analysis. Relying on private contract risks, which seem to
928 institutionalize developer-friendly terms, as the baseline for public utility rates, may
929 not align with the Commission's responsibility to ensure that ratepayers are not
930 paying inflated costs for the utility's business risk.

931 This principle is firmly rooted in regulatory precedent and economic theory, which
932 establishes that private commercial contracts carry no presumption of prudence for
933 ratemaking purposes. Private developers operate under high-risk execution profiles
934 requiring elevated target returns; however, once an asset is transferred to utility
935 ownership, its risk profile drops to that of a regulated monopoly. Directly accepting
936 private fee frameworks without independent adjustment inappropriately converts

⁷⁴ *Id.* at 3:53-7.

⁷⁵ *Id.* at 4:67-82.

high-risk developer profit margins into capitalized assets, forcing captive ratepayers to pay a perpetual utility return on equity on unearned private markups. Under foundational regulatory standards established in landmark decisions like *Hope* and *Bluefield*, the Commission cannot delegate its statutory duty to private market entities that lack public interest obligations but must instead independently evaluate whether contract pricing reflects true cost-of-service principles.

In practice, utility commissions across multiple jurisdictions⁷⁶ consistently apply these principles when reviewing turnkey acquisitions, build-transfer agreements, and major capital project transfers. Under Federal Energy Regulatory Commission guidelines and state utility precedents, regulatory authorities regularly reject total negotiated purchase prices as the rate-base baseline, subjecting projects instead to rigorous original-cost and "open-books" auditing. These precedents frequently disallow or cap capitalized developer fees, success margins, and speculative risk premiums, ensuring that only direct, verifiable Engineering, Procurement, and Construction expenditures enter the rate base. Like the strict scrutiny applied to affiliate transactions, regulatory bodies across the country treat unverified developer markups as non-rate-baseable capital, establishing a clear standard that private commercial terms cannot serve as a back-door mechanism to artificially inflate utility capital costs.

**Q. GIVEN THESE CHALLENGES, HOW SHOULD THE COMMISSION
EVALUATE THE PROPOSED 10.50 ROE AND 50/50 CAPITAL STRUCTURE?**

A. The Commission should view the Fee Framework as informational rather than authoritative. The Commission has historically relied on its own cost of capital analysis or standard industry benchmarks to determine deemed capital structures. As seen in past proceedings (e.g., Rocky Mountain Power or Enbridge

⁷⁶ Generally, these economic and regulatory principles are discussed in Federal Energy Regulatory Commission cost-of-service ratemaking standards, National Regulatory Research Institute reports on Build-Transfer Agreements, and in *Principles of Public Utility Rates* by James. C. Bonbright.

Gas), the Commission often sets a deemed capital structure based on actual company data rather than private agreements.

For a greenfield project, the Commission should conduct an independent assessment of business and financial risks, rather than inferring that the terms negotiated for a private, unregulated agreement are appropriate for a regulated public utility.

CONCERNS WITH CORIX'S ANALYSIS

Q. DO YOU HAVE ANY CONCERNS OR DISAGREEMENTS WITH THE COMPANY'S INFORMATION RELATED TO ITS COST OF CAPITAL CALCULATION?

A. Yes. Although the approaches used by Mr. Figueroa to estimate the cost of equity in this case are generally consistent with standard market practices, and some are like the approaches used in my analysis, I have identified the following areas of concern and disagreement with Mr. Figueroa's analysis and testimony:

1. The biggest concern the DPU has is the significant potential for flawed data when using forward-looking projections to estimate the cost of equity. The DPU is highly uncomfortable with the use of projected growth rates to calculate the ROE for Corix. Calculating an appropriate ROE for a company is already difficult and requires a solid framework of analysis from a variety of ROE estimation models and judgment at each important step. Although ratemaking encompasses both art and science, if the inputs or assumptions of the model are flawed, then the analysis and judgment will also be flawed.

In a ratemaking proceeding where even small percentages can have significant impacts, there should be caution in the use of forward-looking projections. The longer the horizon with the projections, the greater the likelihood of flawed assumptions and judgment, which would over or understate the correct ROE for Corix. The DPU is not comfortable trying to project far into the future to set the appropriate ROE for Corix.

The Commission, in past rate cases, has generally avoided using data points that include projected calculations or assumptions and used the best data available at the time of the general rate case. The Commission should give little or no merit to models that use forward-looking⁷⁷ assumptions when there is current data available.

2. The DCF model calculations in Mr. Figueroa's Schedule No. JF-6 do not use the 75 percent earnings growth and 25 percent dividend growth calculation as ordered in Docket No. 02-057-02, the 2002 Questar General Rate Case. While that case may not have direct precedential weight, it does provide useful standards the Commission should consider here.

Using the 75 percent earnings growth and 25 percent dividend growth calculation considers the fact that while the model is theoretically about dividends and not earnings, it also reflects that dividend growth is related to earnings growth. Implicit is the concept that differences between dividend growth and earnings growth rates in the near-term have a greater effect on the cost of equity than any such differentials in the far future. Therefore, this weighting scheme is reasonable and has been used as part of my analysis.

3. Mr. Figueroa's constant growth and multi-stage DCF analyses rely on growth rate projections from *Value Line* and *S&P Capital IQ*.⁷⁸ This reliance on forward-looking analyst estimates is methodologically flawed. The DCF model is theoretically premised on the use of observable, historical data to minimize speculative inputs. By substituting these empirical benchmarks with subjective forecasts, Mr. Figueroa

⁷⁷ The DPU recognizes that at times the Commission has used "forward-looking" information. An excellent example is using a forward-looking test year. The major difference is that a forward-looking test year is allowed by statute, reviewed by the parties and is the result of a Commission decision in the early stages of a general rate case. Additionally, future projections are being made by regulated utilities on its business. There is a higher level of comfort with this type of projection where costs, rate base, and other items are easier to control by the company. Regulated utilities have little to no control of the risk-free rate, future stock prices, future dividend yield, etc. Each of those items is largely controlled by the financial markets.

⁷⁸ Figueroa Direct at 56:992-96.

1011 compounds the potential for estimation error and undermines the integrity of his final
1012 results.

1013 As stated earlier, projected growth rates increase the possibilities of inaccuracies
1014 and, therefore, are not usually in the public interest and should not be included in the
1015 analysis for Corix's ROE. The Commission should give no weight to these
1016 calculations.

1017 4. Mr. Figueroa's CAPM analysis incorporates an Equity Risk Premium (ERP)
1018 methodology that deviates from generally accepted regulatory practices. Rather than
1019 utilizing established, verifiable data sources, his approach relies on a hybrid of DCF-
1020 derived expected market returns and long-term historical averages. This
1021 methodology overestimates the market risk premium, thereby artificially inflating
1022 Corix's resulting cost of equity estimate. To ensure a just and reasonable outcome,
1023 the Commission should reject these non-standard inputs in favor of an ERP
1024 calculation derived from widely accepted, industry-standard sources.

1025 5. Mr. Figueroa uses a forecasted risk-free rate of 4.6% in his CAPM and ECAPM
1026 analyses. To arrive at this rate, he employs the following methodology: To match the
1027 long-term nature of utility investments, Mr. Figueroa selects the yield on a 20-year
1028 U.S. Government Bond as his representative risk-free asset. Because the rates set
1029 in this proceeding will be in effect during the 2026–2027 Test Period, his
1030 methodology begins with a baseline forecasted yield on a 10-year U.S. Government
1031 Bond of 4.1% for both 2026 and 2027, sourced from *Blue Chip Economic Indicators*.
1032 To translate this 10-year baseline into a representative 20-year yield, he applies an
1033 upward maturity premium adjustment of 50 basis points (0.50%), which represents
1034 the historical average spread between 20-year and 10-year Treasury bonds from
1035 1994 to 2025. This combination results in a forecasted risk-free rate of 4.6%, which
1036 Mr. Figueroa notes is highly conservative relative to actual market conditions given
1037 that the real-world spot yield on the 20-year U.S. Treasury bond was higher at 4.79%
1038 as of December 31, 2025.

As stated before, forward-looking interest projections are not generally in the public interest and should be excluded from the analysis. The primary model point the Commission should use in its measured judgment of ROE is the analysis that uses the current 30-day average of the 30-year U.S. Treasury bond yield.

6. In his analysis of the bond risk premium, Mr. Figueroa uses an implied risk premium model (which he uses as a check on the reasonableness of his CAPM and DCF results). This model estimates the cost of equity by analyzing the historical relationship between commission-authorized ROEs and the prevailing interest rates. He calculates this risk premium using a four-step statistical approach.

I. **Historical Data Assembly:** Mr. Figueroa gathers historical rate case data from Q1 1990 through Q4 2025, sourced from RRA, containing the allowed ROEs granted by U.S. state regulatory agencies for natural gas and water utilities.

II. **Quarterly Premium Calculation:** For each individual quarter in that 35-year span, he calculates the historical allowed utility risk premium as the simple difference between the average authorized ROE and the average 20-year U.S. Treasury bond yield that prevailed during that same quarter.

III. **Ordinary Least Squares (OLS) Regression:** He runs an OLS regression using the quarterly data to model the linear relationship between the historical risk premiums and the prevailing Treasury bond yields. The mathematical equation is $y = \beta_0 + \beta_1 x$, where β_0 is the intercept of the regression and β_1 is the slope. The resulting models demonstrate a high degree of statistical explanatory power, yielding an R-squared of 0.843 for natural gas and 0.933 for water utilities.

IV. **Predicting the Forward-Looking Premium:** Finally, Mr. Figueroa inputs his forecasted 20-year Treasury rate of 4.60 percent into his regression formulas to calculate the predicted risk premium for each utility class:

a. **Natural Gas Utilities:** Utilizing an intercept of 8.44 percent and a slope of -0.564, he calculates a predicted risk premium of 5.84 percent (which, when added to the 4.60 percent risk-free rate, yields an estimated 10.4 percent cost of equity).

b. **Water Utilities:** Utilizing an intercept of 9.29 percent and a slope of -0.881, he calculates a predicted risk premium of 5.24 percent (which, when added to the 4.60 percent risk-free rate, yields an estimated 9.8 percent cost of equity).

There are several problems with this approach for calculating the risk premium, which have been discussed in past rate cases. Dr. J. Randall Woolridge shared criticisms of this approach in the most recent general rate case for Rocky Mountain Power (RMP) in Docket No. 24-035-04.⁷⁹ The following are some of the issues discussed by Dr. Woolridge that would apply to Mr. Figueroa's analysis as well:

First, Mr. Figueroa's risk premium approach is a gauge of *commission* behavior and not *investor* behavior. Capital costs are determined in the marketplace through the financial decisions of investors and are reflected in such fundamental factors as dividend yields, expected growth rates, interest rates, and investors' assessment of the risk and expected return of different investments. Regulatory commissions evaluate capital market data in setting authorized ROEs but also consider other utility- and rate case-specific information in setting ROEs. As such, Mr. Figueroa's approach and results reflect other factors such as capital structure, credit ratings, other risk measures, service territory, capital expenditures, energy supply issues, rate design, investment and expense trackers, and other factors used by utility commissions in determining an appropriate ROE in addition to capital costs. This may especially be true when the authorized ROE data includes the results of rate cases that are settled and not fully litigated.

Additionally, the ROE derived from this approach is dependent on the authorized ROEs from state utility commissions. As discussed later in this testimony, Werner and Jarvis (2025) demonstrated that authorized ROEs over the past four decades have not declined in line with capital costs, and therefore past authorized ROEs have likely overstated the actual cost of equity capital.

⁷⁹ *Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations*, Docket No. 24-035-04, Direct Test. of Dr. J. Randall Woolridge (Oct. 17, 2024) at 94-95:2005-29.

Finally, while the OLS regression demonstrates a high degree of statistical fit, this high R-squared value should not be conflated with meaningful economic causation. Statistical correlation does not inherently translate into a reliable cost-of-equity estimate, particularly in market environments where historical trends may not be representative of forward-looking expectations. As the DPU has previously noted, model results must be balanced with qualitative assessment and informed judgment. Reliance on the mechanistic output of this regression risks overstating the model's predictive power while disregarding the practical market realities that these variables—if viewed in isolation—fail to capture.

COST OF COMMON EQUITY

Q. WILL YOU REMIND THE READER OF THE RETURN ON EQUITY THE DPU IS RECOMMENDING FOR THIS CASE?

A. Yes. I have completed and included the calculations for the various models and recommend that the appropriate cost of equity for Corix is 10.00 percent. The DPU's recommendation is outside its calculated range of 7.15 percent to 9.63 and is based on an evaluation of the DCF, CAPM, and Risk Premium models. Later in my testimony, I will explain why setting the ROE for Corix outside the recommended range is just and reasonable and in the public interest. DPU's recommendation of 10.00 percent is higher than the average allowed rate of return of gas utilities for the first half of the year 2026 by 36 basis points.⁸⁰ The result of the DPU's calculations is summarized in DPU Exhibit 2.01 ROE Summary.

DIVISION OF PUBLIC UTILITIES' ANALYSIS

An Overview of Common Cost of Equity Models

Q. WHAT METHODS DID YOU USE TO ESTIMATE THE CURRENT MARKET COST OF EQUITY FOR CORIX?

⁸⁰ S&P Global Market Intelligence RRA Regulatory Focus, *The rate case process: establishing a fair rate of return for regulated utilities* at 13 (July 21, 2025).

1124 A. I used similar models to those used in previous rate cases before the Commission
1125 and like those used in Mr. Figueroa's analysis. I have included a Constant Growth
1126 Discounted Cash Flow or DCF model. Within the model, I have considered the
1127 growth rates from multiple sources. I have included multiple risk premium models
1128 (RPM), including the CAPM and the Bond-Yield-Risk-Premium approach.

1129 **Q. PLEASE BRIEFLY DESCRIBE THE DCF MODEL.**

1130 A. The DCF model assumes that the value of ownership in a common stock is based
1131 upon the returns the stockholder expects to receive in perpetuity. It incorporates the
1132 current dividend and the prospects for growth in that dividend over time. Among
1133 other things, the model assumes the expected price-to-earnings ratio for the
1134 company's stock will remain constant at the current level. The DCF model assumes
1135 a constant growth rate "g." That is, "g" will adequately serve as a surrogate for the
1136 growth in dividends for all periods of time in the future. The formula used is:

1137 $k_e = D_0(1+g)/P_0 + g$
1138 Where: k_e is the cost of common equity
1139 D_0 is the current dividend
1140 P_0 is the current stock price
1141 g is the (constant) growth rate

1142 **Q. WHAT ARE THE STRENGTHS AND WEAKNESSES OF THE DCF MODELS?**

1143 A. Briefly, the strengths of the models are their simplicity and ease of application,
1144 particularly in the single-stage version of the model. DCF models are derived directly
1145 from the financial theory that the price of common stock is equal to the present value
1146 of the expected future cash flow to stockholders. Two of the three principal
1147 components of the model are directly observable in the market: the dividend and the
1148 stock price. The future growth rate is necessarily an estimate and thus can be
1149 controversial. The single-stage model can be faulted because of its assumption that
1150 there is a single growth rate, usually derived from relatively short-term growth
1151 forecasts that will apply to the company into the indefinite future (theoretically
1152 forever). Non-constant and multi-stage DCF models use changing growth rates in
1153 future periods and sometimes changing discount rates, but they are increasingly

1154 complex. Moreover, without knowledge of future events, there is no reason to
1155 conclude that multi-stage DCF models are more accurate than single-stage models
1156 unless there is a known anomaly in the short term.

1157 **Q. AS YOU MENTIONED EARLIER, IN THE 2002 QUESTAR GAS GENERAL**
1158 **RATE CASE, THE COMMISSION USED A 75 PERCENT WEIGHTING ON**
1159 **EARNINGS GROWTH ESTIMATES AND 25 PERCENT WEIGHTING ON A**
1160 **DIVIDEND GROWTH ESTIMATE. DO YOU HAVE ANY COMMENTS ON THIS**
1161 **WEIGHTING?**

1162 A. Yes. For a DCF model, this weighting appears reasonable. It considers the fact that
1163 the model is theoretically about dividends and not earnings but also reflects that
1164 dividend growth is related to earnings growth. Also implicit is the concept that
1165 differences between dividend growth and earnings growth rates in the near term
1166 have a greater effect on the cost of equity than any such differentials in the long
1167 term. I believe this weighting to determine the growth rate is reasonable and should
1168 be used.

1169 **Q. PLEASE BRIEFLY DESCRIBE THE CAPITAL ASSET PRICING MODEL.**

1170 A. The CAPM is a type of risk premium model. CAPM grew out of theoretical work in
1171 modern portfolio theory in the 1960s. Modern portfolio theory has shown that
1172 diversified portfolios could reduce the variability in the value of those portfolios and
1173 that a risk factor called "beta" could be used to estimate the relative variability of a
1174 portfolio to the market portfolio. The theory of CAPM is that the cost of equity is
1175 equal to the risk-free rate plus a market risk premium adjusted by the beta risk
1176 factor. The market risk premium is the additional return over the risk-free rate that a
1177 portfolio of all risky investments, i.e. the "market," would expect to earn. One of the
1178 theoretical underpinnings of CAPM is that investors, through a diversified portfolio,
1179 could virtually eliminate risk specific to a particular investment, such that if the
1180 investor were sufficiently diversified, he would only face the risk of the market, which
1181 is also called systematic risk. Beta is a measure of the volatility of an investment's
1182 value compared to the market as a whole and will indicate to an investor how a given

1183 investment will affect the systematic risk of their portfolio. Under CAPM theory,
1184 investors are not rewarded for the specific risks of a particular investment because
1185 these risks can be diversified away. The only reward the investor receives is the
1186 systematic risk, represented by the beta, that an investment brings with it to the
1187 portfolio.

1188 The calculation of the CAPM cost of equity for a company is straight-forward and is
1189 based upon readily available information. This model is widely taught in academic
1190 literature and is widely used in industry.⁸¹

1191 The formula for the CAPM is as follows:

1192 $k_e = RFR_0 + \beta * (MS - RFR)$
1193 Where: k_e is the cost of common equity
1194 RFR_0 is the current risk-free rate
1195 β is beta, the risk adjustment factor
1196 $(MS - RFR)$ is the market risk premium which can be
1197 decomposed into two factors: The overall market
1198 return, MS, and the RFR that is compatible with the
1199 way the MS was estimated.

1200 **Q. PLEASE BRIEFLY DISCUSS THE STRENGTHS AND WEAKNESSES OF THE**
1201 **CAPITAL ASSET PRICING MODEL.**

1202 A. The strengths include a firm theoretical basis for the model, its relative simplicity,
1203 and intuitive appeal. The model is widely taught and widely used in corporate
1204 America. The downside of the model is that there is little consensus on how each of
1205 the factors are developed and how the model is implemented.

1206 Different analysts will likely choose different risk-free rates, which will affect the
1207 outcome. Academics sometimes favor using a Treasury bill rate as the most nearly

⁸¹ Modern portfolio theory and the capital asset pricing model are discussed in detail in texts on corporate finance and investment valuation. See, e.g.:

Richard A. Brealey, Stewart C Myers, & Franklin Allen. *Principles of Corporate Finance*, 8th ed. (2006).

Eugene F. Brigham & Joel F. Houston, *Fundamentals of Financial Management* 5th ed. (2007).
Aswath Damodaran, *Investment Valuation* (2002).

David C. Parcell, *The Cost of Capital – A Practitioners Guide* (1997).

1208 true risk-free security, while practitioners favor longer-term bond rates to match the
1209 apparent holding period of the asset. Beta is calculated in various ways using
1210 different base periods, market proxies, and other measurement differences, such as
1211 the frequency of the observations and even the day of the week the observations are
1212 made. Some services offer “adjusted” betas that “correct” the calculated or “raw”
1213 beta to account for the apparent tendency of betas to revert to a mean over time.
1214 The available services assume that the mean the betas revert to is the market beta,
1215 which is 1.0.

1216 Perhaps the most hotly debated factor is the market risk premium, which is the
1217 premium return investors demand from stocks over the risk-free rate. Some
1218 practitioners support the use of the arithmetic average of the difference between
1219 historical stock market returns (with the Standard & Poor’s 500 Index as a proxy)
1220 and long-term (approximately 20 years) Treasury bond returns since 1926, as
1221 popularized by Ibbotson Associates over the last 30 years or so.⁸² This approach has
1222 been criticized by academics and others on several grounds. Some say the historical
1223 period is too long, reaching back to a much different economy than we have today.
1224 Others have cited technical problems with the data Ibbotson compiled. One technical
1225 problem is referred to as “survivor bias.” Survivor bias refers to the fact that the
1226 underlying Ibbotson data is composed of successful companies, losers are not
1227 included. Studies indicate that this bias inflates the Ibbotson-based market risk
1228 premiums by about 1 to 2 percentage points.⁸³ Another issue is the use of arithmetic
1229 averages versus geometric averages. Ibbotson Associates, Brealey, Myers, and
1230 Allen, among others, argue that arithmetic averages produce the appropriate
1231 unbiased estimates of returns. The use of arithmetic averages significantly
1232 overstates the actual returns an investor would have received over a long historical
1233 period, a period in which the geometric average accurately reflects the actual
1234 experiences of investors. For this reason and others, some experts advocate

⁸² Stocks, Bonds, Bills, and Inflation (SBBBI), any edition, published annually by Ibbotson Associates.

⁸³ Eugene F. Brigham & Joel F. Houston, *Fundamentals of Financial Management* 5th ed. 272 (2007).

geometric returns.⁸⁴ In short, there is great dispute about how the market risk premium should be estimated. For my analysis, I have used the Kroll data because it is readily available and widely used.

Empirical studies of stock returns have turned up anomalies that have suggested flaws in the CAPM. To correct for these anomalies (and save the basic theoretical construction), additional factors have been specified for the model, such as the Fama-French five-factor model or add-ons to the model, such as adjustments for size or industry. None of these adjustments have avoided controversy. The practical implementation of the CAPM has resulted in controversy and disagreement. Despite these problems, the CAPM is widely used and has an established theoretical basis. Its widespread use necessitates an analyst at least consider the CAPM in evaluating a cost of equity problem.

COMPARABLE (PROXY) COMPANIES

Q. WHAT ARE THE “COMPARABLE COMPANIES” YOU REFERRED TO, AND HOW WERE THEY CHOSEN?

A. One of the first steps in the estimate of cost of equity is the selection of publicly traded “comparable,” or “proxy” companies. These proxy companies’ market returns and characteristics should be studied to infer from them what the appropriate cost of equity should be for Corix. The selection and use of comparable companies is critical since Corix itself is not an independent, publicly traded company. Even if Corix were publicly traded, it would be advisable to compare it with closely related companies in its industry.

The Company’s witness, Mr. Figueroa, went through a screening process to develop the proxy companies that he felt were comparable to Corix.⁸⁵ His screening criteria selected twelve utilities for a comparable proxy group.⁸⁶ Below is the DPU’s review

⁸⁴ For a discussion of geometric versus arithmetic averages, see Aswath Damodaran, *Investment Valuation* 161-162 (2002) and *PPC’s Guide to Business Valuations* vol 1, para. 502.8 (Feb. 2006).

⁸⁵ Figueroa Direct at 37-44:682-771.

⁸⁶ *Id.* at 43-44:768-71.

1260 of the rationale and screening process Corix used to select its proxy group of
1261 companies.

1262 **Rationale for Utilizing Natural Gas and Water Utilities as Alternative Proxies**

1263 Because there is an insufficient number of publicly traded, pure-play district energy
1264 utilities to form a direct proxy group, Mr. Figueroa's decision to utilize regulated
1265 natural gas distribution and water utilities as comparative samples is conceptually
1266 and financially sound. Thermal district utilities in the United States are predominantly
1267 private, municipal, or cooperative. The most promising potential direct proxy,
1268 Consolidated Edison, operates a regulated steam distribution system in New York
1269 City, but because steam represents only 5% of its total utility assets, its market data
1270 primarily reflects its massive electric and gas operations.⁸⁷ Faced with this market
1271 reality, establishing proxy groups of regulated natural gas distribution and water
1272 utilities represents the most appropriate alternative methodology. These proxy
1273 companies operate under comparable state commission rate-regulated frameworks,
1274 are highly capital-intensive, and distribute a commodity to end-use ratepayers
1275 through a network of underground distribution pipes. Additionally, natural gas utilities
1276 share key demand characteristics with thermal systems, as a significant portion of
1277 their demand is driven by heating requirements.

1278 **Soundness of Specific Selection Screening Criteria**

1279 The specific selection screening criteria employed by Mr. Figueroa to refine his proxy
1280 samples are rigorous, consistent with the best regulatory practices, and effective at
1281 eliminating corporate anomalies that could bias market-derived cost of capital
1282 estimates. Starting with the universe of publicly traded gas and water utilities from
1283 *Value Line*, Mr. Figueroa applied five objective, standard filters: requiring an
1284 investment-grade credit rating; excluding companies with significant merger-and-
1285 acquisition activity in the past five years; excluding companies with recent dividend
1286 cuts; requiring a high proportion (greater than 80%) of rate-regulated utility assets;

⁸⁷ *Id.* at 39:705.

and mandating a minimum market capitalization of \$300 million to ensure stock liquidity.⁸⁸ This systematic screening resulted in a robust proxy sample comprising seven regulated natural gas distribution companies and five regulated water utilities. By filtering out financially distressed, illiquid, or heavily diversified conglomerates, these screens ensure that the resulting financial data represents a clean baseline of the utility asset class.

DPU Policy Position and Acceptance of the Proxy Group

The DPU has reviewed Mr. Figueroa's proxy selection methodology and screening criteria and finds them aligned with the comparable risk principles established under the *Hope* and *Bluefield* doctrines. While most of these proxy companies are mature, multi-billion-dollar utility giants serving diversified customer bases—presenting a sharp contrast to Corix's small greenfield footprint, execution risk, and extreme customer concentration—they provide the necessary market-based baseline to run standard cost of capital models such as the CAPM and DCF. Rather than trying to construct a highly speculative and unvetted proxy group, beginning with these established benchmarks is a reliable way to anchor the cost of equity. The DPU agrees that any incremental risks associated with Corix's small size, greenfield status, and customer concentration are more appropriately addressed through qualitative policy adjustments or transitional overlays rather than by distorting the objective proxy screening process. Accordingly, the DPU accepts the twelve-company proxy group selected by Mr. Figueroa as a financially sound foundation for estimating the cost of capital in this proceeding.

Application of Cost of Equity Models

1. DCF Models

Q. PLEASE DESCRIBE HOW YOU DEVELOPED THE DCF MODEL.

⁸⁸ *Id.* at 42:746-59.

1312 A. First, I calculated the current dividend yield for each of the comparable companies.
1313 The dividend was based on information provided by Value Line. I used a 30-trading
1314 day average closing price from June 25, 2026, to August 6, 2026.⁸⁹ The 30-trading
1315 day average closing price was used to smooth out random fluctuations that might
1316 exist in the stock price data. The historical price information was obtained from
1317 Fidelity Investments. Next, I took earnings and dividend growth rates from the latest
1318 Value Line reports for each comparable company as well as the latest updates on
1319 Value Line's website, as of August 6, 2026.

1320 Second, I considered several different growth rate estimates for the DCF models. I
1321 calculated growth rates based on a weighted-average method by applying a 75
1322 percent weight to the average earnings growth rate, and a 25 percent weight to the
1323 dividend growth rate (from Value Line). DPU Exhibit 2.03 Constant Growth DCF
1324 provides the calculation of the DCF model using the Value Line earnings, Value Line
1325 dividend growth rates, and the 30-day average stock price. This calculation results in
1326 an estimated cost of capital range for all the proxy group companies of negative 0.51
1327 percent to 12.20 percent, with an average of all the proxy group companies at 8.55
1328 percent.

1329 **2. CAPM Results**

1330 **Q. HOW DID YOU DEVELOP YOUR CAPM MODELS?**

1331 A. I looked at the CAPM model using different risk-free rates, time periods, betas, and
1332 market risk premiums. I did this to look at how the variable factors affect the outcome
1333 of the CAPM estimate. As stated earlier, there is no consensus on precisely how the
1334 components of the CAPM should be estimated.

1335 **Q. PLEASE DESCRIBE THE MARKET RISK PREMIUM YOU USED.**

1336 A. One source of the risk premiums used was from Kroll Recommended U.S. Equity
1337 Risk Premium (ERP) and Corresponding Risk-free Rate (R_1). The ERP was updated

⁸⁹ DPU Exhibit 2.03 Constant Growth DCF.

September 2, 2025, and the current guidance for R_1 is to use as the Risk-free Rate the spot 20-year U.S. Treasury yield as the proxy for the risk-free rate, if the prevailing yield as of the valuation date is higher than the recommended U.S. normalized risk-free rate of 3.5 percent. Using this recommendation, the data points are R_1 of 5.22 percent, and an ERP of 5.0 percent.

Dr. Aswath Damodaran, a professor at the Stern School of Business at New York University, is another source of the risk premiums I used in my analysis. His research interests are in valuation, portfolio management, and applied corporate finance. His papers have been published in the Journal of Financial and Quantitative Analysis, the Journal of Finance, the Journal of Financial Economics, and the Review of Financial Studies. He has written four books on equity valuation (*Damodaran on Valuation*, *Investment Valuation*, *The Dark Side of Valuation*, and *The Little Book of Valuation*) and two on corporate finance (*Corporate Finance: Theory and Practice* and *Applied Corporate Finance: A User's Manual*).

Dr. Damodaran has calculated the average historical equity risk premium for stocks minus the U. S. Treasury Bonds at 4.28 percent and a risk-free rate of 4.28 percent.⁹⁰

Q. WHAT BETA ESTIMATE DID YOU USE?

A. I calculated the CAPM using betas from Value Line, Zacks, and Yahoo! Finance, incorporating unadjusted raw betas—such as the Zacks beta of 0.530 and the overall mean beta of 0.61—strictly for sensitivity analysis and completeness. Relying on unadjusted raw betas produces an economically unviable result, as a 0.530 beta yields a CAPM cost of equity of just 6.79 percent, representing a mere 60 basis point risk premium over the Moody's Baa corporate bond yield of 6.19 percent. Accordingly, primary weight is placed on Blume-adjusted betas, reflected in the

⁹⁰ Aswath Damodaran, *Equity Risk Premiums (ERP): Determinants, Estimation and Implications* – The 2019 ed. (Apr. 14, 2019).
SSRN: <https://ssrn.com/abstract=3378246> or <http://dx.doi.org/10.2139/ssrn.3378246>.

1363 Value Line average beta of 0.754, which yields realistic CAPM returns of 7.75
1364 percent to 8.99 percent and maintains an appropriate risk spread over debt costs.

1365 **Q. WHAT WERE THE RESULTS FOR YOUR CAPM CALCULATION?**

1366 A. As seen in DPU Exhibit 2.05 CAPM, I calculated a variety of different returns. First, I
1367 used the Kroll (R_1) of 5.22 percent and the ERP of 5.00 percent. Following the
1368 CAPM inputs as described earlier, I used a few different beta estimates to determine
1369 a ROE for Corix. The first calculation was an ROE using the average beta for all
1370 analysts, then the average beta for the specific calculated betas for Value Line,
1371 Zacks, and Yahoo Finance. Using this procedure, I calculated a range of returns
1372 from 7.87 percent to 8.99 percent and an average of 8.29 percent.

1373 The same methodology was used, replacing the Kroll information with that calculated
1374 by Dr. Damodaran. The result of this effort is a range of returns starting at 6.79
1375 percent and going to 7.75 percent. The average of all rates resulting from my CAPM
1376 analysis is 7.72 percent.

1377 **Q. YOUR CALCULATION OF THE CAPM IS SIGNIFICANTLY DIFFERENT FROM**
1378 **THE CALCULATION USED BY THE COMPANY. CAN YOU EXPLAIN THE**
1379 **DIFFERENCES?**

1380 A. Yes. The major differences in the DPU's and Mr. Figueroa's CAPM model results are
1381 due to the use of a different Market Risk Premium⁹¹ or ERP. Mr. Figueroa uses two
1382 different Market Risk Premiums, 6.17 percent forecasted by Bloomberg and 7.31
1383 percent forecasted by the Brattle Group.⁹² The biggest flaw of this calculation is Mr.
1384 Figueroa's use of forecasted ERP. Using this higher forecasted market risk premium
1385 causes the data used to be significantly higher than the Kroll or Damodaran
1386 estimates.

⁹¹ Figueroa Direct at 33:591-99.

⁹² *Id.* at Confidential Corix Exhibit 5.4 – Cost of Capital Model.

I believe using the calculated risk premiums, as shown in Mr. Figueroa's Direct Testimony,⁹³ is unsupported. These methods have not been accepted by this Commission in any other rate case. Additionally, to my knowledge, this method calculated by the Brattle Group has not been published in any journal or academic publication that would prompt the results to be more broadly vetted and reviewed for accuracy. Because of these two facts, the Commission should not give any weight to the CAPM analysis done by Mr. Figueroa.

Additionally, Mr. Figueroa's analysis in his CAPM model uses projected rates for the risk-free rate. The Commission has not used projected rates when determining the appropriate risk-free rate, subsequently, any analysis done by Mr. Figueroa using projected rates should not be considered.

Q. WHY ARE YOU SO STRONGLY OPPOSED TO PROJECTED INTEREST RATES WHEN CALCULATING AN ROE?

A. The current market situation makes it difficult to accurately and comfortably determine where rates are heading in the future. Historically, analysts have seldom been right when projecting interest rates. Analysts seldom project decreasing interest rates, so the projections are biased to begin with. Additionally, analysts tend to have much more optimistic predictions of the future that seldom happen.

As recently as 2020, the Federal Reserve projected interest rates in the next couple of years. In an article in the Wall Street Journal dated June 11, 2020, Mr. Jerome Powell is quoted as saying, "[w]e're not thinking about raising rates. We're not even thinking about thinking about raising rates."⁹⁴ Two years later, to deal with a variety of economic factors, the Federal Reserve raised interest rates and aggressively continued until inflation cooled.⁹⁵ In the current economic conditions, interest rates are moving dramatically from month to month with little certainty as to where those interest rates will settle in the future. As stated before, the DPU has used normalized

⁹³ *Id.*

⁹⁴ Nick Timiraos, *Fed Officials Project No Rate Increases Through 2022*, Wall St. J. (June 11, 2020).

⁹⁵ Laura Rodini, *A timeline of the Fed's '22-'23 rate hikes & what caused them*, The Street, (Apr. 12, 2024) <https://www.thestreet.com/fed/fed-rate-hikes-2022-2023-timeline-discussion>

1413 risk-free rates to deal with the uncertain interest rate environment when the 20-year
1414 spot U.S. Treasury rate was below 3.5 percent. Another way to smooth out these
1415 significant swings is to use historical rates. It is better to use historical interest rates
1416 that incorporate several different years and economic scenarios, which will smooth
1417 out the significant variations in interest rates.

1418 As noted above, analysts have seldom been accurate when trying to project and
1419 determine future interest rates. A quick search into the information available on how
1420 accurate analysts have been when predicting interest rates shows that analysts are
1421 woefully incorrect. In one article, Mr. Eisen states, “[y]es, 100 percent of economists
1422 were dead wrong about yields.”⁹⁶ In a report published by the Wall Street Journal,
1423 Mr. Ip explains that “[e]conomists got the decade all wrong and they are trying to
1424 figure out why.”⁹⁷ As the information shows, economists, analysts, and even the past
1425 Federal Reserve Chairman have rarely gotten future interest rate projections right. If
1426 the Commission were to accept projected interest rates, it would begin its framework
1427 of analysis with flawed and erroneous data, causing the ROE analysis to be flawed
1428 and erroneous. Because of this fact, the Commission should not use projected
1429 interest rates as recommended by Mr. Figueroa.

1430 **Q. WOULD THE MAJORITY OF PUBLISHED METHODS USED TO CALCULATE**
1431 **AN EQUITY RISK PREMIUM SUPPORT MR. FIGUEROA’S CALCULATED**
1432 **RISK PREMIUM?**

1433 A. No. In the financial literature, there are a variety of different ways to calculate the
1434 ERP or market risk premium. When looking at these studies, a consensus is that the
1435 appropriate ERP would be in the range of 3 percent to 6 percent, depending on
1436 which risk-free rate was used by analysts. Below is a list of opinions of an
1437 appropriate ERP:

⁹⁶ Ben Eisen, *Yes, 100% of economists were dead wrong about yields*, Market Watch, (Oct. 22, 2014), <https://www.marketwatch.com/story/yes-100-of-economists-were-dead-wrong-about-yields-2014-10-21>.

⁹⁷ Greg Ip, *Economists Got the Decade All Wrong. They’re Trying to Figure Out Why*, Wall St. J. (Dec. 14, 2019), <https://www.wsj.com/articles/economists-got-the-decade-all-wrong-theyre-trying-to-figure-out-why-11576346400?mod=searchresults&page=1&pos=3>.

1438 *Principles of Corporate Finance*, 11th ed., takes no official position on
1439 the exact ERP. But the authors believe that a range of 5 percent to 8
1440 percent premium over T-Bills is reasonable for the United States
1441 (equivalent to a premium over long-term government bonds of
1442 approximately 3.5 percent to 6.5 percent).⁹⁸

1443 *Valuation: Measuring and Managing the Value of Companies*, 6th ed.,
1444 notes that “Although many in the finance profession disagree about
1445 how to measure the market risk premium, we believe a range around 5
1446 percent is appropriate. Historical estimates found in most textbooks
1447 (and locked in the minds of many), which often report numbers near 8
1448 percent, are too high for valuation purposes, because they compare
1449 the market risk premium versus Treasury bills (very short-term bonds)
1450 and are biased by the historical strength of the U.S. market.”⁹⁹

1451 Statista, an investment data portal, states: “[t]he average market risk
1452 premium in the United States remained at 5.6 percent in 2020. This
1453 premium has hovered between 5.3 and 5.7 percent since 2011.”¹⁰⁰

1454 **Q. WHAT CONCLUSIONS CAN BE DRAWN FROM REVIEWING THESE EQUITY**
1455 **RISK PREMIUM MODELS?**

1456 A. Even though there are several methods used in the financial literature to determine
1457 an ERP, the methods of the individual authors conclude that the appropriate ERP is
1458 close to 5.00 percent. That is important for this case because Mr. Figueroa’s Market
1459 Risk Premium calculation ranges from 6.17 to 7.31 percent. Mr. Figueroa’s
1460 calculation is 117 to 231 basis points above the consensus of finance professionals.
1461 Mr. Figueroa’s ERP calculation is not reasonable nor in the public interest.

1462 **3. Risk Premium Method**

1463 **Q. CAN YOU PLEASE DESCRIBE THE RISK PREMIUM MODEL USED BY THE**
1464 **DPU?**

1465 A. The value of a company’s equity can be estimated by adding its risk premium to the
1466 yield-to-maturity on the company’s long-term debt. The equity risk premium is

⁹⁸ Richard A Brealey, Stewart C. Meyers, & Franklin Allen, *Principles of Corporate Finance*, 11th ed. 167 (2014).

⁹⁹ McKinsey & Company Inc., Tim Koller, Marc Goedhart, and David Wessels, op. cit, at 292.

¹⁰⁰ Average market risk premium in the United States from 2011 to 2024 (last visited Oct. 15, 2024) <https://www.statista.com/statistics/664840/average-market-risk-premium-usa/>.

1467 essentially the return that stocks are expected to receive in excess of the risk-free
1468 interest rate. The normal historical equity risk premium for all equities has been
1469 approximately 6 percent. In general, an equity's risk premium will be between 5 and
1470 7 percent.¹⁰¹ The RPM Equation states that the required return on an equity equals
1471 the yield of the company's long-term debt plus the equity's risk premium.

1472 As DPU Exhibit 2.06 RP on Bond Yields shows, the DPU used the ERP 5.0 percent
1473 and (R_f) 5.22 percent as calculated by Kroll as a baseline for the total market risk
1474 premium of 10.22 percent. Because Corix is a regulated utility and most regulated
1475 utilities have corporate debt in the investment grade category, the DPU looked at
1476 Moody's Baa Bond Yield for comparison purposes. The Baa Bond Yield was 6.19
1477 percent. This bond yield was subtracted from the total market return of 10.22 percent
1478 to Estimate the Market Risk Premium of 4.03 percent for Corix. To determine the
1479 cost of equity, I added the appropriate premium of 5.60 percent to the recommended
1480 cost of debt for Corix to arrive at a cost of equity of 9.63 percent.

1481 To maintain internal consistency, the 4.03 percent market risk premium derived over
1482 utility bond yields is added to Corix's recommended 5.60 percent borrowing rate
1483 rather than generic corporate yields; this ensures that the resulting 9.63 percent cost
1484 of equity directly incorporates Corix's specific debt structure while preserving a
1485 sound risk-ordering spread above debt.

1486 DPU Exhibit 2.06 RP on Bond Yields also includes the same calculation but uses the
1487 ERP of 4.52 percent and 4.28 percent risk-free rates identified by Dr. Damodaran.
1488 Following the same construct as described above, the DPU calculated a return on
1489 equity of 8.21 percent.

1490 With this data, the ROE using the Bond Risk Premium method would be in the range
1491 of 9.63 percent to 8.21 percent.

¹⁰¹ Boundless Finance Approaches to Calculating the Cost of Capital (last visited Oct. 15, 2024)
<https://courses.lumenlearning.com/boundless-finance/chapter/approaches-to-calculating-the-cost-of-capital/>.

1492 **Q. WHAT ARE THE DRAWBACKS OF USING THE RPM APPROACH?**

1493 A. Estimating the value of an equity using the RPM approach has its drawbacks.

1494 SURFA explained the weaknesses of the risk premium method as follows:

- 1495 1. The premium in effect is very subjective. One has to first estimate
1496 the prospective cost of debt (either long-term or short-term), then
1497 estimate the appropriate risk premium to add to this debt cost;
1498 2. The use of historic risk premiums contains the implicit assumption
1499 that future risk premiums will mirror historic premiums. In addition,
1500 the period chosen over which to measure the risk premium is
1501 subjective; and
1502 3. The risk premium method does not recognize the specific risk of
1503 the subject company, since it essentially results in the same cost
1504 of common equity for the same class of companies.¹⁰²

1505 **Q. WHAT ARE THE RESULTS OF THE DPU'S CALCULATION USING THE**
1506 **BOND YIELD RISK APPROACH?**

1507 A. This approach estimated higher cost of equity rates than the DCF model and in the
1508 higher range of cost of equity rates for the CAPM models. Because the RPM and
1509 CAPM models are returning similar results, it could suggest the ERP of the total
1510 market is close to the equity premium of Corix used in the Bond Yield Risk
1511 calculation.

1512 **4. Risk Premium Results**

1513 **Q. WHAT DO THE RISK PREMIUM RESULTS SUGGEST TO YOU?**

1514 A. The risk premium results are generally higher than those derived from the DCF
1515 models. The CAPM model currently yields higher cost of equity amounts compared
1516 to previous periods, a trend attributable to the evolving interest rate environment.
1517 Specifically, the elevated risk-free rate, which is higher than it was a few years ago,
1518 contributes to these increased equity rates from the CAPM model. Due to this
1519 upward trend in CAPM cost of equity rates, the model's results are now consistent
1520 with those from the other models. This convergence across all models reinforces

¹⁰² David C. Parcell, *The Cost of Capital—A Practitioners' Guide*, Society of Utility and Regulatory Financial Analysts 180 (2020).

1521 confidence in their accuracy in reflecting the cost of equity for regulated utilities
1522 under current market conditions.

1523 **Q. CAN YOU EXPLAIN WHY YOU DID NOT INCLUDE ANY ADJUSTMENTS TO**
1524 **YOUR CAPM CALCULATION?**

1525 A. Yes. The main reason is that any other adjustments either do not apply to Corix or
1526 have not been accepted by the Commission. My analysis provides the return on
1527 equity following basic CAPM theory. There are a few ways to adjust the CAPM, (i.e.,
1528 Empirical CAPM, adjustments for size premiums, etc.). However, to provide the
1529 greatest level of clarity for the Commission to consider, no adjustments to CAPM
1530 were made.

1531 Another reason I did not include any adjustments is that each approach is filled with
1532 its own set of issues and controversies. The existence of the small cap effect is
1533 disputed by some researchers, such as Dr. John Kania.¹⁰³ Others, like Brigham and
1534 Houston, suggest that the effect might be less than one finds in Ibbotson Associates'
1535 publications.¹⁰⁴

1536 **Q. YOU DO NOT BELIEVE ANY ADJUSTMENTS ARE NECESSARY TO THE**
1537 **CAPM CALCULATION, YET MR. FIGUEROA INCLUDES AN EMPIRICAL**
1538 **CAPM CALCULATION. LET'S SUPPOSE YOU DID FEEL ADJUSTMENTS TO**
1539 **THE CAPM MODEL WERE WARRANTED. WOULD YOU THEN ACCEPT MR.**
1540 **FIGUEROA'S ANALYSIS REGARDING THE EMPIRICAL CAPM?**

1541 A. Simply put, no. Mr. Figueroa uses a forecasted ERP. As described above, the DPU
1542 does not agree with this approach. The Empirical CAPM used returns that were
1543 based on the CAPM formula followed by Mr. Figueroa. If the ERP results are flawed

¹⁰³ John J. Kania, "The small firm risk premium remains largely a myth," Shannon Pratt's Business Valuation Update, Vol. 9, No. 11 (Nov. 2003). The essence of Dr. Kania's argument is that "smallness" is incorrectly specified as market capitalization, i.e. the market value of a company's stock. When other measures of size such as revenues or total assets are used, the size effect vanishes.

¹⁰⁴ Eugene F. Brigham & Joel F. Houston, *Fundamentals of Financial Management Concise* 3d ed. (2002). Brigham and Houston conclude "In general, the cost of equity appears to be one or two percentage points higher for small firms (those with market values less than \$20 million) than for large NYSE firms with similar risk characteristics." *Id.* at 491.

1544 for the CAPM calculation, then the same ERP results will be flawed for the Empirical
1545 CAPM results. Due to this fundamental flaw, the DPU cannot accept the Empirical
1546 CAPM rates recommended by Mr. Figueroa.

1547 **RATE CASE HISTORY IN OTHER STATES**

1548 **Q. WHAT HAS BEEN THE GENERAL TREND IN OTHER STATES REGARDING**
1549 **THE ALLOWED RATE OF RETURN FOR REGULATED UTILITIES?**

1550 A. For years, the DPU has included in testimony the fact that allowed rates of return
1551 have been declining.¹⁰⁵ As presented earlier in my testimony, research done by RRA
1552 clearly shows a declining trend for average authorized ROE from 1990 until the
1553 COVID-19 pandemic. Around 2020, there was a small spike in interest rates and the
1554 trend has been mixed since the pandemic until today, but RRA argues the trend is
1555 clearly downward.

1556 Recently RRA had this to say about ROE and authorized returns:

1557 In the first half of 2025, the average authorized ROE for electric utilities
1558 decreased slightly compared to the full-year average of 2024, while the
1559 average authorized ROE for gas utilities remained unchanged.

1560 The average ROE authorized for electric utilities in rate cases decided
1561 in the first half of 2025 was 9.68%, slightly below the 9.74% average
1562 observed in full year 2024. There were 23 electric ROE authorizations
1563 in the first half of 2025 versus 55 in full year 2024.

1564 The average ROE authorized for gas utilities was 9.72% in rate cases
1565 decided in the first half of 2025, equal to the 9.72% average for full year
1566 2024. There were 15 gas ROE authorizations in the first half of 2025
1567 versus 44 in full year 2024.

1568 There were no limited-issue rider cases with a gas authorized ROE in
1569 the first half of 2025, while there were four in 2024. Excluding the rider
1570 cases, the average authorized ROE for gas cases was 9.71% in full year
1571 2024. Generally, limited-issue riders have a limited impact on average
1572 ROEs in the gas sector, as most gas riders depend on the ROE
1573 approved in any given utility's previous base rate case.

¹⁰⁵ *In the Matter of the Application of Questar Gas Company in Increase Distribution Rates and Charges and to Make Tariff Modifications*, Docket No. 13-057-05, Surrebuttal Test. Douglas D. Wheelwright (Jan. 7, 2014) at 4:92-98.

1574 The median ROE authorized in all electric utility rate cases was 9.70%
1575 in the first half of 2025 and 9.70% in full year 2024. For gas utilities, the
1576 median was 9.79% in the first half of 2025 and 9.70% in full year 2024.

1577 Looking at the last-12-months ended June 30, 2025, the average ROE
1578 authorized in all electric utility rate cases was 9.74%, and the median
1579 was 9.74%. For gas utilities, the average for the 12-month period ending
1580 June 30, 2025, was 9.70% and the median was 9.75%.

1581 Authorized returns have generally followed the overall direction of
1582 interest rates, with a lag. However, the magnitude of the year change in
1583 authorized ROEs is generally much smaller than that of the interest rate
1584 changes.

1585 Interest rates — as measured by the 30-year US Treasury bond yield
1586 — declined steadily from 1990 to 2020, exerting downward pressure on
1587 authorized ROEs. During this period, Treasury yields dropped by over
1588 700 basis points, from 8.61% to 1.56%, while the average authorized
1589 ROEs for electric and gas utilities combined decreased by less than 325
1590 basis points, from 12.69% to 9.45%. Notably, average authorized ROEs
1591 did not fall below 10% until 2011 for gas utilities and 2014 for electric
1592 utilities. The calendar year averages fell below 9.50% for the first time
1593 in 2020.

1594 The overall decline in authorized ROEs coincided with an increase in
1595 rate case activity, with 100 or more cases adjudicated in 12 of the past
1596 15 calendar years. In 2024, nearly 155 cases were decided, with
1597 authorized increases totaling over \$9 billion. (This data includes electric
1598 and gas cases where no ROEs were specified but excludes withdrawn
1599 cases).

1600 Between 1990 and 2020, interest rates and authorized ROEs declined
1601 at different rates, leading to a widening spread between authorized
1602 ROEs and the average yield on 30- year US Treasurys. This spread
1603 increased from just over 400 basis points in 1990 to nearly 800 basis
1604 points in 2020.

1605 The widening spread is primarily due to regulators' implicit
1606 understanding that the interest rate drop driven by US Federal Reserve
1607 intervention was atypical. Consequently, regulators did not fully reflect
1608 the interest rate drop in newly authorized ROEs. In some instances,
1609 regulators recognized that industry changes and economic instability
1610 posed increased risks for investors, justifying a higher premium over
1611 interest rates.

1612 The spread has been narrowing since 2020 — when interest rates
1613 began to rise, but authorized ROEs did not keep pace — reaching about
1614 530 basis points in 2024. Given the various factors increasing customer

1615 bills and the focus on affordability, the spread may continue to narrow,
1616 as regulators may become more reluctant to raise authorized returns.

1617 As this information explains, authorized ROEs for regulated utilities did not decline
1618 as quickly as interest rates between 1990 and 2022, causing a widening spread
1619 between authorized ROEs and the average yield on 30-year US Treasuries.
1620 Because authorized ROEs did not decrease as rapidly as interest rates, utilities were
1621 generally earning more than their cost of capital.

1622 Another theory that seems to be applicable to regulated utilities is that a utility's
1623 allowed rate of return will be higher than the ROE calculated by different financial
1624 models. As explained earlier, this theory was explained and analyzed by Karl Dunkle
1625 Werner and Stephen Jarvis for the Energy Institute at HAAS. The DPU reviewed this
1626 paper and agrees with the following analysis by the authors:

1627 Utility companies recover their capital costs through regulator-approved
1628 rates of return. Using a comprehensive database of utility rate cases,
1629 we estimate that utilities' current regulated returns on equity are
1630 significantly higher than various benchmarks would suggest. We show
1631 that regulated returns on equity respond more quickly to increases in
1632 benchmark measures of capital costs than they do to decreases.¹⁰⁶

1633 Finally, as shown in DPU Exhibit 2.10 ROR Equals Cost of Capital, Mark Ellis argues
1634 that authorized ROEs have been significantly higher than utility's cost of capital. In
1635 his policy brief he states, "[o]ver the last three years, investor-owned-utility
1636 residential electricity rates have increased 49 percent more than inflation . . . This
1637 policy brief explains the root cause of this problem: excessive utility rates of return
1638 allowed by utility commissions in setting customer prices."¹⁰⁷ Mr. Ellis goes as far as
1639 to suggest "investor-owned-utilities have been able to outfox their regulators to
1640 convince them to award excess rates of return."¹⁰⁸

¹⁰⁶ Karl Dunkle Werner & Stephen Jarvis, *Rate of Return Regulation Revisited*, Energy Institute at HAAS, (Mar. 2025) at 1.

¹⁰⁷ Mark Ellis, *Rate of Return Equals Cost of Capital: A Simple, Fair Formula to Stop Investor-Owned Utilities From Overcharging the Public* at 2 (Jan. 2025).

¹⁰⁸ *Id.* at 2-3.

As shown by these reports, there is a growing body of work that supports the position expressed by the DPU in numerous rate cases that the authorized ROE for regulated utilities has been higher than their cost of capital.

COMMENTS ON THE COST OF EQUITY RESULTS

Q. DO YOU HAVE ANY OTHER COMMENTS ABOUT MR. FIGUEROA'S TESTIMONY?

A. Yes. As discussed earlier, inherent in the rates proposed by Mr. Figueroa for Corix is the belief that the Company has greater risk than the entire market. However, the DPU asserts that Corix, as a regulated utility, is not riskier than the market.

One example of where Mr. Figueroa and I see the risks of Corix differently is in the RDDA. Mr. Figueroa explains that the RDDA is a rate levelization mechanism proposed by Corix to protect its small, initial customer base from severe, upfront rate pressure during the utility's early development years. Under this levelization plan, Corix will defer the recovery of its full annual revenue requirement, accumulating these uncollected revenues in a regulatory asset that is projected to gradually amortize and wind down to zero by the end of 2041.¹⁰⁹ While Mr. Figueroa acknowledges that the deferral of revenues through regulatory assets is a common industry practice that provides rate relief to customers and offers some long-term certainty of cost recovery, he emphasizes that the scale and duration of Corix's proposed deferrals are unprecedented. Specifically, he notes "that while the selected natural gas and water proxy companies also utilize regulatory assets, their balances are typically smaller, representing cost deferrals for specific, short-cycle expenses that are recovered over much shorter time horizons."¹¹⁰

Corix's key structural concern with the proposed RDDA is its massive size relative to the utility's total rate base, which significantly elevates capital recovery risk for Corix and its investors. Mr. Figueroa projects that "the ratio of the RDDA balance to Corix's

¹⁰⁹ Figueora Direct at 69:1216-23.

¹¹⁰ *Id.* at 70:1234-37.

1667 rate base will escalate rapidly from approximately 4% in 2026 to 28% by 2028.”¹¹¹ In
1668 comparison, the natural gas and water proxy companies maintain regulatory asset
1669 balances that average only 7.4% of their rate base.¹¹² This means that nearly a third
1670 of Corix's entire rate base will consist of deferred revenues representing cash
1671 outflows already incurred but not yet recovered. Mr. Figueroa argues with the point
1672 that because a larger portion of Corix's expected future earnings is dependent on
1673 long-term regulatory approvals, capital recovery risk is elevated. He states “[t]his risk
1674 is further exacerbated by the timing of recovery: standard proxy utilities typically
1675 recover short-cycle regulatory assets within 12 to 18 months (or 3 to 10 years for
1676 extreme, long-dated items like major storm restorations), whereas Corix's RDDA will
1677 take 16 years to be fully recovered.”¹¹³

1678 Ultimately, Mr. Figueroa concludes that while the proposed RDDA is necessary to
1679 prevent prohibitive initial rates, its unique design imposes a higher cost-of-capital risk
1680 profile on Corix than is reflected in the proxy company data.¹¹⁴ The position taken by
1681 Mr. Figueroa is if future regulatory commissions delay, reduce, or disallow any
1682 portion of these deferred balances, the utility would suffer an immediate delay or
1683 permanent reduction in earnings, since the cash was already spent.¹¹⁵ Furthermore,
1684 he continues “[b]ecause such a large share of Corix’s cash flows is deferred into a
1685 regulatory asset rather than collected through active base rates, debt and equity
1686 investors will perceive the utility as having higher business risk.”¹¹⁶ Mr. Figueroa
1687 uses this heightened capital recovery risk—paired with the company's small
1688 greenfield size and extreme customer concentration—to demonstrate that standard,
1689 proxy-derived cost of equity models likely underestimate the required return for
1690 Corix, thereby positioning the requested 10.5% ROE as highly conservative.¹¹⁷

¹¹¹ *Id.* at 70:1222-23.; see also Direct Testimony of Douglas Chong, Corix Exhibit 3.4.

¹¹² *Id.* at 70:1228.

¹¹³ *Id.* at 70–71:1235-46.; see also Chesapeake Utilities 2024 Form 10-K, at 101, regarding Florida PSC storm restoration amortizations.

¹¹⁴ *Id.* at 71:1252-56.

¹¹⁵ *Id.* at 70:1206-15.

¹¹⁶

¹¹⁷ *Id.* at 85–86.

Q. DO YOU AGREE WITH MR. FIGUEROA THAT CORIX HAS A HEIGHTENED CAPITAL RECOVERY RISK AND OTHER RISKS THAT DEMONSTRATE STANDARD PROXY-DRIVEN COST OF EQUITY MODELS LIKELY UNDERESTIMATE THE REQUIRED RETURN FOR CORIX?

A. No. While Mr. Figueroa has outlined some realistic risks faced by Corix, namely, elevated business risks due to its greenfield status and a large share of Corix's cash flows being deferred into a regulatory asset, we disagree on how investors will perceive these risks, especially the RDDA account. The DPU sees the RDDA account as a benefit to investors that would lower the risk profile because the potential exists for all of the cash flows to eventually be recovered.

The Commission should view the company's risk profile as a holistic balance between the utility's operational reality and the proposed regulatory safeguards. While it is true that Corix, as a small, greenfield utility, bears higher business risks—such as load uncertainty and infrastructure buildout risks—these risks are not borne entirely by shareholders. Still, I have accounted for them in my recommendation. The proposed ratemaking mechanisms, particularly the RDDA and the unbundled rate design, serve as critical regulatory risk-mitigation tools. The RDDA, in particular, provides a mechanism for deferring revenue deficiencies, which reduces the immediate financial strain of the initial infrastructure investment. By balancing these heightened business risks with structured recovery mechanisms and Commission oversight, the utility's risk profile is effectively managed, ensuring that the authorized return on equity remains commensurate with the risks faced by an entity of this specific nature, without placing an undue burden on end users. Having an RDDA account with a long timeframe of recovery does not suggest the models underestimate the ROE for Corix.

Ultimately, what Mr. Figueroa is explaining when he discusses the long recovery timeframe for revenues is not a business risk but more a regulatory risk. Investors have to consider the likelihood of the Commission allowing the full recovery of the capital costs of Corix.

1720 **Q. HOW DOES RRA RATE UTAH'S REGULATORY ENVIRONMENT?**

1721 A. The RRA Regulatory Focus published updated information regarding each state and
1722 how the RRA rates the regulatory environment for each utility. RRA's evaluations are
1723 assigned from an investor perspective and indicate the relative regulatory risk
1724 associated with the ownership of securities issued by each jurisdiction's energy
1725 utilities. Each evaluation is based upon consideration of the numerous factors
1726 affecting the regulatory process, including gubernatorial involvement, legislation, and
1727 court activity, and may be adjusted as events occur that cause RRA to modify its
1728 view of the regulatory risk for a given jurisdiction.

1729 In an earlier report, according to RRA, "[a] rating in the average category would
1730 imply a relatively balanced approach on the part of the governor, the legislature, the
1731 courts, and the commission when it comes to adopting policies that impact investor
1732 and consumer interests."¹¹⁸ In RRA's report, the Utah's regulatory environment
1733 receives a rating of "Average/2."¹¹⁹ This rating by S&P has remained consistent over
1734 the last decade.

1735 A June 8, 2020, report published by RRA, discussed the regulatory environment
1736 when dealing with credit metrics. The report stated that:

1737 S&P Global Ratings conducts periodic assessments of each regulatory
1738 jurisdiction in the U.S. and Canada where a rated utility operates as a
1739 reference when determining a utility's regulatory advantage or
1740 regulatory risk. S&P Global Ratings' analysis covers quantitative and
1741 qualitative factors, focusing on regulatory stability, tariff-setting
1742 procedures and design, financial stability, and regulatory independence
1743 and insulation. The presence of utility regulation, no matter where in the
1744 spectrum of [S&P Global]'s assessments, strengthens the business risk
1745 profile and generally supports utility ratings.¹²⁰

1746 From the information presented Corix has not provided any compelling evidence that
1747 the regulatory environment in Utah is risky or unfavorable to its utility operations.

¹¹⁸ S&P Global Market Intelligence, *RRA Regulatory Focus: State Regulatory Evaluations* (May 19, 2020).

¹¹⁹ S&P Global Market Intelligence, *RRA State Regulatory Evaluations—Energy* at 3 (July 2025).

¹²⁰ S&P Global Ratings *Credit Research U.S. and Canadian Utility Regulatory Updates and Insights* (June 2020).

1748 Instead, the utility benefits from a balanced regulatory approach in Utah. The
1749 balanced, or lower risk regulatory environment, does not merit a risk premium to
1750 Corix's ROE. A favorable regulatory environment does not support Mr. Figueroa's
1751 claim that the standard proxy-driven cost of equity models are underestimating the
1752 required return for Corix.

1753 **Q. DO YOU HAVE ANY FINAL COMMENTS ABOUT THE RDDA AND HOW THE**
1754 **COMMISSION SHOULD VIEW THIS REGULATORY ASSET?**

1755 Yes. A regulatory asset that smooths out fluctuations in cash flow is seen as a
1756 positive to investors. The Commission has recognized this benefit to utility investors.
1757 Credit rating agencies also view mechanisms that smooth out cash flow as positive
1758 for investors.

1759 In a past general rate case for Dominion Energy Utah, now called Enbridge Gas
1760 Utah, Mr. Kelly Mendenhall explained how credit rating agencies view accounts that
1761 smooth revenues. Mr. Mendenhall testified to the positive benefits of these revenue
1762 mechanisms and stated, "the Infrastructure Tracker is viewed favorably by the credit
1763 agencies and is one of the reasons why [EGU] has been able to maintain its positive
1764 credit rating."¹²¹ Mr. Mendenhall continued, "the lower set of risks faced by [EGU]
1765 because of the Infrastructure Tracker is definitely seen as a positive by Moody's."¹²²

1766 **Q. DOES YOUR MODEL ANALYSIS IMPLY THAT CORIX DESERVES A**
1767 **PREMIUM COST OF EQUITY COMPARED WITH THE AVERAGE OF**
1768 **COMPARABLE COMPANIES?**

1769 A. Yes, While the quantitative financial models for mature proxy utilities do not contain
1770 a greenfield risk factor, Corix's early-stage development and 19-year buildout involve
1771 initial execution risks. Although the proposed RDDA mitigates long-term cash flow
1772 recovery risk, the DPU recognizes these initial startup realities by applying a

¹²¹ *Application of Dominion Energy Utah to Increase Distribution Rates and Charges and Make Tariff Modifications*, Docket No. 19-057-02, Direct Test. of Kelly B. Mendenhall (July 1, 2019) at 19:423-25.

¹²² *Id.* at 19:429-36.

1773 qualitative 100 basis point greenfield policy adjustment above the proxy model
1774 baseline.

1775 **FAIR RATE OF RETURN**

1776 **Q. WILL YOU DISCUSS HOW A COST OF EQUITY OF 10.00 PERCENT IS**
1777 **REASONABLE GIVEN YOUR ANALYSIS?**

1778 A. Yes. I have provided results from different financial models that attempt to estimate
1779 the appropriate cost of equity for Corix. This is what I would term as the “framework”
1780 aspect of rate making. Careful consideration has been taken to follow each model
1781 and theory as accurately as possible. In this process, inherent warts and flaws will
1782 trickle into the theories. No method is perfect, and each evaluation provides its own
1783 set of results. After extensive analysis, my research comes up with a cost of equity in
1784 the range of 7.15 to 9.63 percent. There is a very significant range of rates from
1785 each of the different models. Recommending 10.00 percent reflects a deliberate two-
1786 step ratemaking framework; first, using quantitative models to establish a benchmark
1787 range of 7.15 percent and 9.63 percent for mature, established utility proxies; and
1788 second applying a 100 basis point qualitative policy adjustment under the *Hope* and
1789 *Bluefield* doctrines to accommodate Corix’s unique startup status.

1790 Ratemaking is not a simple process of observing the results calculated by the
1791 models and determining the appropriate cost of equity for a utility. A well thought out
1792 approach, weighing the appropriate shortfalls of each model and the specific risks of
1793 the specific utility, is necessary to determine an acceptable rate of return. I have
1794 attempted to blend the data calculated to determine a fair and reasonable rate that
1795 will allow for additional investment capital for Corix while balancing the costs
1796 consumers must bear.

1797 To reach the 10.00 percent recommendation, the DPU applied a 100 basis point
1798 adjustment to the middle of our financial model’s range, which is about 9.00 percent.
1799 If we had applied that same adjustment to the high end of our range—9.63 percent—
1800 the result would have been 10.63 percent. However, we capped the

1801 recommendation at 10.00 percent to keep rates fair for customers while still ensuring
1802 the company can attract the investment it needs.

1803 **Q. WILL YOU SUMMARIZE YOUR MODEL RESULTS AGAINST THE 10.22**
1804 **PERCENT TOTAL MARKET RETURN CALCULATED BY KROLL?**

1805 A. Yes. Earlier in my testimony, I provided an explanation that illustrated a quick way to
1806 determine if the financial models were giving reasonable results. The method was to
1807 compare the total market return calculated by Kroll against the ROE calculations for
1808 each model. Kroll calculated the total market return of 10.22 percent. Most of the
1809 calculations done using the different financial models returned calculations below
1810 10.22 percent. This is appropriate given utilities' generally lower risk profile.

1811 Because all the calculated ROEs from the different financial models are below 10.22
1812 percent, I feel comfortable that the model calculations provide a reasonable range
1813 for the actual cost of equity.

1814 **Q. SINCE AN ROE OF 10.00 PERCENT IS HIGHER THAN MANY OF YOUR**
1815 **CALCULATIONS AND OUTSIDE YOUR CALCULATED RANGE, HOW CAN**
1816 **YOU BE COMFORTABLE WITH THAT RECOMMENDATION?**

1817 A. There are several factors that go into this recommendation. I have chosen the point
1818 in the range to account for a balanced approach seemingly favored by the
1819 Commission when setting utility ROEs. There has been a long-standing discussion
1820 dealing with the fair rate of return versus the cost of equity for utility companies.
1821 Steven G. Kihm argues that "determining a reasonable return on equity is a
1822 judgment call, one that reflects the regulator's broad perspective on public policy
1823 matters. That requires one to look beyond economic concepts, such as the cost of
1824 equity, to find proper returns."¹²³

¹²³ Steven G. Kihm, *The Proper Role of the Cost-of-Equity Concept in Pragmatic Utility Regulation*, *The Electricity Journal* vol. 20 Issue 10 (2007) at 26.

1825 NARUC explained the balancing of interests that regulators deal with each day when
1826 making ROE decisions. It stated:

1827 It is typical for regulatory commissions to be confronted with the
1828 perpetual challenge of having a record consisting of multiple ROE
1829 methodologies from multiple ROE witnesses representing multiple
1830 parties. Amid the plethora of evidence before it, the regulatory
1831 commission is charged with considering and weighing all the evidence
1832 and determining a specific authorized ROE for use in developing tariffs.
1833 The “weighing” part is challenging and can be different in each
1834 commissioner’s reasoning, but the task at hand for commissioners is to
1835 agree to an authorized ROE that is within the range or zone defined by
1836 the evidence.¹²⁴

1837 As a utility regulator, the recommendation must take into consideration the data but
1838 also blend public policy matters. Because of the *Hope* and *Bluefield* cases and the
1839 capital attraction principle, commissions are required to consider rates for regulated
1840 utilities set by other utility commissions. The circularity of considering other
1841 companies’ authorized returns in setting a specific utility’s authorized ROE
1842 necessitates some caution. The DPU has attempted to blend the market constraints
1843 with the appropriate policy decisions.

1844 Regulated utility companies’ returns are significantly higher than various
1845 benchmarks. The DPU is not convinced that utilities should collectively be
1846 compensated “significantly higher” than the models. But the DPU recognizes the
1847 reality that they are and that comparable returns are part of the analysis in setting
1848 rates. In part, this is another reason the DPU is comfortable with a 10.00 percent
1849 rate that is higher than some model results. The 10.00 percent recommendation
1850 encapsulates this observed scenario and adjusts for that stated fact that current
1851 regulated returns are higher than various benchmarks would suggest.

1852 **Q. WAS THERE ANYTHING ELSE GUIDING THE DPU’S RECOMMENDATION**
1853 **OF 10.00 PERCENT?**

¹²⁴ National Association of Regulatory Utility Commissioners, A Cost of Capital and Capital Markets Primer for Utility Regulators (April 2020) at 20.

1854 A. Yes. Dr. James C. Bonbright has noted that when calculating the cost of equity
1855 capital for any given company, the only such cost that can be determined with
1856 confidence is a *minimum or partial cost*.¹²⁵ He explains, “[h]ence, if the minimum
1857 estimated cost is to be used in the determination of a computed ‘overall cost of
1858 capital,’ the resulting computation should be subject to a material, ‘judgement-
1859 reached’ enhancement in order to give reasonable assurance of full-cost
1860 coverage.”¹²⁶

1861 Dr. Bonbright concluded that the calculated rates should act as a minimum or partial
1862 cost when determining the fair rate of return. If there is a logical minimum threshold
1863 of allowed rates of return, then there would also be a maximum level for utility
1864 companies.

1865 In the *Hope* and *Bluefield* cases, in the DPU’s opinion, the courts established the
1866 basis of a capital attraction standard as well as other standards for a fair rate of
1867 return for utility companies. When considering a fair rate of return, utility regulators
1868 are expected to provide returns similar to returns currently earned on investments in
1869 other equally risky business enterprises. For a regulated gas utility, that would mean
1870 the fair rate of return would be very similar to allowed rates of return of prudently
1871 managed gas utilities in other states. In other words, the *Hope* and *Bluefield* cases
1872 outline the standard for a floor but do not address a maximum reasonable return.
1873 Other factors can justify adders to the floor.

1874 **Q. YOUR RECOMMENDED ROE OF 10.00 PERCENT IS WITHIN THE CURRENT**
1875 **RANGE OF 9.14 TO 10.14 PERCENT SUGGESTED BY RRA BUT OUTSIDE**
1876 **THE MODELS. HOW DO YOU JUSTIFY A RECOMMENDATION THAT IS**
1877 **HIGHER THAN THE RETURNS CALCULATED BY THE FINANCIAL**
1878 **MODELS?**

¹²⁵ James C. Bonbright, *Principles of Public Utility Rates* 255 (1961), republished on the web (July 2005)
<http://www.terry.uga.edu/bonbright/publications>.

¹²⁶ *Id.*

1879 A. Yes. My recommended 10.00% ROE balances the precision of independent
1880 financial modeling with the specific risk profile of the Corix project. While my financial
1881 models suggest a lower range, they often do not fully capture the execution, startup,
1882 and operational risks inherent in a greenfield project, which warrant a modest
1883 premium to ensure the utility's financial viability.

1884 Furthermore, regarding the RRA data, while it provides a useful macro-benchmark
1885 for evaluating industry trends, it is best utilized as secondary evidence. RRA data
1886 suffers from two structural limitations: first, authorized returns exhibit regulatory
1887 inertia, failing to track downward as quickly as market-based capital costs. Second,
1888 the data is inherently circular, as it aggregates previously authorized returns, thereby
1889 reflecting historical commission decisions rather than an independent, forward-
1890 looking assessment of the cost of equity. Relying on RRA data as a primary metric
1891 risks perpetuating these historical biases, whereas my independent modeling,
1892 adjusted for Corix's unique profile, provides a more accurate reflection of current
1893 economic realities.

1894 **Q. ANY FINAL THOUGHTS ABOUT THIS RATE CASE AND THE FIRST**
1895 **IMPRESSION OF SETTING RATES FOR THERMAL UTILITIES IN THE STATE OF**
1896 **UTAH?**

1897 A. The Commission has a unique opportunity to establish a precedent for thermal
1898 regulation that encourages innovation while protecting the public interest. Because
1899 this is the first opportunity for the Commission, it is imperative that the rates,
1900 safeguards, and regulations are established with clarity and foresight to serve as a
1901 robust framework for all future regulatory decisions This can be done while keeping
1902 in mind that the gradual development of the utility affords opportunities to refine
1903 regulatory mechanisms as development proceeds.

1904

1905 **CONCLUSIONS AND RECOMMENDATIONS**

1906 **Q. DO YOU BELIEVE YOUR CONCLUSIONS AND RECOMMENDATIONS**
1907 **ARRIVE AT JUST AND REASONABLE RESULTS THAT ARE IN THE PUBLIC**
1908 **INTEREST?**

1909 A. Yes.

1910 **Q. CAN YOU SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS?**

1911 A. My analysis indicates that Corix's appropriate cost of equity is 10.00 percent,
1912 resulting in a WACC of 7.80 percent. The DPU's recommended ROE and the
1913 proposed capital structure—consisting of 50 percent equity and 50 percent debt—
1914 are consistent with just and reasonable rate standards. Furthermore, reducing
1915 Corix's cost of debt to 5.60 percent serves the public interest by ensuring fair rates
1916 across all WACC components. Consequently, the Commission is encouraged to
1917 reject Corix's proposed cost of equity and WACC, as its proposal does not align with
1918 the public interest and would lead to unjust and unreasonable rates.

1919 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

1920 A. Yes, it does.