



November 9, 2022

**VIA ELECTRONIC MAIL**

Mark D. Marini, Secretary  
Department of Public Utilities  
One South Station  
Boston, Massachusetts 02110  
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**RE: D.P.U. Docket No. 22-107, Petition of NSTAR Gas Company d/b/a Eversource Energy For Authorization by the Department of Public Utilities To Distribute Gas in the Town of Douglas, Massachusetts Pursuant to the Provisions of G.L. c. 164 § 30—Sierra Club Reply Comments**

Dear Secretary Marini and Hearing Officer Zilgme:

On behalf of the Sierra Club and its more than 25,000 members in Massachusetts, Sierra Club respectfully submits the following reply comments in response to the Department of Public Utilities' (the Department) September 9, 2022 Procedural Notice and pursuant to the Hearing Officer's October 21, 2022 Memorandum granting the Office of the Attorney General's Motion for an Extension of Time for comments relating to NSTAR Gas Company d/b/a Eversource Energy's (Eversource or the Company) petition in the above-referenced docket.

Sierra Club urges that the petition to distribute gas in the Town of Douglas, Massachusetts must be denied as it is inconsistent with Massachusetts' climate mandates under chapter 21N. The Department is compelled to consider compliance with greenhouse gas emissions limits and sublimits when making decisions under M.G.L. c. 164 by the 2021 Climate legislation, "An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy." As outlined in the Act, "[i]n discharging its responsibilities under this chapter and chapter 164, the department shall, with respect to itself and the entities it regulates, prioritize safety, security, reliability of service, affordability, equity and reductions in greenhouse gas emissions to meet statewide greenhouse gas emission limits and sublimits established pursuant to chapter 21N."<sup>1</sup> Sierra Club supports development in the Town of Douglas and throughout Central Massachusetts to bring skilled jobs to the area and uplift communities, but urges that expanding the gas system would be contrary to the GWSA, harmful to ratepayers, unreasonable, and against the public interest.

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<sup>1</sup> M.G. L. c. 25, §1A.

**I. An increase in gas use is not in the public interest because it will not lead to significant greenhouse gas (GHG) reductions and is inconsistent with the Global Warming Solutions Act (GWSA).**

Contrary to the Company's assertion that providing gas service in Douglas is in the public interest because it will lead to immediate reductions in greenhouse gas emissions, expanding fossil gas infrastructure to the Town of Douglas will not lead to significant greenhouse gas reductions and is not consistent with the GWSA<sup>2</sup> or the gas system transition planning underway in D.P.U. 20-80. The Company asserts that commercial and industrial customers in the town currently rely on propane or fuel oil and that should fossil gas become available "some business and government entities in the Town will also convert from using fossil fuels to natural gas, which emits less GHG."<sup>3</sup> This statement ignores the fact that conversion to fossil gas (also known as methane, a greenhouse gas 84 times more potent than carbon dioxide in the first 20 years after its release)<sup>4</sup> is unlikely to lead to emissions reductions over propane or fuel oil because leaks during production and distribution offset any potential greenhouse gas reductions from combusting fossil gas in place of other fossil fuels.<sup>5</sup> Massachusetts' gas system is inherently "leak-prone,"<sup>6</sup> with 32,877 gas leaks reported in the Commonwealth in 2018<sup>7</sup> and thousands of new leaks emerging each year, despite hundreds of millions of dollars a year spent by utilities to repair them.<sup>8</sup> Moreover, leakage rates are currently vastly underestimated in existing inventories.<sup>9</sup>

Given the lack of greenhouse gas emissions benefits from conversions to fossil gas, expansion to the Town of Douglas is not consistent with the GWSA. The Massachusetts Clean

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<sup>2</sup> Massachusetts' GWSA requires the Commonwealth to reduce greenhouse gas emissions by 25% from 1990 levels by 2020, at least 50% from 1990 levels by 2030, at least 75% from 1990 levels by 2040, and achieve Net Zero emissions by 2050 with a gross reduction in emissions of 85% from 1990 levels. Global Warming Solutions Act, Mass. Gen. Laws, Chapter 21N; An Act to Create a Next-Generation Roadmap for Massachusetts Climate Policy (2021 Climate Law); Executive Office of Energy and Environmental Affairs' ("EEA") Determination of Statewide Emissions Limit for 2020 April 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, January 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>.

<sup>3</sup> D.P.U. 22-107, Initial Comments of NSTAR Gas Company d/b/a Eversource Energy, at 5.

<sup>4</sup> Environmental Defense Fund, Methane: The other important greenhouse gas, <https://www.edf.org/climate/methane-other-important-greenhouse-gas>.

<sup>5</sup> Benjamin Storrow, Scientific American, *Methane Leaks Erase Some of the Climate Benefits of Natural Gas* (May 5, 2020), <https://www.scientificamerican.com/article/methane-leaks-erase-some-of-the-climate-benefits-of-natural-gas/>.

<sup>6</sup> D.P.U. 19-GLR-01, Department of Public Utilities, Report to the Legislature on the Prevalence of Natural Gas Leaks in the Natural Gas System, December 31, 2019, p. 1 ("A significant reason for the occurrence of natural gas leaks in Massachusetts is the presence of certain aging, leak-prone infrastructure...").

<sup>7</sup> *Id.*, at 9.

<sup>8</sup> *See id.*, at 14.

<sup>9</sup> Maryann R. Sargent, *Majority of US Urban Natural Gas Emissions Unaccounted for in Inventories*, <https://www.pnas.org/content/118/44/e2105804118> (measured methane leakage around Boston and estimated total supply chain losses of 3.3 to 4.7% for natural gas consumed in urban areas, which significantly increases the climate impacts of natural gas compared to existing U.S. EPA estimates); Ramon A. Alvarez, *Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain*, Science, Vol 361, Issue 6398 (July 13, 2018) (finding that supply chain emissions were approximately 60% higher than the U.S. EPA inventory estimate).

Energy and Climate Plan (CECP), which set sector-specific emissions reduction targets for the buildings sector,<sup>10</sup> has already concluded that conversion of customers to fossil gas is insufficient to achieve the GHG emissions limits required by the GWSA: “Today’s trend of residential customers switching from oil and liquid propane to gas heating continues. This scenario does not achieve the GHG emissions limits as required by the GWSA.”<sup>11</sup> The Company’s GHG justification for this expansion is not reasonable in light of Massachusetts’ clear GHG emissions reduction mandates and policies embodied in the GWSA and CECP.

Even if there were a slight greenhouse gas emission benefit to combusting fossil gas over propane or fuel oil—which is unlikely due to significant leaks in production and distribution of methane—merely asserting some insignificant amount of greenhouse gas emissions reductions is not sufficient to comply with the ambitious greenhouse gas reduction mandates of the GWSA, which require much deeper cuts in GHG emissions than fossil gas could ever provide. Installing new fossil gas infrastructure in buildings will only prolong Massachusetts’ dependence on fossil fuels and will hinder the state’s efforts to achieve its GWSA decarbonization mandates.

Sierra Club reiterates that this expanded gas infrastructure cannot be installed in reliance on the false promise of alternative fuels such as renewable natural gas (RNG) and green hydrogen for decarbonization of the buildings sector. As explained in depth in our initial comments,<sup>12</sup> green hydrogen and RNG cannot serve as viable, cost-effective decarbonization strategies for the gas distribution system already in place, let alone as a rationale for buildout of additional gas infrastructure. These fuels fail to provide significant climate benefits when injected into a leaking distribution system, and in addition hydrogen is not appropriate for blending into the gas distribution system due to concerns relating to safety and pipe embrittlement.<sup>13</sup> The limited and costly supplies of these fuels that will be available must be reserved for the hardest to decarbonize sectors of the economy such as aviation, high-heat industrial end-uses, shipping, and chemical feedstocks—these fuels are not appropriate for the decarbonization of the buildings sector.

## **II. Existing customers will be adversely affected by the cost to maintain an expanded gas system that is unlikely to be used and useful throughout its lifetime.**

The Company asserts that the distribution of gas service to Douglas will not adversely affect existing gas customers.<sup>14</sup> However, expansion of the gas distribution system is an imprudent use of ratepayer funds in light of the Commonwealth’s climate mandates and will likely result in stranded assets and high costs for existing ratepayers to maintain the distribution system. Ratepayers will bear the burden of continuously increasing fixed costs to safely operate

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<sup>10</sup> Clean Energy and Climate Plan for 2025 and 2030, at 23 (setting an emissions reduction target for residential heating and cooling of 29% by 2025 and 49% by 2030 and an emission reduction target for commercial and industrial heating and cooling of 35% by 2025 and 49% by 2030).

<sup>11</sup> Massachusetts Clean Energy and Climate Plan for 2025 and 2030 at page 26 (June 30, 2022), available at <https://www.mass.gov/doc/clean-energy-and-climate-plan-for-2025-and-2030/download>.

<sup>12</sup> D.P.U. 22-107, Initial Comments of the Sierra Club, at 6-8.

<sup>13</sup> See e.g. California Public Utilities Commission, Rulemaking No. R.13-02-008, Hydrogen Blending Impacts Study: Final Report, July 18, 2022.

<sup>14</sup> Initial Comments of NSTAR Gas Company d/b/a Eversource Energy, at 3-4.

and maintain the system as infrastructure ages<sup>15</sup>—costs that will be spread among fewer customers as a growing number of households convert to more economical electric appliances to avoid increased gas expenses.<sup>16</sup> As noted in the CECP for 2025 and 2030, “investments made by natural gas utilities to upgrade natural gas distribution assets—gas pipelines, mains, service pipes, compressor stations, and meters— often last for many decades and can become a growing obligation for those who continue to use natural gas.... [T]he Commonwealth’s plan for building decarbonization should include strategies to mitigate the risks of locking in additional investments and costs of pipeline systems that must eventually be paid for by either ratepayers or gas utilities’ shareholders.”<sup>17</sup>

Further, the long depreciation lifetime of gas distribution system investments means that most of this new infrastructure will not continue to be used or useful over a significant portion of its lifetime and risks becoming a stranded asset as the Commonwealth pursues decarbonization of the buildings sector in compliance with the GWSA.<sup>18</sup> Expanded gas distribution infrastructure will likely lose value prematurely, creating a problem of stranded costs, and potentially burdening ratepayers if they are required to pay those costs.

Sierra Club urges that should this project go forward despite the concerns set forth above, 100 percent of the costs of the project should be borne by those seeking to be interconnected rather than by ratepayers, as the Commonwealth’s climate mandates and strategy for achieving those mandates strongly indicates that the infrastructure will not be used and useful for its lifetime. If ratepayers bear any of the burden from this project, those costs must be amortized over a time frame that ends no later than 2050, when the state is mandated to achieve net zero emissions.

### **III. The Company has not sufficiently evaluated alternatives to gas system expansion in the Town of Douglas.**

Sierra Club reiterates that the Company has not provided sufficient analysis of alternatives to gas system expansion to prove the petition is reasonable—a single page letter from National Grid stating that the existing line would require a significant upgrade to support a large all-electric facility and noting that an engineering study has not been conducted<sup>19</sup> is not sufficient. Eversource further noted in discovery that it has no information as to the reasons that electric service might have to be upgraded to serve the proposed warehouse and that it did not perform its own analysis of the potential for electric service and does not have the system-

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<sup>15</sup> California Energy Commission, Energy Research and Development Division, Natural Gas Distribution in California’s Low-Carbon Future, Draft, October 2019, p. iii, <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/CEC-500-2019-055-D.pdf>; Carmelita Miller, et al., The Greenlining Institute, Equitable Building Electrification: A Framework for Powering Resilient Communities, p. 9 (September 2019).

<sup>16</sup> Carmelita Miller, et al., The Greenlining Institute, Equitable Building Electrification., at 9.

<sup>17</sup> Clean Energy and Climate Plan for 2025 and 2030, at 49.

<sup>18</sup> See e.g. Andy Bilich, et al., Environmental Defense Fund, Managing the Transition—Proactive Solutions for Stranded Gas Asset Risk in California, 2019, [https://www.edf.org/sites/default/files/documents/Managing\\_the\\_Transition\\_new.pdf](https://www.edf.org/sites/default/files/documents/Managing_the_Transition_new.pdf).

<sup>19</sup> Exh. ES-11.

planning data to do so.<sup>20</sup> At least some empirical analysis of alternatives must be conducted in order to allow the Department to determine whether expansion of gas service is reasonable in this case—given the lack of any analysis relating to electrification, the reasonableness of this petition cannot be fairly evaluated.

#### **IV. Conclusion**

The Sierra Club respectfully requests that the Department deny the Company's petition for the reasons set forth above.

Respectfully submitted,

/s/ Sarah Krame

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<sup>20</sup> Exh. AG 1-5.

**COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC UTILITIES**

*Petition of NSTAR Gas Company d/b/a Eversource Energy* )  
*For Authorization by the Department of Public Utilities* ) D.P.U. 22-107  
*To Distribute Gas in the Town of Douglas, Massachusetts* )  
*Pursuant to the Provisions of G.L. c. 164 § 30* )

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document(s) upon Secretary Mark D. Marini and Hearing Officer Katie Zilgme, and upon the Service List via electronic mail in this matter.

Dated this 9th day of November, 2022.

/s/ Sarah Krame

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