

July 27, 2023 (expanded from July 9, 2023 memo)

Memo to: Halina Brown, NCCE Chair

From: Peter J. Barrer

Re: Analysis of Newton Grants of Location and GSEP plans

Cc: Bob Persons, Ellie Goldberg, Nathan Phillips

## **Summary**

The gas pipes team has completed an analysis of National Grid (NGrid) Grants of Location (GOLs) requests to Newton from January 1, 2022, through June 30, 2023, comparing them to NGrid Gas System Enhancement Program (GSEP) plans filed with the Mass. Department of Public Utilities. Contrary to general expectation, we found that only 40% of GOL footage for plastic pipe installation was associated with GSEP plans. GOLs associated with GSEP plans cost \$5,396,000. GOLs approved without GSEP plans cost \$8,141,000.

As Newton moves towards eliminating carbon emissions the gas distribution system will be retired; however this apparently unregulated investment will impose unnecessary costs on ratepayers and perhaps taxpayers.

## **Introduction**

I coordinate the gas pipes team's effort to compile publicly available data about the Newton gas distribution system operated by National Grid (NGrid). The pipes team is in the initial phases of our effort. We have compiled public records of Gas System Enhancement Program (GSEP) plans filed with the Mass. Department of Public Utilities (DPU), and Grants of Location (GOL) approvals by Newton City Council. We intuited that a comparison of GSEP approvals and GOLs would be useful to test the general assumption that gas pipe replacements are being regulated appropriately at the state level in the GSEP process.

## **Methodology**

All GOL requests from NGrid to Newton's City Council's Public Facilities Committee (PFC) dated Jan 1, 2022 through June 30, 2023 were compiled using PFC agendas on Newton City's website. (All requests were subsequently approved by the PFC and authorized by the full City Council.) Table 2 details all GOLs for this period.

Each fall NGrid files GSEP plans for the coming year, and at the same time files less detailed GSEP plans (we term these "lookahead plans") for the following four years. We compiled GSEP plans for 2020, 2021, 2022, and 2023 into a single table, see Table 3. We compiled lookahead plans for 2023 to 2026, and for 2024 to 2027 in the single Table 4. These plans were provided by Home Energy Efficiency Team (HEET) who collected them from NGrid filings with the DPU.

For each GOL we searched the GSEP list to determine whether the GOL was associated with a planned GSEP, and simply flagged it "yes" or "no". Allowing for the possibility of a previous GSEP installation being delayed, we searched all GSEPs back to 2020. Allowing for unexpected

acceleration of a GSEP installation, we also searched GSEP “lookaheads” covering 2023 through 2027. Totals of pipe footage were calculated for both categories: “yes” and “no”.

The \$622 average cost per foot of replacement pipe was calculated from NGrid estimates of GSEP costs for 2022 and 2023.

We noted that for most GSEP plans the pipe footage in the filing was substantially greater than our measured distance along the street. In our analysis we used the GSEP footage as filed.

**Conclusions**

For the period January 1, 2022 through June 30, 2023

- GOLs were approved for 21,764 feet of pipe replacement, at an estimated total cost of \$13,537,000.
- GOLs associated with a GSEP plan consisted of 8,676 feet of pipe replacement, at an estimated cost of \$5,396,000.
- GOLs not associated with GSEP consisted of 13,088 feet of pipe replacement, at an estimated cost of \$8,141,000.
- Footage of GOLs associated with GSEP plans was only 40% of the total.

These conclusions are displayed in Table 1.

**Table 1 Newton GSEPs and GOLs Summary**

	Footage	Cost	Percent
GOLs associated with GSEP	8,676	\$5,396,472	39.9%
GOLs not associated with GSEP	13,088	\$8,140,736	60.1%
Total all GOLs	21,764	\$13,537,208	100.0%
Grants of Location (GOLs) from Jan 1, 2022 through June 30, 2023			

**Limitations of this analysis**

Although there is evidence that repairing leak-prone gas pipe is less expensive than replacing it, we did not attempt to assess for each GOL whether repair would have been more cost-effective. Also, NGrid often provided an explanation for its GOL plans to install new gas pipe; we compiled these explanations but did not attempt to evaluate them.

**Our next steps**

We plan to compile Newton Department of Public Works records of street openings for gas main replacements. We expect to do a similar analysis to this one, comparing street openings for gas pipe replacement to GOLs and to GSEP plans.

As we compile available gas leak data we may compare GSEPs and GOLs to the gas leak history in Newton streets.

**Suggestions for policy review**

As Newton moves towards eliminating carbon emissions the gas distribution system will be retired; however this apparently lightly regulated, or unregulated, investment will impose unnecessary costs on ratepayers and perhaps taxpayers.

Because GSEP provides financial advantages to NGrid, it may be instructive to investigate how the gas company accounts for pipe replacement that is not associated with a GSEP plan. Such discrepancy represented 60% of GOL costs in the 18 recent months we studied.

In light of the discrepancy between GSEP footage and actual footage along the street, we also suggest a review of whether GSEP plans or actual construction costs are the basis for cost recovery for replacement pipe.

Other municipalities and the DPU should investigate whether Newton's experience is typical for others served by NGrid. There are significant financial implications for ratepayers and taxpayers statewide.

We urge the DPU and the legislated GSEP Working Group to take these conclusions into account as they debate the future of gas pipe replacement.

**Appreciations**

Thank you to HEET and to the pipes team consisting of Zach Miller, Bob Persons, Yoshi Futai, Josh Nichols-Barrer, and Nicole Krieger.

Peter J. Barrer  
[pbarrer@gmail.com](mailto:pbarrer@gmail.com)  
617-630-0923

Table 2: Newton Grants of Location from Jan 1, 2022, to June 30, 2023

Date of GOL request	Street number	Street name	Higher street number	feet of new pipe	new pipe size	GSEP Y/N	GSEP year(s)
4/20/22	7	HANCOCK ST	93	1055	6	Y	2022
4/20/22	1	GRAYDALE CIR	11	160	4	N	
4/20/22	32	WOODLAND RD	110	1125	8	Y	2022
6/22/22	16	JOSELYN PL	18	85	4	N	
6/22/22	39	WESTFIELD RD	39	40	4	N	
9/8/22	2104	COMMONWEALTH AVE	2269	2036	12	Y	2023 (after GOL)
9/8/22	112	WOODBINE ST	112	263	6	N	
9/8/22	2226	COMMONWEALTH AVE	2226	110	8	N	
9/8/22	2202	COMMONWEALTH AVE	2202	115	8	N	
9/8/22	2121	COMMONWEALTH AVE	2134	100	12	N	
9/8/22	2095	COMMONWEALTH AVE	2121	390	12	Y	2023 (after GOL)
9/8/22	525	LOWELL AVE	542	400	12	Y	2021
9/8/22	330	HOMER ST	426	935	12	Y	2022
9/8/22	1091	COMMONWEALTH AVE	1133	610	12	Y	2021
9/8/22	259	WARD ST	355	1270	8	N	
9/8/22	355	WARD ST	355	10	6	N	
9/8/22	348	WARD ST	348	10	6	N	
9/8/22	326	WARD ST	326	30	6	N	
9/8/22	303	WARD ST	303	10	6	N	
9/8/22	300	WARD ST	300	30	6	N	
9/8/22	273	WARD ST	273	10	6	N	
1/18/23	6	FERNCROFT RD	83	1125	6	N	
1/18/23	5	HELENE RD	56	710	4	N	
1/18/23	64	EVELYN RD	64	90	6	N	
1/18/23	58	PAULSON RD	145	1040	6	N	
1/18/23	145	PAULSON RD	155	120	6	N	
1/18/23	5	ELLIOT ST	144	1850	8	Y	2024 -2027
1/18/23	978	BOYLSTON ST	978	335	2	N	
1/18/23	1	JOSELYN PL	16	245	4	N	
1/18/23	1	FRANCES ST	22	285	4	N	

1/18/23	6	CHARLES ST	6	50	4	N	
1/18/23	83	COUNTRYSIDE RD	95	50	2	N	
1/18/23	60	ELLIOT ST	60	275	4	Y	2024 -2027
2/8/23	74	TYLER TER	83	75	6	N	
2/8/23	75	PLEASANT ST WST	75	60	2	N	
4/12/23	85	VALENTINE ST	240	1905	8	N	
4/12/23	114	VALENTINE ST	114	40	6	N	
4/12/23	138	VALENTINE ST	138	40	6	N	
4/12/23	3	WAUWINET RD	3	50	6	N	
4/12/23	191	VALENTINE ST	191	80	8	N	
4/12/23	6	ELLIS RD	30	435	6	N	
4/12/23	224	VALENTINE ST	240	80	8	N	
4/19/23	63	OAKDALE RD	151	1165	8	N	
4/19/23	10	PARKER AVE	124	1600	8	N	
4/19/23	7	KENDALL RD	50	715	6	N	
4/19/23	16	WALNUT HILL RD	67	550	8	N	
		<b>Total GOLs</b>		21,764			
		<b>Total Yes:</b>		8,676	39.9%		
		<b>Total No:</b>		13,088	60.1%		

Table 3 GSEPs in Newton Years 2020, 2021, 2022, 2023

year	Street number	Street name	Higher street number	Cross Street name	Other end Cross Street name	old pipe size	GSEP Footage	Cost	Cost /foot
2020	5	MCCARTHY RD	124			8	1640	\$492,000	\$300
2020	5	INDIAN RIDGE RD	65			8	830	\$249,000	\$300
2020	9	CUMMINGS RD	85			4	1,300	\$499,200	\$384
2020	15	NORTH ST CTR	92			4	1065	\$408,960	\$384
2021	63	BOWEN ST	74			4	280	\$136,640	\$488
2021	1063	COMMONWEALTH AVE	1125			8	1,020	\$573,240	\$562
2021	536	LOWELL AVE	600	COMMONWEALTH AVE	WHITTIER RD	8	280	\$157,360	\$562
2021	1	WHITTIER RD	50	LOWELL AVE	OAK CLIFF RD	8	675	\$379,350	\$562
2022	14	BOWDOIN ST	63			3	680	\$333,880	\$491
2022	60	FOREST ST	93			3	610	\$299,510	\$491
2022	17	MOULTON ST	117			6	1370	\$569,920	\$416
2022	1	COLGATE CIR	15			6	180	\$74,880	\$416
2022	21	LAKE AVE CTR	203			5	2500	\$1,097,500	\$439
2022		LAKE TER	12	LAKE AVE CTR		5	200	\$87,800	\$439
2022	308	HOMER ST	374			12	725	\$786,625	\$1,085
2022	616	BOYLSTON ST	692			6	1000	\$470,000	\$470
2022	5	WALNUT HILL RD	16			6	250	\$117,500	\$470
2022	7	HANCOCK ST	93			3	1045	\$459,800	\$440
2022	32	WOODLAND RD	94			3	1000	\$440,000	\$440
2023	1046	CENTRE ST	1267			10	2450	\$2,035,950	\$831

2023	1549	BEACON ST	1649			12	1150	\$993,600	\$864
2023	18	AUBURN ST	109			12	1355	\$915,980	\$676
2023	374	HOMER ST	430			12	690	\$375,360	\$544
2023	1095	COMMONWEA LTH AVE	1125			12	550	\$299,200	\$544
2023	388	LEXINGTON ST	450			12	890	\$886,440	\$996
2023	2060	COMMONWEA LTH AVE	2111			12	520	\$517,920	\$996
2023	595	WATERTOWN ST	687			6	1390	\$803,420	\$578
2023	7	WADE ST	80			6	1020	\$605,880	\$594
				2022-2023 Total GSEP			19,575	\$12,171,165	
				2022-2023 Average cost/ft					\$622

Table 4: GSEPs in Newton Lookahead Years 2023 - 2026, and 2024 - 2027

years	Street number	Street name	Higher street number	old pipe size	GSEP Footage
2023 - 2026	10	SPIERS RD	203	8	5,800
2023 - 2026	1038	BEACON ST	1150	10	2,085
2023 - 2026	1063	COMMONWEALTH AVE	1125	8	1,975
2023 - 2026	107	WOODWARD ST	230	8	3,515
2023 - 2026	108	FULLER ST WST	229	10	3,780
2023 - 2026	110	PROSPECT ST	128	3	940
2023 - 2026	1	DEVONSHIRE RD	120	6	3670
2023 - 2026	112	AUBURNDALE AVE	205	6	3490
2023 - 2026	112	WINCHESTER ST	284	12	2990
2023 - 2026	1	GROVE ST	125	8	3085
2023 - 2026	11	CARLETON ST	56	4	820

2023 - 2026	1	CHAMBERLAIN RD	22	6	3490
2023 - 2026	12	COTTAGE ST	74	4	3205
2023 - 2026	1	OWATONNA ST	35	6	3515
2023 - 2026	1404	CENTRE ST	1542	10	3095
2023 - 2026	14	ERIE AVE	100	4	2580
2023 - 2026	141	GROVE ST	192	8	2580
2023 - 2026	150	AUBURN ST	257	8	2370
2023 - 2026	15	MOODY ST	56	4	780
2023 - 2026	158	NEWTONVILLE AVE	255	8	2780
2023 - 2026	1	COLLEGE RD	68	12	3445
2023 - 2026	1	CANTERBURY RD	73	8	2400
2023 - 2026	1	PELHAM ST	75	10	2295
2023 - 2026	17	PLAINFIELD ST	78	6	1620
2023 - 2026	18	AUBURN ST	109	4	1365
2023 - 2026	1	ROWENA RD	98	8	3475
2023 - 2026	2	ATHELSTANE RD	112	6	3770
2023 - 2026	2	AUBURNDALE AVE	112	6	1710
2023 - 2026	225	RIVER ST	293	8	3520
2023 - 2026	229	WATERTOWN ST	429	6	2910
2023 - 2026	230	HOMER ST	308	8	2000
2023 - 2026	240	HAMMOND ST	450	8	2990
2023 - 2026	242	FULLER ST WST	326	10	3790
2023 - 2026	248	AUBURNDALE AVE	355	6	3490
2023 - 2026	256	LOWELL AVE	360	12	1895
2023 - 2026	2	ALEXANDER RD	66	5	1965
2023 - 2026	32	GREENLAWN AVE	114	6	1770
2023 - 2026	32	CHERRY ST	160	6	3020
2023 - 2026	337	WASHINGTON ST	647	10	3300
2023 - 2026	34	WABAN AVE	64	8	2660
2023 - 2026	347	CENTRAL ST	407	6	730
2023 - 2026	374	HOMER ST	430	12	1775
2023 - 2026	3	PARK LN	76	6	4325
2023 - 2026	406	WALNUT ST	506	12	1440
2023 - 2026	4	PRINCE ST	118	4	3880
2023 - 2026	42	ROCKLAND ST NNC	51	8	245

2023 - 2026	430	CENTRE ST	497	10	3150
2023 - 2026	4	JASSET ST	49	4	610
2023 - 2026	4	SUMNER ST	50	4	2145
2023 - 2026	4	SHAW ST	52	6	3300
2023 - 2026	48	HIGH ST NUF	139	4	2485
2023 - 2026	491	BOYLSTON ST	565	4	3635
2023 - 2026	50	HIGHLAND ST	180	6	3185
2023 - 2026	5	OLDE FIELD RD	90	2	4190
2023 - 2026	5	SUFFOLK RD	90	8	1395
2023 - 2026	6	ISLINGTON RD	50	6	2210
2023 - 2026	7	WOODCHESTER DR	154	8	3110
2023 - 2026	75	LOWELL AVE	171	3	1535
2023 - 2026	7	WADE ST	80	6	1020
2023 - 2026	79	LANGDON ST	143	4	2065
2023 - 2026	8	DAY ST	160	6	3910
2023 - 2026	821	WASHINGTON ST	1251	10	6685
2023 - 2026	825	BEACON ST	1013	8	3365
2023 - 2026	9	ARDMORE RD	28	4	630
2023 - 2026	930	CENTRE ST	1055	10	3570
2023 - 2026	9	CYPRESS ST	305	6	3855
2023 - 2026	97	OAK ST	200	12	2160
2023 - 2026	9	CUMMINGS RD	85	4	2325
2023 - 2026	992	BEACON ST	1050	6	2275
2024 - 2027	100	OAK ST	200	12	2160
2024 - 2027	10	HILLSIDE AVE	114	12	1045
2024 - 2027	10	SPIERS RD	203	8	5800
2024 - 2027	1038	BEACON ST	1150	10	2085
2024 - 2027	107	WOODWARD ST	230	8	3515
2024 - 2027	1080	WALNUT ST	1136	12	4185
2024 - 2027	108	FULLER ST WST	229	10	3780
2024 - 2027	111	WEBSTER ST	279	8	2570
2024 - 2027	1	DEVONSHIRE RD	120	6	3670
2024 - 2027	112	AUBURNDALE AVE	205	6	4010
2024 - 2027	112	WINCHESTER ST	284	12	2990
2024 - 2027	11	CARLETON ST	56	4	820

2024 - 2027	1	PLYMOUTH RD	180	6	6240
2024 - 2027	1	CHAMBERLAIN RD	22	6	3490
2024 - 2027	1404	CENTRE ST	1542	10	4445
2024 - 2027	14	ERIE AVE	100	4	2580
2024 - 2027	144	ELLIOT ST	251	12	4185
2024 - 2027	158	NEWTONVILLE AVE	255	8	3640
2024 - 2027	1665	BEACON ST	1791	12	3410
2024 - 2027	1	COLLEGE RD	68	12	3445
2024 - 2027	1	DUNCKLEE ST	71	6	1265
2024 - 2027	1	CANTERBURY RD	73	8	2400
2024 - 2027	17	PLAINFIELD ST	78	6	1,620
2024 - 2027	1	ROWENA RD	98	8	3,900
2024 - 2027	1	LENOX ST	99	6	3,849
2024 - 2027	2	AUBURNDALE AVE	112	6	1,710
2024 - 2027	2251	WASHINGTON ST	2362	12	1,770
2024 - 2027	229	WATERTOWN ST	429	6	3,280
2024 - 2027	230	HOMER ST	308	8	2,000
2024 - 2027	240	HAMMOND ST	450	8	3,000
2024 - 2027	242	FULLER ST WST	326	10	3,770
2024 - 2027	248	AUBURNDALE AVE	355	6	3,490
2024 - 2027	2	ALEXANDER RD	66	5	920
2024 - 2027	308	HOMER ST	374	12	725
2024 - 2027	3	ELLIOT ST	144	10	2,315
2024 - 2027	32	GREENLAWN AVE	114	6	1,770
2024 - 2027	337	WASHINGTON ST	647	10	3,300
2024 - 2027	34	WABAN AVE	64	8	2,660
2024 - 2027	347	CENTRAL ST	407	6	730
2024 - 2027	3	PARK LN	76	6	4,325
2024 - 2027	4	PRINCE ST	118	4	4,405
2024 - 2027	430	CENTRE ST	497	6	2,770
2024 - 2027	4	JASSET ST	49	4	610
2024 - 2027	4	SUMNER ST	50	4	2,145
2024 - 2027	4	SHAW ST	52	6	3,300
2024 - 2027	50	HIGHLAND ST	180	6	3,185
2024 - 2027	5	OLDE FIELD RD	90	2	4,190

2024 - 2027	5	SUFFOLK RD	90	8	1,395
2024 - 2027	7	WOODCHESTER DR	154	8	3,170
2024 - 2027	7	BRUSH HILL RD	61	6	3,550
2024 - 2027	79	LANGDON ST	143	4	910
2024 - 2027	4	LAUDHOLM RD	35	4	560
2024 - 2027	8	DAY ST	160	6	3,910
2024 - 2027	885	CENTRE ST	1055	12	4,245
2024 - 2027	9	CYPRESS ST	305	6	2,955
2024 - 2027	42	ROCKLAND ST HGH	51	8	245
2024 - 2027	67	WABAN HILL RD NORTH	142	5	910