COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

Petition of the Office of the Attorney General, pursuant to G.L. c. 12, §§ 11E, 10; and its common law authority to act in the public interest, Requesting an Investigation, pursuant to the Department of Public Utilities' authority under G.L c. 164, §§ 76, 105A into the impact on the continuing business operations of local gas distribution companies as the Commonwealth achieves its target 2050 climate goals.	**D.P.U. 20-XX**

The Office of the Attorney General ("AGO"), pursuant to G.L. c. 164, §§ 76, 105A; G.L. c. 12, §§ 11E, 10; and the AGO's common law authority to act in the public interest, respectfully requests that the Department of Public Utilities (the "Department") initiate an investigation to assess the future of local gas distribution company ("LDC") operations and planning in light of the Commonwealth's legally binding statewide limit of net-zero greenhouse gas ("GHG") emissions by 2050.[1]

As found in the Commonwealth's 2015 update to its Clean Energy and Climate Plan ("CECP") for 2020, the Commonwealth's heating sector must make sizeable reductions in its use

[1] *See* the Global Warming Solutions Act ("GWSA"), St. 2008, c. 298, codified at M.G.L. c. 21N; Executive Office of Energy and Environmental Affairs'("EOEEA") Determination of Statewide Emissions Limit for 2020 (Apr. 22, 2020), *available at* https://www.mass.gov/doc/final-signed-letter-of-determination-for-2050-emissions-limit; (setting a legally binding statewide limit of net zero greenhouse gas emissions by 2050, defined as 85 percent below 1990 levels); State of the State Address (Jan. 21, 2021) (Governor commits to achieving net-zero greenhouse gas emissions by 2050), *available at* https://www.mass.gov/news/governor-baker-delivers-2020-state-of-the-commonwealth-address.

of fossil fuels to achieve the state's mandated GHG limit.[2] Ensuring that Massachusetts LDCs' current and planned business and operating practices are consistent with the Commonwealth's 2050 emission reduction mandate and interim targets requires more from the LDCs than "business as usual." Just as declining fossil fuel demand is reshaping markets and business practices in global markets (due to a range of factors including a climate-risk driven transition to clean energy), the Commonwealth's climate policy requirements will have profound impacts on gas distribution system management, operations, and rates. This will require the LDCs to make significant changes to their planning processes and business model. It will also require the Department to develop new policies and structures to protect ratepayers and ensure a safe, reliable, and fair transition away from reliance on natural gas and other fossil fuels.

While policymakers and stakeholders are presently discussing and examining various electric-dependent pathways to achieve the 2050 climate requirements, there has been little

[2] Pursuant to the GWSA, the EOEEA must prepare a CECP every 5 years, beginning in 2010, that sets GHG limits and provides plans to ensure the Commonwealth meets its 2050 mandated emissions limit. See G.L. c. 21N (setting forth standards for targets and plans). Both the 2010 and 2015 update focused on reducing building sector GHG emissions. *See* Massachusetts CECP for 2020, 2015 Update at 19 ("Buildings consume more than 50 percent of the energy used in Massachusetts including the vast majority of the electricity and significant amounts of natural gas and oil primarily for space heating. Emissions from buildings represent over 50 percent of GHGs in 2013, with direct fossil fuel use (*i.e.*, excluding buildings use of electricity) accounting for almost a third of the Massachusetts GHG inventory."), *available at* https://www.mass.gov/files/documents/2016/08/sk/2020-clean-energy-plan.pdf.; *see also* EOEEA, March 2020 Public Sessions Presentation, *available at* https://www.mass.gov/doc/march-public-meeting-slide-deck-for-2050-roadmap ("March 2020 Slide Deck") (noting same); Massachusetts Comprehensive Energy Plan (December, 2018) at Executive Summary, page v, available at https://www.mass.gov/service-details/massachusetts-comprehensive-energy-plan-cep (noting that the building heating/domestic hot water sector represents the second largest source of emissions in the Commonwealth, with nearly two-thirds of that thermal heating demand being met by natural gas); Massachusetts GHG Mitigation and Policies, at Buildings, available at https://www.mass.gov/info-details/ghg-emissions-and-mitigation-policies#buildings- (noting same).

public discussion of the resulting business planning and financial implications of building electrification and related initiatives that will need to be implemented with sufficient lead time to comply with 2050 emission reduction mandates. The Department has both the authority and expertise to initiate this urgent public discussion by promptly opening an investigation that will (1) examine the gas distribution industry, regulatory, and policy changes needed to support the achievement of the Commonwealth's mandated GHG emission limits; and (2) determine what near- and long-term adjustments are necessary to maintain a safe and reliable gas distribution system and protect consumer interests as the Commonwealth transitions from fossil fuels to a clean, increasingly electrified, and decarbonized energy future by 2050.

Like the Department's leadership in examining and implementing new regulatory policies for harmonizing the state's clean energy priorities with electric grid modernization efforts,[3] this investigation provides the Department with the opportunity to solicit utility and stakeholder input and develop a nation-leading regulatory and policy roadmap to guide the evolution of the gas distribution industry companies, provide ratepayer protection, and allow the Commonwealth to move into its net-zero GHG emissions energy future.

[3] *See e.g., Vote and Order Opening Investigation*, D.P.U. 12-76 (2012) (investigation into modernization of the electric grid, with workshops and written submissions from stakeholders).

I. BACKGROUND

1. Massachusetts is a national leader in climate action.[4] Accordingly, the legislative, executive, and judicial branches have taken definitive and necessary steps to achieve GHG emissions reduction requirements that will result in an 85 percent reduction in emissions below 1990 levels by 2050 and achieve net-zero emissions. GWSA; Determination of Statewide Emissions Limit for 2020, *supra n.1*.

2. Massachusetts' GHG emissions limits are set forth in several key pieces of legislation enacted in 2008. First, the GWSA set forth target goals for the reduction of GHG emissions from all sectors of the Commonwealth's economy. The current end goal is to reduce GHG emissions by 85 percent by 2050 below the 1990 baseline emission level, with intermediary goals set for 2020 (25 percent reduction) and 2030.[5] Along with the GWSA, the Green Communities Act (St. 2008, c. 169; the "GCA") created a framework to promote enhanced energy efficiency throughout the Commonwealth and required Program Administrators

[4] For example, in 2007, Massachusetts led multiple states, cities and other environmental action groups to compel the Environmental Protection Agency ("EPA") to regulate carbon dioxide as a pollutant under the Clean Air Act. *Massachusetts v. EPA*, 549 U.S. 497 (2007). The United States Supreme Court found, among other things, that the "harms associated with climate change are serious and well recognized" and that the EPA has the statutory authority, under the §202(a)(1) of the Clean Air Act, to regulate greenhouse gas emissions. The Supreme Court reasoned that the express language of the Clean Air Act requires the EPA to promulgate regulations to protect the public health and welfare, unless it determines that greenhouse gases do not contribute to climate change. *Id.* In December 2009, the EPA made the endangerment finding that the current and projected concentrations of greenhouse gases in the atmosphere threaten the public health and welfare of current and future generations. Federal Register, Vol. 74, No. 239 (Dec. 15, 2009), Rules and Regulations at 66496.

[5] Determination of Statewide Emissions Limit for 2020, *supra* n.1; *see also* EOEEA 2018 GWSA 10-year progress report, available at https://www.mass.gov/doc/gwsa-10-year-progress-report (providing progress made in achieving the GWSA's 2020 mandate (25 percent GHG reduction below 1990 levels) and finds, based on the Massachusetts Department of Environmental Protection's 2017 GHG inventory, that GHG emissions in the Commonwealth were 22.4 percent below the 1990 baseline level).

(consisting of gas and electric utilities and municipal aggregators with approved energy efficiency plans) to develop energy efficiency plans that would "provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply." G.L. c. 25, § 21(b)(1).[6]

3. In May 2016, the Supreme Judicial Court clarified and reaffirmed that the GHG emission reduction limits of the GWSA are mandatory, enforceable emission limits, and not mere aspirational goals. *Kain et al. v. Department of Environmental Protection*, 474 Mass. 278, 288–90 (2016). The Court in *Kain* also underscored that the EOEEA (of which the Department, along with the Department of Environmental Protection, is a part) is primarily responsible for administering the required emission reductions. *See* G.L. c. 21N, § 7; G.L. c. 21A, § 2, clause (30).

4. Similarly, in 2018, the Supreme Judicial Court recognized that the GWSA, "is designed to make Massachusetts a national, and even international, leader in the efforts to reduce the greenhouse gas emissions that cause climate change." *New England Power Generators Assoc., Inc. v. Dep't of Environmental Protection*, 480 Mass. 398, 399 (2018). The Supreme Judicial Court, in upholding the Department of Environmental Protection's authority to promulgate sector specific regulations under G. L. c. 21N, § 3(d), stated that the GWSA "establishes significant, 'ambitious,' legally binding, short-and long-term restrictions on those emissions." *Id.* at 399

[6] In 2018, the GCA was amended to provide Program Administrators with the authority to provide a full range of energy services to customers, including energy optimization, energy storage, renewables, active demand response and strategic electrification of home heating. *An Act to Advance Clean Energy*, St. 2018, c. 227. In addition, the Department now recognizes "a localized and reasonable cost value of reducing GHG emissions [that] [] the Program Administrators can claim as one of the benefits of the proposed energy efficiency programs, within the context of contributing to GWSA compliance." *2019-2021 Three-year Energy Efficiency Plans*, D.P.U. 18-110 through 18-119 (2019) at 69–70 (internal citations omitted).

(citations omitted) (also noting that the GWSA "was passed to address the grave threats that climate change poses to the health, economy, and natural resources of the Commonwealth").

5. In September 2016, Governor Baker signed Executive Order 569, which set forth a comprehensive approach to meeting the Commonwealth's GHG emission goals, as well as protecting residents, businesses, and municipalities from the impacts of climate change. On January 21, 2020, in his State of the State address, Governor Baker committed the Commonwealth to achieving economy-wide "net-zero" emissions by 2050. Currently, EOEEA is working to identify cost-effective and equitable strategies to meet the 2050 long-term emission reduction mandates. The EOEEA's "80x50" final report also will inform the determination of the 2030 emissions limit and the development of the CECP for 2030, as well as provide a roadmap to achieve the GWSA's 2050 emissions reduction limit. *See* https://www.mass.gov/info-details/ma-decarbonization-roadmap.[7]

6. Of particular note, the EOEEA has reintroduced pathways identified in its 2020 CECP as foundational strategies to achieve long-term decarbonization and net-zero emissions: "1) Increase Energy Efficiency: Building weatherization, passive house construction, etc.; 2) End-Use Fuel Switching: Electric cars, hydrogen trucks, heat pumps, biofuels, etc.; 3) Expand Clean Energy: Renewable electricity, grid storage, advanced biofuels, etc.; and 4) Increased Carbon Sequestration: Conserving natural lands, best management practices." March 2020 Slide Deck, at slides 20-23.[8]

[7] The EOEEA has undertaken a planning process to identify strategies to ensure Massachusetts reaches its GHG emissions reduction mandates and achieves net-zero emissions by 2050. The EOEEA plans to publish its findings in December 2020. It is the Department's role to ensure that the utility regulatory framework is in place to support these identified pathways.

[8] In December 2010, pursuant to the GWSA, the EOEEA presented its CECP for 2020 to the Legislature. 2020 CECP, *supra* n 2. The 2020 CECP also identified increased energy

7. Taken together, this suite of legislative, judicial, executive, and agency action evinces a strong, central policy goal—across Administrations spanning over a decade—to make the changes necessary to achieve net-zero carbon emissions in the Commonwealth by 2050 to address the urgent threat of climate change quickly and comprehensively. The consensus-identified pathway emerging for the residential and commercial building heating sector, under present technologies, is electrification, powered by low- or zero-emission sources. *See e.g.*, March 2020 Slide Deck (detailing electrification of heating sector as pathway to 2050 goals).[9]

8. As electrification and decarbonization of heating increases, the Commonwealth's natural gas demand and usage from thermal heating requirements will decline substantially and could be near zero by 2050. *Id.* As the Commonwealth reduces its fossil fuel consumption, the Department should establish a consistent regulatory framework that protects customers and maintains reliability and safety during the transition.

II. THE DEPARTMENT'S JURISDICTION TO INVESTIGATE

9. Within the Constitutional limits of its delegated statutory jurisdiction, comprehensive authority "to regulate and control the storage, transportation and distribution of gas . . . is hereby vested in the [D]epartment." G.L. c. 164, § 105A. Further, the Department has plenary authority, on its own motion or on written complaint, to investigate at any time "as to the manner in which . . . gas is being or shall be stored, transported or distributed." *Id.* In construing the scope of power conferred by Section 105A the Supreme Judicial Court noted:

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efficiency, electrification of the heating sector and expanded clean energy as necessary elements to achieving the 2050 mandated emissions limits.

[9] To better plan for this transition to electrification, commencing with the 2020 Capacity, Energy, Loads and Transmission (CELT) Report, ISO New England has begun forecasting the electrification of heating and its resulting impacts on wholesale electricity power planning and reliability studies. *See* https://www.iso-ne.com/static-assets/documents/2020/02/final-draft-2020-heatelectr-v1.pdf

> [T]he Legislature intended to give, and did give, . . . paramount power to the Department further to regulate and control the storage, transportation and distribution of gas and pressure under which these operations may respectively be carried on in this Commonwealth.

Pereira v. New England LNG Co., Inc., 364 Mass. 109, 120 (1973) (internal citation omitted, and punctuation modified).

10. Analogizing the scope of the Department's plenary authority under G.L. c. 164, § 105A with the Department's preemptive zoning powers related to gas facilities under G.L. c. 40A, §§ 3, 10 the SJC reasoned:

> These two statutes in combination recognize the absolute interdependence of all parts of the Commonwealth and of all of its inhabitants in the matter of availability of public utility services, and they give to the Department the power to take action necessary to insure that all may obtain a reasonable measure of such vital services.

Pereira v. New England LNG Co., Inc., 364 Mass. at 121. Accordingly, a comprehensive investigation into the LDCs' plans to transition to decarbonization is well within the broad authority that the Legislature expressly granted to the Department. Moreover, Section 76 of Chapter 164 affirms that the Department has general supervision of all gas companies and:

> shall make all necessary examination and inquiries and keep itself informed as to the condition of the respective properties owned by such corporations and the manner in which they are conducted with reference to the safety and convenience of the public, and as to their compliance with the provisions of law and the orders, directions and requirements of the department . . . .

In addition, G.L. c. 164, § 69I requires that the Department review every two years the long-range forecast and supply plans of the LDCs. Among other priorities, G.L. c. 164, § 69I directs that these plans consider environmental impacts (defined as land use impact, water resource impact, air quality impact, solid waste impact, radiation impact, and noise impact) and that plans to expand and construct any new gas facilities be "consistent with current health, environmental protection, and resource use and development policies as adopted by the [C]ommonwealth; and

are consistent with the policies to provide a necessary energy supply for the [C]ommonwealth with a minimum impact on the environment at the lowest possible cost."

11. Thus, the Department has both the opportunity and the responsibility to undertake a comprehensive review of the LDCs' continuing gas operations in light of, and in furtherance of, the Commonwealth's GHG emission reduction mandates. Indeed, in order to carry out its mandate to ensure continuous provision of these "vital services," and protect the interests of the Commonwealth's ratepayers, such investigation is imperative.

III. SIMILAR PROCEEDINGS IN OTHER STATES

12. On their own initiatives, California and New York's public utilities commissions have recently undertaken similar proceedings.

13. In January, the California Public Utilities Commission ("CA PUC") opened a rulemaking proceeding with the goal of providing a process for the CA PUC to consider challenges relating to California's natural gas infrastructure safety and reliability while the state effectuates its long-term decarbonization goals. CA PUC R.20-01-007 (2020). As part of this proceeding, the CA PUC seeks to develop and adopt updated reliability standards that reflect the current and prospective challenges to gas system operators and to implement a long-term planning strategy to manage the state's transition away from natural gas-fueled technologies. *Id.*

14. Like Massachusetts' Gas System Enhancement Plans ("GSEP"), in 2011, the CA PUC created the Pipeline Safety Enhancement Plan ("PSEP") process, which requires all gas transmission pipeline operators to outline the replacement and pressure testing of all intrastate natural gas transmission pipelines. CA PUC R.11-02-019 (2011). The total PSEP investment in California is estimated to be well over two billion dollars. CA PUC R.20-01-007 (2020), at 5. At the same time that it created the PSEP process, the CA PUC found that compliance with local

and statewide greenhouse gas legislation will necessitate the decline in natural gas demand for the foreseeable future. *Id.* at 10. Stakeholders recommended that the CA PUC develop long-term plans for phasing out gas utility assets and identify regulatory accounting mechanisms that will mitigate stranded costs for utilities while maintaining affordable gas rates for remaining customers. In addition to its review of safety and reliability regulations, the CA PUC will also develop a planning strategy to balance the impact that the projected gas demand reduction will have on the gas systems with the existing framework to ensure safe and reliable service, *e.g.*, PSEP. *Id.* at 17.[10]

15. In March, the New York Public Service Commission ("NY PSC") opened an investigation "to consider issues related to gas utilities' planning procedures." NY PSC Case 20-G-0131, Order Instituting Proceeding, dated March 19, 2020 (the "Order"). The NY PSC states that it "seeks to establish planning and operational practices that best support customer needs and emissions objectives while minimizing infrastructure investments and ensuring the continuation of reliable, safe, and adequate service to existing customers." Order, at 4. With the passage of its Climate Leadership and Community Protection Act, New York must achieve net-zero greenhouse gas emissions by 2050 and 100 percent emissions-free electric power sources by 2040.

16. In response to these mandated emissions requirements, the NY PSC will examine, among other things, the transparency of gas distribution company planning, non-pipe alternatives, demand response and rate design, as well as any necessary tariff and rule revisions. Within 150 days of the Order, each gas utility must file a "status report and proposals regarding the extent to

[10] The CA PUC set forth a series of questions for the investigation to address. CA PUC R.20-01-007, at 18–20 (including questions regarding long-term natural gas policy and planning).

which the gas utility currently uses or anticipates using demand reducing measures, including energy efficiency, electrification, demand response, non-pipe solutions, and other measures" to meet future demand. Order, at 12. In addition, each gas utility must report on the "potential to target existing and new energy efficiency and electrification programs and budgets to reduce near term and future infrastructure investments and emissions." *Id.*

IV. TOPICS FOR INPUT AND DEPARTMENT CONSIDERATION

17. The Commonwealth's 2050 GHG emission reduction mandate and the anticipated decline in natural gas demand raise many questions regarding the future of gas distribution services and possible changes to the Department's rules and regulations. As an initial starting point, the AGO offers the following particular items for the Department's consideration:

A. Ratepayer Protection, Equity and Fairness

18. How should the Department account for affordability concerns, particularly when the number of gas customers decline as the Commonwealth electrifies its heating sector? What additional policy measures may be necessary to ensure that no customer is left behind in the transition to a clean heating sector? How should principles of equity and fairness serve as benchmarks to protect remaining firm customers?

19. What measures should the Department take to ensure that those least able to pay are not subject to increasing distribution rates as the LDC's revenue requirement is spread over a diminishing customer sales base? Are there rate design safeguards that could help prevent inequitable and disparate impacts?

20. Not all ratepayers, particularly low- to moderate-income customers and residents of environmental justice communities will be able to cost-effectively electrify their home heating

without additional policy measures.[11] What incentives or additional policy measures are necessary to assist in the electrification of their homes (or the adoption of another carbon-neutral alternative)?

21. To the extent some customers remain firm natural gas customers for a longer period, what regulatory measures are necessary to ensure that the LDCs continue to provide safe and reliable gas service as their customer counts decline?

22. Should shareholders pay for the diversification and expansion of the LDC's business operations to meet GHG emission limits? How should the Department determine what is business expansion vs. the provision of a monopoly service that is recoverable in rates?

B. Planning, Forecast and Supply[12]

23. Should the Department adjust its guidelines for review of gas LDCs' forecast and supply plans to require additional long-term forecast data addressing the Commonwealth's transition away from natural gas as a heating fuel? Should the Department require the LDCs to submit modeling/scenario analysis showing the impacts to gas demand in response to decarbonization policy and how that demand projection would affect supply and pricing?

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[11] Environmental justice communities in Massachusetts have long been among the poorest and most polluted in the Commonwealth. *See e.g.*, *COVID-19's Unequal Effects in Massachusetts*, Report of Attorney General Maura Healey, released May 12, 2020 available at https://www.mass.gov/doc/covid-19s-unequal-effects-in-massachusetts. "[P]olicymakers at every level must work hand in hand with communities in developing and implementing steps to remedy environmental injustice and its attendant public health harms. The voices and experiences of communities of color must play a central role, and community representatives and leaders must be full partners in the work of building an environmentally just future." *Id.* at 8.

[12] Currently, natural gas distribution companies are required to file their long-range forecast and supply plans every two years with the Department. G.L. c. 164, § 69I. By statute, the gas long-range forecast is a five-year forward-looking projection with respect to the gas requirements of an LDC's market area, including the gas send-out necessary to serve projected firm customers and the available supplies necessary to meet the projected demand. *Id.* Also by statute, the LDC's plan must "provide a necessary energy supply for the [C]ommonwealth with a minimum impact on the environment at the lowest possible cost." *Id.*

24. Should the Department require longer-term forecasts, *e.g.*, 10-year or 20-year projections and require the LDCs to assess various methods for meeting future demand, including but not limited to, increased energy efficiency, demand response, electrification, and other carbon-neutral options?

C. Capital Investments and GSEP[13]

25. How much additional LDC investment is prudent in the next 30 years to ensure a safe and reliable gas distribution system, while statewide gas demand declines?

26. Are there other cost-effective alternatives to traditional distribution infrastructure investment that would be better aligned with the Commonwealth's climate goals? Should the Department require gas LDCs to present alternatives when proposing capital investment for system repairs or new gas distribution infrastructure? How should the Department compare and evaluate investment alternatives necessary for the Commonwealth's carbon-neutral energy future?

27. Should the Department require the LDCs, in their GSEPs, to demonstrate continuing need or long-term value for the proposed infrastructure investment and demonstrate how proposed GSEP investments "are consistent with the policies [outlined in G.L. c. 164, § 69H] to provide a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost?"

[13] Pursuant to G.L. c. 164, § 145, a "gas company may file with the Department a plan to address aging or leaking natural gas infrastructure within the Commonwealth in the interest of public safety and reducing lost and unaccounted for natural gas through a reduction in natural gas system leaks."

28. Should the Department require the LDCs, in their GSEPs, to compare GSEP investment with other investment alternatives, *e.g.*, abandoning leak-prone pipes for targeted electrification initiatives and/or geo-thermal projects?

29. Should the Department adjust GSEP planning and cost recovery to mitigate against potentially stranded infrastructure investment, as well as operations and maintenance expenses as a result of declining gas demand? Should accelerated depreciation or retirement of older leak prone infrastructure alternatives be considered? Are there regulatory mechanisms to proactively maintain reasonable rates and mitigate the impact of these investments on remaining firm customers?

D. Other Considerations

30. *Renewable Natural Gas- Biofuel ("RNG"):* What is the potential for RNG to meet future gas demand and deliver verifiable GHG emissions reductions? Is RNG readily available? What considerations are there for scalability and associated operational costs? What infrastructure investment is required to support the widescale use of RNG? What policy or legislative action might be necessary or beneficial to support investment in RNG, *e.g.* RPS-like requirement for RNG?

31. *Renewable Natural Gas- Power-to-Gas ("P2G"):* What is the potential for P2G in Massachusetts? Can P2G deliver verifiable GHG emissions reductions? Have any of the gas distribution utilities investigated the use of hydrogen as a power source? What considerations are there for scalability and associated operational costs? Is there infrastructure investment required to support the widescale use of P2G? What policy or legislative action would be necessary or beneficial to support investment in P2G?

32. *Energy Efficiency Programs:* What is the viability of gas demand resource programs to meet or contribute to emission reduction goals? Are adjustments to current cost-effectiveness screening of energy efficiency programs required to allow for the implementation of a gas demand response program? Can targeted or incremental electrification offset certain future GSEP investment? Does the Department need to review and revise the energy efficiency delivery platform, including the structure of company earned performance incentives, to support achievement of the Commonwealth's climate goals? Should incentive structures be revised to allow for targeted or incremental electrification?

33. Is there an opportunity to convert some amount of fossil fuel residential heating (*e.g.*, oil, propane, natural gas) with geo-thermal network applications? Can existing gas infrastructure or operations be used to support geo-thermal investment? What is the potential for geo-thermal ground source heating technology to meet cost-effectively the heating/cooling needs in the Commonwealth vs. air source heat pump electrification? Should geo-thermal opportunities be administered through program administrators? LDCs? Other market-based third-party organizations? Other governmental agencies? What are the scalability and costs to implement a statewide geo-thermal effort? What policy is required to support investment in geo-thermal networks?

34. *Other technologies:* Are there alternative technologies available (or in development) to electrification that can satisfy the building sector's heating needs and meet the GWSA emission reductions?

35. *Continued Sustainability of Gas Distribution as Usual:* Can the LDCs sustain their current business model as the Commonwealth takes affirmative action to electrify

and decarbonize the heating sector? What does the LDC look like in 2030? 2040? 2050? Are there different business models to be considered? Should LDCs plan to adapt to the new energy future by expanding business lines? What will be required of gas LDCs in meaningfully contributing to the achievement of the Commonwealth's GHG emission reduction mandates? Are there unique opportunities for LDCs that share a parent company with an electric company?

V. PROPOSED PHASED INVESTIGATION

36. The AGO recommends that the Department investigate in two phases. In the first phase, the Department would direct the LDCs to submit detailed economic analyses and business plans depicting future gas demand in a carbon-constrained economy, as well as probable revenues, expenses, and investments. The LDCs would also address the challenges that a substantially decarbonized economy creates for them and present ideas and solutions for the LDCs of the near and far-term future as the Commonwealth transitions its heating sector away from fossil fuels. This first phase also would include stakeholder input regarding issues such as necessary regulatory changes, policy and legislative directives, as well as gas business operation changes necessary to accommodate the Commonwealth's GHG emission mandates.[14] Like its grid modernization investigation in D.P.U. 12-76, the Department could conduct or sponsor workshops or working groups to evaluate and flesh out the submitted stakeholder plans and proposals and to strive for a consensus framework and timeline for future Department action.

37. The second phase of the proposed investigation would seek the development and implementation of the necessary policy, business, and regulatory pathways to achieve the

[14] Stakeholders may also consider proposing alternative business and regulatory models that could sustain the continued operation of gas distribution companies in a decarbonized 2050.

Commonwealth's climate change mandates and protect the Commonwealth's gas consumers. The Department (or working group) could develop straw proposals regarding proposed regulatory, legislative, and policy initiatives required to support the Commonwealth's climate policy and actions, mitigate unnecessary investment in gas distribution assets, and protect ratepayers from increasing gas distribution costs. The utilities and participating stakeholders should have an opportunity to comment on the straw proposals prior to the Department's final order. The Department's final action would be to issue an order providing both the policy and regulatory framework necessary to protect ratepayers and provide necessary guidance for the LDCs regarding the Commonwealth's increasingly decarbonized future.

VI. CONCLUSION

38. Pursuant to its authority pursuant to G.L. c. 164, §§ 76, 105A, the Department should take proactive steps to investigate the future role of the LDCs as the Commonwealth transitions to a clean, increasingly electrified, and decarbonized heating sector. An investigation will provide the platform for the Department to assess fully the prevailing concerns and relevant issues facing LDCs and enable it to develop policies and a regulatory framework to ensure an orderly and fair transition to a clean energy heating sector, to ensure continued safe and reliable gas service even as demand declines, and to ensure that consumers do not pay unnecessary costs.

WHEREFORE, the AGO respectfully requests the Department open an investigation, as described above, to examine the issues facing gas distribution companies as the Commonwealth rapidly moves to achieve its 2050 GHG emission reduction mandate.

Respectfully submitted,

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