

**BEFORE THE
MARYLAND PUBLIC SERVICE COMMISSION**

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RELOCATION OF NATURAL
GAS SERVICE REGULATORS IN
THE BGE SERVICE TERRITORY

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Case No. 9711

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COMMENTS OF THE MARYLAND OFFICE OF PEOPLE’S COUNSEL

The Office of People’s Counsel submits the following comments in response to the Commission’s July 7, 2023 Notice Initiating Proceeding to Consider the Relocation of Residential Natural Gas Service Regulators in the BGE Service Territory. OPC appreciates the opportunity to comment.

The conflicts BGE has had with customers concerning gas service regulators (“regulators”) have arisen from “Operation Pipeline” projects in which BGE is replacing older, low-pressure gas mains with new higher-pressure mains. That work requires installing regulators on the properties of customers who have never had regulators before, but who now need them because of the new high-pressure gas mains. As is explained further below, the Public Utilities Article gives the Commission broad authority to regulate not just BGE’s standards and practices concerning the installation of these regulators, but also the timing, location, and extent of the gas main replacement work that for many BGE customers, especially in Baltimore City, is making regulators necessary for the first time.

OPC asks the Commission to use its broad authority to direct BGE to change its practices regarding both the installation of regulators and higher-pressure gas mains. Specifically, OPC asks the Commission to direct that:

- BGE offer customers reasonable and appropriate accommodations regarding installation—including the opportunity for customers to fully electrify and no longer have gas service—when it seeks to install new regulators on non-multifamily structures with existing gas service;

- When a customer elects to remain on BGE’s higher-pressure system, BGE individually evaluate each customer’s gas service to determine what location(s) are appropriate for the regulator and offer the customer the option of installation in an underground vault or an interior location, where such a location is consistent with federal regulations and practicable, and where the customer is willing to pay any incremental costs, relative to exterior installation; and
- BGE be prohibited from commencing new replacements of existing low-pressure gas mains systems with higher-pressure mains in neighborhoods where replacement has not yet begun for a period of at least two years, so that customers can be given advance notice of the work—including the need for customers to have regulators—and those customers who wish to replace their gas appliances with electric appliances have sufficient time to do so.
- BGE file a plan to, among other things, to identify leaks in service areas with aging infrastructure and repair, or if necessary, replace, leaking infrastructure that poses a threat to public safety.

Our comments begin with a discussion of the relevant background, including an overview of BGE’s “Operation Pipeline” under Maryland’s Strategic Infrastructure Development and Enhancement (“STRIDE”) law; the enactment of Maryland’s Flower Branch Act following a fatal 2016 explosion caused by an improperly vented indoor regulator; and BGE’s subsequent decision to begin installing new regulators outside for existing non-multifamily residences, rather than co-locating regulators with customers’ existing meters (which were typically indoors). Then we discuss the federal and state legal authority governing the installation of new regulators on structures with existing gas service before elaborating on the recommendations summarized above.

BACKGROUND

The customer disputes at the center of this case are not about the relocation of existing regulators. They have arisen from BGE’s work to install regulators on homes and businesses that previously did not have regulators at all. In most parts of Baltimore City, and in some other parts of BGE’s service territory, “house regulators” on customer properties are becoming necessary for the first time because under “Operation Pipeline,” BGE is replacing all of its older, low-pressure large gas pipelines, or “mains,” with new, higher-pressure mains.¹ In order for the gas transported through these new mains to be

¹ See BGE Response to Staff DR01-21, noting that BGE intends to replace 42 miles of low-pressure mains per year for the next 20 years and in the process renew over 100,000 customer services, with the “vast majority” of customers whose services are renewed receiving a regulator.

used safely in customers' furnaces, boilers, hot water heaters, stoves, and other appliances its pressure must be lowered by a regulator. In short, wherever BGE is replacing low-pressure mains with higher-pressure mains, it is also installing regulators on properties that did not previously need them.²

By contrast, under the Flower Branch Act of 2021,³ BGE is working to relocate regulators inside residential multifamily structures to the outside of those structures “whenever the gas service line or regulator is replaced,” and has filed a plan with the Commission to relocate all indoor regulators at residential multifamily structures by 2031.⁴ In addition, on the parts of its system where higher-pressure mains are already in service—and customers already have regulators—BGE is relocating interior regulators to the exterior of customer properties whenever it performs work on the customer’s “gas service,” i.e., the pipeline that carries gas from a distribution pipeline into the customer’s home or business.⁵ BGE has at least one program to proactively replace services of certain ages, materials, and conditions.⁶

The distinction between BGE’s relocation of existing regulators under the Flower Branch Act and the company’s installation of new regulators under Operation Pipeline is important because the Commission’s decision-making authority is different in each case. Under the Flower Branch Act, the Commission has the duty to deny or approve a gas company’s plan to relocate all indoor regulators in multifamily residential structures based on the criteria at PUA § 7-313(b)(4)(i). With respect to the installation of new regulators on non-multifamily structures, the Commission has broad authority under the Public Utilities Article to regulate not just the location of installations, but also the timing, location, and extent of the installation of the higher-pressure gas mains that, for many BGE customers, are making regulators necessary for the first time.⁷

² While individual customers on BGE’s low-pressure gas delivery system have historically not had regulators on their properties, BGE has long used “district regulators” on its system to regulate system pressure. According to BGE’s Gas Design Construction Manual: “Gas is supplied to the Low-Pressure system from any of the higher-pressure systems through district gas pressure regulators.... The supplying district pressure regulator installations are designed, in the event of failure, to prevent the source pressure from causing the unsafe operation of any connected and properly adjusted gas utilization equipment as required by federal regulations since individual services are without pressure regulators (Ref 49 CFR 192.201).” BGE Gas Design Construction Manual, Gas Engineering and Standards, Section GC 104-1 at 3.

³ The Flower Branch Act is codified in the Public Utilities Article at PUA § 7-313.

⁴ The Flower Branch Act also requires new structures of any kind to be built with exterior regulators.

⁵ See BGE Gas Engineering and Standards, Section GC 402-1, “Existing Services.”

⁶ See BGE Response to OPC DR 01-06, BGE Response to Staff DR 01-18.

⁷ See PUA § 5-303 (public service companies must furnish equipment, services, and facilities that are safe, adequate, just, reasonable, economical, and efficient, considering the conservation of natural resources and the quality of the environment); PUA § 2-113(a)(2)(vi) (Commission must enforce compliance with the requirements of the law by public service companies, including requirements with respect to the manner of operation); PUA § 2-113(a)(2) (in supervising and regulating public service

With that distinction noted, OPC offers the following background regarding the conflicts between BGE and its customers that spurred the Commission’s request for comments.

A. The need for regulators.

BGE’s gas distribution system is comprised of transmission mains, distribution mains, and service lines. BGE receives gas from an interstate transmission pipeline at “gate stations” often referred to as “city gates.” From there, the gas is placed into a transmission main that distributes it across BGE’s network to distribution mains. The individual service lines that feed into customer homes are connected to these distribution mains.

BGE has different pipelines that operate at different pressure levels. Transmission mains are typically wider in diameter and operate at a higher pressure than the distribution mains. Distribution mains can be operated at either high, low, or medium pressure. Service lines operate at the same pressure as the distribution line the service is connected to. Moreover, different parts of BGE’s system operate at different pressures. Baltimore City has historically been largely a low-pressure system; as noted above, BGE is now rebuilding it as a higher-pressure system.

BGE uses regulators to control the gas pressure within a pipeline. A gas pressure regulator is a mechanical device “installed to a meter inlet to control the gas pressure being introduced into a structure.”⁸ When the gas pressure exceeds a specified pressure, a relief valve in the regulator vents the excess gas. BGE uses larger, district regulators to reduce the gas pressure when gas is transferred from a transmission main to a distribution main. Service or house regulators are necessary for structures that receive service from a medium or high-pressure gas line. Because gas appliances cannot safely function when the gas pressure is too high, gas must be at a low pressure when it enters customers’ homes and businesses. Service regulators are not necessary for structures served by low-pressure distribution mains.

B. Operation Pipeline and STRIDE

Operation Pipeline refers to BGE’s leak-prone pipe replacement program. BGE has primarily executed Operation Pipeline under the STRIDE law.⁹ Enacted in 2012 with the “purpose of accelerating gas infrastructure improvements,” STRIDE is a financial

companies, the Commission shall consider the public safety); and COMAR 20.55.02.01 (gas plant of utility shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practice in the gas industry to ensure, as far as reasonably possible, the safety of persons and property).

⁸ PUA § 7-313(a)(1)(2)(i).

⁹ STRIDE is not the exclusive way in which BGE proceeds with its infrastructure replacement work. The company can, and does, conduct infrastructure replacement work outside of STRIDE.

mechanism for gas companies to recover costs of “eligible infrastructure” replacement projects on an accelerated basis through a surcharge separate from utility base rates. Eligible infrastructure includes replacement work that is “designed to improve public safety or infrastructure reliability” and “reduces or has the potential to reduce greenhouse gas emissions through a reduction in natural gas system leaks.”¹⁰

BGE’s first STRIDE plan—approved by the Commission in 2012 in Case No. 9331—identified five asset groups that had reached the end of their life and should be replaced.¹¹ These asset groups included: cast iron main, bare steel main, bare steel services, copper services, and pre-1982 plastic service risers.¹² BGE sought and obtained Commission approval to replace its low-pressure cast iron and bare steel mains with higher-pressure mains for the purpose of “improving overall system stability and standardization,”¹³ and concomitantly to install “over-pressurization protection through the use of regulators at the customer’s meter.”¹⁴

In 2023, BGE stated that it no longer intended to pursue its Operation Pipeline work through STRIDE.¹⁵ Rather, BGE proposed to pursue this work in its second multi-year rate plan (“MRP”) proposed for 2024–2026.¹⁶ The pace of BGE’s replacement work would not change under this arrangement, however.¹⁷

As of July 2023, there are approximately 839 miles of low-pressure gas main remaining in service within Baltimore City, including cast iron, bare steel, and other low pressure assets.¹⁸ BGE expects to remove about 42 miles of this low-pressure main in Baltimore City per year for the next 20 years through numerous projects.¹⁹ Additionally, over 100,000 services would need to be renewed, with the vast majority of these requiring the installation of an outside regulator.²⁰

C. Development of BGE’s regulator relocation standard

Until 2021, BGE did not have a policy requiring that regulators be located outside. Rather, BGE installed regulators “at the existing position of the gas meter, unless a meter was being moved outside of the building.”²¹ If BGE needed to bury an entire new service

¹⁰ PUA § 4-210.

¹¹ Case No. 9331, Company Exhibit RDB-1, ML# 148861.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.* at 23.

¹⁵ BGE STRIDE 2023 Project List, Case No. 9468, ML# 242893 (Nov. 1, 2022).

¹⁶ OPC has filed expert testimony in the MRP II Case (Case No. 9692) explaining that it is inappropriate for BGE to conduct STRIDE work outside of STRIDE (ML#303622).

¹⁷ BGE STRIDE 2023 Project List at 3.

¹⁸ BGE Response to Staff DR 1-21.

¹⁹ BGE Response to Staff DR 1-21.

²⁰ BGE Response to Staff DR 1-21.

²¹ BGE Response to OPC DR 1-08 at 2.

line, the regulator “would be placed outside and piped back to an interior meter.”²² Under this prior policy, BGE installed thousands of new regulators—including many in Baltimore City—indoors.²³ In 2021, BGE changed its policy to require outdoor placement of regulators. According to BGE, “[s]afety, reliability, federal agency and legislative guidance, and industry best practices were the considerations that led to the decision.”²⁴

1. State and federal response to the Flower Branch explosion.

On August 10, 2016, an explosion and fire caused the collapse of the Flower branch Apartment Complex in Silver Spring, Maryland. Seven residents died in the explosion and 65 suffered injuries. A National Transportation Safety Board (“NTSB”) investigation concluded that the likely cause of the accident was the failure of an indoor service regulator with an unconnected vent line. When the service regulator failed, gas accumulated inside the meter room and exploded when ignited by an unknown source. The NTSB issued a report on April 24, 2019, determined the probable cause of the explosion, and provided safety recommendations. These safety recommendations included (1) requiring all new service regulators be installed outside occupied structures, and (2) requiring existing interior regulators to be relocated outside occupied structures, whenever the gas service line, meter, or regulator is replaced.²⁵

On September 29, 2020 the federal Pipeline and Hazardous Materials Safety Administration (“PHMSA”) issued an advisory bulletin that reiterated PHMSA’s existing requirements for inside meters and regulators. noting that PHMSA regulations allow service regulators to be located either outside or inside, but that indoor regulators must be properly vented to the outside atmosphere.²⁶ PHMSA’s bulletin did not adopt NTSB’s recommendations.

In response to the NTSB report and PHMSA bulletin, the General Assembly enacted the Flower Branch Act in 2021. The Act codifies NTSB’s safety recommendation that for all new service installations, regardless of structure type, regulators may only be installed outside the structure. With respect to residential multifamily structures, the Act requires the relocation of interior regulators serving multifamily homes “whenever the gas service line or regulator is replaced.”²⁷ Further, the Flower Branch Act requires gas companies to file plans by January 1, 2022 to relocate all regulators serving multifamily residential structures. BGE submitted its plan to the Commission on December 22, 2021; it provided for the relocation of approximately 7,000 regulators, which at the time BGE

²² *Id.*

²³ See BGE Response to OPC DR 1-08 Attachment 1.

²⁴ BGE Response to Staff DR 1-06.

²⁵ NTSB Accident Report, *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*, NTSB/PAR-19/01PB2019-100722 at 42.

²⁶ 85 Fed. Reg. at 61103.

²⁷ PUA § 7-313(a)(b).

believed was the total number of regulators it needed to replace under the Act, by 2031.²⁸ The Commission approved BGE's plan on June 6, 2022.²⁹ In its 2023 Gas Service Regulator Relocation Plan Annual Report, BGE informed the Commission that it had identified an additional 4,200 locations "in likely need of regulator relocation, leading to a revised total population of approximately 11,200 regulators across BGE's gas system that will likely need to be relocated outside."³⁰ BGE estimated in the report that it could still relocate all regulators affected by the Flower Branch Act by 2031.³¹

2. BGE's revised regulator replacement policy.

In 2021, the same year that BGE developed its Flower Branch Act compliance plan, BGE updated its policy regarding the installation and relocation of natural gas regulators. As explained in an internal technical bulletin issued on November 11, 2021 BGE expanded its outdoor regulator policy "beyond the Flower Branch Act requirements to be more restrictive on exceptions to the outdoor gas regulator policy."³² This policy is embodied in two BGE documents: (i) Section GC 402-1-I of the Gas Engineering and Construction standards; and (ii) Outdoor Metering and Gas Service Regulator Exemptions process (AM-BE-P3066).³³

Section GC 402-1-I requires regulators for existing services to be installed outdoors, regardless of whether the meter is installed indoors or outdoors.³⁴ The policy further identifies seven potential exemptions:

1. Unable to provide required gas meter assembly protection measures as required by GC 406-1.
2. The building or structure at which the meter is proposed to be located outdoors is on the National Historic Landmark Registry. See www.nps.gov for a list of locations.
3. Proposed outdoor location would result in the company installing >5' of additional new indoor piping from the original gas meter location.

²⁸ ML# 238325.

²⁹ Order No. 90250.

³⁰ BGE Response to OPC DR 1-07, OPCDR01-07 *Attachment 1* at 2.

³¹ *Id.*

³² BGE Response to Staff DR 1-09, Attachment 3.

³³ BGE provided the Outdoor Metering and Gas Service Regulator Exemptions process document (AM-BE-P3066) in response to an OPC data request and initially marked the document confidential. However, on August 9, 2023, BGE counsel communicated to the parties of record in the case (Commission Staff and OPC) that it was rescinding the confidentiality designation.

³⁴ BGE GC 402-1 § I.1-2.

4. Proposed outdoor location would involve legal liability encumbrance such as but not limited to asbestos, hazardous conditions, and non-compliance with Americans with Disabilities Act.
5. Inadequate space on outside building wall when considering:
 - (a) Appropriate Construction Standard
 - (b) The 5/5/5 policy
 - (c) Limitations from permanent premise features (such as concrete steps, porches, windows).
 - (d) Other requirements listed in Section III – Gas Meter and Regulator Location Requirements.
6. Proposed outdoor locations will extend beyond the customer’s property line or utility right of way.
7. Proposed outside location would violate Federal, State, or Local jurisdictional laws, ordinances, or regulations.

AM-BE-P3066 details BGE’s exemption process.³⁵ The exemption process may only be triggered by a variance request submitted by the BGE entity managing the project (the “BGE Job Owner”) to the BGE Smart Metering and Technology (“SMT”) group overseeing regulator and meter installations. Exemptions may only be granted by SMT.

BGE and its contractors appear to be administering BGE’s exemption process in a way that allows for very few exemptions. Despite the seven categories of exemptions, BGE’s “gas regulator talking points for contractors” states that “other options will be explored only when site conditions prevent the installation of an outdoor regulator... Contractors should explain that site condition refers to challenges where there needs [to be] more space to install outside without impeding or breaking other required codes for installing gas services.”³⁶

D. The conflict regarding BGE’s regulator replacements.

According to BGE, since the adoption of the company’s Outdoor Meter Assembly Location Policy, BGE has completed 4,213 service renewals involving the placement of a regulator on the outside of a property.³⁷

³⁵ BGE Response to OPC DR 2-01, *Attachment 2*.

³⁶ BGE Response to Staff DR 1-09, Attachment 1.

³⁷ BGE Response to Staff DR 1-17. However, in response to Staff DR 1-16, BGE provided a spreadsheet showing 3,733 service renewals with exterior regulators since policy was updated.

After BGE began exterior regulator installations, customers began to complain about physical and aesthetic damage to homes resulting from outside regulator installations. Some customers refused to allow BGE to install exterior regulators and were threatened with service terminations. Between June 21 and June 22, 2023, four customers that refused the installation of exterior regulators had the gas service terminated.

Fourteen residents subsequently filed a class action suit seeking declaratory judgment and injunctive relief in the Circuit Court for Baltimore City contending that BGE's tariff does not authorize it to shut off service to customers for refusing new equipment and that BGE's external gas regulator installations do not improve system safety and cause irreparable harm to affected customers.³⁸ On June 28, 2023, the circuit court granted a temporary restraining order prohibiting BGE from threatening to cut off or cutting on gas service to plaintiffs and putative gas members that did not consent to the placement of external regulators.³⁹ On July 7, 2023, the court extended the TRO until September 5, 2023.⁴⁰

The Commission initiated this proceeding to "Consider the Relocation of Residential Natural Gas Service Regulators in the BGE Service Territory."⁴¹ The notice solicited public comments, indicating that comments must be filed by August 11, 2023 and that a legislative style hearing will be held on August 15, 2023.

RELEVANT LEGAL AUTHORITY

For non-multifamily structures with existing gas service, federal and state law allow new regulators to be installed either on the interior or the exterior of structures.⁴²

Regulators installed outside must be protected from "vehicular damage that may be anticipated."⁴³ Regulators installed inside a building must be placed as close as practicable to the service line entrance and vented to the outside atmosphere.⁴⁴ Vents must terminate outdoors and "be rain and insect resistant," located where "gas from the vent can freely escape into the atmosphere and away from any opening into the building," and be protected from flooding damage in areas where flooding may occur.⁴⁵

³⁸ Complaint for Declaratory Judgment and Injunctive Relief and Demand for Jury Trial, Stephen H. Topping, et. al. v. Baltimore Gas and Electric Co., 24-C-23-002872 (June 23, 2023).

³⁹ Temporary Restraining Order, Topping et. al v. BGE, 24-C-23-002872 (June 28, 2023).

⁴⁰ Order Extending Temporary Restraining Order, Topping et. al. v. BGE, 24-C-23-002872 (July 7, 2023).

⁴¹ Case No. 9711, ML# 303970.

⁴² See 49 CFR § 192.353(a), which provides, "Each meter and service regulator, whether inside or outside a building, must be installed in a readily accessible location and be protected from corrosion and other damage, including, if installed outside a building, vehicular damage that may be anticipated. However, the upstream regulator in a series may be buried."

⁴³ *Id.* § 192.353(a).

⁴⁴ *Id.* §§ 192.353(a), 192.357(d).

⁴⁵ *Id.* § 193.355(b).

At the State level, the Flower Branch Act requires service regulators to be installed outside “whenever gas service is newly installed at an occupied structure.”⁴⁶ With respect to structures with existing gas services, however, PUA § 7-313(b)(2) requires only that interior regulators serving multifamily homes be relocated outside “whenever the gas service line or regulator is replaced.”⁴⁷ The Flower Branch Act does not require the relocation of internal regulators located inside single family homes. Nor does it require new regulators to be installed outside on structures with existing gas service. Additionally, PUA § 5-303 broadly requires public service companies to “furnish equipment, services, and facilities that are safe, adequate, just, reasonable, economic and efficient....”

No state regulations set forth specific standards governing the service regulator installations. COMAR 20.55.02.01 generally requires gas utilities to install, maintain and operate gas plant “in accordance with accepted good engineering in the gas industry to ensure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.” COMAR 20.55.09.01 requires gas utilities to “exercise reasonable care to reduce the hazards to which its employees, its customers, its contractors, and the general public may be subjected.”

Lastly, BGE’s tariff, as approved by the Commission, has the force of law.⁴⁸ Section 5.1 of BGE’s gas tariff states that gas pressure regulators are furnished, installed, and maintained by the company when deemed to be necessary.

Beyond recognizing that BGE may install regulators, the tariff has no specifications as to where such regulators may be located. Section 6.1 of the Gas Tariff notes that, as a general matter, an outdoor location is required for service equipment “under normal conditions.” Yet, this section appears to primarily govern the location of *meters*, rather than regulators.⁴⁹ The only mention of regulators appears in Section 6.11, which specifies that, for outdoor meter installations, sufficient space be provided for “meters, regulators, and service risers.” Section 6.12, regarding the indoor location of meters, does not address regulator location.⁵⁰ Section 6.1 further states that meter

⁴⁶ PUA § 7-313.

⁴⁷ PUA § 7-313(a)(b)(2).

⁴⁸ See *West v. United Rys. & Electric Co. of Baltimore*, 155 Md. 572, 142 A. 870, 873 (“That the power committed to the Commission is legislative in character, notwithstanding that the manner in which it is exercised is forensic, is no longer open to question . . . and except where limited by the statute itself or some constitutional provision the acts of the Commission done in the exercise of its statutory powers are entitled to the same weight which would be given a direct act of the Legislature.”).

⁴⁹ BGE Response to OPC DR 1-10, 1-11.

⁵⁰ BGE Response to OPC DR 1-11.

locations are “agreed upon by the Customer and the Company.” This requirement, however, does not extend to service regulators.⁵¹

Lastly, COMAR 20.31.02.02 entitles BGE to terminate service for a customer’s violation of or noncompliance with BGE’s tariff and rules on file with the Maryland PSC. BGE’s tariff specifies 11 circumstances when BGE may refuse or discontinue service, including:

- Failure to comply with any provisions of the tariff, applicable Commission regulations, or applicable Company rules or practices;⁵²
- Failure to maintain equipment in safe condition;⁵³ and
- Failure to permit reasonable access to company equipment located on or in the customer’s premises.⁵⁴

Given the lack of explicit tariff provisions governing the location and siting of new service regulators on customer property, it is not apparent the extent to which these provisions apply to a customer’s refusal of new equipment being installed by BGE.

COMMENTS

I. For new regulators to be installed at residential structures with existing gas service, the Commission should require BGE to individually evaluate each installation and offer reasonable accommodations and alternatives, including electrification.

A. PHMSA data show that both exterior and interior regulators experience serious incidents involving injury, death, and property damage, but are of limited use for comparing incident probability.

BGE’s Outdoor Meter Assembly Location Policy is premised mainly on the proposition that locating regulators on the exteriors of customer homes and businesses is safer than locating them indoors.⁵⁵ PHMSA gas accident data analyzed on behalf of OPC tell a nuanced story, however—one that supports a case-by-case evaluation of where new regulators should be installed.

⁵¹ BGE Response to OPC DR 1-10.

⁵² Gas Service Tariff Part 2, Section 2.4(a).

⁵³ *Id.* Section 2.4(e).

⁵⁴ *Id.* Section 2.4(f). Section 5.4 authorizes BGE to enter the customer’s premises “at all reasonable times for the purpose of reading its meters, and operating, inspecting, modifying and keeping in repair or removing any or all of its apparatus used in connection with the supply of gas.”

⁵⁵ In its response to Staff DR 1-05, , BGE states that “enhanced safety from gas being able to dissipate directly into the atmosphere” was the “primary driver” of its 2021 decision to establish a new general rule for exterior installation. BGE also argues that exterior installation enhances access to regulators by company technicians and first responders, which has reliability and additional safety benefits.

OPC asked Rod Walker & Associates Consultancy (“RWA”) to analyze data from PHMSA’s Natural Gas Distribution Incidents Database to help OPC evaluate the relative risks of interior and exterior regulator placement. In its analysis RWA sought to measure:

- The frequency at which incidents occur due to particular causes that affect various types of gas infrastructure, including regulators;
- The consequences of various types of incidents; and
- The overall frequency and historic trends of incidents involving vehicle strikes to outside regulators as well as incidents involving indoor regulators.

Table 1, below, shows how frequently incidents have been caused by the eight causal factors PHMSA uses to categorize incidents affecting various types of gas infrastructure, including both indoor and exterior regulators.

Jan 2010 - July 2023								
Incidents by Infrastructure Type/Cause Matrix								
Type	Incorrect Operation	Excavation Damage	Other Incident Cause	Pipe, Weld, Or Joint Failure	Other Outside Force Damage	Natural Force Damage	Equipment Failure	Corrosion Failure
Main	43	364	27	60	76	38	12	19
Service Valve	0	0	1	1	0	0	0	0
Farm Tap Meter/Regulator Set	0	0	0	0	3	0	1	0
Service	21	87	11	22	48	16	4	11
Service Riser	7	0	4	2	50	9	2	0
Other	9	10	45	10	19	5	9	3
District Regulator/Metering Station	10	0	1	1	46	4	26	0
Outside Meter/Regulator Set	6	1	22	0	161	28	4	0
Inside Meter/Regulator Set	4	1	2	0	27	0	0	0

Table 1: Natural Gas Incident by Infrastructure/Cause Matrix

Table 2 breaks down into sub-causes the 161 incidents of “Other Outside Force” affecting exterior meter/regulator sets, as this is by far the largest cause of damage to outdoor regulators.

Other Outside Force & Outside Meter/Regulator - Breakout by Sub-cause														
Sub-cause	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Vehicles	10	4	9	11	8	7	5	5	6	9	7	6	1	4
Other Damage	2	1	0	1	1	3	0	1	0	3	0	0	1	0
Fire	14	4	7	3	2	4	4	1	1	2	1	2	0	0
Electrical Arcing	0	0	0	0	2	0	0	1	0	0	2	0	0	0
Intentional Damage	2	0	0	0	2	0	0	0	1	1	0	0	0	0

Table 2: Incidents by Sub-Cause

Table 3 shows the consequences—in terms of people injured and killed, property damaged, overall number of customers affected, and gas lost—that have resulted from the different types of incidents. RWA normalized these data on a per-incident basis so that each column shows the average amount of gas lost, people injured and killed, property damaged, and customers affected per incident.

Consequence Analysis (per incident)					
Cause	Gas Lost (Mcf)	Injuries (People)	Fatalities (People)	Property Damage (\$)	Customers Affected (Qty.)
All Causes	1.15	0.426	0.092	\$1,799,033	136
INCORRECT OPERATION	1.92	1.060	0.070	\$16,527,988	185
EXCAVATION DAMAGE	1.38	0.263	0.048	\$459,527	161
OTHER INCIDENT CAUSE	1.05	0.770	0.283	\$551,642	147
PIPE, WELD, OR JOINT FAILURE	1.37	0.625	0.073	\$391,261	216
OTHER OUTSIDE FORCE DAMAGE	0.80	0.314	0.098	\$1,081,586	89
NATURAL FORCE DAMAGE	1.17	0.640	0.170	\$552,613	105
EQUIPMENT FAILURE	0.27	0.103	0.000	\$246,987	157
CORROSION FAILURE	1.24	0.394	0.030	\$179,614	7
Involving Outside M&R	2.16	0.144	0.045	\$106,693	10
Involving Inside M&R	0.70	0.382	0.176	\$1,639,318	9

Table 3: Consequence Analysis

The data from these tables show that:

- Since 2010, there have been more than six times as many serious incidents affecting exterior meter/regulator sets (222) as there have

been serious incidents affecting interior meter/regulator sets (34).

- “Other Outside Force” damage to exterior meter/regulator sets is the second most common type of serious incident across all types of gas infrastructure, after excavation damage to gas mains.
- Vehicle strikes account for the majority of “Other Outside Force” incidents affecting exterior meters/regulator sets, though the number of incidents over the last 13 years is relatively low, ranging from one (in 2022) to 11 (in 2013). PHMSA data show four vehicle strikes so far in 2023.
- The consequences of a major natural gas incident are greater when it involves an inside meter/regulator than when it involves an outside meter/regulator.⁵⁶

However, the data do not show—and OPC does not have the information to assess⁵⁷—the relative *probability* of serious incidents affecting exterior regulators and interior regulators. This inability to assess probability is because, while PHMSA’s data show the raw numbers of serious incidents affecting each type of infrastructure, it does not show the total number of exterior and indoor regulators in operation. As a result, OPC cannot assess whether serious incidents are more likely with one type of infrastructure than with the other.

For example, although there have been more than six times as many serious incidents affecting exterior regulators as affecting indoor regulators since 2010, if the total number of exterior regulators in operation were more than six times larger than the total number of indoor regulators, it would be unreasonable to conclude based on the accident data that exterior regulators were six times more likely to experience a major incident, since the *percentage* of indoor regulators experiencing serious incidents would be lower than that of exterior regulators. On the other hand, if there were only twice the number of exterior regulators in operation as indoor regulators, it would be reasonable to conclude that exterior regulators are three times more likely than indoor regulators to experience a serious incident.

⁵⁶ This conclusion corroborates BGE’s statement that “outdoor regulators result in less severe consequences, even when involved in extraordinary accidents such as accident strikes.” BGE Response to Staff DR 01-04 at 2.

⁵⁷ According to RWA, datasets counting the total number of exterior and interior regulators in operation are not publicly available.

B. When installing new regulators, BGE should evaluate each service installation on an individual basis.

The fact that indoor and exterior regulators can both be affected by serious incidents—and that different circumstances impact individual indoor and outdoor locations—is presumably why PHMSA recently stated that “[gas system] operators should ensure compliance with the applicable pipeline safety regulations and *should evaluate each service installation to determine the appropriate location of the service regulators.*”⁵⁸

PHMSA made this statement in an Advisory Bulletin in response to NTSB’s recommendations to PHMSA after the Flower Branch accident. One of the NTSB recommendations (P-19-002) was that PHMSA should require that “existing service regulators be relocated outside occupied structures whenever the gas service line, meter, or regulator is replaced.”⁵⁹ BGE has characterized PHMSA’s bulletin as “implementing” this recommendation.⁶⁰ However, while PHMSA uses the word “implement,” it does not actually accept NTSB’s recommendation. What PHMSA says is that “[t]o further enhance PHMSA’s safety efforts and implement NTSB’s April 24, 2019 Recommendations P-19-001 and P-19-002, PHMSA is issuing this advisory bulletin to remind operators of the [existing regulatory] requirements for inside meters and regulators.”⁶¹

Accepting NTSB’s recommendation would have required PHMSA to revise its regulations at 49 CFR Part 192, as those regulations allow for both exterior or indoor placement of regulators. The regulations do not require indoor regulators to be moved outside whenever a service line, meter, or regulator is replaced, or require new regulators to be installed exclusively outdoors when a utility is installing a higher-pressure system that requires the use of house regulators for the first time.

PHMSA’s directive in the bulletin is for utilities to evaluate each installation to determine where regulators should be placed, taking into account the criteria set forth in PHMSA’s regulations. Those criteria require utilities to ensure that each regulator is in a readily accessible location; is protected from corrosion and other damage, including, if installed outside a building, vehicular damage that may be anticipated; is installed in a ventilated space at least three feet from any source of ignition or heat, if located indoors; and must vent outdoors with a vent terminal that is rain and insect-resistant, located away

⁵⁸ PHMSA Advisory Bulletin, Pipeline Safety: Inside Meters and Regulator, 85 Fed. Reg. 61,101 (September 29, 2020). BGE cites this PHMSA statement in its response to OPC DR 01-01. (Emphasis added).

⁵⁹ *Id.*

⁶⁰ BGE Response to OPC DR 01-01 at 1.

⁶¹ *Id.*

from any opening to the building, and protected from damage caused by flooding in flood-prone areas.⁶²

In accordance with PHMSA guidance, BGE should be performing such case-by-case evaluations as it installs new regulators under Operation Pipeline. Further, when either exterior or indoor placement can occur safely and in accordance with PHMSA regulations, BGE should take into account customer preferences regarding location and seek to accommodate those preferences. OPC expects that because the consequences of a regulator incident can be more serious with indoor regulators than with outdoor regulators, BGE will continue to prefer exterior installation in all but a few cases, and that for the same reason most customers who receive new regulators (as opposed to those who choose to fully electrify their homes and leave the gas system) will be willing to accept outdoor regulators. OPC elaborates on this recommendation below.

C. While BGE’s replacement of older, low-pressure gas mains with new, higher-pressure mains may enhance overall system safety, combustible gas invariably presents risks, including through new regulators.

As BGE has acknowledged, regulators pose risks because they are a “potential source of leaks.”⁶³ Moreover, the PHMSA data discussed above show that because exterior regulators can be damaged by external forces such as vehicular collisions, as well as “natural force damage” like lightning strikes, the exterior installation of new regulators may mitigate regulator risks but cannot eliminate them, as BGE also acknowledges.⁶⁴

Given these facts, it is worth revisiting statements made by BGE in its STRIDE plans about the merits of replacing its low-pressure distribution systems in Baltimore City and elsewhere with higher-pressure systems. In its STRIDE 1 plan, BGE argued that a higher-pressure system would enhance reliability, and that “[d]istribution at higher pressure also provides over-pressurization protection through the use of regulators at the customer’s meter, preventing outages or damage to the customer’s equipment.”⁶⁵ BGE reiterated this safety rationale in its STRIDE II plan, stating that “[i]n addition to simply replacing these assets, BGE’s approach is to incorporate modern system designs that improve reliability and public safety, such as increased system pressure, over-pressurization protection at the customer meter, service shutoff valves, and the installation of Excess Flow Valves.”⁶⁶

BGE’s suggestion that a higher-pressure system would be safer than a lower-pressure system because of the addition of customer regulators a little like saying that

⁶² 49 CFR § 192.353—192.354.

⁶³ BGE Response to Staff DR01-03.

⁶⁴ BGE Response to Staff DR01-04.

⁶⁵ *Id.* at 23.

⁶⁶ Case No. 9468, Company Exhibit ACB-1 at 24 (emphasis added).

playing baseball with cowhide balls is safer than playing with wiffle balls because in the former case batters wear helmets. Helmets certainly provide protection from injury—but the potential for injury is due to the use of the cowhide balls. Similarly, regulators provide protection from over-pressurization on a higher-pressure system—but the protection is needed *because of the higher pressure*. On BGE’s low-pressure system, the district regulators that supply gas to the system “are designed, in the event of failure, to prevent the source pressure from causing the unsafe operation of any connected and properly adjusted gas utilization equipment as required by federal regulations since individual services are without pressure regulators.”⁶⁷

OPC does not disagree that a new, higher-pressure gas system is safer than an old low-pressure system. (Which is not to say that replacement with higher-pressure pipe is the *only* way to achieve greater safety than an older low-pressure system; as BGE has acknowledged and as OPC emphasizes below, BGE can for a time, if not “indefinitely,” maintain safety through leak repairs, targeted replacements, and other maintenance measures).⁶⁸

However, because regulators on customer properties introduce new risks for those customers, whether the regulators are located inside or outside, it appears to OPC that the safety benefits of any new higher-pressure system are primarily because the system is *new*, rather than the fact that it is higher-pressure. The only way for customers to be free of risk associated with BGE’s gas system is to electrify their homes and businesses and no longer be on the gas system. Thus, it is critical that BGE’s Operation Pipeline activities be conducted in a way that provides customers an opportunity to electrify rather than having to accept a new regulator.

D. When installing new regulators on non-multifamily structures with existing gas service, BGE should offer customers reasonable accommodations.

BGE’s current exemption process provides little room for accommodating homeowner concerns about the physical and aesthetic impacts of outdoor regulator installation. BGE acknowledges certain circumstances in which exemptions may be appropriate—inability to comply with BGE’s meter assembly protection measures, the need to install more than five feet of new indoor pipe, inadequate outside space, installations beyond the customers’ property line, and installations at structures on the National Historic Landmark registry, or if installation would violate federal, state, or local laws or regulations.⁶⁹ These limited exemption circumstances, however, do not sufficiently protect the interests of BGE customers most affected by these replacements.

⁶⁷ BGE Gas Design Construction Manual, Gas Engineering and Standards, GC 104-1 at 3.

⁶⁸ See BGE Response to Staff DR01-18.

⁶⁹ BGE Gas Design Construction Manual, Gas Engineering and Standards, GC 402-1 at 3.

The majority of historic row homes in Baltimore City are not on the National Historic Landmark Registry. Properties on the Maryland Inventory of Historic Properties also are not eligible for an exemption. Customers interested in moving off natural gas have no opportunity to refuse the installation of new gas infrastructure to serve their homes.

Moreover, the process by which BGE considers and grants exemptions does not sufficiently consider the concerns and interests of the homeowner. *Only BGE can initiate an exemption request; a homeowner cannot.*⁷⁰ BGE only informs customers that exemptions are available if there is insufficient space to install a regulator outside or if installation would violate other requirements for installing gas services.⁷¹ In short, *customers are not fully informed of all circumstances in which an exemption may be available.* This means that, in most cases, customers that otherwise could seek an exemption are unable to do so.

As noted above, BGE's outdoor regulator location standard goes beyond the safety requirements established by PHMSA and the Flower Branch Act. PHMSA regulations allow for indoor regulation installations, so long as the regulator is properly vented to the outside and safely located inside the home. State law only restricts the location of regulators installed on new services or on existing services serving multi-family homes. While nothing prohibits BGE's regulation location standard from being more strict than federal or state law, the lack of customer accommodations provided by BGE's exemption process is unreasonable. Accordingly, OPC recommends several changes to BGE's exemption process:

- Exemptions should be available for properties listed in the Maryland Inventory of Historic Properties or otherwise located within a designated State or local historic district;
- Customers should be informed of all available exemptions in the company's initial communication regarding the proposed regulator installation work;
- For each planned project requiring regulators to be relocated or installed, BGE should conduct a preliminary survey of affected properties to identify those that may be eligible for an exemption; and
- Exemption requests should be initiated by customers and denied only if installation of an indoor regulator would violate federal or state laws or regulations governing the service regulation

⁷⁰ See BGE Process AM-BE-P3066, Rev. 1 (April 12, 2022).

⁷¹ See BGE Response to Staff DR 1-08 Attachment 1, "Gas Regulator Talking Points for Contractors."

installations.

These recommendations acknowledge that BGE may continue to prefer installing regulators outside, while protecting the interests of customers with legitimate cause to seek an exemption from this policy.

To ensure that BGE's exemption process is fairly administered, the Commission should require BGE to submit its revised process and customer-facing information documents for the Commission's review and approval. The Commission should also require BGE to submit quarterly reports to the Commission detailing (i) the number of exemptions requested, (ii) the location of each exemption request and the specific project requiring a regulator to be installed, (iii) whether each request was approved or denied, and (iv) an explanation of the basis for BGE's decision on the request.

III. In locations where high-pressure main replacement has not begun, the Commission should impose a two-year delay.

For areas of the BGE service territory where low-pressure gas mains have not yet been replaced, the faster, safer, and least impactful on customer rates way to address the regulator issue is for residences to electrify their home appliances. Electrification is faster, because customers can begin to incrementally replace their appliances now, while BGE's Operation Pipeline continues over another approximately 20 years. It is safer because, as explained above, any continued use of gas—at low or high pressure, with a regulator outside or inside—poses safety risks simply because gas is combustible wherever it is used. It is less impactful on customer rates because electrification avoids the massive costs of replacing gas system infrastructure that is at risk of being stranded

A. Customers interested in electrifying need notice and time.

Customers interested in electrifying their household appliances need time. Ideally, customers replace appliances when their useful lives expire. But, when faced with the opportunity to electrify rather than allow BGE to replace a customer's gas infrastructure, the affected customer may not be ready to electrify. Customers interested in electrification should have the opportunity to control, as much as feasible, the pace of their electrification. Customers may wish to electrify to avoid the need for a regulator altogether, to improve their indoor air quality, to save money, or to benefit the environment. The pace of BGE's infrastructure investments should not dictate if, whether, and when a customer may electrify.

Accordingly, the Commission should ensure that customers are given as early notice as possible before BGE's Operation Pipeline arrives in their neighborhoods with the need for new regulators. Customers should be informed on their options and opportunities regarding electrification at least two years in advance, if not earlier, as it

allows customers time to phase in their acquisition of non-gas appliances. In practice, this necessitates a two-year pause on BGE’s planned gas infrastructure replacement work.

For its part, BGE acknowledges that it is possible “to adjust or extend its gas asset replacement plans or timeline if necessary to meet emerging State goals regarding gas delivery, customer affordability, and related concerns.”⁷² A delay to allow time for customers to consider electrification rather than have their service replaced falls within that possibility.

B. A two-year delay need not compromise any safety benefits that may result from Operation Pipeline.

A Commission-imposed two-year delay does not obviate the utility’s obligation to ensure safe and reliable service. While a two-year delay may require BGE to scale back its proactive replacement of cast iron and bare steel main, the utility acknowledges that it could “replace low pressure materials like-for-like . . . on an as-needed basis as leaks and/or gas main breaks emerge, as well as at some minimum level to meet regulatory requirements regarding risk mitigation.”⁷³ BGE claims this may not be a “sustainable long-term solution.” But BGE does not dispute whether such an approach to replacements would impede safety and reliability in the near term.

Considering that BGE’s “proactive” replacement of cast iron and bare steel main will continue for another 20 years, a more targeted and limited approach to aging infrastructure should not have colorable and material impact on BGE’s overall system safety. The consequences of a two-year delay are outweighed by the public’s interest in receiving advanced notice on infrastructure projects that directly affect their homes and provide an opportunity to consider their opportunity to electrify. BGE could and should continue to do work that is necessary, *in the near term*, to assure safe and reliable service. But BGE—and its customers—can afford a short-term delay on projects intended to *improve* safe and reliable service over the long term.

Accordingly, a two-year moratorium on all projects replacing low pressure main with high pressure main serving existing customers at single family residences is appropriate. The Commission should direct BGE to file a plan to detect any leaks posing safety risks and that prioritizes repairs over replacements; when repairs are not feasible, BGE should replace low-pressure materials on a limited, as-needed basis. BGE should be directed to file quarterly reports for stakeholder and Commission review that details any repairs or necessary replacements that BGE has conducted and identifies any potential

⁷² BGE Response to Staff DR 1-18. Despite its acknowledgement, BGE does not include among its exemplary options a delay to allow time for customers to elect to electrify rather than have a gas regulator installed. *See id.*

⁷³ *Id.*

replacements BGE must make during the moratorium period that BGE claims is needed to ensure safe and reliable service.

C. During the two-year moratorium, BGE should be directed to expedite its relocation of multi-unit housing regulators consistent with the purpose of the Flower Branch Act.

OPC's suggested two-year moratorium is limited to projects affected single-family residences and does not, and should not, impede BGE's execution of its Flower Branch Act compliance plan. In fact, a moratorium may enable BGE to comply with the Flower Branch Act earlier. BGE's current compliance plan provides for work to be completed by 2031. BGE could complete this work much more quickly if resources currently being devoted to Operation Pipeline were redirected to Flower Branch Act compliance.

It remains unclear why BGE plans to take ten years to complete its Flower Branch Act compliance while, at the same time, installing hundreds or thousands of new exterior regulators each year. BGE indicates that it has identified 11,200 regulators across its gas system that will likely need to be relocated through its Flower Branch Act compliance plan.⁷⁴ As detailed in its compliance plan, the utility is gradually ramping up its replacements from 100 in 2022 and 200 in 2023 to more than 1,100 by 2026.⁷⁵ In contrast, BGE completed 4,213 service renewals involving the placement of an outside regulator over an 18-month period beginning on January 1, 2021.⁷⁶

The two-year moratorium would enable BGE to expedite the relocation of services affected properties specifically targeted by the Flower Branch Act. Stated otherwise, BGE could continue to improve the safety of its distribution system while the moratorium remains in effect.

⁷⁴ BGE Gas Service Regulator Relocation Plan Annual Report, January 23, 2023 at 2.

⁷⁵ BGE Gas Service Regulator Relocation Plan, December 22, 2021.

⁷⁶ BGE Response to Staff DR 1-17.

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CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of August 2023, a copy of the Comments of the Office of People's Counsel was emailed to all parties of record to this proceeding.

/electronic signature/

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