

Alice Napoleon

CORRECTED Exhibit AN-2

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Table 1: LPP Replacement and Total capital Budget Per Year

Project/Program	FY 24	FY 25	FY 26	FY 27	Total
LPP - Total Capital (\$Millions)	\$86.2	\$92.6	\$96.0	\$100.3	\$375.2
Total Capital Budget (\$Millions)	\$125.5	\$123.4	\$119.8	\$123.9	\$492.5

Figure 1: Annual Revenue Requirement for 2024-2027 LPP Mains and Services Investments Under Current and Shortened Asset Lifetimes

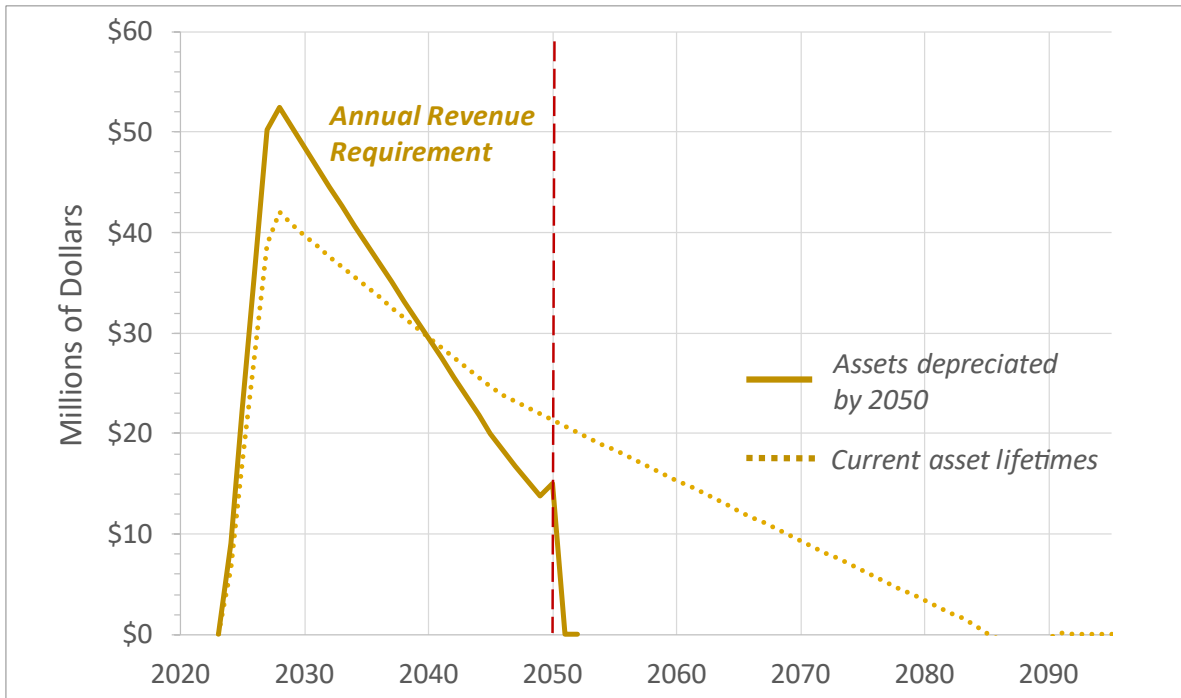


Table 2: Annual Average Carrying Cost for NFG's Total LPP Distribution Mains Investment for FY2024 Under Different Depreciation Regimes

Installed year and lifetime	Annual average carrying cost (%)	Annual average carrying cost (\$)
2024, 65-year life, retire in 2089	9.8%	\$4,503,122
2024, 26-year life, retire in 2050	11.9%	\$5,482,526

Table 3: Annual Average Carrying Cost for a \$1 Million LPP Main Investment Under Current and Shortened Depreciation Regimes

Lifetime	Annual average carrying cost (%)	Annual average carrying cost (\$) (per \$1M investment)
2024, 65-year life	9.8%	\$98,084
2024, retire 2050	11.9%	\$97,692 <u>\$119,416</u>
2025, retire 2050	12.1%	\$119,416 <u>\$121,328</u>
2026, retire 2050	12.3%	\$121,328 <u>\$123,439</u>
2027, retire 2050	12.6%	\$123,439 <u>\$125,777</u>

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Exhibit AN-3

NFG Responses to Discovery Cited in This Testimony

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NRDC-6

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Witness: IEPNATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627Question

Please refer to p. 47 of the CLCPA testimony, where NFG states: "National Fuel currently retires a minimum of 110 miles of LPP per year. At that pace, which the Company intends to maintain, all LPP, excluding high pressure (>125 psi) mains, would likely be retired by 2035."

a. Please indicate how many miles of LPP per year have historically been:

- i. replaced
- ii. retired and replaced
- iii. fully decommissioned and not replaced each year

b. Please indicate how many miles of LPP per year NFG plans to:

- i. replace
- ii. retire and replace
- iii. fully decommission and not replace each year

c. Does the Company have any minimums or goals for how many miles of pipe will be fully decommissioned and not replaced between now and 2035? If yes, please describe those goals. If not, why not?

Response

a) Please see NRDC 6 – Attachment 1.

- i. The Company does not differentiate between "replaced" and "retired and replaced". All mileage of LPP retired with an accompanying project to install pipe is shown on line 1 of the attachment.
- ii. See above.
- iii. Mileage shown on NRDC – Attachment 1 as Retired without Replacement is pipe that has been decommissioned with no new infrastructure installed to replace it.

b)

- i. The Company's plan is to retire 110 miles of LPP each year.
- ii. The Company does not have specific plans or goals on the miles of LPP to be retired without replacement. The Company's plan to retire 110 miles of LPP each year is driven by several factors as part of the Company's Systematic Replacement Program as described in the Infrastructure and Engineering Panel's direct testimony.
- iii. See above.

a) No, see above.

NRDC-6 Attachment 1

Attachmen NRDC-6
Witness: IEP
Page 1

NRDC 6 - Attachment 1

Sum of Calendar Year LPP Mileage Retired	2018	2019	2020	2021	2022	Grand Total
Retired and Replaced	110.3	112.7	110.1	109.6	108.4	551.0
Retired without Replacement	9.7	1.2	3.5	4.1	3.3	21.9
Grand Total	120.0	113.9	113.6	113.7	111.7	572.9

NRDC-13

NRDC-13

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Witness: CLCPAP

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627

Question

On page 56 of the CLCPA Panel Testimony, lines 16-18, the Company describes its LPP program, stating “they result in reductions in GHG emissions.”

Has the Company completed or commissioned any analysis comparing the cost of emissions reductions from the LPP retirement program compared to non-pipeline alternatives, such as (but not limited to) targeted electrification and pipeline retirement without replacement?

- a. If so, please provide the analysis, including all supporting workpapers with formulas intact and sources, methodologies, and assumptions clearly stated. Please provide results in terms of \$/MT CO₂e.
- b. If not, please explain why not.

Response

The Company objects to this response on the grounds that the Company disagrees with the characterization of “pipeline retirement without replacement” alone as a non-pipe alternative (NPA). Subject to and without waiving the foregoing objection, the Company provides the following response:

The Company has not commissioned an analysis as described in the question because such an analysis would not be useful given the fact- and context-dependent nature of NPA projects/programs that necessarily rely on specific geographic, facility, customer factors and/or information.

NRDC-15

NRDC-15
Supplemental 1
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Witness: IEPNATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627Question

In Exhibit IEP-8, the Company shows historical and projected replacement costs per mile for the Leak Prone Pipe Program.

- a. Please provide this exhibit in Excel with all formulae intact and sources, methodologies, and assumptions clearly stated.
- b. In Excel, please provide the historical spending on pipe replacement programs by pipe material (e.g., unprotected steel, wrought iron, etc.), age, pipe diameter, and type (mains versus services) for all programs from 2018–2023 on an annual basis. If not available by the requested categories, please provide all information available that is responsive to this request.
- c. In Excel, please provide the projected spending on pipe replacement programs by pipe material (e.g., unprotected steel, wrought iron, etc.), age, pipe diameter and type (mains versus services) for all programs from 2024–2027 on an annual basis. If not available for the requested categories, please provide all information available that is responsive to this request.

Response

- a. See NRDC-15 Attachment 1 for the excel version of IEP-8.
- b. See NRDC-15 Attachment 1 for a break-out of the historical spending from FY2018-2023. Also see NRDC-15 Attachment 2 for historical mains and service replacement spending by LPP program for distribution from FY2018-2023. The Company budgets LPP Cost per mile at an aggregate level and subcategories of the actual cost per mile information is not available.
- c. See NRDC-15 Attachment 2 for a forecasted FY 2024-2027 cost per mile worksheet that breaks out the main and service replacement forecasted spending by LPP program for distribution. The Company budgets LPP Cost per mile at an aggregate level and subcategories of forecasted cost per mile information is not available.

Supplemental Response

- a. This is an updated response to the Company's January 12th amended filing which includes forecasted increases to the capital budget due to the NY Roadway Excavation Quality Assurance Act (REQAA) including cost per mile of Leak Prone Pipe. See NRDC-15 Supplemental 1, Attachment 1 for the excel version of IEP-8.
- b. See NRDC-15 Supplemental 1, Attachment 1 for a break-out of the historical spending from FY2018-2023. Also see NRDC-15 Supplemental 1, Attachment 2 for historical mains and service replacement spending by LPP program for distribution from FY2018-2023. The Company budgets LPP Cost per mile at an aggregate level and subcategories of the actual cost per mile information is not available.
- c. See NRDC-15 Supplemental 1, Attachment 2 for a forecasted FY 2024-2027 cost per mile worksheet that breaks out the main and service replacement forecasted spending by LPP program for distribution. The Company budgets LPP Cost per mile at an aggregate level and subcategories of forecasted cost per mile information is not available.

NRDC-15 Supplemental Attachment 1

**New York Distribution Corporation
Replacement Cost per Leak Prone Pipe Mile Retired
FY 2018-2023**

Plant Type	FY2018	FY2019	FY2020	FY2021	FY2022	FY 2023
Distribution Totals	\$ 25,061,183	\$ 20,706,348	\$ 25,021,214	\$ 26,433,206	\$ 33,947,439	\$ 38,288,542
Services Totals	\$ 14,314,707	\$ 14,511,270	\$ 13,495,599	\$ 17,533,200	\$ 21,726,413	\$ 22,516,762
Distribution Miles Total *	112.25	109.58	112.54	111.85	112.88	111.24
Cost per Mile	\$ 350,803	\$ 321,376	\$ 342,250	\$ 393,082	\$ 493,202	\$ 546,610

* Does Not include Large Diameter

2018 to 2023 Cost Per Mile Increased 56%
--

**New York Distribution Corporation
Replacement Cost per Leak Prone Pipe Mile Retired
Projected FY 2024-2027**

Plant Type	Projected FY24	Projected FY25	Projected FY26	Projected FY27
Distribution Totals	\$ 48,767,000	\$ 50,155,000	\$ 52,662,000	\$ 55,296,000
Services Totals	\$ 30,844,000	\$ 33,437,000	\$ 35,108,000	\$ 36,864,000
Distribution Miles Total *	108	108	108	108
Cost per Mile	737,139	774,000	812,685	853,333

* Does Not include Large Diameter

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Witness: CLCPAP

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627

Question

Please refer to the following statement on p. 48, lines 7-10 of the CLCPA panel testimony: “The Company intends to include in its annual reports – the first of which will issued on or before May 31, 2024 – an approach whereby it will implement its NPA screening and suitability criteria to identify segments of LPP that can be abandoned in favor of NPAs.”

- a. Why hasn't the Company proposed NPA screening and suitability criteria yet?
- b. Please list and describe any NPA screening and suitability criteria that the Company intends to propose.
 - i. How were these NPA screening and suitability criteria chosen?
- c. Has NFG identified segments of LPP that could be abandoned in favor of NPAs?
 - i. If yes, please identify these segments, including pipe length, diameter, material and age, and the number of customers on these segments.
 - ii. If not, why not?
- d. Will the Company commit to pursuing NPAs for all segments of LPP that meet the NPA screening and suitability criteria?

Response

- a. The Company, like the other New York utilities, has proposed non-pipe alternative (NPA) screening and suitability criteria in Case No. 20-G-0131 in accordance with the Commission's May 12, 2022 order in that case.
- b. Please see the filing referenced in response to a. above.
- c & d. The Company is engaging in analyses and processes necessary to comply with appropriate orders issued by the Commission with respect to NPA projects/initiatives.

NRDC-18

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Witness:IEP

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627

Question

Is the Company exploring any targeted network abandonment?

- a. If yes, please identify where on the Company's system this is possible, the length and diameter of mains in this area, pipe material and age, and the number of customers currently on the targeted section.
- b. If not, please explain why not.

Response

See NRDC-18 Attachment 1. This is a preliminary list of locations the Company has identified and plans to further evaluate for potential NPA consideration.

NRDC-18 Attachment 1

NRDC-18 Attachment 1

Project Name	RC	Town	Pipe Footage	Number of Existing Customers	Pipe Material	Pipe Diameter
W. Hill Rd	116	Eagle	7,800	2	Bare Steel	8
Nash Hill	122	Persia	12,600	5	Bare Steel	4
Point Peter	122	Persia	14,015	15	Bare Steel & Plastic	2, 3, 4
River Rd	128	Willing	4,000	2	Coated Steel & Plastic	2
Pump Station Rd	128	Alma	2,700	1	Wrought Iron	4
CR 38 / Dutton Hollow	128	Alma	4,000	1	Wrought Iron & Plastic	2

45,115 26
8.54 Miles

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Witness: IEP

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627

Question

With respect to areas where pipe is in place on both sides of a single street:

- a. Has the Company identified specific areas to abandon pipe where it is in place on both sides of a single street?
 - i. If yes, please specify for which sections of pipe this has been explored.
 - ii. If not, why not?
- b. Does the Company plan to identify specific areas to abandon pipe where pipe is in place on both sides of a single street?
 - i. If not, please explain why not.
- c. Does the Company intend to prioritize targeted pipe abandonment in locations where pipe exists on both sides of the street?
 - i. If not, why not?

Response

- a) The Company has not specifically identified areas to abandon where pipe is in place on both sides of a single street.
 - i. n/a
 - ii. The Company reviews all potential projects and seeks to minimize the total amount of pipe installed, while also assuring reliable service to existing customers. Project costs and risk are taken into consideration in determining the most efficient method to replace the pipe and maintain service. Installing main along a single side of the road may be considered if the majority of customers are on that side of the road and it is feasible to maintain service to customers on the other side of the road while also considering overall cost and the potential risk for future 3rd party excavation damage for gas facilities located under the roadway.
- b) Please see above response to a(ii).
 - i.
- c) The decision to abandon pipe is evaluated on a project-by-project basis in the design process as described in response a) above and is not subject to prioritization criteria.
 - i. Please see above response a(ii)

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Witness:CLCPA

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627

Question

Has the Company performed or commissioned any analysis of the cost of emission reductions (\$/MT CO₂e) from RNG blending compared to NPAs, such as (but not limited to) targeted electrification and pipeline retirement without replacement?

- a. If so, please provide the analysis, including all workpapers with formulas intact.
- b. If not, please explain why not.

Response

The Company objects to this request on the grounds that the Company disagrees with the characterization of “pipeline retirement without replacement” alone as a non-pipe alternative (NPA). Subject to and without waiving the foregoing objection, the Company provides the following response:

The Company has not performed or commissioned an analysis as described in the question because such an analysis would likely not be valuable given the fact and context-dependent nature of NPA projects/programs that necessarily rely on specific geographic, facility, customer, etc. factors and/or information.

NRDC-41

NRDC-41
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Witness: ESSPNATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627Question

Please refer to p. 3 of the ESSP-1 Exhibit discussion of the Hybrid Heat Pilot Program where it shows a table on the pilot costs.

- a. Please provide a breakdown of costs per rate year for each measure/component for each year of the program.
- b. Please provide a benefit-cost analysis of this program, including any workbooks used for the analysis with assumptions clearly identified and calculations intact.
- c. How will the cost of this program be recovered? When answering this question, please specify whether program costs would be treated as capital costs.

Response

- a. Consistent with the Public Service Commission's (Commission) *Order Implementing Long-Term Natural Gas Plan with Modifications*, Issued and Effective December 14, 2023, in Case 22-G-0610 (Order), the Company will be filing its Hybrid Heating pilot project proposal with the Secretary to the Commission on or before June 30, 2024. A breakdown of costs per rate year for each measure and/or component of the program will be provided in this filing.
- b. Consistent with the Commission's Order, the Company will be filing its Hybrid Heating pilot project proposal with the Secretary to the Commission on or before June 30, 2024. A projected benefit-cost analysis of this program will be included in this filing.
- c. The Company has detailed how it proposes to recover costs related to CLCPA-related programs, including the Hybrid Heating Pilot Program, in its response to DPS-395. The Company does not intend to treat the costs associated with this program as capital costs.

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Witness: IEP

NATIONAL FUEL GAS DISTRIBUTION CORPORATION
NEW YORK DIVISION
RESPONSE TO REQUEST FOR INFORMATION
CASE 23-G-0627

Question

Please refer to the following statement on page 4 of Spanos Direct Testimony, lines 7-9:
“The CLCPA, which was signed into law in July of 2019, sets greenhouse gas emission reduction targets and renewable electricity targets and will likely have impacts on the gas industry that would result in shorter life cycles of many of the asset classes”

- a. Please describe in detail how the prospect of shorter life cycles of gas assets informs NFG’s gas capital planning.
- b. Has the prospect of shorter service lives of gas assets had any specific impact on the capital projects or plan presented in this proceeding? If so, which projects (or plan aspect) are impacted, and what is the impact?

Response

As discussed in the Spanos Direct Testimony, it is premature to consider potential impacts of the CLCPA on depreciation given that these impacts are expected to be addressed by the Commission in the Gas Planning Proceeding.

DPS – 406 Attachment 3

RNG purchased from Dairy Farm	
200	Dth/day
365	days
73,000	Dth/year
1.033	Dth/Mcf Heating Value
70,668	Mcf/year

GHG Emission Rates			
Avoided Natural Gas Use			
Natural Gas Scope 3 GHG Emissions			
	Imported Gas	End Use	Scope 3
	lb/Mcf	lb/Mcf	lb/Mcf
CO2	5.95	120.84	126.79
CH4	0.13	0.00	0.13
N2O	0.00	0.00	0.00
CO2e	16.75	121.09	137.84
<i>Source: Case 22-G-0610 National Fuel Final Long Term Plan Appendix D, Table D-25, Table D-28 (Appalachian Shale)</i>			

RNG from Animal Manure, NY Fuel Stock	
Life-Cycle Carbon Intensity, lb/Mcf	
CO2	(51.24)
CH4	(2.74)
N2O	-
CO2e	(281.80)
<i>Source: Case 22-G-0610 National Fuel Final Long Term Plan Appendix A, Table A-34. 20-Year GWP.</i>	

GHG Annual Emission Reductions, lbs			
	Avoided Natural Gas	RNG Life-Cycle	Total Avoided
CO2	(8,959,784)	(3,620,800)	(12,580,584)
CH4	(9,222)	(193,971)	(203,194)
N2O	(23)	-	(23)
CO2e	(9,740,617)	(19,914,400)	(29,655,017)

GHG Annual Emission Reductions, MT			
	Avoided Natural Gas	RNG Life-Cycle	Total Avoided
CO2	(4,064)	(1,642)	(5,706)
CH4	(4)	(88)	(92)
N2O	(0)	-	(0)
CO2e	(4,418)	(9,033)	(13,451)
1 Metric Ton=	2,205	lbs	