BEFORE THE
MARYLAND PUBLIC SERVICE COMMISSION

PETITION OF THE OFFICE OF PEOPLE'S COUNSEL FOR NEAR-TERM, PRIORITY ACTIONS AND COMPREHENSIVE, LONG-TERM PLANNING FOR MARYLAND'S GAS COMPANIES	* * * *	Case No. 9707 (Phase II)

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INITIAL AND REPLY TESTIMONY

OF

ALICE NAPOLEON

ON BEHALF OF THE OFFICE OF PEOPLE'S COUNSEL

May 4, 2026

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INITIAL AND REPLY TESTIMONY OF ALICE NAPOLEON

INTRODUCTION

Q Please state your name and business address.

A My name is Alice Napoleon. I am a Senior Principal at Synapse Energy Economics, Inc. ("Synapse Energy Economics"), and my business address is at 485 Massachusetts Avenue, Suite 3, Cambridge, MA 02139.

Q Please describe Synapse Energy Economics.

A Synapse Energy Economics is a research and consulting firm specializing in electricity and gas industry regulation, planning, and analysis. Our work covers a range of issues, including economic and technical assessments of demand-side and supply-side energy resources, energy efficiency policies and programs, integrated resource planning, electricity market modeling and assessment, renewable resource technologies and policies, and climate change strategies. Synapse works for a wide range of clients, including state attorneys general, offices of consumer advocates, trade associations, public utility commissions, environmental advocates, the U.S. Environmental Protection Agency, the U.S. Department of Energy, the U.S. Department of Justice, the Federal Trade Commission, and the National Association of Regulatory Utility Commissioners. Synapse's staff includes over 35 professionals with extensive experience in the electricity and gas industries.

Q Please summarize your work experience and educational background.

A Since joining Synapse in 2005, I have provided economic and policy analysis of electric and gas systems and emissions regulations on behalf of a diverse set of clients throughout the United States and in Canada. I have co-authored multiple white papers on natural gas regulatory reforms regarding New York's efforts to meet its decarbonization targets, as well as several reports and comments on the role of energy efficiency in New York state in meeting its Reforming the Energy Vision ("REV") objectives. Before the New York Public Service Commission, I submitted testimony regarding gas distribution system investments in two Consolidated Edison rate cases, two National Grid rate cases, and one National Fuel Gas rate case, and I provided extensive support on the comments submitted by Natural Resources Defense Council in numerous long-term gas planning proceedings. I have also provided expert witness services on issues related to the future of natural gas utilities in Maryland and Michigan and provided policy analysis and technical support on issues related to the future of natural gas utilities in many other jurisdictions, including the District of Columbia, New Jersey, Pennsylvania, California, Colorado, Hawaii, Massachusetts, Nevada, and Rhode Island.

I have provided expert advice on demand-side management programs in numerous states and Canadian provinces regarding a range of issues including incentive-setting methodologies, benefit-cost analysis, avoided costs, load forecasting, and locational demand-side management. I also co-authored a manual for regulators on designing performance incentive mechanisms for utilities, which has been highly utilized by many states.

Before joining Synapse, I worked at Resource Insight, Inc., where I supported investigations of electric, gas, steam, and water resource issues, primarily in the context of reviews by state utility regulatory commissions. I hold a master's degree in public administration from the University of Massachusetts at Amherst and a bachelor's in economics from Rutgers University. My resume is attached as Exhibit AN-1.

Q Have you previously testified before the Maryland Public Service Commission?

A Yes. I submitted an affidavit on behalf of the Maryland Office of the People's Counsel regarding Columbia Gas of Maryland's proposal to implement the Green Path Rider, a voluntary program to allow its customers to offset greenhouse gas ("GHG") emissions associated with their fossil gas use with renewable natural gas attributes and GHG offsets.[1]

Q On whose behalf are you appearing?

A I am presenting testimony on behalf of the Office of People's Counsel.

Q What is the purpose of your testimony in this proceeding?

A My testimony serves three related purposes. First, I describe the purpose of the proceeding and recommend a framework for aligning the planning practices of Maryland's gas public service companies (the "gas companies") with Maryland state policies and electrification trends. Next, I describe current gas planning

[1] *See* Office of People's Counsel, *OPC Green Path Rider Admin Comments*, ML # 300901 (Jan. 17, 2023), at Att. 1.

practices in the State and provide my recommended changes to planning and investment practices. Third, I reply to arguments by the gas companies on planning practices as laid out in their February 9, 2026, filings.

Q Which issues from Order No. 91791 does your testimony address?

A In Order No. 91791, the Commission directed that this proceeding address 12 issues. My testimony addresses topics related to issue numbers 1, 2, 3, 4, 6, 8, 9, 11, and 12 in depth. Additional OPC testimony is sponsored by Kenji Takahashi, focused on gas load forecasting and design day assumptions that is relevant to issues 1, 3 and 12, and by Sol DeLeon, focused on gas capacity and supply planning and alternative fuels that addresses issues 1, 3, and 7.

Q Have you prepared schedules to accompany your testimony?

A Yes. I have prepared the following Exhibits:

- Exhibit AN-1: Resume;
- Exhibit AN-2: Maryland Gas Utility Spending: Projections and Analysis of Future Capital Investments, prepared for the Office of the People's Counsel by DHInfrastructure (2025);
- Exhibit AN-3: Repair/Replace Considerations for Pre-Regulation Pipelines: Final Report, prepared for PHMSA by J.F.Kiefner and M. Van Auker (2015);
- Exhibit AN-4: The Geospatial Tool Gas Utilities Need for Future Planning: Requirements and Next Steps for a Non-Pipeline Alternatives Analysis Tool by Synapse Energy Economics, Inc. (2025);
- Exhibit AN-5: Cited discovery responses;

- Exhibit AN-6: OPC Letter on WGL STRIDE Customer Notice

I. Summary of Conclusions and Recommendations

Q Please describe the conclusions from your testimony.

A My conclusions are as follows:

- Continuing to make large capital investments and to use assumptions based primarily on historical patterns poses increasing economic risks for customers given per-customer residential consumption is declining and overall consumption is stagnating and is likely to decline. It is not reasonable or prudent for gas companies to assume that they can continue to operate as they have in the past.
- Improved, more transparent planning is needed to ensure consideration of least-cost alternatives and to mitigate gas companies' capital infrastructure overspending, even without the impacts of climate change policies. Making such large investments without accounting for State policies, consumer and market trends, and a changing energy landscape is no longer reasonable, affordable, or prudent.
- Declining or even stagnating load can lead to stranded assets—i.e., assets that are no longer used or useful and for which the utility cannot recover the costs—as customers who can afford to electrify do so, further reducing the sales that the gas companies count on to recover their fixed costs. The gas companies have failed to adequately plan for the risk of stranded assets.
- Gas companies have not materially changed their planning practices in response to electrification trends and State climate policies.

Q Please describe your recommendations from this testimony.

A My recommendations are as follows:

- The Commission should require the gas utilities to recalibrate their load forecasting, capital planning, and procurement practices both to better account for emerging market trends and State climate policy and to build in more flexibility and critical assessment of the near-term and long-term impacts of their decisions on safety, customer cost, reliability, financial risk, and ability to meet climate targets.
- Planning should incorporate strategies to mitigate inconsistencies with the State's achievement of its GHG emissions reduction targets.
- The Commission should implement a gas planning framework that includes more comprehensive consideration of replacement alternatives (including non-pipeline alternatives or "NPAs", repair, and relining) and of the optionality[2] that these different replacement alternatives confer, more robust and consistent consideration of risk, assessment of customer cost and the risk of stranded assets, consistency across different regulatory processes, and enhanced reporting.

II. Overview

Q Please provide an overview of your testimony.

A My testimony discusses current gas company capital planning processes and the limitations of those processes for adapting to changing markets and State policy. Gas planning processes drive the gas companies' investment in gas infrastructure.

[2] Optionality involves deferring decisions that can reasonably be deferred until later to increase flexibility and to allow more insight into uncertain futures. It represents the potential value of preserving future flexibility to adjust, defer, or abandon an investment decision, rather than committing irrevocably to a course of action under conditions of uncertainty. I discuss optionality further in Section IV.A.

Such planning answers questions about whether to replace, repair, or retire a given pipe segment. Current gas company planning processes do not adequately consider replacement alternatives, including pipe relining, repairs, and NPAs. Looking ahead, continuing to make such investments and to operate using assumptions based primarily on historical patterns poses increasing economic risks for customers given per-customer residential consumption is declining and overall consumption is stagnating and is likely to decline. It is not reasonable or prudent to assume, consistent with the gas companies' current practices and as they recommend in this docket, that they can continue to operate as they have in the past. Instead, the Public Service Commission should require them to recalibrate their load forecasting, capital planning, and procurement practices to build in more flexibility and critical assessment of the near-term and long-term impacts of their decisions on safety, customer cost, reliability, and financial risk. Even if gas demand does not decline, improving the gas companies' capital planning processes could avoid billions of dollars in unnecessary, excessive, or untimely investments.[3]

Q Please describe the background for this proceeding.

A OPC filed a petition for near-term priority actions and long-term gas planning in February 2023. In that petition, OPC requested that the Commission open a proceeding "to address the planning, practices, and future operations of the gas

[3] DHInfrastructure. February 2025. *Maryland Gas Utility Spending: Projections and Analysis of Future Capital Investments*. Prepared for the Office of the People's Counsel. See Table 1.1 on p. 6 for accelerating scale of capital investments, and estimated budgets for STRIDE 4, 5, and 6. See also pp. 49-55 for savings under alternative capital expenditure pathways. Available at: https://opc.maryland.gov/Portals/0/Files/Publications/Gas%20Utility%20Spending%20Report%20February%202025.pdf?ver=RP_bNtF-Hn7szyL7eLY-Lw%3d%3d, and attached as Exhibit AN-2.

public service companies . . . to ensure they are consistent with the 'interest of the public' and that the rates they charge utility customers are and continue to be 'just and reasonable.'"[4] In making this request, OPC cited the concern that escalating capital spending on gas system infrastructure was "misaligned with technological and economic trends toward the replacement of fossil gas with electricity"[5] and with Maryland's GHG reduction goals, codified by the Climate Solutions Now Act, which calls for economy-wide GHG emissions reductions of 60 percent relative to a 2006 baseline by 2031 and net zero GHG emissions by 2045. To address these concerns, OPC recommended that the Commission initiate a two-track proceeding: a "priority track" dedicated to issues that do not require extensive investigation and fact-finding and are ripe for Commission action, and a longer-term "transition track" for issues that warrant more extensive investigation and fact-finding. In June 2023, the Commission initiated Case No. 9707 and requested comments from interested parties on OPC's petition. In July 2024, the Commission held a legislative-style hearing to review the comments filed by the various parties.

On May 6, 2025, OPC filed comments that renewed and updated its recommendations concerning the structure and implementation of OPC's recommended two-track approach to this proceeding. These comments also called for changes to the gas companies' practices and procedures for proposing infrastructure replacement; reporting on system risk; and reporting on alternatives

[4] Office of the People's Counsel, Petition of the Office of People's Counsel for Near-Term, Priority Actions and Comprehensive, Long-Term Planning for Maryland's Gas Companies, *Petition for Near-Term, Priority Actions and Comprehensive, Long-Term Planning for Maryland's Gas Companies*, ML # 301247 (Case No. 9707, Feb. 9, 2023), at 1.
[5] *Id*.

to pipeline replacement. In addition, they recommended consideration of issues with gas company communications, barriers to customer electrification, gas planning and gas system investments, procurement processes, and reporting requirements.[6] Following the filing of these comments, the Commission invited another round of comments.

On August 20, 2025, the Commission issued Order No. 91791, which instituted formal proceedings to investigate issues regarding "current long-term capacity, supply, and capital investment planning practices of natural gas companies" to, in part, "ensure that gas company planning is consistent with Maryland's climate goals."[7] When discussing recent legislation demonstrating Maryland's commitment to addressing climate issues, Order No. 91791 recognized the relevance of the 2025 Next Generation Energy Act ("NGEA") on gas infrastructure planning given the NGEA's modifications to the cost recovery provisions of the Strategic Infrastructure Development and Enhancement Plan ("STRIDE"), which permits accelerated cost recovery for replacement of certain aging gas infrastructure. Further, Order No. 91791 designated a Special Master to preside over the long-term planning proceeding and set forth 12 issues to be

[6] These comments also recommended that the Commission direct the gas companies to show cause why gas line extension subsidies should not be immediately eliminated. By Order No. 91683 in Case No. 9707, the Commission ordered Commission Staff to draft regulations implementing its decision to eliminate gas line extension allowances. See Md. Pub. Serv. Comm'n, Order No. 91683, Petition of the Office of People's Counsel for Near-Term, Priority Actions and Comprehensive, Long-Term Planning for Maryland's Gas Companies, (June 13, 2025), at 10. In addition, OPC's May 2025 comments called on the Commission to initiate a comprehensive review of gas company communications and Commission regulations and policies governing those communications. The Commission did not include issues related to the gas companies' communications and marketing practices in Order No. 91791's list of 12 questions.
[7] Md. Pub. Serv. Comm'n, Order No. 91791, Petition of the Office of People's Counsel for Near-Term, Priority Actions and Comprehensive, Long-Term Planning for Maryland's Gas Companies (Case No. 9707, Aug. 20, 2025) at 1.

addressed in this phase of the proceeding ("12 questions"). These 12 questions are focused on various aspects of gas company planning, which has not received the same attention as electric system planning in Maryland and in other jurisdictions.

Q Why do the gas companies need to revise their gas planning framework?

A First, in their planning frameworks, gas companies need to consider least-cost alternatives to mitigate their capital infrastructure overspending. Second, annual consumption is stagnating in the State due to a number of factors, including electrification, energy efficiency, and a warming climate, as noted in Mr. Takahashi's testimony. Future gas consumption is likely to decline due to market shifts and policy implementation. With high gas system investments and flat or decreasing overall consumption, the gas companies will need to increase rates to recover their costs.

Considering the gas companies' current and planned massive investments in their distribution systems,[8] gas rates will rise and gas bills will grow even more expensive, likely accelerating adoption of electrification measures by those customers who can afford them and putting even more upward pressure on rates. This scenario is not sustainable, and it could lead to stranded assets—i.e., assets that are no longer economically useful.

Given recent trends in gas consumption, a scenario of sustained, declining overall consumption is very plausible. This proceeding is needed to formulate a

[8] *See* OPC Gas Utility Spending Report, 2025, attached as Exhibit AN-2. On p.7 "In 2025 alone, Maryland gas utilities will spend a projected $744 million on gas capital expenditures." Based on 2025 STRIDE projected spending of $122 million for BGE, and $62 million for WGL, and $0 for CMD on pp. 22-25, STRIDE makes up 25% of this estimate.

proactive approach and adjust gas company planning practices to seriously consider the risk that sustained, declining overall consumption pose for stranding assets, and options for mitigating that risk. As gas companies face new potential financial consequences from undepreciated, uneconomic assets on their books, they could face additional business risks and cost pressures. It is in the customers' interest to manage such declines in consumption and their resulting financial impacts in ways that do not impact safety and reliability for remaining customers. The gas companies have failed to adequately plan for the risk of this scenario on their own.

It is not reasonable for gas companies to ignore market trends or State climate policy, and gas planning must consider how Maryland can attain its emissions targets at the lowest reasonable cost. The buildings sector has more cost-effective, viable decarbonization options than other sectors (e.g., heavy-duty transportation and certain industries). In light of this, gas companies that serve the building sector should plan to meet or exceed economy-wide percentage reductions. Planning should include identification of measures to reduce GHG emissions and strategies to mitigate factors that would cause the gas companies to miss these emission reduction targets.

Q Please describe your recommended framework for gas planning.

A I recommend the Commission implement a gas planning framework that includes five components:

1. **Consideration of replacement alternatives**. The Commission should require the gas utilities to consider and demonstrate consideration of the value of

optionality[9] and a broader set of alternatives, including relining, repair, and NPAs, as a condition of demonstrating prudence of capital investments.

2. **Risk prioritization**. The Commission should require the gas companies to calculate risk reduction (generally including safety, reliability, and other types of risk) per dollar spent, also called "risk spend efficiency," in their capital planning. Further, risk per dollar spent should guide project-level decision-making and investment prioritization. More sophisticated handling of risk in the prioritization of capital investment projects will direct spending to where it has the most benefit. A requirement to calculate risk reduction will not affect the gas utilities' obligation to make improvements necessary to address imminent safety concerns.

3. **Assessment of bill impacts and the risk of stranded assets**. The Commission should require the gas companies to assess the risk of stranded assets periodically, for example every two years (or more frequently if rate cases are more frequent). Risk of stranded assets is directly linked to alternatives such as electrification and could model different scenarios based on different assumptions of electrification. The analysis should be conducted at the customer-level for different types of customers (e.g., rate classes).

4. **Consistency across processes**. In this proceeding, the Commission should establish guidelines for a methodology for conducting gas planning that will be adopted in different proceedings, including rate cases, STRIDE, purchased gas

[9] Optionality involves deferring decisions that can reasonably be deferred until later to increase flexibility and to allow more insight into uncertain futures. It represents the potential value of preserving future flexibility to adjust, defer, or abandon an investment decision, rather than committing irrevocably to a course of action under conditions of uncertainty. I discuss optionality further in Section IV.A.

adjustment proceedings, and the like. Related proceedings should use consistent, Commission-reviewed methodologies, as long-term planning will only be effective if its learnings carry into other forums where gas investments, supply, and capacity decision-making takes place. Companies should use Commission-reviewed methodologies, as well as assumptions, inputs, and outputs where appropriate and still accurate, consistently across all these proceedings.

5. **Enhanced reporting.** The Commission should require specific reporting on (1) historical and projected gas infrastructure expenditures, (2) detailed information on pipeline infrastructure, (3) demand forecasts and assumptions, (4) fuel supply portfolios, (5) stranded asset analysis, (6) customer decisions to leave the gas system, and (7) supply and capacity procurement, as described further in the body of this testimony. Periodic (e.g., every two years) gas company reporting can support effective regulatory oversight and stakeholder engagement in planning proceedings.

This framework and the five components listed above are discussed further in Section IV.

III. Gas Company Planning Processes

Q Please provide an overview of this section of your testimony.

A In this section, I discuss the gas companies' current practices and their limitations. This section addresses issues 1, 2, 3, 4, and 6 in Order No. 91791.[10]

[10] The relevant questions from Order 91791 are as follows:
(1) each natural gas company, and combination gas and electric company, subject to the Commission's jurisdiction shall provide a full description of its current natural gas capacity, supply, and capital

A. Overview of Current Practices and Context

Q Is there any context you would like to provide for current planning practices?

A Yes, I would like to make three observations. First, the gas companies' distribution systems and their practices for planning and managing those systems developed over the course of decades during an era of gas load growth, before stagnating consumption and declines in residential use per customer (as discussed in Mr. Takahashi's testimony), and before Maryland adopted GHG reduction and decarbonization policies that encourage electrification. In the past, gas companies have to some extent modified their planning practices and operations in response to new technological and economic developments, such as the increase in availability of gas sourced closer to Maryland due to fracking.[11] But by and large, the gas companies have not materially changed their planning practices in response to electrification trends and State climate policy.

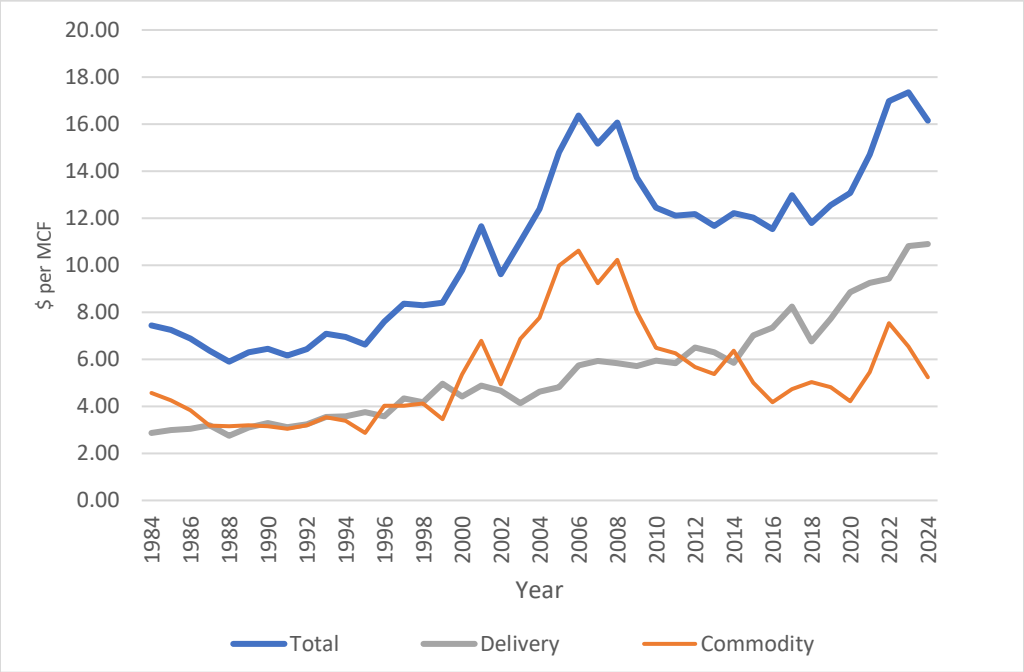
Second, natural gas prices have been historically volatile, and it would be imprudent to think they will be stable in the future. As shown in Figure 1, below,

investment planning practices. This description shall include, but is not limited to, a discussion of how current gas company planning practices address State climate goals;
(2) as a general matter, how can natural gas company planning be improved and made more transparent?
(3) What policies, guidelines, or regulations, if any, should be adopted to ensure that future natural gas company planning practices adequately address the State's climate goals?
(4) What policies, guidelines, or regulations, if any, should be adopted with respect to natural gas company planning practices related to a reduced greenhouse gas (GHG) emissions future?
(6) How should the potential for any stranded costs from future natural gas company capital investments be accounted for in long-term gas company planning?
a. What, if any, specific policies, guidelines, or regulations should be developed now with respect to the future expansion of natural gas facilities through capital investment?
b. Should the Commission require a formal demonstration of the potential impact on stranded costs, and the potential impact on rates, when a natural gas company files a request to engage in new or additional capital investment? If so, how should such an analysis be structured?

[11] Direct Testimony of BGE witness Brian M.W. Scheerer at 23.

the massive influx of new gas supply that resulted from the fracking boom starting around 2010 lead to a sustained decline in gas commodity prices (the orange line) until about 2020. This created an environment where gas companies could—and did—increase the portion of the bill for delivery infrastructure without losing business (represented as the gray line in Figure 1). But in the last few years, gas commodity prices have seen a return to their historical volatility, due to weather and larger geopolitical forces. Rising exports of liquified natural gas are tying domestic markets to global ones, making domestic gas prices higher and subjecting them to upward price pressures and fluctuations due to developments in the international market.

Figure 1. Maryland residential natural gas costs: total, commodity, and delivery rates



Source: U.S. EIA, annual Maryland residential rates and annual citygate price.

Third, gas companies have a natural incentive to invest in capital, as they earn a return on such investments. The passage in 2013 of STRIDE, which permits

accelerated recovery of the costs of certain aging gas infrastructure investments, further enhanced gas company incentives to invest in their systems. STRIDE has a cap on surcharges of $2 per month, but utilities can and have frequently reset the surcharge in rate cases.[12]

However, as discussed in the testimony of Mr. Takahashi, overall gas demand has been flat and is likely to decline in response to market changes and implementation of decarbonization policies. In addition, the residential sector has seen declines in use per customer. As a result, endless expansion is no longer a viable business model. The context in which the gas companies' historical planning practices (including planning for STRIDE) evolved is changing and investing in tens or hundreds of millions of dollars of new assets each year without accounting for State policies, consumer trends, and a changing energy landscape is no longer reasonable, affordable, or prudent.

Q Please describe gas companies' current supply and capacity planning practices.

A As described in the testimony of my colleague Sol deLeon, gas distribution companies maintain a portfolio of supply contracts (which provide the gas commodity) and capacity contracts (which reserve pipeline space and potentially

[12] *See* Proposed Order of Public Utility Law Judge, Washington Gas Light Company's Application for Approval of a New Gas System Strategic Infrastructure Development and Enhancement Plan and Accompanying Cost Recovery Mechanism, ML # 305809, (Case No. 9708, Oct. 25, 2023) at 42, 43 n.150 (affirmed by Order No. 90941); Md. Pub. Serv. Comm'n, Order No. 90099, In the Matter of the Application of Washington Gas Light Company for Approval of a New Gas System Strategic Infrastructure Development and Enhancement Plan and Accompanying Cost Recovery Mechanism (Case No. 9486, Mar. 2, 2022) at 10 n.36 (noting the distinction between the prudency review that occurs in a rate case when STRIDE assets are moved into rate base, and the initial reviews that occur throughout the STRIDE case itself).

storage to transport the commodity from the upstream delivery point or hub to the local delivery point) for serving their residential, commercial and industrial customers. Capacity planning involves considering the volume of gas required on the design day,[13] and how that peak load may change in the future. The gas companies use a purchased gas adjustment ("PGA") mechanism to pass on the cost of purchased gas to customers.[14] The State-mandated processes for reviewing these mechanisms provide opportunity for discovery and an annual formal hearing before the Commission. BGE, WGL, and Columbia file annual capacity plans with the Commission, but Chesapeake and UGI do not. The filed annual capacity plans are not subject to a formal review and approval process, which makes it challenging for stakeholders to question their rigor, assumptions, and underlying planning strategy. As discussed in Dr. deLeon's testimony, these plans typically have a five-year planning horizon,[15] which limits their utility for aligning supply and capacity with longer term policy and market trends.

Q Please provide an overview of current gas company capital planning processes.

A Generally, the utilities base their capital investment planning on maintaining the reliability of the existing system, rather than anticipating future shifts that diverge from historical patterns. For example, BGE does not anticipate changes in sales

[13] Design day demand represents estimated peak gas demand under specified extreme weather and related planning assumptions intended to reflect rare high-demand conditions for system planning purposes. See Mr. Takahashi's testimony for discussion of design day planning assumptions.
[14] Unlike the other gas utilities, BGE uses a Market-Based Rates ("MBR") mechanism that ties BGE's purchased gas costs to a market-based benchmark. This program was approved by the Commission and replaced BGE's previous PGA mechanism that passed all gas costs on to firm customers. If BGE's purchased gas costs are higher or lower than the market-based benchmark, the savings or losses are shared equally between BGE customers and shareholders. *See* BGE witness Scheerer at 19.
[15] Initial and Reply testimony of OPC Witness Sol deLeon, at 18.

and in the number of customers, such as what may occur due to electrification trends and policies.[16] WGL goes as far as to say that it would be "irresponsible" and "unsafe" to speculate about uncertainty of future demand.[17] I understand that at least BGE, Columbia, and WGL consider historical system trends and known future requirements.[18] The gas companies' planning practices are focused on maintaining reliability and safety in extreme conditions, which may lead to excessive, unnecessary investments.[19] As I discuss below, the gas utilities generally only consider similar technologies, replacements, or expansion for identified gas system needs, in almost all situations. In addition, they emphasize compliance with federal, state, and local requirements related to reliability and safety such as Distribution Integrity Management Programs ("DIMP"); however, as I describe in Section IV.C, it appears that they do not adequately consider the range of compliance options that this regulation allows.

Q How does load forecasting factor into gas companies' capital planning practices?

A Gas companies' load forecasts are central to their decision-making about investments and supply and capacity procurement. Gas companies build their systems to meet design day (peak day for firm load) conditions and ensure the provision of reliable service throughout periods of the highest demand. In his testimony, Mr. Takahashi discusses more about the ways in which the gas companies' methodologies likely over-project system demands, for example by

[16] Direct Testimony of BGE witness Nichole R. Owens at 34-35.
[17] Direct Testimony of WGL witness Melissa Bartos at 33.
[18] See Initial and Reply Testimony of OPC Witness Kenji Takahashi at 20.
[19] BGE witness Scheerer Direct at 32; Direct Testimony of WGL witness Jason Weekley at 3; WGL Response to OPC DR 3-4; BGE witness Owens Direct at 9-11, 37-38.

failing to incorporate electrification trends that are emerging and not fully reflected in historical data.[20] The implications of these biases in load forecasting have profound impacts on investment planning. They allow the gas companies to excessively build out their systems, and thus increase the risk of future stranded assets.

B. Limitations of Current Planning Processes

Q In what ways are these practices outdated?

A The practices described above are no longer justifiable because utility bills are escalating, highlighting the cost of ongoing, long-term massive utility infrastructure spending on two competing, duplicative energy systems. As discussed in Mr. Takahashi's testimony, while Maryland's historical gas consumption trends have remained relatively flat over the long term, emerging market trends and policy changes are likely to lead to declines in gas demand. Residential consumption per customer is currently seeing declines.[21] Even with flat consumption, however, high levels of gas system investments have increased and will increase gas rates, which will improve the competitive position of efficient electric equipment over gas.[22] We are no longer in an era of indefinite load growth, and the gas companies' reliance on perpetual expansion to smooth over the rising cost of service is not prudent.

[20] Testimony of OPC Witness Kenji Takahashi at 41.
[21] See Testimony of OPC Witness Kenji Takahashi at 24.
[22] See OPC, Maryland's Utility Rates and Charges, (updated March 2025) available at https://opc.maryland.gov/Portals/0/Files/Publications/Reports/Utility Rates PowerPoint 2025 updated 3-11-25.pdf?ver=WE3Jb5lAWghiYWH_u9RLrA%3d%3d.

Gas companies have a responsibility to undertake prudent planning and investment decisions to adapt to market trends and decarbonization policies, taking into account the potential timeframe of that transition and how it relates to the lifetime of gas assets. Capital investments should not be made until they are shown to be superior to alternatives that incorporate repair, efficiency, electrification, and retirement, accounting for the limited lifetime of pipe replacements. Failure to make prudent capital decisions increases stranded-asset risk, which, absent Commission or legislative intervention, will be borne by customers.

Q To what extent do gas companies consider the risk of stranded assets in their current planning practices?

A None of the gas companies currently consider the risk of stranded assets in a concrete way.[23] Gas companies conduct rate and bill impact analyses for proposed investments in rate cases and STRIDE filings, and some companies conduct these analyses for individual projects on a case-by-case basis.[24] However, companies do not regularly calculate bill impacts for individual projects or small groups of projects,[25] nor do they consider the impacts of their investments on how the bill

[23] No company answered yes to question 6b from Order No. 91791 of whether stranded costs impacts should be considered during the project planning process. (Direct Testimony of Columbia witness Mark Kempic at 7-10; WGL witness Kevin M. Murphy at 69-70; Direct Testimony of BGE witness John C. Frain at 52-54; Direct Testimony of Chesapeake witness Matthew Everngam at 7-8; Direct Testimony of UGI witness Jessica Rogers at 50-51). Similarly, no company lists stranded cost risk among the list of risks considered during the project planning process. (CMD Response to OPC DR 4-6; WGL Response to OPC DR 4-44; BGE Response to OPC DR 4-40; Chesapeake Response to OPC DR 4-6).
[24] BGE Response to OPC DR 4-9; WGL Response to OPC DR 4-16; CMD Response to OPC DR 4-4 and 4-5; Chesapeake Response to OPC DR 4-4 and 4-5.
[25] *See* BGE Response to OPC DR 4-9: "BGE calculates bill impacts based on the revenue requirements associated with a rate request before the Commission as well as for individual projects and programs on a

impacts of continued gas use compares to customer-facing end-use alternatives including electrified heating over time. The gas utilities are overlooking conditions that may lead to stranded assets by failing to consistently estimate and consider in their decision-making the impacts of their investments on customer costs and the relative customer-level economics of gas versus alternative appliances. I discuss consideration of stranded assets further in section IV.C.

Q What other types of risks are currently considered in gas system planning?

A The gas companies consider risks like safety, reliability, cost, and property damage. For example, WGL uses a proprietary model, JANA, to quantify risk, considering the likelihood of an event (e.g., pipe breaking due to construction) and magnitude of consequences of that event (e.g., death, injury, property damage, or environmental damage). The model quantifies risk for different scenarios in terms of "health and safety implications, property damage, repair costs, and others."[26] In response to a data request, Chesapeake indicated that it considers fuel supply risk, labor and construction cost risk, weather and operational risk, reliability and system performance risk, and regulatory and cost recovery risk (which involves whether capital planning is conducted in accordance with safety regulations and Commission-approved policies, including the company's line extension policy, and deals with cost recovery risk by ensuring investments are prudent).[27] In

case-by-case basis." *See also:* CMD Response to OPC DRs 4-4 and 4-5, WGL Response to OPC DR 4-16, Chesapeake Response to OPC DRs 4-4 and 4-5.

[26] Direct testimony of WGL Witness Murphy, p. 38, lines 3-4. See also the testimony of Asa Hopkins in Case No. 9849, where he notes that WGL also considers risks associated with regulatory impacts, environmental impacts, and corporate image or reputation.

[27] Chesapeake Response to OPC DR 4-6.

neither of these cases do the categories of risk considered by the gas company directly tie into the risk of stranded assets.

IV. A New Framework for Planning Practices

Q What do you recommend as the framework for gas planning?

A In this section, I discuss my recommended framework, which includes five core components. *This section addresses issues 8, 9, 11, and 12 in Order No. 91791*.[28]

A. The Commission should direct the gas companies to consider a broader set of replacement alternatives, and the alternatives' optionality, in their capital investments decision-making

Q What do you mean by "a broader set of replacement alternatives" and "optionality"?

A By "a broader set of replacement alternatives" I am referring to a menu of solutions aside from pipe replacement that satisfy system needs or address aging infrastructure (such as older cast iron, wrought iron, and bare steel pipe that may present elevated risk in certain circumstances due to corrosion, brittleness, or other degradation). I discuss below examples of these alternatives, including repair, rehabilitation, or abandonment.

[28] The relevant questions from Order 91791 are as follows:
(8) How should non-pipeline alternatives (NPAs) be evaluated and incorporated into gas company planning, if at all?
a. How do NPAs affect investment in capital project planning?
b. How do NPAs interact with the cost recovery provisions of the Next Generation Act?
(9) What is the impact of the recent modifications to the STRIDE statue on current natural gas company long-term planning practices?
(11) What policies, guidelines, or regulations, if any, should be adopted to address whether it is more appropriate to repair natural gas company facilities rather than replace them?
(12) How should future technological innovations, demand response programs, more efficient appliances, and other mechanism, be addressed in gas company planning?

Optionality is a concept used in infrastructure investments and in financial hedging, for example in fuel contracts. It represents the potential value of preserving future flexibility to adjust, defer, or abandon an investment decision, rather than committing irrevocably to a course of action under conditions of uncertainty. In this context, it would allow gas companies to defer a decision, e.g., to make an investment to increase system capacity or to replace aging infrastructure, to a later date when uncertainties (such as regarding the pace of electrification) might be better known.

Q Do the gas companies consider alternatives in their planning?

A While the gas companies state that they consider alternatives, it does not appear that they consider them adequately. Instead, gas companies effectively only consider pipe replacement. They often treat replacement as the default response to addressing higher-risk assets when other options are available. For example, in its STRIDE filings, WGL provides the same rationale for replacement for every single project, which suggests that the company does not meaningfully consider alternatives in its decision-making.[29]

Gas utilities' natural incentive to invest in capital so that they can earn a rate of return, in part, makes replacement more attractive to the utilities. In contrast, they are not able to earn a return on the cost of approaches like enhanced maintenance and leak surveys, which are treated as pass-through expenses.

[29] WGL witness Murphy Direct, Exhibit WGL-KMM-1.

Q What are your concerns about gas companies using pipe replacement as their dominant strategy for addressing aging infrastructure or identified system needs?

A Replacement is a costly, long-term solution to issues that could be addressed with lower-cost alternatives that provide a comparable level of risk reduction as replacement. Relining and joint sealing are examples of alternatives with a similar useful life to new pipes. In some cases, alternatives with even shorter lifespans are optimal if they provide a near-term solution with a relatively smaller financial commitment and allow the utility to preserve optionality. Delaying the larger investment decision allows time for more information to become available that may obviate the need for replacement.

Q **Is pipeline replacement the only option to address concerns about vintage pipe?**

A No. Gas companies frequently cite the Pipeline and Hazardous Materials Safety Administration ("PHMSA") Call to Action and PHMSA DIMP guidance as the reason why they prefer pipeline replacement. However, the Call to Action identified remedies other than replacement for critical pipelines: its initial goal was to accelerate "rehabilitation, repair, and replacement programs for high-risk pipeline infrastructure and to requalify that infrastructure as fit for service."[30] Likewise, the DIMP framework requires operators to develop and implement a plan to identify risks within their distribution systems and implement appropriate measures to address those risks, which could include enhanced leak detection, increased inspection frequency, improvements to corrosion control, pressure

[30] Department of Transportation Call to Action to Improve the Safety of the Nations's Energy Pipeline System; and US DOT, PHMSA, Letter to the Commissioner.

reductions, targeted repairs, pipe replacement, or discontinuation of service.[31] Further, PHMSA commissioned a report by Kiefner Engineers to develop a process focused on technical and safety-related factors for making repair or replace decisions for older pipelines.[32] For natural gas distribution systems, the report distinguishes how pipes of different materials should be treated and identifies attributes that must be considered in a repair or replace decision for steel, plastic, and cast-iron mains and service lines.[33] The study notes that continued leak surveys and management of the pipelines in accordance with published regulations accompanied by repairs will be necessary.[34] Importantly, the framework for evaluating a repair-versus-replace decision does not call for the utilities to replace all older pipelines.

Q What are the primary causes of major gas incidents?

A The majority of gas utility incidents in the United States are a result of excavation damage and natural forces. According to PHMSA, from 2016 to 2025, the causes for all gas distribution system incidents were excavation damage (39 percent), outside forces (27 percent), material failure of pipe or weld (7 percent), incorrect operation (8 percent), natural forces (6 percent), equipment failure (3 percent), and

[31] 49 C.F.R. Part 192, Subpart P8, (§§192.1001–192.1015).
[32] JF Kiefner and M. Van Auker. Final Report on Repair/Replace Considerations for Pre-Regulation Pipelines for the US Department of Transportation Pipeline and Hazardous Materials Safety Administration, pp 1-30. https://primis.phmsa.dot.gov/matrix/FilGet.rdm?fil=9427. Attached as Exhibit AN-3.
[33] Kiefner, pp. 26-27
[34] Kiefner, p. 29.

other causes (7%); for all types of pipes, corrosion was the cause in only 2 percent of cases.[35]

Q What do you conclude from this?

A Pipe replacement is not likely to be an effective strategy for mitigating major gas incidents.

Q What provisions of Maryland law reference consideration of alternatives?

A As one of the requirements for receiving approval to recover reasonable and prudent costs, Public Utilities Article ("PUA") § 4-214(c) requires investor-owned gas companies to demonstrate that they have "analyzed cost-effective options available to defer, reduce, or eliminate the need to replace, upgrade, or construct new components," including an analysis of (i) non-pipeline alternatives for investments unrelated to safety, and (ii) leak detection and repair. Additionally, PUA § 4-210(e)(2) requires STRIDE plans to include "an analysis that compares the costs of proposed replacement projects with alternatives to replacement, including leak detection and repair." The recently initiated Rulemaking 95 will establish STRIDE Plan compliance standards.[36] This rulemaking will establish regulations governing how the gas companies should conduct an analysis comparing the costs of proposed STRIDE projects with alternatives to replacement

[35] PHMSA. Pipeline Incident 20 Year Trends: Pipeline Incidents. All Reported Incident 20 Year Trend, 10 year average for gas distribution, all states. Available at https://www.phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends, accessed on May 1, 2026.
[36] Md. Pub. Serv. Comm'n, Order No. 92207, Washington Gas Light Company's Application for Approval of a New Gas System Strategic Infrastructure Development and Enhancement Plan and Accompanying Cost Recovery Mechanism (Feb. 26, 2026), at 5.

and how the gas utilities can demonstrate that they have completed the comparative analysis required by the NGEA.[37]

Q What are some alternatives to asset replacement?

A Alternatives include pipe repair (e.g., joint sealing such as cast iron sealing robot), pipe relining (e.g., cured-in-place liners), and non-pipeline alternatives to retire pipe (e.g., demand reduction, electrification). Gas companies should also engage in maintenance (e.g., improvements to corrosion control like cathodic protection) and leak detection, especially for aging infrastructure but also for newer pipes as well, to help prevent incidents.

Q Please describe pipe relining and its uses.

A Liners are a trenchless technology that can be inserted into an existing pipe to restore the asset and lengthen its life. Cured-in-place liners can be used to rehabilitate leak-prone or corrosion-compromised metallic natural gas distribution and low-pressure transmission pipelines. Installation involves curing a bonded composite liner, resulting in "a new composite pipeline, elimination of and the structural rehabilitation of the host pipe."[38] Cured-in-place liners can be cured in 24 hours or less in most cases, but even if longer times are needed, temporary gas service can be provided to serve typical gas demands for most customers.

[37] OPC has asked the Commission to amend its directive in Order No. 92207 so that the rulemaking also establishes cost recovery standards for PUA § 4-214, which concerns the recovery of planned gas infrastructure investments outside of STRIDE in gas company rate cases. *See* OPC Request for Clarification and Rehearing of the Maryland Office of People's Counsel, ML # 328423 (Case No. 9708, Mar. 30, 2026).

[38] Progressive Pipe Management. "About Progressive Pipeline Management (PPM)" Accessed at https://www.progressivepipe.com/cipl-faq on February 26, 2026.

Relining can avoid the costly activities associated with pipe replacement such as excavation and repaving. Liners can be used in pipes as small as 2" in diameter,[39] which works well with mains and the large service lines typically used by larger commercial and industrial customers; this technology is currently unsuitable for most residential service lines, which are typically 2" or less in diameter.

Q What are common concerns you hear from gas companies about the feasibility of relining?

A Gas companies are often concerned that relining pipes will require the utility to shut off service to customers for an extended period and then relight affected customer equipment.[40] However, shutting off service may be avoidable for customers served by a redundant supply (i.e., a customer who can temporarily receive service from an alternate pipeline while the affected pipeline is being lined). In some cases, trucked-in supply may allow the utility to keep service on.

Q To what extent are the gas companies using pipe relining?

A The gas companies consider and use pipe relining, but on a very limited scale and for only certain applications. For example, BGE does not consider using relining for pipes from 8-16" in diameter in lieu of proactive pipe replacement.[41] WGL

[39] Ibid.
[40] *See* BGE witness Owens Direct at 77:8 to 78:11, "To install a liner, the existing gas main must be out of service for a month or longer, meaning that an outage must be feasible without impact on other customers on the gas system." Witness Owens does not provide support for his unfounded claim that gas mains must be out of service for a month or longer during liner installation, especially in light of the fact that cured-in-place liners can be cured in 24 hours or less in most cases.
[41] BGE Response to OPC DR 4-58.

only considers relining for medium-pressure cast iron pipes with a diameter of 16" or greater, and where replacement is impractical, such as under railroad crossings.[42] Columbia does not consider relining to be viable in general and has never evaluated relining as an alternative for any project.[43] Chesapeake does not employ relining at all.[44]

Q Please describe other long-term pipe repair technologies.

A Several repair and rehabilitation technologies are commercially available, proven, and widely used. They include technologies like stab couplings for plastic pipe[45] and weld-over sleeves for steel pipes.[46] Other options include joint sealing and cathodic protection. These treatments and repairs can restore the pipe to its full functionality and confer a life comparable to new plastic pipe, i.e., at least 50 years.

Q How should the gas companies integrate preventative maintenance and leak detection?

A Gas companies should be tracking their leaks before and after replacing or repairing a pipe to assess the effectiveness of the technology, consistent with DIMP requirements that operators monitor system performance and periodically evaluate the effectiveness of their integrity management programs.[47] Further,

[42] WGL Response to OPC DR 4-60.
[43] Columbia Response to OPC DR 6-17.
[44] Chesapeake Response to OPC DR 5-2.
[45] https://dresserutility.com/project/stab-38/
[46] https://dresserutility.com/coupling-repair/gas/pipe-repair-gas-market/weld-sleeves/#:~:text=Weld%20sleeves%20are%20available%20for%20repairing%20mechanical,be%20used%20with%20ordinary%20field%20welding%20procedures.
[47] 49 C.F.R. Part 192, Subpart P8 (§§192.1001–192.1015).

DIMP calls on operators to determine and implement appropriate risk-reduction measures based on the conditions present within their systems. Such measures may include enhanced leak detection, increased inspection frequency, improvements to corrosion control, pressure reductions, targeted repairs, or pipe replacement.[48]

Q What are NPAs?

A NPAs, short for non-pipeline alternatives, are solutions that meet customer energy needs and are alternatives to traditional infrastructure investments. NPAs could include demand-side measures such as electrification, energy efficiency, and other measures that reduce or eliminate customers' demand for natural gas.

Q What are the safety implications of NPAs?

A The safest pipe is the one that's not there. Removing sections of distribution system pipe will eliminate the risk of incidents on that section and reduce ongoing maintenance costs associated with that section. NPAs represent an option to maintain safety while avoiding investment in replacement infrastructure.

Q Why should gas companies pursue NPAs?

A Gas companies are obligated to behave in a prudent manner to protect the interests of their customers. This is true whether or not specific laws or Commission directives require the utilities to consider NPAs—but, as mentioned above, consideration of NPAs is required for STRIDE plans and new investments

[48] See, Pipes Act of 2006 E:\PUBLAW\PUBL468.109, Pipe Safety Act of 2011 Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 | PHMSA.

unrelated to safety.[49] By failing to evaluate alternatives, the companies are likely spending more money than is necessary to provide services.

Q. What is an NPA framework, and what should it include?

A An NPA framework is a structured analytical process through which a utility and other stakeholders can evaluate demand-side and distributed energy resources — such as energy efficiency, demand response, and fuel switching — as potential alternatives to traditional pipeline infrastructure investments. The goal of an NPA framework is to identify the most cost-effective and flexible means of meeting system needs while avoiding or deferring capital expenditures that may become stranded as gas demand declines. An NPA framework should define a consistent approach for considering NPAs. It should clearly identify what types of traditional gas system projects or assets are suitable for NPAs and what types of alternative measures or technologies (such as demand response, energy efficiency, or electrification) will be considered. It should employ geospatial analysis that considers attributes of projects favorable to NPAs (e.g., terminal segments, segments with few customers, segments that are slated for replacement in 1-5 years).[50] It should include an analysis of alternatives that accounts for technical feasibility, costs, and benefits (including emission reduction benefits), using consistent, standardized, Commission-reviewed assumptions and methodologies. A robust framework clearly articulates a plan for engaging with and educating

[49] *See* PUA §§ 4-210, 4-214.
[50] For further information on geospatial analysis to support consideration of NPAs, please see Exhibit AN-4.

customers about the opportunities available to them. The Commission should provide guidance about the proper approach for designing an NPA framework.

Q Do the companies' currently have a framework for considering NPAs such as the one described above?

A No. The companies currently only consider NPAs in limited circumstances, if at all.[51] BGE does not consistently perform cost-benefit analyses to consider the viability of potential solutions, such as NPAs, when considering infrastructure needs, and analyzes NPA options only on an ad-hoc project-level basis.[52] WGL does not have an established process for conducting quantitative cost-benefit analysis for NPAs, or estimating the costs of NPAs that don't involve standard modifications to gas infrastructure.[53] Columbia evaluates NPAs only when replacing existing assets is not economically justified.[54] Columbia does not anticipate NPAs such as "electrification, geothermal networks, or renewable gas integration" impacting operations, and does not utilize alternatives currently.[55]

Q Are you aware of any examples of gas companies that plan and implement NPAs?

A Yes. Public Service of Colorado ("PSCo") and Consolidated Edison ("ConEd") in New York are just two examples.

[51] As noted above, the recently initiated RM 95 will establish STRIDE Plan NGEA compliance standards, which will include standards for compliance with the NPA requirements that the NGEA added to PUA § 4-210(e)(6). *See* Order No. 92207. OPC has requested that the Commission consider expanding the scope of RM 95 to also establish cost recovery standards for investments unrelated to safety under PUA § 4-214. *See* OPC Request for Clarification and Rehearing of the Maryland Office of People's Counsel, ML # 328423 (Case No. 9708, Mar. 30, 2026).
[52] BGE Response to OPC DR 4-21, BGE Response to OPC DR 4-26.
[53] WGL Response to OPC DR 4-28, WGL Response to OPC DR 4-29.
[54] Columbia Response to OPC DR 4-14.
[55] Columbia Response to OPC DR 4-13.

PSCo identified a supply constraint in its Eastern Mountain Gas System that could have required a costly, large-scale gas infrastructure project to increase supply to the area. Instead, PSCo proposed to implement a combination of NPAs and supplemental supply to alleviate the supply constraint, called the Mountain Energy Project. PSCo designed a portfolio of NPAs to achieve a certain level of peak demand reduction; the portfolio includes electrification, building shell upgrades, gas demand response, efficient gas appliances, and more.[56] The remaining supply needs are met with shipments of liquified natural gas and certified natural gas.

ConEd offers three NPA programs. The Electric Advantage program pursues projects to avoid the replacement of leak-prone radial mains (i.e., terminal, end-of-branch) with fewer than five connecting customers. The Energy Exchange program seeks to avoid the replacement of pre-1972 services. The Area Load Relief Program aims to reduce demand to avoid capacity-related projects. As of November 2025, Con Edison has avoided the installation of nearly 3,000 feet of gas main and associated services through the Electric Advantage and Energy Exchange programs. [57]

Q Why should the gas companies consider the value of optionality for different alternatives?

A In their capital investment processes, the gas companies should consider the value of optionality. As explained earlier in my testimony, optionality represents the

[56] Public Service Company of Colorado d/b/a Xcel Energy, Hearing Exhibit 102, Direct Testimony of Grace K. Jones, Proceeding No. 25A-0044EG.
[57] Consolidated Edison Company of New York, Inc. Non-Pipes Alternatives Annual Expenditures & Program Report, November 2025, Case 22-G-0065.

potential value of preserving future flexibility to adjust, defer, or abandon an investment decision, rather than committing irrevocably to a course of action under uncertain conditions. Consideration of optionality would enable gas companies to defer certain decisions in the near term that would otherwise lock them into long-lived investments, such as replacing older pipe with new pipelines in their distribution systems. Instead, they should prioritize only the investments that cannot be deferred, and in doing so they should consider options with potentially shorter lifetimes (such as pipeline repair and relining for assets that present relatively low safety risks). They should also consider options that may serve different purposes in the future (for example, thermal energy networks) as well as NPAs.

Q How should gas companies adapt their planning processes to better incorporate consideration of alternatives?

A Gas companies should expand their suite of options to include relining, repair, and NPAs. Gas companies should consider alternatives at the project level, which could involve electrification of a building or an entire neighborhood, and at a program-level, which might target an entire customer class or a type of gas system investment to be avoided. If the gas companies cannot assess alternatives for every project, then they should establish more robust protocols for which types of projects will be considered for alternatives (for example, relining).

Further, the gas companies should explicitly demonstrate consideration of short-term, mid-term, and long-term options, in addition to considering pathways for the gas companies to advance Maryland's climate goals.

Q Should the consideration of alternatives and optionality have bearing on prudence?

A Yes. Given the high cost of replacement, the availability of alternatives, and the risk that continued high levels of investment pose to ratepayers and to Maryland's GHG target attainment, the Commission should establish clear requirements for considering alternatives to guide gas utilities' analysis of alternatives to replacement and to ensure such analysis is meaningful.

Specifically, the Commission should require gas companies to demonstrate that alternatives (relining, repair, and NPAs) were considered before the gas company invests. Additionally, the Commission should establish clear expectations for what companies must demonstrate (e.g., metrics, threshold criteria, a reporting template, and workpapers with assumptions and inputs clearly defined) to verify that they adequately considered alternatives. The range of alternatives as well as related assumptions, inputs, and methodologies should be subject to discovery. Without that showing, the proposed investment should be deemed imprudent.

Q How should companies determine which solution to prioritize and/or pursue?

Companies should evaluate the risk spend efficiency of each feasible solution and prioritize solutions that reduce the greatest risk at the lowest cost. I discuss "risk spend efficiency" more below.

B. Investment prioritization should consider risk-reduction per dollar spent

Q Describe what you mean by risk-reduction per dollar spent.

A Risk reduction per dollar spent, also called "risk spend efficiency," is an approach to calculating the amount of risk (generally including safety, reliability, and other types of risk) reduced for every dollar spent on a risk-reducing project. Risk spend efficiency ("RSE") is calculated by dividing risk reduction of each mitigation alternative by cost.

RSE = Risk Reduction / Cost
Where: Risk reduction = Risk × Mitigation Effectiveness,
Risk represents the dollar value of the potential consequence of an unabated risk, and
Mitigation Effectiveness represents the percentage reduction conferred by a specific mitigation measure

Risk spend efficiency allows consideration of different ways (e.g., replacement, retirement, repair, and relining) to reduce risk from gas system assets. For capital projects, costs should cover the investment over its full depreciation life, discounted appropriately, to allow comparison with alternatives that do not involve capital. Risk reduction reflects the effectiveness of the mitigation at reducing risk, which is determined based on historical data and/or subject matter expertise.

Using this approach, utilities and regulators can identify, evaluate, and prioritize projects that are the most cost-effective for reducing risk. The risk spend efficiency of different actions can inform the pace at which a given action is pursued: actions with high risk spend efficiency may be more attractive for

accelerated investment, or at least should be prioritized relative to other investments. In this process, regulators should account for the expected useful life of the assets that are replaced, repaired, or relined and the timeline of associated benefits.

Q Is a relative risk-ranking enough to demonstrate the prudency of investments?

A No. Neither risk reduction per dollar spent nor relative risk-ranking (methods that rank projects on the basis of risk reduction) is sufficient to demonstrate prudency. A prudency determination may include many considerations including, among other things, whether a project's benefits exceed its costs—which neither risk reduction per dollar spent nor relative risk-ranking address. Further, it is worth noting that prioritized options are limited to the set of projects that the company evaluated for risk per dollar spent, which may be smaller than the set of possible options the company could undertake to reduce risk. It may also be the case that taking no action is the best option.

Q Are the companies currently using this relative risk ranking approach?

A To varying degrees. BGE indicates that it does not assess a risk reduction per dollar spent metric as part of planning work.[58] Chesapeake does not discuss a ranking or prioritization-based approach in its discussion of risk and capital investments.[59] On the other hand, WGL calculates the cost of reducing risk and

[58] BGE Response to OPC DR 4-41.
[59] Direct Testimony of Chesapeake witness Christopher Redd at 5-8; Chesapeake Response to OPC DR 4-6.

reports this for all STRIDE investments as a basis for prioritizing investments,[60] and Columbia uses risk scores generated by a Probabilistic Risk Assessment ("PRA") model to prioritize investments.[61] However, prioritizing investments by itself does not ensure that the investment is worth making.

Q How should companies integrate this type of risk-ranking approach with consideration of alternatives?

A The gas companies should calculate and demonstrate that they calculated a risk spend efficiency for each alternative. Further, they should prioritize solutions based on this metric and be prepared to demonstrate that they made this prioritization.

C. Assessment of risk of stranded assets and bill impacts

Q Describe the risk of stranded assets in the context of the gas companies.

A The gas system is composed of many assets with long useful lives whose costs are currently recovered over many decades. At the same time, gas consumption has been stagnant and is likely to decline, while residential consumption already has shown declines, as Mr. Takahashi describes in his testimony. In addition, there are

[60] *See* WGL witness Murphy Direct at 24. "The 2026 Project List filed under the Company's STRIDE 3 Plan further demonstrates the Company has selected and given priority to projects based on risk to the public and cost-effectiveness."

[61] *See* Columbia witness Kempic at 10: "Columbia uses risk scores generated from a probabilistic risk assessment ("PRA") model, along with local operational knowledge, to assess and prioritize where to make its investments." Columbia does not appear to assess risk-spend efficiency per se. However, in Columbia Response to OPC DR 5-4, Columbia indicates that it evaluates whether a pipeline replacement is "economically warranted", considering several factors including future growth, cost of replacement, expected revenue from existing customers, asset age, operational input, risk, and field data. Further investigation into the model and its use in decision making is appropriate to assess whether this model could be adopted to calculate risk-spend efficiency and if so, whether it could be adopted by other gas utilities.

uncertainties in the pace of electrification and the price of gas. Considering the large investments the gas companies are making in their systems, gas rates will increase, driving current customers to further reduce usage or to defect from the gas system altogether. At some point, the gas companies may not be able to recover their full revenue requirement by increasing rates. Therefore, the companies' ability to fully recover the costs of long-lived gas system investments, including those under STRIDE, is increasingly uncertain, contributing to the risk of stranded assets and of associated burdens on ratepayers.

Q Do the gas companies take a position on the risk of stranded assets?

A Yes. The gas companies take the position that stranded assets associated with gas use trends, electrification, and climate policies are not an imminent risk. For example, on behalf of WGL, witness Kevin Murphy says, "...given current demand projections, we do not anticipate any stranded costs from investments during the planning horizon." [62] BGE witness Frain states, "[t]o date there have been no definitive state policy changes that would result in stranded costs."[63]

Q Do these assessments claim that this risk is zero?

A No. As I interpret them, these statements effectively claim that, according to the companies, it is more likely than not that there will be no stranded costs. They do not claim that there is no risk, or even that the risk is trivial. The Commission should not be influenced by these statements. Many costs of gas infrastructure investments today will be depreciated over decades, so the question is not whether

[62] WGL witness Murphy Direct at 69.
[63] BGE witness Frain Direct at 53.

stranded costs exist today or in the very near future, but in the longer term. Ignoring this risk puts ratepayers at peril of escalating, unreasonable rates. Waiting to address stranded costs until they occur risks unreasonably shifting costs to the customers who remain on the gas system at that time. The alternative—thoughtful planning that downsizes the system and related investments and mitigates stranded cost risk—cuts into the gas companies' profits, and therefore is undesirable from their perspective.

Q Please explain what you recommend regarding assessment of risk of stranded assets.

A The Commission should require the gas companies to assess the risk of stranded assets periodically, for example every two years (or more frequently if rate cases are more frequent). Risk of stranded assets is directly linked to alternatives such as electrification and could model different scenarios based on different assumptions of electrification. The analysis should be conducted at the customer-level for different types of customers (e.g., rate classes).

Q Are there other elements to a stranded assets study?

A Yes. It will be important to consider stranded costs across a range of potential gas demand and supply scenarios that help meet the State's climate policies (including scenarios that consider different rates of adoption of electric alternatives) and compare costs and risks, as discussed in Mr. Takahashi's testimony. The stranded assets analysis should include evaluation of alternative utility investment scenarios (such as those which use NPAs, relining, and other approaches which could lower gas rates and thus reduce stranded asset risk) as well as different approaches to

depreciation. Note that stranded assets only cause stranded costs if the assets are not fully depreciated, but also that increased depreciation rates to mitigate stranded costs could increase retail rates and increase stranded asset risk.

Q How often should this study be conducted?

A As a starting point, I recommend a frequency of every two years. In determining the cadence of these stranded asset analyses, the Commission should consider when and how the gas utilities' outputs will be used in relevant decision making, for example in rate cases in which the gas company seeks cost recovery for investments that it prioritized. It should also consider whether parties will have the opportunity to meaningfully participate in the review of these analyses. This suggests conducting review of these analyses *before* rate cases, because parties may be challenged to devote sufficient attention to the stranded asset analysis during a rate case. Presentation and review of this analysis should happen frequently enough that it reflects and is able to respond to shifts in number of customers and consumption trends, technology developments in the cost and efficiency of end use equipment and production processes, and policy changes.

D. Related proceedings should use consistent methodologies

Q Please describe the current gas supply and capacity planning framework in Maryland.

A As described briefly above and in the testimony of Dr. deLeon, reporting on gas supply and gas capacity strategies is not uniform. Some utilities file annual reports; others do not.

It is important that gas companies adjust their planning processes consistently across all proceedings. Long-term planning should not be detached from the investment decisions, and likewise, long-term planning should take stock of the specific programs and cost categories at play in a gas companies' rate cases.

Long term planning methodologies, and inputs, assumptions, and outputs where appropriate and still reasonably accurate, should be consistent across proceedings (i.e., STRIDE, rate cases, etc.). Otherwise, it is unlikely that outcomes will be optimized or will be effectively oriented toward policy goals.

E. Reporting should be enhanced to support effective regulatory oversight and stakeholder engagement in planning proceedings.

Q Why is reporting important?

A Data reports and filings provide essential insight into companies' actual gas systems, investments activities, and trends over time. Detailed, frequent, and publicly accessible reporting will help the Commission and stakeholders understand where modifications to current processes are needed, and will allow them to hold the companies accountable for making prudent decisions in the public interest. They can facilitate comparison of data over time and, if they are consistent across utilities, between the utilities to identify promising practices and areas for improvement. Once implemented, using a standard Commission-approved template for reporting would ease the administrative burden to regulators and gas utilities alike.

Q Do you have concerns with the companies' current reporting practices?

A Yes. Current reporting practices are missing crucial information that is needed for a transparent review of gas planning practices, and data that are available are scattered across several proceedings. In its May 6, 2025 comments in this proceeding, OPC identified numerous data points and metrics in four categories that would allow the Commission and stakeholders to better understand companies' current operations and opportunities for improvement. The four categories are 1) historical and projected gas infrastructure expenditures, 2) detailed information on pipeline infrastructure, 3) demand forecasts and assumptions, and 4) fuel supply portfolios.[64]

Q Do you have any additional recommendations regarding reporting?

A Yes. The Commission should require the gas companies to file public reports about their stranded asset analysis (as described in section IV.D above). Further, the Commission should require the gas companies to track and report on customer electrification. At a minimum, this should include collecting and reporting on customers, by rate class and by neighborhood, census tract, or zip code, that have fully electrified their buildings and have requested to disconnect from the gas system. While the Commission has instituted certain notification requirements for replacement work, evidence suggests that utilities may not have processes to track when a customer electrifying their appliance exits the gas system outside of infrastructure replacement work. For example, Washington Gas customers use "abandonment" procedures that appear not to distinguish why a customer may be

[64] OPC Comments, May 6, 2025, p. 25.

ending their gas service.[65] In addition, I support the additional reporting recommended by Dr. deLeon regarding supply and capacity procurement.

Q What are some examples of reporting requirements in other jurisdictions?

A In 2020, the California Public Utility Commission ("CPUC") opened a proceeding to address long-term gas utility planning, R2001007.[66] Since 2022, the CPUC has required gas utilities to provide detailed information on their gas systems by census tract, consumption data by census tract and zip code, gas system summary statistics, and supplemental data.[67] California's Senate Bill 1221, passed in 2024, required the major utilities to create and to provide to the Public Utility Commission detailed geospatial mapping tools that include the locations of smaller distribution lines below 60 psi and the locations of all foreseeable distribution line replacement projects, as well as locations of disadvantaged communities, tribes, and priority neighborhood decarbonization zones (as designated by the Commission pursuant to Section 662 of Senate Bill 1221) that are within the utility's service territory.[68]

[65] WGL's current process, for example, treats customers who are electrifying as if they are abandoning/demolishing properties and thus no longer need service. *See* OPC Letter re WGL Service Abandonment Process, ML #309055, Case No. 9708 (Apr. 18, 2024) at 1-2; OPC Letter on WGL STRIDE Customer Notice, ML #313491, Case No. 9708 (Nov. 8, 2024) at 3-4 (attached as Exhibit AN-6).

[66] California Public Utilities Commission. Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-term Gas System Planning. January 27, 2020. Available at: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M325/K641/325641802.PDF

[67] Public Utilities Commission of the State of California. "Revised Administrative Law Judges' Ruling Seeking Data from California's Gas Utilities." Rulemaking 20-01-007. Filed March 1, 2022. Available at: https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M455/K736/455736679.PDF.

[68] St. John, Jeff. 2024. "Switching California from gas to electricity, one neighborhood at a time." Canary Media. September 16. Available at: https://www.canarymedia.com/articles/policy-regulation/switching-california-from-gas-to-electricity-one-neighborhood-at-a-time.

As another example, Massachusetts LDCs are required to file plans every five years that detail their strategy for complying with the State's overall emission limits and sub-limit for the natural gas distribution and services sector.[69] These filings are called Climate Compliance Plans ("CCPs"). Specifically, CCPs are required to demonstrate how the utility proposes to do the following: (i) reduce scope 1 and scope 3 greenhouse gas emissions, (ii) meet customer demand safely, reliably, affordably, and equitably using available technology, (iii) use pilot projects to identify investment alternatives, and (iv) implement recommendations for future plans.[70]

V. Responding to Utility Arguments related to Planning Processes, Obligation to Serve, and Alternatives

Q Please outline the issues addressed in this section.

A In this section, I respond to the key arguments put forth by the gas companies in their direct testimonies. *This section addresses issues 1, 2, 3, 4, 6, 8, 11, and 12 in Order No. 91791*.[71]

[69] Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs. 2022 (December 21). Determination of Statewide Greenhouse Gas Emissions Limit and Sector-Specific Sublimits for 2050. Available at: https://www.mass.gov/doc/determination-letter-for-the-2050-cecp/download.

[70] Massachusetts Department of Public Utilities (DPU), Order 20-80-B, Docket No. D.P.U. 20-80, December 6, 2023, page 134, available at: https://eeaonline.eea.state.ma.us/dpu/fileroom/#/dockets/docket/11789.

[71] The relevant questions from Order 91791 are as follows:
(1) Each natural gas company, and combination gas and electric company, subject to the Commission's jurisdiction shall provide a full description of its current natural gas capacity, supply, and capital investment planning practices. This description shall include, but is not limited to, a discussion of how current gas company planning practices address State climate goals.
(2) As a general matter, how can natural gas company planning be improved and19 made more transparent?
(3) What policies, guidelines, or regulations, if any, should be adopted to ensure that future natural gas company planning practices adequately address the State's climate goals?

A. Gas companies should give more consideration in gas planning to trends and uncertainty in consumption and, number of customers.

Q Please summarize the gas companies' observations about historical consumption and customers.

A In general, the gas companies assert there are no downward trends in customer consumption.[72] They assert that future declines in consumption are merely speculative, and they do not plan to adjust current processes until they witness observable trends. For example, WGL states that, "there is no significant trend in the historical use per customer for residential customers, and there is a significant positive (i.e., increasing) trend in the historical firm use per customer for C&I and GMA customers."[73] BGE states that it "has not observed meaningful changes in natural gas use or the number of gas customers."[74]

(4) What policies, guidelines, or regulations, if any, should be adopted with respect to natural gas company planning practices related to a reduced greenhouse gas (GHG) emissions future?
(6) How should the potential for any stranded costs from future natural gas company capital investments be accounted for in long-term gas company planning?
a. What, if any, specific policies, guidelines, or regulations should be developed now with respect to the future expansion of natural gas facilities through capital investment?
b. Should the Commission require a formal demonstration of the potential impact on stranded costs, and the potential impact on rates, when a natural gas company files a request to engage in new or additional capital investment? If so, how should such an analysis be structured?
(8) How should non-pipeline alternatives (NPAs) be evaluated and incorporated into gas company planning, if at all?
a. How do NPAs affect investment in capital project planning?
b. How do NPAs interact with the cost recovery provisions of the Next Generation Act?
(11) What policies, guidelines, or regulations, if any, should be adopted to address whether it is more appropriate to repair natural gas company facilities rather than replace them?
(12) How should future technological innovations, demand response programs, more efficient appliances, and other mechanism, be addressed in gas company planning?

[72] Columbia does acknowledge a decline in gas use per customer for the residential class. See, Direct Testimony of Columbia witness Cyndee Fang at 8:5-6.
[73] WGL witness Bartos Direct at 39.
[74] BGE witness Frain Direct at 34.

Q How do you interpret these statements?

A The gas companies report that the number of customers are still increasing. Even so, as discussed by Mr. Takahashi, trends indicate that throughput is flat. Consumption per residential customer has seen a downward trend for 25 years.[75]

Q What should the gas companies do regarding the likelihood of declining annual consumption?

A Gas companies need to account for potential scenarios where total consumption declines, or where consumption declines for certain areas of the system, and modify their planning processes to implement no-regrets solutions in the near-term that provide them with optionality later on. No-regrets solutions may include, e.g., NPAs, repairs, and enhanced system maintenance that will be beneficial whether Maryland follows a hybrid or high electrification decarbonization pathway.

Q Do their assertions that emissions reduction timelines are uncertain mean that reforms to gas planning are not needed?

A No. Uncertainty and risk (particularly of stranded assets), and the gas companies' failure to adequately address them on their own, is a primary reason why this gas planning process is needed. The buildings sector has more cost-effective, viable decarbonization options than other sectors (e.g., certain industries, heavy-duty transportation), and so gas companies that serve this sector should plan to meet or exceed economy-wide percentage reductions. BGE even acknowledges that "achieving the State's goal of net-zero GHG emissions will require Marylanders to choose significant electrification, including building and transportation

[75] Testimony of OPC Witness Kenji Takahashi at 21-24.

electrification."[76] Planning should include identification of factors that would cause the gas companies to miss these emission reduction targets, and a plan to mitigate the risks.

B. Gas companies are not taking adequate action to respond to State policies or market trends

Q What do you observe regarding the gas companies' statements about State policy goals and market trends?

A WGL calls into question the feasibility of achieving State emission reduction targets on time, stating that "challenges associated with maintaining both electric reliability and energy affordability have emerged as major concerns associated with achieving emissions reductions goals, and therefore the original emissions reduction timelines may not be achievable."[77] Additionally, gas companies are not taking appropriate precautions to prepare for the potential impact of decreased consumption and customers, which places them and their customers at serious risk. For example, BGE states, "…the Company currently does not believe a significant number of customers will leave the system. Accordingly, BGE has not incorporated this hypothetical into its existing activities or plans."[78] Similarly, gas companies are not accounting for the possibility of trends in building electrification that could accelerate significantly in coming years as a result of market considerations, including electrification technologies and customers concerns over health and safety of gas.

[76] BGE witness Frain Direct at 32.
[77] WGL witness Bartos Direct at 18.
[78] BGE Response to OPC DR 4.8.b.

Q What are your concerns with this?

A Gas companies have an active responsibility in planning consistent with the State's climate policies and market trends. As stated in BGE's testimony, "Direct fuel use in the building sector accounted for 16 percent of Maryland's gross emissions in 2020."[79] Policy goals should be reflected in gas company planning processes. This includes those articulated in the Maryland Department of Environment's 2030 Greenhouse Gas Emissions Reduction Act Plan that recommends reducing emissions from buildings using energy efficiency and by electrifying building heating systems. It would also be imprudent to ignore market trends that leave ratepayers at risk for stranded assets.

C. This proceeding should address optionality as well as near, mid, and long term gas planning

Q Please summarize WGL's recommendation for establishing a long-term plan filing.

A WGL recommends that the Commission require gas and electric companies to prepare long-term compliance plans every four years, and implement a process for stakeholder review. WGL witness Melissa Bartos states, "Each electric and gas utility should provide historical and forecasted customer counts, monthly usage and peak demand, current and forecasted supply and capacity, projected capital investments, as well as overall planning initiative and information as to how the utility can support Maryland's climate goals on a realistic timeline…"[80] She calls

[79] BGE witness Frain Direct at 27.
[80] WGL witness Bartos at 24.

for a "fact-based, transparent, and collaborative" long-term planning process that should involve "sharing of information across many stakeholders."[81]

Q Do you agree with WGL's proposal for a transparent planning process?

A In part. I agree that the planning process should be fact-based, transparent, and collaborative.

Q What are your reservations about this recommendation?

A In long-term planning cases, parties have had difficulty reaching agreement on inputs and assumptions regarding an uncertain future. For example, the New York Public Service Commission implemented a long-term gas planning process in 2022 to modernize the gas companies' planning, improve transparency, and align practices with state policy. While gas planning and assumptions are more visible than they were before, the process has failed to affect actual change in gas utility planning or investment decisions. Utilities continue to pursue business-as-usual operations and investments in their rate cases, contrary to the strategies and recommendations for long-term planning identified in the proceeding. In part, this may stem from the lack of clarity and guidance about what the long-term plans should include and how they should be brought into other proceedings (such as rate cases). In addition, the focus only on long-term outcomes has come at the expense of incremental, mid-term actions that can avoid locking the gas companies and their customers into investments that may be stranded in the future.

[81] WGL witness Bartos at 14.

The gas planning process in Maryland should include nearer-term actions that are no-regrets, prioritized options that have value in different versions of the future and seek to minimize risk of stranded assets. "No-regrets" solutions can serve different pathways, such as a hybrid gas/electric future and an all-electric future. A planning framework that considers no-regrets solutions and the optionality value that different actions have—that is, whether alternatives allow large investment decisions to be deferred until there is more certainty on key factors—will reduce the risk of stranded assets and on average will provide a better outcome for the state across the range of potential futures. Those nearer-term actions include:

- greater emphasis on system maintenance and repair (rather than pipe replacement and associated investment);
- NPAs to avoid investments that expand system capacity and investments that extend the life of the distribution system for long periods (50+ years);
- Pilots to assess and test implementation of newer technologies and business models, e.g. thermal energy networks.

Q What are your recommendations relating to long-term planning?

A The Commission should establish uniform standards for all gas companies wherever possible and clear expectations about the linkages between long-term plans and other proceedings (i.e., rate cases, supply plans, etc.). Also, the Commission should require consideration of near- and mid-term planning and long-term planning. For long-term planning, the process should consider an adequately long time horizon, at least 20 years, that includes the State's 2045 net-

zero emissions target. Further, this horizon would enable the utilities to consider and incorporate State policy impacts and emerging market trends and to align with the recommendation of Dr. deLeon regarding supply. In addition, consistent with the recommendation of Mr. Takahashi, the long-term planning should consider a range of potential gas demand and supply scenarios that help meet the State's climate policies and compare costs and risks. The process can support broad pathways for the utility to support Maryland's climate goals.

For near- and mid-term planning, the process should focus on interim decision-making that preserves optionality over the next one to 10 years. The process should be reasonably aligned with the preferred pathway identified in the long-term exercise.

D. Federal regulation does not require pipe replacement

Q What are your concerns with the gas companies' assumptions about pipe replacement?

A Gas companies mischaracterize the PHMSA Call to Action and DIMP regulations. As I discuss in section IV, neither DIMP regulations nor the PHMSA Call to Action require pipe replacement. The Call to Action calls for rehabilitation, repair, and replacement to address pipe integrity, not *only* replacement.[82] Likewise, the DIMP regulations require operators to determine and implement appropriate risk-reduction measures, which could include enhanced leak detection, increased

[82] Department of Transportation Call to Action to Improve the Safety of the Nations's Energy Pipeline System; and US DOT, PHMSA, Letter to the Commissioner

inspection frequency, improvements to corrosion control, pressure reductions, targeted repairs, or pipe replacement.[83]

Gas companies assume that there is no practical alternative to pipe replacement. Utility capital investment and alternative evaluation practices are deficient—they do not adequately consider viable alternatives and result in unnecessary and excessive replacement, costing customers excessive amounts of money. From a safety perspective, removing pipes from service entirely (e.g., using NPAs) or minimizing excavation damages will reduce incidents more effectively than replacing aging pipe, as discussed earlier in this testimony.

Q What are your recommendations?

A Regardless of whether the future is closer to hybrid or all-electric, gas companies need to minimize their investment in the system, and employ repair or relining technologies wherever possible and cost-effective to alleviate the burden to customers and reduce the potential magnitude of rate increases today and stranded costs in the future.

E. Obligation to serve does not prevent proactive planning, nor does it excuse gas company action to increase their gas businesses

Q What are your concerns with the gas companies' claims about the obligation to serve?

A Gas companies characterize the obligation to serve as requiring them to serve every customer that requests gas service. For example, BGE witness John Frain states that "BGE has an obligation to provide service to any customer – residential,

[83] 49 C.F.R. Part 192, Subpart P8 (§§192.1001–192.1015).

commercial, or industrial – that wants to connect to the Company's electric and gas systems."[84] WGL witness Kevin Murphy states that "the Company has an obligation to provide reliable service to all firm customers who request gas service."[85]

Q Under the existing policy framework, are gas companies able to pursue alternatives to gas?

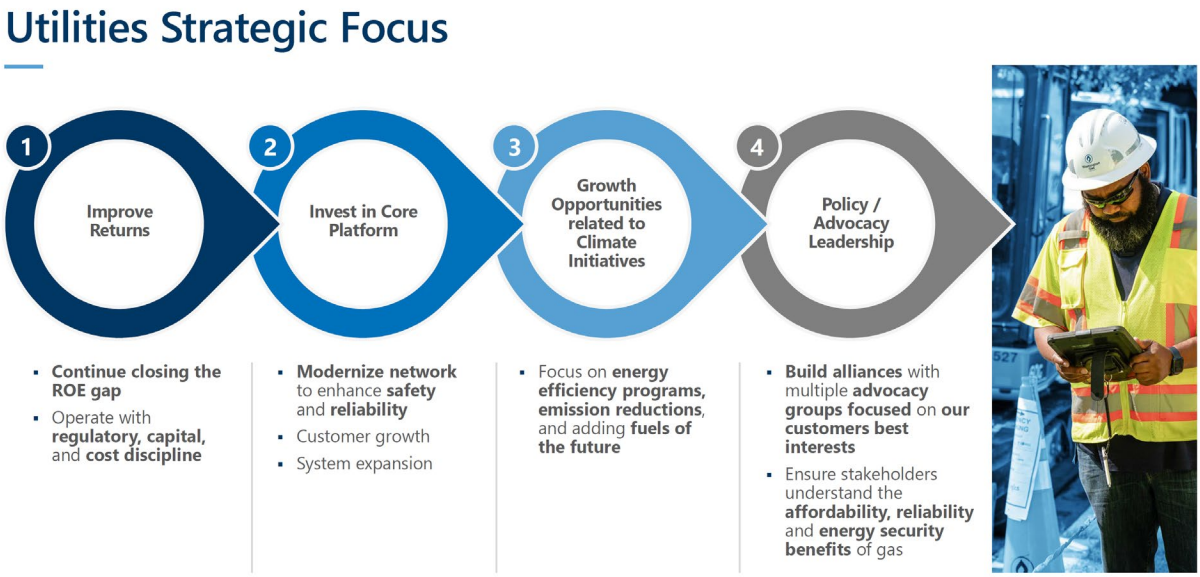
A Yes. Nothing prevents gas companies from allowing customers to participate in an NPA, or from providing planning data that allows governments (e.g., local governments) or third parties to organize NPAs. Also, gas companies can engage in other lines of business such as thermal energy network projects.[86]

Q Are any of the gas companies working to create demand, not just respond to it?

A Yes. For example, the 2025-2029 Gas Utility Five-Year Forecast for Washington Gas Light Company articulates WGL's approach as recently as the end of 2025: "Continuing efforts to increase natural gas availability and drive consumer demand will always be value drivers for Washington Gas. This includes system expansion efforts and education about how natural gas can play a role in low-carbon solutions such as energy efficiency, Combined Heat and Power (CHP) efforts and exploring and testing highly efficient new technologies…Washington Gas will focus efforts on increasing market share and meeting gas demand by marketing to homeowners, renters, business owners, developers and the like.

[84] BGE witness Frain Direct at 10.
[85] WGL witness Murphy Direct at 69:8-9.
[86] For example, see Case No. 9749, where the Commission is evaluating pilot thermal energy network systems.

Promoting the cost-saving and efficient benefits of natural gas, Washington Gas will share the advantages of adding natural gas to homes and businesses."[87]



Furthermore, Washington Gas sees climate initiatives as a path for achieving growth, as shown in the following slide by its parent company:

Source: WGL response to Special Master Request: AltaGas, Fundamentally Focused: Corporate Investor Presentation. Slide 23.

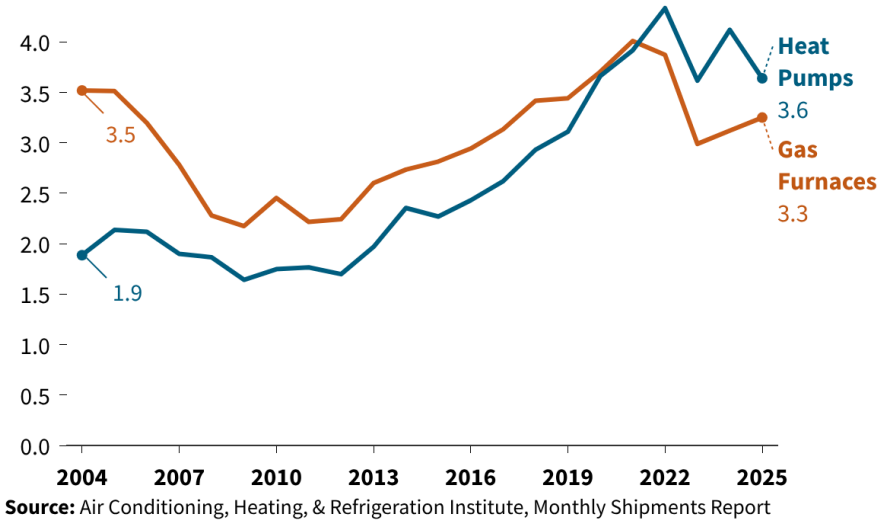
F. A hybrid scenario requires duplicative systems

Q Do you believe that the gas companies are taking adequate steps to prepare for the potential for widespread electrification in the future?

A No. The gas companies cast doubt on the pace of electrification, even as they are seeing indications of stagnating or declining gas use for certain rate classes, as

[87] WGL, 2025-2029 Gas Utility Five-Year Forecast for Washington Gas Light Company, December 5, 2025. Case No. 9707, WGL Supplemental Response 2.9.2026, p. 6 of 51.

discussed further in Mr. Takahashi's testimony. Sales of heat pumps have surpassed sales of furnaces nationally for the last five years.[88]



Source: Rocky Mountain Institute, Annual Shipments of Gas Furnaces and Air-Source Heat Pumps from Air Conditioning, Heating, & Refrigeration Institute, Monthly Shipments Report, accessed April 24, 2026, available at: https://rmi.org/insight/tracking-the-heat-pump-water-heater-market-in-the-united-states/.

Q What are the risks of failing to consider a future with significant electrification?

A As I described above, the risks include financial consequences that may come as a result of declining consumption and gas stranded assets.[89]

[88] Rocky Mountain Institute, Annual Shipments of Gas Furnaces and Air-Source Heat Pumps from Air Conditioning, Heating, & Refrigeration Institute, Monthly Shipments Report, accessed April 24, 2026, available at: https://rmi.org/insight/tracking-the-heat-pump-water-heater-market-in-the-united-states/.

[89] For example, when asked to describe the impact to company financial health, gas pressure, safety, and reliability if demand is significantly reduced, BGE ignored the question about financial health and only responded with respect to the other criteria. It responded, "A decrease in demand may not correspond to a decrease in peak demand or a decrease in customers connected to the system, which would result in little change in activities needed to meet the gas system's safety, reliability, and regulatory needs." BGE further maintains that, "the existing processes, which consider specific situations and data on a routine basis for problem solving and analysis, are fluid enough to make adjustments should changes occur over

Q What did OPC say in the past about a hybrid scenario?

A In the May, 2025 comments in this proceeding, OPC asked the Commission to settle the issue of which decarbonization pathway to assume. However, the Commission did not make a determination on this issue prior to initiating the current phase of these proceedings. In the absence of a Commission decision, the Maryland Commission on Climate Change's ("MCCC") determination that the lowest-cost decarbonization pathway is full electrification for most types of buildings (not for all commercial and industrial) provides relevant guidance.[90] It is my understanding that the MCCC's finding demonstrates the State's policy regarding decarbonization pathways. This clear statement from the MCCC (and any other Maryland agency statements) demonstrates a clear preference for full electrification.

In this testimony, I recommend "no regrets" actions as described above, including greater emphasis on and full consideration of system maintenance and repair, NPAs, and pilots for thermal energy networks, community electrification, geothermal heat pump programs, or similar initiatives that face implementation challenges; these pilots should be designed to provide GHG emissions reduction benefits and learnings to inform next steps regardless of the pace of electrification.

time." (BGE Response to OPC DR 4-6a.) However, this ignores the ongoing investments that BGE and the other utilities are making in their gas distribution systems, e.g. with pipe replacements through the STRIDE program.

[90] Maryland Commission on Climate Change. *Building Energy Transition Plan: A Roadmap for Decarbonizing the Residential and Commercial Building Sectors in Maryland.* Approved by the Mitigation Work Group on Oct. 13, 2021. Available at: https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Commission/Building%20Energy%20Transition%20Plan%20-%20MCCC%20approved.pdf.

Q What have other states found with respect to a hybrid scenario?

A In Massachusetts, in Docket No. 20-80, the Department of Public Utilities (DPU) found that a hybrid heating approach is impractical, given the availability of market-ready alternatives. Order 20-80-B states, "the Department is not persuaded that pursuit of a broad hybrid heating strategy that would necessitate maintenance of the natural gas system to support backup heating systems is a viable path forward. Given improvements in technology, the Department expects that cold-climate heat pumps generally will eliminate the need for backup heating systems."[91] The DPU acknowledges that some customers may opt for hybrid equipment during this transition period[92] but found the companies should not lean on hybrid heating as a decarbonization strategy more broadly. Additionally, the DPU directed the companies to track customer heat pump installations, and work with energy contractors and vendors to "provide sufficient information to customers about the capabilities of heat pumps so they may reach a more informed conclusion about the true need for backup heating systems."[93] Notably, the winters in Massachusetts are much colder than they are in Maryland.

Q Does this complete your testimony?

A Yes.

[91] DPU Order 20-80-B, Docket No. 20-80, December 6, 2023, page 55.
[92] DPU Order 20-80-B, Docket No. 20-80, December 6, 2023, page 55.
[93] DPU Order 20-80-B, Docket No. 20-80, December 6, 2023, page 55.