State of New York
Public Service Commission

Case 22-G-0610 – Order Implementing Long-Term Natural Gas Plan with Modifications

NATIONAL FUEL GAS DISTRIBUTION CORPORATION

PROPOSAL FOR 2024/25-2026/27 WINTER SEASONS

GAS DEMAND RESPONSE PILOT PROGRAMS

DATED: May 31, 2024

Introduction

National Fuel Gas Distribution Corporation ("National Fuel" or "Company") hereby submits its Proposal for Gas Demand Response Pilot Programs ("Proposal") in accordance with the New York State Public Service Commission's ("Commission") December 14, 2023, Order Implementing Long-Term Natural Gas Plan with Modifications ("Order") in Case 22-G-0610.

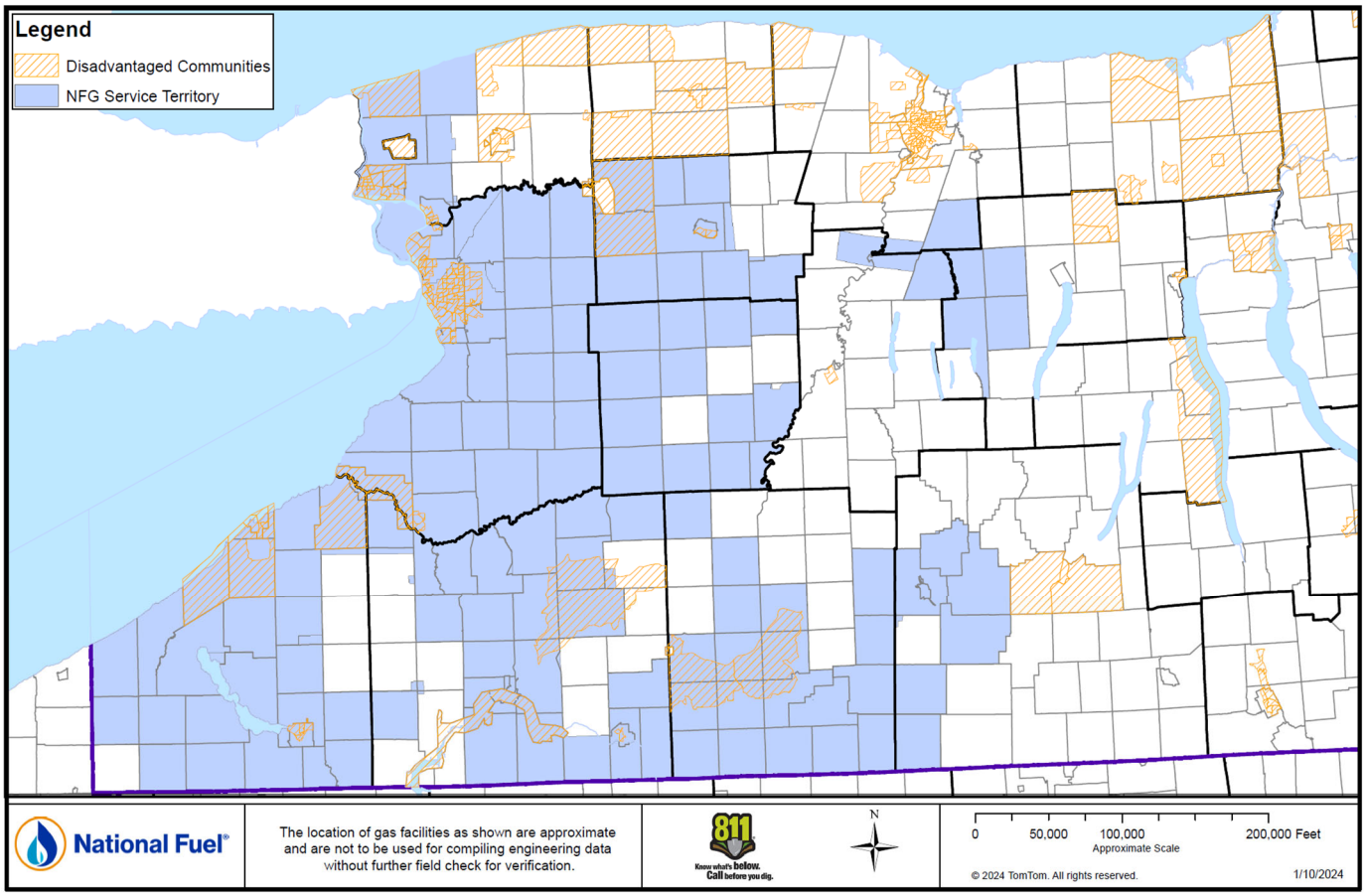
Gas demand response programs aim to reduce gas usage on the coldest days or hours of the year by incentivizing customers to voluntarily shift their usage to a different, less-constrained period. Peak load reductions can help ensure safe and reliable service for all customers, particularly for utility systems that are experiencing high firm demand growth, vulnerable areas, and upstream gas supply constraints. Other gas utilities in downstate New York have implemented demand response programs and reported them to be an effective tool in lowering peak system load requirements on the coldest of days. National Fuel has not experienced the same recent demand growth or gas supply constraint concerns as downstate gas utilities and has not previously proposed a demand response program. However, National Fuel anticipates its demand response program will reduce customers' overall gas consumption which will result in emission reductions. Now, in accordance with the Order, National Fuel is proposing the following demand response pilot programs for the program years ("PY") 2024/25 through 2026/27. A PY will run from April 1 through March 31.

As detailed in the Proposal, National Fuel proposes two pilots, one that focuses on a residential program where the customer brings its own thermostat and one that focuses on a non-residential voluntary usage reduction program for qualifying customers. With these pilot programs, National Fuel will be able to explore system impacts, emission reductions, and potential effectiveness of gas demand response programs for the Company's New York service territory.

National Fuel developed this Proposal, including specific savings targets and budgets, based on data specific to the Company's New York service territory (shown in Figure 1), a detailed review of the program plans and reports of other New York utilities with implemented gas demand response programs, and overall cost considerations. Additionally, this Proposal was developed with a focus on reasonableness and recognition that the initial implementation of these programs will provide lessons learned to support future initiatives.

Chapter 1 of this Proposal provides an overview, including objectives, budget, and projected savings and emissions reductions, as well as a brief discussion on performance metrics and reporting. Chapters 2 and 3 contain individual program descriptions, delivery details, eligibility information, budget by category and year, and projected savings by year. Chapter 4 describes the Company's approach to ensure benefits to disadvantaged communities ("DAC"), and Chapter 5 provides an overview of the Company's cost recovery mechanism and process.

Figure 1. National Fuel Gas New York Service Territory



Pending approval by the Commission, National Fuel will strive to commence the demand response pilot programs described herein for the 2024/25 heating season, starting November 1, 2024. Specific to the proposed Bring Your Own Thermostat ("BYOT") pilot program, following preliminary discussions with distributed energy resource management system ("DERMS") providers, it is anticipated that the creation of a DERMS platform and establishing the necessary agreements with smart thermostat manufacturers may take three to four months. The Company anticipates starting the contracting phase once Commission approval is obtained. Should a full roll-out not be possible by the start of the 2024/25 heating season, at least one test event (as described below) will be held by March 31, 2025, the end of the 2024/25 heating season.

1 Portfolio Overview

As shown in Figure , National Fuel plans to offer two pilot programs that serve residential and non-residential customers.

Figure 2. Pilot Demand Response Pilot Programs

Portfolio and Program Objectives

The Order directs National Fuel to file a proposal to implement demand response programs that focus on reducing peak day demand. The proposed demand response pilot programs should target different customer types, namely residential and commercial or other non-residential customers. To that end, National Fuel proposes to include the following programs:

- **BYOT Program.** National Fuel will incentivize residential and certain small commercial customers with natural gas space heating equipment and an eligible smart thermostat to enroll and participate in demand response events. The opt-out structure of events and the direct control enabled by the smart thermostats make participation easy for customers. This will support high participation rates and will allow National Fuel to aggregate many small individual customer energy savings into substantial collective demand response savings.
- **Non-Residential Demand Response Program.** National Fuel will incentivize non-residential customers with eligible annual and peak demand and meters with telemetry to enroll and participate in demand response events. As a counterpoint to the BYOT program, this program focuses on achieving larger energy savings from a smaller group of customers with the highest demand response energy savings potential.

As part of its overall Proposal, National Fuel intends to position the demand response pilot programs as a complement to its existing and future energy efficiency programs. The Company will cross-market energy efficiency and demand response programs and use customer insights and data from its many years of offering energy efficiency programs to tailor, target, and promote its demand response pilot programs.

Portfolio Budget and Energy Savings

Overall program-level budget, energy savings, and emissions reduction projections are provided below. The Order did not specify savings or budget targets for these programs. National Fuel has developed these projections with consideration of program potential, overall costs, and customer benefits.[1]

Table 1 provides a program-level budget for each year of the plan. Additional detail regarding budget allocation by program cost component is provided in the individual program-level sections below.

Table 1. Portfolio Budget

Program	2024/25	2025/26	2026/27
BYOT	$252,272	$442,508	$742,526
Non-Residential Demand Response	$169,232	$196,639	$138,107
Total	**$421,504**	**$639,147**	**$880,633**

Table 2 and Table 3 provide program-level energy savings (MMBtu) for each year of the plan. Table 2 shows project energy savings (MMBtu) during the hours of the event windows, while Table 3 shows full-day energy savings (MMBtu), both inside and outside of the event window.

Table 2. Portfolio Annual Event Window Energy Savings (MMBtu)

Program	2024/25	2025/26	2026/27
BYOT	211	804	1,764
Non-Residential Demand Response	381	688	955
Total	**593**	**1,492**	**2,719**

Table 3. Portfolio Annual Event Day Energy Savings (MMBtu)

Program	2024/25	2025/26	2026/27
BYOT	161	613	1,346
Non-Residential Demand Response	1,048	1,920	2,663
Total	**1,209**	**2,534**	**4,008**

[1] Budget, energy savings, and emissions reductions assumptions are all influenced by the number of assumed program events. National Fuel based the assumed number of program events on the average number of times the event temperature trigger was met in the winters of 2019-2020 through 2022-2023 and assumes four BYOT and load shedding events and 3 load shifting events.

Table 4 provides carbon dioxide equivalent emissions reductions (Metric Tons CO_2^e) for each year of the plan.[2] Carbon dioxide equivalent emissions reductions are calculated using emission factors consistent with the accounting used for New York State's Climate Leadership and Community Protection Act ("CLCPA").[3]

Table 4. Portfolio CO_2 Equivalent Annual Event Day Emissions Reductions (Metric Tons CO_2^e)

Program	2024/25	2025/26	2026/27
BYOT	15	59	129
Non-Residential Demand Response	100	183	254
Total	**115**	**242**	**383**

Performance Metrics and Reporting

National Fuel proposes to align reporting metrics for its demand response programs with the metrics it currently reports for energy efficiency programs through the Clean Energy Dashboard and DAC reporting. Specifically, reporting will include cost, participation, and saving metrics for the total program and by DAC and non-DAC participation. Providing this additional breakout by DAC, which will include geographic DACs and identified low- to moderate-income (LMI) customers, will allow National Fuel to monitor its contributions toward achieving the statewide CLCPA goal of ensuring that DACs receive at least 35%, with a goal of 40%, of benefits associated with energy efficiency and clean energy projects.

National Fuel proposes to submit an annual Demand Response Portfolio report to recap and share pilot program performance, lessons learned, and general observations from the preceding year. The reports shall be submitted annually by June 30.

[2] Carbon dioxide equivalent emissions reduction projections are based on reduced natural gas consumption and do not make assumptions about alternative energy usage.

[3] New York State Energy Research and Development Authority, *Fossil and Biogenic Fuel Greenhouse Gas Emission Factors*, Revised May 2023.

2 Bring Your Own Thermostat (BYOT) Pilot Program

Description

The BYOT program will be a residential and small commercial customer demand response pilot program that reduces residential heating load during windows of peak gas demand by remotely adjusting participating customers' smart thermostats. National Fuel will offer customers with qualifying smart thermostats incentives to enroll in the program and participate in program events. Customers will maintain the option to opt out of events and override the thermostat adjustments made by the program.

Eligibility

The BYOT program will be available to qualifying National Fuel residential and small commercial accounts with natural gas space heating. To qualify, customers must have accounts in good standing, have a compatible smart thermostat that is connected to an in-home Wi-Fi network, and agree to allow National Fuel to push temperature set point adjustments through their thermostat. Residential customers living in single-family, multifamily, and manufactured homes will be eligible for the program.

Additionally, small commercial customers that meet Service Classification No. 3 per the Company Tariff and utilize a compatible smart thermostat that is connected to a Wi-Fi network to control space heating will be eligible to participate in the pilot program.

Delivery

National Fuel will contract with a DERMS provider that has experience working with smart thermostat manufacturers to enroll participants and manage event thermostat adjustments for utility demand response programs to implement the BYOT program. The program will offer customers a one-time $30 incentive to enroll their smart thermostat and a $10 incentive for each event in which they participate for at least 70% of the event windows. It is anticipated that incentives will be paid through the use of electronic gift cards, delivered following enrollment or individual events.

National Fuel will limit events to the program season, occurring from November 1 through March 31 of the PY. Each event is anticipated to occur from 6:00 am to 10:00 am or 4:00 pm to 8:00 pm. Events may be called when the temperature forecast during the event window is at or below 10 degrees Fahrenheit based on the National Oceanic and Atmospheric Administration's ("NOAA") Buffalo Weather Station. National Fuel will call a maximum number of 15 events per program season. In the absence of any weather-triggered events, National Fuel will have the option, but not the obligation, of calling up to two test events per program season.

Customers will be formally notified of program events at least 20 hours in advance through opt-in communication channels, such as email or text messages. Any additional notifications prior to this formal notification will be on a best-efforts basis. Customers will have the opportunity to opt out of an event by overriding the thermostat adjustment once the event begins. Customers who opt out of an event and as a result participate for less than 70% of the event window will not receive the participation incentive for that event.

National Fuel will develop a marketing campaign to promote the BYOT program to its residential and small commercial customers. The campaign will include customers who have received an eligible thermostat through EmPower+ or a rebate for an eligible thermostat through the Residential Rebate Program as a priority audience. If customers are interested but are ineligible due to lack of a qualifying smart thermostat, they will be referred to National Fuel's existing Wi-Fi thermostat rebate, available through the Company's energy efficiency Residential Rebates Program, or to NYSERDA's EmPower+ program, which provides no-cost energy efficiency measures, including smart thermostats, to LMI customers.

National Fuel reserves the right to cancel a customer's participation in the program if they participate in fewer than 15% of event hours during a program season.

Budget

Table 5 shows the anticipated budget for the BYOT program. Administration costs included in this table do not include National Fuel labor costs, which are included in the Company's operating and maintenance expenses.

Table 5. Budget by Category

Category	2024/25	2025/26	2026/27
Enrollment & Participation Incentives	$56,106	$184,390	$357,541
Implementation & Vendor	$126,166	$168,118	$349,985
Marketing, Outreach, and Education	$65,000	$30,000	$30,000
Administration	$5,000	$5,000	$5,000
Evaluation, Measurement, & Verification		$55,000	
Total	**$525,272**	**$442,508**	**$742,526**

Energy Savings

Table 6 and Table 7 show the projected energy savings by year and total for the BYOT program. Table 6 shows project energy savings (MMBtu) during the four-hour event windows, while Table 7 shows full-day energy savings (MMBtu), both inside and outside of the event window. Event window energy savings are projected to be higher than event day savings because National Fuel anticipates that when participants' thermostats reset at the end of the event window, they will have increased gas demand as their home heating systems return the home temperatures back to the original set points. For projected equivalent event day emissions reductions, please see Table 4.

Table 6. Projected Annual Event Window Energy Savings (MMBtu)

2024/25	2025/26	2026/27
211	804	1,764

Table 7. Projected Annual Event Day Energy Savings (MMBtu)

2024/25	2025/26	2026/27
161	613	1,346

3 Non-Residential Demand Response Pilot Program

Description

National Fuel's Non-Residential Demand Response Pilot Program will include two program offerings:

- **Load Shedding** is designed to reduce gas demand on peak days. The offering will target customers who are able to curtail their gas demand by limiting usage of non-heating gas equipment or switching from gas heating to an alternative non-gas heating system or fuel source. The offering may call events in both the morning and the evening.
- **Load Shifting** is designed to provide customers who can delay but not remove gas demand over a full day an option to participate by shifting their gas demand to another time of day to support peak hour usage reduction. The offering will only call morning events.

Both offerings will afford eligible non-residential customers the opportunity to earn incentives for reducing peak day gas demand during the four-hour program event windows.

Eligibility

National Fuel's Non-Residential Demand Response Pilot Program will be open to firm service commercial and industrial ("C&I") customers with at least 5,000 Mcf of gas usage per year and peak usage of at least one Mcf per hour. Customers must also have a National Fuel gas meter with telemetry. Customers who enroll in the load-shedding offering must be able to limit use of non-heating gas equipment or switch from gas heating to an alternative non-gas heating system or fuel source to achieve their gas demand reduction commitment.

Delivery

Through the Non-Residential Demand Response Pilot Program, eligible customers will earn incentives for committing to specified gas demand reductions and then achieving those reductions when events are called by the Company.

National Fuel will limit events to the program season, occurring from November 1 through March 31 of the PY. Each event for the load-shedding offering will occur from 6:00 am to 10:00 am or 4:00 pm to 8:00 pm. Each event for the load-shifting offering will occur from 6:00 am to 10:00 am. Events may be called when the temperature forecast during the event window is at or below 10 degrees Fahrenheit based on NOAA's Buffalo Weather Station. National Fuel will call a maximum number of 15 events per season. In the absence of any weather-triggered events, National Fuel will have the option, but not the obligation, of calling up to two test events per program season.

National Fuel will offer a $40/Mcf/average winter month demand reduction commitment incentive, not to exceed $5,000, and a $25/Mcf performance incentive for reductions achieved during events. The demand response commitment incentive will be available to eligible customers only once during the program years and will be paid in two installments: 50% following acceptance of the commitment, and 50% at the end of their first season if they participate in more than half of the demand response events.

Performance incentives will be based on the gas reduction achieved, as determined by metered gas usage relative to a calculated baseline. Customers who do not sustain decreased usage and as a result participate for less than 50% of the event window will not receive the participation incentive for that event. Customers must have a Company gas meter with telemetry in order to confirm participation.

National Fuel will formally notify enrolled customers of events at least 20 hours before the start of an event window. Any additional notifications prior to this formal notification will be on a best-efforts basis. Notifications will be through opt-in communications channels selected by the customer. Customers will be responsible for making the adjustment to achieve gas demand reduction (the program does not include a direct load control option).

While anticipated to be handled in-house initially, National Fuel may contract with a program implementer who will support customer enrollment and review customer demand reduction commitments, event reduction calculations, and providing incentive payments. Incentive payments following enrollment and individual events may be paid through account credits.

National Fuel will develop a marketing campaign to support its Non-Residential Demand Response Pilot Program. The campaign will leverage relationships developed and lessons learned through support of the Company's Non-Residential Energy Efficiency Rebate Program.

Budget

Table 8 shows the anticipated budget for the Non-Residential Demand Response Pilot Program. Administration costs included in this table do not include National Fuel labor costs, which are included in the Company's operating and maintenance expenses.

Table 8. Budget by Category

Category	2024/25	2025/26	2026/27
Enrollment & Participation Incentives	$54,232	$46,639	$53,107
Implementation	$60,000	$60,000	$60,000
Marketing, Outreach, and Education	$50,000	$20,000	$20,000
Admin Costs	$5,000	$5,000	$5,000
Evaluation, Measurement, & Verification		$65,000	
Total	**$169,232**	**$196,639**	**$138,107**

Energy Savings

Table 9 and Table 10 show the projected energy savings by year and total for the Non-Residential Demand Response Pilot Program. Table 9 shows project energy savings (MMBtu) during the four-hour event windows, while Table 10 shows full-day energy savings (MMBtu), both inside and outside of the event window. Total event day savings are projected to be higher than event window savings because National Fuel anticipates that load-shedding participants will achieve savings throughout the event day and this will be larger than any usage snapback from load-shifting participants. For projected equivalent event day emissions reductions, please see Table 4.

Table 9. Projected Annual Event Window Energy Savings (MMBtu)

Offering	2024/25	2025/26	2026/27
Load Shedding	357	663	918
Load Shifting	24	24	37
Total	**381**	**688**	**955**

Table 10. Projected Annual Event Day Energy Savings (MMBtu)

Offering	2024/25	2025/26	2026/27
Load Shedding	1,018	1,891	2,618
Load Shifting	29	29	44
Total	**1,048**	**1,920**	**2,663**

4 Ensuring Benefits to DAC and LMI Customers

National Fuel is committed to providing meaningful benefits to customers in DACs and LMI customers in its service territory. To that end, National Fuel will track and report the benefits and costs of demand response programs by DAC and LMI participation. National Fuel will map participating customers based on their service address as DAC or non-DAC and will additionally flag and track LMI participants if they are known to have participated in EmPower+ or are an Energy Affordability Program participant. This tracking will help National Fuel quantify how program costs and benefits accrue to the DACs with a focus on contributing to the achievement of the statewide goal of no less than 35% of the overall benefits directed to DACs, as directed by the CLCPA.

National Fuel recognizes that some portion of customers in DACs or who are LMI customers lack in-home Wi-Fi networks and are therefore ineligible for participation in the BYOT program. As of the date of this submission, no widely available smart thermostat devices exist that may connect through cellular networks or some other means. Should such devices be developed and made available during the program years, Company will consider distributing these in DACs or to LMI customers to allow for participation of households without in-home Wi-Fi.

Additionally, National Fuel will take specific steps to deliver greater benefits to the DAC and LMI customers in its service territory. Specifically, National Fuel proposes the following:

- Prioritize program marketing to DAC and LMI customers.
- Provide program marketing materials in multiple languages.
- Work with NYSERDA to identify LMI customers who have received qualifying smart thermostats through the EmPower+ program and promote the BYOT program to those customers.
- Coordinate program promotion through the local clean energy hub.
- Should a participant's account be in arrears during their time with the program, the Company will direct them to other programs that may improve their standing, such as the Home Energy Assistance Program.

In addition to the items listed above, National Fuel will continue to look for additional outreach and education opportunities with DACs and LMI customers.

5 Cost Recovery Mechanism and Process

The Company is seeking to recover annual program costs on a lag through a surcharge within the Delivery Adjustment Charge. The Company intends to track and defer all eligible program costs incurred over the course of each program year and develop a rate effective for a 12-month period that would begin on July 1 that would be designed to recover all program costs incurred during the prior program year. The costs in the first year will include deferred costs of the consultant study and all reasonable external operations and maintenance costs related to the development of the Proposal and implementation plan.