



NEW YORK GEOTHERMAL ENERGY ORGANIZATION

In the Matter of a Review of the Long-Term
Gas System Plan of National Fuel Gas Distribution Corporation, Case 22-G-0610

COMMENTS OF THE NEW YORK GEOTHERMAL ENERGY ORGANIZATION
ON NATIONAL FUEL GAS DISTRIBUTION COMPANIES FINAL LONG-TERM PLAN

Dated: September 5, 2023

FINAL LONG TERM PLAN COMMENT, AUGUST 17

INTRODUCTION

Following review of the National Fuel Gas Distribution Company's final long-term plan (LTP), NY-GEO is submitting the comments below. We believe the Final Long-Term should include a much greater emphasis on effective electrification and less emphasis on combustion of gasses of any type. In addition to these final LTP comments, our previous comments have been included as we believe they should also be incorporated into the final LTP.

Hybrid heating systems will not save lives, expense, nor energy in extreme cold weather. The proposed hybrid heating systems, which include both air source heat pumps and fossil fuel burning heating systems, are not the most efficient and effective for reducing emissions and saving customers lives and money for the following reasons:

Fossil fuel burning components will not work without electricity. Current and future gas space and water heating systems have electric components such as thermostats, exhaust fans, pilot mechanisms to operate these systems. Therefore, extreme weather electrical outages such as the December 2022 Buffalo tragedy, will result in the same safety risks with a hybrid system as any other modern space/water heating system.

There are existing heat pumps (both ground source and cold climate air source) that can handle the entire heating loads of buildings on heating degree days in National Fuel Service territory. Relying on a dual fuel, hybrid system of heating which creates emissions, seems contrary to the CLCPA mandates and Climate Council's scoping plan recommendations.

Two systems will cost the customer more. National Fuel proposes that initial costs will be less for a hybrid system but provides no peer reviewed data for this assumption, especially in the long term. NY-

GEO has data supporting new build residential geothermal space/hot water and cooling systems having lower installation costs than installing 2 separate systems to heat and cool a home in western New York. National Fuel does not include the very relevant long-term cost to ratepayers of depreciation/stranded assets related to the subsidized service lines and mains which bring fossil fuels to buildings. Maintenance costs of 2 systems, along with the inconvenience of more maintenance chores, will be a greater burden on customers than a single system such as a geothermal or cold climate air source heat pump system. In addition, NY-GEO notes National Fuel's filings for the gas planning proceeding¹ which compares a moderate electrification scenario to a high electrification scenario.

¹ <https://documents.dps.ny.gov/public/MatterManagement/MatterFilingItem.aspx?FilingSeq=302395&MatterSeq=62227>) estimate that a moderate electrification scenario that includes robust use of hydrogen and RNG, similar to his plan, would cost gas ratepayers 2.733 Billion by 2050, where a high electrification scenario would cost them \$1.605 Billion, a \$1.128 Billion savings. Put another way, National Fuel's plan can be projected to cause ratepayers to pay 1.7 times as much in capital expense between now and 2050 than a high electrification scenario.

REVISED PLAN COMMENT FROM JULY 15

INTRODUCTION

NY-GEO is supportive of the Commission's objective in 22-G-0610 to achieve consensus between utilities and stakeholders on the long-term plan. However, for the reasons stated below NY-GEO does not believe this version of National Fuel's revised long-term plan achieves this objective.

Cost tests do not include the negative health impacts of burning fossil gas and/or renewable natural gas (RNG). There is enough cost based research available now from credible research organizations, such as RMI and Boston University to include the negative health impacts of gas combustion in the cost testing process.

The impact of accelerated depreciation is not included in the future cost estimates of gas and thus understates the estimated costs to consumers. Waiting for a future Commission ruling and/or until the next rate case in 3 years or the next required update of the LTP seems contrary to the idea of a long range plan needed today. A realistic (as possible) depreciation estimate needs to be included in this and any future long-term plans and can build upon previous Commission-ordered studies which discussed viable methods such as "units of production."

Cap and Invest implications are not incorporated into the gas price estimates. Therefore, current gas price increase projections are understated. While there is still some uncertainty as to the exact cost impacts of a Cap and Invest program on gas prices to ratepayers, there is certainty that a cost will be incurred. It seems logical that some amount of cost be introduced at this time, or, at a minimum, a footnote should be added to the long-term plan indicating a probable higher than stated price of natural gas. The increasing cost of emission allowances plus the previously stated inevitable rise in customer depreciation costs should have a place in this LTP.

Ground Source Heat Pumps need to be part of the LTP; Not just ASHP's. The current LTP has no mention of using ground source heat pumps, relying only on conventional (not cold climate) air source heat pumps. Use of ground source heat pumps, the most energy efficient heating source, makes sense, particularly in National Fuel territory, given the colder temperatures cited by National Fuel in the LTP. The Climate Action's Council's Final Scoping Plan projects that 20 – 23% of heat pumps to be installed statewide will be ground source (Integration Analysis Appendix G. Page 133, table 19). The Integration Analysis recognizes the importance of the thermal storage capacity of ground loops in dampening peak electric demand. As this phenomenon becomes more widely recognized and current federal and state incentives begin to impact the market, NY-GEO believes the percentage of gshp's in New York's heat pump mix will need to be greater than 23% in order to increase grid utilization while minimizing the cost of building out grid infrastructure to accommodate electrification.

Other cost items that should be factored into the LTP include the 30 percent federal tax credit available for the installation of residential ground source heat pumps, the 25 percent New York State geothermal tax credit and Clean Heat program incentives. Each of these cost savings opportunities for contractors and customers positively impact the cost benefit ratio of electrification. The increase of the commercial geothermal tax credit to 30% will also be consequential in the marketplace. In addition, as it is now refundable, non-profit entities like churches, schools and hospitals located in National Fuel service territory will be able to take advantage of this substantial credit.

With few exceptions gas heating appliances will not work safely during an electric outage. NY-GEO recognizes that reliability is impacted by electric outages. However, National Fuel's implication that gas heating is more reliable/safe during an electrical outage (Executive Summary p1&2) is misleading given that the vast majority of current gas fueled space/water heating and cooking systems are dependent on electrical devices for safe operation. Both gas heating systems utilizing forced air and boiler systems have electrical components to safely operate them, as do domestic hot water systems and even many gas fireplaces. Suggesting operation of gas appliances without the designed electrical components (i.e. vents for stoves, electric fireplace starters and blower fans, electric smoke alarms) contradicts National Fuel's stated concern for customer safety. Thus, even a hybrid heating system proposed in the LTP would not operate during an electric power outage.

Inclusion of hydrogen and renewable natural gas (RNG) as a partial supplement/replacement for fossil gas for residential customers is a distraction from the main residential and small commercial electrification effort. Hydrogen and RNG are more expensive than electrification for producers and thus consumers. The use of hydrogen is not proven on the scale anticipated in this LTP. (Ground source heat pump technology is proven). It would require replacement of customers' stoves and other fossil fuel burning equipment adding additional costs to customers and/or diverting incentives that would be more effective in gshp or energy efficiency/weatherization related installation. In addition, there is limited capacity for production of RNG in New York State. Importing RNG from other states, as proposed in the LTP requires the export of money from the NYS economy. Both RNG and hydrogen will encourage continued use of expensive stranded pipeline/distribution assets that ratepayers pay for. Lastly, because hydrogen is a vastly smaller molecule than fossil gas, there is no guarantee that significant leakage would not occur.

Use of hybrid fuel systems will be an inconvenience, and a significant expense for customers. Both the electrical and gas supplied heating systems will need to be maintained and replaced at the end of their useful lives, and will consume space in customers' buildings. One reliable system such as a gshp affords customers not only more efficiency and less operating costs, but less need for maintenance and space consumption.

The LTP underutilizes thermal networks. The Climate Action Council's Scoping Plan and State legislation strongly promotes the use of thermal energy networks by utilities. Yet National Fuel's LTP indicates a goal of only one thermal energy network per year starting in 2027. Thermal energy networks present a pathway for gas utilities to transition to greater electrification. National Fuel should significantly increase the number of neighborhoods converted to thermal energy networks in their LTP.

Emissions from out of state RNG production, transportation and combustion are not counted in the LTP. This understates the true negative environmental picture and should be incorporated into the plan.

Thank you for the opportunity to comment on this case.

The New York Geothermal Energy Organization (NY-GEO) is a non-profit trade organization representing geothermal heat pump (GHP) installers, manufacturers, distributors, drillers, consultants and industry stakeholders from throughout New York State and beyond.