



**National Fuel®**

**SAFE. RELIABLE. AFFORDABLE. SUSTAINABLE.**





## Dear Stakeholder,

Thank you for taking the time to read National Fuel Gas Company's 2022 Corporate Responsibility Report ("Report"). This Report builds on our previous disclosures, highlighting the Company's efforts to continue enhancing its environmental, social and governance initiatives, and our commitment to the sustainable and responsible production, storage, transportation, and distribution of natural gas. Across our organization, we remain driven by our guiding principles of Safety, Environmental Stewardship, Community, Innovation, Satisfaction and Transparency. Consistent with our more than 120-year operating history, National Fuel has maintained its focus on safely, reliably, and affordably providing critical energy supplies to consumers. Additionally, we remain focused on efforts to reduce our carbon footprint and build a culture focused on safety and diversity.

### Our Important Role in the Energy Future

I firmly believe that natural gas will continue to play a critical role in the energy ecosystem as we work toward a lower carbon future. As a safe, abundant, domestically produced, readily dispatchable, and affordable energy solution, natural gas provides an excellent complement to renewable energy, while supporting state and federal climate objectives. I strongly support a rational and measured "all-of-the-above" approach to the energy transition that leverages reliable and resilient natural gas infrastructure to transport energy supplies to our communities. This approach will importantly maintain energy reliability and affordability for consumers.

## Reliability

The reliability of our natural gas system was more apparent than ever in the multi-day winter storm that Western New York experienced in December 2022. Despite incredibly harsh winter weather conditions, with maximum wind gusts reaching 79 mph, 50.3 inches of snowfall, and sustained temperatures below 5 degrees (Fahrenheit), our dedicated and talented workforce safely operated the business which resulted in minimal customer outages. In addition, our Pipeline & Storage business met firm storage and transportation service obligations with near 100% reliability during calendar year 2022, providing dependable service to customers, including natural gas utilities, during peak winter conditions when they and their customers needed it the most. Similarly, despite periods of severe winter weather, our Exploration & Production and Gathering businesses experienced limited operational impacts in 2022, illustrating the integrity and reliability of our facilities.

## Sustainability

National Fuel continues to make significant investments to ensure the long-term safety, reliability and integrity of our system and assets. In addition, we continue to take significant decarbonization steps through further system modernization, best management practices, and embracing new and emerging technology, all with the goal of achieving the emissions reduction goals that we've established. Some of our 2022 accomplishments include:

- **Making Progress Toward Emissions Reduction Targets:** Our subsidiaries made further progress toward their methane intensity reduction targets, with progress to date ranging from 8.3% to 27.4%, as compared to 2020 baselines.



National Fuel has maintained its focus on safely, reliably, and affordably providing critical energy supplies to consumers.



**David P. Bauer**  
President and Chief Executive Officer

- **Responsibly Sourced Natural Gas Production:** Our Upstream Segment successfully completed the annual re-verification process required to maintain certification of 100% of our natural gas production under Equitable Origin's EO100™ Standard for Responsible Energy Development. In addition, our Upstream Segment achieved certification of 100% of its Appalachian natural gas production under the MiQ Standard for Methane Emissions Performance at the highest certification level, an "A" grade.
- **Emissions Reduction Programs:** In 2022, Supply's FM100 project entered its first full year of operations. This project, which incorporates best-in-class emissions controls, such as vent gas recovery, is a great example of how we can expand our pipeline system while at the same time reduce the methane intensity of our operations.
- **Energy Conservation Efforts:** In New York, our Downstream Segment's Conservation Incentive Program ("CIP") continued to drive end-use emissions reductions. Since inception, the program is responsible for a cumulative total reduction of approximately 1.5 million metric tons of carbon dioxide emissions. The CIP is comprised of various programs designed to reduce our customers' energy usage, including a residential and non-residential rebate program, outreach, and education.



## Building a Culture Focused on Safety and Inclusion

Safety is a core value and guiding principle at National Fuel. We value the safety of our customers, employees, and communities, and work diligently to ensure that safety is embedded into everything we do across our integrated businesses. Throughout this Report, you will see the numerous ways in which safety is an integral part of our day-to-day operations. I am proud of the safety culture that we have built, and strongly believe that our steadfast commitment to our well-established and robust safety programs will allow us to continue to safely and reliably serve our customers.

Additionally, the Company recognizes that building a diverse and inclusive workforce is critical to our long-term success. Improving diversity in the workplace continues to be a focus of the Company. In 2022, we undertook several steps in this area, including implementing diversity-focused recruitment initiatives, offering diversity and inclusion training for employees, and fostering inclusion through the support of our various employee resource groups. The Company also recognizes the importance of supplier diversity, and in 2022, we took steps to ensure that diversity is considered when identifying and on-boarding our suppliers.

National Fuel, supported by its dedicated and talented workforce, has an outstanding history of safely and reliably producing, transporting and delivering natural gas to the communities we serve. Looking forward, our strong safety culture and continued focus on the sustainability and reliability of our operations, combined with our commitment to continuous improvement across the entire organization, positions us well for future success. We look forward to further reporting on our progress in the coming years.



**David P. Bauer**

President and Chief Executive Officer



## Report Overview and Highlights

This Report provides discussion and analysis of National Fuel's ESG metrics, the Company's management of those metrics, and the programs and policies in place to achieve National Fuel's commitment to the safe and environmentally conscious operation of its business. The Report includes updated ESG disclosures from January 1–December 31, 2022, and as appropriate, significant developments that have occurred since the end of this reporting period.

Disclosures within the Report are aligned with the Sustainability Accounting Standards Board (SASB) framework for each of National Fuel's principal business Segments, referred to within the Report as the Company's Downstream, Midstream, and Upstream segments, respectively, as well as certain disclosures under the Global Reporting Initiative ("GRI") standards. Additionally, in line with National Fuel's commitment to continuously improving our corporate responsibility and sustainability initiatives, including our ESG disclosures, the Report builds on our previous disclosures to include supplemental information in line with the TCFD framework, and enhances our emissions, and diversity and inclusion-focused, disclosures. A detailed listing of the location of the Company's ESG disclosures within this Report, by framework and subject area, is located in the Appendix.

## Report



### GRI-Referenced Standards

- Governance and Social metrics

### SASB

- Downstream (Gas Utilities and Distributors)
- Midstream (Oil & Gas – Midstream)
- Upstream (Oil & Gas – Exploration & Production)

### TCFD

- Governance of sustainability
- Strategy concerning potential impacts of climate-related risks and opportunities and resiliency of our strategy under climate-related scenarios
- Risk management process to identify, assess and manage climate-related risks
- Metrics and targets used to assess and manage climate-related risks and opportunities

## Report Highlights

The Company is committed to continuously improving our corporate responsibility initiatives. Our Report builds on past disclosures with a focus on:

- Climate-related risks, opportunities and resiliency
- Progress towards emissions targets and sustainability initiatives related to emissions reductions
- Waste management program and metrics
- Internal audit review prior to publication
- Independent third-party verification of emissions data ([Appendix C](#))

## Company Overview

National Fuel is a holding company organized under the laws of the state of New Jersey and headquartered in Western New York. The Company is a diversified energy company engaged principally in the onshore production, gathering, transportation, and distribution of natural gas. The Company operates an integrated business, with assets centered in Western New York and Pennsylvania, being used for, and benefiting from, the production and transportation of natural gas from the Appalachian basin. Current natural gas production development activities are focused in the Marcellus and Utica shales, geological shale formations that are present nearly a mile or more below the surface in the Appalachian region of the United States. Pipeline development activities are designed to gather, store and transport natural gas production to new and growing markets. The common geographic footprint of the Company's subsidiaries enables them to share certain management, labor, facilities, and support services across various businesses and pursue coordinated projects designed to produce and transport natural gas from the Appalachian basin to markets in the eastern United States and Canada. The Company previously developed and produced oil reserves, primarily in California, prior to the divestiture of these assets on June 30, 2022. The Company reports financial results for four business segments: Exploration and Production, Pipeline and Storage, Gathering, and Utility.



## Downstream

National Fuel Gas Distribution Corporation ("Distribution Corporation" or "Downstream Segment"), a New York corporation, carries out the Company's Utility operations. Distribution Corporation provides natural gas utility services to approximately 754,000 customers through a local distribution system located in Western New York and northwestern Pennsylvania. The principal metropolitan areas served by Distribution Corporation include Buffalo, Niagara Falls and Jamestown, New York and Erie and Sharon, Pennsylvania.



## Midstream

The Company's Midstream operations are carried out by the Company's Pipeline & Storage and Gathering subsidiaries (collectively the "Midstream Segment"). National Fuel Gas Supply Corporation ("Supply Corporation"), a Pennsylvania corporation, and Empire Pipeline, Inc. ("Empire"), a New York corporation, carry out the Company's Pipeline & Storage operations. Supply Corporation and Empire provide interstate natural gas transportation and storage services through integrated gas pipeline systems in Pennsylvania and New York. Wholly-owned subsidiaries of National Fuel Gas Midstream Company, LLC ("Midstream Company"), a Pennsylvania limited liability company, carry out the Company's Gathering operations. Through these subsidiaries, Midstream Company builds, owns, and operates natural gas gathering and compression facilities in the Appalachian region.



## Upstream

Seneca Resources Company, LLC ("Seneca"), a Pennsylvania limited liability company, carries out the Company's Exploration & Production operations. Seneca is engaged in the exploration for, and the development and production of, natural gas in the Appalachian region of the United States.



# Our Guiding Principles

National Fuel understands that to deliver long-term sustainable value for the benefit of stakeholders – shareholders, employees, customers, and communities where we operate – we must continue to conduct our business activities in a way that promotes our six guiding principles. These principles underpin all aspects of our operations, as well as our daily interactions with our stakeholders.



## Safety

We value the safety of all our customers, employees and communities, and work diligently to establish a culture of safety that is embraced throughout the entire organization.



## Environmental Stewardship

Environmental protection and conservation of resources are high priorities for National Fuel. We utilize procedures, technologies, and best management practices across our businesses to develop, build, and operate our assets in a manner that respects and protects the environment.



## Community

We are committed to the health and vitality of the local communities where we operate. We work where we live and raise our families, and are constantly focused on the highest standards of corporate responsibility and accountability.



## Innovation

We strive to exceed the standards for safe, clean and reliable energy development, embracing new technologies and investing in the future of our regions' energy resources. We envision a long and healthy future for our Company.



## Satisfaction

We work to deliver reliable, high-quality service for our customers. We want our shareholders to see a strong return on their investment. We want our employees to work in a positive, safe and rewarding environment. We want our communities to be proud to call us neighbors.



## Transparency

We believe that open communication is key to maintaining strong relationships. We see value in educating our shareholders, employees, customers and communities about all aspects of our business.

# SAFE.

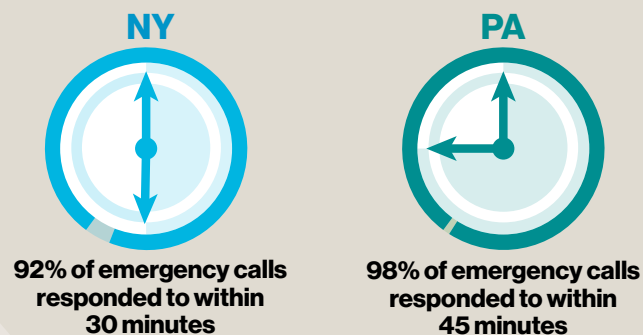
National Fuel's number one priority is the safety of our customers, employees and communities where we operate. We continuously focus on system integrity, making natural gas a safe, viable option for our customers.

## Continually Strengthening Our Safety Culture

- Aggressive System Modernization Program
- Leak Management Program
- Comprehensive Integrity Management Program
- Customer Outreach and Education on Safety
- Rapid Emergency Response
- Accelerated Leak Surveys
- Damage Prevention Programs
- Pipeline Safety Management System
- Employee and Contractor Training and Qualification
- Safety Culture Programs



## 2022 Utility Emergency Response Time





**RELIABLE.** Given our weather-hardened infrastructure, natural gas remains a reliable and resilient option for our customers at all times of the year.



- ✓ **Distribution Corporation had minimal customer (~15) outages while battling more than 50" of snow over 4 days.**
- ✓ **Midstream Segment had near 100% reliability during fiscal year 2022 and served peak demand without incident.**
- ✓ **Upstream Segment kept production flowing in sub-zero temperatures during Winter Storm Elliott.**

# AFFORDABLE.

Distribution Corporation remains #1 in affordability for its New York and Pennsylvania service territories compared to other companies in each state.

## Focus on Affordability



New York

#1 State Rates  
(out of 8 Utilities)  
Northeast – #1 Rates  
(out of 26)

#1 State Rates  
(out of 6 Utilities)  
Northeast – #3 Rates  
(out of 26)

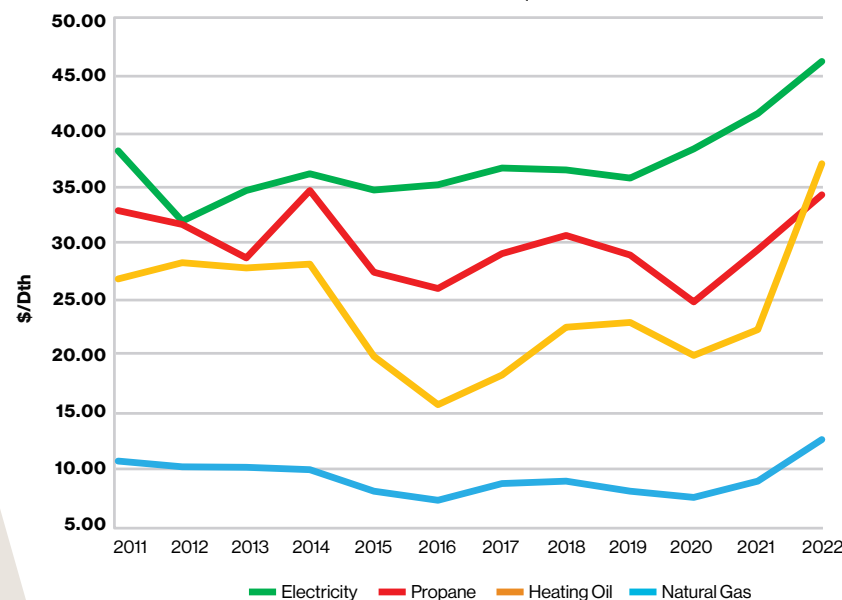


Pennsylvania

Since 2009, the average retail residential customer in New York and Pennsylvania has seen a decrease of \$250 and \$402, respectively, on their annual natural gas bills.

## Affordability of Natural Gas

Combined Service Territory Average Residential Rates  
2011-2022 \$/Dth Equivalent



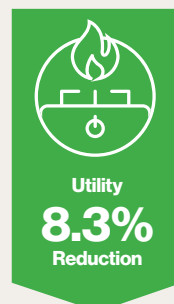
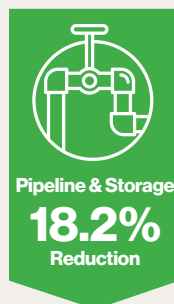
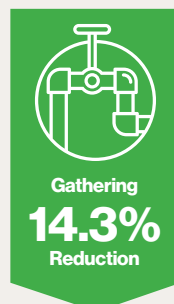
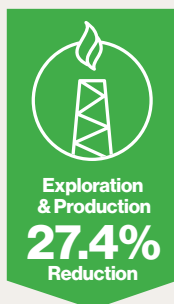


# SUSTAINABLE.

We believe natural gas remains an integral part of the transition to a low-carbon economy. As we continue analyzing potential decarbonization actions, National Fuel is committed to developing responsibly sourced gas, maintaining a safe and sustainable system, and pursuing responsible GHG emissions reduction initiatives.

## Methane Intensity Targets

Reduction  
Since  
2020



2030  
Target



Focused on driving emissions reductions through new initiatives and technologies.



Procedures across every segment to protect the environment and mitigate biodiversity impacts.



Committed to reducing waste quantities generated throughout our operations.



## Consolidated Data Tables Posted: September 11, 2023

This workbook contains a consolidated view of our ESG metrics for years 2020, 2021, and 2022. Our disclosure primarily uses the standards of the Sustainability Accounting Standard's Board (SASB), but it also encompasses sustainability data considered under our Task Force on Climate-Related Financial Disclosures (TCFD) reporting. This information is presented in our Report with more detail. Total values between charts may vary slightly due to conventional rounding.

### Downstream Segment

Scope 1 & 2 Emissions Intensity (kg CO <sub>2</sub> e/BOE)	2020	2021	2022
<b>Utility (NY)</b>			
Methane Emissions Intensity	14.0	13.2	12.7
Greenhouse Gas Emissions Intensity	14.4	13.7	13.2
<b>Utility (PA)</b>			
Methane Emissions Intensity	15.6	14.5	14.4
Greenhouse Gas Emissions Intensity	16.1	15.0	14.9
<b>Utility (All)</b>			
Methane Emissions Intensity	14.5	13.6	13.3
Greenhouse Gas Emissions Intensity	15.0	14.1	13.7
<b>Scope 1 Greenhouse Gas Emissions (Metrics Tons CO<sub>2</sub> e)</b>			
<b>Utility (NY)</b>			
EPA Subpart W Mandatory Reporting	171,000	163,165	154,240
Additional EPA Subpart W Facilities	1,556	1,505	1,373
Other Sources	65,502	65,560	65,619
<b>Total Utility (NY)</b>	<b>238,058</b>	<b>230,230</b>	<b>221,232</b>
<b>Utility (PA)</b>			
EPA Subpart W Mandatory Reporting	96,861	94,088	90,742
Additional EPA Subpart W Facilities	110	0	198
Other Sources	30,226	30,190	30,312
<b>Total Utility (PA)</b>	<b>127,197</b>	<b>124,278</b>	<b>121,252</b>
<b>Utility (All)</b>			
EPA Subpart W Mandatory Reporting	267,861	257,253	244,982
Additional EPA Subpart W Facilities	1,666	1,505	1,571
Other Sources	95,728	95,750	95,931
<b>Total Utility (All)</b>	<b>365,256</b>	<b>354,508</b>	<b>342,484</b>

Methane (CH <sub>4</sub> ) Emissions (Metrics Tons)	2020	2021	2022
<b>Utility (NY)</b>			
EPA Subpart W Mandatory Reporting	6,099	5,820	5,502
Additional EPA Subpart W Facilities	56	54	49
Other Sources	2,105	2,091	2,097
<b>Total Utility (NY)</b>	<b>8,260</b>	<b>7,964</b>	<b>7,648</b>
<b>Utility (PA)</b>			
EPA Subpart W Mandatory Reporting	3,456	3,356	3,237
Additional EPA Subpart W Facilities	4	0	7
Other Sources	963	953	955
<b>Total Utility (PA)</b>	<b>4,423</b>	<b>4,309</b>	<b>4,199</b>
<b>Utility (All)</b>			
EPA Subpart W Mandatory Reporting	9,555	9,176	8,739
Additional EPA Subpart W Facilities	60	54	56
Other Sources	3,068	3,044	3,053
<b>Total Utility (All)</b>	<b>12,683</b>	<b>12,273</b>	<b>11,847</b>
<b>Scope 2 Emissions (Metrics Tons CO<sub>2</sub> e)</b>			
New York	730	603	534
Pennsylvania	552	506	452
<b>Total Utility (All)</b>	<b>1,282</b>	<b>1,109</b>	<b>986</b>

continued



## Downstream Segment (continued)

Downstream and Midstream Waste Summary <sup>1</sup>		2022
<b>Solid Waste Weight (MT)- Hazardous</b>		
Incineration		4.63
Landfill		2.61
Recovery		0.32
Recycled		0.80
<b>Hazardous Total</b>		<b>8.36</b>
<b>Solid Waste Weight (MT)- Non- Hazardous</b>		
Incineration		18.16
Landfill		400.77
Recovery		3.76
Recycled		1,277.25
<b>Non- Hazardous Total</b>		<b>1,699.94</b>
<b>Total Solid Waste</b>		<b>1,708.30</b>
<b>Liquid Waste Weight (MT)- Hazardous</b>		
Incineration		189.00
Landfill		5.24
Recovery		30.00
Recycled		1.31
Reuse		1.31
<b>Hazardous Total</b>		<b>226.86</b>
<b>Liquid Waste Weight (MT)- Non- Hazardous</b>		
Incineration		1,159.93
Landfill		17.02
Recovery		16,464.08
Recycled		870.76
Reuse		2,392.55
Non-Hazardous Total		20,904.34
<b>Total Liquid Waste</b>		<b>21,131.20</b>

<sup>1</sup> 2022 is the first year of publicly quantifying waste management data.

OSHA Total Recordable Incident Rate (TRIR) (Fiscal Year October 1 to September 30)	2020	2021	2022
TRIR	2.88	2.45	3.46
Injuries	37	31	42
Hours Worked	2,572,247	2,525,864	2,578,906
<b>OSHA Days Away, Restricted, or Transferred Rate (DART) (Fiscal Year October 1 to September 30)</b>			
DART	2.57	1.74	2.25
Incidents	33	22	29
Hours Worked	2,572,247	2,525,864	2,578,906
<b>Average Retail Gas Rates (per MCF)</b>			
<b>Bundled Retail Sales</b>			
Residential	\$7.91	\$8.97	\$11.31
Commercial	\$7.07	\$8.11	\$10.45
Industrial	\$6.28	\$7.45	\$9.50
<b>Total Retail</b>	<b>\$7.79</b>	<b>\$8.85</b>	<b>\$11.18</b>
<b>Transportation Sales</b>			
Residential	\$3.99	\$4.10	\$3.88
Commercial	\$2.18	\$2.25	\$2.25
Industrial	\$0.76	\$0.77	\$0.84
<b>Total Transportation</b>	<b>\$1.69</b>	<b>\$1.63</b>	<b>\$1.66</b>

## Midstream Segment

Scope 1 & 2 Emissions Intensity (kg CO <sub>2</sub> e/BOE)	2020	2021	2022
<b>Pipeline &amp; Storage (Supply Corporation &amp; Empire)</b>			
Methane Emissions Intensity	2.49	1.89	2.03
Greenhouse Gas Emissions Intensity	4.82	4.33	4.41
<b>Gathering (Midstream Company)</b>			
Methane Emissions Intensity	2.45	2.17	2.11
Greenhouse Gas Emissions Intensity	9.01	8.38	7.87
<b>Midstream Segment</b>			
Methane Emissions Intensity	2.47	1.99	2.06
Greenhouse Gas Emissions Intensity	6.22	5.70	5.64
<b>Scope 1 Greenhouse Gas Emissions (Metrics Tons CO<sub>2</sub> e)</b>			
<b>Empire</b>			
EPA Mandatory Reporting Sources	31,145	94,816	87,576
Additional EPA Sources	24,129	3,814	1,501
Other Sources	4,605	7,482	7,482
<b>Total Empire</b>	<b>59,879</b>	<b>106,112</b>	<b>96,559</b>
<b>Supply Corporation</b>			
EPA Mandatory Reporting Sources	288,389	256,773	277,514
Additional EPA Sources	184,517	156,643	177,252
Other Sources	10,375	10,786	14,137
<b>Total Supply Corporation</b>	<b>483,281</b>	<b>424,202</b>	<b>468,903</b>
<b>Midstream Company</b>			
EPA Mandatory Reporting Sources	506,979	514,740	542,873
Additional EPA Sources	8,221	12,660	11,837
Other Sources	615	665	709
<b>Total Midstream Company</b>	<b>515,815</b>	<b>528,065</b>	<b>555,419</b>
<b>Midstream Segment</b>			
EPA Mandatory Reporting Sources	826,513	866,329	907,963
Additional EPA Sources	216,867	173,117	190,590
Other Sources	15,595	18,933	22,329
<b>Total Midstream Segment</b>	<b>1,058,975</b>	<b>1,058,379</b>	<b>1,120,882</b>

Scope 1 Methane Emissions (Metrics Tons CH <sub>4</sub> as CO <sub>2</sub> e)	2020	2021	2022
<b>Empire</b>			
EPA Mandatory Reporting Sources	3,573	5,194	6,230
Additional EPA Sources	4,011	3,315	1,319
Other Sources	4,600	7,475	7,475
<b>Total Empire</b>	<b>12,184</b>	<b>15,984</b>	<b>15,024</b>
<b>Supply Corporation</b>			
EPA Mandatory Reporting Sources	111,394	96,270	119,081
Additional EPA Sources	152,378	114,826	118,065
Other Sources	7,186	7,442	10,780
<b>Total Supply Corporation</b>	<b>270,958</b>	<b>218,538</b>	<b>247,926</b>
<b>Midstream Company</b>			
EPA Mandatory Reporting Sources	138,582	134,962	147,321
Additional EPA Sources	1,217	1,632	1,236
Other Sources	511	526	536
<b>Total Midstream Company</b>	<b>140,310</b>	<b>137,120</b>	<b>149,093</b>
<b>Midstream Segment</b>			
EPA Mandatory Reporting Sources	253,549	236,426	272,632
Additional EPA Sources	157,606	119,773	120,620
Other Sources	12,297	15,443	18,791
<b>Total Midstream Segment</b>	<b>423,452</b>	<b>371,642</b>	<b>412,043</b>
<b>Scope 2 Emissions (Metrics Tons CO<sub>2</sub> e)</b>			
Empire	881	1,634	582
Supply Corporation	4,738	4,490	4,400
Midstream Company	629	794	843
<b>Total Midstream Segment</b>	<b>6,248</b>	<b>6,918</b>	<b>5,825</b>

continued



## Midstream Segment (continued)

Air Emissions (Metric Tons)	2020	2021	2022
<b>Empire</b>			
No <sub>x</sub>	18	24	26
So <sub>x</sub>	2	3	4
VOC	3	4	5
PM	1	2	2
<b>Supply Corporation</b>			
No <sub>x</sub>	448	411	412
So <sub>x</sub>	4	3	3
VOC	268	245	250
PM	25	14	14
<b>Midstream Company</b>			
No <sub>x</sub>	317	330	355
So <sub>x</sub>	3	3	3
VOC	91	77	91
PM	13	16	16
<b>Midstream Segment</b>			
No <sub>x</sub>	783	765	793
So <sub>x</sub>	9	9	10
VOC	362	326	346
PM	39	32	32

OSHA Total Recordable Incident Rate (TRIR) (Fiscal Year October 1 to September 30) <sup>1</sup>	2020	2021	2022
TRIR	0.48	0.94	1.38
Injuries	2	4	6
Hours Worked	836,072	848,934	870,090
<b>OSHA Days Away, Restricted, or Transferred Rate (DART) (Fiscal Year October 1 to September 30)</b>			
DART	0.24	0.71	0.92
Incidents	1	3	4
Hours Worked	836,072	848,934	870,090

<sup>1</sup> 2020 and 2021 values for the Midstream Segment are restated to include the Midstream Company.

# Upstream Segment

## Seneca

Scope 1 & 2 Emissions Intensity (kg CO <sub>2</sub> e/BOE)	2020	2021	2022
Methane Emissions Intensity	2.70	2.58	1.96
Greenhouse Gas Emissions Intensity	4.37	4.32	3.67
<b>Scope 1 Methane Emissions (Metrics Tons CH<sub>4</sub> as CO<sub>2</sub>e)</b>			
EPA Mandatory Reporting Sources	159,109	158,700	130,665
Other Sources	407	447	455
<b>Total</b>	<b>159,516</b>	<b>159,147</b>	<b>131,120</b>
<b>Scope 1 Greenhouse Gas Emissions (Metrics Tons CO<sub>2</sub>e)</b>			
EPA Mandatory Reporting Sources	229,950	247,575	227,046
Other Sources	29,607	18,537	17,973
<b>Total</b>	<b>259,557</b>	<b>266,112</b>	<b>245,019</b>
<b>Scope 2 Emissions (Metrics Tons CO<sub>2</sub>e)</b>	430	404	463
<b>Criteria Pollutant Emissions (Metric Tons)</b>			
CO	97.58	121.02	138.85
No <sub>x</sub>	334.37	456.86	503.58
PM-10	14.07	14.77	16.25
So <sub>x</sub>	0.62	0.81	0.82
VOC	41.78	48.93	49.04

All Non-Hazardous Waste <sup>1</sup>	Liquid Waste (in bbls)	Solid Waste (in tons)
Injection	284	—
Landfilled	—	97,312
Recycled	1,514	46
Reused	345,350	—
<b>Total</b>	<b>347,148</b>	<b>97,358</b>

## Highland Field Services

Scope 1 Methane Emissions (Metrics Tons CH <sub>4</sub> as CO <sub>2</sub> e)			2022
EPA Mandatory Reporting Sources			0
Other Sources			13
<b>Total</b>			<b>13</b>
<b>Scope 1 Greenhouse Gas Emissions (Metrics Tons CO<sub>2</sub>e)</b>			
EPA Mandatory Reporting Sources			0
Other Sources			14,467
<b>Total</b>			<b>14,467</b>
<b>Scope 2 Emissions (Metrics Tons CO<sub>2</sub>e)</b>			607
<b>Highland Field Services Pollutant Emissions (Metric Tons)</b>			
CO			127.53
No <sub>x</sub>			96.98
PM-10			5.57
So <sub>x</sub>			9.68
VOCs			29.05

<sup>1</sup> Waste Management values include data from both Seneca and Highland Field Services.

continued

## Upstream Segment (continued)

Freshwater Withdrawn and Freshwater Consumed (Thousands of Cubic Meters)	2020	2021	2022
Total Water Withdrawn	428	1,149	1,686
% of Water from Locations with High or Extremely-High Water Risk	0%	0%	0%
Total Freshwater Consumed	770	1,166	1,696
% of Water from Locations with High or Extremely-High Water Risk	0%	0%	0%
<b>Volume of Produced Water and Flowback Generated (Thousands of Cubic Meters)</b>			
Produced Water and Flowback	1,294	1,620	1,764
% Discharged	0%	0%	0%
% Injected	3.5%	7.4%	9.7%
% Recycled	96.5%	92.6%	90.3%
<b>Number and Volume of Spills &gt; 1 Bbl</b>			
Number of Hydrocarbon Spills > 1 Bbl	0	0	0
Total Volume of Hydrocarbon Spills (in Bbls)	0	0	0
Total Volume of Hydrocarbon Spills Impacting Environmentally Sensitive Shoreline	0	0	0
Total Volume of Hydrocarbon Spills Recovered (in Bbls)	0	0	0
Number of Non-Hydrocarbon Spills > 1 Bbl	3	1	1
Total Volume of Non-Hydrocarbon Spills (in Bbls)	16	354	300
Total Volume of Non-Hydrocarbon Spills Recovered (in Bbls)	0	250	0
Total Volume of Spills Occurring in the Arctic	N/A	N/A	N/A
<b>Total Recordable Incident Rate (TRIR)</b>			
Full Time Employees	0.51	0	0.48
Contract Employees	0.75	1	0.51
<b>Fatality Rate</b>			
Full Time Employees	0	0	0
Contract Employees	0.25	0	0
<b>Near Miss Frequency Rate (NMFR)</b>			
Full Time and Contract Employees	7.64	7.82	2.03





## Independent Third-Party Verification of Emissions Data



### VERIFICATION STATEMENTS FOR NATIONAL FUEL UPSTREAM, MIDSTREAM, AND DOWNSTREAM REPORTING FOR REPORTING YEAR 2020, 2021, AND 2022

National Fuel Gas Company (National Fuel) is a diversified energy company engaged principally in the onshore exploration and production, gathering, transportation, and distribution of natural gas. The Company operates an integrated business, with assets centered in Western New York and Pennsylvania. National Fuel reports their greenhouse gas (GHG) emissions pursuant to the U.S. EPA 40 CFR Part 98 Subpart W reporting requirements. National Fuel enlisted the services of Tetra Tech, Inc. (Tetra Tech) to perform a review of their reported 2020, 2021, and 2022 reporting year emissions for their Upstream, Midstream, and Downstream reporting segment processes.

The National Fuel assurance review was done by an independent third-party auditor to review submitted emissions, reporting methodology, and process flow to ensure no material misstatement or nonconformances occurred for the 2020, 2021, or 2022 reporting years. The verification body that conducted the GHG assurance review is certified by both the California Air Resources Board (CARB) and the Oregon Department of Environmental Quality (DEQ). While National Fuel is not required to comply with CARB requirements, the methodology contained with the CARB Mandatory Reporting Regulation (MRR) is robust and includes specific requirements for data review and reporting. The approach contained within the CARB MRR was utilized as guidance for the assurance review of National Fuel with the approach specifically tailored for National Fuel's reporting requirements. Tetra Tech's report presents the results of the assurance review process for the 2020, 2021, and 2022 reporting years.

The verification body has conducted a review of the submitted emissions for both the Pennsylvania and New York facilities for the 2020, 2021, and 2022 reporting years for the Upstream, Midstream, and Downstream reporting segment processes. A review of raw data utilized to calculate these submitted emissions, backup documentation, prepared Monitoring Plans, data management systems, and site interviews with key reporting National Fuel staff was conducted. Additionally, the verification body reviewed National Fuel's Corporate Responsibility Reports. The reports detailed the Upstream, Midstream, and Downstream processes and discussed all aspects of National Fuel's impact, from GHG emissions to biodiversity impacts. During the verification process, all questions and issues were reviewed and discussed with National Fuel, and all issues were closed out.

Per the CARB MRR, "material misstatement" means any discrepancy, omission, or misreporting, or aggregation of the three, identified in the course of verification services that leads a verification team to believe that the total reported covered emissions (metric tons of CO<sub>2</sub>e) or reported covered product data contains errors greater than 5%, as applicable, in an emissions data report. Additionally, "nonconformance" means the failure to use the methods or emission factors specified in this article to calculate emissions, or the failure to meet any other requirements of the regulation.

The verification body has found the submitted emissions reports free of material misstatement. In addition, the verification body also attests that the National Fuel reports conform to the requirements of the regulation.

Certified by:

A handwritten signature in brown ink that reads 'Erica Alvarado'.

Erica Alvarado, D.Env., M.P.H.  
CARB and OR DEQ Accredited Greenhouse Gas Lead Verifier with Oil & Gas and Transactions Specialties

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**SAFE. RELIABLE. AFFORDABLE. SUSTAINABLE.**



**National Fuel**

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