COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES |

Investigation by the Department of Public Utilities on its own Motion into the Role of Gas Local Distribution Companies as the Commonwealth Achieves its Target 2050 Climate Goals	)))))	D.P.U. 20-80

REPLY COMMENTS OF THE
NATIONAL CONSUMER LAW CENTER

The National Consumer Law Center ("NCLC"), on behalf of its low-income clients, hereby files its Reply Comments with the Massachusetts Department of Public Utilities ("DPU" or "the Department"), pursuant to the schedule established by the Administrative Law Judge in the above-captioned proceeding, which the Department initiated to develop a pathway to reduce greenhouse gas ("GHG") emissions from the sale and distribution of natural gas in order to meet the Commonwealth's goal of decarbonization of its energy supply by 2050.

As discussed below and in NCLC's May 6, 2022 Comments, NCLC urges the Department to:

(1) ensure that low-income customers, who are unlikely to be able to afford the switch to clean energy appliances and migrate away from the gas utility system, be held harmless from increased utility costs associated with the transition to cleaner energy;

(2) refrain from adopting any particular pathway recommended by the Local Distribution Companies ("LDCs") and their consultants at this time, given the significant and multi-faceted uncertainty surrounding technology development, costs of new fuels, customer adoption rates of new clean energy appliances, and whether the General Court and/or federal government will provide assistance outside of ratepayer funding to reduce transition costs;

(3) initiate a least-cost GHG-reduction planning process, integrated with electric grid planning, to evaluate needed infrastructure changes and fuel procurement;

(4) re-evaluate the necessity of the existing Gas System Enhancement Plan ("GSEP") tariff, which adds significant costs each month and for the foreseeable future to gas customer bills; and

(5) reject the Local Distribution Companies' ("LDCs")[1] requested approval of a new Net Zero Enablement Plan Model Tariff ("Net Zero Tariff"), and other cost recovery proposals (in addition to the GSEP), which would enable unlimited spending on vaguely identified "transition costs" and place all financial risk associated with the transition to clean energy on ratepayers, and low-income customers in particular, consistent with the direction of the General Court.

In support of these Reply Comments, NCLC states as follows:

I. Background

In accordance with the schedule established in this case, NCLC and other Stakeholders' submitted comments on the LDCs' proposal and E3 Report on May 6, 2022. In a June 3, 2022 Memorandum, the Department stated that it had received more than 230 oral and written comments and proposals in this docket. The Department postponed remaining deadlines for the filing of comments in that Memorandum in order to conduct its review and analysis of the information filed by all parties.

On July 1, 2022, the Department then directed the LDCs to file comments responding to the stakeholder comments by July 19, 2022. After a Joint Motion to Extend the filing time of the

[1] The LDCs consist of The Berkshire Gas Company, Eversource Gas Company of Massachusetts and NSTAR Gas Company each d/b/a Eversource Energy, Fitchburg Gas and Electric Light Company d/b/a Unitil, Liberty Utilities (New England Natural Gas Company) Corp. d/b/a Liberty, and Boston Gas Company d/b/a National Grid.

LDCs' responses was granted by the Department, the LDCs filed a Joint Response ("LDCs Response") to the stakeholder comments on July 29, 2022. In a Memorandum issued on September 8, 2022, the Department requested final stakeholder comments to be filed by October 14, 2022.

As noted in NCLC's May 6, 2022 Comments, NCLC has participated in the Future of Gas proceedings as a stakeholder and presenter. For decades, NCLC has been actively involved in advocacy for low-income consumers in Massachusetts and throughout the country, including advocacy for utility bill affordability programs to keep vulnerable consumers connected to vital utility service. NCLC urges the Department to enter findings consistent with the recommendations in these Reply Comments.

II. ARGUMENT

A. The LDCs' Net Zero Enablement Plans and Proposed Tariffs Should Be Rejected.

As noted in the LDCs Response, all parties (including the LDCs) and commenters recognize that all paths to a Net Zero energy transition in the Commonwealth represent a significant challenge at significant cost. LDC Response at 6. In particular, the LDCs acknowledge, low-income customers will experience the burdens of increased costs most profoundly given their lack of discretionary income to move toward electrification and the likelihood that they will be the most likely customers to leave the LDC systems last. *Id.* at 10-11.

The LDCs note that they "agree that electrification is a critical part of the clean energy future" but that "there are economic and technical limitations to electrifying all end uses." LDCs' Response at 6. The LDCs highlight the E3 report's conclusion that "[a]bsent supportive policy initiatives, these incremental costs represent a substantial barrier to achieving adoption of

electrification measures, particularly for low-income customers, who are less likely to be able to afford the upfront costs of electrification." LDCs Response at 11, citing E3 Report at 16.

NCLC acknowledges that today, the *exact path* to a clean energy transition for the Commonwealth remains unclear – particularly given the lack of a complete record, sworn testimony and due process protections that the current format of this docket has permitted. Exactly what role network geothermal investment will play[2], for example, or whether state and federal governments will provide financial support to help enable the transition, remains unclear. Yet, that uncertainty does not support Department adoption of the LDCs' response to this reality. The argument that the Department should simply trust them with their respective Net Zero Enablement Plans ("NZEPs"), and approve their proposed NZEP Model Tariff ("Net Zero Tariff"), and other cost recovery proposals (in addition to the GSEP), would enable unlimited spending on vaguely identified "transition costs." Such a plan, of course, places all financial risk associated with the transition to clean energy on ratepayers and must be rejected.

The LDCs plans, as noted in their July Response to stakeholder comments, relies heavily on the introduction of both renewable natural gas and hydrogen being pumped through existing and new gas delivery infrastructure[3] as a means for achieving net zero emissions. But NCLC has concerns that hydrogen would be a bad deal for consumers, as an increasing body of research indicates that there are concerns about safety, cost and feasibility over the long term.
For example, one independent think tank serving the Northwest writes:

> Despite being touted by natural gas utilities as the best path to clean home heating, hydrogen is much less effective at decarbonizing buildings than is electricity. Only small volumes of hydrogen, perhaps up to a ratio of 20 percent hydrogen to 80 percent natural gas, can safely be injected into existing gas pipelines. But a 20 percent blend of hydrogen only shaves off around 7 percent of

[2] National Grid and Eversource are currently conducting networked geothermal pilot projects.

[3] *See, e.g.,* LDCs' Response at

> the combustion emissions of a system running on 100 percent natural gas. Put in context, in Washington, for example, buildings' emissions will need to decrease 96 percent by 2050 for the state to meet its legislated decarbonization commitments.
>
> What's more, blending higher ratios of hydrogen into existing natural gas infrastructure to achieve greater emissions reductions could cost billions. Most gas distribution pipelines would need to be replaced or extensively retrofitted to safely accommodate the new fuel, since at higher volumes than 20 percent, hydrogen can degrade pipelines. Plus, higher ratios of hydrogen are incompatible with existing appliances like stoves and water heaters, meaning consumers would also need to buy new hydrogen-compatible appliances. These replacement requirements and associated costs are why major studies for the Northwest conclude that wide-spread electrification is the least expensive pathway to decarbonize building.
>
> Plus, hydrogen is less efficient than electricity at heating homes. A 2021 study found that heating a home with green hydrogen has an efficiency of around 46 percent. Heating a home with an electric air-source heat pump, on the other hand, has almost six times that efficiency, at around 270 percent. Yes, hydrogen could provide carbon-free heat in a home, but heating with hydrogen demands nearly six times as much renewable electricity as does an electric heat pump. Heating with hydrogen, in other words, is like drying your dishes with a blow torch.[4]

The California Public Utilities Commission ("CPUC") recently commissioned the University of California at Riverside's Hydrogen Blending Impacts Study, in compliance with state legislation and as part of the CPUC's ongoing Renewable Gas Rulemaking. According to the CPUC, the Rulemaking "assesses the operational and safety concerns associated with injecting hydrogen into the existing natural gas pipeline system at various percentages to help

[4] *Hydrogen's Dead End: Home Heating, A word of caution to Cascadian lawmakers and regulators*. Sightline Institute, Laura Feinstein, May 24, 2022 (internal footnotes removed). *See* https://www.sightline.org/2022/05/24/hydrogens-dead-end-home-heating/. (Sightline Institute notes on its website that it "is committed to making the Northwest a global model of sustainability, with strong communities, a green economy, and a healthy environment. We work to promote smart policy ideas and monitor the region's progress towards sustainability. Sightline Institute is non-partisan and does not oppose, support, or endorse any political candidate or party.")

Other studies challenge the notion that significant use of hydrogen in home heating applications is appropriate. *See*, *e.g.,* Physicians for Social Responsibility, *Hydrogen Pipe Dreams: Why Burning Hydrogen in Buildings is Bad for Climate and Health* (June 22, 2022), available at https://psr.org/resources/hydrogen-pipe-dreams-why-burning-hydrogen-in-buildings-is-bad-for-climate-and-health/

California establish the standards and interconnection protocols for possibly injecting renewable hydrogen into natural gas pipelines."[5] The CPUC notes that the Study's findings conclude "additional examination is needed into blending hydrogen into the gas system to ensure its safety in California" and that "it is critical to conduct real-world demonstrations of hydrogen under safe and controlled conditions to build on the Study's findings and determine the appropriate blend percentage suitable to mitigate operational risks such as ignition."[6]

The point in citing these findings is to note that (1) the LDCs have a strong financial interest in maintaining and increasing their gas delivery infrastructure investment; (2) the promotion of RNG and hydrogen is one means of protecting that investment; and (3) there is documented skepticism as to the appropriateness of hydrogen as a significant energy source for home heating. These facts point to the need for a more complete record for the Department's consideration on the difficult and costly transition ahead – a record that should include sworn testimony, the ability for parties and DPU staff to cross-examine expert testimony, and an opportunity for all parties to then weigh that evidence and make informed recommendations.

The General Court agrees on the need for "an adjudicatory hearing." Pursuant to Ch. 179 of the Acts of 2022, An Act Driving Clean Energy and Offshore Wind"[7]:

> SECTION 77. Notwithstanding any general or special law or rule, regulation or order to the contrary, the department of public utilities shall not approve any company-specific plan filed pursuant to the DPU Docket No. 20-80, Investigation by the Department of Public Utilities on its own Motion into the Role of Gas Local Distribution Companies as the Commonwealth Achieves its Target 2050 Climate Goals, prior to conducting an adjudicatory proceeding with respect to such plan.

[5] *See* https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-issues-independent-study-on-injecting-hydrogen-into-natural-gas-systems
[6] *Id.*
[7] *See* https://malegislature.gov/Laws/SessionLaws/Acts/2022/Chapter179

NCLC looks forward to participating in any upcoming adjudicatory proceeding, and stands ready to offer its expertise on ways to protect low-income customers from unaffordable increases in gas (and electric) rates due to the transition to clean energy.

B. Low-Income Customers Must Be Held Harmless in the Commonwealth's Transition to Net Zero Energy

While much remains uncertain about the most viable and cost-efficient paths to achieving the Commonwealth's clean energy goals, one conclusion is shared by the LDCs, LEAN and other commenters: additional financial assistance will be needed to ensure that low income customers are able to participate in the transition, and not left subsidizing a gas delivery system that other more financially secure customers will have left in favor of electrification.[8] In their Response, the LDCs correctly observe, "The feasibility of achieving the levels of electrification modeled in each scenario will depend on the suite of policies and market transformation activities that can help consumers overcome the upfront cost challenges associated with electrification." LDCs' Response at 11.

As noted in the NCLC May 6, 2022 Comments, the E3 Report, too, references the need for subsidization of low-income customers both in general and in terms of protecting against bill increases as a result of the adoption of new technologies:

> Income distribution may indicate the need for LDCs to develop low income decarbonization programs that are supported by higher income customers. LDCs with a larger proportion of higher-income customers may have more "first movers" or "early adopters" with respect to new or innovative space heating technologies.[9]…

[8] *See* LDC Response at 11, 16, 94 . *See also, e.g.,* LEAN Comments of May 6, 2022, *gen'ly*.
[9] E3 Report, p. 41.

> While access to brand-new appliances may be appealing, experience suggests that customers, particularly low-income customers, will not view targeted electrification projects as successful if their energy bills increase as a result. *Bill guarantees may be necessary to ensure that customers are not adversely affected by participation in targeted electrification.* (Emphasis added.)[10]

Energy unaffordability with or without the clean energy transition, remains a problem for both Massachusetts and utility customers across the country.[11] The significant spike in energy prices that is forecasted to continue[12] – in particular heating costs – has exacerbated unaffordability issues. Data from July of 2022 highlights that the situation for many residential customers continues to worsen. In July 2022, there were nearly half a million residential customers (450,403) more than 90 days behind on their energy bills, owing a total of $602.5 million dollars, or $1,338 each on average.[13] Electric bills are expected to increase by more than 60%[14] and gas bills are expected to increase by at least $200 this season, with many customers' bills expected to rise by more than $300.[15]

---

[10] *Id.* at 71.
[11] *See* NCLC Comments of May 6, 2022, at 7-8.
[12] *See* U.S. Energy Information Association winter 2022-2023 outlook at https://www.eia.gov/outlooks/steo/report/WinterFuels.php. In particular, natural gas and heating oil customers have and will experience significant price increases. *Id.*
[13] These companies include three National Grid operating companies (Massachusetts Electric Company, Boston Gas, and Colonial Gas Company); four Eversource reporting entities (Western Massachusetts and Eastern Massachusetts Electric, Eversource Gas [formerly Columbia Gas], and Eastern Massachusetts Gas), Berkshire Gas, Liberty Utilities, and Fitchburg Gas and Electric. Note: previous reports did not include data from Fitchburg Gas and Electric. DPU Docket 20-58, "Inquiry of the Department of Public Utilities into Establishing Policies and Practices for Electric and Gas Companies Regarding Customer Assistance and Ratemaking Measures in Connection to the State of Emergency Regarding the Novel Coronavirus (COVID19)" (opened May 8, 2020).
[14] Jon Chesto, Boston Globe, "Your electric bill may go up by more than 60 percent this winter: Here's why." (September 21, 2022). https://www.bostonglobe.com/2022/09/21/business/your-electric-bill-is-about-go-up-hereswhy/
[15] "NSTAR Gas and EGMA Gas Adjustment, Delivery &Cost of Gas Increases November 1, 2022 – April 30, 2023 Adjustments"; National Grid, "To help customers address increasing energy supply prices, National Grid launches the Winter Customer Savings Initiative to provide options to manage costs and secure assistance," (September 21, 2022) https://www.nationalgridus.com/News/2022/09/To-help-customers-address-increasing-energy-supply-prices,-National-Grid-launches-the-Winter-Customer-Savings-Initiative-to-provide-options-to-manage-costs-and-secureassistance/

As noted in NCLC's May 6, 2022, Comments, even the strong utility consumer protections Massachusetts that exist today, including discount rates and arrearage management programs, will likely not be enough to address the increased gas and electric costs that are coming as part of the net zero, clean energy transition. As mentioned in these previous Comments, the E3 Report notes:

> All pathways imply transformational change for the LDCs and their customers, raising substantial cost recovery and potential stranded cost challenges for those scenarios with high levels of customer departures.[16]

The E3 Report further notes that the gas delivery network cost recovery dilemma is exacerbated by the fact that investment in the gas network continues through the GSEP tariff:

> The LDCs are currently implementing system upgrades under the Gas System Enhancement Plan (GSEP) and those investments will increase the cost of the gas system and LDC revenue requirements over the coming decade, … . *As customers depart the gas system in scenarios with high levels of electrification and customer migration, the costs for remaining customers increase to impractical levels.* Those increases can be partially mitigated via measures like targeted electrification[17], which reduces the remaining rate base of the gas system by up to $4 billion in 2050. However, the degree to which cost savings from targeted electrification can be achieved is uncertain.[18] (Emphasis added.)

Unless low-income customers are protected from increases in essential utility costs during the transition, continued access to essential utility services is threatened. In addition, the need for the GSEP tariff, which subsidizes the costs of a continued replacement and investment in the gas delivery network, should be revisited by both the General Court and the DPU in light

[16] E3 Report at p. 14.
[17] "Targeted electrification" refers to a narrower approach to promoting electrification rather than to the broad population.
[18] E3 Report, pp. 14-15.

of the Commonwealth's clean energy goals.[19] The conclusions in the E3 Report related to low-income customer cost impacts associated with any transition are worth highlighting again:

> LDC customer bills rise in all pathways due to increases in both the delivery and commodity components of gas rates…
>
> - Delivery costs rise in all scenarios due to GSEP and other system upgrade initiatives. However, LDC customer impacts are most acute in scenarios with high levels of electrification as the cost of gas infrastructure is spread over rapidly declining utilization. Under the current cost allocation, this would result in inequitable outcomes where remaining customers would pay a disproportionate share of costs. *Such an outcome is particularly concerning for lower-income customers, who are less able to reduce their exposure to gas rate increases through electrification given the upfront costs.* (Emphasis added.)[20]

The E3 Report further notes:

> Should the utilization of LDC T&D infrastructure decline as a result of electrification programs, the remaining natural gas customers, absent any regulatory policy changes, will see higher volumetric rates and customer bill impacts associated with the cost recovery of the LDCs' T&D investments…[21]

Data shows that lower income households and people of color must by necessity devote a greater proportion of income to maintain basic utility service.[22] The E3 Report specifically forecasts that low-income customers that are unable to participate in decarbonization strategies ("non-migrating customers") are likely to spend an increasingly high share of their income on energy, from approximately 5% today, to over 15% in 2050.[23]

---

[19] *See* NCLC Comments of May 6, 2022, pp. 25-28.
[20] E3 Report, pp. 17-18.
[21] *Id.* at 44.
[22] ACEEE, *How High Are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burden across the United States* (Sept. 2020), available at https://www.aceee.org/topic/energy-equity.
[23] E3 Report, p. 103.

Some form of additional assistance beyond ratepayer funding through gas delivery rates will be needed to ensure that low-income customers are held harmless and not left subsidizing the cost of maintaining a gas delivery system that may increasingly become obsolete. As noted in our initial Comments, NCLC stands ready to lend its expertise to help develop new, supplemental affordability programs that go beyond Massachusetts utilities' existing discount rates, whether in the form of enhanced discounts, tiered discounts based on income, or a more targeted examination and limiting of energy burden or other affordability programs.

III. CONCLUSION

In accordance with the arguments presented above, and in NCLC's Comments filed on May 6, 2022, NCLC urges the Department to:

(1) ensure that low-income customers, who are unlikely to be able to afford the switch to clean energy appliances and migrate away from the gas utility system, be held harmless from increased utility costs associated with the transition to cleaner energy;

(2) refrain from adopting any particular pathway recommended by the LDCs and their consultants, given the significant and multi-faceted uncertainty surrounding technology development, costs of new fuels, customer adoption rates of new clean energy appliances, and whether the General Court and/or federal government will provide assistance outside of ratepayer funding to reduce transition costs;

(3) instead initiate a least-cost GHG-reduction planning process, integrated with electric grid planning, to evaluate needed infrastructure changes and fuel procurement;

(4) re-evaluate the necessity of the existing Gas System Enhancement Plan ("GSEP") tariff, which adds significant costs each month and for the foreseeable future to gas customer bills; and

(5) reject the Local Distribution Companies'[24] requested approval of a new Net Zero Enablement Plan Model Tariff ("Net Zero Tariff"), and other cost recovery proposals (in addition to the GSEP), which would enable unlimited spending on vaguely identified "transition costs" and place all financial risk associated with the transition to clean energy on ratepayers.

[24] The LDCs consist of The Berkshire Gas Company, Eversource Gas Company of Massachusetts and NSTAR Gas Company each d/b/a Eversource Energy, Fitchburg Gas and Electric Light Company d/b/a Unitil, Liberty Utilities (New England Natural Gas Company) Corp. d/b/a Liberty, and Boston Gas Company d/b/a National Grid.

Dated: October 14, 2022

Respectfully submitted,

By: _/s/___*KarenLusson*_____

Jenifer Bosco, Attorney
Karen Lusson, Attorney
National Consumer Law Center
7 Winthrop Square, 4th floor Boston, MA 02110
617-542-8010
jbosco@nclc.org
klusson@nclc.org