OPC
OFFICE OF PEOPLE'S COUNSEL
State of Maryland

# Customer Impacts of Baltimore Gas & Electric's Gas Infrastructure Replacement Program

BGE's gas regulator installation initiative is part of its "Gas Infrastructure Modernization Program," a costly long-term program to replace all of BGE's gas infrastructure that existed as of 2013. That year, the General Assembly passed a law called STRIDE (which stands for "Strategic Infrastructure Development and Enhancement") that incentivizes programs like BGE's by allowing utilities to recover their costs much faster than the usual regulatory treatment. A major component of BGE's STRIDE plan is the replacement of existing gas mains with new, higher-pressure pipelines. BGE calls this work "Operation Pipeline." The work includes installing gas regulators on thousands of customer properties to lower the pressure from the gas mains so it can be used in customer appliances.

## Customers will pay $15 billion over the life of the program.

BGE started its STRIDE program in 2014. It plans to continue the work until its target completion date of 2043, at an overall cost to BGE customers of more than $15 *billion* dollars. In 2023 alone, BGE will spend about $160 million on its STRIDE plan. After accounting for BGE's returns, that $160 million will cost customers about $576 million.

BGE has filed budgets with the Public Service Commission (PSC) that provide for its STRIDE spending through 2023 and projected budgets through 2043. The figures below are based on those filings. The budgets shown in Figure 1 do not include BGE's rate of return, which is analogous to interest on a mortgage.

## How do customers pay for Operation Pipeline?

BGE's spending on Operation Pipeline is recovered from customers over many decades, generally ranging from 40 to 70 years. That's the period of time for which customers will pay off the approximately $160 million BGE spends on STRIDE in 2023.

Figure 1. BGE STRIDE Investment Actual/Projections

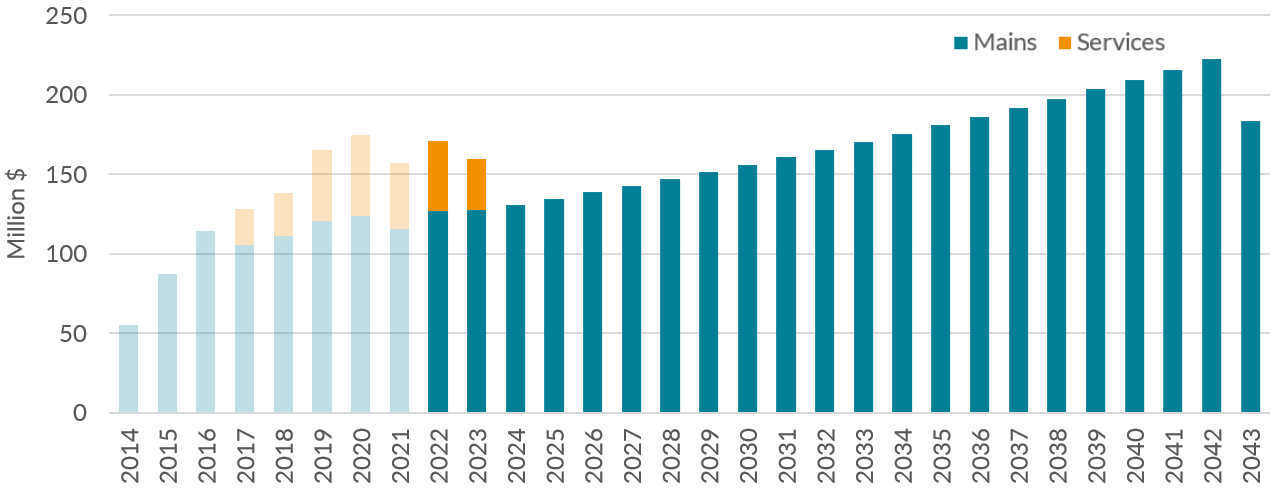
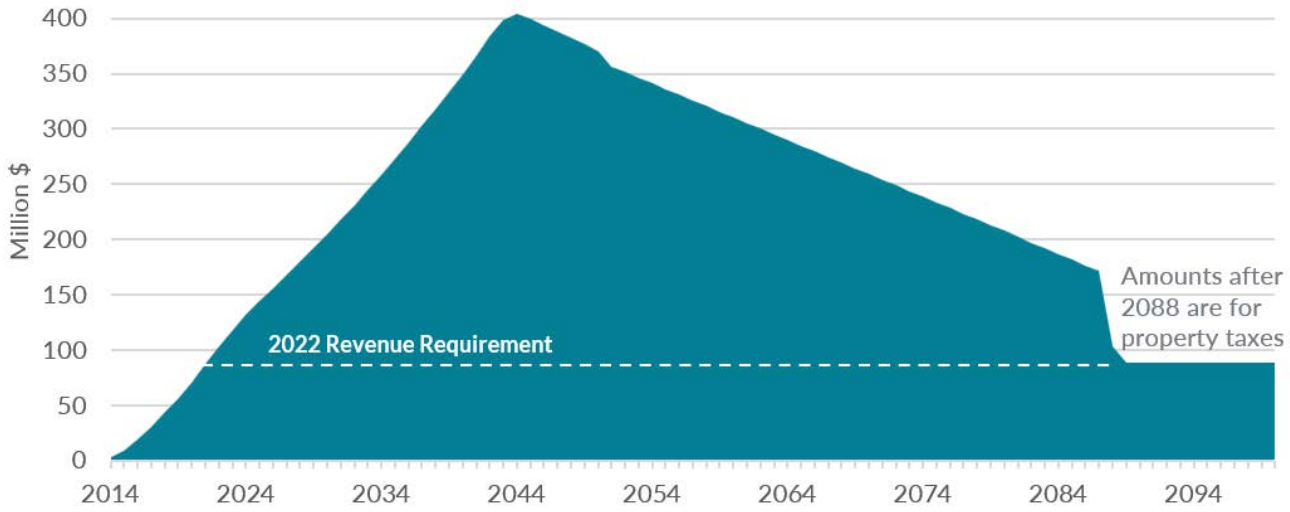


Figure 2. BGE's STRIDE Annual Revenue Requirement




Every STRIDE cost that customers pay through their bills includes a portion of the "principal" amount, *i.e.*, what BGE has actually spent, plus the utility's return. The combined principal and interest costs make up a substantial part of BGE's annual "revenue requirement," which is divided among customer sales to arrive at the rate customers pay. Figure 2 above shows how much BGE's STRIDE plan increases BGE's revenue requirement—and therefore customer rates—over time.

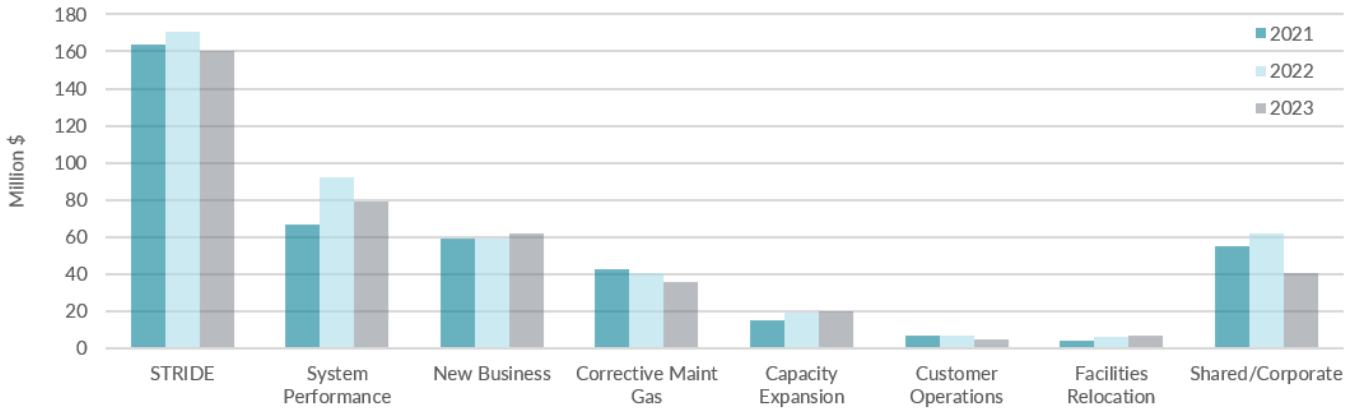
Figure 2 shows that in 2022, BGE charged over $107 million per year for STRIDE work. In 10 years, at the current pace of investment, BGE will be charging over $234 million per year for this work, and in 20 years, it will be asking for over $386 million per year.

The figure also shows that, if allowed by the State to continue, Operation Pipeline costs will be recovered from customers until about the end of the century. Moreover, because the costs (along with BGE's rate of return) are collected from ratepayers over 40 to 70 years, today's customers have barely started paying for what BGE spent on the program as long as 10 years ago. As of 2022, *less than 3 percent* of total Operation Pipeline expenditures have been paid for by customers—meaning that the customer cost burden for Operation Pipeline has hardly been felt yet.

## Is STRIDE spending a big part of BGE's spending on gas infrastructure and other assets?

STRIDE is by far BGE's biggest category of gas capital spending, more than double the next largest category, as shown in Figure 3.

Figure 3. BGE Multi-Year Rate Plan - Capital Expenditure Plans by Category



## Are capital expenditures a big part of a BGE customer's bill?

Yes. A BGE bill includes two major components—the commodity charge (the cost of the gas itself) and the delivery charge. This document addresses the delivery charge, which is the rate BGE charges for delivering gas to your home and is primarily driven by infrastructure spending. Figure 4 shows STRIDE's contribution to BGE's annual revenue requirement in comparison to non-STRIDE capital spending and BGE's operating costs (on which it does not earn a return). Capital expenditures make up the vast majority of these costs, with STRIDE costs making up a significant portion.

As gas sales decline because of competitive electrification technologies and climate policy, gas rates will rise significantly. These higher rates will most severely impact non-affluent customers who are less capable of electrifying their home appliance use. (This is the topic of OPC's report, "Climate Policy for Maryland's Gas Utilities: Financial Implications.")

## How does Operation Pipeline align with new electric technologies and the State's climate goals?

It doesn't. Electric technologies—especially for home heating—are now more cost-effective for customers for many applications. Figure 5 shows that over the past decade, electric heating has become increasingly common, while gas heating has stagnated.

More importantly, Maryland cannot achieve its climate goals without substantially reducing, if not fully eliminating, continued use of fossil fuels,

Figure 4. BGE Revenue Requirement Projections

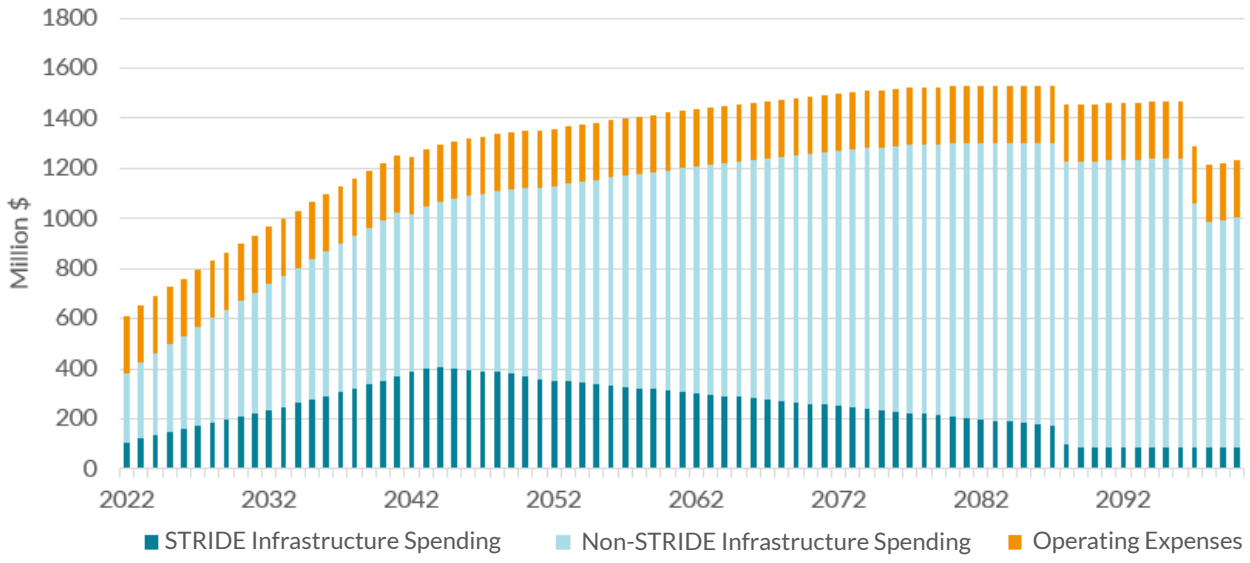
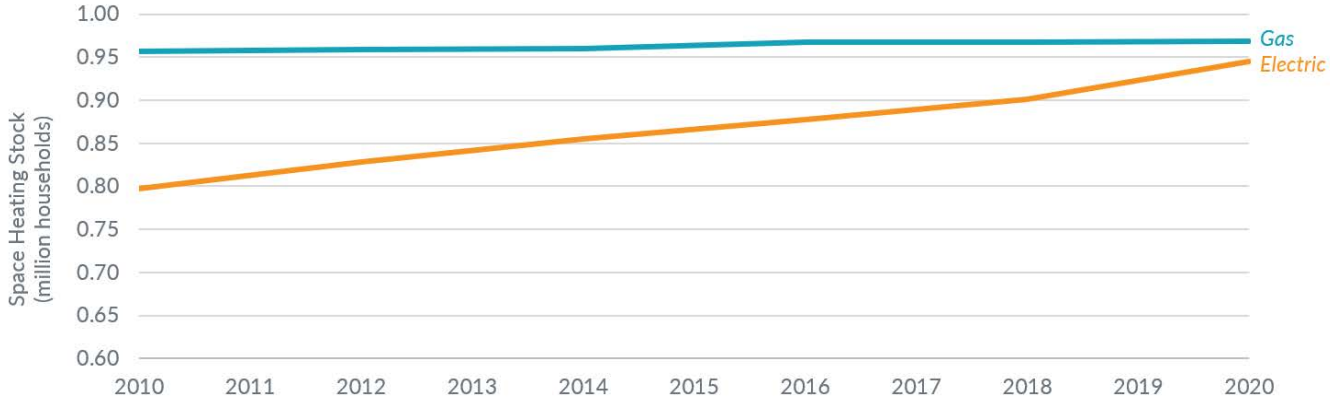



Figure 5. Type of Home Heating in Maryland - Gas vs. Electric, 2010-2020



inceach oluding natural gas, and soon. As the Maryland Department of Environment stated in its June 30, 2023, climate pathways report, achieving the State's climate goals requires a "reduction in economy-wide natural gas consumption"—and continued spending on natural gas infrastructure "delay[s] the inevitable transition to clean energy and could cause major economic losses from stranded assets."

Figure 6 models how gas consumption will decline with electrification. This likely means that all the infrastructure upgraded for Operation Pipeline may eventually be "stranded"—meaning that they will no longer be economically useful.

To achieve the State's climate goals of net zero greenhouse gas emissions by 2045, the vast majority of buildings will have to either fully electrify or use alternative fuels for any gas needs, including backup heating. The most likely alternative gaseous fuels (AGF) that have potential for replacing fossil gas are biomethane, recovered methane, hydrogen, and synthetic natural gas or synthetic methane. None of these is cost-effective or available in quantities nearly sufficient to replace fossil gas at scale. Figure 7 shows a projection of BGE's combined natural gas delivery and commodity rates if BGE incorporates AGFs into its system. The chart shows how BGE's rates are projected to rise for residential gas customers as electrification occurs, using both low-cost and high-cost projections for AGFs. As the figure shows, even at the low end of cost projections, overall gas rates are projected to increase significantly.

Importantly, even if the pipes and other infrastructure become eventually obsolete, BGE is likely to seek full cost recovery on the grounds that its Operation Pipeline costs were borne to serve customers and approved by State regulators.

## What is being done about BGE's spending on gas infrastructure?

Action by the General Assembly may be necessary to comprehensively address these issues, and lawmakers could accelerate progress. In the absence of legislation, the PSC has broad authority over public utilities. On February 9, 2023, OPC asked PSC to adopt priority actions to curb spending and engage in long-term

Figure 6. Residential Consumption of Gas for Space and Water Heating

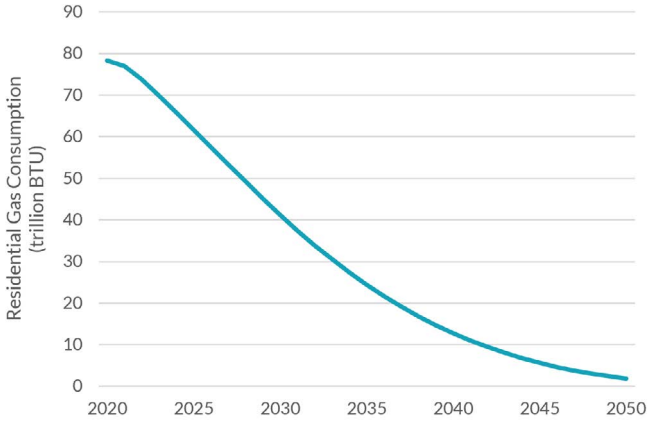
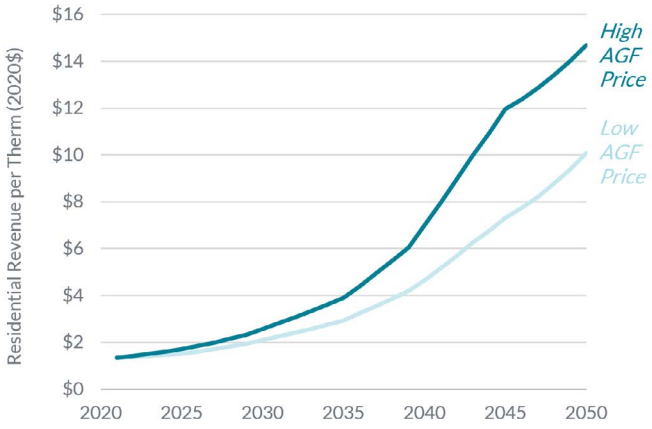



Figure 7. Residential Consumption of Gas for Space and Water Heating




planning for the future of gas utilities, to protect customers and mitigate climate change. OPC's petition is available here. On June 14, 2023, the Commission initiated Case No. 9707 to receive comments on the petition. Comments are due October 10, 2023. For more information about filing comments, please visit OPC's website.

These issues are further explored by OPC in:

- Petition for gas planning February 2023
- Maryland Gas Utility Spending: Projections and Analysis October 2022
- Climate Policy for Maryland's Gas Utilities: Financial Implications November 2022

*This document is based on the analysis and data contained in the two gas reports. Please see the reports for further explanation of the data and assumptions, and to learn more.*