



November 2024

Investor Perspectives on Natural Gas Utilities: A Canadian and United States Review

A Canadian Gas Association and
American Gas Association
Study Prepared by:

The logo for MCR Performance Solutions, consisting of the letters 'MCR' in a bold, white, sans-serif font.

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EXECUTIVE SUMMARY

The American Gas Association (AGA) and the Canadian Gas Association (CGA) engaged MCR Performance Solutions (MCR) to update and enhance a [2022 study](#) that explored investor sentiment and perception toward natural gas utilities. Like the original study, the current project focused on addressing these key questions:

- (1) Are gas utility returns on capital across the United States and Canada consistent with investor expectations?
- (2) What are the primary drivers of return on equity (ROE) determinations across the U.S. and Canada, and how is capital priced in the marketplace?
- (3) Are utilities adequately able to earn the authorized ROE, and what are some of the reasons for differences between authorized and earned ROEs?
- (4) What should gas utilities be doing to maintain their ability to economically attract capital?

1. Project Approach

MCR approached this project in two phases:

- Perform foundational research to update the macroeconomic conditions since publication of the 2022 Investor Expectations Report, particularly the significant changes in the prevailing interest and inflation rates. This included:
 - Rolling forward historical risk-free rates and requested and allowed ROEs for U.S. and Canadian utilities.
 - Examining the relationship between regulatory decisions and cost of capital.
 - Comparing and contrasting the manner in which regulatory ROE is developed versus how capital is actually priced in competitive markets.
- Conduct research on the investment community to gather the views of a cross-section of capital market participants on the investment risks, merits, and positioning of North American natural gas utilities.
 - Instead of the prior survey-based approach, MCR conducted nearly 40 conversations with buy-side portfolio managers, sell-side financial analysts, investment bankers, credit analysts, and rating agency personnel.
 - MCR also sought input from member company investor relations, treasury, and C-suite leaders who have frequent interaction with the financial community.
 - To encourage participation, MCR maintained a strict policy of confidentiality and non-attribution.

2. Foundational Research

Setting of Regulatory Return on Equity (ROE)

The 2022 study thoroughly and comprehensively addressed the methodology and processes underlying regulatory ROE determination, along with an in-depth analysis of historical trends in ROE awards compared with prevailing treasury bond yields as a proxy for a risk-free rate. Section 2 of this report updates that historical data in the context of substantial movements in central bank policy, interest rates, bond yields, and inflation that have taken place since 2021.

U.S. and Canadian bond yields have moved substantially higher, admittedly from a very low starting point. However, allowed regulatory ROE barely registered an upward inflection, in part due to the relative stability of ROEs as interest rates fell to historic lows.

Impact of Policy on Investor Risk Perception

For many years, investors viewed natural gas local distribution companies (LDCs) as having relatively less risk than other segments of the utility industry given their comparatively simple delivery-only business model and more modest and stable capital expenditure profile. This has been reflected in somewhat lower allowed ROE for the gas LDCs. However, that risk perception appears to be changing, despite continued growth in natural gas use, in response to:

- Specific regional, state, or provincial policy efforts that seek to limit the connection of new natural gas customers, reducing the number of customers and/or sales volumes (the denominator in computing customer rates).
- Investments aimed at reducing greenhouse gas emissions (hydrogen, RNG, etc.), raising costs (the numerator in computing customer rates).
- The long-term health and business model of utilities in a lower emissions construct.

In this context, when a regulatory ruling takes investors by surprise, security prices of affected companies can react sharply—and that reaction tends to be magnified in smaller, less liquid companies and industry segments.

Pricing of Capital in the Markets

For all its analytical rigor, the theoretical approach to estimating regulatory ROE fails to consider that equity securities (shares of stock) are actually priced each trading day by buyers and sellers in structured, competitive financial markets—markets that, as just noted, have experienced considerable change in the form of higher borrowing costs, inflation, and investor focus over past three years. Theoretical cost of capital approaches also do not capture the manner by which investors and markets actually make capital allocation decisions. While most capital estimation is based on comparisons to similar but not identical publicly traded companies, by and large, investors choose between a range of alternatives that vary across a spectrum of risk and reward.

An investor placing their (or their client's) assets in a particular natural gas utility stock has already made several decisions, including an allocation to the energy industry (as opposed to non-energy utilities or industries unrelated to utilities) and, further, to natural gas distribution as a subset of regulated energy utilities. The purchase of a given stock is further informed by

market served, growth potential, management quality, regulatory tenor, and expected financial performance relative to other investment opportunities.

This selection process is somewhat reflected in the theoretical ROE-setting methodologies used in utility regulation. However, there is an important distinction. The setting of regulatory ROE tends to be a bottom-up process that starts with a risk-free rate and incorporates risk factors to synthesize a return that should be sufficient to attract investor capital. The actual investment process is a top-down exercise rooted in risk evaluation and eliminating alternatives.

As a capital-intensive industry, utilities have been involved in the public debt and equity markets throughout their history. However, as a percentage of total market capitalization (or value), utilities today represent less than 3% of the S&P 500 index—less than half of where they were valued relative to the market in 1990. While utilities have grown, the market has grown faster, particularly among high-profile sectors such as technology.

To attract investor capital in a competitive marketplace, utility investment returns must exceed the opportunity cost of capital as perceived by investors based on their individual objectives and risk tolerance. Simply stated, investors have alternatives and vote with their feet (or more appropriately, their wallets), and while capital markets factor the allowed regulatory ROE into the pricing of a security, along with many other determinants of perceived relative opportunity and risk, the cost of capital is ultimately determined by markets and reflects the opportunity cost of an alternative investment decision.

To attract investor capital in a competitive marketplace, utility investment returns must exceed the opportunity cost of capital as perceived by investors based on their individual objectives and risk tolerance. Simply stated, investors have alternatives and vote with their feet (or more appropriately, their wallets).

Cost of Capital—It Matters to Utility Customers

The regulatory process is often viewed as a balancing act between the competing interests of customers and shareholders. Utilities are, by nature, infrastructure companies characterized by high levels of capital investment; therefore, they rely on ready access to capital to finance the construction and maintenance of their infrastructure (which is not elective).

Like other costs of running the utility enterprise, financing is reflected in rates, meaning that over time, customers benefit from access to capital on the most favorable economic terms possible.

3. Capital Markets Research

Investor Discussions

Investor discussions were undertaken to gain insight on the factors that drive capital allocation decisions, with a particular focus on U.S. and Canadian gas LDCs, to better understand the market forces that drive a utility's cost of capital. The discussions also sought to gain an understanding of how members of the financial community view the LDC industry and its perceived risks, strategic challenges, and opportunities in what has become a highly dynamic environment for companies in all facets of energy production and delivery.

Working with the Steering Committee, the project team determined that interviews should be conducted with the following:

- Fixed income and equity markets
- Buy-side portfolio managers and financial analysts
- Sell-side financial analysts (e.g., brokerage houses and major banks)
- Investment bankers
- Credit rating agencies
- Company management, including CEOs, CFOs, and investor relations and treasury executives

Of 59 targeted interviews, 37 were completed during the second and third quarters of 2024.

Targeted Discussion Topics

Six broad topic areas were identified for the investor discussions:

- Investment positioning, selection criteria, and return expectations
- Gas utility sector-specific investment positioning issues
- Screening companies as potential investments
- Strategic considerations for gas utilities
- Regulatory and policy considerations
- Messages to convey to the natural gas industry and regulatory community

Actual Discussion Topics

The project team took a conversational and less-scripted approach to the interviews, giving participants discretion as to the topics they wanted to discuss. In MCR's view, this yielded additional insights that might not have been captured with a more prescribed approach. It also allowed discussant responses to determine the topics that were most important and relevant. The investor conversations ended up focusing largely on the following:

- Regulatory allowed ROEs, including jurisdictional tenor and ability to earn allowed ROE
- Policy issues, including restrictions on new gas customers, new gas infrastructure development and/or reduction in existing customer usage (collectively, gas bans), decarbonization, and safety
- Macroeconomic conditions, including interest and inflation, business growth, and energy demand
- Capital market positioning, including environmental, social, and governance (ESG) considerations, sector ownership, company and sector size, capitalization and liquidity, and market attention span
- Company-specific issues, including diversification and complexity, management acumen, and regulatory relationships

- Strategic matters, including the role of natural gas, customer experience, energy security/resilience/reliability, and industry messaging

Key Conclusions

By giving participants the flexibility to discuss topics that were relevant to them about the natural gas industry, MCR's approach yielded some valuable insights. In particular, the discussions revealed that the targeted questions were not necessarily the questions on investors' minds. The discussions are detailed in Section 3 of this report, but here are the highlights:

- The investment community widely believes that natural gas and related infrastructure will play a vital role in energy supply, security, and resilience for decades to come.
- Views of natural gas LDC investment risk have become regionalized and defined by state and local government policy toward natural gas and, to a lesser extent, by environmental policy.
- Consolidation and acquisitions have thinned the number of publicly traded gas LDCs over time, reducing market capitalization, liquidity, and financial analyst coverage for the group. With one exception, larger LDCs are subsidiaries of combination companies whose strategy and investor narrative are focused on electric or upstream energy operations.
- Non-utility business diversification within stand-alone gas LDC utilities complicates the investment thesis, keeping some would-be investors on the sidelines.
- Customer experience matters. Customers are voters, and gas utilities have a distinct and growing advantage in terms of affordability, resilience, and reliability.
- Investors are becoming cautiously more bullish on natural gas, but some view the gas utility sector as regionalized due to political differences. Many believe that the industry could benefit from more robust external education and messaging.

In summary, while some investors have a cautious or uncertain view of the natural gas utility industry, most believe that natural gas plays a key role in the safe, secure, reliable, resilient, and affordable delivery of energy, despite regional and strategic differences among industry players. Investors are also beginning to take renewed interest in the sector, attracted to forecasts for gas demand as well as media attention on artificial intelligence (AI) and associated data processing. In MCR's view, the gas utility industry's underlying commercial foundation remains solid. But regional policy challenges coupled with rapidly growing energy demand (and the urgent imperatives of affordability, security, resilience, and reliability) suggest there is potential in considering new commercial avenues—avenues that can both sustain a mature industry and align business strategies with important public policy and social objectives.

1. INTRODUCTION

1.1 Project Objective and Overview

The American Gas Association and the Canadian Gas Association identified a number of key objectives in commissioning follow-up work to the 2022 Investor Expectations Report. In addition to identifying trends in regulatory return on equity (ROE) allowances as bond yields have moved higher, these objectives included:

- Addressing the importance of capital formation and cost of capital to utility companies.
- Exploring the impact of regulatory lag, as well as means of mitigation.
- Discussing the pricing of capital in the marketplace and the investor decision process.
- Gathering intelligence on investor perceptions and expectations.

1.2 Specific Project Goals

AGA and CGA identified a number of specific goals, principally:

- Address alignment of allowed regulatory returns in the U.S. and Canada with investor expectations via direct information gathering from capital market participants.
- Explore primary drivers of ROE determination versus pricing of capital in the markets.
- Update allowed regulatory ROE in light of macroeconomic changes.
- Address factors that limit the ability of utility companies to earn allowed ROE.
- Provide insights based on data and investor discussions to inform stakeholders in the rate-setting process.

1.3 MCR Project Approach

MCR worked with AGA and CGA staff to identify the following specific steps and approach for completing the project and obtaining useful insights from the financial community.

- Establish a Steering Committee representing AGA and CGA member companies and agree to a project timeline, deliverables, target dates, and presentation venues.
- Roll forward version 1.0 ROE statistics to append existing historical data.
- Develop and agree on a survey format and content that accurately and fully captures investor expectations specific to natural gas LDC companies.
- Conduct a series of interviews targeting the following for both equity and debt:
 - Buy-side institutional investors and their portfolio managers who make investment allocation decisions
 - Sell-side financial analysts who provide investment recommendations, develop financial models, and target valuations for institutional and retail investors

- Investment bankers who support the capital-raising process for member company issuers
- Members of company management who interact with the capital markets, including CEOs, CFOs, and investor relations and treasury professionals
- Credit rating agency analysts
- In these discussions, address how issues such as “the energy transition,” ESG, and macroeconomic factors influence capital allocation and pricing.
- Compile the findings into a comprehensive report that conveys the critical importance and influence of investor expectations and perceptions on utility cost of capital.
- Present the findings and report to AGA and CGA members, the regulatory community, and other interested parties.
- Establish a platform for hosting the relevant data.

2. FOUNDATIONAL RESEARCH

2.1 Macroeconomic Trends

Since publication of the 2022 Investor Expectations Report, a number of macroeconomic trends have reshaped the context in which regulatory ratemaking decisions are made. In early 2022, U.S. monetary policy began to reverse a long trend of lower interest rates, with the first of what would be many increases in March of that year. That was in response to—and aimed at controlling—inflationary trends that began as the economy recovered from the 2020-2021 COVID pandemic. Shortly thereafter, the start of the Russia-Ukraine war created massive upheaval in global energy markets, spurring a natural gas shortage in Western Europe and a surge in LNG exports that also caused a brief spike in North American gas prices.

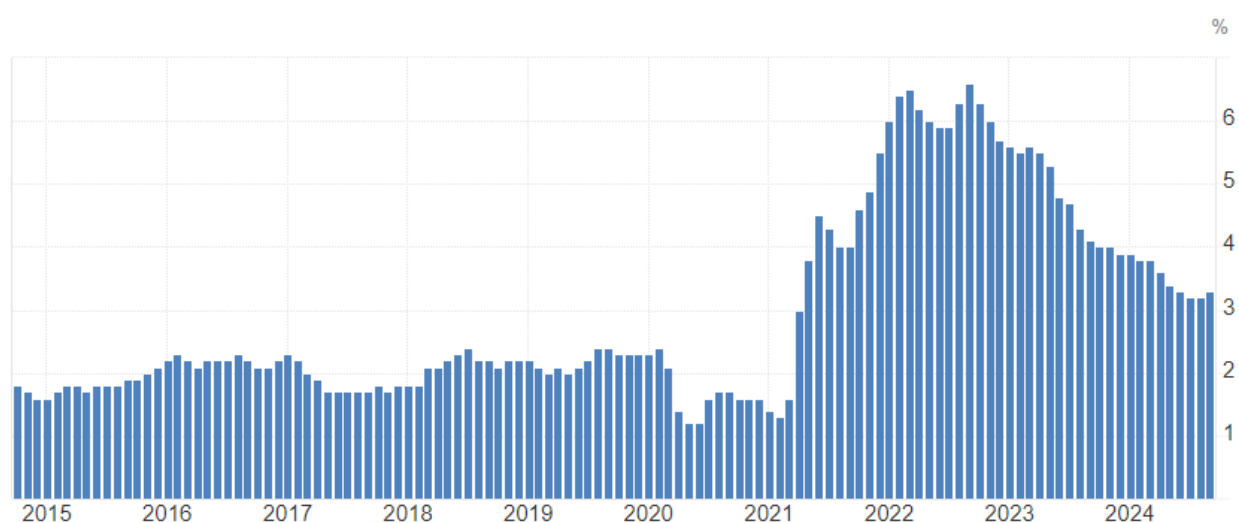
Macroeconomic shifts are depicted in Charts 1 and 2 below.

Chart 1: U.S. Ten-Year Treasury Yield History



Source: Macrotrends, U.S. Treasury

Chart 2: U.S. Core Inflation Rate 2014–2024



Source: Trading Economics, U.S. Bureau of Labor Statistics

Macroeconomic trends have multiple impacts. Interest rates affect not only utility rate setting, but also the microeconomic context in which utility bills are paid. Higher interest increases the cost of borrowing, but it also diminishes the relative attractiveness of utilities (and by extension, their cost of equity capital) as investors are presented with lower-risk, higher-yielding opportunities in other vehicles, including simple assets like cash. Accordingly, it is important for utility ROEs to remain competitive as market yields increase. Inflation affects the cost of everything from electrical components to wages, all of which are subject to recovery in rates paid by utility consumers facing the same inflationary and interest rate pressures that raise the cost of living.

In short, the regulatory challenge of maintaining affordable access to clean, safe, reliable energy while supporting utility financial integrity and access to capital on favorable economic terms has intensified since this study was last undertaken nearly three years ago. At the same time, the number of utilities with active rate cases is at near-record levels, and consumer bills have seen upward pressure from a combination of cost inflation, accelerating capital expenditures, and weather events, reflected in a five-year compound annual growth rate (CAGR) of more than 4% for U.S. residential electricity (as illustrated in Chart 7 on page 29).

2.2. Review of Regulatory Mechanisms and Inputs

The process by which regulatory returns and capital structure are developed was well detailed in Section 2 of the 2022 Investor Expectations Report. The two main market-based methodologies favored in utility rate case testimonies are variations of the discounted cash flow (DCF) model and the capital asset pricing model (CAPM). These typically serve as the foundation for ROE determination, with jurisdiction-specific and stakeholder considerations also factored in. However, as AGA and CGA accurately noted in seeking proposals for this project:

“...no actual investors are involved in the ROE calculation. Instead, the regulator sets the ROE through delicate balancing between what the regulator perceives to be actual investor

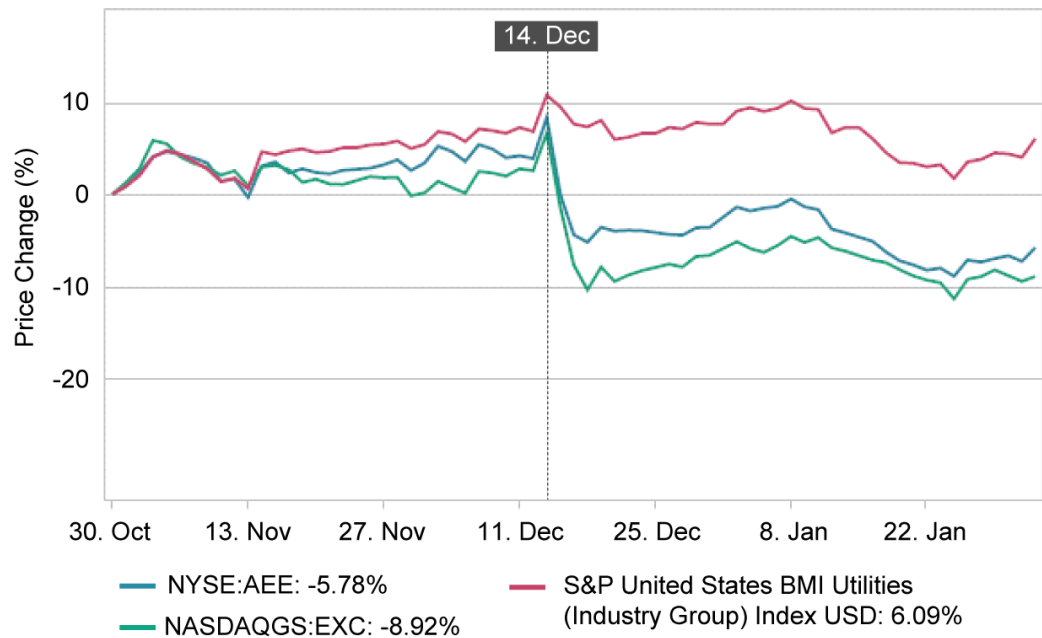
expectations based on expert testimony from the parties, and the extent to which the regulator feels comfortable increasing rates.”

This is an important observation. While investors may not be directly involved with the regulatory ROE determination, markets do factor regulatory matters into the pricing of equity and debt securities, thereby providing signals about perceived risk, which directly affects the cost of capital for a utility company. As observed in Section 3, investors tend to view natural gas LDCs as having relatively less risk than other segments of the utility industry, which is also reflected in lower allowed ROE for the gas LDCs. However, several factors are currently altering that perception of risk:

- Specific regional, state, or provincial policy efforts that seek to limit the connection of new natural gas customers, reducing the number of customers and/or sales volumes (the denominator in computing customer rates).
- Investments aimed at reducing greenhouse gas emissions (hydrogen, RNG, etc.), raising costs (the numerator in computing customer rates).
- The long-term health and business model of utilities in a lower emissions construct.

Against this backdrop, a regulatory ruling that surprises investors can cause security prices of affected companies to react sharply. For example, when a multifaceted final order issued by the Illinois Commerce Commission set equity returns for gas and electric utilities at levels below the prevailing average levels that the market had been expecting, the stock prices of utilities in that state declined sharply as investors “voted” with their wallets.

Chart 3: Share Prices of Illinois Utilities, Q4 2023



Source: S&P Capital IQ

2.3 Methodologies for Determining ROE

The 2022 Investor Expectations Report thoroughly detailed the approaches used in both the U.S. and Canada in ROE determination, including CAPM, DCF, and risk premium models, as well as comparable and expected earnings methodologies, which often rely on data from comparable companies (the proxy group). These well-established approaches incorporate multiple parallel methodologies to capture varying risk profiles, fundamental differences in business mix, and other unique characteristics, which all lend themselves to interpretation and debate. The complex and myriad variables driving these ROE approaches is illustrated in Appendix A.

The final determination of regulatory ROE can also be subjected to exogenous factors. Examples include “penalty discounts” for perceived subpar utility performance, or factors such as rate riders or trackers that can mitigate investment risk by separately accounting for specific utility investments or programs to comply with policy initiatives such as energy efficiency. Input from intervenor parties can also influence the ultimate ROE, sometimes as an unsubstantiated “X factor.”

2.3.1 Pricing of Equity Securities in the Capital Markets

The pricing of debt securities—whether long-term (e.g., bonds) or short-term (e.g., commercial paper) is reasonably straightforward. So-called fixed income securities typically carry a stated rate of interest, which reflects the prevailing market rate, adjusted to reflect the borrower’s risk profile (scored by credit rating agencies but also by the market), repayment term, and duration. The utility regulatory process considers the level of debt as a component of the capital structure as well as the appropriate allocation to short- and long-term duration, but the starting point is relatively unambiguous.

Regulatory ROE also starts with a risk-free (treasury) or low-risk (corporate) bond yield as described above. However, for all its analytical rigor, the theoretical approach to estimating the regulatory ROE fails to consider that equity securities (shares of stock) are actually priced each trading day by buyers and sellers in structured, competitive financial markets—markets that, as just noted, have experienced considerable change in the form of higher borrowing costs, inflation, and investor focus over past three years.

Theoretical cost of capital approaches also fail to capture the manner by which investors and markets actually make capital allocation decisions. By and large, investors choose among a range of alternatives that vary across a spectrum of risk and reward. A “risk-off” posture might concentrate portfolio assets in a combination of cash, treasury securities, and highly rated corporate debt, all of which come with an implied repayment of principal. Stocks, on the other hand, may or may not pay a dividend and—in contrast with an implied promise of repayment—come with the risk of loss.

An investor placing their (or their client’s) assets in a particular natural gas utility stock has already made several decisions, including an allocation to energy and, further, to natural gas distribution as a subset of regulated utilities. The purchase of a given stock may also be driven by it being in a sector-specific index, or an active decision by the investor based upon their perception of risk and reward. The latter is driven by such factors as market served, growth potential, management quality, regulatory tenor, and expected financial performance relative to other investment opportunities.

Much of this selection process—in particular, the quantitative attributes—is reflected in the theoretical ROE-setting methodologies used in utility regulation. However, there is an important distinction. The setting of regulatory ROE tends to be a bottom-up process that starts with a risk-free rate adjusted for risk factors to synthesize a return that should be sufficient to attract investor capital. As described above however, the actual investment process is a top-down exercise rooted in risk evaluation and the elimination of alternatives. Investor performance is often measured relative to a market benchmark; typically, well-recognized indices such as the S&P 500.

An investor choosing to allocate capital to a utility index or a utility company has arrived at that decision by foregoing other market investment opportunities. The benefit that the investor would have received had an alternative investment been chosen is known as the opportunity cost of capital and should be a primary driver in the regulatory ROE determination process. As the regulatory ROE is set, regulators should understand that an investor's expected, risk-adjusted return on a chosen investment should at least offer the potential to exceed the benefit that would have been derived from the investment path not taken.

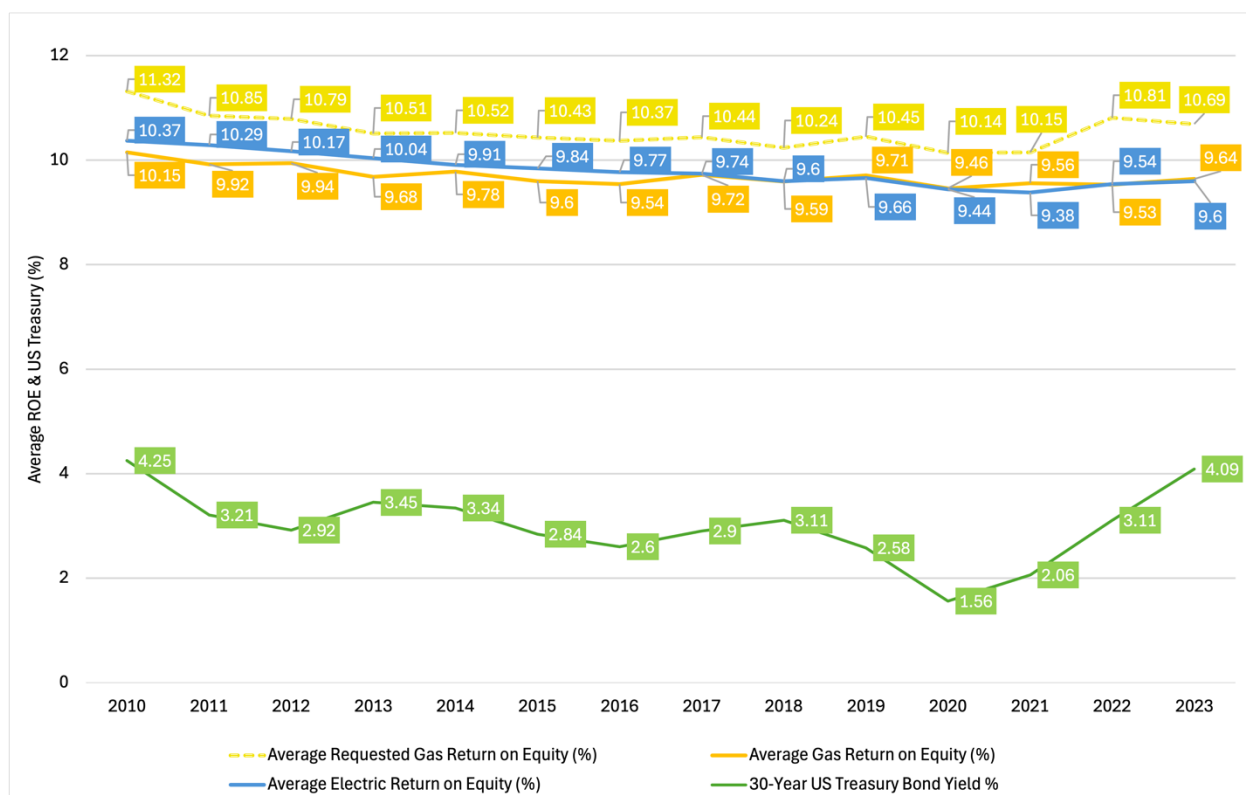
The benefit that the investor would have received had an alternative investment been chosen is known as the opportunity cost of capital and should be a primary driver in the regulatory ROE determination process.

Accordingly, investment returns are relative and must exceed the (opportunity) cost of capital—appropriately adjusted for associated risks—in order to attract investment in a competitive marketplace. Simply stated, investors have alternatives and vote with their feet. Accordingly, while a regulatory-determined ROE is a marker for what a regulated utility is allowed to earn on, it does not necessarily reflect the cost of capital as determined in the capital markets. The capital markets do factor regulatory ROE into the pricing of a security, along with many other determinants of perceived relative opportunity and risk. However, the actual cost of capital is ultimately determined by the markets.

2.4 Historical Review of Requested and Allowed ROE

Chart 4 compares the average requested and allowed ROEs for U.S. gas utilities since 2010, allowed ROEs for U.S. electric utilities, and the trend in U.S. 10-year Treasury bond yields over the same period. Since bottoming in 2020, bond yields began rising in anticipation of tighter monetary policy, which began with the Federal Reserve's initial interest rate increase in the first quarter of 2022.

Chart 4: U.S. Gas and Electric Utility ROE and Treasury Yield History



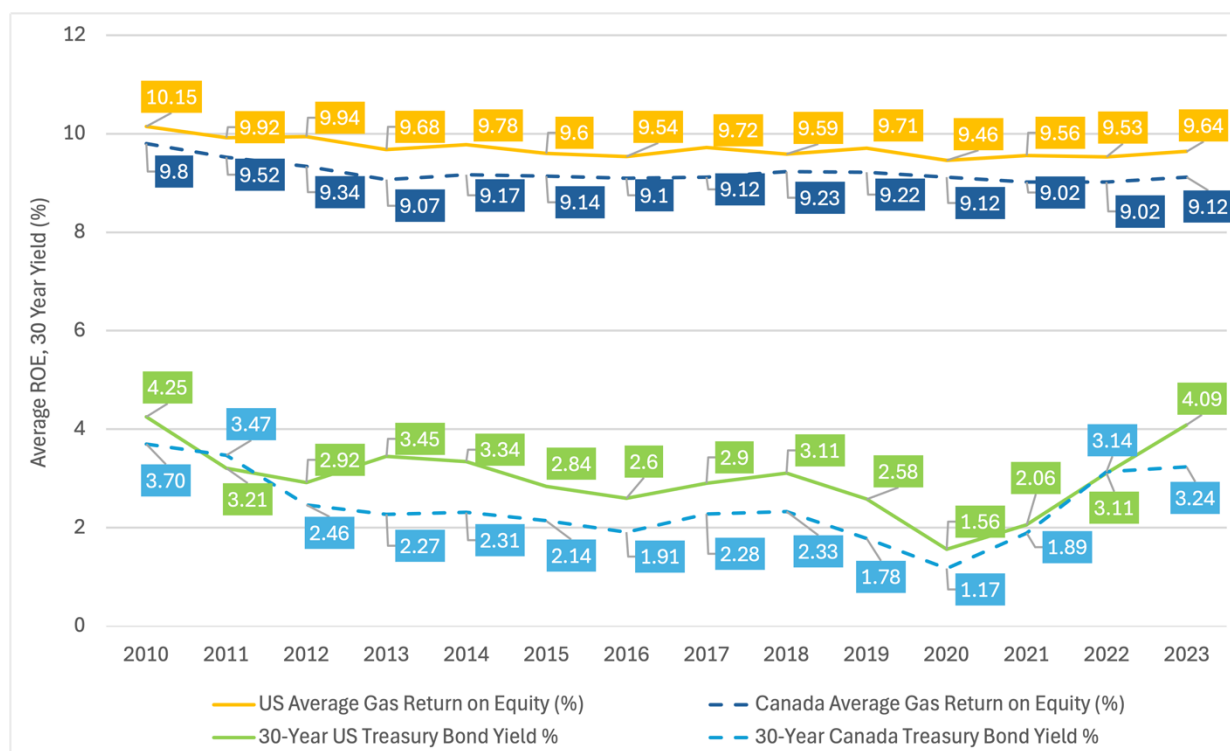
Source: S&P Global

Requested ROE in utility rate cases began trending upward in concert with rising bond yields, but regulatory orders have only recently begun to exhibit a subtle upward inflection point. In the discussions, investors and analysts took note of that apparent lag with generally muted concern. In a few conversations, it was observed that average allowed ROEs did not follow the magnitude of the drop in bond yields as noted in Chart 5. This was particularly true as pandemic-related economic stimulus took interest rates to historic lows.

However, there have also been some regulatory orders setting ROE at lower levels, even as “risk-free” rates in the market began moving upward, implying regulatory lag. Most recently, the California Public Utilities Commission upheld an administrative law judge’s proposed decision that prospectively sets ROEs for that state’s three major investor-owned utilities at a lower level than had been prescribed by a formulaic cost of capital mechanism triggered by higher bond yields last year. While this didn’t reduce ROE from current levels, one analyst noted that the PD and ruling reinforce a view of inconsistent regulatory outcomes and at least the appearance of a targeted outcome and “cherry-picking” of data to exclude periods with significant interest rate changes.

Chart 5 compares allowed regulatory ROE for gas utilities in the U.S. and Canada with prevailing bond yields. While allowed utility ROEs moved steadily lower with U.S. and Canadian market yields, the overall trend was both smoother and less pronounced, supporting the stability that utility investors seek. While interest rates moved sharply higher starting in 2021, utility ROEs—which had not declined as precipitously—did not “snap back.” Conversely, a sub-9 percent ROE ruling was not well-received in the market, as illustrated in Chart 3 in Section 2.2.

Chart 5: U.S. and Canadian Gas Utility ROE and Bond Yield History



Source: S&P Capital IQ

While the gap has begun narrowing recently, Canadian ROEs have historically lagged those of the U.S. by approximately 40 to 60 basis points, as reflected in Chart 5. The relationship between U.S. and Canadian capital structure and allowed ROE is further addressed in Section 3.4.1 of this report.

2.5 Capital Structure

Historically, Canadian gas utilities have operated with a higher level of leverage in the capital structure than their U.S. counterparts. While U.S. gas utilities typically incorporate an equity component between 40% and 50% of total capital, Canadian LDCs have averaged an equity “layer” of 40% or less. In 2004, the Canadian utility average common equity ratio averaged just under 37%, and it has gradually increased to an average of 40% in 2023 and just under 40.5% in 2024. Notably, the British Columbia Utilities Commission in late 2023 approved a significant increase of the gas utility equity allocation from 38.5% to 45%, specifically incorporating increased business risk related to energy transition issues.

2.6 Importance of Capital Cost to Utility Customers

While the regulatory process is often viewed as a balancing act between the competing interests of customers and shareholders, utilities are, by nature, infrastructure companies characterized by high levels of capital investment. Utility companies rely on ready access to capital to finance not only the building, but also the maintenance of their infrastructure. Like other costs of running the utility enterprise, financing is reflected in rates, meaning that customers benefit when utilities have ready access to capital on the most favorable economic

terms possible. By engaging in dialogue with investors and analysts who make those capital allocation—and by extension, pricing—decisions, this project provides insight into considerations surrounding investments in natural gas LDCs, as detailed in Section 3.

3. CAPITAL MARKETS RESEARCH

MCR conducted investor interviews to gain insight into the factors that drive capital allocation decisions—with a particular focus on U.S. and Canadian gas distribution utilities—to better understand the market forces that drive utility capital costs. The discussions also sought to gain an understanding of how members of the financial community view the LDC industry, its perceived risks, strategic challenges, and opportunities in what has become a highly dynamic environment for companies in all facets of energy production and delivery. While specific topics (identified in Appendix B) were targeted, a less formal and more conversational format was chosen over a scripted approach.

To encourage a greater willingness to share insights and opinions, the names and firms of participants have been kept confidential, and comments are non-attributable. MCR also chose to expand the target discussant audience to include not only portfolio managers, but also analysts who follow the industry, as well as investor relations, treasury, and management professionals from AGA and CGA member companies who have regular capital markets engagement.

3.1 Targeted Outreach across Capital Market Participants

Working with the Steering Committee, the project team determined that interviews should be conducted with the following:

- Fixed income and equity markets
- Buy-side portfolio managers and financial analysts
- Sell-side financial analysts (e.g., brokerage houses and major banks)
- Investment bankers
- Credit rating agencies
- Company management, including CEOs, CFOs, and investor relations and treasury executives

A total of 59 discussants were identified, and 37 interviews were conducted during the second and third quarters of 2024.

3.2 Interview Topics

Six broad topic areas were identified:

- Investment positioning, selection criteria, and return expectations
- Gas utility sector-specific investment positioning issues
- Screening companies as potential investments
- Strategic considerations for gas utilities
- Regulatory and policy considerations
- Messages to convey to the natural gas industry and regulatory community

These topics, which are addressed in greater detail in Appendix B, were shared with discussants prior to the interviews. The conversational and less formal approach to the interviews gave participants discretion as to the topics they wanted to focus on. In MCR's view, this yielded additional insights that might not have been captured with a more scripted approach. It also allowed discussant responses to determine the topics that were most important and relevant.

3.3 Participants

The names of study participants have been kept confidential to encourage a greater willingness to share their views. Professional affiliations and the number of discussions are summarized in Table 1.

Table 1: Targeted and Completed Interviews

Category	Targeted	Completed	Percent
Sell-Side Analyst	12	7	58%
Buy-Side Portfolio Manager/Analyst	24	14	58%
Investment Banker	3	2	67%
Credit Rating Agency	4	2	50%
AGA/CGA Board Member	3	2	67%
AGA/CGA Member CFO/IR/Treasury	8	6	75%
AGA/CGA Member Company CEO	5	4	80%
Total	59	37	63%

3.4 Key Topics and Findings

Table 2 lists the broad topical areas that emerged as conversations with investors, analysts, and other participants progressed. There is clear overlap with but also clear departure from the initial six topic areas.

Table 2: Topics and Frequency of Discussion

Broad Topic	Sub-Topic	Frequency
Regulatory Matters		
	Allowed ROE	8
	Earned vs. Allowed ROE	8
	Complexity and Tenor	7
	Alternative Ratemaking	8
	Total	31
Policy Issues		
	Gas Bans	18
	Decarbonization	12
	Safety/Wildfires	7
	Total	37
Macroeconomic		
	Growth	14
	Interest and Inflation	4
	Gas Prices and Hedging	5
	Demand and Data Centers	13
	Total	36
Capital Market Positioning		
	ESG/Market Tenor	10
	Ownership Changes	6
	Sector Size and Liquidity	9
	Total	25
Company Specific and Stock Selection		
	Business Complexity	11
	Management Acumen	2
	Total	13
Strategic Issues		
	Ongoing Role of Gas	16
	Energy Security	13
	Customer/Affordability	15
	Industry Messaging	18
	Total	62

3.4.1 Regulatory Matters

Allowed ROE and Capital Structure

Among investors and analysts, regulatory allowed ROE and capital structure are important, but more in the context of meeting expectations of reasonableness and fairness. In the words of one portfolio manager, “I expect the gas LDCs to be treated OK.” Relative to four or five years ago, it was also noted that the risk of lower allowed ROEs in a historically low interest rate

environment had eased thanks to rising interest rates and bond yields—even as those came with fresh challenges. It was also noted—as discussed in Section 2.4—that rising yields have earned a slight nod in the form of a modest upward trend to allowed ROE.

Some discussants also observed that equity as a component of total allowed capitalization had moved slightly higher in some jurisdictions and specific situations, perhaps as overall returns drifted steadily lower in a persistent environment of low bond yields. As noted in Section 2.4, investors and analysts did not express surprise nor particular concern that allowed ROEs had not “snapped back” as interest rates rose, given that the decline in allowed ROEs had not been as pronounced as the drop in yields.

Comparing U.S. and Canadian Utility Capital Structure and ROE

Canadian utility capital structures have historically incorporated more leverage (a higher allocation to debt versus equity) than what is commonly seen in the U.S., although it was noted that the equity component of Canadian utilities had been trending slightly higher in recent years. The lower allowed ROEs found in Canada seem to associate with a slightly lower level of perceived risk, owing in part to a lower likelihood of underearning. One senior analyst observed that Canadian utilities rarely, if ever, underearn allowed ROE and are somewhat more likely to slightly outearn. This was attributed to the use of forward-looking test years, more frequent rate reviews, greater flexibility to adjust rates between major proceedings, and weather protection. It was also observed that while regulatory tenor varies between provinces, Canadian utility regulation tends to be more homogeneous and less politicized and tends to exhibit greater continuity than in the U.S.

Earned versus Allowed Regulatory ROE

A discussant with extensive experience in utility capital markets made the rather dry observation that utilities sometimes point to modest allowed ROE levels as “an old crutch” to excuse lackluster financial performance. Many discussants repeated various themes on the message that the absolute level of allowed regulatory ROEs (provided that they are set at levels sufficient to attract capital rather than investment alternatives) matters less than the ability of individual companies to actually *achieve* those allowed returns. Underearning was sometimes attributed to regulatory lag due to the use of historical test years, lack of weather normalization, or delayed recovery of event costs (e.g., storms), but it was also clear that investors hold management responsible for managing the bottom line. Another highly experienced analyst noted that gas LDCs have historically tended to underearn allowed regulatory ROEs by a factor of 3 to 5 times the average delta among electric utilities. The muted upward inflection in allowed ROE as interest rates began rising was also not unexpected, for the reasons noted in Section 2.4.

Many discussants repeated various themes on the message that the absolute level of allowed regulatory ROEs (provided that they are set at levels sufficient to attract capital rather than investment alternatives) matters less than the ability of individual companies to actually *achieve* those allowed returns.

Complexity and Tenor of Regulatory Backdrop

Many respondents shared the view that LDCs exhibit less regulatory risk than their electric counterparts due to the relative simplicity of gas LDC rate and regulatory proceedings

historically. Specific factors noted included relatively small and fewer “chunky” capital expenditures, the affordability or ranking of gas among utility customer bills, and (with the exception of the current issue of gas bans in some locales), a lack of controversial policy issues such as resource planning or capital-intensive power plant development.

Alternative Ratemaking, Incentive Mechanisms, and Separate Recovery

Mechanisms such as rate riders and trackers are viewed positively through an investor lens, as they help reduce complexity, regulatory lag, duration uncertainty, and overall risk of a “full-blown” rate case process. As mentioned previously, forward-looking test years speak to regulatory lag. Separate recovery of one-off, large-dollar events such as storms or extreme cold through designated recovery or—when circumstances warrant, securitization—is also viewed positively from a risk standpoint. Multi-year rate plans aim to mitigate risk and increase certainty across a defined period of time compared with historical approaches to ratemaking. On the other hand, it was noted that multi-year rate plans carry the risk of undermining the “core” of cost-of-service ratemaking and/or unduly lowering overall allowed ROE.

Incentive-based ratemaking got a more mixed review. Performance-based ratemaking that fully disassociates the ratemaking process from a cost basis is often viewed as more stick than carrot, while performance incentive mechanisms in the context of a cost-based approach were noted as having the potential to provide compensation for achieving desired outcomes aligned with public policy objectives.

3.4.2 Policy Issues

As noted in Section 3.4.1, investors have historically viewed natural gas utilities as being less affected by policy issues and complexity relative to other segments of the industry. While not a government policy issue per se, ESG principles became policy-like by effectively precluding some institutions from investing in certain industries or activities. Direct policy initiatives affecting natural gas within the past decade at the state and federal levels include proposed bans on new natural gas customer connections, greenhouse gas emissions standards, and state/local decarbonization goals.

Most discussants noted that the rise of ESG-driven investing in the pre-pandemic decade had coincided with the initial emergence of proposed local bans on the connection of new gas customers (discussed later in this section). In the words of one portfolio manager, “All of a sudden, gas was evil”—perhaps overstated, but reflective of sentiment. Gas LDC utilities, widely viewed as the least risky corner of a low-risk sector, were suddenly caught in a crossfire of harsh negative screening by investors being pressured to divest fossil fuel-related investments and by policy makers in many states driven by similar populist politics.

One analyst observed that the natural gas industry collectively missed an early opportunity to inform the public discourse on these matters by aggressively pointing out the many environmental advantages of gas relative to other hydrocarbon fuels, coupled with North American abundance, affordability, and resilience. “They let the perfect become the enemy of the good.”

ESG

What is ESG (environmental, social, and governance)? Investopedia states that “...ESG investing refers to a set of standards that socially conscious investors use to screen

investments.” There is no shortage of alternative definitions put forth by what one investor described as the “ESG-industrial complex.”

ESG remains an investment consideration, but most discussants indicated that it is now being incorporated in a more pragmatic context. First of all, many U.S. investment managers have been reminded by their clients of their fiduciary responsibility to prioritize economic returns over social (or political) matters. In addition, a combination of factors, including the extreme winter weather of 2021 and the disruption of European energy markets after the Russian invasion of Ukraine in 2022, elevated the importance of energy resilience, reliability, and security. Several discussants observed that while ESG likely remains a block for European investors potentially interested in U.S. natural gas, it has become less so for U.S. investors. A Canadian investor observed that ESG-related matters require more explanation and disclosure but were not a block to investment.

ESG remains an investment consideration, but most discussants indicated that it is now being incorporated in a more pragmatic context.

Gas Bans

Like the ESG phenomenon, proposed municipal bans on new gas customer connections introduced risks that investors previously hadn’t considered. Compounded by ESG-related pressures, some investors saw the natural gas industry facing greater political, regulatory, and legislative risk, and some gas LDCs were seen to be on the receiving end of the spear’s tip. Five years ago, this caused some investors to reduce their natural gas utility ownership, putting pressure on share prices, perceived creditworthiness, and views on the sector’s longevity. That view has largely been supplanted by a regional approach, succinctly summed up by one investor as a “trifurcation” between cold northern states that will “never get rid of natural gas,” southern and / or gas-producing states where policy issues simply aren’t a concern, and western and northeastern coastal states, which despite ongoing dependence on gas, embrace policy issues elevate risk to a level that raises the risk premium investors demand or deters investment altogether. Variations of this regional theme were repeated many times during our discussions.

Decarbonization

Gas-specific comments on decarbonization centered on addressing the fugitive methane emissions issue, in some instances invoking the potential use of performance incentive rate mechanisms. Other comments noted the ability of natural gas to further public policy decarbonization goals through the displacement of more carbon-heavy fuels and/or the facilitation of greater renewable electricity production with natural gas as a clean and economic proxy for seasonal energy storage.

Safety

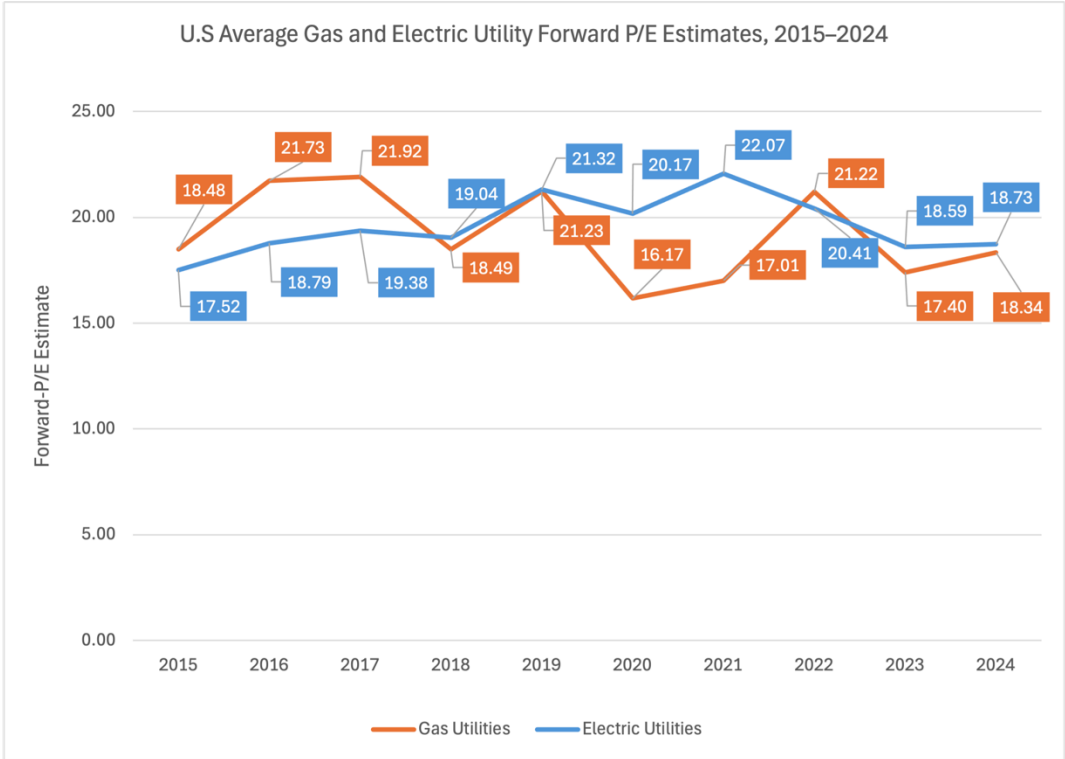
Public safety issues were mentioned in a small number of financial community conversations. Interestingly, one utility executive observed that while safety is a top-to-bottom daily issue of paramount concern for all gas utility companies, investors only care when an event occurs.

3.4.3 Macroeconomic Issues

Utility Sector Growth

For many years, natural gas LDCs were typically valued in the capital markets on par with, or at a slight premium to, their electric counterparts, which largely reflected a lower-risk business and regulatory profile, as discussed in Section 3.4.1. As indicated in Chart 6, that view began to change heading into 2019, when gas utility sector valuation estimates (expressed as forward price/earning ratios) began to decline and gas utility stocks began to underperform investor-owned electric and water utility stocks.

Chart 6: Historical Comparison of U.S. Electric and Gas Utility Valuation



Source: S&P Global, Analyst Estimates

Why did this happen? Several investors and analysts observed that over the past decade, utility sector growth transitioned from natural gas utilities to electric utilities. Ten years ago, pipe replacement was driving rate base growth, positioning gas LDCs with industry-leading capital expenditure growth. That was aided by the shale energy tailwind of falling natural gas prices that provided “headroom” to recover and earn on growing rate base investments without unduly pressuring rates and customer bills. On a parallel track, however, the ESG and policy issues discussed above started throwing up roadblocks to traditional gas utility growth via new customer connections in some states and regions.

The extreme winter weather that gripped much of the central U.S. in 2021 added to investor angst with mounting concerns over the ability of gas utilities to recover natural gas purchased

for customers at spiking prices driven by supply shut-ins and higher gas demand—not only for heating, but also for electricity generation.

Adding to investors' divergent views of natural gas and electricity was the accelerating growth profile of electricity, driven initially by ramping investment in rate-based renewable (and natural gas) generation to supplant an aging coal fleet. This led to greater earnings growth for many electric utility companies, with the added halo effect of investments being perceived as “green” by investors still in the thrall of ESG. Taking a page from the natural gas investor relations playbook, electric utilities began to prominently feature five-year capital expenditure and rate base growth projections in their communications to the capital markets.

As previously noted, these investor concerns began to dissipate in early 2022 as the importance of natural gas to all forms of energy production was clearly illustrated by the interruption of gas supply to Western Europe after the Russian invasion of Ukraine. Supply security concerns were amplified by the experience of weather-related electricity disruptions in North America, particularly in the U.S. energy heartland. In the words of one investor, “the risk of people freezing to death became more apparent.”

Interest Rates and Inflation

Interest rates matter to utility companies for several reasons, including the cost of debt financing (and by extension, costs recovered in rates), utility share price performance, and the “risk-free” rate incorporated in setting of regulatory ROE, as discussed in Section 2.

Utility debt cost is typically not subject to regulatory interpretation; it's much more straightforward, as fixed income securities come with a stated coupon interest rate. While existing debt may not be directly affected by changing interest rates, bond prices do fluctuate to align yields with prevailing market conditions.

Generalist investors and investment strategists tend to view utility stocks as “bond proxy” investments given their income orientation and perceived views of comparatively slow growth and low-risk profile as regulated monopolies. As such, stock valuations tend to be affected by changes in monetary policy; utilities tend to underperform the rest of the equity market when interest rates are expected to rise. The reason is simple—rising interest rates make bonds and other fixed-income investment opportunities comparatively more attractive on a risk-adjusted basis. At least one utility analyst mentioned that the recent 50 basis point reduction in the federal funds rate could potentially benefit utility valuations over time.

As described in Section 2, the extended low interest rate environment that prevailed between 2012 and 2022 was accompanied by steady attrition in allowed utility ROE. As market rates and yields have risen, the downward trend in allowed regulatory ROE has stopped, although ROEs have barely recovered even as the yield on the 10-year treasury doubled in a just a couple of years.

Natural Gas Prices and Hedging

The sustained abundance of natural gas and low prices were described by several participants as a strategic advantage for the natural gas industry broadly, particularly as prices of other delivered fuels (e.g., electricity) have risen sharply. A few analysts questioned why gas utilities aren't actively securing/hedging future gas supplies more aggressively, especially given the second-order impact that power demand may have on gas forward pricing. This question was

then posed in some member company management discussions. The response was not enthusiastic, given a view of generally asymmetric regulatory risk associated with hedging.

Demand (and Data Processing/AI)

Energy demand—particularly the demand for electricity—is a hot topic, especially as a merchant power generator recently overtook the leading microchip manufacturer as the best-performing stock in the S&P 500 this year. Energy demand came up repeatedly in discussions with investors, analysts, and bankers. Some mentioned that the May 2024 AGA Financial Forum was dominated by discussions on power demand from data centers—and that gas LDCs lacked a similar narrative. It was also noted that while natural gas is the largest single source of power generation across the U.S. (and Canada’s second largest), most of that gas is delivered via long-haul pipelines, not through LDCs.

Other participants were dismissive of the data center power demand phenomenon, referring to it as “the latest fad,” or expressing interest in shorting the stocks of associated companies that had run up on rising demand and price expectations.

The overall theme of rising energy demand—including demand for electricity—was cited as a potential opportunity for gas utilities, including the direct supply of natural gas to meet data center demand via onsite (off-grid) generation. Competitive natural gas prices were viewed as compelling, and the gas system’s advantages as a resilient, reliable, parallel energy delivery system were cited in several conversations. Finally, the impact of growing energy demand from industrial reshoring was viewed as a potential benefit to natural gas utilities.

The overall theme of rising energy demand—including demand for electricity—was cited as a potential opportunity for gas utilities.

3.4.4 Capital Market Positioning and Valuation

Capital formation and pricing can be viewed as a top-down process that originates with a macro-level, risk-informed allocation of cash, fixed income, and equity securities, as well as alternatives such as commodities or currency exchange. Participants range from individual (retail) investors to institutions such as pension funds, endowments, high-net-worth individuals (often family offices), governments (sovereign wealth funds), and others. Asset managers include mutual, index, and hedge funds that may specialize in a particular asset class, industry, or theme (such as artificial intelligence).

For purposes of this discussion, capital market participants include:

- Investors or asset managers, referred to as the “buy-side,” who direct their capital or that of their clients into stocks, bonds, or alternative investments.
- The analytical community, including independent analysts or those affiliated with a financial institution (the “sell-side”). These analysts make investment recommendations (buy/hold/sell) based on their views of market, industry, and individual sector and company fundamentals.
- Investment bankers who connect issuers and buyers of debt and equity securities.
- Company investor relations and treasury personnel who interact with the above.

As a capital-intensive industry, utilities have been involved in the public debt and equity markets throughout their history. However, as a percentage of total market capitalization (or value), utilities today represent less than 3% of the S&P 500 index—less than half of their value relative to the market in 1990. While utilities have grown, the market has grown faster, particularly among high-profile sectors such as technology.

As noted previously, generalist investors, strategists, and the financial media tend to view utilities as bond substitutes with comparatively low risk and slow growth as regulated, monopoly franchise enterprises. As discussed in Section 2.3, capital allocated to the utility sector—debt or equity—is further allocated between gas, electricity, and water. Perceptions of relative risk and reward further inform allocation of capital to individual companies—and the resulting cost of that capital.

ESG and Shifts in Market Sentiment

As discussed previously, the financial community has viewed utilities as having a generally low-risk investment profile, and gas LDCs were long seen as positioned on the low end of that utility risk spectrum. Utility-specific risks tended to center around regulation, safety, and the impact of weather and economic growth on sales volumes. Section 3.4.2, however, describes the convergence of two unprecedented risk factors in 2019: the zenith of the ESG-driven investment trend and the first municipal proposal to modify building codes to prohibit new gas customer connections.

The balance between risk and reward potential is key to determining the cost of capital. Securities of all kinds are priced in buy and sell transactions, and investors vote with their feet. In 2019, ESG was limiting investor demand for gas utility stocks, while proposed gas bans were seen as curbing demand for gas utility product. In response, analysts took a more bearish view of gas LDCs, and many utility investors reduced their LDC holdings, driving stock prices lower and credit spreads wider. Fewer buyers than sellers translated to higher yields and a higher cost of capital, particularly for the utilities seen by the market as most exposed to these new risk factors. As noted at Section 2.5, that impacts utility consumers by raising the cost to maintain, let alone upgrade, utility infrastructure.

Changes in Sector Ownership

Both the Canadian and U.S. natural gas pipeline and utility sectors have seen considerable merger and acquisition activity over many years. In the late 1990s, “convergence” deals created a number of large combined companies with a presence in both electricity and natural gas, typically led by large electric utility or gas pipeline companies. Some U.S. gas pipelines and LDCs were consolidated by larger Canadian pipeline and/or utility operators attracted to comparatively higher ROEs and greater allocation of equity in the capital structure. (It is worth noting that U.S. utilities have not ventured north.) In 2015, three of the larger natural gas LDC companies were acquired by larger electric or combination utilities, some at historically high valuation multiples.

Investor and analyst discussants observed that the acquisition trend slowed and began to reverse as some of the risks just noted began to emerge. Some electric utilities making rate-based investments in transmission and renewable energy took advantage of elevated valuation multiples to monetize legacy and/or acquired gas LDCs. A growing list of interested sellers pushed valuations lower, which caught attention of a number of private equity investors who saw value in cash-generative critical energy infrastructure businesses that were becoming

unloved in the marketplace. Some private equity investors had perpetual ownership horizons unbound to a specified exit date, which helped ease policy-related longevity concerns.

We queried investors, analysts, and bankers for their views on future merger and acquisition (M&A) potential. Some noted recovering LDC market valuations, as well as the smaller pool of potential sellers. Several shared the view that the remaining combination utilities are less likely to divest their gas businesses, and some company executives noted the ongoing strategic value of having natural gas delivery infrastructure as part of an overall corporate strategy.

Sector Size and Liquidity

Over the past decade, consolidation and acquisitions have reduced both the number of LDC companies in the public markets as well as—with a few exceptions—their individual size and the sector’s collective market capitalization. This was noted in multiple conversations, and it has several implications for the remaining publicly traded LDC companies.

Over the past decade, consolidation and acquisitions have reduced both the number of LDC companies in the public markets as well as their individual size and the sector’s collective market capitalization.

Concerns were voiced that a smaller group of less-liquid public companies was also manifesting in a smaller pool of potential buyers. A smaller-sector company population challenges peer valuation analysis. Illiquidity increases both the difficulty and cost of trading, which reduces research analyst coverage. Less research limits the ability of new market entrants to gain the familiarity needed to invest, especially among utilities where the complexity of rate regulation heightens the importance of experienced and informed insight. Comparatively few sell-side analysts today provide research on LDCs relative to the larger electric utility sector.

Finally, some participants noted that many of the remaining gas LDCs are subsidiaries larger combination utilities whose investment thesis, narrative, and research coverage are dominated by the electric side of the house. A few noted that this was evident at the 2024 AGA Financial Forum, where data center talk was the dominant theme.

3.4.5 Company Specific and Stock Selection Issues

There are many different types of investors in the capital markets. Passive, algorithmic, and index-based investment models tend not to focus on qualitative matters, instead relying on quantitative metrics, trading dynamics, or inclusion in a particular index as a basis for individual stock selection.

Complexity of Business Model

The small number and relatively small market capitalization of natural gas LDC companies is compounded by the complexity of LDCs that have diversified non-utility business operations. Even when related to the core business (e.g., renewable natural gas), some discussants pointed out that these additional business operations can overburden the intellectual and analytical resources needed to build credible financial models and sufficient understanding of the subject company to make a succinct investment case to a portfolio manager or an investor client. To quote one investor:

“If I were running a small cap[italization] LDC, I’d have a simple story...90 percent regulated, here’s the growth rate, here’s the dividend, and maybe someday a buyer will take it over at a premium. ... Give me a clean LDC that [a hedge fund] can pair against a crappy electric short.”

Financial modeling of a regulated utility can be a fairly straightforward exercise, thanks to publicly available data on rate base, capital structure, and allowed ROE by jurisdiction. Unregulated businesses, by contrast, often lack comparable levels of detailed financial disclosure. As a result, some investors and analysts say that the risk and complexity introduced by diversification—compounded by competing demands on scarce analytical resources—outweighs their potential investment returns.

Management Acumen and Communication

Management capability and execution are critical to any company’s business success and financial performance. Among utilities, the ability to successfully manage multiple regulatory and stakeholder relationships as well as the rate-setting process are seen as critically important, and it requires balancing disparate interests and effectively communicating to multiple constituencies. While regulatory tenor varies by state, investors ultimately hold management accountable for earning allowed regulatory returns on capital while ensuring the safe and reliable delivery of energy. Over time, the best-run utility companies tend to be the best performing utility investments.

Conversations indicated that investors value consistent execution and delivery. Multiple investor discussants mentioned a handful of companies that consistently meet or slightly beat the financial performance expectations implicit in financial guidance. Conversely, other LDC companies were cited as examples where guidance was missed or the impacts of weather or macroeconomic factors were not anticipated or communicated. One company executive observed that the relative lack of analyst coverage of the LDC sector magnifies the challenges of investor communication and setting of expectations.

On the topic of mergers and acquisitions, investors expressed a preference for companies that would rather be sellers than buyers, with one commenting, “If you want to be acquisitive, stop being owned in the public markets.” On the other hand, one investor believed that a major Canadian company’s expansion into the U.S. market “made sense.”

3.4.6 Strategic Issues

Most discussants see an ongoing long-term role for natural gas, but there is less certainty around a clear strategy for the industry and LDCs, particularly in less gas-friendly regions.

The Ongoing Role for Natural Gas

All of the study participants saw an ongoing role for natural gas over a period of decades. As one discussant noted, “No sophisticated person thinks gas is going away.” Analysts and investors pointed to the ongoing dependence on natural gas of states with even the most aggressive decarbonization policies. The ongoing use of carbon-intensive fuel oil in the Northeastern U.S. was also mentioned as being rather paradoxical, especially in states where natural gas supplies aren’t constrained. The ongoing use of natural gas in power generation was cited as well, although discussants didn’t see that as having much of an impact on gas LDCs. Investors expressed a clear preference to invest in states with more gas-friendly policies.

The challenges associated with phasing out natural gas were frequently raised. Investors, as well as a few combination utility company executives, observed that electrifying gas heating in cold climates could require a threefold increase in electrical capacity, an unrealistic scenario that most believe could exert massive upward pressure on customer rates, even if it were technically achievable. One combination utility executive noted that in order to address numerous investor inquiries about the strategic positioning of its gas LDC operations, the company added disclosure to an investor presentation quantifying the significant economic burden that full electrification would impose on its customer base.

Electrifying gas heating in cold climates could require a threefold increase in electrical capacity, an unrealistic scenario that most believe could exert massive upward pressure on customer rates.

The variable, non-dispatchable nature of wind and solar was also discussed. While battery deployment continues to grow, so does the demand for power. In several conversations, it was noted that battery storage is costly and inefficient compared to natural gas as a proxy for longer-term seasonal storage, as solar output declines in winter months.

Decarbonization

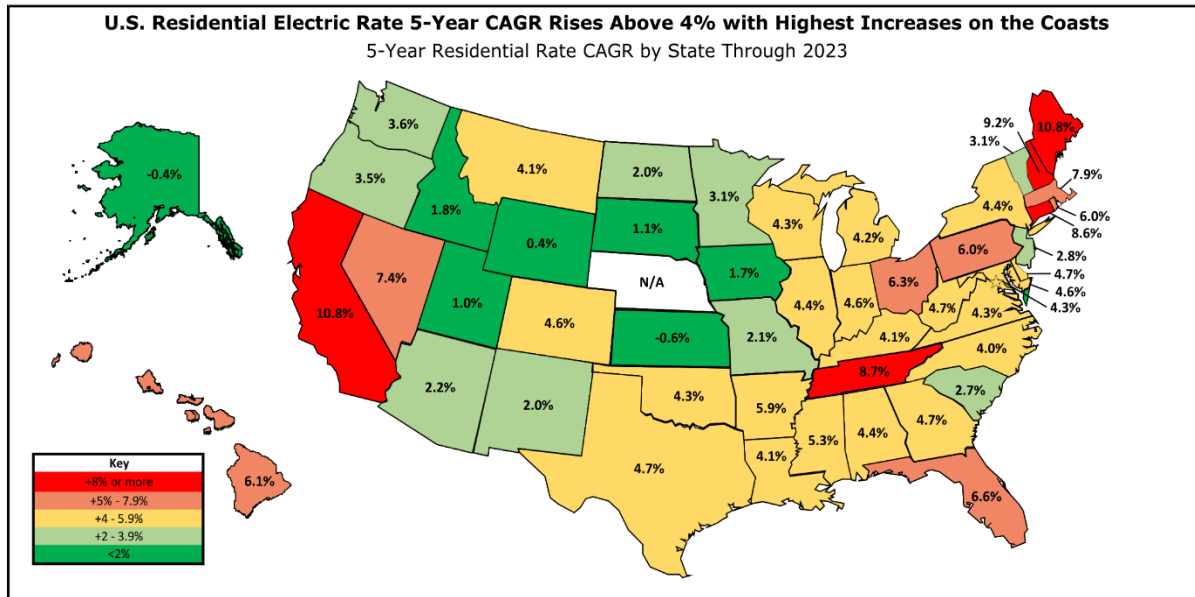
A Canadian investor cited the potential of exported LNG to drive decarbonization by displacing coal and other more carbon-intensive fuels in regions outside North America. The comparatively low emissions profile of natural gas relative to other fuels, as well as the end-to-end efficiency of natural gas in space heating was cited by company managers. One noted that in a best-case scenario, turning gas into electricity to make heat sacrificed 60% of efficiency. And an analyst observed that “gas could be used as a tool to reduce overall emissions.” Utility executives also mentioned ongoing efforts at system tightening to reduce fugitive gas emissions, another topic that came up in some investor discussions.

Customer Experience and Affordability

A few investors brought up the importance of customer experience in the context of reliability and affordability, specifically comparing average customer gas bills to bills from other utility services. A utility board member added that customers “pay the bills...and they vote.” A credit analyst with a fairly bearish view on the gas LDC sector observed that natural gas has a “compelling” cost advantage relative to both propane and power and that “people like gas.” Another investor urged gas utilities to remain visible in their communities and help agencies such as first responders better understand how their systems work and where critical facilities are located.

The rising cost of electricity and the impact of surging data processing center demand was mentioned in a utility analyst report that included the map shown in Chart 7. One utility executive noted that rising prices coupled with public safety (wildfire)-related power interruptions were also contributing to growing customer dissatisfaction.

Chart 7 : 5-year Growth in U.S. Residential Electric Rates



Note: CAGRs calculated using average residential price by state (cents/kWh); US Median 5-Year Rate CAGR = 4.3%; Median 2023 residential price = 14.5 cents per kWh
 Note: Nebraska does not have any Investor-Owned Utilities
 Source: SNL Financial LC and Wells Fargo Securities, LLC
 SNL Disclaimer: SNL FINANCIAL LC. CONTAINS COPYRIGHTED AND TRADE SECRET MATERIAL DISTRIBUTED UNDER LICENSE FROM SNL. FOR RECIPIENT'S USE ONLY

Source: Wells Fargo Securities, S&P Global

Energy Security, Resilience, and Reliability

Several participants noted that a combination of European gas supply interruption, extreme winter weather in North America, hurricanes and other severe storms, and wildfires all point to greater threats to energy security, resilience, and reliability—and the important role played by natural gas in protecting against those threats. Conversations with LDC and combination utility management teams indicate a rise in customer requests for natural gas backup generator connections, and one LDC noted that larger industrial customers are specifically requesting natural gas service to provide standby power. When asked if they saw these issues as an emerging business opportunity for gas utilities, financial market participants generally indicated that they hadn't considered it but could see a role for gas in backup generation as well as self-generation, particularly in service of growing data processing loads.

CONCLUSIONS

The objective of this study was to explore and address four questions:

- (1) Are gas utility returns on capital across the United States and Canada consistent with investor expectations?

As discussed in Section 3.4.1, investors generally expect gas utilities to receive fair regulatory treatment based on past experience (i.e., regulatory certainty) and tend to be more concerned with a given utility company's ability to earn its allowed regulatory return on capital—provided that prevailing allowed regulatory ROEs are competitive to begin with. Over time, some regulatory jurisdictions have set ROE below industry or regional averages, and markets tend to price those utility shares at an appropriate discount. Section 2.2 discusses the impact of an unexpected reduction in ROE or exogenous factors such as imposition of penalties will increase investor perception of risk—and by extension, the cost of capital in the marketplace.

- (2) What are the primary drivers of ROE determinations across the U.S. and Canada, and how is capital priced in the marketplace?

Section 2.3 describes the models used in regulatory ROE determination, including DCF, CAPM, the risk premium model, and the expected earnings methodology. The setting of regulatory ROEs is a bottom-up process that starts with a risk-free rate and then incorporates risk factors to synthesize a return that should be sufficient to attract investor capital. However, the actual investment process by which the cost of capital is determined in a competitive marketplace is a top-down exercise rooted in risk evaluation and the elimination of alternatives. The return that an investor would have earned by choosing to invest in an alternative is known as the opportunity cost of capital and should be a primary driver of the regulatory ROE determination process.

- (3) Are utilities adequately able to achieve the authorized ROE, and what are some of the reasons for differences between authorized and earned ROEs?

This topic is addressed in sections 3.4.1 and 3.4.5. Investors focus on the ability to earn the allowed ROE to a greater extent than the absolute allowed regulatory return. A variety of factors can drive underearning (or overearning), including weather, use of a historical test year, or a company's ability to manage costs. A rapid upward trend in interest rates or the inflation rate can also challenge a utility's ability to earn its allowed return. Alternative ratemaking methodologies, including trackers, riders, and forward test years offer the potential to address recovery lag and associated underearning.

- (4) What should gas utilities be doing to maintain their ability to economically attract capital?

As discussed throughout this report and in the Conclusions below, investors perceive less risk to the gas utility sector today than they did five years ago when policy issues converged with the rise of ESG-driven investment. While those considerations still exist today, it has become increasingly apparent that natural gas plays a vital role in supporting energy security, resilience, and reliability.

That said, investors also noted considerable regional differences in the regulatory and policy climate, and they expressed a clear preference for states and provinces that are

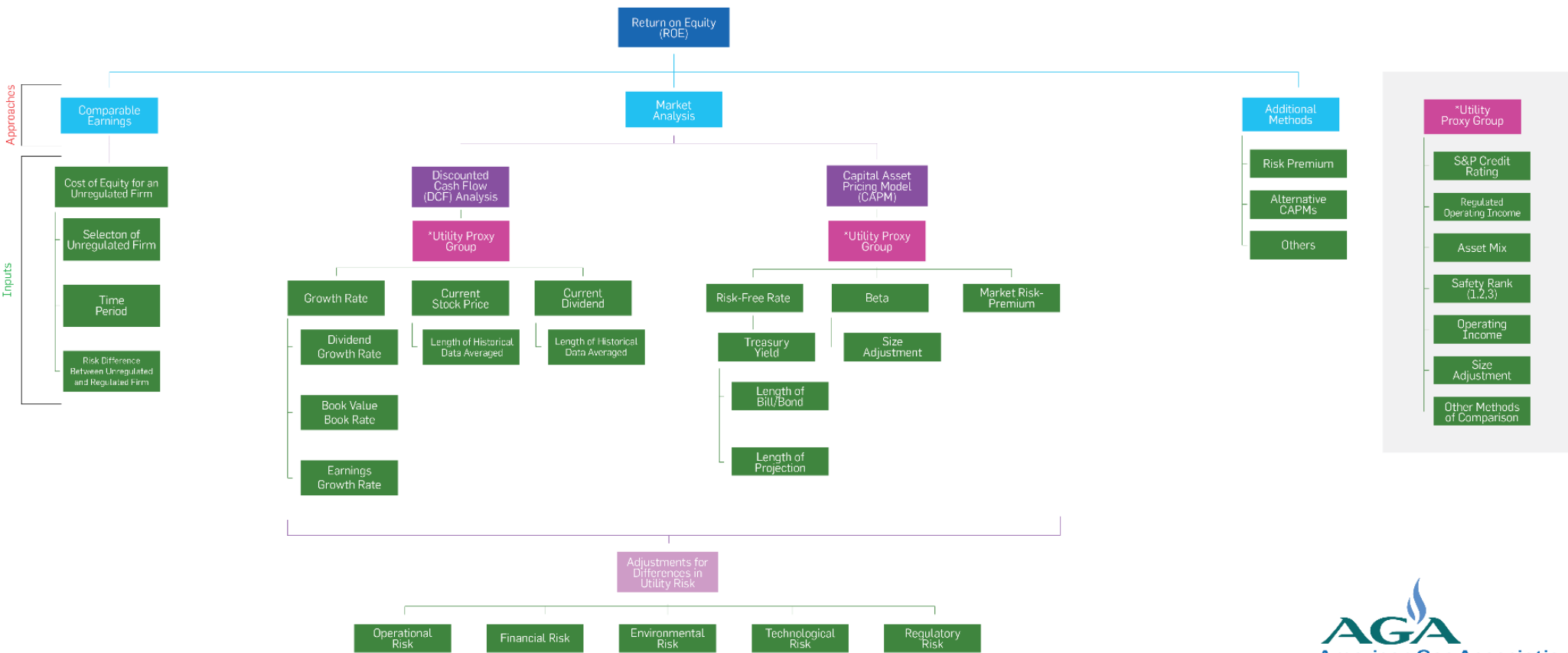
more receptive to current and continued natural gas use. While future gas utility business growth prospects remain uncertain in some regions, the security and affordability of natural gas are seen as clear advantages that the industry would do well to highlight to customers, regulators, and policy makers.

In addition to addressing these questions, MCR arrived at several key conclusions through the foundational research and discussions with capital market participants:

- U.S and Canadian interest rates began rising shortly after completion of the 2022 Investor Expectations Report, driving bond yields that support higher utility ROE. However, allowed regulatory ROEs moved up only slightly through 2023 and into 2024.
- Regulatory ROE and cost of capital are related, but ROE is derived through theoretical models such as CAPM, while cost of capital is determined by security prices in competitive markets. Regulators face the challenge of balancing short-term consumer interests against the longer-term effects of a higher cost of capital.
- The low-risk, high-growth narrative that gas LDCs enjoyed a decade ago was disrupted by ESG and regional proposals to ban new natural gas customer connections. Those risks have eased, but the electric sector has claimed the higher ground on growth.
- Investors have choices and vote with their feet. Utility investors allocate their capital between electric, gas, and water utilities as well as between states, provinces, and regions based on the perceived risk/reward profile of each.
- The investment community widely believes that natural gas and related infrastructure will play a vital role in global energy supply, security, and resilience for decades to come.
- Views of natural gas LDC investment risk have become regionalized and defined by government policy toward natural gas and to a lesser extent by climate.
- Consolidation and acquisitions have thinned the number of publicly traded gas LDCs over time, reducing market capitalization, liquidity, and financial analyst coverage for the entire group. With one exception, larger LDCs are subsidiaries of combination companies whose strategy and investor narrative are dominated by the electric side of the house.
- Non-utility business diversification within stand-alone gas LDC utilities tends to over-complicate the investment thesis, keeping some would-be investors on the sidelines.
- Customer experience matters, customers are voters, and gas utilities have a distinct and growing advantage in terms of affordability, resilience, and reliability.
- Investors are becoming cautiously more bullish on natural gas, but many see the gas utility sector as regionalized and in need of a strategy to address changing opportunities as well as stronger and more cohesive advocacy and messaging.

APPENDICES

Appendix A: The Many Inputs in Developing Regulatory ROEs



Appendix B: Targeted Investor Discussion Topics

1. Investment positioning
 - a. Utility sector macro view (over / under / equal)
 - b. Gas utility view / positioning relative to sector (over / under / equal)
 - c. Investment objectives (dividend, capital preservation, value, growth)
 - d. How (and if) do ESG and other social issues affect investment
 - i. How has ESG changed / evolved?
 - ii. Is it still a priority?
 - e. Desired financial metrics (e.g., return on capital, yield, growth, balance sheet metrics)
2. Gas utility sector specific issues
 - a. What are the sector's key risks relative to broader utility and energy sectors
 - b. Views on U.S. versus Canadian gas utility sectors
 - c. Returns on capital relative to other utility sectors
 - i. Electric, water, combination companies
 - d. Is decarbonization an existential threat?
 - e. Do you think in terms of "terminal value?"
3. Company specific issues—how do you screen individual companies as potential investments?
 - a. Financial metrics relative to objectives
 - b. Management strategy and acumen
 - c. Tenor of regulation and regulatory relationships
 - d. Examples of how individual companies "stand out"
4. Strategic
 - a. What opportunities do you see for the natural gas utility sector?
 - b. What is the role of natural gas in pursuit of "clean energy"
 - i. Are natural gas and renewable energy mutually exclusive?
 - c. How do you view alternative fuels such as RNG and H2?
 - i. Government incentives e.g. tax credits, subsidies
 - d. M&A, divestiture, combination vs pure-play utilities
 - i. Publicly traded vs private ownership
5. Regulatory and Policy macro
 - a. Constructive / collaborative vs punitive / politicized regulatory environments
 - b. Allowed return on capital and capital structure
 - c. Limitations on gas usage / customer connections
 - d. What message would you impart to regulators about the natural gas industry?
 - e. Electrification strategies
 - f. Recovery of unusual events (e.g., gas costs, weather impacts)
 - g. U.S., Canada, other countries and regions
6. What messages would you convey to the gas utility industry?
 - a. How do you view the industry's stakeholder messaging?
 - i. Investors, political / regulatory / customers / environmental
 - ii. Is the industry being assertive enough in defending its role?
 1. Industry is delivering record amounts of energy
 2. Addresses "energy independence"
 3. Exports bolster national economies, help address climate issues
 - b. If your sector view is negative, what could change that?