Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities 2018 In Service Spend for Non-Growth Projects

Project Number	Project Name	<u>Priority</u>	In Service 2018 Spend
8840-1801	Facility Improvements & Additions - Concord	Discretionary	\$23,147
8840-1802	Meter Protection Program	Mandated	\$224,779
8840-1803	Cathodic Protection Program	Mandated	\$454,064
8840-1804	Replacement Services Random (Non Leaks)	Mandated	\$587,344
8840-1805	Replacement Services Random (Due to Leaks)	Mandated	\$730,757
8840-1807	Meter Work Project (Meter Purchases)	Mandated	\$523,776
8840-1808	Corrosion & Miscellaneous Fitting	Mandated	\$228,934
8840-1809	Valve Installation/Replacement	Mandated	\$93,268
8840-1810	Leak Repairs	Mandated	\$1,120,651
8840-1811	Main Replacement LPP	Regulatory	\$5,895,243
8840-1813	Main Replacement Fitting LPP	Regulatory	\$1,485,452
8840-1814	K Meter Replacement Program	Discretionary	\$237,261
8840-1815	Aldyl-A Replacement Program	Discretionary	\$291,262
8840-1816	Main Replacement Reactive	Discretionary	\$138,420
8840-1817	Dispatch and Control Center	Discretionary	\$9,843
8840-1818	Purchase Misc Capital Equipment & Tools	Discretionary	\$258,849
8840-1819	Transportation Fleet & Equipment	Discretionary	\$866,380
8840-1823	Main Replacement City/State Construction	Mandated	\$5,661,086
8840-1825	Service Replacement Fitting City/State Construction	Mandated	\$347,115
8840-1826	LNG/LPG Capital Improvements	Mandated	\$17,175
8840-1829	Pre-Code Stee Pipe Protection Program	Mandated	\$26,313
8840-1830	IT - Software, Equipment & Infrastructure	Discretionary	\$558,216
8840-1831	Gas System Planning & Reliability	Discretionary	\$780,834
8840-1832	Gas System Control & Regulation	Discretionary	\$22,167
8840-1833	Facility Improvements & Additions - Manchester	Discretionary	\$201,168
8840-1834	Facility Improvements & Additions - Nashua	Discretionary	\$32,077
8840-1835	Facility Improvements & Additions - Tilton	Discretionary	\$235,179
8840-1836	Facility Improvements & Additions - Londonderry	Discretionary	\$145,620
8840-1838	IT Systems Allocations - Corporate	Discretionary	\$103,972
8840-1839	Dresser Coupling Replacement Program	Mandated	\$407,356
8840-1855	Manchester Mixer Project	Safety	\$582,790
8840-1857	Expansion Joint replacement NAS	Mandated	\$50,395
8840-1858	Chestnut St Regulator Pit	Safety	\$421,083
8840-1860	Incremental Transit-Connect Vehicles & Pipe Locating Equipment	Mandated	\$201,112
8840-1861	Concord Office Noise Reduction	Discretionary	\$38,287
8840-1865	Weather Normalization (system enhancements)	Regulatory	\$231,343
8840-1872	GIS Mapping	Discretionary	\$200,509
8840-1900-RENTAL	EN EQUIPMENT RENTAL	Discretionary	\$429
8840-C18800	Upgrade Hi Line - Concord to Tilton	Discretionary	\$172,435
8843-1806	Transportation Fleet & Equipment	Discretionary	\$66,367
8843-1809	Service Replacement City/State Construction	Mandated	\$2,362
8843-1810	LNG/LPG Capital Improvements	Mandated	\$29,252
8843-1811	Facility Improvements & Additions - Keene	Discretionary	\$36,852
8843-1812	Tools & Equipment - Keene	Discretionary	\$25,358
8843-1813	IT - Software, Equipment & Infrastructure	Discretionary	\$8,772
8843-1814	Gas System Planning & Reliability	Discretionary	\$11,268
8843-1820	Keene Propane Air Plant Meter Install	Mandated _	\$134,685
		Total	\$23,921,009

8840-1811 total is the net of the total in service minus the amount approved in DG 19-054

Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities 2018 In Service Spend for Growth Projects

Project Number	<u>Project Name</u>	<u>Priority</u>	In Service 2018 Spend
8840-1847	Growth New Main	Growth	\$6,885,661
8840-1849	Growth Fitting	Growth	\$1,651,091
8840-1850	New Service Residential	Growth	\$3,613,352
8840-1851	New Service Comm/Industrial	Growth	\$791,959
8843-1808	Main Replacement City/State Construction	Mandated	\$92,016
8843-1817	New Service Residential	Growth	\$28,659
8843-1819	Keene HP Conversion to CNG	Growth	\$16,446
		Total	\$13,079,184

Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities 2019 In Service Spend for Non-Growth Projects

Project Number	<u>Project Name</u>	<u>Priority</u>	In Service 2019 Spend
8840-1900-RENTAL	EN EQUIPMENT RENTAL	Discretionary	\$14,571
8840-1902	Meter Protection Program	Mandated	\$343,196
8840-1903	Cathodic Protection Program	Mandated	\$443,194
8840-1904	Replacement Services Random (Non Leaks)	Mandated	\$98,770
8840-1905	Replacement Services Random (Due to Leaks)	Mandated	\$584,431
8840-1908	Corrosion & Miscellaneous Fitting	Mandated	\$176,049
8840-1909	Valve Installation/Replacement	Mandated	\$83,932
8840-1910	Leak Repairs	Mandated	\$1,413,077
8840-1911	Main Replacement LPP	Regulatory Programs	\$8,074,499
8840-1913	Main Replacement Fitting LPP	Regulatory Programs	\$1,422,921
8840-1914	K Meter Replacement Program	Safety	\$254,746
8840-1915	Aldyl-A Replacement Program	Discretionary	\$269,341
8840-1916	Main Replacement Reactive	Discretionary	\$1,233,438
8840-1918	Purchase Misc Capital Equipment & Tools	Discretionary	\$364,029
8840-1923	Main Replacement City/State Construction	Mandated	\$5,713,656
8840-1925	Service Replacement Fitting City/State Construction	Mandated	\$241,623
8840-1926	LNG/LPG Capital Improvements	Mandated	\$182,820
8840-1928	Gas System Control & Regulation (ENG)	Discretionary	\$292,086
8840-1929	Pre-Code Stee Pipe Protection Program	Mandated	\$236,889
8840-1930	IT - Software, Equipment & Infrastructure	Discretionary	\$417,503
8840-1931	Gas System Planning & Reliability	Discretionary	\$3,073,371
8840-1937	Prometric Training Center	Discretionary	\$611,266
8840-1938	IT Systems Allocations - Corporate	Discretionary	\$170,051
8840-1939	Dresser Coupling Replacement Program	Mandated	\$514,412
8840-1945	Placeholder for Gas Training & Development	Discretionary	\$10,697
8840-1953	Relocation of Engineering from Londonderry to Manchester	Discretionary	\$73,737
8840-1962	GIS Mapping	Discretionary	\$122,266
8840-1965	New Facility Build - Prometrics (Engineering)	Discretionary	\$213,822
8840-1990	Transportation Fleet and Equipment Purchases	Discretionary	\$2,555,626
8840-1991	Meter Work Project (Meter Purchases)	Mandated	\$862,331
8840-1993	EN Facilities Capital Improvements	Discretionary	\$94,191
8843-1820	Keene Propane Air Plant Meter Install	Mandated	\$11,545
8843-1902	Replacement Services Random	Mandated	\$1,042
8843-1909	Service Replacement City/State Construction	Mandated	\$5,919
8843-1912	Capital Tools/Equipment	Discretionary	\$9,391
8843-1914	Gas System Planning & Reliability	Discretionary	\$82,927
8843-1990	Transportation Fleet and Equipment Purchases	Discretionary	\$148,719
8843-1993	Keene Facilities Capital Improvements	Discretionary	\$4,403
		Total	\$30,426,488

8840-1911 total is the net of the total in service minus the amount approved in DG 20-049

Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty Utilities 2019 In Service Spend for Growth Projects

Project Number	Project Name	<u>Priority</u>	In Service 2019 Spend
8840-1947	Growth New Main	Growth	\$6,883,285
8840-1948	New Reinforcement Main for Growth	Growth	\$339,598
8840-1949	Growth Fitting	Growth	\$2,143,578
8840-1950	New Service Residential	Growth	\$4,416,228
8840-1951	New Service Comm/Industrial	Growth	\$1,513,274
8843-1908	Main Replacement City/State Construction	Mandated	\$459,929
8843-1911	Main Replacement LPP	Regulatory Programs	\$954,448
8843-1915	Growth New Main	Growth	\$118,757
8843-1916	Main Replacement/Growth Fitting	Growth	\$11,070
8843-1917	New Service Residential	Growth	\$9,517
8843-1918	New Service Comm/Industrial	Growth	\$17,970
8843-1919	Keene HP Conversion to CNG	Growth	\$100,921
		Total	\$16,968,575

Liberty Utilities Capital Spending Plan

2021 through 2023

<u>Project</u>	2021 Costs	2022 Costs	2023 Costs	<u>Total</u>
Leak Repairs	\$ 1,226,000	\$ 1,265,000	\$ 1,310,000	\$ 3,801,000
LPP-City/State	\$ 23,050,000	\$ 25,260,000	\$ 27,700,000	\$ 76,010,000
Aldyl-A Replacement	\$ 880,000	\$ 1,000,000	\$ 1,070,000	\$ 2,950,000
K Meter Replacement Program	\$ 1,500,000	\$ 3,090,000	\$ 3,190,000	\$ 7,780,000
Main Replacement Reactive	\$ 600,000	\$ 660,000	\$ 720,000	\$ 1,980,000
Dresser Coupling Replacement	\$ 475,000	\$ 490,000	\$ 502,000	\$ 1,467,000
Gas System Planning & Reliability	\$ 6,850,000	\$ 4,500,000	\$ 13,900,000	\$ 25,250,000
Gas Supply System Enhancements	\$ 100,000	\$ 17,800,000	\$ 5,000,000	\$ 22,900,000
Total	\$ 34,681,000	\$ 54,065,000	\$ 53,392,000	\$ 142,138,000

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities Illustrative Step Adjustment Calculation Computation of Revenue Requirement CY 2021

Total Investment				CY		
Less Growth				<u>2021</u>		
Total	1	Total Investment		\$40,000,000		
6 Peter Tax Calculation \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2	Less Growth		(\$15,000,000)		
	3	Total		\$25,000,000		
	4	80% of Non Growth Capital		\$20,000,000		
7 Book Depreciation Rate 3.75% 8 Federal Tax Depreciation Rate 3.75% 9 FEDERAL Vintage Year Tax Depreciation: 10 CY 2021 Spend \$750,000 11 Annual Tax Depreciation \$750,000 12 Cumulative Tax Depreciation: \$750,000 13 STATE Vintage Year Tax Depreciation: \$750,000 16 Annual Tax Depreciation \$750,000 17 Cumulative Tax Depreciation \$750,000 18 CY 2021 Spend \$750,000 19 Book Depreciation \$384,000 20 Cumulative Book Depreciation \$384,000 21 Cumulative Book Depreciation \$366,000 23 Jess: Deferred Tax Reserve (State) \$28,182 24 Net Book/Tax Timer (Federal) \$337,818 25 Effective Tax Rate (Federal) \$333,818 26 Deferred Tax Reserve (Federal) \$333,818 27 Book/Tax Timer (Federal) \$366,000 28 Effective Tax Rate (State) \$2,000	5					
8 Federal Tax Depreciation Rate 3,75% 9 FEDERAL Vintage Year Tax Depreciation: \$750,000 11 Annual Tax Depreciation \$750,000 12 Cumulative Tax Depreciation \$750,000 13 Tax \$750,000 14 STATE Vintage Year Tax Depreciation: \$750,000 15 Cumulative Tax Depreciation \$750,000 16 Annual Tax Depreciation \$750,000 17 Cumulative Tax Depreciation \$750,000 18 Cumulative Book Depreciation 20 Cumulative Book Depreciation \$384,000 21 We Book/Tax Timer (Federal) \$366,000 23 less: Deferred Tax Reserve (State) \$28,182 24 Net Book/Tax Timer (Federal) \$337,818 25 Effective Tax Rate (Federal) \$333,818 26 Deferred Tax Reserve (Federal) \$70,942 27 Book/Tax Timer (State) \$366,000 28 Effective Tax Rate (State) \$70,942 29 Deferred Tax Reserve (State) \$28,182 30 TOTAL Deferred Tax Reserve \$29,124 31 Plant in Service \$20,000,000 34 Accumulated Book Depreciation (\$384,000) 35	6 <u>D</u>	eferred Tax Calculation				
FEDERAL Vintage Year Tax Depreciation:	7	Book Depreciation Rate		1.92%		
Annual Tax Depreciation	8	Federal Tax Depreciation Rate		3.75%		
Annual Tax Depreciation	9	FEDERAL Vintage Year Tax Depreciation:				
Cumulative Tax Depreciation \$750,000	10	CY 2021 Spend		\$750,000		
STATE Vintage Year Tax Depreciation:	11	Annual Tax Depreciation		\$750,000		
STATE Vintage Year Tax Depreciation: CY 2021 Spend	12	Cumulative Tax Depreciation		\$750,000		
CY 2021 Spend	13					
Annual Tax Depreciation	14	STATE Vintage Year Tax Depreciation:				
Cumulative Tax Depreciation \$750,000	15	CY 2021 Spend	_	\$750,000		
Book Depreciation	16	Annual Tax Depreciation		\$750,000		
Book Depreciation	17	Cumulative Tax Depreciation		\$750,000		
Cumulative Book Depreciation \$384,000	18					
Book/Tax Timer (Federal)	19	Book Depreciation		\$384,000		
Book/Tax Timer (Federal) \$366,000	20	Cumulative Book Depreciation		\$384,000		
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Net Book/Tax Timer (Federal) \$337,818	22	Book/Tax Timer (Federal)		\$366,000		
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S70,942 S70,	24	Net Book/Tax Timer (Federal)	•	\$337,818		
Sa66,000	25	Effective Tax Rate (Federal)		21.00%		
Sa66,000	26	Deferred Tax Reserve (Federal)	•	\$70,942		
28 Effective Tax Rate (State) 7.70% 29 Deferred Tax Reserve (State) \$28,182 30 TOTAL Deferred Tax Reserve \$99,124 31 \$99,124 32 Rate Base Calculation \$20,000,000 34 Accumulated Book Depreciation \$384,000 35 Deferred Tax Reserve \$19,516,876 36 Year End Rate Base \$19,516,876 37 Year End Rate Base \$19,516,876 40 Pre-Tax ROR 9.43% 41 Return and Taxes \$1,840,138 42 Book Depreciation \$384,000 43 Property Taxes¹ 2.71% \$531,594 44 Annual Revenue Requirement \$2,755,731 45 Adjusted Annual Revenue Requirement \$2,755,731 46 Adjusted Annual Revenue Requirement \$2,755,731 48 Weighted 49 Ratio Rate Pre Tax 51 Long Term Debt 49.85% 4.42% 2.20% 2.20% 53 Common Equity 50.15% 10.51% 5.27%	27	Book/Tax Timer (State)	•			
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37 38 Revenue Requirement Calculation			•			
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48 49 Imputed Capital Structure (e) Weighted 50 Ratio Rate Rate Pre Tax 51 Long Term Debt 49.85% 4.42% 2.20% 2.20% 53 Common Equity 50.15% 10.51% 5.27% 7.23% 54		Adjusted Annual Revenue Requirement		\$2,755,731		
49 Imputed Capital Structure (e) Ratio Rate Rate Pre Tax 51 Long Term Debt 49.85% 4.42% 2.20% 2.20% 53 Common Equity 50.15% 10.51% 5.27% 7.23% 54						
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	55		100.00%		7.47%	9.43%