



Matthew DeCoursey

Managing Director

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Education

MBA in Finance,
University of
Massachusetts at
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B.A. in Political
Science, University
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Boston

Matthew DeCoursey is a Managing Director in the Power and Utilities practice, where he provides advisory services to utilities, investors, regulators, and infrastructure developers in jurisdictions throughout North America. His practice focuses on the utility ratemaking and regulatory strategy, analysis of gas and power markets, market design, investment advisory, and policy analysis.

PROFESSIONAL EXPERIENCE

- *FTI Consulting*, Managing Director, Boston MA, March 2018 – Present
- *Concentric Energy Advisors*, Project Manager and Principal, Marlborough MA, January 2016 – February 2018
- *Leviton & Associates*, Senior Consultant, Boston MA, October 2004 – December 2015

SELECTED ENGAGEMENTS

Engagements listed below comprise a representative sampling of recent consulting projects Mr. DeCoursey has undertaken that relate to utility rate making, energy markets, and policy. They include assignments undertaken while at FTI and at previous employers.

Spire Missouri. Provided advisory services to Spire Missouri, an LDC subsidiary of Spire Energy, in the most recent rate case for Mississippi River Transmission ("MRT"), on which Spire is a shipper (RP18-923). Analyzed system flows to determine the appropriateness of proposed tariff designs on MRT, analyzed market conditions to estimate the commercial outlook for MRT capacity, and supported negotiations.

Emera Energy. Advised Emera regarding a taxation dispute related to the cross-border shipments of natural gas between Canada and the U.S.

District of Columbia Office of People's Counsel. Currently representing OPC in Pepco's ongoing rate case in the District (FC 1156). Responsible for the analysis of Pepco's proposed Multi-Year Rate Plan ("MRP"), including the identification of key flaws, inconsistencies with Commission precedent, and development of alternative MRP formulations.

Jacksonville Electric Authority. Served as a regulatory advisor for its proposed privatization. The FTI team, along with JEA's financial and legal advisors, was responsible for evaluation of the risks, opportunities, and requirements of JEA and the NewCo as they relate to approval by the Florida Public Service Commission ("FPSC"), including the FPSC's approval of the transaction, ratemaking for the NewCo, the transition from regulatory to IOU accounting, and related advisory.

Municipal Light & Power. Advisory services for the municipal utility serving Anchorage, AK, in its rate case (U-17-008) before the Regulatory Commission in

Alaska on matters related to the prudence of its investment in new generation. Managed a consulting team that conducted research of prudence issues and standards in Alaska and other jurisdictions, drafted testimony, managed discovery, and developed analyses related to current and expected operational benefits used to rationalize the investment.

Maryland of Office of People's Council ("OPC"). Advised OPC regarding a request for a change in rates filed at the FERC by the Exelon companies serving Maryland. Analyzed the companies' proposal regarding rate changes attributable to the Tax Cuts and Jobs Act and its effect on Accumulated Deferred Income Taxes and related matters.

Atmos Pipeline Texas ("APT"). Advised APT on its general rate case before the Texas Railroad Commission. Prepared testimony, conducted analyses of captive customers, and evaluated APT's competitiveness in support of a recommendation on the high end of the zone of reasonableness on ROE.

Equinor. Represented Equinor in multiple proceedings before the Federal Energy Regulatory Commission ("FERC") regarding proposed changes to the New York Independent System ("NYISO") market mitigation rules (ER16-1404, ER20-1710).

NYISO. Assisted with the development of the first estimate of the Net Cost of New Entry ("Net CONE") used to establish the demand curves used in NYISO's Installed Capacity ("ICAP") spot auction. Recommendations were accepted at the FERC.

Industrial Power Consumers Association of Alberta. Advised IPCAA, a consortium of industrial consumers, regarding proposals to implement a capacity market mechanism in Alberta. Conducted comparative reviews of proposed market designs, analyzed economic impacts, and proposed improvements. FTI's findings were presented in an expert report filed with the Alberta Utilities Commission.

Atlantic Wind Connection. On behalf of the developers of the New Jersey Energy Link project, conducted modeling to quantify market benefits to customers deriving from relieve of capacity price congestion, and environmental benefits associated with providing access to offshore wind.

Millennium Pipeline. Developed an expert report estimating the gas and electric market benefits of the Eastern System Upgrade ("ESU"). Analyzed markets via simulation to determine ESU's impacts on delivered gas and electric prices in Eastern New York.

Connecticut Department of Energy and Environmental Protection ("DEEP"). Working as a contractor to DEEP, advised the two Connecticut EDCs (United Illuminating and Connecticut Light & Power) on their procurement of energy from wholesale suppliers for purposes of Standard Offer supply. Assisted with the design of the "laddering" strategy in place to reduce rate shock while tracking market conditions, negotiated with suppliers, designed and executed a sealed bid auction scheme, and conducted price benchmarking to analyze the competitiveness of offers.

Industrial Power Consumers Association of Alberta. Advised a group of industrial consumers of electricity on matters related to the implementation of a capacity market in Alberta. Analyzed proposed market rules, identified potential

weaknesses, and assisted in the development of an expert report filed with the provincial regulator.

Independent System Operator of New England. Conducted studies to support the triennial Net CONE reset. Developed financial and simulation models to determine the levelized net cost, inclusive of energy and ancillaries revenues, to develop various types of generation technologies. Recommendations and related tariff revisions were accepted by the FERC and are currently in effect.

Millennium Pipeline. Developed an expert report estimating the gas and electric market benefits of the Eastern System Upgrade (“ESU”). Analyzed markets via simulation to determine ESU’s impacts on delivered gas and electric prices in Eastern New York. Expert report submitted to the FERC in support of CPCN application.

Eastern Interconnect Planning Collaborative. EIPC is a consortium of the six ISOs that comprise the North American Eastern Interconnect. As part of a major study on gas-electric interdependence issues funded by the U.S. Department of Energy and administered by EIPC, conducted simulation modeling to analyze gas deliverability under peak demand conditions and quantify generation at risk arising from gas pipeline constraints.

Mitsubishi Heavy Industries. Analyzed gas and electric markets in California to support MHI in arbitration proceedings regarding the failure of the San Onofre Nuclear Generation Station (“SONGS”). Developed a market outlook to parameterize the damages associated with lost production and conducted diligence and rebuttal on the claimant’s own market outlook.

Maryland Public Service Commission. Advised Maryland’s state regulator to evaluate long-term options for the state’s energy future. Developed long-run economic outlooks of various conventional and renewable generation options as well as demand-side measures to quantify the impact of achieving renewable policy mandates on ratepayers.

Multinational Energy Company. Advised a major institutional investor regarding the purchase of U.S. utilities in the U.S. Developed a study to compare regulatory environments on a state-by-state basis and estimated the regulatory advantage in each jurisdiction.

EnergyFairness. On behalf of an advocacy group representing the interests of regulated utilities, provided advisory and advocacy related to a proposed Florida ballot initiative to deregulate the electric market in that state. Conducted analyses, supported outreach, and delivered presentations regarding the risks and costs of the proposed measure to a joint committee of the Florida legislature.

RECENT PUBLICATIONS AND MEMBERSHIPS

Member, Energy Bar Association, Renewables and Natural Gas Committees

Member, Global Association of Risk Professionals

“Renewable Portfolio Standards— Recent Experience and Auction Design Options.”
Selected for presentation at the Center for Research in Regulated Industries Annual Conference, with David Salant, May 2020 (pending delay)

"PJM Market Fundamentals, Operations, and Value Dynamics." *EUCI Course*, with Kenneth Sosnick, January 2020.

"U.S. Observations and Experiences in Natural Gas Infrastructure Investment." *Working Paper of the US-India Strategic Partnership Forum*, with Kenneth Sosnick, et al, December 2019

"Developing the Generation Fleet of the Future." *PowerGen University*, with Keith Paul, November 2019

"Investing in Infrastructure Projects." *Workshop at the 23rd Platts Mexican Energy Conference*, with Dino Barajas, November 2019

"It's Time for Electric Utilities to Re-Energize Their Cybersecurity Efforts." *FTI Journal*, with Jordan Rae Kelly, November 2019

"A Roadmap for Developing the Public Utility of the Future." *Working Paper of the American Public Power Association*, April 2019

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study**

Incremental Production Cost Support Summary (LNG Facility)

Line	Description	Total	Units	
1	Cost of incremental LNG capacity	6,417,840	\$, 2016	[1]
2	Incremental capacity	10,000	dth	[2]
3	Unit cost of incremental capacity	641.78	\$/dth	[3]
4	Year of pressure support analysis	2016		[4]
5	Base year of MCS study	2019		[5]
6	Period adjustment	1.062		[6]
7	Current-year unit cost of incremental capacity	681.48	\$/dth	[7]
8	Percentage related to pressure support	8.73%		[8]
9	Marginal cost of production plant for distribution function (\$/dth)	59.52	\$/dth	[9]

[1] Source: Company data

[2] Source: Company data

[3] Equals [1]/[2]

[6] Source: U.S. Bureau of Economic Analysis, Gross Domestic Product Implicit Price Deflator

[7] Equals [3]*[6]

[8] Source: Company data

[9] Equals [7]*[8]

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Capacity-Related Distribution Plant Costs for Reinforcements

Line No.	Year	Design Day Demand (Dth)	Dummy Variable: 2022 - 2030	Incremental Design Day Demand (Dth)	Reinforcement Cost (Constant \$)	Cumulative Total
	[1]	[2]		[3]	[4]	[5]
1	2020	168,699	0	0	\$0	\$0
2	2021	170,932	0	2,232	\$3,950,000	\$3,950,000
3	2022	173,377	1	2,445	\$4,700,000	\$8,650,000
4	2023	181,097	1	7,720	\$10,400,000	\$19,050,000
5	2024	184,065	1	2,967	\$2,880,000	\$21,930,000
6	2025	186,987	1	2,923	\$3,900,000	\$25,830,000
7	2026	189,963	1	2,975	\$3,420,000	\$29,250,000
8	2027	192,968	1	3,006	\$3,420,000	\$32,670,000
9	2028	196,015	1	3,047	\$3,420,000	\$36,090,000
10	2029	199,042	1	3,027	\$3,420,000	\$39,510,000
11	2030	202,065	1	3,023	\$3,420,000	\$42,930,000
12						
13	Total (2021 - 2030)			33,366	\$42,930,000	
14						
15	REGRESSION RESULTS				Col. [5] vs. Col. [2]	
16	Slope				1,261.973	
17	Y Intercept				(211,012,698.480)	
18	R ²				0.995	
19	t-stat				0.000	
20	p-value				1,195.043	
21						
22	Regression Estimate		[Line 16]		\$1,261.97	
23						
24	ASSUMED MARGINAL COSTS FOR REINFORCEMENT					
25	\$s per Design Day Therm				<u>\$1,261.97</u>	

NOTES:

- 1 Forecast used to develop marginal distribution investment taken from engineer's estimates (company data).

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.997535661
R Square	0.995077395
Adjusted R Square	0.994530439
Standard Error	1069689.807
Observations	11

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	2.08171E+15	2.08171E+15	1819.3004	1.06791E-11
Residual	9	1.02981E+13	1.14424E+12		
Total	10	2.09201E+15			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-211012698.5	5510464.544	-38.29308706	2.80489E-11	-223478235.3	-198547161.6	-223478235.3	-198547161.6
X Variable 1	1261.972627	29.58678171	42.65325779	1.06791E-11	1195.042677	1328.902578	1195.042677	1328.902578

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Capacity Related Distribution Plant Costs for Mains Extensions

Line No.	Year	Design Day Demand (Dth)	Dummy Variable: 2009 - 2019	Interaction Variable: Col [2] x Col [3]	Dummy Variable: 2001 - 2003	Incremental Design Day Demand (Dth)	Cost of Mains Installed (\$)	Handy-Whitman Cost Index	Conversion Factor (\$2019)	Cost of Mains Installed (\$2019)	Cumulative Total
		[1]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
1	1989	94,340	0	0	0	0	\$2,102,827	280	2.15	\$4,528,588	\$4,528,588
2	1990	95,525	0	0	0	1,185	\$1,724,250	289	2.09	\$3,600,771	\$8,129,360
3	1991	97,891	0	0	0	2,366	\$1,341,529	297	2.03	\$2,723,710	\$10,853,070
4	1992	101,018	0	0	0	3,127	\$1,489,922	302	2.00	\$2,977,375	\$13,830,445
5	1993	101,899	0	0	0	882	\$1,018,848	310	1.95	\$1,981,824	\$15,812,269
6	1994	104,535	0	0	0	2,635	\$975,268	316	1.91	\$1,863,983	\$17,676,252
7	1995	107,163	0	0	0	2,628	\$667,884	322	1.87	\$1,250,727	\$18,926,979
8	1996	112,323	0	0	0	5,160	\$1,138,184	330	1.83	\$2,082,929	\$21,009,907
9	1997	118,475	0	0	0	6,152	\$4,396,282	337	1.79	\$7,866,344	\$28,876,252
10	1998	119,650	0	0	0	1,176	\$1,792,794	344	1.75	\$3,144,887	\$32,021,138
11	1999	127,994	0	0	0	8,344	\$2,415,815	351	1.72	\$4,156,167	\$36,177,305
12	2000	123,296	0	0	0	-4,698	\$3,440,754	358	1.68	\$5,795,459	\$41,972,764
13	2001	120,420	0	0	1	-2,876	\$8,588,507	367	1.64	\$14,120,980	\$56,093,744
14	2002	117,163	0	0	1	-3,257	\$5,787,927	374	1.61	\$9,325,638	\$65,419,383
15	2003	129,188	0	0	1	12,025	\$6,335,289	381	1.58	\$10,033,300	\$75,452,683
16	2004	135,096	0	0	0	5,908	\$2,804,933	397	1.52	\$4,260,389	\$79,713,072
17	2005	138,566	0	0	0	3,470	\$1,761,281	422	1.43	\$2,519,698	\$82,232,770
18	2006	142,066	0	0	0	3,500	\$1,531,679	443	1.36	\$2,083,705	\$84,316,475
19	2007	146,269	0	0	0	4,203	\$2,092,072	467	1.29	\$2,699,721	\$87,016,196
20	2008	148,760	0	0	0	2,491	\$1,779,635	492	1.23	\$2,183,357	\$89,199,553
21	2009	147,487	1	147,487	0	-1,273	\$5,177,230	512	1.18	\$6,097,401	\$95,296,954
22	2010	150,439	1	150,439	0	2,952	\$1,853,067	505	1.19	\$2,213,768	\$97,510,722
23	2011	145,478	1	145,478	0	-4,961	\$1,419,065	522	1.16	\$1,640,050	\$99,150,773
24	2012	149,203	1	149,203	0	3,725	\$3,379,136	541	1.11	\$3,766,393	\$102,917,166
25	2013	154,471	1	154,471	0	5,268	\$2,245,707	545	1.11	\$2,486,981	\$105,404,147
26	2014	160,216	1	160,216	0	5,745	\$2,424,524	551	1.10	\$2,655,746	\$108,059,893
27	2015	158,060	1	158,060	0	-2,157	\$2,684,371	559	1.08	\$2,896,959	\$110,956,852
28	2016	163,606	1	163,606	0	5,546	\$2,246,935	567	1.06	\$2,391,707	\$113,348,558
29	2017	169,976	1	169,976	0	6,370	\$4,426,087	575	1.05	\$4,643,637	\$117,992,195
30	2018	173,822	1	173,822	0	3,846	\$9,277,518	584	1.03	\$9,579,355	\$127,571,550
31	2019	179,564	1	179,564	0	5,742	\$8,477,001	603	1.00	\$8,477,001	\$136,048,551
32											
33	Total (1989 - 2019)	4,133,957				85,224	\$96,796,320			\$136,048,551	
34	Total (2009 - 2019)	1,752,320				30,804	\$43,610,640			\$46,848,998	
35	Total (2014 - 2019)	1,005,243				25,093	\$29,536,436			\$30,644,404	
36											
37											
38	REGRESSION RESULTS						Col. [11] vs. Col. [2] to Col [5]				
39	Slope for the period 2009 and beyond						1,090.652				
40	Y Intercept						(153,632,473.80)				
41	R ²						0.975				
42	t-stat						17.374				
43	p-value						0.000				
44											
45	Regression Estimate				[Line 37]		\$1,090.65				
46	Incremental Average Cost										
47	1989 - 2019				[Line 33], Col [10] / Col [6]		\$1,596.37				
48	2009 - 2019				[Line 34], Col [10] / Col [6]		\$1,520.88				
49	2014 - 2019				[Line 35], Col [10] / Col [6]		\$1,221.25				
50											
51	MARGINAL COSTS FOR MAINS ADDITIONS										
52	\$s per Design Day Therm						\$1,090.65				

NOTES:

1 Source: Company data.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.987425289
R Square	0.975008702
Adjusted R Square	0.971163887
Standard Error	7014710.273
Observations	31

ANOVA					
	df	SS	MS	F	Significance F
Regression	4	4.99129E+16	1.24782E+16	253.5905293	2.02855E-20
Residual	26	1.27936E+15	4.92062E+13		
Total	30	5.11922E+16			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-153632473.8	11248002.62	-13.65864492	2.25894E-13	-176753074.3	-130511873.3	-176753074.3	-130511873.3
X Variable 1	1629.907125	93.81073488	17.37442018	7.89617E-16	1437.076397	1822.737852	1437.076397	1822.737852
X Variable 2	90276727.76	33141817.26	2.723952252	0.011375037	22152746.73	158400708.8	22152746.73	158400708.8
X Variable 3	-539.2555105	216.6126968	-2.489491699	0.019515686	-984.5092855	-94.00173548	-984.5092855	-94.00173548
X Variable 4	20020070.27	4406737.732	4.543059171	0.000112291	10961891.13	29078249.41	10961891.13	29078249.41

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Capacity-Related Distribution O&M Expense

Line No.	Year	Design Day Demand (Dth)	Capacity-Related O&M Expense (\$)	GDP Implicit Price Deflator	Conversion Factor (\$2019)	Capacity-Related O&M Expense (\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	94,340	\$1,945,026	61.37	1.83	\$3,560,503
2	1990	95,525	\$1,893,462	63.67	1.76	\$3,340,785
3	1991	97,891	\$1,918,550	65.82	1.71	\$3,274,506
4	1992	101,018	\$2,040,158	67.32	1.67	\$3,404,580
5	1993	101,899	\$2,151,230	68.92	1.63	\$3,506,770
6	1994	104,535	\$2,529,506	70.39	1.60	\$4,037,247
7	1995	107,163	\$2,598,141	71.86	1.56	\$4,061,537
8	1996	112,323	\$2,558,264	73.18	1.54	\$3,927,350
9	1997	118,475	\$2,645,969	74.44	1.51	\$3,993,101
10	1998	119,650	\$2,768,391	75.28	1.49	\$4,131,372
11	1999	127,994	\$2,626,392	76.37	1.47	\$3,863,710
12	2000	123,296	\$2,781,957	78.07	1.44	\$4,003,044
13	2001	120,420	\$2,518,609	79.79	1.41	\$3,546,140
14	2002	117,163	\$2,241,570	81.05	1.39	\$3,106,982
15	2003	129,188	\$3,479,902	82.55	1.36	\$4,735,729
16	2004	135,096	\$3,370,059	84.77	1.33	\$4,466,035
17	2005	138,566	\$3,675,620	87.41	1.29	\$4,723,763
18	2006	142,066	\$4,093,085	90.06	1.25	\$5,105,554
19	2007	146,269	\$4,154,511	92.48	1.21	\$5,046,643
20	2008	148,760	\$4,431,308	94.29	1.19	\$5,279,760
21	2009	147,487	\$4,882,340	95.00	1.18	\$5,773,431
22	2010	150,439	\$5,316,649	96.11	1.17	\$6,214,788
23	2011	145,478	\$4,976,899	98.12	1.15	\$5,698,551
24	2012	149,203	\$3,277,420	100.00	1.12	\$3,681,966
25	2013	154,471	\$4,743,594	101.75	1.10	\$5,237,330
26	2014	160,216	\$7,930,472	103.63	1.08	\$8,596,987
27	2015	158,060	\$7,395,141	104.72	1.07	\$7,933,734
28	2016	163,606	\$6,414,281	105.80	1.06	\$6,811,028
29	2017	169,976	\$5,679,124	107.79	1.04	\$5,919,024
30	2018	173,822	\$6,515,569	110.41	1.02	\$6,629,295
31	2019	179,564	\$6,384,488	112.34	1.00	\$6,384,488
32						
33	Total (1989 - 2019)	4,133,957	\$119,937,688			\$149,995,733
34	Total (2009 - 2019)	1,752,320	\$63,515,978			\$68,880,622
35	Total (2014 - 2019)	1,005,243	\$40,319,075			\$42,274,556
36						
37	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope				46.871	
39	Y Intercept				(1,411,780.50)	
40	R ²				0.678	
41	t-stat				7.817	
42	p-value				0.000	
43						
44	Regression Estimate		[Line 38]		\$46.87	
45	Average Cost					
46	1989 - 2019		[Line 33], Col [6] / Col [2]		\$36.28	
47	2009 - 2019		[Line 34], Col [6] / Col [2]		\$39.31	
48	2014 - 2019		[Line 35], Col [6] / Col [2]		\$42.05	
49						
50	ASSUMED MARGINAL COSTS FOR CAPACITY-RELATED O&M					
51	\$s per Design Day Threm				<u>\$46.87</u>	

NOTES:

- Source: Company data.
- GDP implicit price deflator obtained from Bureau of Economic Analysis/FRED database.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.823507575
R Square	0.678164726
Adjusted R Square	0.667066958
Standard Error	813266.6835
Observations	31

ANOVA

	df	SS	MS	F	Significance F
Regression	1	4.04171E+13	4.04171E+13	61.10820858	1.27524E-08
Residual	29	1.91807E+13	6.61403E+11		
Total	30	5.95978E+13			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-1411780.495	812799.2309	-1.736936308	0.09301097	-3074141.575	250580.5849	-3074142	250580.6
X Variable 1	46.87057	5.995845851	7.817173951	1.27524E-08	34.60768833	59.13345166	34.60769	59.13345

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Capacity-Related Production Expense

Line No.	Year	Design Day Demand (Dth)	Capacity-Related Production Expense (\$)	GDP Implicit Price Deflator	Conversion Factor (\$2019)	Capacity-Related Production Expense (\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	94,340	\$1,544,027	61.37	1.83	\$2,826,447
2	1990	95,525	\$1,752,291	63.67	1.76	\$3,091,706
3	1991	97,891	\$1,620,490	65.82	1.71	\$2,765,789
4	1992	101,018	\$1,467,204	67.32	1.67	\$2,448,444
5	1993	101,899	\$1,566,459	68.92	1.63	\$2,553,522
6	1994	104,535	\$1,714,538	70.39	1.60	\$2,736,509
7	1995	107,163	\$1,647,159	71.86	1.56	\$2,574,917
8	1996	112,323	\$1,722,081	73.18	1.54	\$2,643,673
9	1997	118,475	\$1,784,059	74.44	1.51	\$2,692,370
10	1998	119,650	\$1,760,381	75.28	1.49	\$2,627,081
11	1999	127,994	\$1,591,292	76.37	1.47	\$2,340,965
12	2000	123,296	\$679,438	78.07	1.44	\$977,664
13	2001	120,420	\$575,485	79.79	1.41	\$810,269
14	2002	117,163	\$845,341	81.05	1.39	\$1,171,705
15	2003	129,188	\$545,839	82.55	1.36	\$742,821
16	2004	135,096	\$591,437	84.77	1.33	\$783,778
17	2005	138,566	\$699,365	87.41	1.29	\$898,796
18	2006	142,066	\$768,391	90.06	1.25	\$958,461
19	2007	146,269	\$757,630	92.48	1.21	\$920,322
20	2008	148,760	\$812,189	94.29	1.19	\$967,697
21	2009	147,487	\$693,185	95.00	1.18	\$819,700
22	2010	150,439	\$592,199	96.11	1.17	\$692,239
23	2011	145,478	\$472,046	98.12	1.15	\$540,493
24	2012	149,203	(\$69,221)	100.00	1.12	(\$77,765)
25	2013	154,471	\$1,412,098	101.75	1.10	\$1,559,076
26	2014	160,216	\$2,057,282	103.63	1.08	\$2,230,186
27	2015	158,060	\$1,818,960	104.72	1.07	\$1,951,436
28	2016	163,606	\$1,666,705	105.80	1.06	\$1,769,797
29	2017	169,976	\$2,656,076	107.79	1.04	\$2,768,275
30	2018	173,822	\$2,971,810	110.41	1.02	\$3,023,682
31	2019	179,564	\$1,796,152	112.34	1.00	\$1,796,152
32						
33	Total (1989 - 2019)	4,133,957	\$40,512,388			\$54,606,207
34	Total (2000 - 2019)	2,953,145	\$22,342,407			\$25,304,784
35	Total (2014 - 2019)	1,005,243	\$12,966,985			\$13,539,527
36						
37	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope				(13.394)	
39	Y Intercept				3,547,617.18	
40	R ²				0.128	
41	t-stat				(2.065)	
42	p-value				0.048	
43						
44	Regression Estimate		[Line 38]		(\$13.39)	
45	Average Cost					
46	1989-2019		[Line 33], Col [6] / Col [2]		\$13.21	
47						
48	ASSUMED MARGINAL COSTS FOR CAPACITY-RELATED PRODUCTION					
49	\$s per Design Day Therm				\$13.21	

Allocation to Distribution Function	Production (Pressure Support) Expense
8.73%	\$1.15

NOTES:

- Source: Company data.
- GDP implicit price deflator obtained from Bureau of Economic Analysis/FRED database.
- Regression results show negative coefficient, low R² value, so average cost estimate used.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.358017477
R Square	0.128176514
Adjusted R Square	0.098113635
Standard Error	879835.6324
Observations	31

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	3.30051E+12	3.30051E+12	4.263614085	0.047980153
Residual	29	2.24492E+13	7.74111E+11		
Total	30	2.57497E+13			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	3547617.185	879329.917	4.034455233	0.000364302	1749185.573	5346048.796	1749185.573	5346048.796
X Variable 1	-13.39392825	6.486628474	-2.064852073	0.047980153	-26.66057309	-0.127283422	-26.66057309	-0.127283422

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Services and Meters Plant Investment Costs

Line	Description	R-1	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54	
1	Service Costs										
2	Representative Cost	\$5,346	\$5,346	\$4,995	\$6,346	\$10,913	\$15,649	\$6,583	\$39,407	\$9,647	[1]
3	Services per Customer	<u>0.76</u>	<u>0.76</u>	<u>0.76</u>	<u>1.00</u>	<u>1.00</u>	<u>0.76</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	[2]
4	Average Service Cost Per Customer	\$4,063	\$4,063	\$3,796	\$6,346	\$10,913	\$11,894	\$6,583	\$39,407	\$9,647	[3]
5	Meter Costs										
6	Installed Cost per Customer	\$440	\$440	\$1,077	\$2,750	\$9,333	\$3,483	\$2,750	\$3,995	\$11,904	[4]
7	Meters per Customer	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	[5]
8	Average Meter Cost per Customer	\$440	\$440	\$1,077	\$2,750	\$9,333	\$3,483	\$2,750	\$3,995	\$11,904	[6]

[1] Source: Company data

[2] Source: Company data

[3] Equals [1]*[2]

[4] Source: Company data

[5] Source: Company data

[6] Equals [4]*[5]

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Customer-Related O&M Expense

Line No.	Year	Annual Customers	Customer-Related O&M Expense (\$)	GDP Implicit Price Deflator	Conversion Factor (\$2019)	Customer-Related O&M Expense (\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	58,809	\$3,265,009	61.37	1.83	\$5,976,824
2	1990	60,216	\$3,297,919	63.67	1.76	\$5,818,781
3	1991	60,958	\$3,391,122	65.82	1.71	\$5,787,835
4	1992	61,725	\$3,502,421	67.32	1.67	\$5,844,777
5	1993	62,566	\$3,522,064	68.92	1.63	\$5,741,400
6	1994	64,044	\$3,720,493	70.39	1.60	\$5,938,137
7	1995	65,385	\$3,736,123	71.86	1.56	\$5,840,486
8	1996	66,464	\$3,391,523	73.18	1.54	\$5,206,537
9	1997	67,928	\$3,405,043	74.44	1.51	\$5,138,640
10	1998	69,588	\$3,507,511	75.28	1.49	\$5,234,387
11	1999	71,291	\$3,481,936	76.37	1.47	\$5,122,309
12	2000	73,106	\$2,984,429	78.07	1.44	\$4,294,386
13	2001	74,959	\$3,275,394	79.79	1.41	\$4,611,674
14	2002	74,721	\$2,439,210	81.05	1.39	\$3,380,926
15	2003	78,438	\$2,340,691	82.55	1.36	\$3,185,399
16	2004	80,221	\$2,348,327	84.77	1.33	\$3,112,025
17	2005	81,735	\$2,621,664	87.41	1.29	\$3,369,259
18	2006	82,474	\$2,750,067	90.06	1.25	\$3,430,326
19	2007	83,637	\$3,087,832	92.48	1.21	\$3,750,906
20	2008	83,943	\$3,445,440	94.29	1.19	\$4,105,130
21	2009	84,346	\$3,828,174	95.00	1.18	\$4,526,866
22	2010	84,420	\$4,444,691	96.11	1.17	\$5,195,529
23	2011	85,286	\$4,037,750	98.12	1.15	\$4,623,226
24	2012	85,862	\$3,209,604	100.00	1.12	\$3,605,778
25	2013	86,972	\$3,817,221	101.75	1.10	\$4,214,536
26	2014	87,754	\$6,271,678	103.63	1.08	\$6,798,779
27	2015	90,335	\$5,696,782	104.72	1.07	\$6,111,683
28	2016	90,867	\$5,706,842	105.80	1.06	\$6,059,831
29	2017	93,291	\$7,314,420	107.79	1.04	\$7,623,398
30	2018	94,965	\$8,073,464	110.41	1.02	\$8,214,384
31	2019	96,597	\$7,803,263	112.34	1.00	\$7,803,263
32						
33	Total (1989 - 2019)		\$123,718,105			\$159,667,416
34	Total (2009 - 2019)		\$60,203,888			\$64,777,272
35	Total (2014 - 2019)		\$40,866,448			\$42,611,338
36						
37	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope				12.554	
39	Y Intercept				4,177,475.84	
40	R ²				0.011	
41	t-stat				0.567	
42	p-value				0.575	
43						
44	Regression Estimate		[Line 38]		\$12.55	
45	Average Cost					
46	1989 - 2019				\$66.45	
47	2009 - 2019				\$66.05	
48	2014 - 2019				\$76.94	
49	Current Average Cost per Customer				\$80.78	
50						
51	ASSUMED MARGINAL COSTS FOR CUSTOMER-RELATED O&M					
52	\$s per Customer				<u>\$66.45</u>	

NOTES:

- Source: Company data.
- GDP implicit price deflator obtained from Bureau of Economic Analysis/FRED database.
- Regression results show extremely low R² value, so average cost estimate used.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.104743591
R Square	0.01097122
Adjusted R Square	-0.023133221
Standard Error	1379106.995
Observations	31

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	6.11843E+11	6.11843E+11	0.321694758	0.574955508
Residual	29	5.51561E+13	1.90194E+12		
Total	30	5.5768E+13			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	4177475.84	1733440.165	2.409933682	0.022525612	632192.6313	7722759.048	632192.6313	7722759
X Variable 1	12.55384836	22.1337442	0.567181415	0.574955508	-32.71474136	57.82243808	-32.71474136	57.82244

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Class Weighting of Services and Meter Plant Expense

Line	Description	R1	R-3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54	Total	
1	Test year customers	3,549	79,448	9,349	1,423	58	1,319	394	34	28	95,602	[1]
2	Meters cost per customer	\$440	\$440	\$1,077	\$2,750	\$9,333	\$3,483	\$2,750	\$3,995	\$11,904		[2]
3	Services cost per customer	\$4,063	\$4,063	\$3,796	\$6,346	\$10,913	\$11,894	\$6,583	\$39,407	\$9,647		[3]
4	Services and meters per customer total	\$4,503	\$4,503	\$4,873	\$9,097	\$20,245	\$15,376	\$9,333	\$43,403	\$21,552		[4]
5	Total cost	\$15,979,776	\$357,739,395	\$45,555,875	\$12,942,386	\$1,180,127	\$20,280,736	\$3,673,679	\$1,494,249	\$599,082	\$459,445,305	[5]
6	Average cost per customer										\$4,806	[6]
7	Relative weight per customer	0.94	0.94	1.01	1.89	4.21	3.20	1.94	9.03	4.48		[7]
8	System average marginal cost per customer	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45		[8]
9	Class weighted marginal cost per customer	\$62.26	\$62.26	\$67.38	\$125.77	\$279.92	\$212.60	\$129.04	\$600.10	\$297.99		[9]

[1] Source: Company data

[2] MCOS-3, p. 1, ln 8

[3] MCOS-3, p. 1, ln 4

[4] Equals [2]+[3]

[5] Equals [1]*[4]

[6] Equals $\sum_{[5]} / \sum_{[1]}$

[7] Equals [3]/[6]

[8] MCOS-3, p. 2, ln 52

[9] Equals [7]*[8]

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Customer-Related Accounting & Marketing Expense

Line No.	Year	Annual Customers	Customer-Related Accounting & Marketing Expense (\$)	GDP Implicit Price Deflator	Conversion Factor (\$2019)	Customer-Related Accounting & Marketing Expense (\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	58,809	\$2,864,392	61.37	1.83	\$5,243,466
2	1990	60,216	\$3,442,112	63.67	1.76	\$6,073,191
3	1991	60,958	\$3,565,057	65.82	1.71	\$6,084,700
4	1992	61,725	\$3,740,667	67.32	1.67	\$6,242,358
5	1993	62,566	\$4,032,636	68.92	1.63	\$6,573,695
6	1994	64,044	\$3,935,631	70.39	1.60	\$6,281,510
7	1995	65,385	\$3,677,860	71.86	1.56	\$5,749,405
8	1996	66,464	\$3,695,729	73.18	1.54	\$5,673,543
9	1997	67,928	\$3,390,219	74.44	1.51	\$5,116,269
10	1998	69,588	\$3,377,588	75.28	1.49	\$5,040,499
11	1999	71,291	\$3,319,897	76.37	1.47	\$4,883,931
12	2000	73,106	\$3,042,687	78.07	1.44	\$4,378,216
13	2001	74,959	\$1,318,450	79.79	1.41	\$1,856,345
14	2002	74,721	\$1,114,892	81.05	1.39	\$1,545,323
15	2003	78,438	\$2,340,981	82.55	1.36	\$3,185,794
16	2004	80,221	\$3,171,337	84.77	1.33	\$4,202,686
17	2005	81,735	\$3,204,083	87.41	1.29	\$4,117,762
18	2006	82,474	\$4,130,827	90.06	1.25	\$5,152,632
19	2007	83,637	\$3,990,833	92.48	1.21	\$4,847,816
20	2008	83,943	\$3,927,632	94.29	1.19	\$4,679,647
21	2009	84,346	\$4,317,533	95.00	1.18	\$5,105,539
22	2010	84,420	\$4,816,133	96.11	1.17	\$5,629,719
23	2011	85,286	\$7,556,567	98.12	1.15	\$8,652,272
24	2012	85,862	\$9,647,965	100.00	1.12	\$10,838,852
25	2013	86,972	\$3,519,219	101.75	1.10	\$3,885,516
26	2014	87,754	\$5,036,775	103.63	1.08	\$5,460,090
27	2015	90,335	\$5,637,886	104.72	1.07	\$6,048,497
28	2016	90,867	\$4,737,995	105.80	1.06	\$5,031,057
29	2017	93,291	\$3,544,533	107.79	1.04	\$3,694,262
30	2018	94,965	\$3,005,303	110.41	1.02	\$3,057,759
31	2019	96,597	\$3,977,788	112.34	1.00	\$3,977,788
32						
33	Total (1989 - 2019)		\$121,081,206			\$158,310,142
34	Total (2009 - 2019)		\$55,797,696			\$61,381,353
35	Total (2014 - 2019)		\$25,940,280			\$27,269,454
36						
37	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope				(23.662)	
39	Y Intercept				6,940,889.07	
40	R ²				0.023	
41	t-stat				(0.834)	
42	p-value				0.411	
43						
44	Regression Estimate		[Line 38]		(\$23.66)	
45	Average Cost					
46	1989 - 2019				\$65.88	
47	2009 - 2019				\$62.59	
48	2014 - 2019				\$49.24	
49	Current Average Cost per Customer				\$41.18	
50						
51	ASSUMED MARGINAL COSTS FOR CUSTOMER-RELATED O&M					
52	\$s per Customer				<u>\$65.88</u>	

NOTES:

- Source: Company data.
- GDP implicit price deflator obtained from Bureau of Economic Analysis/FRED database.
- Regression results show extremely low R² value and negative coefficient, so average cost estimate used.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.153116387
R Square	0.023444628
Adjusted R Square	-0.010229695
Standard Error	1766940.628
Observations	31

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.17364E+12	2.17364E+12	0.69621675	0.410878792
Residual	29	9.05403E+13	3.12208E+12		
Total	30	9.27139E+13			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	6940889.069	2220919.672	3.125231929	0.004013654	2398598.324	11483179.81	2398598	11483180
X Variable 1	-23.66198178	28.35821443	-0.834396039	0.410878792	-81.66104253	34.33707896	-81.661	34.33708

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Plant-Related A&G Marginal Loading Factor

Line No.	Year	Plant Related A&G		Loading Factor
		Expense (\$)	Total Utility Plant (\$)	
	[1]	[2]	[3]	[4]
1	1989	\$1,364,240	\$90,119,098	1.51%
2	1990	\$1,429,254	\$99,467,339	1.44%
3	1991	\$1,427,802	\$106,202,255	1.34%
4	1992	\$1,435,822	\$112,423,806	1.28%
5	1993	\$1,445,997	\$118,656,821	1.22%
6	1994	\$1,342,813	\$124,120,097	1.08%
7	1995	\$1,200,572	\$129,472,654	0.93%
8	1996	\$1,405,850	\$135,806,318	1.04%
9	1997	\$1,422,193	\$145,866,429	0.97%
10	1998	\$1,311,090	\$156,424,246	0.84%
11	1999	\$1,624,095	\$166,682,099	0.97%
12	2000	\$2,209,040	\$174,018,261	1.27%
13	2001	\$1,000,753	\$189,363,169	0.53%
14	2002	\$1,127,386	\$202,252,941	0.56%
15	2003	\$413,762	\$227,692,187	0.18%
16	2004	\$401,446	\$239,474,276	0.17%
17	2005	\$686,615	\$242,115,491	0.28%
18	2006	\$696,565	\$263,405,595	0.26%
19	2007	\$705,896	\$280,967,870	0.25%
20	2008	\$734,523	\$298,931,548	0.25%
21	2009	\$756,942	\$318,900,861	0.24%
22	2010	\$1,218,997	\$328,222,369	0.37%
23	2011	\$388,947	\$338,986,146	0.11%
24	2012	\$689,718	\$339,610,905	0.20%
25	2013	\$1,071,232	\$360,914,157	0.30%
26	2014	\$1,132,042	\$379,562,429	0.30%
27	2015	\$1,135,511	\$426,165,148	0.27%
28	2016	\$850,423	\$453,429,242	0.19%
29	2017	\$776,521	\$485,723,431	0.16%
30	2018	\$939,134	\$595,016,259	0.16%
31	2019	\$1,039,393	\$665,854,695	0.16%
32				
33	Average Loading Factor		Col [2] / Col [3]	
34	1989 - 2019		0.61%	
35	2009 - 2019		0.22%	
36	2014 - 2019		0.20%	
37	Current		0.16%	
38				
39	MARGINAL LOADING FACTOR FOR PLANT A&G			
40	%		0.61%	

NOTES:

1 Source: Company data.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Non-Plant Related A&G Marginal Loading Factor

Line No.	Non-Plant Related A&G			
	Year	Expense (\$)	Adjusted O&M (\$)	Loading Factor
	[1]	[2]	[3]	[4]
1	1989	\$5,909,986	\$8,789,813	67.24%
2	1990	\$5,916,868	\$9,468,756	62.49%
3	1991	\$6,262,331	\$9,604,565	65.20%
4	1992	\$6,307,455	\$9,919,580	63.59%
5	1993	\$6,311,505	\$10,375,088	60.83%
6	1994	\$6,463,160	\$10,955,356	59.00%
7	1995	\$5,625,812	\$10,756,889	52.30%
8	1996	\$5,708,347	\$10,442,201	54.67%
9	1997	\$5,543,252	\$10,255,675	54.05%
10	1998	\$5,620,410	\$10,423,880	53.92%
11	1999	\$6,187,199	\$10,155,876	60.92%
12	2000	\$6,308,523	\$9,150,670	68.94%
13	2001	\$11,088,012	\$7,533,407	147.18%
14	2002	\$4,904,823	\$6,352,629	77.21%
15	2003	\$4,376,775	\$8,615,202	50.80%
16	2004	\$5,713,357	\$9,367,067	60.99%
17	2005	\$4,218,671	\$10,090,659	41.81%
18	2006	\$5,464,787	\$11,466,986	47.66%
19	2007	\$5,829,666	\$11,734,639	49.68%
20	2008	\$7,666,805	\$12,318,347	62.24%
21	2009	\$7,997,073	\$13,469,376	59.37%
22	2010	\$9,072,506	\$14,925,410	60.79%
23	2011	\$6,668,773	\$16,907,246	39.44%
24	2012	\$14,901,222	\$16,624,967	89.63%
25	2013	\$13,527,831	\$12,972,812	104.28%
26	2014	\$9,650,588	\$20,243,503	47.67%
27	2015	\$11,452,287	\$19,797,077	57.85%
28	2016	\$11,771,039	\$17,879,185	65.84%
29	2017	\$16,019,761	\$18,922,068	84.66%
30	2018	\$17,481,590	\$20,052,772	87.18%
31	2019	\$16,834,917	\$17,994,219	93.56%
32				
33	Average Loading Factor			Col [2] / Col [3]
34	1989 - 2019			66.16%
35	2009 - 2019			71.84%
36	2014 - 2019			72.79%
37	Current			93.56%
38				
39	MARGINAL LOADING FACTOR FOR NON-PLANT A&G			
40	%			66.16%

NOTES:

- 1 Source: Company data.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Materials & Supplies and Prepayments Marginal Loading Factor

Line No.	Year	Materials & Supplies and Prepayments (\$)	Total Utility Plant (\$)	Loading Factor
	[1]	[2]	[3]	[4]
1	1989	\$3,629,263	\$90,119,098	4.03%
2	1990	\$2,814,685	\$99,467,339	2.83%
3	1991	\$2,978,851	\$106,202,255	2.80%
4	1992	\$2,903,000	\$112,423,806	2.58%
5	1993	\$2,911,222	\$118,656,821	2.45%
6	1994	\$2,603,364	\$124,120,097	2.10%
7	1995	\$2,653,717	\$129,472,654	2.05%
8	1996	\$2,551,060	\$135,806,318	1.88%
9	1997	\$2,737,535	\$145,866,429	1.88%
10	1998	\$2,351,916	\$156,424,246	1.50%
11	1999	\$2,472,925	\$166,682,099	1.48%
12	2000	\$1,694,816	\$174,018,261	0.97%
13	2001	\$1,423,213	\$189,363,169	0.75%
14	2002	\$688,197	\$202,252,941	0.34%
15	2003	\$12,491	\$227,692,187	0.01%
16	2004	\$89,880	\$239,474,276	0.04%
17	2005	\$464,721	\$242,115,491	0.19%
18	2006	\$570,708	\$263,405,595	0.22%
19	2007	\$556,729	\$280,967,870	0.20%
20	2008	\$338,049	\$298,931,548	0.11%
21	2009	\$356,896	\$318,900,861	0.11%
22	2010	\$46,167	\$328,222,369	0.01%
23	2011	\$2,715,050	\$338,986,146	0.80%
24	2012	\$3,479,465	\$339,610,905	1.02%
25	2013	\$2,870,074	\$360,914,157	0.80%
26	2014	\$4,730,829	\$379,562,429	1.25%
27	2015	\$6,132,549	\$426,165,148	1.44%
28	2016	\$6,861,095	\$453,429,242	1.51%
29	2017	\$8,629,234	\$485,723,431	1.78%
30	2018	\$11,010,586	\$595,016,259	1.85%
31	2019	\$11,753,766	\$665,854,695	1.77%
32				
33	Average Loading Factor			Col [2] / Col [3]
34	1989 - 2019			1.31%
35	2009 - 2019			1.12%
36	2014 - 2019			1.60%
37	Current			1.77%
38				
39	MARGINAL LOADING FACTOR FOR MATERIALS & SUPPLIES AND PREPAYMENTS			
40	%			1.31%

NOTES:

- 1 Source: Company data.

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study**

General Plant Marginal Loading Factor

Line No.	Year	General Plant (\$)	Total Utility Plant (\$)	Total Utility Plant Less	
				General Plant (\$)	Loading Factor
	[1]	[2]	[3]	[4]	[5]
1	1989	\$5,933,582	\$90,119,098	\$84,185,516	7.05%
2	1990	\$6,503,724	\$99,467,339	\$92,963,615	7.00%
3	1991	\$6,849,445	\$106,202,255	\$99,352,810	6.89%
4	1992	\$7,659,250	\$112,423,806	\$104,764,556	7.31%
5	1993	\$7,970,207	\$118,656,821	\$110,686,614	7.20%
6	1994	\$8,384,740	\$124,120,097	\$115,735,357	7.24%
7	1995	\$8,221,795	\$129,472,654	\$121,250,859	6.78%
8	1996	\$8,870,155	\$135,806,318	\$126,936,163	6.99%
9	1997	\$9,203,222	\$145,866,429	\$136,663,207	6.73%
10	1998	\$9,478,301	\$156,424,246	\$146,945,945	6.45%
11	1999	\$11,244,509	\$166,682,099	\$155,437,590	7.23%
12	2000	\$7,255,965	\$174,018,261	\$166,762,296	4.35%
13	2001	\$8,348,042	\$189,363,169	\$181,015,127	4.61%
14	2002	\$11,173,887	\$202,252,941	\$191,079,054	5.85%
15	2003	\$11,582,178	\$227,692,187	\$216,110,009	5.36%
16	2004	\$10,499,392	\$239,474,276	\$228,974,884	4.59%
17	2005	\$10,220,042	\$242,115,491	\$231,895,449	4.41%
18	2006	\$11,333,343	\$263,405,595	\$252,072,252	4.50%
19	2007	\$12,089,175	\$280,967,870	\$268,878,695	4.50%
20	2008	\$15,097,758	\$298,931,548	\$283,833,790	5.32%
21	2009	\$16,049,203	\$318,900,861	\$302,851,658	5.30%
22	2010	\$16,060,707	\$328,222,369	\$312,161,662	5.14%
23	2011	\$16,195,189	\$338,986,146	\$322,790,957	5.02%
24	2012	\$8,811,783	\$339,610,905	\$330,799,122	2.66%
25	2013	\$9,473,843	\$360,914,157	\$351,440,314	2.70%
26	2014	\$10,590,671	\$379,562,429	\$368,971,758	2.87%
27	2015	\$18,670,190	\$426,165,148	\$407,494,958	4.58%
28	2016	\$23,326,152	\$453,429,242	\$430,103,090	5.42%
29	2017	\$24,927,246	\$485,723,431	\$460,796,185	5.41%
30	2018	\$29,522,360	\$595,016,259	\$565,493,899	5.22%
31	2019	\$35,197,100	\$665,854,695	\$630,657,595	5.58%
32					
33	Average Loading Factor			Col [2] / Col [4]	
34	1989 - 2019			5.49%	
35	2009 - 2019			4.54%	
36	2014 - 2019			4.85%	
37	Current Average Cost per Customer			5.29%	
38					
39	MARGINAL LOADING FACTOR FOR GENERAL PLANT				
40	%			5.49%	

NOTES:

1 Source: Company data.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Class Weighted Bad Debt Expense

Line No.	Rate Class	Gross Bad Debt Expense	Percent of Total	Adjusted Bad Debt Accounts Expense	Total Normalized Distribution Revenues	Bad Debt Expense Percentage
		[1]	[2]	[3]	[4]	[5]
1	R-1	\$54,638	2.33%	\$39,236	\$895,559	4.38%
2	R-3, R-4	\$2,072,985	88.57%	\$1,488,642	\$46,836,151	3.18%
3	G-41	\$168,920	7.22%	\$121,304	\$14,691,765	0.83%
4	G-42	\$28,979	1.24%	\$20,810	\$13,862,372	0.15%
5	G-43	\$0	0.00%	\$0	\$2,979,914	0.00%
6	G-51	\$13,411	0.57%	\$9,631	\$1,687,389	0.57%
7	G-52	\$1,597	0.07%	\$1,147	\$2,248,398	0.05%
8	G-53	\$0	0.00%	\$0	\$1,703,104	0.00%
9	G-54	\$0	0.00%	\$0	\$1,105,561	0.00%
10	Total	\$2,340,529	100.00%	\$1,680,770	\$86,010,213	1.95%

[1] Company data

[2] Col [1] Line (n) / Col [1] Line 10

[3] Col [2] Line (n) x Col [3] Line 10

[4] Company data.

[5] Col [3] / Col [4]

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Carrying Charges Inputs

Line	Description	Peaking plant	Distribution	Services	Meters	
1	Plant data					
2	Capitalized cost	\$1,000	\$1,000	\$1,000	\$1,000	
3	Book life	35	59	45	29	[1]
4	Salvage value	0%	-15%	-60%	0%	[2]
5	MACRS life	20	20	20	20	[3]
6	Capital structure					
7	Long-term debt ratio	49.85%	49.85%	49.85%	49.85%	[4]
8	Short-term debt ratio	0.00%	0.00%	0.00%	0.00%	[5]
9	Preferred ratio	0.00%	0.00%	0.00%	0.00%	[6]
10	Common ratio	50.15%	50.15%	50.15%	50.15%	[7]
11	Other	0.00%	0.00%	0.00%	0.00%	[8]
12	Cost of capital					
13	Long-term debt cost	4.42%	4.42%	4.42%	4.42%	[9]
14	Short-term debt cost	0.00%	0.00%	0.00%	0.00%	
15	Preferred cost	0.00%	0.00%	0.00%	0.00%	[10]
16	Common cost	10.51%	10.51%	10.51%	10.51%	[11]
17	Other	0.00%	0.00%	0.00%	0.00%	[12]
18	WACC	7.47%	7.47%	7.47%	7.47%	[13]
19	After tax WACC	6.88%	6.88%	6.88%	6.88%	[14]
20	Tax affected cost of capital	9.43%	9.43%	9.43%	9.43%	[15]
21	Tax info					
22	Tax rate	27.08%	27.08%	27.08%	27.08%	[16]
23	Property tax rate	2.58%	2.58%	2.58%	2.58%	[17]
24	Property insurance rate	0.18%	0.18%	0.18%	0.18%	[18]
25	Misc data					
26	Inflation rate	2.14%	2.14%	2.14%	2.14%	[19]
27	Constant \$ disc rate	4.73%	4.73%	4.73%	4.73%	[20]
28	Property tax escalation rate	2.14%	2.14%	2.14%	2.14%	[21]

[1] MCOS-5 Page 2

[2] MCOS-5 Page 2

[3] MCOS-5 Page 2

[4] Direct testimony of John Cochrane

[5] Direct testimony of John Cochrane

[6] Direct testimony of John Cochrane

[7] Direct testimony of John Cochrane

[8] Direct testimony of John Cochrane

[9] Direct testimony of John Cochrane

[10] Direct testimony of John Cochrane

[11] Direct testimony of John Cochrane

[12] Direct testimony of John Cochrane

[13] Line 7 x Line 13 + Line 8 x Line 14 + Line 9 x Line 15 + Line 10 x Line 16 + Line 11 x Line 17

[14] (1 - Line 22) * Line 20

[15] Line 19 / (1 - Line 22)

[16] Revenue Requirements RR-1

[17] Revenue Requirements Step-EN

[18] Revenue Requirements Step-EN

[20] Line 19 - Line 26

[21] Line 26

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study**

Development of Plant Service Lives and Net Salvage

Line	Account	Description	[A] Test Year Plant Balance	[B] Average Service Life	[C] Net Salvage Value	
1		<u>Production Plant</u>				
2	361	Structures and Improvements	\$96,980	35.0	0%	[1]
3	361.5	Other Equipment	<u>\$0</u>	<u>35.0</u>	<u>0%</u>	[2]
4		Production Plant Total	\$96,980	35.0	0%	[3]
5		<u>Distribution</u>				
6	366.2	Structures and Improvements	\$252,675	35.0	0%	[4]
7	366.3	Structures and Improvements	\$353,851	35.0	0%	[5]
8	367.0	Mains	\$239,064,768	60.0	-15%	[6]
9	369.0	Measuring and Regulation Stat	\$4,881,531	35.0	0%	[7]
10	387	Other Equipment	<u>\$1,044,334</u>	<u>19.0</u>	<u>0%</u>	[8]
		Distribution Total	\$245,597,159	59.3	-15%	[9]
11		<u>Services</u>				
12	380	Services	\$185,013,119	45.0	-60%	[10]
13	380.1	Services - Stub	<u>\$2,225,746</u>	<u>45.0</u>	<u>-60%</u>	[11]
		Services Total	\$187,238,865	45.0	-60%	[12]
14		<u>Meters</u>				
15	381.0	Meters	\$13,396,339	32.0	0%	[13]
16	381.1	Meters-Instrument	\$276,522	32.0	0%	[14]
17	381.2	Meters - ERTs	\$6,038,019	15.0	0%	[15]
18	382	Meter Installation	<u>\$18,597,177</u>	<u>32.0</u>	<u>0%</u>	[16]
19		Meters Total	\$38,308,057	29.3	0%	[17]

[1] Source: Company data

[2] Source: Company data

[3] Col A Equals [1]+[2], Cols B,C = Weighted Average of Lines [1] to [2]

[4] Source: Company data

[5] Source: Company data

[6] Source: Company data

[7] Source: Company data

[8] Source: Company data

[9] Col A Equals \sum lines [4] to [8], Cols B, C Equal Weighted Average of Lines [4] to [8]

[10] Source: Company data

[11] Source: Company data

[12] Col A Equals [10]+[11], Cols B,C Equal Weighted Average of Lines [10] to [11]

[13] Source: Company data

[14] Source: Company data

[15] Source: Company data

[16] Source: Company data

[17] Col A = \sum lines [13] to [16], Cols B, C = Weighted Average of Lines [13] to [16]

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Development of Revenue Requirements Stream
Peaker Plant

Year	PV Factor	Rate Base	Interest on Debt	Return on Preferred Equity	Return on Common Equity	Tax Depreciation	Tax Depreciation Rate	Book Depreciation	Deferred Taxes	Taxable Income	Income Taxes	Property Tax	Property Insurance	Revenue Requirement	% of Original Investment Revenue	PV of Revenue Requirement
0	1.00	1000														
1	0.94	969.01	21.35	0.00	51.07	37.50	3.75%	28.57	2.42	61.11	16.55	25.80	1.80	147.56	14.76%	138.07
2	0.88	928.63	20.46	0.00	48.95	72.19	7.22%	28.57	11.81	23.50	6.36	26.35	1.84	144.35	14.43%	126.37
3	0.82	889.71	19.60	0.00	46.89	66.77	6.68%	28.57	10.34	26.11	7.07	26.92	1.88	141.28	14.13%	115.72
4	0.77	852.15	18.78	0.00	44.91	61.77	6.18%	28.57	8.99	28.40	7.69	27.50	1.92	138.36	13.84%	106.04
5	0.72	815.85	17.98	0.00	43.00	57.13	5.71%	28.57	7.73	30.41	8.24	28.09	1.96	135.56	13.56%	97.21
6	0.67	780.70	17.20	0.00	41.15	52.85	5.29%	28.57	6.57	32.15	8.71	28.69	2.00	132.89	13.29%	89.16
7	0.63	746.63	16.45	0.00	39.35	48.88	4.89%	28.57	5.50	33.66	9.11	29.30	2.04	130.34	13.03%	81.82
8	0.59	713.55	15.72	0.00	37.61	45.22	4.52%	28.57	4.51	34.93	9.46	29.93	2.09	127.89	12.79%	75.12
9	0.55	680.63	15.00	0.00	35.87	44.62	4.46%	28.57	4.35	33.15	8.98	30.57	2.13	125.47	12.55%	68.96
10	0.51	647.72	14.27	0.00	34.14	44.61	4.46%	28.57	4.34	30.78	8.34	31.23	2.18	123.07	12.31%	63.28
11	0.48	614.80	13.55	0.00	32.40	44.62	4.46%	28.57	4.35	28.39	7.69	31.90	2.23	120.68	12.07%	58.06
12	0.45	581.88	12.82	0.00	30.67	44.61	4.46%	28.57	4.34	26.02	7.05	32.58	2.27	118.31	11.83%	53.26
13	0.42	548.97	12.10	0.00	28.93	44.62	4.46%	28.57	4.35	23.63	6.40	33.28	2.32	115.95	11.59%	48.84
14	0.39	516.05	11.37	0.00	27.20	44.61	4.46%	28.57	4.34	21.26	5.76	33.99	2.37	113.61	11.36%	44.77
15	0.37	483.13	10.65	0.00	25.46	44.62	4.46%	28.57	4.35	18.87	5.11	34.72	2.42	111.28	11.13%	41.03
16	0.35	450.22	9.92	0.00	23.73	44.61	4.46%	28.57	4.34	16.50	4.47	35.47	2.47	108.98	10.90%	37.60
17	0.32	417.30	9.19	0.00	22.00	44.62	4.46%	28.57	4.35	14.11	3.82	36.23	2.53	106.68	10.67%	34.44
18	0.30	384.39	8.47	0.00	20.26	44.61	4.46%	28.57	4.34	11.75	3.18	37.00	2.58	104.41	10.44%	31.54
19	0.28	351.47	7.74	0.00	18.53	44.62	4.46%	28.57	4.35	9.36	2.53	37.80	2.64	102.16	10.22%	28.87
20	0.26	318.56	7.02	0.00	16.79	44.61	4.46%	28.57	4.34	6.99	1.89	38.61	2.69	99.92	9.99%	26.42
21	0.25	291.68	6.43	0.00	15.37	22.31	2.23%	28.57	(1.70)	27.34	7.40	39.44	2.75	98.27	9.83%	24.31
22	0.23	270.85	5.97	0.00	14.28	0.00		28.57	(7.74)	48.15	13.04	40.28	2.81	97.21	9.72%	22.50
23	0.22	250.01	5.51	0.00	13.18	0.00		28.57	(7.74)	46.64	12.63	41.15	2.87	96.17	9.62%	20.83
24	0.20	229.18	5.05	0.00	12.08	0.00		28.57	(7.74)	45.14	12.22	42.03	2.93	95.15	9.51%	19.28
25	0.19	208.34	4.59	0.00	10.98	0.00		28.57	(7.74)	43.63	11.82	42.93	3.00	94.15	9.41%	17.85
26	0.18	187.51	4.13	0.00	9.88	0.00		28.57	(7.74)	42.12	11.41	43.85	3.06	93.17	9.32%	16.53
27	0.17	166.67	3.67	0.00	8.79	0.00		28.57	(7.74)	40.62	11.00	44.79	3.12	92.21	9.22%	15.31
28	0.16	145.84	3.21	0.00	7.69	0.00		28.57	(7.74)	39.11	10.59	45.75	3.19	91.27	9.13%	14.17
29	0.15	125.01	2.75	0.00	6.59	0.00		28.57	(7.74)	37.61	10.18	46.73	3.26	90.35	9.04%	13.13
30	0.14	104.17	2.30	0.00	5.49	0.00		28.57	(7.74)	36.10	9.78	47.73	3.33	89.46	8.95%	12.16
31	0.13	83.34	1.84	0.00	4.39	0.00		28.57	(7.74)	34.60	9.37	48.76	3.40	88.59	8.86%	11.27
32	0.12	62.50	1.38	0.00	3.29	0.00		28.57	(7.74)	33.09	8.96	49.80	3.47	87.74	8.77%	10.44
33	0.11	41.67	0.92	0.00	2.20	0.00		28.57	(7.74)	31.58	8.55	50.87	3.55	86.92	8.69%	9.68
34	0.10	20.83	0.46	0.00	1.10	0.00		28.57	(7.74)	30.08	8.14	51.96	3.63	86.12	8.61%	8.97
35	0.10	0.00	0.00	0.00	0.00	0.00		28.57	(7.74)	28.57	7.74	53.08	3.70	85.35	8.54%	8.32
Total			327.84		784.23	1,000.00		1,000.00	0.00	1,075.47	291.24	1,325.11	92.45	3,820.87	382.09%	1,591.33
PV			175.85		420.67	549.02		374.93	47.14	402.80	109.08	433.42	30.24	1,591.33	159.13%	
Levelized payment current \$			13.40		32.06	41.84		28.57	3.59	30.70	8.31	33.03	2.30	121.27	12.13%	
Levelized payment constant \$			10.38		24.83	32.41		22.13	2.78	23.78	6.44	25.58	1.78	93.94	9.39%	

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Development of Revenue Requirements Stream
Capacity-Related Distribution

Year	Rate Base	Interest on Debt	Return on Preferred Equity	Return on Common Equity	Tax Depreciation	Tax Depreciation Rate	Book Depreciation	Deferred Taxes	Taxable Income	Income Taxes	Property Tax	Property Insurance	Revenue Requirement	% of Original Investment Revenue	PV of Revenue Requirement
0	1000.00														
1	975.68	21.50	0.00	51.43	37.50	3.75%	19.42	4.90	52.45	14.20	25.80	1.80	139.05	13.90%	130.10
2	941.97	20.76	0.00	49.65	72.19	7.22%	19.42	14.29	15.32	4.15	26.35	1.84	136.46	13.65%	119.46
3	909.72	20.04	0.00	47.95	66.77	6.68%	19.42	12.82	18.41	4.99	26.92	1.88	134.02	13.40%	109.78
4	878.83	19.36	0.00	46.32	61.77	6.18%	19.42	11.47	21.18	5.73	27.50	1.92	131.72	13.17%	100.95
5	849.20	18.71	0.00	44.76	57.13	5.71%	19.42	10.21	23.68	6.41	28.09	1.96	129.56	12.96%	92.91
6	820.72	18.08	0.00	43.26	52.85	5.29%	19.42	9.05	25.90	7.01	28.69	2.00	127.52	12.75%	85.56
7	793.32	17.48	0.00	41.81	48.88	4.89%	19.42	7.98	27.89	7.55	29.30	2.04	125.59	12.56%	78.84
8	766.91	16.90	0.00	40.42	45.22	4.52%	19.42	6.99	29.64	8.03	29.93	2.09	123.77	12.38%	72.70
9	740.66	16.32	0.00	39.04	44.62	4.46%	19.42	6.82	28.34	7.67	30.57	2.13	121.99	12.20%	67.04
10	714.42	15.74	0.00	37.66	44.61	4.46%	19.42	6.82	26.45	7.16	31.23	2.18	120.21	12.02%	61.81
11	688.17	15.16	0.00	36.27	44.62	4.46%	19.42	6.82	24.55	6.65	31.90	2.23	118.45	11.85%	56.99
12	661.93	14.58	0.00	34.89	44.61	4.46%	19.42	6.82	22.66	6.14	32.58	2.27	116.71	11.67%	52.54
13	635.68	14.01	0.00	33.51	44.62	4.46%	19.42	6.82	20.75	5.62	33.28	2.32	114.98	11.50%	48.43
14	609.44	13.43	0.00	32.12	44.61	4.46%	19.42	6.82	18.86	5.11	33.99	2.37	113.27	11.33%	44.64
15	583.19	12.85	0.00	30.74	44.62	4.46%	19.42	6.82	16.96	4.59	34.72	2.42	111.57	11.16%	41.14
16	556.95	12.27	0.00	29.36	44.61	4.46%	19.42	6.82	15.07	4.08	35.47	2.47	109.89	10.99%	37.91
17	530.70	11.69	0.00	27.97	44.62	4.46%	19.42	6.82	13.16	3.56	36.23	2.53	108.23	10.82%	34.94
18	504.45	11.12	0.00	26.59	44.61	4.46%	19.42	6.82	11.28	3.05	37.00	2.58	106.59	10.66%	32.19
19	478.21	10.54	0.00	25.21	44.62	4.46%	19.42	6.82	9.37	2.54	37.80	2.64	104.96	10.50%	29.66
20	451.96	9.96	0.00	23.82	44.61	4.46%	19.42	6.82	7.48	2.03	38.61	2.69	103.35	10.34%	27.33
21	431.76	9.51	0.00	22.76	22.31	2.23%	19.42	0.78	28.32	7.67	39.44	2.75	102.33	10.23%	25.32
22	417.59	9.20	0.00	22.01	0.00		19.42	(5.26)	49.61	13.43	40.28	2.81	101.90	10.19%	23.59
23	403.43	8.89	0.00	21.26	0.00		19.42	(5.26)	48.58	13.16	41.15	2.87	101.49	10.15%	21.98
24	389.27	8.58	0.00	20.52	0.00		19.42	(5.26)	47.56	12.88	42.03	2.93	101.10	10.11%	20.49
25	375.10	8.26	0.00	19.77	0.00		19.42	(5.26)	46.54	12.60	42.93	3.00	100.73	10.07%	19.10
26	360.94	7.95	0.00	19.02	0.00		19.42	(5.26)	45.51	12.32	43.85	3.06	100.38	10.04%	17.81
27	346.77	7.64	0.00	18.28	0.00		19.42	(5.26)	44.49	12.05	44.79	3.12	100.05	10.00%	16.61
28	332.61	7.33	0.00	17.53	0.00		19.42	(5.26)	43.47	11.77	45.75	3.19	99.74	9.97%	15.49
29	318.45	7.02	0.00	16.78	0.00		19.42	(5.26)	42.44	11.49	46.73	3.26	99.45	9.95%	14.45
30	304.28	6.70	0.00	16.04	0.00		19.42	(5.26)	41.42	11.22	47.73	3.33	99.19	9.92%	13.49
31	290.12	6.39	0.00	15.29	0.00		19.42	(5.26)	40.39	10.94	48.76	3.40	98.95	9.89%	12.59
32	275.95	6.08	0.00	14.54	0.00		19.42	(5.26)	39.37	10.66	49.80	3.47	98.73	9.87%	11.75
33	261.79	5.77	0.00	13.80	0.00		19.42	(5.26)	38.35	10.38	50.87	3.55	98.53	9.85%	10.97
34	247.63	5.46	0.00	13.05	0.00		19.42	(5.26)	37.32	10.11	51.96	3.63	98.37	9.84%	10.25
35	233.46	5.14	0.00	12.31	0.00		19.42	(5.26)	36.30	9.83	53.08	3.70	98.22	9.82%	9.58
36	219.30	4.83	0.00	11.56	0.00		19.42	(5.26)	35.28	9.55	54.21	3.78	98.10	9.81%	8.95
37	205.14	4.52	0.00	10.81	0.00		19.42	(5.26)	34.25	9.28	55.38	3.86	98.01	9.80%	8.37
38	190.97	4.21	0.00	10.07	0.00		19.42	(5.26)	33.23	9.00	56.56	3.95	97.95	9.79%	7.82
39	176.81	3.90	0.00	9.32	0.00		19.42	(5.26)	32.20	8.72	57.78	4.03	97.91	9.79%	7.32
40	162.64	3.58	0.00	8.57	0.00		19.42	(5.26)	31.18	8.44	59.02	4.12	97.90	9.79%	6.84
41	148.48	3.27	0.00	7.83	0.00		19.42	(5.26)	30.16	8.17	60.28	4.21	97.91	9.79%	6.40
42	134.32	2.96	0.00	7.08	0.00		19.42	(5.26)	29.13	7.89	61.57	4.30	97.96	9.80%	6.00
43	120.15	2.65	0.00	6.33	0.00		19.42	(5.26)	28.11	7.61	62.89	4.39	98.04	9.80%	5.61
44	105.99	2.34	0.00	5.59	0.00		19.42	(5.26)	27.08	7.33	64.24	4.48	98.15	9.81%	5.26
45	91.82	2.02	0.00	4.84	0.00		19.42	(5.26)	26.06	7.06	65.62	4.58	98.28	9.83%	4.93
46	77.66	1.71	0.00	4.09	0.00		19.42	(5.26)	25.04	6.78	67.03	4.68	98.45	9.85%	4.62
47	63.50	1.40	0.00	3.35	0.00		19.42	(5.26)	24.01	6.50	68.46	4.78	98.65	9.87%	4.33
48	49.33	1.09	0.00	2.60	0.00		19.42	(5.26)	22.99	6.23	69.93	4.88	98.89	9.89%	4.06
49	35.17	0.77	0.00	1.85	0.00		19.42	(5.26)	21.97	5.95	71.43	4.98	99.16	9.92%	3.81
50	21.00	0.46	0.00	1.11	0.00		19.42	(5.26)	20.94	5.67	72.96	5.09	99.46	9.95%	3.58
51	6.84	0.15	0.00	0.36	0.00		19.42	(5.26)	19.92	5.39	74.53	5.20	99.80	9.98%	3.36
52	(7.32)	(0.16)	0.00	(0.39)	0.00		19.42	(5.26)	18.89	5.12	0.00	5.31	24.04	2.40%	0.76
53	(21.49)	(0.47)	0.00	(1.13)	0.00		19.42	(5.26)	17.87	4.84	0.00	5.43	22.82	2.28%	0.67
54	(35.65)	(0.79)	0.00	(1.88)	0.00		19.42	(5.26)	16.85	4.56	0.00	5.54	21.60	2.16%	0.60
55	(49.82)	(1.10)	0.00	(2.63)	0.00		19.42	(5.26)	15.82	4.28	0.00	5.66	20.39	2.04%	0.53
56	(63.98)	(1.41)	0.00	(3.37)	0.00		19.42	(5.26)	14.80	4.01	0.00	5.78	19.17	1.92%	0.46
57	(78.14)	(1.72)	0.00	(4.12)	0.00		19.42	(5.26)	13.78	3.73	0.00	5.91	17.96	1.80%	0.41
58	(92.31)	(2.03)	0.00	(4.87)	0.00		19.42	(5.26)	12.75	3.45	0.00	6.03	16.75	1.68%	0.35
59	(146.01)	(3.22)	0.00	(7.70)	146.01		19.42	34.28	-137.14	(37.14)	0.00	6.16	11.81	1.18%	0.23

Total	449.39		1075.01	1146.01		1146.01	0.00	1,474.23	399.22	2,347.02	209.56	5,626.22	562.62%	1,663.62
PV	201.00		480.82	551.90		276.85	74.48	384.33	104.08	490.99	35.40	1,663.62	166.36%	
Levelized payment current \$	14.10		33.73	38.72		19.42	5.23	26.96	7.30	34.45	2.48	116.72	11.67%	
Levelized payment constant \$	10.18		24.35	27.95		14.02	3.77	19.46	5.27	24.86	1.79	84.24	8.42%	

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Development of Revenue Requirements Stream
Services

Year	Rate Base	Interest on Debt	Return on Preferred Equity	Return on Common Equity	Tax Depreciation	Tax Depreciation Rate	Book Depreciation	Deferred Taxes	Taxable Income	Income Taxes	Property Tax	Property Insurance	Revenue Requirement	% of Original Investment Revenue	PV of Revenue Requirement
0	1000.00														
1	963.92	21.24	0.00	50.81	37.50	3.75%	35.56	0.53	67.73	18.34	25.80	1.80	154.07	15.41%	144.15
2	918.44	20.24	0.00	48.41	72.19	7.22%	35.56	9.92	29.75	8.06	26.35	1.84	150.37	15.04%	131.64
3	874.43	19.27	0.00	46.09	66.77	6.68%	35.56	8.45	31.99	8.66	26.92	1.88	146.82	14.68%	120.27
4	831.78	18.33	0.00	43.84	61.77	6.18%	35.56	7.10	33.91	9.18	27.50	1.92	143.42	14.34%	109.92
5	790.38	17.42	0.00	41.66	57.13	5.71%	35.56	5.84	35.56	9.63	28.09	1.96	140.15	14.01%	100.50
6	750.14	16.53	0.00	39.54	52.85	5.29%	35.56	4.68	36.93	10.00	28.69	2.00	136.99	13.70%	91.91
7	710.98	15.67	0.00	37.47	48.88	4.89%	35.56	3.61	38.07	10.31	29.30	2.04	133.96	13.40%	84.09
8	672.81	14.82	0.00	35.46	45.22	4.52%	35.56	2.62	38.97	10.55	29.93	2.09	131.03	13.10%	76.96
9	634.80	13.99	0.00	33.46	44.62	4.46%	35.56	2.45	36.82	9.97	30.57	2.13	128.13	12.81%	70.42
10	596.79	13.15	0.00	31.46	44.61	4.46%	35.56	2.45	34.08	9.23	31.23	2.18	125.25	12.52%	64.40
11	558.78	12.31	0.00	29.45	44.62	4.46%	35.56	2.45	31.32	8.48	31.90	2.23	122.38	12.24%	58.88
12	520.77	11.47	0.00	27.45	44.61	4.46%	35.56	2.45	28.59	7.74	32.58	2.27	119.53	11.95%	53.81
13	482.76	10.64	0.00	25.45	44.62	4.46%	35.56	2.45	25.83	6.99	33.28	2.32	116.69	11.67%	49.15
14	444.75	9.80	0.00	23.44	44.61	4.46%	35.56	2.45	23.09	6.25	33.99	2.37	113.87	11.39%	44.87
15	406.74	8.96	0.00	21.44	44.62	4.46%	35.56	2.45	20.34	5.51	34.72	2.42	111.06	11.11%	40.95
16	368.73	8.12	0.00	19.44	44.61	4.46%	35.56	2.45	17.60	4.77	35.47	2.47	108.27	10.83%	37.36
17	330.72	7.29	0.00	17.43	44.62	4.46%	35.56	2.45	14.84	4.02	36.23	2.53	105.50	10.55%	34.06
18	292.72	6.45	0.00	15.43	44.61	4.46%	35.56	2.45	12.10	3.28	37.00	2.58	102.75	10.27%	31.03
19	254.71	5.61	0.00	13.42	44.62	4.46%	35.56	2.45	9.35	2.53	37.80	2.64	100.01	10.00%	28.26
20	216.70	4.77	0.00	11.42	44.61	4.46%	35.56	2.45	6.61	1.79	38.61	2.69	97.30	9.73%	25.73
21	184.73	4.07	0.00	9.74	22.31	2.23%	35.56	(3.59)	26.60	7.20	39.44	2.75	95.17	9.52%	23.54
22	158.80	3.50	0.00	8.37	0.00		35.56	(9.63)	47.03	12.74	40.28	2.81	93.63	9.36%	21.67
23	132.88	2.93	0.00	7.00	0.00		35.56	(9.63)	45.16	12.23	41.15	2.87	92.10	9.21%	19.95
24	106.95	2.36	0.00	5.64	0.00		35.56	(9.63)	43.29	11.72	42.03	2.93	90.60	9.06%	18.36
25	81.02	1.79	0.00	4.27	0.00		35.56	(9.63)	41.41	11.21	42.93	3.00	89.12	8.91%	16.90
26	55.10	1.21	0.00	2.90	0.00		35.56	(9.63)	39.54	10.71	43.85	3.06	87.66	8.77%	15.55
27	29.17	0.64	0.00	1.54	0.00		35.56	(9.63)	37.66	10.20	44.79	3.12	86.22	8.62%	14.31
28	3.24	0.07	0.00	0.17	0.00		35.56	(9.63)	35.79	9.69	45.75	3.19	84.80	8.48%	13.17
29	(22.69)	(0.50)	0.00	(1.20)	0.00		35.56	(9.63)	33.92	9.18	0.00	0.00	33.42	3.34%	4.86
30	(48.61)	(1.07)	0.00	(2.56)	0.00		35.56	(9.63)	32.04	8.68	0.00	0.00	30.97	3.10%	4.21
31	(74.54)	(1.64)	0.00	(3.93)	0.00		35.56	(9.63)	30.17	8.17	0.00	0.00	28.53	2.85%	3.63
32	(100.47)	(2.21)	0.00	(5.30)	0.00		35.56	(9.63)	28.29	7.66	0.00	0.00	26.08	2.61%	3.10
33	(126.39)	(2.78)	0.00	(6.66)	0.00		35.56	(9.63)	26.42	7.15	0.00	0.00	23.63	2.36%	2.63
34	(152.32)	(3.36)	0.00	(8.03)	0.00		35.56	(9.63)	24.55	6.65	0.00	0.00	21.19	2.12%	2.21
35	(178.25)	(3.93)	0.00	(9.40)	0.00		35.56	(9.63)	22.67	6.14	0.00	0.00	18.74	1.87%	1.83
36	(204.18)	(4.50)	0.00	(10.76)	0.00		35.56	(9.63)	20.80	5.63	0.00	0.00	16.30	1.63%	1.49
37	(230.10)	(5.07)	0.00	(12.13)	0.00		35.56	(9.63)	18.92	5.12	0.00	0.00	13.85	1.39%	1.18
38	(256.03)	(5.64)	0.00	(13.49)	0.00		35.56	(9.63)	17.05	4.62	0.00	0.00	11.41	1.14%	0.91
39	(281.96)	(6.21)	0.00	(14.86)	0.00		35.56	(9.63)	15.18	4.11	0.00	0.00	8.96	0.90%	0.67
40	(307.88)	(6.78)	0.00	(16.23)	0.00		35.56	(9.63)	13.30	3.60	0.00	0.00	6.52	0.65%	0.46
41	(333.81)	(7.36)	0.00	(17.59)	0.00		35.56	(9.63)	11.43	3.09	0.00	0.00	4.07	0.41%	0.27
42	(359.74)	(7.93)	0.00	(18.96)	0.00		35.56	(9.63)	9.55	2.59	0.00	0.00	1.63	0.16%	0.10
43	(385.67)	(8.50)	0.00	(20.33)	0.00		35.56	(9.63)	7.68	2.08	0.00	0.00	-0.82	-0.08%	-0.05
44	(411.59)	(9.07)	0.00	(21.69)	0.00		35.56	(9.63)	5.81	1.57	0.00	0.00	-3.26	-0.33%	-0.17
45	(600.00)	(13.22)	0.00	(31.62)	600.00		35.56	152.85	-607.81	(164.60)	0.00	0.00	-21.03	-2.10%	-1.05

Total	182.87		437.45	1,600.00		1,600.00	0.00	599.90	162.45	976.17	68.11	3,427.05	342.70%	1,568.08
PV	153.70		367.68	579.10		491.07	23.84	416.19	112.71	391.75	27.33	1,568.08	156.81%	
Levelized payment current \$	11.13		26.62	41.93		35.56	1.73	30.13	8.16	28.36	1.98	113.54	11.35%	
Levelized payment constant \$	8.31		19.88	31.32		26.56	1.29	22.51	6.10	21.19	1.48	84.80	8.48%	

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Development of Revenue Requirements Stream
Meters

Year	Rate Base	Interest on Debt	Return on Preferred Equity	Return on Common Equity	Tax Depreciation	Tax Depreciation Rate	Book Depreciation	Deferred Taxes	Taxable Income	Income Taxes	Property Tax	Property Insurance	Revenue Requirement	% of Original Investment Revenue	PV of Revenue Requirement
0	1000.00														
1	964.70	21.26	0.00	50.85	37.50	3.75%	34.48	0.82	66.71	18.07	25.80	1.80	153.07	15.31%	143.22
2	920.01	20.27	0.00	48.49	72.19	7.22%	34.48	10.21	28.79	7.80	26.35	1.84	149.45	14.94%	130.83
3	876.78	19.32	0.00	46.21	66.77	6.68%	34.48	8.74	31.09	8.42	26.92	1.88	145.97	14.60%	119.57
4	834.91	18.40	0.00	44.01	61.77	6.18%	34.48	7.39	33.06	8.95	27.50	1.92	142.64	14.26%	109.32
5	794.29	17.50	0.00	41.87	57.13	5.71%	34.48	6.13	34.77	9.41	28.09	1.96	139.44	13.94%	99.99
6	754.84	16.63	0.00	39.79	52.85	5.29%	34.48	4.97	36.19	9.80	28.69	2.00	136.36	13.64%	91.49
7	716.45	15.79	0.00	37.76	48.88	4.89%	34.48	3.90	37.39	10.12	29.30	2.04	133.40	13.34%	83.75
8	679.06	14.96	0.00	35.79	45.22	4.52%	34.48	2.91	38.35	10.38	29.93	2.09	130.55	13.05%	76.68
9	641.84	14.14	0.00	33.83	44.62	4.46%	34.48	2.75	36.26	9.82	30.57	2.13	127.72	12.77%	70.19
10	604.61	13.32	0.00	31.87	44.61	4.46%	34.48	2.74	33.57	9.09	31.23	2.18	124.91	12.49%	64.23
11	567.38	12.50	0.00	29.91	44.62	4.46%	34.48	2.75	30.87	8.36	31.90	2.23	122.12	12.21%	58.75
12	530.16	11.68	0.00	27.94	44.61	4.46%	34.48	2.74	28.19	7.63	32.58	2.27	119.34	11.93%	53.72
13	492.93	10.86	0.00	25.98	44.62	4.46%	34.48	2.75	25.49	6.90	33.28	2.32	116.58	11.66%	49.10
14	455.70	10.04	0.00	24.02	44.61	4.46%	34.48	2.74	22.81	6.18	33.99	2.37	113.83	11.38%	44.86
15	418.48	9.22	0.00	22.06	44.62	4.46%	34.48	2.75	20.11	5.45	34.72	2.42	111.10	11.11%	40.96
16	381.25	8.40	0.00	20.09	44.61	4.46%	34.48	2.74	17.43	4.72	35.47	2.47	108.38	10.84%	37.39
17	344.02	7.58	0.00	18.13	44.62	4.46%	34.48	2.75	14.73	3.99	36.23	2.53	105.68	10.57%	34.12
18	306.80	6.76	0.00	16.17	44.61	4.46%	34.48	2.74	12.05	3.26	37.00	2.58	103.01	10.30%	31.11
19	269.57	5.94	0.00	14.21	44.62	4.46%	34.48	2.75	9.35	2.53	37.80	2.64	100.34	10.03%	28.36
20	232.34	5.12	0.00	12.25	44.61	4.46%	34.48	2.74	6.67	1.81	38.61	2.69	97.70	9.77%	25.83
21	201.16	4.43	0.00	10.60	22.31	2.23%	34.48	(3.30)	26.71	7.23	39.44	2.75	95.64	9.56%	23.66
22	176.01	3.88	0.00	9.28	0.00		34.48	(9.34)	47.21	12.78	40.28	2.81	94.18	9.42%	21.80
23	150.87	3.32	0.00	7.95	0.00		34.48	(9.34)	45.39	12.29	41.15	2.87	92.73	9.27%	20.08
24	125.72	2.77	0.00	6.63	0.00		34.48	(9.34)	43.57	11.80	42.03	2.93	91.30	9.13%	18.50
25	100.58	2.22	0.00	5.30	0.00		34.48	(9.34)	41.75	11.31	42.93	3.00	89.89	8.99%	17.04
26	75.43	1.66	0.00	3.98	0.00		34.48	(9.34)	39.94	10.81	43.85	3.06	88.51	8.85%	15.70
27	50.29	1.11	0.00	2.65	0.00		34.48	(9.34)	38.12	10.32	44.79	3.12	87.14	8.71%	14.46
28	25.14	0.55	0.00	1.33	0.00		34.48	(9.34)	36.30	9.83	45.75	3.19	85.80	8.58%	13.32
29	(0.00)	(0.00)	0.00	(0.00)	0.00		34.48	(9.34)	34.48	9.34	46.73	3.26	84.48	8.45%	12.28
Total		279.64		668.93	1,000.00		1,000.00	(0.00)	917.35	248.42	1,022.91	71.37	3,291.26	329.13%	1,550.33
PV		162.47		388.65	549.02		428.53	32.63	412.50	111.70	398.54	27.81	1,550.33	155.03%	
Levelized payment current \$		13.07		31.27	44.18		34.48	2.63	33.19	8.99	32.07	2.24	124.75	12.48%	
Levelized payment constant \$		10.41		24.91	35.19		27.47	2.09	26.44	7.16	25.54	1.78	99.37	9.94%	

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Fixed Carrying Charge Rates

Line	Description	Production Plant				Mains				Services				Meters			
		Current Dollars		Constant Dollars		Current Dollars		Constant Dollars		Current Dollars		Constant Dollars		Current Dollars		Constant Dollars	
		Engineer's FCCR		Economist's FCCR		Engineer's FCCR		Economist's FCCR		Engineer's FCCR		Economist's FCCR		Engineer's FCCR		Economist's FCCR	
		Current	% of Capital	Constant	% of Capital	Current	% of Capital	Constant	% of Capital	Current	% of Capital	Constant	% of Capital	Current	% of Capital	Constant	% of Capital
		Levelized	Investment	Levelized	Investment	Levelized	Investment	Levelized	Investment	Levelized	Investment	Levelized	Investment	Levelized	Investment	Levelized	Investment
		Dollars		Dollars		Dollars		Dollars		Dollars		Dollars		Dollars		Dollars	
1	Interest on Debt	\$13.40	1.3%	\$10.38	1.0%	\$14.10	1.4%	\$10.18	1.0%	\$11.13	1.1%	\$8.31	0.8%	\$13.07	1.3%	\$10.41	1.0%
2	Return on Preferred	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
3	Return on Common	<u>\$32.06</u>	<u>3.2%</u>	<u>\$24.83</u>	<u>2.5%</u>	<u>\$33.73</u>	<u>3.4%</u>	<u>\$24.35</u>	<u>2.4%</u>	<u>\$26.62</u>	<u>2.7%</u>	<u>\$19.88</u>	<u>2.0%</u>	<u>\$31.27</u>	<u>3.1%</u>	<u>\$24.91</u>	<u>2.5%</u>
4	Total Return	\$45.46	4.5%	\$35.21	3.5%	\$47.84	4.8%	\$34.53	3.5%	\$37.75	3.8%	\$28.20	2.8%	\$44.35	4.4%	\$35.32	3.5%
5	Depreciation	\$28.57	2.9%	\$22.13	2.2%	\$19.42	1.9%	\$14.02	1.4%	\$35.56	3.6%	\$26.56	2.7%	\$34.48	3.4%	\$27.47	2.7%
6	Income tax	\$8.31	0.8%	\$6.44	0.6%	\$7.30	0.7%	\$5.27	0.5%	\$8.16	0.8%	\$6.10	0.6%	\$8.99	0.9%	\$7.16	0.7%
7	Deferred Taxes	\$3.59	0.4%	\$2.78	0.3%	\$5.23	0.5%	\$3.77	0.4%	\$1.73	0.2%	\$1.29	0.1%	\$2.63	0.3%	\$2.09	0.2%
8	Revenue Tax	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
9	Property Tax	<u>\$33.03</u>	<u>3.3%</u>	<u>\$25.58</u>	<u>2.6%</u>	<u>\$34.45</u>	<u>3.4%</u>	<u>\$24.86</u>	<u>2.5%</u>	<u>\$28.36</u>	<u>2.8%</u>	<u>\$21.19</u>	<u>2.1%</u>	<u>\$32.07</u>	<u>3.2%</u>	<u>\$25.54</u>	<u>2.6%</u>
10	Total Taxes	\$44.93	4.5%	\$34.81	3.5%	\$46.98	4.7%	\$33.91	3.4%	\$38.25	3.8%	\$28.57	2.9%	\$43.68	4.4%	\$34.80	3.5%
11	Property Insurance	\$2.30	0.2%	\$1.78	0.2%	\$2.48	0.2%	\$1.79	0.2%	\$1.98	0.2%	\$1.48	0.1%	\$2.24	0.2%	\$1.78	0.2%
12	Total Revenue Required	\$121.27	12.1%	\$93.94	9.4%	\$116.72	11.7%	\$84.24	8.4%	\$113.54	11.4%	\$84.80	8.5%	\$124.75	12.5%	\$99.37	9.9%

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Summary of Marginal Capacity-Related Costs

Line	Description	Production in lieu of reinforcement	Mains reinforcement	Mains extension	Total distribution	
1	Plant Investment					
2	Long-run unit costs - \$/design day dth	\$59.52	\$1,261.97	\$1,090.65	\$2,412.14	[1]
3	General plant loading factor	<u>5.49%</u>	<u>5.49%</u>	<u>5.49%</u>	--	[2]
4	Gross-up unit costs	\$62.79	\$1,331.28	\$1,150.55	\$2,544.63	[3]
5	Fixed charge rate	9.39%	8.42%	8.42%	--	[4]
6	Plant-related A&G loading factor	<u>0.61%</u>	<u>0.61%</u>	<u>0.61%</u>	--	[5]
7	Grossed up fixed charge rate	10.00%	9.03%	9.03%	--	[6]
8	Annualized cost	\$6.28	\$120.24	\$103.91	\$230.43	[7]
9	Operating Expense					
10	Production capacity costs	\$1.15	--	--	\$1.15	[8]
11	Distribution capacity costs	--	--	\$46.87	\$46.87	[9]
12	Non-plant A&G loading factor	<u>66.16%</u>	<u>66.16%</u>	<u>66.16%</u>	--	[10]
13	Total O&M expense	\$1.92	\$0.00	\$77.88	\$79.80	[11]
14	Working Capital					
15	M&S and prepayments rate	<u>1.31%</u>	<u>1.31%</u>	<u>1.31%</u>	<u>0.00%</u>	[12]
16	M&S and prepayments cost	\$0.83	\$17.50	\$15.13	\$33.45	[13]
17	Working cash allowance lag (days)	<u>26.10</u>	<u>26.10</u>	<u>26.10</u>	--	[14]
18	Working cash allowance lag (rate)	<u>7.15%</u>	<u>7.15%</u>	<u>7.15%</u>	--	[15]
19	Working cash O&M allowance	<u>\$0.59</u>	<u>\$8.60</u>	<u>\$13.00</u>	<u>\$22.18</u>	[16]
20	Total working capital	\$1.41	\$26.10	\$28.12	\$55.64	[17]
21	Tax affected cost of capital rate	<u>9.43%</u>	<u>9.43%</u>	<u>9.43%</u>	<u>0.00%</u>	[18]
22	Working capital revenue requirement	\$0.13	\$2.46	\$2.65	\$5.25	[19]
23	System Seasonal Capacity Related Cost					
24	\$/design day dth	\$8.33	\$122.70	\$184.45	\$315.47	[20]
25	Sales/sendout factor	<u>95.28%</u>	<u>95.28%</u>	<u>95.28%</u>	--	[21]
26	Inflation	<u>2.14%</u>	<u>2.14%</u>	<u>2.14%</u>	--	[22]
27	Seasonal Capacity Cost	\$8.91	\$131.25	\$197.30	\$337.46	[23]

- [1] MCOS-1 and MCOS-2
[2] MCOS-4
[3] (1 + Line 3) x Line 2
[4] MCOS-5
[5] MCOS-4
[6] Line 5 + Line 6
[7] Line 4 x Line 7
[8] MCOS-2
[9] MCOS-2
[10] MCOS-4
[11] (1 + Line 12) x (Line 10 + Line 11)
[12] MCOS-4
[13] Line 15 x Line 4
[14] Company data
[15] Line 17 / 365
[16] (Line 8 + Line 13) x Line 18
[17] Line 19 + Line 16
[18] MCOS-5
[19] Line 21 x Line 20
[20] Line 22 + Line 13 + Line 8
[21] Company data
[23] ((1 + (1 - Line 25)) x Line 24) x (1 + Line 26)

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Summary of Marginal Customer-Related Costs

Line	Description	R-1	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54	
1	Plant Investment										
2	Meters and regulators	\$439.76	\$439.76	\$1,076.76	\$2,750.07	\$9,332.68	\$3,482.86	\$2,750.07	\$3,995.06	\$11,904.46	[1]
3	General plant loading factor	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	[2]
4	Grossed up meter costs	\$463.92	\$463.92	\$1,135.90	\$2,901.12	\$9,845.27	\$3,674.15	\$2,901.12	\$4,214.48	\$12,558.30	[3]
5	Fixed charge rate	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	[4]
6	Meter carrying costs	\$46.10	\$46.10	\$112.88	\$288.28	\$978.33	\$365.10	\$288.28	\$418.79	\$1,247.92	[5]
7	Services	\$4,063.04	\$4,063.04	\$3,796.20	\$6,346.48	\$10,912.52	\$11,893.51	\$6,582.61	\$39,407.48	\$9,647.45	[6]
8	General plant loading factor	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	[7]
9	Grossed up services costs	\$4,286.19	\$4,286.19	\$4,004.70	\$6,695.05	\$11,511.88	\$12,546.75	\$6,944.15	\$41,571.89	\$10,177.32	[8]
10	Fixed charge rate	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	[9]
11	Services carrying costs	\$363.48	\$363.48	\$339.61	\$567.76	\$976.24	\$1,064.00	\$588.89	\$3,525.43	\$863.07	[10]
12	Total plant carrying costs	\$409.58	\$409.58	\$452.49	\$856.05	\$1,954.57	\$1,429.10	\$877.17	\$3,944.22	\$2,110.99	[11]
13	Plant -related A&G loading factor	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	[12]
14	Annualized cost	\$412.07	\$412.07	\$455.23	\$861.24	\$1,966.44	\$1,437.78	\$882.50	\$3,968.17	\$2,123.81	[13]
15	Operating Expense										
16	Plant-related O&M/customer	\$62.26	\$62.26	\$67.38	\$125.77	\$279.92	\$212.60	\$129.04	\$600.10	\$297.99	[14]
17	Customer accounting & marketing expense	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	[15]
18	Non-plant A&G loading factor	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	[16]
19	Total O&M expense	\$212.92	\$212.92	\$221.42	\$318.46	\$574.59	\$462.73	\$323.88	\$1,106.61	\$604.61	[20]
20	Working Capital										
21	M&S and prepayments rate	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	[21]
22	M&S and prepayments cost	\$62.45	\$62.45	\$67.58	\$126.15	\$280.76	\$213.24	\$129.43	\$601.91	\$298.89	[22]
23	Working cash allowance (days)	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	[23]
24	Working cash lag (rate)	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	[24]
25	Working cash O&M allowance	\$44.69	\$44.69	\$48.39	\$84.36	\$181.70	\$135.90	\$86.26	\$362.88	\$195.10	[25]
26	Total working capital	\$107.14	\$107.14	\$115.96	\$210.51	\$462.47	\$349.14	\$215.69	\$964.80	\$493.99	[26]
27	Tax affected cost of capital	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	[27]
28	Working capital revenue requirement	\$10.10	\$10.10	\$10.94	\$19.85	\$43.62	\$32.93	\$20.34	\$90.99	\$46.59	[28]
29	Customer Related Cost										
30	Annual cost per customer	\$635.09	\$635.09	\$687.59	\$1,199.56	\$2,584.64	\$1,933.44	\$1,226.72	\$5,165.77	\$2,775.01	[29]
31	Inflation	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	[30]
32	Annual customer related cost	\$648.71	\$648.71	\$702.34	\$1,225.28	\$2,640.07	\$1,974.90	\$1,253.03	\$5,276.54	\$2,834.51	[31]

- [1] Company data
[2] MCOS-4
[3] (1 + Line 3) x Line 2
[4] MCOS-5
[5] Line 5 x Line 4
[6] Company data
[7] MCOS-4
[8] (1 + Line 8) x Line 7
[9] MCOS-5
[10] Line 10 x Line 9
[11] Line 11 + Line 6
[12] MCOS-4
[13] (1 + Line 13) x Line 12
[14] MCOS-3
[15] MCOS-3
[16] MCOS-4
[20] (Line 16 + Line 17) x (1 + Line 18)
[21] MCOS-4
[22] (Line 9 + Line 4) x Line 21
[23] Company data
[24] Line 23 / 365
[25] (Line 19 + Line 14) x Line 24
[26] Line 25 + Line 22
[27] MCOS-5
[28] Line 26 x Line 27
[29] Line 28 + Line 19 + Line 14
[31] Line 30 x (1 + Line 31)

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Marginal Cost Study

Marginal Cost Estimates

Line	Description	R-1	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54	
1	Bad debt factor	4.38%	3.18%	0.83%	0.15%	0.00%	0.57%	0.05%	0.00%	0.00%	[1]
2	Monthly Charge										
3	Monthly customer charge	\$54.06	\$54.06	\$58.53	\$102.11	\$220.01	\$164.58	\$104.42	\$439.71	\$236.21	[2]
4	Adjustment for uncollectible	<u>\$2.37</u>	<u>\$1.72</u>	<u>\$0.48</u>	<u>\$0.15</u>	<u>\$0.00</u>	<u>\$0.94</u>	<u>\$0.05</u>	<u>\$0.00</u>	<u>\$0.00</u>	[3]
5	Grossed up monthly cust charge	\$56.43	\$55.78	\$59.01	\$102.26	\$220.01	\$165.51	\$104.47	\$439.71	\$236.21	[4]
6	Winter Charge										
7	Distribution charge - pressure support	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	[5]
8	Distribution charge - reinforcement	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	[6]
9	Distribution charge - main extension	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	[7]
10	Adjustment for uncollectible	<u>\$14.78</u>	<u>\$10.73</u>	<u>\$2.79</u>	<u>\$0.51</u>	<u>\$0.00</u>	<u>\$1.93</u>	<u>\$0.17</u>	<u>\$0.00</u>	<u>\$0.00</u>	[8]
11	Grossed up winter charge	\$352.25	\$348.19	\$340.25	\$337.97	\$337.46	\$339.39	\$337.63	\$337.46	\$337.46	[9]
12	Summer Charge										
13	Summer Charge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	[10]
13	Billing Determinants										
14	Customers	3,549	79,448	9,349	1,423	58	1,319	394	34	28	[11]
15	Design day demand	<u>500</u>	<u>73,735</u>	<u>33,053</u>	<u>40,264</u>	<u>11,556</u>	<u>2,400</u>	<u>5,518</u>	<u>5,921</u>	<u>3,412</u>	[12]
16	Winter demand	50,154	5,266,930	2,191,390	2,937,838	878,444	255,488	594,059	629,151	803,047	[13]
17	Summer demand	24,402	1,071,772	306,315	576,528	249,918	157,811	362,434	423,139	1,025,126	[14]
18	Total Marginal Costs										
19	Total customer-related cost (annual)	\$2,403,044	\$53,177,077	\$6,620,165	\$1,745,916	\$153,894	\$2,619,671	\$493,488	\$181,659	\$78,791	[15]
20	Capacity-related, winter										
21	Pressure support	\$4,651	\$677,839	\$296,925	\$359,277	\$102,960	\$21,504	\$49,193	\$52,754	\$30,401	[16]
22	Reinforcements	\$68,509	\$9,985,322	\$4,374,030	\$5,292,554	\$1,516,719	\$316,772	\$724,667	\$777,120	\$447,844	[17]
23	Main extension	<u>\$102,986</u>	<u>\$15,010,493</u>	<u>\$6,575,286</u>	<u>\$7,956,062</u>	<u>\$2,280,017</u>	<u>\$476,189</u>	<u>\$1,089,360</u>	<u>\$1,168,211</u>	<u>\$673,224</u>	[18]
24	Total winter	\$176,146	\$25,673,655	\$11,246,241	\$13,607,893	\$3,899,697	\$814,464	\$1,863,220	\$1,998,084	\$1,151,469	[19]
25	Capacity-related, summer										
26	Capacity related - summer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	[20]
27	Totals										
28	Total Annual Marginal Cost	<u>\$2,579,190</u>	<u>\$78,850,731</u>	<u>\$17,866,407</u>	<u>\$15,353,809</u>	<u>\$4,053,591</u>	<u>\$3,434,135</u>	<u>\$2,356,708</u>	<u>\$2,179,744</u>	<u>\$1,230,261</u>	[21]
29	Share	2.0%	61.6%	14.0%	12.0%	3.2%	2.7%	1.8%	1.7%	1.0%	[22]
30	Unit Costs										
31	\$/customer	\$56.43	\$55.78	\$59.01	\$102.26	\$220.01	\$165.51	\$104.47	\$439.71	\$236.21	[23]
32	Winter (\$/dth)										
33	Pressure support	\$0.09	\$0.13	\$0.14	\$0.12	\$0.12	\$0.08	\$0.08	\$0.08	\$0.04	[24]
34	Reinforcements	\$1.37	\$1.90	\$2.00	\$1.80	\$1.73	\$1.24	\$1.22	\$1.24	\$0.56	[25]
35	Main extensions	\$2.05	\$2.85	\$3.00	\$2.71	\$2.60	\$1.86	\$1.83	\$1.86	\$0.84	[26]
36	Summer (\$/dth)	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	[27]
37	Average Annual (\$/dth)	\$2.36	\$4.05	\$4.50	\$3.87	\$3.46	\$1.97	\$1.95	\$1.90	\$0.63	[28]

- [1] MCOS-4
[2] MCOS-6 Page 2 Line 32 / 12
[3] Line 1 x Line 3
[4] Line 4 + Line 3
[5] MCOS-6 Page 1 Line 27
[6] MCOS-6 Page 1 Line 27
[7] MCOS-6 Page 1 Line 27
[8] (Line 7 + Line 8 + Line 9) x Line 1
[9] Line 7 + Line 8 + Line 9 + Line 10
[10] Company data
[11] Company data
[12] Company data
[13] Company data
[14] Company data
[15] Line 14 x Line 5 x 12
[16] (1 + Line 1) x Line 15 x Line 7
[17] (1 + Line 1) x Line 15 x Line 8
[18] (1 + Line 1) x Line 15 x Line 9
[19] Line 21 + Line 22 + Line 23
[20] Company data
[21] Line 19 + Line 24
[22] Line 28 / Sum of Line 28
[23] Line 5
[24] Line 21 / Line 16
[25] Line 22 / Line 16
[26] Line 23 / Line 16
[27] Line 26 / Line 17
[28] (Line 26 + Line 24) / (Line 16 + Line 17)

		Per Books Data												
Customer Count - Actual Number of Bills		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12 Month Average
1	R-1	3,665	3,392	3,368	3,397	3,523	3,593	3,463	3,530	3,502	3,368	3,318	3,623	3,479
2	R-3	77,739	71,346	71,242	71,330	74,030	74,738	73,127	74,866	72,418	71,237	70,735	77,452	73,355
3	R-4	5,974	6,118	6,221	6,463	6,612	5,983	5,630	5,700	5,442	5,167	5,067	5,769	5,846
4	R-5	74	61	66	69	68	68	76	69	68	73	71	75	70
5	R-6	219	188	189	202	218	232	247	260	255	265	273	283	236
6	R-7	2	2	7	3	3	3	3	4	4	4	4	6	4
7	Total Residential	87,673	81,106	81,094	81,465	84,453	84,617	82,547	84,428	81,689	80,115	79,468	87,207	82,988
8														
9	G-41	10,049	9,080	9,327	9,615	9,351	9,560	9,437	9,182	8,754	8,872	8,656	9,933	9,318
10	G-42	1,485	1,350	1,376	1,414	1,394	1,424	1,421	1,455	1,393	1,397	1,351	1,494	1,413
11	G-43	61	59	55	58	57	57	58	57	59	57	57	59	58
12	G-44	1	2	2	2	2	2	2	2	3	3	4	4	2
13	G-45	8	4	4	4	4	4	4	4	6	7	7	7	5
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	1,390	1,280	1,271	1,284	1,316	1,336	1,309	1,346	1,330	1,265	1,257	1,394	1,315
16	G-52	404	364	373	389	382	401	399	402	387	391	370	429	391
17	G-53	38	36	34	36	34	36	36	33	31	33	33	35	35
18	G-54	29	27	27	29	28	27	27	26	25	24	25	29	27
19	G-55	3	4	2	3	3	3	3	3	3	3	3	3	3
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	1	1	1	1	1	1	1	1	1	1	1	1	1
23	Total C/I	13,468	12,206	12,474	12,835	12,573	12,850	12,696	12,512	11,992	12,053	11,764	13,388	12,567
24														
25	Total	101,141	93,312	93,568	94,300	97,026	97,467	95,244	96,940	93,681	92,167	91,231	100,595	95,556

		Per Books Data												
Actual - Therms billed		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	88,312	89,781	85,523	75,772	61,312	51,500	39,994	32,680	34,468	38,518	50,194	78,635	726,689
27	R-3	9,524,781	10,512,561	9,418,226	6,541,933	3,756,481	2,077,526	1,185,648	1,009,296	1,043,918	1,535,728	3,547,745	8,051,572	58,205,415
28	R-4	685,665	832,335	791,552	616,505	385,336	169,582	92,841	79,605	79,388	108,054	236,269	558,158	4,635,290
29	R-5	2,459	2,208	2,403	1,506	924	499	454	357	435	696	1,402	2,135	15,478
30	R-6	25,681	25,315	22,848	15,536	9,324	4,598	2,805	2,621	2,751	5,372	15,491	27,991	160,333
31	R-7	182	169	461	158	88	30	26	20	20	52	190	407	1,803
32	Total Residential	10,327,081	11,462,368	10,321,013	7,251,410	4,213,465	2,303,735	1,321,768	1,124,578	1,160,980	1,688,420	3,851,290	8,718,899	63,745,008
33														
34	G-41	4,321,413	4,808,165	4,439,730	3,005,894	1,489,238	701,903	306,229	227,646	250,812	442,272	1,230,906	3,393,209	24,617,416
35	G-42	5,585,268	6,067,067	5,658,958	4,176,998	2,326,679	1,242,218	624,361	557,180	562,741	937,089	2,037,124	4,715,295	34,490,978
36	G-43	1,545,052	1,835,644	1,589,381	1,418,349	888,296	588,694	366,070	349,197	236,954	371,997	654,147	1,254,271	11,098,051
37	G-44	508	896	844	536	285	147	71	64	73	138	731	2,353	6,646
38	G-45	18,414	17,636	15,951	11,831	6,553	5,647	1,015	430	989	3,951	10,997	23,427	116,841
39	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
40	G-51	457,491	483,241	469,505	380,588	333,668	301,708	249,851	237,833	264,277	259,397	291,596	412,872	4,142,026
41	G-52	1,058,630	1,094,095	1,050,193	906,153	756,556	652,598	579,058	567,763	552,389	629,622	713,520	1,048,628	9,609,204
42	G-53	1,073,624	1,230,849	1,084,725	1,063,450	838,251	776,896	696,615	680,191	697,014	642,704	834,275	943,097	10,561,692
43	G-54	1,341,350	1,310,289	1,231,408	1,204,395	1,373,982	1,643,240	1,676,270	1,797,269	1,703,235	1,790,770	1,737,115	1,558,296	18,367,621
44	G-55	527	1,081	308	546	313	189	66	9	62	54	102	437	3,694
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	3,712	3,510	225,768	59,302	63,292	42,032	33,380	35,064	33,476	37,076	41,460	(264,976)	313,096
48	Total C/I	15,405,988	16,852,474	15,766,771	12,228,043	8,077,112	5,955,271	4,532,987	4,452,647	4,302,022	5,115,070	7,551,973	13,086,909	113,327,267
49														
50	Total	25,733,069	28,314,842	26,087,784	19,479,453	12,290,577	8,259,006	5,854,755	5,577,225	5,463,002	6,803,491	11,403,263	21,805,807	177,072,274

Per Books Data														
Actual - Base Revenue (Margin) w/o Normal Weather Adjustment		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	\$88,102	\$84,541	\$82,588	\$79,357	\$75,851	\$73,241	\$67,186	\$66,017	\$66,273	\$65,767	\$69,439	\$84,840	\$903,202
2	R-3	\$6,408,219	\$6,855,501	\$6,251,924	\$4,670,732	\$3,178,741	\$2,265,520	\$1,757,764	\$1,699,551	\$1,681,833	\$1,937,904	\$3,050,840	\$5,661,065	\$45,419,593
3	R-4	\$186,824	\$219,993	\$211,632	\$174,548	\$124,565	\$73,282	\$54,466	\$52,380	\$50,774	\$55,454	\$83,448	\$159,434	\$1,446,800
4	R-5	\$2,632	\$2,268	\$2,461	\$2,078	\$1,774	\$1,564	\$1,724	\$1,531	\$1,560	\$1,775	\$2,100	\$2,523	\$23,991
5	R-6	\$22,656	\$21,772	\$20,028	\$15,064	\$10,919	\$7,817	\$6,881	\$7,026	\$7,028	\$9,130	\$16,602	\$25,851	\$170,773
6	R-7	\$70	\$63	\$187	\$70	\$49	\$31	\$33	\$37	\$36	\$48	\$86	\$165	\$876
7	Total Residential	\$6,683,144	\$7,160,034	\$6,546,144	\$4,924,638	\$3,379,156	\$2,412,042	\$1,879,417	\$1,817,948	\$1,798,880	\$2,059,126	\$3,203,727	\$5,905,340	\$47,965,235
8														
9	G-41	\$2,018,048	\$2,104,957	\$2,006,531	\$1,574,033	\$1,049,624	\$767,206	\$632,128	\$596,588	\$580,228	\$651,006	\$911,735	\$1,737,079	\$14,629,163
10	G-42	\$1,992,383	\$2,086,784	\$1,980,377	\$1,582,659	\$1,017,020	\$645,801	\$452,462	\$437,843	\$432,009	\$551,672	\$898,653	\$1,774,036	\$13,851,701
11	G-43	\$437,697	\$510,222	\$445,329	\$403,689	\$259,578	\$110,833	\$84,132	\$82,816	\$74,589	\$85,658	\$124,068	\$365,251	\$2,983,863
12	G-44	\$294	\$530	\$531	\$380	\$290	\$211	\$176	\$190	\$259	\$272	\$582	\$1,323	\$5,038
13	G-45	\$9,367	\$8,037	\$7,299	\$5,791	\$3,907	\$3,290	\$1,363	\$1,179	\$1,835	\$3,290	\$6,029	\$11,278	\$62,666
14	G-46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	G-51	\$168,535	\$166,450	\$163,492	\$148,156	\$141,541	\$136,746	\$125,887	\$126,857	\$130,843	\$126,111	\$131,639	\$162,439	\$1,728,696
16	G-52	\$264,983	\$260,610	\$256,120	\$237,092	\$198,080	\$157,032	\$148,361	\$149,222	\$144,568	\$153,404	\$171,040	\$270,114	\$2,410,626
17	G-53	\$205,105	\$229,603	\$204,554	\$202,072	\$159,103	\$88,359	\$82,071	\$79,246	\$78,852	\$76,215	\$93,445	\$182,777	\$1,681,402
18	G-54	\$106,050	\$102,066	\$97,869	\$97,225	\$105,783	\$76,071	\$77,412	\$81,478	\$77,453	\$79,866	\$78,625	\$119,101	\$1,098,999
19	G-55	\$350	\$544	\$258	\$350	\$320	\$275	\$234	\$237	\$250	\$225	\$249	\$345	\$3,637
20	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	G-58	\$1,263	\$1,311	\$17,498	\$5,784	\$6,207	\$2,882	\$2,413	\$2,611	\$2,510	\$2,575	\$2,804	(\$15,437)	\$32,420
23	Total C/I	\$5,202,461	\$5,469,259	\$5,162,103	\$4,251,097	\$2,934,927	\$1,985,551	\$1,603,993	\$1,555,419	\$1,520,635	\$1,727,495	\$2,415,817	\$4,623,397	\$38,488,210
24														
25	Total	\$11,885,605	\$12,629,293	\$11,708,247	\$9,175,735	\$6,314,082	\$4,397,592	\$3,483,410	\$3,373,367	\$3,319,516	\$3,786,621	\$5,619,544	\$10,528,737	\$86,453,445
Calculated														
Calculated - Base Revenue (Margin) w/o Normal Weather Adjustment		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	\$88,082	\$84,536	\$82,587	\$79,370	\$75,849	\$73,240	\$67,223	\$66,029	\$66,274	\$65,770	\$69,441	\$84,843	\$903,243
27	R-3	\$6,408,266	\$6,855,612	\$6,251,934	\$4,670,728	\$3,178,743	\$2,265,622	\$1,757,160	\$1,699,931	\$1,682,009	\$1,937,937	\$3,050,906	\$5,661,186	\$45,420,035
28	R-4	\$186,834	\$219,992	\$211,632	\$174,549	\$124,553	\$73,282	\$54,471	\$52,388	\$50,775	\$55,493	\$83,448	\$159,435	\$1,446,851
29	R-5	\$2,632	\$2,268	\$2,461	\$2,078	\$1,774	\$1,564	\$1,718	\$1,531	\$1,560	\$1,775	\$2,100	\$2,523	\$23,984
30	R-6	\$22,656	\$21,772	\$20,028	\$15,064	\$10,919	\$7,817	\$6,865	\$7,028	\$7,028	\$9,130	\$16,602	\$25,851	\$170,759
31	R-7	\$70	\$63	\$187	\$70	\$49	\$31	\$33	\$37	\$36	\$48	\$86	\$165	\$875
32	Total Residential	\$6,683,182	\$7,160,140	\$6,546,153	\$4,924,647	\$3,379,144	\$2,412,144	\$1,878,854	\$1,818,349	\$1,799,058	\$2,059,200	\$3,203,795	\$5,905,464	\$47,965,748
33														
34	G-41	\$2,018,047	\$2,104,957	\$2,006,538	\$1,574,035	\$1,049,622	\$767,205	\$632,176	\$596,717	\$580,226	\$651,005	\$911,731	\$1,737,235	\$14,629,495
35	G-42	\$1,992,383	\$2,086,784	\$1,980,377	\$1,582,660	\$1,016,937	\$645,801	\$452,447	\$437,946	\$432,012	\$551,676	\$898,653	\$1,774,036	\$13,851,713
36	G-43	\$437,697	\$510,222	\$445,329	\$403,689	\$259,578	\$110,833	\$84,355	\$82,821	\$74,578	\$85,658	\$124,068	\$365,251	\$2,984,079
37	G-44	\$296	\$532	\$534	\$382	\$291	\$211	\$176	\$190	\$259	\$272	\$582	\$1,323	\$5,048
38	G-45	\$9,340	\$8,037	\$7,299	\$5,791	\$3,907	\$3,290	\$1,368	\$1,180	\$1,835	\$3,290	\$6,029	\$11,278	\$62,646
39	G-46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40	G-51	\$168,535	\$166,452	\$163,492	\$148,156	\$141,541	\$136,746	\$125,891	\$126,880	\$130,843	\$126,111	\$131,640	\$162,445	\$1,728,731
41	G-52	\$264,983	\$260,610	\$256,120	\$237,092	\$197,504	\$157,032	\$148,336	\$149,246	\$144,546	\$153,412	\$171,040	\$270,119	\$2,410,039
42	G-53	\$205,105	\$229,603	\$204,554	\$202,072	\$159,103	\$88,359	\$82,297	\$79,246	\$78,852	\$76,215	\$93,445	\$182,777	\$1,681,627
43	G-54	\$106,050	\$102,066	\$97,869	\$97,225	\$105,783	\$76,071	\$77,681	\$81,478	\$77,453	\$79,884	\$78,625	\$119,101	\$1,099,286
44	G-55	\$350	\$544	\$258	\$350	\$320	\$275	\$234	\$238	\$250	\$225	\$249	\$345	\$3,639
45	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
47	G-58	\$1,263	\$1,311	\$17,466	\$5,784	\$6,207	\$2,882	\$2,421	\$2,613	\$2,510	\$2,575	\$2,804	(\$15,607)	\$32,229
48	Total C/I	\$5,202,436	\$5,469,263	\$5,162,112	\$4,251,102	\$2,934,267	\$1,985,550	\$1,604,728	\$1,555,702	\$1,520,604	\$1,727,524	\$2,415,814	\$4,623,564	\$38,488,533
49														
50	Total	\$11,885,618	\$12,629,403	\$11,708,265	\$9,175,749	\$6,313,412	\$4,397,694	\$3,483,581	\$3,374,051	\$3,319,662	\$3,786,723	\$5,619,608	\$10,529,027	\$86,454,281

Calculated														
Calculated to Actual Difference - Base Revenue (Margin)		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	\$20	(\$5)	(\$1)	\$12	(\$2)	(\$1)	\$36	\$12	\$1	\$3	\$1	\$3	\$81
2	R-3	\$47	\$111	\$10	(\$4)	\$2	\$103	(\$604)	\$381	\$176	\$32	\$66	\$121	\$442
3	R-4	\$11	(\$1)	(\$0)	\$1	(\$12)	(\$0)	\$4	\$9	\$0	\$39	\$0	\$0	\$51
4	R-5	\$0	\$0	\$0	(\$0)	\$0	\$0	(\$7)	\$0	\$0	\$0	\$0	\$0	(\$7)
5	R-6	\$0	\$0	\$0	\$0	\$0	(\$0)	(\$16)	\$2	\$0	\$0	\$0	\$0	(\$14)
6	R-7	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	(\$0)	\$0	\$0	\$0	\$0	\$0	(\$0)
7	Total Residential	\$77	\$105	\$9	\$9	(\$11)	\$102	(\$586)	\$403	\$177	\$74	\$68	\$124	\$552
8														
9	G-41	(\$1)	\$0	\$6	\$3	(\$2)	(\$1)	\$48	\$128	(\$2)	(\$1)	(\$4)	\$156	\$332
10	G-42	\$0	(\$0)	\$0	\$0	(\$83)	\$0	(\$15)	\$103	\$3	\$4	\$0	\$0	\$12
11	G-43	(\$0)	\$0	\$0	\$0	\$0	\$0	\$223	\$5	(\$11)	\$0	\$0	\$0	\$217
12	G-44	\$1	\$2	\$3	\$2	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10
13	G-45	(\$26)	\$0	\$0	\$0	\$0	\$0	\$5	\$1	\$0	\$0	\$0	\$0	(\$20)
14	G-46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	G-51	\$0	\$2	\$0	\$0	(\$0)	\$0	\$3	\$22	\$0	(\$0)	\$1	\$6	\$35
16	G-52	\$0	\$0	\$0	\$0	(\$576)	\$0	(\$25)	\$24	(\$22)	\$8	\$0	\$5	(\$587)
17	G-53	\$0	\$0	(\$0)	\$0	\$0	\$0	\$226	\$0	\$0	\$0	\$0	\$0	\$226
18	G-54	\$0	(\$0)	\$0	\$0	\$0	\$0	\$269	\$0	\$0	\$18	\$0	(\$0)	\$287
19	G-55	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$1
20	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	G-58	\$0	\$0	(\$32)	\$0	\$0	\$0	\$9	\$3	\$0	\$0	\$0	(\$170)	(\$191)
23	Total C/I	(\$26)	\$5	(\$23)	\$5	(\$659)	(\$0)	\$744	\$287	(\$31)	\$29	(\$4)	(\$4)	\$323
24														
25	Total	\$52	\$110	(\$14)	\$15	(\$671)	\$102	\$158	\$690	\$146	\$103	\$64	\$120	\$875

		Calculated												
Actual to Calculated Pct Diff - Base Revenue (Margin)		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	0.0%	(0.0%)	(0.0%)	0.0%	(0.0%)	(0.0%)	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
27	R-3	0.0%	0.0%	0.0%	(0.0%)	0.0%	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
28	R-4	0.0%	(0.0%)	(0.0%)	0.0%	(0.0%)	(0.0%)	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
29	R-5	0.0%	0.0%	0.0%	(0.0%)	0.0%	0.0%	(0.4%)	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0%)
30	R-6	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0%)	(0.2%)	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0%)
31	R-7	(0.0%)	(0.0%)	(0.1%)	0.0%	0.0%	0.0%	(0.5%)	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0%)
32	Total Residential	0.0%	0.0%	0.0%	0.0%	(0.0%)	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
33														
34	G-41	(0.0%)	0.0%	0.0%	0.0%	(0.0%)	(0.0%)	0.0%	0.0%	(0.0%)	(0.0%)	(0.0%)	0.0%	0.0%
35	G-42	0.0%	(0.0%)	0.0%	0.0%	(0.0%)	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
36	G-43	(0.0%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%
37	G-44	0.4%	0.4%	0.5%	0.6%	0.6%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%
38	G-45	(0.3%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	(0.0%)
39	G-46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
40	G-51	0.0%	0.0%	0.0%	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%	(0.0%)	0.0%	0.0%	0.0%
41	G-52	0.0%	0.0%	0.0%	0.0%	(0.3%)	0.0%	(0.0%)	0.0%	(0.0%)	0.0%	0.0%	0.0%	(0.0%)
42	G-53	0.0%	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
43	G-54	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	(0.0%)	0.0%
44	G-55	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
45	G-56	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
46	G-57	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
47	G-58	0.0%	0.0%	(0.2%)	0.0%	0.0%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	1.1%	(0.6%)
48	Total C/I	(0.0%)	0.0%	(0.0%)	0.0%	(0.0%)	(0.0%)	0.0%	0.0%	(0.0%)	0.0%	(0.0%)	(0.0%)	0.0%
49														
50	Total	0.0%	0.0%	(0.0%)	0.0%	(0.0%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Per Books Data														
Customer Count - Actual Number of Bills		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12 Month Average
1	R-1	3,665	3,392	3,368	3,397	3,523	3,593	3,463	3,530	3,502	3,368	3,318	3,623	3,479
2	R-3	77,739	71,346	71,242	71,330	74,030	74,738	73,127	74,866	72,418	71,237	70,735	77,452	73,355
3	R-4	5,974	6,118	6,221	6,463	6,612	5,983	5,630	5,700	5,442	5,167	5,067	5,769	5,846
4	R-5	74	61	66	69	68	68	76	69	68	73	71	75	70
5	R-6	219	188	189	202	218	232	247	260	255	265	273	283	236
6	R-7	2	2	7	3	3	3	3	4	4	4	4	6	4
7	Total Residential	87,673	81,106	81,094	81,465	84,453	84,617	82,547	84,428	81,689	80,115	79,468	87,207	82,988
8														
9	G-41	10,049	9,080	9,327	9,615	9,351	9,560	9,437	9,182	8,754	8,872	8,656	9,933	9,318
10	G-42	1,485	1,350	1,376	1,414	1,394	1,424	1,421	1,455	1,393	1,397	1,351	1,494	1,413
11	G-43	61	59	55	58	57	57	58	57	59	57	57	59	58
12	G-44	1	2	2	2	2	2	2	2	3	3	4	4	2
13	G-45	8	4	4	4	4	4	4	4	6	7	7	7	5
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	1,390	1,280	1,271	1,284	1,316	1,336	1,309	1,346	1,330	1,265	1,257	1,394	1,315
16	G-52	404	364	373	389	382	401	399	402	387	391	370	429	391
17	G-53	38	36	34	36	34	36	36	33	31	33	33	35	35
18	G-54	29	27	27	29	28	27	27	26	25	24	25	29	27
19	G-55	3	4	2	3	3	3	3	3	3	3	3	3	3
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	1	1	1	1	1	1	1	1	1	1	1	1	1
23	Total C/I	13,468	12,206	12,474	12,835	12,573	12,850	12,696	12,512	11,992	12,053	11,764	13,388	12,567
24														
25	Total	101,141	93,312	93,568	94,300	97,026	97,467	95,244	96,940	93,681	92,167	91,231	100,595	95,556
Calculated														
Calendarization Adjustment - Bills		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12 Month Average
26	R-1	(109)	(184)	185	38	27	(161)	69	10	(75)	168	111	(76)	0
27	R-3	(3,172)	(3,841)	3,616	1,040	579	(2,689)	1,254	(483)	(183)	3,788	2,237	(1,442)	59
28	R-4	232	(521)	(52)	(588)	(657)	(303)	80	(130)	(133)	495	812	105	(55)
29	R-5	(36)	(18)	(19)	(16)	(13)	(4)	(10)	(8)	(1)	(6)	(1)	(5)	(11)
30	R-6	(133)	(93)	(89)	(78)	(72)	(52)	(56)	(82)	(53)	(54)	(40)	(46)	(71)
31	R-7	(1)	(1)	(6)	(1)	(0)	0	(0)	(1)	(1)	(1)	(1)	(3)	(1)
32	Total Residential	(3,219)	(4,658)	3,635	396	(135)	(3,210)	1,335	(693)	(445)	4,390	3,117	(1,467)	(79)
33														
34	G-41	(328)	(270)	431	(220)	183	(515)	(230)	(36)	111	538	760	(90)	28
35	G-42	(47)	(50)	63	(32)	30	(53)	17	(3)	9	64	76	(17)	5
36	G-43	(1)	(6)	3	(4)	(2)	(5)	(5)	(8)	(11)	(7)	(8)	(6)	(5)
37	G-44	0	(0)	(0)	0	(0)	(0)	0	1	(0)	1	0	(0)	0
38	G-45	(3)	(1)	0	0	0	(0)	0	2	1	1	0	0	0
39	G-46	0	1	2	3	4	5	6	7	8	9	10	11	6
40	G-51	(51)	(71)	66	7	11	(52)	34	8	(27)	85	51	(47)	1
41	G-52	(14)	(11)	19	(8)	15	(16)	2	4	5	18	31	(12)	3
42	G-53	(0)	(2)	1	(1)	2	(1)	(2)	(0)	2	1	0	(1)	(0)
43	G-54	(1)	(1)	1	(2)	0	0	0	0	0	2	0	(2)	(0)
44	G-55	0	(1)	1	0	(0)	0	0	(0)	(0)	0	0	0	0
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	0	(0)	0	0	(0)	0	0	(0)	(0)	0	0	(0)	(0)
48	Total C/I	(444)	(412)	589	(256)	242	(636)	(177)	(26)	99	711	921	(165)	37
49														
50	Total	(3,663)	(5,070)	4,223	139	107	(3,846)	1,158	(720)	(347)	5,102	4,039	(1,631)	(42)

Calculated													
Calendar Month - Bills	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12 Month Average
1 R-1	3,556	3,208	3,554	3,435	3,550	3,433	3,532	3,541	3,426	3,536	3,429	3,548	3,479
2 R-3	74,568	67,504	74,858	72,371	74,609	72,049	74,381	74,383	72,235	75,025	72,971	76,009	73,414
3 R-4	6,206	5,597	6,169	5,875	5,955	5,680	5,709	5,570	5,309	5,662	5,879	5,874	5,791
4 R-5	37	43	47	53	55	63	66	60	67	67	70	70	58
5 R-6	86	94	100	125	146	180	191	178	202	212	233	237	165
6 R-7	1	1	1	2	3	3	3	3	3	3	3	3	2
7 Total Residential	84,454	76,448	84,729	81,860	84,318	81,407	83,883	83,735	81,244	84,505	82,585	85,741	82,909
8													
9 G-41	9,722	8,810	9,759	9,395	9,534	9,045	9,208	9,146	8,865	9,410	9,417	9,843	9,346
10 G-42	1,438	1,300	1,439	1,383	1,423	1,371	1,437	1,451	1,402	1,461	1,428	1,477	1,418
11 G-43	60	53	58	54	55	52	53	49	48	50	48	53	53
12 G-44	1	2	2	2	2	2	2	3	3	4	4	4	3
13 G-45	4	4	4	4	4	4	4	6	7	7	7	7	5
14 G-46	0	1	2	3	4	5	6	7	8	9	10	11	6
15 G-51	1,339	1,208	1,338	1,291	1,327	1,284	1,342	1,354	1,303	1,350	1,308	1,347	1,316
16 G-52	390	352	392	381	397	385	401	406	392	409	401	417	394
17 G-53	37	34	35	34	36	35	34	33	33	34	33	34	34
18 G-54	28	26	29	27	28	27	27	26	25	26	25	27	27
19 G-55	3	3	3	3	3	3	3	3	3	3	3	3	3
20 G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21 G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22 G-58	1	1	1	1	1	1	1	1	1	1	1	1	1
23 Total C/I	13,024	11,794	13,063	12,579	12,815	12,214	12,519	12,485	12,091	12,764	12,685	13,223	12,605
24													
25 Total	97,478	88,242	97,791	94,439	97,133	93,621	96,402	96,220	93,334	97,269	95,270	98,964	95,514

Per Books Data														
Actual - Therms billed		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	88,312	89,781	85,523	75,772	61,312	51,500	39,994	32,680	34,468	38,518	50,194	78,635	726,689
2	R-3	9,524,781	10,512,561	9,418,226	6,541,933	3,756,481	2,077,526	1,185,648	1,009,296	1,043,918	1,535,728	3,547,745	8,051,572	58,205,415
3	R-4	685,665	832,335	791,552	616,505	385,336	169,582	92,841	79,605	79,388	108,054	236,269	558,158	4,635,290
4	R-5	2,459	2,208	2,403	1,506	924	499	454	357	435	696	1,402	2,135	15,478
5	R-6	25,681	25,315	22,848	15,536	9,324	4,598	2,805	2,621	2,751	5,372	15,491	27,991	160,333
6	R-7	182	169	461	158	88	30	26	20	20	52	190	407	1,803
7	Total Residential	10,327,081	11,462,368	10,321,013	7,251,410	4,213,465	2,303,735	1,321,768	1,124,578	1,160,980	1,688,420	3,851,290	8,718,899	63,745,008
8														
9	G-41	4,321,413	4,808,165	4,439,730	3,005,894	1,489,238	701,903	306,229	227,646	250,812	442,272	1,230,906	3,393,209	24,617,416
10	G-42	5,585,268	6,067,067	5,658,958	4,176,998	2,326,679	1,242,218	624,361	557,180	562,741	937,089	2,037,124	4,715,295	34,490,978
11	G-43	1,545,052	1,835,644	1,589,381	1,418,349	888,296	588,694	366,070	349,197	236,954	371,997	654,147	1,254,271	11,098,051
12	G-44	508	896	844	536	285	147	71	64	73	138	731	2,353	6,646
13	G-45	18,414	17,636	15,951	11,831	6,553	5,647	1,015	430	989	3,951	10,997	23,427	116,841
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	457,491	483,241	469,505	380,588	333,668	301,708	249,851	237,833	264,277	259,397	291,596	412,872	4,142,026
16	G-52	1,058,630	1,094,095	1,050,193	906,153	756,556	652,598	579,058	567,763	552,389	629,622	713,520	1,048,628	9,609,204
17	G-53	1,073,624	1,230,849	1,084,725	1,063,450	838,251	776,896	696,615	680,191	697,014	642,704	834,275	943,097	10,561,692
18	G-54	1,341,350	1,310,289	1,231,408	1,204,395	1,373,982	1,643,240	1,676,270	1,797,269	1,703,235	1,790,770	1,737,115	1,558,296	18,367,621
19	G-55	527	1,081	308	546	313	189	66	9	62	54	102	437	3,694
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	3,712	3,510	225,768	59,302	63,292	42,032	33,380	35,064	33,476	37,076	41,460	(264,976)	313,096
23	Total C/I	15,405,988	16,852,474	15,766,771	12,228,043	8,077,112	5,955,271	4,532,987	4,452,647	4,302,022	5,115,070	7,551,973	13,086,909	113,327,267
24														
25	Total	25,733,069	28,314,842	26,087,784	19,479,453	12,290,577	8,259,006	5,854,755	5,577,225	5,463,002	6,803,491	11,403,263	21,805,807	177,072,274
Calculated														
Calendarization Adjustment - Therms														
		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	9,958	(7,303)	(4,350)	(13,203)	(9,906)	(12,296)	(7,286)	882	1,728	8,794	24,162	12,137	3,318
27	R-3	1,522,834	(1,343,711)	(1,580,319)	(2,186,158)	(1,287,679)	(792,003)	(190,491)	4,082	232,846	1,348,445	3,499,823	1,194,260	421,929
28	R-4	200,247	(104,755)	(163,280)	(267,490)	(189,938)	(64,975)	(13,891)	(1,388)	14,249	104,474	311,375	132,777	(42,595)
29	R-5	(41)	(42)	(426)	(251)	(122)	(22)	(43)	44	102	310	387	179	75
30	R-6	(910)	(2,586)	(2,520)	(3,429)	(2,251)	(1,301)	(187)	76	1,202	5,277	7,853	3,652	4,875
31	R-7	54	50	(256)	(26)	(14)	(1)	(3)	1	11	64	96	(12)	(36)
32	Total Residential	1,732,142	(1,458,348)	(1,751,152)	(2,470,557)	(1,489,910)	(870,598)	(211,901)	3,698	250,139	1,467,364	3,843,697	1,342,993	387,568
33														
34	G-41	850,199	(528,708)	(908,597)	(1,240,113)	(624,354)	(350,140)	(70,888)	13,668	101,600	573,514	1,773,265	760,097	349,541
35	G-42	945,150	(591,295)	(933,440)	(1,504,456)	(844,640)	(548,662)	(122,550)	(22,365)	205,268	821,625	2,234,622	879,929	519,186
36	G-43	360,784	(274,603)	(154,856)	(518,383)	(284,382)	(248,693)	(85,583)	(50,821)	104,052	263,401	654,816	419,835	185,567
37	G-44	327	(125)	(273)	(259)	(132)	(75)	(8)	14	97	984	1,719	1,186	3,455
38	G-45	(1,348)	(2,627)	(4,023)	(5,492)	(1,410)	(4,662)	(592)	840	4,116	9,457	13,520	8,871	16,648
39	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
40	G-51	55,874	(46,347)	(46,840)	(48,737)	(35,545)	(52,574)	(17,998)	20,643	(10,121)	26,463	99,278	43,345	(12,560)
41	G-52	109,065	(106,065)	(74,944)	(134,474)	(98,798)	(100,264)	(37,293)	13,245	36,868	72,598	244,491	31,297	(44,275)
42	G-53	263,510	(164,958)	(46,518)	(237,172)	(61,818)	(113,387)	(33,526)	17,452	(49,101)	140,101	121,934	124,699	(38,785)
43	G-54	(13,916)	(103,975)	(45,526)	104,700	265,578	25,612	93,758	(30,816)	(77,469)	(125,402)	(192,277)	(264,906)	(364,639)
44	G-55	94	(504)	196	(283)	(142)	(131)	(54)	48	(3)	103	319	188	(169)
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	15,303	30,469	(194,173)	(29,922)	(41,826)	(24,849)	(16,412)	(18,082)	(13,403)	(14,515)	(18,009)	291,075	(34,342)
48	Total C/I	2,585,043	(1,788,738)	(2,408,995)	(3,614,593)	(1,727,469)	(1,417,826)	(291,147)	(56,174)	301,904	1,768,328	4,933,677	2,295,616	579,626
49														
50	Total	4,317,184	(3,247,086)	(4,160,147)	(6,085,150)	(3,217,379)	(2,288,424)	(503,048)	(52,476)	552,043	3,235,692	8,777,374	3,638,609	967,194

Calculated														
Calendar Month - Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	98,270	82,477	81,173	62,569	51,406	39,204	32,708	33,562	36,196	47,312	74,356	90,773	730,007
2	R-3	11,047,615	9,168,849	7,837,906	4,355,776	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	7,047,568	9,245,832	58,627,344
3	R-4	885,912	727,579	628,272	349,015	195,398	104,607	78,949	78,217	93,638	212,528	547,644	690,935	4,592,696
4	R-5	2,418	2,166	1,977	1,255	802	477	411	401	537	1,006	1,789	2,314	15,553
5	R-6	24,771	22,729	20,328	12,107	7,073	3,298	2,618	2,697	3,953	10,649	23,344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	12,059,223	10,004,020	8,569,861	4,780,853	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	7,694,988	10,061,892	64,132,575
8														
9	G-41	5,171,612	4,279,458	3,531,133	1,765,781	864,883	351,762	235,341	241,313	352,412	1,015,786	3,004,170	4,153,306	24,966,957
10	G-42	6,530,418	5,475,772	4,725,518	2,672,542	1,482,039	693,556	501,810	534,815	768,009	1,758,714	4,271,746	5,595,225	35,010,164
11	G-43	1,905,835	1,561,041	1,434,525	899,966	603,914	340,002	280,487	298,376	341,006	635,398	1,308,963	1,674,106	11,283,618
12	G-44	835	771	571	277	153	72	63	78	170	1,122	2,450	3,539	10,101
13	G-45	17,066	15,009	11,928	6,338	5,143	985	423	1,270	5,105	13,408	24,517	32,298	133,489
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	513,365	436,895	422,665	331,851	298,122	249,134	231,853	258,476	254,156	285,859	390,874	456,217	4,129,466
16	G-52	1,167,695	988,029	975,249	771,679	657,758	552,333	541,766	581,009	589,257	702,220	958,011	1,079,925	9,564,929
17	G-53	1,337,134	1,065,891	1,038,207	826,277	776,434	663,509	663,090	697,644	647,913	782,805	956,209	1,067,796	10,522,907
18	G-54	1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
19	G-55	621	577	504	263	172	58	12	57	59	157	421	625	3,525
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	19,016	33,980	31,595	29,380	21,467	17,183	16,968	16,982	20,073	22,561	23,451	26,099	278,754
23	Total C/I	17,991,031	15,063,736	13,357,776	8,613,449	6,349,644	4,537,445	4,241,840	4,396,473	4,603,926	6,883,398	12,485,650	15,382,524	113,906,893
24														
25	Total	30,050,254	25,067,756	21,927,637	13,394,303	9,073,199	5,970,583	5,351,707	5,524,748	6,015,045	10,039,183	20,180,637	25,444,416	178,039,468
Calculated														
Headblock Volume Ratio		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	
26	R-1	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
27	R-3	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
28	R-4	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
29	R-5	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
30	R-6	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
31	R-7	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
32														
33														
34	G-41	17.9209%	18.4060%	23.0291%	32.5220%	22.5306%	21.1314%	23.9874%	24.2645%	21.2121%	20.5934%	24.3859%	21.4869%	
35	G-42	22.6230%	23.0003%	29.0478%	42.0030%	38.7080%	44.4681%	49.7484%	50.1757%	42.5889%	34.4643%	31.3654%	26.7830%	
36	G-43	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
37	G-44	17.3965%	22.3132%	29.6302%	45.5067%	22.4305%	34.6539%	40.8031%	34.6452%	27.6321%	10.7583%	13.0449%	10.7310%	
38	G-45	24.2196%	24.8747%	34.2544%	53.1992%	35.5228%	90.8021%	100.0000%	88.5062%	46.8697%	26.0474%	26.8946%	22.3958%	
39	G-46	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	
40	G-51	19.3205%	19.3886%	21.7864%	25.8571%	28.3600%	31.4939%	34.1718%	31.7658%	31.1330%	28.7791%	23.3782%	21.0834%	
41	G-52	34.0257%	34.1604%	38.1347%	45.5222%	52.1518%	57.6418%	59.9423%	58.6653%	55.3881%	49.5502%	40.5518%	37.6578%	
42	G-53	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
43	G-54	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
44	G-55	19.7069%	18.7331%	22.4107%	44.7078%	66.1722%	100.0000%	100.0000%	100.0000%	100.0000%	65.5208%	26.9961%	18.8713%	
45	G-56	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	
46	G-57	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	
47	G-58	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	

		Calculated												
Calendar Month Headblock - Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	98,270	82,477	81,173	62,569	51,406	39,204	32,708	33,562	36,196	47,312	74,356	90,773	730,007
2	R-3	11,047,615	9,168,849	7,837,906	4,355,776	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	7,047,568	9,245,832	58,627,344
3	R-4	885,912	727,579	628,272	349,015	195,398	104,607	78,949	78,217	93,638	212,528	547,644	690,935	4,592,696
4	R-5	2,418	2,166	1,977	1,255	802	477	411	401	537	1,006	1,789	2,314	15,553
5	R-6	24,771	22,729	20,328	12,107	7,073	3,298	2,618	2,697	3,953	10,649	23,344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	12,059,223	10,004,020	8,569,861	4,780,853	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	7,694,988	10,061,892	64,132,575
8														
9	G-41	926,798	787,677	813,189	574,268	194,863	74,332	56,452	58,553	74,754	209,185	732,595	892,418	5,395,085
10	G-42	1,477,379	1,259,445	1,372,659	1,122,549	573,668	308,411	249,643	268,347	327,086	606,128	1,339,850	1,498,571	10,403,735
11	G-43	1,905,835	1,561,041	1,434,525	899,966	603,914	340,002	280,487	298,376	341,006	635,398	1,308,963	1,674,106	11,283,618
12	G-44	145	172	169	126	34	25	26	27	47	121	320	380	1,591
13	G-45	4,133	3,733	4,086	3,372	1,827	895	423	1,124	2,393	3,492	6,594	7,233	39,305
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	99,185	84,708	92,083	85,807	84,547	78,462	79,228	82,107	79,126	82,268	91,379	96,186	1,035,087
16	G-52	397,316	337,514	371,909	351,285	343,033	318,375	324,747	340,851	326,378	347,952	388,491	406,675	4,254,525
17	G-53	1,337,134	1,065,891	1,038,207	826,277	776,434	663,509	663,090	697,644	647,913	782,805	956,209	1,067,796	10,522,907
18	G-54	1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
19	G-55	122	108	113	118	113	58	12	57	59	103	114	118	1,095
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	19,016	33,980	31,595	29,380	21,467	17,183	16,968	16,982	20,073	22,561	23,451	26,099	278,754
23	Total C/I	7,494,497	6,340,583	6,344,417	5,202,243	4,239,460	3,470,103	3,441,103	3,530,521	3,444,602	4,355,381	6,392,803	6,962,972	61,218,685
24														
25	Total	19,553,720	16,344,603	14,914,278	9,983,096	6,963,015	4,903,240	4,550,970	4,658,797	4,855,722	7,511,165	14,087,791	17,024,864	125,351,260
		Calculated												

Calendar Month		Calculated												
Tailblock - Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	R-3	0	0	0	0	0	0	0	0	0	0	0	0	0
28	R-4	0	0	0	0	0	0	0	0	0	0	0	0	0
29	R-5	0	0	0	0	0	0	0	0	0	0	0	0	0
30	R-6	0	0	0	0	0	0	0	0	0	0	0	0	0
31	R-7	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Total Residential	0	0	0	0	0	0	0	0	0	0	0	0	0
33														
34	G-41	4,244,814	3,491,781	2,717,944	1,191,513	670,020	277,430	178,889	182,760	277,658	806,601	2,271,576	3,260,888	19,571,872
35	G-42	5,053,039	4,216,328	3,352,860	1,549,993	908,371	385,145	252,168	266,468	440,923	1,152,586	2,931,895	4,096,654	24,606,429
36	G-43	0	0	0	0	0	0	0	0	0	0	0	0	0
37	G-44	690	599	402	151	119	47	37	51	123	1,001	2,130	3,159	8,509
38	G-45	12,933	11,275	7,842	2,966	3,316	91	0	146	2,712	9,915	17,923	25,064	94,184
39	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
40	G-51	414,181	352,187	330,581	246,044	213,575	170,672	152,624	176,369	175,029	203,592	299,494	360,031	3,094,379
41	G-52	770,379	650,515	603,340	420,394	314,725	233,958	217,019	240,158	262,879	354,268	569,520	673,249	5,310,405
42	G-53	0	0	0	0	0	0	0	0	0	0	0	0	0
43	G-54	0	0	0	0	0	0	0	0	0	0	0	0	0
44	G-55	499	469	391	145	58	0	0	0	0	54	307	507	2,430
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Total C/I	10,496,533	8,723,153	7,013,360	3,411,207	2,110,184	1,067,343	800,737	865,952	1,159,324	2,528,018	6,092,847	8,419,552	52,688,208
49														
50	Total	10,496,533	8,723,153	7,013,360	3,411,207	2,110,184	1,067,343	800,737	865,952	1,159,324	2,528,018	6,092,847	8,419,552	52,688,208

Calculated														
Weather Normalization Headblock Adj- Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	(1,310)	1,287	404	1,606	0	0	0	0	0	0	(7,072)	156	(4,929)
2	R-3	(194,464)	193,820	55,053	169,953	0	0	0	0	0	0	(970,225)	21,387	(724,476)
3	R-4	(15,463)	15,226	4,368	13,433	0	0	0	0	0	0	(74,415)	1,582	(55,270)
4	R-5	0	0	0	0	0	0	0	0	0	0	0	0	0
5	R-6	0	0	0	0	0	0	0	0	0	0	0	0	0
6	R-7	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total Residential	(211,237)	210,332	59,824	184,992	0	0	0	0	0	0	(1,051,712)	23,124	(784,675)
8														
9	G-41	0	0	0	0	0	0	0	0	0	0	0	0	0
10	G-42	0	0	0	0	0	0	0	0	0	0	0	0	0
11	G-43	(31,229)	30,422	9,198	31,279	0	0	0	0	0	0	(163,763)	3,545	(120,548)
12	G-44	0	0	0	0	0	0	0	0	0	0	0	0	0
13	G-45	0	0	0	0	0	0	0	0	0	0	0	0	0
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	0	0	0	0	0	0	0	0	0	0	0	0	0
16	G-52	0	0	0	0	0	0	0	0	0	0	0	0	0
17	G-53	(13,192)	11,116	3,346	11,001	0	0	0	0	0	0	(59,922)	1,213	(46,438)
18	G-54	0	0	0	0	0	0	0	0	0	0	0	0	0
19	G-55	0	0	0	0	0	0	0	0	0	0	0	0	0
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Total C/I	(44,421)	41,538	12,544	42,281	0	0	0	0	0	0	(223,685)	4,758	(166,986)
24														
25	Total	(255,657)	251,870	72,368	227,273	0	0	0	0	0	0	(1,275,397)	27,883	(951,661)
Calculated														
Weather Normalization Tailblock Adj - Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	R-3	0	0	0	0	0	0	0	0	0	0	0	0	0
28	R-4	0	0	0	0	0	0	0	0	0	0	0	0	0
29	R-5	0	0	0	0	0	0	0	0	0	0	0	0	0
30	R-6	0	0	0	0	0	0	0	0	0	0	0	0	0
31	R-7	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Total Residential	0	0	0	0	0	0	0	0	0	0	0	0	0
33														
34	G-41	(95,028)	94,809	26,347	76,233	0	0	0	0	0	0	(440,226)	10,110	(327,756)
35	G-42	(116,437)	117,510	33,900	109,203	0	0	0	0	0	0	(602,500)	13,200	(445,124)
36	G-43	0	0	0	0	0	0	0	0	0	0	0	0	0
37	G-44	0	0	0	0	0	0	0	0	0	0	0	0	0
38	G-45	0	0	0	0	0	0	0	0	0	0	0	0	0
39	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
40	G-51	(5,339)	5,220	1,493	5,162	0	0	0	0	0	0	(25,364)	565	(18,262)
41	G-52	(11,886)	11,450	3,378	11,608	0	0	0	0	0	0	(62,273)	1,270	(46,454)
42	G-53	0	0	0	0	0	0	0	0	0	0	0	0	0
43	G-54	0	0	0	0	0	0	0	0	0	0	0	0	0
44	G-55	0	0	0	0	0	0	0	0	0	0	0	0	0
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Total C/I	(228,691)	228,990	65,118	202,205	0	0	0	0	0	0	(1,130,363)	25,144	(837,596)
49														
50	Total	(228,691)	228,990	65,118	202,205	0	0	0	0	0	0	(1,130,363)	25,144	(837,596)

		Calculated												
Calendar Month Weather Normal Headblock - Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	96,960	83,764	81,577	64,175	51,406	39,204	32,708	33,562	36,196	47,312	67,285	90,929	725,078
2	R-3	10,853,151	9,362,669	7,892,959	4,525,729	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	6,077,343	9,267,219	57,902,868
3	R-4	870,449	742,805	632,640	362,448	195,398	104,607	78,949	78,217	93,638	212,528	473,230	692,517	4,537,425
4	R-5	2,418	2,166	1,977	1,255	802	477	411	401	537	1,006	1,789	2,314	15,553
5	R-6	24,771	22,729	20,328	12,107	7,073	3,298	2,618	2,697	3,953	10,649	23,344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	11,847,986	10,214,353	8,629,685	4,965,845	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	6,643,276	10,085,016	63,347,900
8														
9	G-41	926,798	787,677	813,189	574,268	194,863	74,332	56,452	58,553	74,754	209,185	732,595	892,418	5,395,085
10	G-42	1,477,379	1,259,445	1,372,659	1,122,549	573,668	308,411	249,643	268,347	327,086	606,128	1,339,850	1,498,571	10,403,735
11	G-43	1,874,607	1,591,462	1,443,723	931,245	603,914	340,002	280,487	298,376	341,006	635,398	1,145,200	1,677,651	11,163,070
12	G-44	145	172	169	126	34	25	26	27	47	121	320	380	1,591
13	G-45	4,133	3,733	4,086	3,372	1,827	895	423	1,124	2,393	3,492	6,594	7,233	39,305
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	99,185	84,708	92,083	85,807	84,547	78,462	79,228	82,107	79,126	82,268	91,379	96,186	1,035,087
16	G-52	397,316	337,514	371,909	351,285	343,033	318,375	324,747	340,851	326,378	347,952	388,491	406,675	4,254,525
17	G-53	1,323,942	1,077,007	1,041,553	837,279	776,434	663,509	663,090	697,644	647,913	782,805	896,286	1,069,009	10,476,470
18	G-54	1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
19	G-55	122	108	113	118	113	58	12	57	59	103	114	118	1,095
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	19,016	33,980	31,595	29,380	21,467	17,183	16,968	16,982	20,073	22,561	23,451	26,099	278,754
23	Total C/I	7,450,076	6,382,121	6,356,960	5,244,523	4,239,460	3,470,103	3,441,103	3,530,521	3,444,602	4,355,381	6,169,118	6,967,730	61,051,699
24														
25	Total	19,298,063	16,596,473	14,986,646	10,210,369	6,963,015	4,903,240	4,550,970	4,658,797	4,855,722	7,511,165	12,812,394	17,052,746	124,399,599
Calendar Month Weather Normal Tailblock - Therms		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	R-3	0	0	0	0	0	0	0	0	0	0	0	0	0
28	R-4	0	0	0	0	0	0	0	0	0	0	0	0	0
29	R-5	0	0	0	0	0	0	0	0	0	0	0	0	0
30	R-6	0	0	0	0	0	0	0	0	0	0	0	0	0
31	R-7	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Total Residential	0	0	0	0	0	0	0	0	0	0	0	0	0
33														
34	G-41	4,149,785	3,586,590	2,744,290	1,267,746	670,020	277,430	178,889	182,760	277,658	806,601	1,831,350	3,270,998	19,244,116
35	G-42	4,936,602	4,333,838	3,386,760	1,659,195	908,371	385,145	252,168	266,468	440,923	1,152,586	2,329,396	4,109,853	24,161,305
36	G-43	0	0	0	0	0	0	0	0	0	0	0	0	0
37	G-44	690	599	402	151	119	47	37	51	123	1,001	2,130	3,159	8,509
38	G-45	12,933	11,275	7,842	2,966	3,316	91	0	146	2,712	9,915	17,923	25,064	94,184
39	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
40	G-51	408,842	357,407	332,075	251,206	213,575	170,672	152,624	176,369	175,029	203,592	274,130	360,595	3,076,117
41	G-52	758,492	661,965	606,718	432,002	314,725	233,958	217,019	240,158	262,879	354,268	507,247	674,519	5,263,951
42	G-53	0	0	0	0	0	0	0	0	0	0	0	0	0
43	G-54	0	0	0	0	0	0	0	0	0	0	0	0	0
44	G-55	499	469	391	145	58	0	0	0	0	54	307	507	2,430
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Total C/I	10,267,843	8,952,143	7,078,478	3,613,412	2,110,184	1,067,343	800,737	865,952	1,159,324	2,528,018	4,962,484	8,444,696	51,850,612
49														
50	Total	10,267,843	8,952,143	7,078,478	3,613,412	2,110,184	1,067,343	800,737	865,952	1,159,324	2,528,018	4,962,484	8,444,696	51,850,612

		Calculated												
Calendar Month Weather Normal		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
Total - Therms														
1	R-1	96,960	83,764	81,577	64,175	51,406	39,204	32,708	33,562	36,196	47,312	67,285	90,929	725,078
2	R-3	10,853,151	9,362,669	7,892,959	4,525,729	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	6,077,343	9,267,219	57,902,868
3	R-4	870,449	742,805	632,640	362,448	195,398	104,607	78,949	78,217	93,638	212,528	473,230	692,517	4,537,425
4	R-5	2,418	2,166	1,977	1,255	802	477	411	401	537	1,006	1,789	2,314	15,553
5	R-6	24,771	22,729	20,328	12,107	7,073	3,298	2,618	2,697	3,953	10,649	23,344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	11,847,986	10,214,353	8,629,685	4,965,845	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	6,643,276	10,085,016	63,347,900
8														
9	G-41	5,076,584	4,374,267	3,557,480	1,842,013	864,883	351,762	235,341	241,313	352,412	1,015,786	2,563,944	4,163,416	24,639,201
10	G-42	6,413,980	5,593,283	4,759,419	2,781,744	1,482,039	693,556	501,810	534,815	768,009	1,758,714	3,669,246	5,608,424	34,565,040
11	G-43	1,874,607	1,591,462	1,443,723	931,245	603,914	340,002	280,487	298,376	341,006	635,398	1,145,200	1,677,651	11,163,070
12	G-44	835	771	571	277	153	72	63	78	170	1,122	2,450	3,539	10,101
13	G-45	17,066	15,009	11,928	6,338	5,143	985	423	1,270	5,105	13,408	24,517	32,298	133,489
14	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
15	G-51	508,027	442,115	424,158	337,013	298,122	249,134	231,853	258,476	254,156	285,859	365,510	456,781	4,111,204
16	G-52	1,155,808	999,479	978,627	783,287	657,758	552,333	541,766	581,009	589,257	702,220	895,738	1,081,194	9,518,475
17	G-53	1,323,942	1,077,007	1,041,553	837,279	776,434	663,509	663,090	697,644	647,913	782,805	896,286	1,069,009	10,476,470
18	G-54	1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
19	G-55	621	577	504	263	172	58	12	57	59	157	421	625	3,525
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	19,016	33,980	31,595	29,380	21,467	17,183	16,968	16,982	20,073	22,561	23,451	26,099	278,754
23	Total C/I	17,717,919	15,334,263	13,435,438	8,857,935	6,349,644	4,537,445	4,241,840	4,396,473	4,603,926	6,883,398	11,131,602	15,412,426	112,902,311
24														
25	Total	29,565,905	25,548,616	22,065,123	13,823,781	9,073,199	5,970,583	5,351,707	5,524,748	6,015,045	10,039,183	17,774,877	25,497,443	176,250,211

		Per Books Data												
Actual - Base Revenue (Margin) w/o Normal Weather Adjustment		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	\$88,102	\$84,541	\$82,588	\$79,357	\$75,851	\$73,241	\$67,186	\$66,017	\$66,273	\$65,767	\$69,439	\$84,840	\$903,202
2	R-3	\$6,408,219	\$6,855,501	\$6,251,924	\$4,670,732	\$3,178,741	\$2,265,520	\$1,757,764	\$1,699,551	\$1,681,833	\$1,937,904	\$3,050,840	\$5,661,065	\$45,419,593
3	R-4	\$186,824	\$219,993	\$211,632	\$174,548	\$124,565	\$73,282	\$54,466	\$52,380	\$50,774	\$55,454	\$83,448	\$159,434	\$1,446,800
4	R-5	\$2,632	\$2,268	\$2,461	\$2,078	\$1,774	\$1,564	\$1,724	\$1,531	\$1,560	\$1,775	\$2,100	\$2,523	\$23,991
5	R-6	\$22,656	\$21,772	\$20,028	\$15,064	\$10,919	\$7,817	\$6,881	\$7,026	\$7,028	\$9,130	\$16,602	\$25,851	\$170,773
6	R-7	\$70	\$63	\$187	\$70	\$49	\$31	\$33	\$37	\$36	\$48	\$86	\$165	\$876
7	Total Residential	\$6,708,502	\$7,184,137	\$6,568,820	\$4,941,851	\$3,391,897	\$2,421,453	\$1,888,055	\$1,826,543	\$1,807,505	\$2,070,078	\$3,222,515	\$5,933,878	\$47,965,235
8														
9	G-41	\$2,018,048	\$2,104,957	\$2,006,531	\$1,574,033	\$1,049,624	\$767,206	\$632,128	\$596,588	\$580,228	\$651,006	\$911,735	\$1,737,079	\$14,629,163
10	G-42	\$1,992,383	\$2,086,784	\$1,980,377	\$1,582,659	\$1,017,020	\$645,801	\$452,462	\$437,843	\$432,009	\$551,672	\$898,653	\$1,774,036	\$13,851,701
11	G-43	\$437,697	\$510,222	\$445,329	\$403,689	\$259,578	\$110,833	\$84,132	\$82,816	\$74,589	\$85,658	\$124,068	\$365,251	\$2,983,863
12	G-44	\$294	\$530	\$531	\$380	\$290	\$211	\$176	\$190	\$259	\$272	\$582	\$1,323	\$5,038
13	G-45	\$9,367	\$8,037	\$7,299	\$5,791	\$3,907	\$3,290	\$1,363	\$1,179	\$1,835	\$3,290	\$6,029	\$11,278	\$62,666
14	G-46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	G-51	\$168,535	\$166,450	\$163,492	\$148,156	\$141,541	\$136,746	\$125,887	\$126,857	\$130,843	\$126,111	\$131,639	\$162,439	\$1,728,696
16	G-52	\$264,983	\$260,610	\$256,120	\$237,092	\$198,080	\$157,032	\$148,361	\$149,222	\$144,568	\$153,404	\$171,040	\$270,114	\$2,410,626
17	G-53	\$205,105	\$229,603	\$204,554	\$202,072	\$159,103	\$88,359	\$82,071	\$79,246	\$78,852	\$76,215	\$93,445	\$182,777	\$1,681,402
18	G-54	\$106,050	\$102,066	\$97,869	\$97,225	\$105,783	\$76,071	\$77,412	\$81,478	\$77,453	\$79,866	\$78,625	\$119,101	\$1,098,999
19	G-55	\$350	\$544	\$258	\$350	\$320	\$275	\$234	\$237	\$250	\$225	\$249	\$345	\$3,637
20	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	G-58	\$1,263	\$1,311	\$17,498	\$5,784	\$6,207	\$2,882	\$2,413	\$2,611	\$2,510	\$2,575	\$2,804	(\$15,437)	\$32,420
23	Total C/I	\$5,204,075	\$5,471,113	\$5,179,859	\$4,257,231	\$2,941,453	\$1,988,708	\$1,606,639	\$1,558,267	\$1,523,394	\$1,730,294	\$2,418,871	\$4,608,305	\$38,488,210
24														
25	Total	\$11,912,577	\$12,655,251	\$11,748,679	\$9,199,082	\$6,333,351	\$4,410,161	\$3,494,695	\$3,384,810	\$3,330,899	\$3,800,372	\$5,641,386	\$10,542,184	\$86,453,445
Calculated														
Calendar Month Base Revenue Adjustment		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	\$2,078	(\$5,495)	\$1,159	(\$4,351)	(\$3,293)	(\$7,012)	(\$1,110)	\$518	(\$478)	\$5,907	\$10,846	\$3,463	\$2,231
27	R-3	\$789,972	(\$797,052)	(\$815,265)	(\$1,187,209)	(\$699,752)	(\$475,999)	(\$72,796)	(\$4,405)	\$127,340	\$808,827	\$1,983,200	\$643,342	\$300,202
28	R-4	\$45,417	(\$26,257)	(\$36,314)	(\$62,454)	(\$45,793)	(\$16,147)	(\$2,147)	(\$1,071)	\$2,383	\$26,336	\$74,313	\$30,222	(\$11,513)
29	R-5	(\$716)	(\$358)	(\$567)	(\$421)	(\$310)	(\$93)	(\$231)	(\$157)	\$17	\$21	\$155	(\$18)	(\$2,678)
30	R-6	(\$3,041)	(\$3,473)	(\$3,356)	(\$3,862)	(\$3,014)	(\$1,951)	(\$1,249)	(\$1,596)	(\$219)	\$2,711	\$4,842	\$1,679	(\$12,530)
31	R-7	\$7	\$8	(\$120)	(\$18)	(\$4)	\$1	(\$2)	(\$9)	(\$3)	\$9	\$22	(\$27)	(\$137)
32	Total Residential	\$833,716	(\$832,627)	(\$854,463)	(\$1,258,315)	(\$752,166)	(\$501,201)	(\$77,536)	(\$6,721)	\$129,039	\$843,811	\$2,073,377	\$678,660	\$275,575
33														
34	G-41	\$248,269	(\$183,851)	(\$258,282)	(\$423,279)	(\$224,274)	(\$144,526)	(\$31,597)	\$2,635	\$40,141	\$226,364	\$662,673	\$242,315	\$156,590
35	G-42	\$258,934	(\$180,408)	(\$242,608)	(\$456,873)	(\$289,775)	(\$182,129)	(\$33,927)	(\$5,064)	\$65,932	\$272,733	\$726,645	\$252,358	\$185,817
36	G-43	\$91,641	(\$73,751)	(\$37,537)	(\$135,184)	(\$149,743)	(\$33,827)	(\$12,614)	(\$12,111)	\$837	\$25,701	\$249,160	\$105,270	\$17,842
37	G-44	\$180	(\$50)	(\$118)	(\$98)	(\$72)	(\$33)	\$13	\$74	\$38	\$505	\$763	\$483	\$1,686
38	G-45	(\$1,505)	(\$1,084)	(\$1,316)	(\$2,001)	(\$831)	(\$1,906)	(\$223)	\$837	\$1,998	\$3,816	\$5,634	\$3,385	\$6,803
39	G-46	\$0	\$932	\$1,864	\$2,796	\$3,728	\$4,660	\$5,660	\$6,604	\$7,547	\$8,490	\$9,434	\$10,377	\$62,092
40	G-51	\$7,409	(\$12,860)	(\$4,527)	(\$8,641)	(\$6,191)	(\$13,138)	(\$540)	\$4,263	(\$3,682)	\$9,748	\$21,784	\$5,444	(\$931)
41	G-52	\$15,335	(\$19,610)	(\$7,783)	(\$24,186)	(\$42,392)	(\$15,472)	(\$2,902)	\$2,134	\$4,203	\$10,929	\$80,377	\$4,885	\$5,518
42	G-53	\$43,173	(\$28,777)	(\$6,996)	(\$40,155)	(\$70,988)	(\$10,029)	(\$3,276)	\$1,348	(\$2,294)	\$12,003	\$91,085	\$21,233	\$6,328
43	G-54	(\$1,486)	(\$6,812)	(\$1,820)	\$5,282	(\$29,088)	\$961	\$4,321	(\$1,039)	(\$2,506)	(\$2,926)	\$38,553	(\$16,588)	(\$13,147)
44	G-55	\$36	(\$192)	\$99	(\$56)	(\$42)	(\$37)	(\$2)	\$10	(\$8)	\$52	\$84	\$44	(\$12)
45	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
47	G-58	\$1,304	\$2,402	(\$13,888)	(\$2,389)	(\$4,260)	(\$1,158)	(\$646)	(\$843)	(\$635)	(\$556)	\$111	\$18,603	(\$1,956)
48	Total C/I	\$663,290	(\$504,062)	(\$572,910)	(\$1,084,783)	(\$813,929)	(\$396,633)	(\$75,733)	(\$1,153)	\$111,569	\$566,859	\$1,886,302	\$647,810	\$426,628
49														
50	Total	\$1,497,007	(\$1,336,689)	(\$1,427,373)	(\$2,343,098)	(\$1,566,095)	(\$897,834)	(\$153,268)	(\$7,874)	\$240,608	\$1,410,670	\$3,959,679	\$1,326,470	\$702,203

		Calculated													
Calendar Month Base Revenues (Margin) w/o NWA		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total	
1	R-1	\$ 90,179	\$ 79,045	\$ 83,747	\$ 75,006	\$ 72,558	\$ 66,229	\$ 66,076	\$ 66,535	\$ 65,795	\$ 71,674	\$ 80,285	\$ 88,303	\$905,433	
2	R-3	\$ 7,198,190	\$ 6,058,449	\$ 5,436,659	\$ 3,483,523	\$ 2,478,989	\$ 1,789,520	\$ 1,684,968	\$ 1,695,145	\$ 1,809,174	\$ 2,746,731	\$ 5,034,039	\$ 6,304,407	\$45,719,796	
3	R-4	\$ 232,241	\$ 193,735	\$ 175,318	\$ 112,094	\$ 78,771	\$ 57,135	\$ 52,319	\$ 51,309	\$ 53,157	\$ 81,790	\$ 157,761	\$ 189,656	\$1,435,286	
4	R-5	\$ 1,917	\$ 1,909	\$ 1,893	\$ 1,658	\$ 1,464	\$ 1,471	\$ 1,494	\$ 1,374	\$ 1,577	\$ 1,796	\$ 2,255	\$ 2,505	\$21,313	
5	R-6	\$ 19,615	\$ 18,299	\$ 16,672	\$ 11,202	\$ 7,905	\$ 5,865	\$ 5,632	\$ 5,430	\$ 6,809	\$ 11,841	\$ 21,444	\$ 27,529	\$158,243	
6	R-7	\$ 77	\$ 72	\$ 67	\$ 53	\$ 45	\$ 32	\$ 31	\$ 28	\$ 33	\$ 57	\$ 107	\$ 138	\$739	
7	Total Residential	\$7,542,218	\$6,351,510	\$5,714,357	\$3,683,536	\$2,639,731	\$1,920,253	\$1,810,520	\$1,819,822	\$1,936,544	\$2,913,889	\$5,295,892	\$6,612,539	\$48,240,810	
8															
9	G-41	\$ 2,266,317	\$ 1,921,105	\$ 1,748,249	\$ 1,150,754	\$ 825,351	\$ 622,680	\$ 600,531	\$ 599,223	\$ 620,369	\$ 877,370	\$ 1,574,408	\$ 1,979,394	\$14,785,753	
10	G-42	\$ 2,251,317	\$ 1,906,376	\$ 1,737,770	\$ 1,125,786	\$ 727,244	\$ 463,673	\$ 418,536	\$ 432,779	\$ 497,941	\$ 824,405	\$ 1,625,298	\$ 2,026,394	\$14,037,517	
11	G-43	\$ 529,337	\$ 436,470	\$ 407,792	\$ 268,506	\$ 109,836	\$ 77,006	\$ 71,518	\$ 70,704	\$ 75,425	\$ 111,359	\$ 373,229	\$ 470,521	\$3,001,705	
12	G-44	\$ 474	\$ 480	\$ 413	\$ 282	\$ 217	\$ 178	\$ 189	\$ 264	\$ 298	\$ 777	\$ 1,345	\$ 1,806	\$6,724	
13	G-45	\$ 7,862	\$ 6,953	\$ 5,983	\$ 3,790	\$ 3,076	\$ 1,384	\$ 1,140	\$ 2,015	\$ 3,833	\$ 7,106	\$ 11,663	\$ 14,663	\$69,469	
14	G-46	\$ -	\$ 932	\$ 1,864	\$ 2,796	\$ 3,728	\$ 4,660	\$ 5,660	\$ 6,604	\$ 7,547	\$ 8,490	\$ 9,434	\$ 10,377	\$62,092	
15	G-51	\$ 175,944	\$ 153,590	\$ 158,965	\$ 139,515	\$ 135,350	\$ 123,608	\$ 125,347	\$ 131,120	\$ 127,160	\$ 135,859	\$ 153,423	\$ 167,883	\$1,727,765	
16	G-52	\$ 280,317	\$ 241,000	\$ 248,337	\$ 212,906	\$ 155,688	\$ 141,560	\$ 145,459	\$ 151,356	\$ 148,770	\$ 164,333	\$ 251,417	\$ 274,999	\$2,416,143	
17	G-53	\$ 248,279	\$ 200,826	\$ 197,557	\$ 161,917	\$ 88,115	\$ 78,330	\$ 78,795	\$ 80,594	\$ 76,558	\$ 88,218	\$ 184,530	\$ 204,010	\$1,687,729	
18	G-54	\$ 104,564	\$ 95,254	\$ 96,049	\$ 102,507	\$ 76,694	\$ 77,033	\$ 81,733	\$ 80,439	\$ 74,947	\$ 76,940	\$ 117,178	\$ 102,513	\$1,085,852	
19	G-55	\$ 386	\$ 352	\$ 357	\$ 294	\$ 278	\$ 238	\$ 231	\$ 248	\$ 241	\$ 277	\$ 333	\$ 389	\$3,626	
20	G-56	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0	
21	G-57	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0	
22	G-58	\$ 2,568	\$ 3,712	\$ 3,610	\$ 3,395	\$ 1,946	\$ 1,724	\$ 1,767	\$ 1,767	\$ 1,874	\$ 2,018	\$ 2,915	\$ 3,167	\$30,464	
23	Total C/I	\$5,867,365	\$4,967,052	\$4,606,949	\$3,172,448	\$2,127,524	\$1,592,075	\$1,530,907	\$1,557,114	\$1,634,963	\$2,297,153	\$4,305,173	\$5,256,115	\$38,914,838	
24															
25	Total	\$13,409,583	\$11,318,562	\$10,321,306	\$6,855,984	\$4,767,256	\$3,512,327	\$3,341,426	\$3,376,936	\$3,571,508	\$5,211,042	\$9,601,065	\$11,868,654	\$87,155,648	

		Calculated												
Calendar Month Weather Normal														
Base Revenue Adjustment		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	(\$490)	\$481	\$151	\$601	\$0	\$0	\$0	\$0	\$0	\$0	(\$2,678)	\$59	(\$1,875)
27	R-3	(\$106,989)	\$106,634	\$30,288	\$93,504	\$0	\$0	\$0	\$0	\$0	\$0	(\$540,305)	\$11,910	(\$404,957)
28	R-4	(\$3,403)	\$3,351	\$961	\$2,956	\$0	\$0	\$0	\$0	\$0	\$0	(\$16,578)	\$352	(\$12,360)
29	R-5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	R-6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31	R-7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32	Total Residential	(\$110,882)	\$110,466	\$31,401	\$97,061	\$0	\$0	\$0	\$0	\$0	\$0	(\$559,560)	\$12,321	(\$419,193)
33														
34	G-41	(\$29,144)	\$29,076	\$8,080	\$23,379	\$0	\$0	\$0	\$0	\$0	\$0	(\$136,658)	\$3,138	(\$102,128)
35	G-42	(\$32,207)	\$32,503	\$9,377	\$30,205	\$0	\$0	\$0	\$0	\$0	\$0	(\$168,677)	\$3,695	(\$125,102)
36	G-43	(\$7,970)	\$7,764	\$2,347	\$7,982	\$0	\$0	\$0	\$0	\$0	\$0	(\$42,300)	\$916	(\$31,261)
37	G-44	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	G-45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	G-46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
40	G-51	(\$955)	\$934	\$267	\$923	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,593)	\$102	(\$3,321)
41	G-52	(\$1,871)	\$1,802	\$532	\$1,827	\$0	\$0	\$0	\$0	\$0	\$0	(\$9,921)	\$202	(\$7,429)
42	G-53	(\$2,179)	\$1,836	\$553	\$1,817	\$0	\$0	\$0	\$0	\$0	\$0	(\$10,019)	\$203	(\$7,790)
43	G-54	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44	G-55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
47	G-58	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
48	Total C/I	(\$74,324)	\$73,915	\$21,156	\$66,134	\$0	\$0	\$0	\$0	\$0	\$0	(\$372,168)	\$8,257	(\$277,030)
49														
50	Total	(\$185,206)	\$184,382	\$52,556	\$163,195	\$0	\$0	\$0	\$0	\$0	\$0	(\$931,728)	\$20,578	(\$696,223)

		Calculated												
Calendar Month Weather Normal Base Revenues (Margin)		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	\$ 89,689	\$ 79,526	\$ 83,898	\$ 75,607	\$ 72,558	\$ 66,229	\$ 66,076	\$ 66,535	\$ 65,795	\$ 71,674	\$ 77,608	\$ 88,362	\$903,558
2	R-3	\$ 7,091,202	\$ 6,165,084	\$ 5,466,948	\$ 3,577,027	\$ 2,478,989	\$ 1,789,520	\$ 1,684,968	\$ 1,695,145	\$ 1,809,174	\$ 2,746,731	\$ 4,493,734	\$ 6,316,317	\$45,314,839
3	R-4	\$ 228,838	\$ 197,086	\$ 176,279	\$ 115,050	\$ 78,771	\$ 57,135	\$ 52,319	\$ 51,309	\$ 53,157	\$ 81,790	\$ 141,183	\$ 190,009	\$1,422,926
4	R-5	\$ 1,917	\$ 1,909	\$ 1,893	\$ 1,658	\$ 1,464	\$ 1,471	\$ 1,494	\$ 1,374	\$ 1,577	\$ 1,796	\$ 2,255	\$ 2,505	\$21,313
5	R-6	\$ 19,615	\$ 18,299	\$ 16,672	\$ 11,202	\$ 7,905	\$ 5,865	\$ 5,632	\$ 5,430	\$ 6,809	\$ 11,841	\$ 21,444	\$ 27,529	\$158,243
6	R-7	\$ 77	\$ 72	\$ 67	\$ 53	\$ 45	\$ 32	\$ 31	\$ 28	\$ 33	\$ 57	\$ 107	\$ 138	\$739
7	Total Residential	\$7,431,337	\$6,461,977	\$5,745,758	\$3,780,596	\$2,639,731	\$1,920,253	\$1,810,520	\$1,819,822	\$1,936,544	\$2,913,889	\$4,736,331	\$6,624,860	\$47,821,617
8														
9	G-41	\$ 2,237,173	\$ 1,950,182	\$ 1,756,330	\$ 1,174,133	\$ 825,351	\$ 622,680	\$ 600,531	\$ 599,223	\$ 620,369	\$ 877,370	\$ 1,437,750	\$ 1,982,533	\$14,683,625
10	G-42	\$ 2,219,110	\$ 1,938,879	\$ 1,747,146	\$ 1,155,992	\$ 727,244	\$ 463,673	\$ 418,536	\$ 432,779	\$ 497,941	\$ 824,405	\$ 1,456,621	\$ 2,030,089	\$13,912,415
11	G-43	\$ 521,368	\$ 444,234	\$ 410,140	\$ 276,488	\$ 109,836	\$ 77,006	\$ 71,518	\$ 70,704	\$ 75,425	\$ 111,359	\$ 330,929	\$ 471,437	\$2,970,444
12	G-44	\$ 474	\$ 480	\$ 413	\$ 282	\$ 217	\$ 178	\$ 189	\$ 264	\$ 298	\$ 777	\$ 1,345	\$ 1,806	\$6,724
13	G-45	\$ 7,862	\$ 6,953	\$ 5,983	\$ 3,790	\$ 3,076	\$ 1,384	\$ 1,140	\$ 2,015	\$ 3,833	\$ 7,106	\$ 11,663	\$ 14,663	\$69,469
14	G-46	\$ -	\$ 932	\$ 1,864	\$ 2,796	\$ 3,728	\$ 4,660	\$ 5,660	\$ 6,604	\$ 7,547	\$ 8,490	\$ 9,434	\$ 10,377	\$62,092
15	G-51	\$ 174,989	\$ 154,524	\$ 159,232	\$ 140,439	\$ 135,350	\$ 123,608	\$ 125,347	\$ 131,120	\$ 127,160	\$ 135,859	\$ 148,830	\$ 167,986	\$1,724,444
16	G-52	\$ 278,447	\$ 242,802	\$ 248,869	\$ 214,733	\$ 155,688	\$ 141,560	\$ 145,459	\$ 151,356	\$ 148,770	\$ 164,333	\$ 241,496	\$ 275,201	\$2,408,715
17	G-53	\$ 246,100	\$ 202,662	\$ 198,110	\$ 163,734	\$ 88,115	\$ 78,330	\$ 78,795	\$ 80,594	\$ 76,558	\$ 88,218	\$ 174,510	\$ 204,212	\$1,679,939
18	G-54	\$ 104,564	\$ 95,254	\$ 96,049	\$ 102,507	\$ 76,694	\$ 77,033	\$ 81,733	\$ 80,439	\$ 74,947	\$ 76,940	\$ 117,178	\$ 102,513	\$1,085,852
19	G-55	\$ 386	\$ 352	\$ 357	\$ 294	\$ 278	\$ 238	\$ 231	\$ 248	\$ 241	\$ 277	\$ 333	\$ 389	\$3,626
20	G-56	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
21	G-57	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
22	G-58	\$ 2,568	\$ 3,712	\$ 3,610	\$ 3,395	\$ 1,946	\$ 1,724	\$ 1,767	\$ 1,767	\$ 1,874	\$ 2,018	\$ 2,915	\$ 3,167	\$30,464
23	Total C/I	\$5,793,041	\$5,040,967	\$4,628,105	\$3,238,583	\$2,127,524	\$1,592,075	\$1,530,907	\$1,557,114	\$1,634,963	\$2,297,153	\$3,933,005	\$5,264,372	\$38,637,808
24														
25	Total	\$13,224,378	\$11,502,943	\$10,373,862	\$7,019,179	\$4,767,256	\$3,512,327	\$3,341,426	\$3,376,936	\$3,571,508	\$5,211,042	\$8,669,336	\$11,889,232	\$86,459,425

		Calculated												
Calendar Month Weather Normal Base Rev Adj at EOY Rates		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	\$1,084	\$961	\$1,014	\$913	\$876	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$5,648
27	R-3	\$86,381	\$75,094	\$66,561	\$43,504	\$30,101	\$21,693	\$0	\$0	\$0	\$0	\$0	\$0	\$323,333
28	R-4	\$2,830	\$2,438	\$2,184	\$1,430	\$985	\$718	\$0	\$0	\$0	\$0	\$0	\$0	\$10,585
29	R-5	\$9	\$10	\$11	\$12	\$17	\$17	\$15	\$14	\$15	\$15	\$16	\$16	\$168
30	R-6	\$20	\$22	\$23	\$29	\$96	\$70	\$44	\$41	\$46	\$49	\$54	\$54	\$547
31	R-7	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3
32	Total Residential	\$90,324	\$78,525	\$69,792	\$45,889	\$32,075	\$23,298	\$60	\$55	\$62	\$64	\$70	\$71	\$340,286
33														
34	G-41	\$27,228	\$23,733	\$21,360	\$14,260	\$10,008	\$7,540	\$0	\$0	\$0	\$0	\$0	\$0	\$104,130
35	G-42	\$26,958	\$23,553	\$21,224	\$14,042	\$8,834	\$5,632	\$0	\$0	\$0	\$0	\$0	\$0	\$100,243
36	G-43	\$6,337	\$5,399	\$4,985	\$3,360	\$1,336	\$937	\$0	\$0	\$0	\$0	\$0	\$0	\$22,355
37	G-44	\$1	\$2	\$2	\$2	\$3	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$11
38	G-45	\$11	\$10	\$11	\$11	\$37	\$17	\$0	\$0	\$0	\$0	\$0	\$0	\$96
39	G-46	\$0	\$11	\$23	\$34	\$45	\$57	\$0	\$0	\$0	\$0	\$0	\$0	\$170
40	G-51	\$2,131	\$1,881	\$1,938	\$1,708	\$1,645	\$1,502	\$0	\$0	\$0	\$0	\$0	\$0	\$10,804
41	G-52	\$3,390	\$2,956	\$3,028	\$2,610	\$1,884	\$1,713	\$0	\$0	\$0	\$0	\$0	\$0	\$15,582
42	G-53	\$3,054	\$2,514	\$2,457	\$2,030	\$1,035	\$922	\$0	\$0	\$0	\$0	\$0	\$0	\$12,013
43	G-54	\$1,281	\$1,167	\$1,177	\$1,256	\$896	\$899	\$0	\$0	\$0	\$0	\$0	\$0	\$6,676
44	G-55	\$3	\$2	\$3	\$3	\$3	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$17
45	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
47	G-58	\$12	\$11	\$12	\$12	\$23	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$90
48	Total C/I	\$70,406	\$61,242	\$56,219	\$39,327	\$25,750	\$19,244	\$0	\$0	\$0	\$0	\$0	\$0	\$272,187
49														
50	Total	\$160,729	\$139,767	\$126,011	\$85,216	\$57,825	\$42,542	\$60	\$55	\$62	\$64	\$70	\$71	\$612,472

Calculated													
Calendar Month Weather Normal Base Revenues at EOY Rates													
	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1 R-1	\$ 90,773	\$ 80,487	\$ 84,912	\$ 76,520	\$ 73,434	\$ 67,029	\$ 66,076	\$ 66,535	\$ 65,795	\$ 71,674	\$ 77,608	\$ 88,362	\$909,206
2 R-3	\$ 7,177,583	\$ 6,240,178	\$ 5,533,508	\$ 3,620,531	\$ 2,509,090	\$ 1,811,213	\$ 1,684,968	\$ 1,695,145	\$ 1,809,174	\$ 2,746,731	\$ 4,493,734	\$ 6,316,317	\$45,638,172
3 R-4	\$ 231,668	\$ 199,524	\$ 178,463	\$ 116,481	\$ 79,756	\$ 57,853	\$ 52,319	\$ 51,309	\$ 53,157	\$ 81,790	\$ 141,183	\$ 190,009	\$1,433,511
4 R-5	\$ 1,925	\$ 1,919	\$ 1,904	\$ 1,670	\$ 1,481	\$ 1,488	\$ 1,509	\$ 1,388	\$ 1,593	\$ 1,812	\$ 2,272	\$ 2,521	\$21,481
5 R-6	\$ 19,635	\$ 18,321	\$ 16,695	\$ 11,231	\$ 8,000	\$ 5,936	\$ 5,676	\$ 5,471	\$ 6,855	\$ 11,890	\$ 21,498	\$ 27,584	\$158,791
6 R-7	\$ 77	\$ 72	\$ 67	\$ 53	\$ 45	\$ 33	\$ 31	\$ 28	\$ 33	\$ 57	\$ 107	\$ 138	\$742
7 Total Residential	\$7,521,660	\$6,540,502	\$5,815,550	\$3,826,485	\$2,671,807	\$1,943,551	\$1,810,579	\$1,819,877	\$1,936,606	\$2,913,953	\$4,736,401	\$6,624,931	\$48,161,903
8													
9 G-41	\$ 2,264,401	\$ 1,973,915	\$ 1,777,690	\$ 1,188,393	\$ 835,359	\$ 630,220	\$ 600,531	\$ 599,223	\$ 620,369	\$ 877,370	\$ 1,437,750	\$ 1,982,533	\$14,787,756
10 G-42	\$ 2,246,068	\$ 1,962,433	\$ 1,768,370	\$ 1,170,033	\$ 736,078	\$ 469,305	\$ 418,536	\$ 432,779	\$ 497,941	\$ 824,405	\$ 1,456,621	\$ 2,030,089	\$14,012,658
11 G-43	\$ 527,705	\$ 449,633	\$ 415,125	\$ 279,848	\$ 111,172	\$ 77,943	\$ 71,518	\$ 70,704	\$ 75,425	\$ 111,359	\$ 330,929	\$ 471,437	\$2,992,799
12 G-44	\$ 476	\$ 482	\$ 415	\$ 283	\$ 220	\$ 180	\$ 189	\$ 264	\$ 298	\$ 777	\$ 1,345	\$ 1,806	\$6,735
13 G-45	\$ 7,873	\$ 6,963	\$ 5,994	\$ 3,801	\$ 3,113	\$ 1,401	\$ 1,140	\$ 2,015	\$ 3,833	\$ 7,106	\$ 11,663	\$ 14,663	\$69,565
14 G-46	\$ -	\$ 943	\$ 1,887	\$ 2,830	\$ 3,773	\$ 4,717	\$ 5,660	\$ 6,604	\$ 7,547	\$ 8,490	\$ 9,434	\$ 10,377	\$62,262
15 G-51	\$ 177,119	\$ 156,405	\$ 161,170	\$ 142,146	\$ 136,995	\$ 125,110	\$ 125,347	\$ 131,120	\$ 127,160	\$ 135,859	\$ 148,830	\$ 167,986	\$1,735,247
16 G-52	\$ 281,837	\$ 245,759	\$ 251,897	\$ 217,343	\$ 157,571	\$ 143,273	\$ 145,459	\$ 151,356	\$ 148,770	\$ 164,333	\$ 241,496	\$ 275,201	\$2,424,297
17 G-53	\$ 249,154	\$ 205,176	\$ 200,567	\$ 165,764	\$ 89,151	\$ 79,252	\$ 78,795	\$ 80,594	\$ 76,558	\$ 88,218	\$ 174,510	\$ 204,212	\$1,691,952
18 G-54	\$ 105,845	\$ 96,421	\$ 97,226	\$ 103,763	\$ 77,590	\$ 77,932	\$ 81,733	\$ 80,439	\$ 74,947	\$ 76,940	\$ 117,178	\$ 102,513	\$1,092,528
19 G-55	\$ 389	\$ 355	\$ 360	\$ 297	\$ 282	\$ 241	\$ 231	\$ 248	\$ 241	\$ 277	\$ 333	\$ 389	\$3,642
20 G-56	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
21 G-57	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
22 G-58	\$ 2,580	\$ 3,723	\$ 3,622	\$ 3,406	\$ 1,969	\$ 1,744	\$ 1,767	\$ 1,767	\$ 1,874	\$ 2,018	\$ 2,915	\$ 3,167	\$30,553
23 Total C/I	\$5,863,447	\$5,102,208	\$4,684,323	\$3,277,909	\$2,153,274	\$1,611,318	\$1,530,907	\$1,557,114	\$1,634,963	\$2,297,153	\$3,933,005	\$5,264,372	\$38,909,995
24													
25 Total	\$13,385,107	\$11,642,710	\$10,499,873	\$7,104,395	\$4,825,081	\$3,554,869	\$3,341,486	\$3,376,991	\$3,571,570	\$5,211,107	\$8,669,406	\$11,889,303	\$87,071,898
Calculated													
Calendar Month Weather Normal Low-Inc Discount at EOY Rates													
	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26 R-4 Cust	6,207	5,598	6,170	5,877	5,958	5,683	5,713	5,573	5,312	5,665	5,882	5,877	69,515
27 R-3 Cust Charge	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	\$ 15.20	
28 Customer Revenue at R-3 Rate	\$94,369	\$85,103	\$93,802	\$89,339	\$90,581	\$86,391	\$86,846	\$84,726	\$80,763	\$86,126	\$89,416	\$89,350	\$1,056,811
29													
30 R-7 Cust	1	1	1	2	3	3	3	3	3	3	3	3	29
31 R-6 Cust Charge	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	\$ 19.76	
32 Customer Revenue at R-6 Rate	\$20	\$20	\$20	\$36	\$59	\$61	\$61	\$55	\$61	\$59	\$61	\$59	\$575
33 Customer Revenue at R-3/6 Rate	\$94,390	\$85,124	\$93,822	\$89,375	\$90,640	\$86,452	\$86,907	\$84,781	\$80,824	\$86,185	\$89,477	\$89,409	\$1,057,386
34													
35 R-4 Volume	870,449	742,805	632,640	362,448	195,398	104,607	78,949	78,217	93,638	212,528	473,230	692,517	4,537,425
36 R-3 Rate	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	\$0.5569	
37 Dist Revenue at R-3 Rate	\$484,741	\$413,658	\$352,308	\$201,842	\$108,814	\$58,254	\$43,966	\$43,558	\$52,145	\$118,354	\$263,535	\$385,653	\$2,526,829
38													
39 R-7 Volume	236	219	205	132	74	29	23	21	31	116	286	395	1,767
40 R-6 Rate	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	\$0.7240	
41 Dist Revenue at R-6 Rate	\$171	\$159	\$149	\$96	\$53	\$21	\$17	\$15	\$22	\$84	\$207	\$286	\$1,280
42 Dist Revenue at R-4/6 Rate	\$484,912	\$413,817	\$352,457	\$201,938	\$108,868	\$58,275	\$43,983	\$43,573	\$52,168	\$118,438	\$263,742	\$385,939	\$2,528,108
43													
44 Base Revenue at R-3/6 Rate	\$579,302	\$498,940	\$446,278	\$291,313	\$199,508	\$144,727	\$130,890	\$128,354	\$132,992	\$204,623	\$353,219	\$475,348	\$3,585,494
45 Base Revenue at R-4/7 Rate	\$ 231,745	\$ 199,596	\$ 178,531	\$ 116,533	\$ 79,801	\$ 57,886	\$ 52,350	\$ 51,337	\$ 53,190	\$ 81,847	\$ 141,290	\$ 190,147	\$1,434,253
46 Low-Inc Base Rate Discount Rev	\$347,557	\$299,344	\$267,748	\$174,780	\$119,707	\$86,841	\$78,540	\$77,017	\$79,801	\$122,776	\$211,929	\$285,201	\$2,151,241

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Rate		Cur	Prop	Cur COG & LDAC
R1	Customer Charge	\$ 15.50	\$ 17.99	
	<u>Winter</u> Charge for 1st Therms	\$ 0.3860	\$ 0.4137	
	LDAC Charge	\$ 0.0310	\$ 0.0329	\$ 0.03100
	Energy Charge Charge for Therms over 1st	\$ 0.3860	\$ 0.4137	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2679	\$ 0.2660	\$ 0.26790
	<u>Summer</u> Charge for 1st Therms	\$ 0.3860	\$ 0.4137	
	LDAC Charge	\$ 0.0310	\$ 0.0329	\$ 0.03100
	Energy Charge Charge for Therms over 1st	\$ 0.3860	\$ 0.4137	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3715	\$ 0.3738	\$ 0.37150
R3	Customer Charge	\$ 15.50	\$ 17.99	
	<u>Winter</u> Charge for 1st Therms	\$ 0.5678	\$ 0.6520	
	LDAC Charge	\$ 0.0310	\$ 0.0329	\$ 0.03100
	Energy Charge Charge for Therms over 1st	\$ 0.5678	\$ 0.6520	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2679	\$ 0.2660	\$ 0.26790
	<u>Summer</u> Charge for 1st Therms	\$ 0.5678	\$ 0.6520	
	LDAC Charge	\$ 0.0310	\$ 0.0329	\$ 0.03100
	Energy Charge Charge for Therms over 1st	\$ 0.5678	\$ 0.6520	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3715	\$ 0.3738	\$ 0.37150
R4	Customer Charge	\$ 6.20	\$ 7.20	
	<u>Winter</u> Charge for 1st Therms	\$ 0.2272	\$ 0.2608	
	LDAC Charge	\$ 0.0310	\$ 0.0329	\$ 0.03100
	Energy Charge Charge for Therms over 1st	\$ 0.2272	\$ 0.2608	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2679	\$ 0.2660	\$ 0.26790
	<u>Summer</u> Charge for 1st Therms	\$ 0.2272	\$ 0.2608	
	LDAC Charge	\$ 0.0310	\$ 0.0329	\$ 0.03100
	Energy Charge Charge for Therms over 1st	\$ 0.2272	\$ 0.2608	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3715	\$ 0.3738	\$ 0.37150
41	Customer Charge	\$ 57.46	\$ 66.71	
	<u>Winter</u> Charge for 1st Therms	\$ 0.4711	\$ 0.5433	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.3165	\$ 0.3650	
	Block Size Cutoff for First Block	100	100	
	Cost of Gas Cost of Gas Rate	\$ 0.2666	\$ 0.2647	\$ 0.26660
	<u>Summer</u> Charge for 1st Therms	\$ 0.4711	\$ 0.5433	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.3165	\$ 0.3650	
	Block Size Cutoff for First Block	20	20	
	Cost of Gas Cost of Gas Rate	\$ 0.3669	\$ 0.3692	\$ 0.36690
42	Customer Charge	\$ 172.39	\$ 200.14	
	<u>Winter</u> Charge for 1st Therms	\$ 0.4284	\$ 0.4999	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.2855	\$ 0.3331	
	Block Size Cutoff for First Block	1,000	1,000	
	Cost of Gas Cost of Gas Rate	\$ 0.2666	\$ 0.2647	\$ 0.26660
	<u>Summer</u> Charge for 1st Therms	\$ 0.4284	\$ 0.4999	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.2855	\$ 0.3331	
	Block Size Cutoff for First Block	400	400	
	Cost of Gas Cost of Gas Rate	\$ 0.3669	\$ 0.3692	\$ 0.36690

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Rate		Cur	Prop	Cur COG & LDAC
43	Customer Charge	\$ 739.83	\$ 858.91	
	<u>Winter</u> Charge for 1st Therms	\$ 0.2633	\$ 0.3126	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.2633	\$ 0.3126	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2666	\$ 0.2647	\$ 0.26660
	<u>Summer</u> Charge for 1st Therms	\$ 0.1204	\$ 0.1429	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.1204	\$ 0.1429	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3669	\$ 0.3692	\$ 0.36690
51	Customer Charge	\$ 57.46	\$ 66.71	
	<u>Winter</u> Charge for 1st Therms	\$ 0.2839	\$ 0.3408	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.1846	\$ 0.2216	
	Block Size Cutoff for First Block	100	100	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	\$ 0.27340
	<u>Summer</u> Charge for 1st Therms	\$ 0.2839	\$ 0.3408	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.1846	\$ 0.2216	
	Block Size Cutoff for First Block	100	100	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	\$ 0.37860
52	Customer Charge	\$ 172.39	\$ 200.14	
	<u>Winter</u> Charge for 1st Therms	\$ 0.2439	\$ 0.2926	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.1624	\$ 0.1948	
	Block Size Cutoff for First Block	1,000	1,000	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	\$ 0.27340
	<u>Summer</u> Charge for 1st Therms	\$ 0.1767	\$ 0.2120	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.1004	\$ 0.1205	
	Block Size Cutoff for First Block	1,000	1,000	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	\$ 0.37860
53	Customer Charge	\$ 761.39	\$ 883.94	
	<u>Winter</u> Charge for 1st Therms	\$ 0.1705	\$ 0.2092	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.1705	\$ 0.2092	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	\$ 0.27340
	<u>Summer</u> Charge for 1st Therms	\$ 0.0818	\$ 0.1003	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.0818	\$ 0.1003	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	\$ 0.37860
54	Customer Charge	\$ 761.39	\$ 883.94	
	<u>Winter</u> Charge for 1st Therms	\$ 0.0650	\$ 0.0900	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.0650	\$ 0.0900	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	\$ 0.27340
	<u>Summer</u> Charge for 1st Therms	\$ 0.0353	\$ 0.0488	
	LDAC Charge	\$ 0.0478	\$ 0.0497	\$ 0.04780
	Energy Charge Charge for Therms over 1st	\$ 0.0353	\$ 0.0488	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	\$ 0.37860

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Rate		Cur	Prop	Cur COG & LDAC
R5	Customer Charge	\$ 20.15	\$ 23.39	
	<u>Winter</u> Charge for 1st Therms	\$ 0.5018	\$ 0.5378	
	LDAC Charge	\$ 0.0310	\$ 0.0329	
	Energy Charge Charge for Therms over 1st	\$ 0.5018	\$ 0.5378	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2679	\$ 0.2660	
	<u>Summer</u> Charge for 1st Therms	\$ 0.5018	\$ 0.5378	
	LDAC Charge	\$ 0.0310	\$ 0.0329	
	Energy Charge Charge for Therms over 1st	\$ 0.5018	\$ 0.5378	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3715	\$ 0.3738	
R6	Customer Charge	\$ 20.15	\$ 23.39	
	<u>Winter</u> Charge for 1st Therms	\$ 0.7381	\$ 0.8476	
	LDAC Charge	\$ 0.0310	\$ 0.0329	
	Energy Charge Charge for Therms over 1st	\$ 0.7381	\$ 0.8476	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2679	\$ 0.2660	
	<u>Summer</u> Charge for 1st Therms	\$ 0.7381	\$ 0.8476	
	LDAC Charge	\$ 0.0310	\$ 0.0329	
	Energy Charge Charge for Therms over 1st	\$ 0.7381	\$ 0.8476	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3715	\$ 0.3738	
R7	Customer Charge	\$ 8.06	\$ 9.36	
	<u>Winter</u> Charge for 1st Therms	\$ 0.2953	\$ 0.3390	
	LDAC Charge	\$ 0.0310	\$ 0.0329	
	Energy Charge Charge for Therms over 1st	\$ 0.2953	\$ 0.3390	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2679	\$ 0.2660	
	<u>Summer</u> Charge for 1st Therms	\$ 0.2953	\$ 0.3390	
	LDAC Charge	\$ 0.0310	\$ 0.0329	
	Energy Charge Charge for Therms over 1st	\$ 0.2953	\$ 0.3390	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3715	\$ 0.3738	
44	Customer Charge	\$ 74.70	\$ 86.72	
	<u>Winter</u> Charge for 1st Therms	\$ 0.6125	\$ 0.7063	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.4114	\$ 0.4745	
	Block Size Cutoff for First Block	100	100	
	Cost of Gas Cost of Gas Rate	\$ 0.2666	\$ 0.2647	
	<u>Summer</u> Charge for 1st Therms	\$ 0.6125	\$ 0.7063	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.4114	\$ 0.4745	
	Block Size Cutoff for First Block	20	20	
	Cost of Gas Cost of Gas Rate	\$ 0.3669	\$ 0.3692	
45	Customer Charge	\$ 224.11	\$ 260.18	
	<u>Winter</u> Charge for 1st Therms	\$ 0.5569	\$ 0.6498	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.3711	\$ 0.4330	
	Block Size Cutoff for First Block	1,000	1,000	
	Cost of Gas Cost of Gas Rate	\$ 0.2666	\$ 0.2647	
	<u>Summer</u> Charge for 1st Therms	\$ 0.5569	\$ 0.6498	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.3711	\$ 0.4330	
	Block Size Cutoff for First Block	400	400	
	Cost of Gas Cost of Gas Rate	\$ 0.3669	\$ 0.3692	

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Rate		Cur	Prop	Cur COG & LDAC
46	Customer Charge	\$ 961.78	\$ 1,116.58	
	<u>Winter</u> Charge for 1st Therms	\$ 0.3423	\$ 0.4064	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.3423	\$ 0.4064	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2666	\$ 0.2647	
	<u>Summer</u> Charge for 1st Therms	\$ 0.1565	\$ 0.1858	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.1565	\$ 0.1858	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3669	\$ 0.3692	
55	Customer Charge	\$ 74.69	\$ 86.72	
	<u>Winter</u> Charge for 1st Therms	\$ 0.3691	\$ 0.4430	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.2400	\$ 0.2881	
	Block Size Cutoff for First Block	100	100	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	
	<u>Summer</u> Charge for 1st Therms	\$ 0.3691	\$ 0.4430	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.2400	\$ 0.2881	
	Block Size Cutoff for First Block	100	100	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	
56	Customer Charge	\$ 224.11	\$ 260.18	
	<u>Winter</u> Charge for 1st Therms	\$ 0.3170	\$ 0.3804	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.2111	\$ 0.2533	
	Block Size Cutoff for First Block	1,000	1,000	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	
	<u>Summer</u> Charge for 1st Therms	\$ 0.2297	\$ 0.2756	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.1306	\$ 0.1566	
	Block Size Cutoff for First Block	1,000	1,000	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	
57	Customer Charge	\$ 989.81	\$ 1,149.12	
	<u>Winter</u> Charge for 1st Therms	\$ 0.2216	\$ 0.2720	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.2216	\$ 0.2720	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	
	<u>Summer</u> Charge for 1st Therms	\$ 0.1063	\$ 0.1305	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.1063	\$ 0.1305	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	
58	Customer Charge	\$ 989.81	\$ 1,149.12	
	<u>Winter</u> Charge for 1st Therms	\$ 0.0846	\$ 0.1170	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.0846	\$ 0.1170	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.2734	\$ 0.2715	
	<u>Summer</u> Charge for 1st Therms	\$ 0.0459	\$ 0.0634	
	LDAC Charge	\$ 0.0478	\$ 0.0497	
	Energy Charge Charge for Therms over 1st	\$ 0.0459	\$ 0.0634	
	Block Size Cutoff for First Block	-	-	
	Cost of Gas Cost of Gas Rate	\$ 0.3786	\$ 0.3809	

Line	(A)	Residential										Commercial and Industrial- Low Load Factor										Commercial and Industrial- High Load Factor										Conveyance Total (V)	Explanation (W)		
		Non Heat		MEP Non Heat		Heat		MEP Heat		Low Income Heat		MEP Low Income Heat		MEP Low Annual		MEP Annual		Medium Annual		MEP Medium Annual		MEP High Annual		MEP Low Annual		MEP Annual		Medium Annual		MEP Medium Annual				MEP High Annual	
		(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)	(Z)	(AA)	(AB)	(AC)	(AD)	(AE)				
A. Profirma Normalized Revenues at Current Rates																																			
1	Winter																																		
2	Winter Customer Revenues	\$321,238	\$6,468	\$6,791,969	\$17,618	\$220,676	\$89	\$3,272,068	\$1,163	\$1,459,217	\$6,776	\$241,408	\$25,968	\$449,960	\$1,352	\$403,292	\$0	\$158,162	\$0	\$123,675	\$5,972	\$13,508,098													
3	Winter Volumetric Revenues	\$167,897	\$5,381	\$1,741,345	\$90,958	\$807,238	\$435	\$7,559,599	\$3,737	\$1,262,904	\$45,163	\$45,163	\$0	\$222,348	\$912	\$1,140,817	\$0	\$104,568	\$0	\$11,713	\$13,837	\$10,984,618													
4	Summer																																		
5	Summer Customer Revenues	\$325,707	\$7,628	\$8,860,163	\$22,357	\$213,952	\$146	\$3,172,280	\$1,228	\$1,473,257	\$7,313	\$227,277	\$27,510	\$457,344	\$1,374	\$412,025	\$0	\$156,365	\$0	\$121,006	\$6,071	\$13,499,124													
6	Summer Volumetric Revenues	\$92,788	\$1,824	\$3,634,491	\$22,355	\$173,383	\$90	\$1,072,183	\$738	\$1,971,800	\$30,918	\$11,659	\$0	\$335,518	\$175	\$916,983	\$0	\$345,985	\$0	\$387,555	\$5,284	\$10,847,346													
7	Base Revenues	\$926,820	\$21,900	\$48,527,988	\$161,887	\$1,461,408	\$756	\$15,076,131	\$6,866	\$14,286,778	\$70,932	\$3,051,188	\$63,478	\$1,789,170	\$3,714	\$2,471,727	\$0	\$1,725,110	\$0	\$1,113,980	\$31,154	\$88,770,986													
8	EOY Revenue Adjustment	(\$6,583)	\$0	\$309,127	\$0	(\$11,384)	\$0	\$144,745	\$0	\$191,520	\$0	\$63,869	\$0	(\$8,972)	\$0	\$36,522	\$0	(\$7,074)	\$0	\$0	\$0	\$755,571													
9	Adjusted Base Revenues	\$920,238	\$21,900	\$48,837,115	\$161,887	\$1,450,025	\$756	\$15,220,876	\$6,866	\$14,438,298	\$70,932	\$3,104,057	\$63,478	\$1,782,197	\$3,714	\$2,510,249	\$0	\$1,718,036	\$0	\$1,113,980	\$31,154	\$89,526,557													
10	Revenue Shortfall R-4 revenues at R-4, R-3 rates							\$2,174,762	\$1,134																										
11	R-4 Shortfall Recovery Rate																																		
12	Recovery of R-4 Revenue Shortfall	\$9,819	\$191	\$715,729	\$2,025	\$55,164	\$22	\$304,523	\$124	\$427,836	\$1,636	\$139,256	\$0	\$50,211	\$43	\$118,454	\$0	\$127,785	\$0	\$220,063	\$3,417	\$2,175,856													
13	B. Billing Determinants																																		
14	Customer Bill Count																																		
15	Winter	20,729	321	438,281	875	35,600	11	66,945	16	8,465	30	326	27	7,831	18	2,334	0	208	0	162	6	572,184													
16	Summer	21,018	378	442,683	1,108	33,886	18	65,228	16	8,565	33	307	29	7,960	18	2,380	0	205	0	159	6	574,975													
17	Total	41,747	700	880,964	1,983	69,486	29	112,152	32	17,010	63	634	56	15,791	36	4,714	0	413	0	321	12	1,147,159													
18	EOY Customer Bill Count Adjustment																																		
19	Winter	(161)	0	3,858	0	(329)	0	455	0	100	0	6	0	(26)	0	41	0	(0)	0	0	0	3,944													
20	Summer	(126)	0	3,922	0	(158)	0	816	0	120	0	11	0	(42)	0	34	0	(2)	0	0	0	4,575													
21	Total	(286)	0	7,779	0	(487)	0	1,271	0	220	0	16	0	(68)	0	75	0	(2)	0	0	0	8,519													
22	Adjusted Customer Bill Count																																		
23	Winter	20,569	321	442,139	875	35,271	11	67,400	16	8,565	30	332	27	7,808	18	2,374	0	207	0	162	6	576,128													
24	Summer	20,892	378	446,604	1,108	33,728	18	66,024	16	8,665	33	318	29	7,918	18	2,424	0	203	0	159	6	575,055													
25	Total	41,461	700	888,743	1,983	68,999	29	113,424	32	17,231	63	650	56	15,723	36	4,798	0	411	0	321	12	1,154,683													
26	C. Delivery Quantities (Weather Normalized, Calendarized)																																		
27	Winter Volumes																																		
28	Headblock	484,690	11,918	47,979,070	134,921	3,774,088	1,474	4,726,945	1,312	8,070,452	29,152	8,663,887	0	549,348	693	2,253,190	0	6,245,076	0	7,866,954	163,520	90,956,690													
29	Tailblock	0	0	0	0	0	0	16,850,759	7,131	20,755,646	78,004	0	0	1,984,256	2,318	3,640,943	0	0	0	0	0	43,319,056													
30	Winter EOY Adjustment																																		
31	Headblock	(4,108)	0	405,786	0	(33,342)	0	83,478	0	83,266	0	124,301	0	(1,801)	0	37,130	0	(1,829)	0	0	0	632,881													
32	Tailblock	0	0	0	0	0	0	126,054	0	183,774	0	0	0	(6,278)	0	59,430	0	0	0	0	0	362,980													
33	Winter Adjusted Volumes																																		
34	Headblock	480,581	11,918	48,384,856	134,921	3,740,746	1,474	4,760,423	1,312	8,153,718	29,152	8,788,188	0	547,547	693	2,290,320	0	6,233,247	0	7,866,954	163,520	91,589,571													
35	Tailblock	0	0	0	0	0	0	16,976,813	7,131	20,939,418	78,004	0	0	1,977,978	2,318	3,700,373	0	0	0	0	0	43,682,035													
36	Summer Volumes																																		
37	Headblock	240,388	3,635	9,523,798	30,287	763,337	293	668,140	279	2,333,283	10,153	2,498,183	0	485,738	402	2,001,334	0	4,231,394	0	10,136,028	115,234	33,442,905													
38	Tailblock	0	0	0	0	0	0	2,353,387	1,378	3,405,681	16,180	0	0	1,091,981	112	1,623,007	0	0	0	0	0	6,531,056													
39	Summer EOY Adjustment																																		
40	Headblock	(1,454)	0	84,849	0	(3,478)	0	8,363	0	30,864	0	73,522	0	(2,049)	0	26,041	0	(38,189)	0	0	0	178,861													
41	Tailblock	0	0	0	0	0	0	36,717	0	42,528	0	0	0	(4,547)	0	23,093	0	0	0	0	0	97,791													
42	Summer Adjusted Volumes																																		
43	Headblock	238,935	3,635	10,008,648	30,287	759,859	293	677,493	279	2,364,147	10,153	2,573,105	0	483,696	402	2,027,375	0	4,192,201	0	10,136,028	115,234	33,621,770													
44	Tailblock	0	0	0	0	0	0	2,430,074	1,378	3,448,189	16,180	0	0	1,087,314	112	1,646,101	0	0	0	0	0	8,629,348													
45	Total	719,515	15,553	58,393,524	165,208	4,530,836	1,767	8,444,823	10,101	14,925,472	133,489	11,361,293	0	4,096,935	3,025	9,688,189	0	10,425,448	0	1															

Line		Residential							Commercial and Industrial- Low Load Factor							Commercial and Industrial- High Load Factor							Company Total	Explanation
		Non Heat R-1	MEP Non Heat R-5	Heat R-3	MEP Heat R-6	Low Income Heat R-4	MEP Low Income Heat R-7	Low Annual G-41	MEP Low Annual G-44	Medium Annual G-42	MEP Medium Annual G-45	High Annual G-43	MEP High Annual G-46	Low Annual G-51	MEP Low Annual G-55	Medium Annual G-52	MEP Medium Annual G-56	High Annual G-53	MEP High Annual G-57	High Annual G-54	MEP High Annual G-58			
		(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)			
134	Winter Volumetric Rates																							Goal seek
135	Headblock	\$0.4137	\$0.5378	\$0.6520	\$0.8476	\$0.2608	\$0.3390	\$0.5433	\$0.7063	\$0.4999	\$0.6498	\$0.3126	\$0.4064	\$0.3408	\$0.4430	\$0.2536	\$0.3804	\$0.2092	\$0.2720	\$0.0900	\$0.1170			
136	Tailblock	\$0.4137	\$0.5378	\$0.6520	\$0.8476	\$0.2608	\$0.3390	\$0.3650	\$0.4745	\$0.3331	\$0.4330	\$0.3126	\$0.4064	\$0.2216	\$0.2881	\$0.1948	\$0.2533	\$0.2092	\$0.2720	\$0.0900	\$0.1170		Line 127 * Line 135	
137	Summer Volumetric Rates																							
138	Headblock	\$0.4137	\$0.5378	\$0.6520	\$0.8476	\$0.2608	\$0.3390	\$0.5433	\$0.7063	\$0.4999	\$0.6498	\$0.1429	\$0.1858	\$0.3408	\$0.4430	\$0.2120	\$0.2756	\$0.1003	\$0.1305	\$0.0488	\$0.0634		Line 131 * Line 135	
139	Tailblock	\$0.4137	\$0.5378	\$0.6520	\$0.8476	\$0.2608	\$0.3390	\$0.3650	\$0.4745	\$0.3331	\$0.4330	\$0.1429	\$0.1858	\$0.2216	\$0.2881	\$0.1205	\$0.1566	\$0.1003	\$0.1305	\$0.0488	\$0.0634		Line 132 * Line 136	
140																								
141	Class volumetric revenue	\$297,656	\$8,364	\$38,071,771	\$140,028	\$1,173,733	\$999	\$10,037,370	\$5,161	\$13,380,782	\$66,325	\$3,115,408	\$0	\$1,030,692	\$1,185	\$2,019,196	\$0	\$1,724,680	\$0	\$1,202,318	\$26,434		Line 138 + Line 46 * Line 139	
142	Total Revenue (Base plus MEP)	\$306,020	\$0	\$39,386,131				\$10,042,532		\$13,447,107		\$3,115,408		\$1,031,877		\$2,019,196		\$1,724,680		\$1,228,753	\$26,434		3 volumetric revenues for related classes	
143	Overhead Expenses	\$0		\$0				\$0		\$0		\$0		\$0		\$0		\$0		\$0	\$0		Line 142 - Line 121	
144	E. LOW INCOME DISCOUNT AND RLAP CALCULATION																							
145	Base Revenues before RLAP Discount					\$1,241,369	\$234																Line 26 * Line 100	
146	Customer Revenue																							
147	Winter Period Variable Rates																							
148	Head Block					\$2,438,916	\$961																Line 36 * Line 135	
149	Tail Block					\$0	\$0																Line 37 * Line 136	
150	Summer Period Variable Rates																							
151	Head Block					\$495,418	\$191																Line 45 * Line 138	
152	Tail Block					\$0	\$0																Line 46 * Line 139	
153	Total Base Revenue before Low Income Discount					\$4,175,703	\$1,676																\$4,177,375	
154																								
155	Low Income Discount % of Distribution Rates																						Master Inouts	
156	Total discount (revenue shortfall)																						Line 153 * Line 155	
157	Low Income RLAP rate (\$/therm)																						Line 156 / Line 47	
158	RLAP Revenues																						Line 47 * Line 157 Col (V)	
159	Increase in RLAP Rate	\$10,159	\$220	\$824,453	\$2,333	\$63,544	\$25	\$350,782	\$143	\$492,827	\$1,885	\$160,409	\$0	\$57,839	\$50	\$136,448	\$0	\$147,196	\$0	\$254,162	\$3,936		\$0.0015	
160																								
161	F. CHECK																							
162	Revenue target	\$1,068,307		\$55,918,773				\$17,611,689		\$16,912,068		\$3,747,195		\$2,083,871		\$2,979,549		\$2,087,714		\$1,526,832			\$183,938,068	
163	Customer Revenue	\$762,287		\$16,532,643				\$7,569,167		\$3,464,961		\$631,787		\$1,051,894		\$960,353		\$363,034		\$298,079			\$31,634,365	
164	Volumetric Revenue	\$306,020		\$39,386,131				\$10,042,532		\$13,447,107		\$3,115,408		\$1,031,877		\$2,019,196		\$1,724,680		\$1,228,753			\$72,367,793	
165	Check	\$0		\$0				\$0		\$0		\$0		\$0		\$0		\$0		\$0			\$0	
166																								
167	G. COMPONENT RATE CHANGES																							
168		R-1	R-5	R-3	R-6	R-4	R-7	G-41	G-44	G-42	G-45	G-43	G-46	G-51	G-55	G-52	G-56	G-53	G-57	G-54	G-58			
169	Customer charge																							
170	Current tariff	\$15.50	\$20.15	\$15.50	\$20.15	\$6.20	\$8.06	\$57.46	\$74.70	\$172.39	\$224.11	\$739.83	\$961.78	\$57.46	\$74.69	\$172.39	\$224.11	\$761.39	\$969.81	\$761.39	\$969.81			
171	Proposed	\$17.99	\$23.39	\$17.99	\$23.39	\$7.20	\$9.36	\$66.71	\$86.72	\$200.14	\$260.18	\$658.91	\$1,116.58	\$66.71	\$86.72	\$200.14	\$260.18	\$883.94	\$1,149.12	\$883.94	\$1,149.12			
172	% increase	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%	16.1%			
173																								
174	Winter Headblock																							
175	Current tariff	\$0.3860	\$0.50	\$0.5678	\$0.74	\$0.2272	\$0.30	\$0.4711	\$0.61	\$0.4284	\$0.56	\$0.2633	\$0.34	\$0.2839	\$0.37	\$0.2439	\$0.32	\$0.1705	\$0.22	\$0.0650	\$0.08			
176	Proposed	\$0.4137	\$0.5378	\$0.6520	\$0.8476	\$0.2608	\$0.3390	\$0.5433	\$0.7063	\$0.4999	\$0.6498	\$0.3126	\$0.4064	\$0.3408	\$0.4430	\$0.2528	\$0.3804	\$0.2092	\$0.2720	\$0.0900	\$0.1170			
177	% increase	7.2%	7.2%	14.8%	14.8%	14.8%	14.8%	15.3%	15.3%	16.7%	16.7%	18.7%	18.7%	20.0%	20.0%	20.0%	20.0%	22.7%	22.7%	38.3%	38.3%			
178	Winter Tailblock																							
179	Current tariff							\$0.3165	\$0.41	\$0.2855	\$0.37			\$0.1846	\$0.24	\$0.1624	\$0.21							
180	Proposed							\$0.3650	\$0.4745	\$0.3331	\$0.4330			\$0.2216	\$0.2881	\$0.1948	\$0.2533							
181	% increase							15.3%	15.3%	16.7%	16.7%			20.0%	20.0%	20.0%	20.0%							
182																								
183	Summer Headblock																							
184	Current tariff	\$0.3860	\$0.50	\$0.5678	\$0.74	\$0.2272	\$0.30	\$0.4711	\$0.61	\$0.4284	\$0.56	\$0.1204	\$0.16	\$0.2839	\$0.37	\$0.1767	\$0.23	\$0.0818	\$0.11	\$0.0363	\$0.05			
185	Proposed	\$0.4137	\$0.5378	\$0.6520	\$0.8476	\$0.2608	\$0.3390	\$0.5433	\$0.7063	\$0.4999	\$0.6498	\$0.1429	\$0.1858	\$0.3408	\$0.4430	\$0.2120	\$0.2756	\$0.1003	\$0.1305	\$0.0488	\$0.0634			
186	% increase	7.2%	7.2%	14.8%	14.8%	14.8%	14.8%	15.3%	15.3%	16.7%	16.7%	18.7%	18.7%	20.0%	20.0%	20.0%	20.0%	22.7%	22.7%	38.3%	38.3%			
187	Summer Tailblock																							
188	Current tariff							\$0.3165	\$0.41	\$0.2855	\$0.37			\$0.1846	\$0.24	\$0.1004	\$0.13							
189	Proposed							\$0.3650	\$0.4745	\$0.3331	\$0.4330			\$0.2216	\$0.2881	\$0.1205	\$0.1566							
190	% increase							15.3%	15.3%	16.7%	16.7%			20.0%	20.0%	20.0%	20.0%							

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Indirect Gas Costs Analysis

Docket No. DG 20-105
Attachment RATES-6
Page 1 of 1

Line	Description	Residential			Commercial and Industrial: Low Load Factor			Commercial and Industrial: High Load Factor				Company Total (K)	Explanation (L)
		Non Heat R-1	Heat R-3	Low Income Heat R-4	Low Annual G-41	Medium Annual G-42	High Annual G-43	Low Annual G-51	Medium Annual G-52	High Annual G-53	High Annual G-54		
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)		
1	LP and LNG Costs											\$ 1,708,977	FCOS
2	Winter Sales Volumes	496,608	48,113,991	3,775,563	3,696,529	3,820,500	2,390,624	402,620	799,290	585,444	71,792	64,152,960	Company Records
3	Unit Cost in COGC											\$ 0.02660	Line 1 / Line 2
4	Class Revenues	\$ 13,210	\$ 1,279,832	\$ 100,430	\$ 98,328	\$ 101,625	\$ 63,591	\$ 10,710	\$ 21,261	\$ 15,573	\$ 1,910	\$ 1,706,469	Line 2 x Line 3
5													
6	Bad Debt Costs											\$ 5,083	FCOS
7	Annual Sales Volumes	735,069	58,558,712	4,502,373	19,431,444	16,527,518	3,134,919	3,001,166	3,428,240	977,333	163,438	110,460,211	Company Records
8	Unit Cost in COGC											\$ 0.00005	Line 6 / Line 7
9	Class Revenues	\$ 34	\$ 2,694	\$ 207	\$ 894	\$ 760	\$ 144	\$ 138	\$ 158	\$ 45	\$ 8	\$ 5,081	Line 7 x Line 8
10													
11	Gas Working Capital											\$ -	FCOS
12	Annual Sales Volumes	735,069	58,558,712	4,502,373	19,431,444	16,527,518	3,134,919	3,001,166	3,428,240	977,333	163,438	110,460,211	Company Records
13	Unit Cost in COGC											\$ -	Line 11 / Line 12
14	Class Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Line 12 x Line 13
15													
16	Other A&G and Misc.											\$ 295,177	FCOS
17	Annual Sales Volumes	735,069	58,558,712	4,502,373	19,431,444	16,527,518	3,134,919	3,001,166	3,428,240	977,333	163,438	110,460,211	Company Records
18	Unit Cost in COGC											\$ 0.00267	Line 16 / Line 17
19	Class Revenues	\$ 1,964	\$ 156,469	\$ 12,030	\$ 51,921	\$ 44,162	\$ 8,377	\$ 8,019	\$ 9,160	\$ 2,611	\$ 437	\$ 295,150	Line 17 x Line 18
20													
21	Total Indirect Costs	\$ 15,208	\$ 1,438,995	\$ 112,667	\$ 151,142	\$ 146,547	\$ 72,111	\$ 18,867	\$ 30,579	\$ 18,229	\$ 2,354	\$ 2,006,700	Σ Cols A-J
22													
23	Total from FCOS											\$ 2,009,237	Σ Lines 1, 6, 11, 16
24	Variance												
25	\$s											\$ (2,537)	Line 21 - Line 23
26	%											-0.13%	Line 25 / Line 23

	Currently effective			Rate case		
	2020 Summer COG Filing	2019-2020 Winter COG Filing		Summer	Winter	
LP and LNG Costs	\$ -	\$ 1,980,428			\$ 1,708,977	
Bad Debt Costs	12,571	17,415	29,986	2,131	2,952	\$ 5,083
Gas Working Capital						
Other A&G and Misc.	5,521	7,649	13,170	123,744	171,432	\$ 295,177
Total Indirect Costs	\$ 18,092	\$ 2,005,492		\$ 125,875	\$ 1,883,362	
Volumes	46,307,251	64,152,960	110,460,211	46,307,251	64,152,960	110,460,211
Indirect Gas Rate	\$ 0.0004	\$ 0.0313		\$ 0.0027	\$ 0.0294	

COG Adder for Rate Case	
Summer	Winter
\$ 0.0023	\$ (0.0019)

	Currently effective		
	2020 Summer COG Filing	2019-2020 Winter COG Filing	
LP and LNG Costs	\$ -	\$ 1,980,428	
Bad Debt Costs	\$ 353,092	\$ 1,012,101	per company
Gas Working Capital	\$ 22,172	\$ 142,623	per company
Other A&G and Misc.	\$ 2,521	\$ 10,649	
Total	\$ 377,785	\$ 3,145,801	

Liberty Utilities (EnergyNorth Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE R-1 : RESIDENTIAL NON-HEATING

Line

Present Rates			Winter	Summer	Proposed Rates			Winter	Summer
Cost of Gas			\$0.4737	\$0.3715	Cost of Gas			\$0.4718	\$0.3738
LDAC			\$0.0310	\$0.0310	LDAC			\$0.0329	\$0.0329
Customer charge			\$15.50		Customer charge			\$17.99	
Sales rate					Sales rate				
First Block Size					First Block Size				
Block 1			\$0.3860	\$0.3860	Block 1			\$0.4137	\$0.4137
Block 2			\$0.3860	\$0.3860	Block 2			\$0.4137	\$0.4137

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
0	\$15.50	\$0.00	\$15.50	\$15.50	\$0.00	\$15.50	\$17.99	\$0.00	\$17.99	\$17.99	\$0.00	\$17.99	\$2.49	16.1%	\$2.49	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000
2	\$16.27	\$1.01	\$17.28	\$16.27	\$0.81	\$17.07	\$18.82	\$1.01	\$19.83	\$18.82	\$0.81	\$19.63	\$2.55	14.8%	\$2.56	15.0%	\$8.6391	\$8.5369	\$9.9139	\$9.8159
4	\$17.04	\$2.02	\$19.06	\$17.04	\$1.61	\$18.65	\$19.65	\$2.02	\$21.66	\$19.65	\$1.63	\$21.27	\$2.60	13.7%	\$2.62	14.1%	\$4.7649	\$4.6627	\$5.4161	\$5.3181
6	\$17.81	\$3.03	\$20.84	\$17.81	\$2.42	\$20.23	\$20.47	\$3.03	\$23.50	\$20.47	\$2.44	\$22.91	\$2.66	12.8%	\$2.69	13.3%	\$3.4735	\$3.3713	\$3.9169	\$3.8189
8	\$18.58	\$4.04	\$22.62	\$18.58	\$3.22	\$21.80	\$21.30	\$4.04	\$25.34	\$21.30	\$3.25	\$24.55	\$2.72	12.0%	\$2.75	12.6%	\$2.8278	\$2.7256	\$3.1672	\$3.0692
10	\$19.36	\$5.05	\$24.40	\$19.36	\$4.03	\$23.38	\$22.13	\$5.05	\$27.17	\$22.13	\$4.07	\$26.19	\$2.77	11.4%	\$2.81	12.0%	\$2.4404	\$2.3382	\$2.7175	\$2.6195
15	\$21.29	\$7.57	\$28.86	\$21.29	\$6.04	\$27.32	\$24.20	\$7.57	\$31.77	\$24.20	\$6.10	\$30.30	\$2.91	10.1%	\$2.97	10.9%	\$1.9238	\$1.8216	\$2.1178	\$2.0198
20	\$23.22	\$10.09	\$33.31	\$23.22	\$8.05	\$31.27	\$26.26	\$10.09	\$36.36	\$26.26	\$8.13	\$34.40	\$3.05	9.1%	\$3.13	10.0%	\$1.6655	\$1.5633	\$1.8179	\$1.7199
25	\$25.15	\$12.62	\$37.76	\$25.15	\$10.06	\$35.21	\$28.33	\$12.62	\$40.95	\$28.33	\$10.17	\$38.50	\$3.19	8.4%	\$3.29	9.3%	\$1.5106	\$1.4084	\$1.6380	\$1.5400
30	\$27.08	\$15.14	\$42.22	\$27.08	\$12.08	\$39.15	\$30.40	\$15.14	\$45.54	\$30.40	\$12.20	\$42.60	\$3.32	7.9%	\$3.45	8.8%	\$1.4073	\$1.3051	\$1.5181	\$1.4201
35	\$29.01	\$17.66	\$46.67	\$29.01	\$14.09	\$43.09	\$32.47	\$17.66	\$50.13	\$32.47	\$14.23	\$46.70	\$3.46	7.4%	\$3.61	8.4%	\$1.3335	\$1.2313	\$1.4324	\$1.3344
40	\$30.94	\$20.19	\$51.12	\$30.94	\$16.10	\$47.04	\$34.54	\$20.19	\$54.73	\$34.54	\$16.27	\$50.81	\$3.60	7.0%	\$3.77	8.0%	\$1.2781	\$1.1759	\$1.3681	\$1.2701
45	\$32.87	\$22.71	\$55.58	\$32.87	\$18.11	\$50.98	\$36.61	\$22.71	\$59.32	\$36.61	\$18.30	\$54.91	\$3.74	6.7%	\$3.93	7.7%	\$1.2351	\$1.1329	\$1.3182	\$1.2202
50	\$34.80	\$25.24	\$60.03	\$34.80	\$20.13	\$54.92	\$38.68	\$25.23	\$63.91	\$38.68	\$20.33	\$59.01	\$3.88	6.5%	\$4.09	7.4%	\$1.2006	\$1.0984	\$1.2782	\$1.1802
60	\$38.66	\$30.28	\$68.94	\$38.66	\$24.15	\$62.81	\$42.81	\$30.28	\$73.09	\$42.81	\$24.40	\$67.21	\$4.15	6.0%	\$4.41	7.0%	\$1.1490	\$1.0468	\$1.2182	\$1.1202
70	\$42.52	\$35.33	\$77.85	\$42.52	\$28.18	\$70.69	\$46.95	\$35.33	\$82.28	\$46.95	\$28.47	\$75.42	\$4.43	5.7%	\$4.72	6.7%	\$1.1121	\$1.0099	\$1.1754	\$1.0774
80	\$46.38	\$40.38	\$86.75	\$46.38	\$32.20	\$78.58	\$51.09	\$40.37	\$91.46	\$51.09	\$32.53	\$83.62	\$4.71	5.4%	\$5.04	6.4%	\$1.0844	\$0.9822	\$1.1432	\$1.0452
90	\$50.24	\$45.42	\$95.66	\$50.24	\$36.23	\$86.46	\$55.22	\$45.42	\$100.64	\$55.22	\$36.60	\$91.82	\$4.98	5.2%	\$5.36	6.2%	\$1.0629	\$0.9607	\$1.1183	\$1.0202
100	\$54.10	\$50.47	\$104.57	\$54.10	\$40.25	\$94.35	\$59.36	\$50.47	\$109.83	\$59.36	\$40.67	\$100.03	\$5.26	5.0%	\$5.68	6.0%	\$1.0457	\$0.9435	\$1.0983	\$1.0003
200	\$92.70	\$100.94	\$193.64	\$92.70	\$80.50	\$173.20	\$100.73	\$100.93	\$201.66	\$100.73	\$81.33	\$182.06	\$8.03	4.1%	\$8.87	5.1%	\$0.9682	\$0.8660	\$1.0083	\$0.9103
percentiles																				
8	\$18.58	\$4.04	\$22.62				\$21.30	\$4.04	\$25.34				\$2.72	12.0%			\$2.8278		\$3.1672	
20	\$23.22	\$10.09	\$33.31				\$26.26	\$10.09	\$36.36				\$3.05	9.1%			\$1.6655		\$1.8179	
30	\$27.08	\$15.14	\$42.22				\$30.40	\$15.14	\$45.54				\$3.32	7.9%			\$1.4073		\$1.5181	
5				\$17.43	\$2.01	\$19.44				\$20.06	\$2.03	\$22.09			\$2.65	13.7%	\$3.8879		\$4.4186	
11				\$19.74	\$4.43	\$24.17				\$22.54	\$4.47	\$27.01			\$2.84	11.8%	\$2.1973		\$2.4559	
20				\$23.22	\$8.05	\$31.27				\$26.26	\$8.13	\$34.40			\$3.13	10.0%	\$1.5633		\$1.7199	

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (EnergyNorth Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE R-3 : RESIDENTIAL HEATING

Line

Present Rates			Winter	Summer	Proposed Rates			Winter	Summer
Cost of Gas			\$0.4737	\$0.3715	Cost of Gas			\$0.4718	\$0.3738
LDAC			\$0.0310	\$0.0310	LDAC			\$0.0329	\$0.0329
Customer charge			\$15.50		Customer charge			\$17.99	
Sales rate					Sales rate				
First Block Size					First Block Size				
Block 1			\$0.5678	\$0.5678	Block 1			\$0.6520	\$0.6520
Block 2			\$0.5678	\$0.5678	Block 2			\$0.6520	\$0.6520

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
0	\$15.50	\$0.00	\$15.50	\$15.50	\$0.00	\$15.50	\$17.99	\$0.00	\$17.99	\$17.99	\$0.00	\$17.99	\$2.49	16.1%	\$2.49	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000
10	\$21.17	\$5.05	\$26.22	\$21.17	\$4.03	\$25.20	\$24.51	\$5.05	\$29.56	\$24.51	\$4.07	\$28.58	\$3.34	12.7%	\$3.38	13.4%	\$2.6222	\$2.5200	\$2.9558	\$2.8578
25	\$29.69	\$12.62	\$42.31	\$29.69	\$10.06	\$39.75	\$34.29	\$12.62	\$46.91	\$34.29	\$10.17	\$44.46	\$4.60	10.9%	\$4.70	11.8%	\$1.6923	\$1.5901	\$1.8763	\$1.7783
50	\$43.89	\$25.24	\$69.12	\$43.89	\$20.13	\$64.01	\$50.59	\$25.23	\$75.82	\$50.59	\$20.33	\$70.92	\$6.70	9.7%	\$6.91	10.8%	\$1.3824	\$1.2802	\$1.5165	\$1.4185
75	\$58.08	\$37.85	\$95.93	\$58.08	\$30.19	\$88.27	\$66.89	\$37.85	\$104.74	\$66.89	\$30.50	\$97.39	\$8.81	9.2%	\$9.12	10.3%	\$1.2791	\$1.1769	\$1.3965	\$1.2985
100	\$72.27	\$50.47	\$122.74	\$72.27	\$40.25	\$112.52	\$83.19	\$50.47	\$133.66	\$83.19	\$40.67	\$123.86	\$10.91	8.9%	\$11.33	10.1%	\$1.2274	\$1.1252	\$1.3366	\$1.2386
125	\$86.47	\$63.09	\$149.56	\$86.47	\$50.31	\$136.78	\$99.49	\$63.08	\$162.57	\$99.49	\$50.83	\$150.32	\$13.02	8.7%	\$13.54	9.9%	\$1.1965	\$1.0943	\$1.3006	\$1.2026
150	\$100.66	\$75.71	\$176.37	\$100.66	\$60.38	\$161.04	\$115.79	\$75.70	\$191.49	\$115.79	\$61.00	\$176.79	\$15.12	8.6%	\$15.75	9.8%	\$1.1758	\$1.0736	\$1.2766	\$1.1786
175	\$114.86	\$88.32	\$203.18	\$114.86	\$70.44	\$185.30	\$132.09	\$88.32	\$220.40	\$132.09	\$71.17	\$203.25	\$17.22	8.5%	\$17.96	9.7%	\$1.1610	\$1.0588	\$1.2595	\$1.1615
200	\$129.05	\$100.94	\$229.99	\$129.05	\$80.50	\$209.55	\$148.39	\$100.93	\$249.32	\$148.39	\$81.33	\$229.72	\$19.33	8.4%	\$20.17	9.6%	\$1.1500	\$1.0478	\$1.2466	\$1.1486
225	\$143.25	\$113.56	\$256.80	\$143.25	\$90.56	\$233.81	\$164.69	\$113.55	\$278.24	\$164.69	\$91.50	\$256.19	\$21.43	8.3%	\$22.38	9.6%	\$1.1414	\$1.0392	\$1.2366	\$1.1386
250	\$157.44	\$126.18	\$283.62	\$157.44	\$100.63	\$258.07	\$180.99	\$126.17	\$307.15	\$180.99	\$101.67	\$282.65	\$23.54	8.3%	\$24.59	9.5%	\$1.1345	\$1.0323	\$1.2286	\$1.1306
275	\$171.64	\$138.79	\$310.43	\$171.64	\$110.69	\$282.32	\$197.29	\$138.78	\$336.07	\$197.29	\$111.83	\$309.12	\$25.64	8.3%	\$26.80	9.5%	\$1.1288	\$1.0266	\$1.2221	\$1.1241
300	\$185.83	\$151.41	\$337.24	\$185.83	\$120.75	\$306.58	\$213.59	\$151.40	\$364.99	\$213.59	\$122.00	\$335.59	\$27.75	8.2%	\$29.01	9.5%	\$1.1241	\$1.0219	\$1.2166	\$1.1186
350	\$214.22	\$176.65	\$390.86	\$214.22	\$140.88	\$355.09	\$246.19	\$176.63	\$422.82	\$246.19	\$142.33	\$388.52	\$31.95	8.2%	\$33.42	9.4%	\$1.1168	\$1.0146	\$1.2081	\$1.1101
400	\$242.61	\$201.88	\$444.49	\$242.61	\$161.00	\$403.61	\$278.79	\$201.86	\$480.65	\$278.79	\$162.66	\$441.45	\$36.16	8.1%	\$37.84	9.4%	\$1.1112	\$1.0090	\$1.2016	\$1.1036
450	\$271.00	\$227.12	\$498.11	\$271.00	\$181.13	\$452.12	\$311.38	\$227.10	\$538.48	\$311.38	\$183.00	\$494.38	\$40.37	8.1%	\$42.26	9.3%	\$1.1069	\$1.0047	\$1.1966	\$1.0986
500	\$299.38	\$252.35	\$551.73	\$299.38	\$201.25	\$500.63	\$343.98	\$252.33	\$596.32	\$343.98	\$203.33	\$547.32	\$44.58	8.1%	\$46.68	9.3%	\$1.1035	\$1.0013	\$1.1926	\$1.0946
750	\$441.33	\$378.53	\$819.85	\$441.33	\$301.88	\$743.20	\$506.98	\$378.50	\$885.48	\$506.98	\$305.00	\$811.98	\$65.62	8.0%	\$68.77	9.3%	\$1.0931	\$0.9909	\$1.1806	\$1.0826
1,000	\$583.27	\$504.70	\$1,087.97	\$583.27	\$402.50	\$985.77	\$669.98	\$504.66	\$1,174.64	\$669.98	\$406.66	\$1,076.64	\$86.67	8.0%	\$90.87	9.2%	\$1.0880	\$0.9858	\$1.1746	\$1.0766
percentiles																				
60	\$49.56	\$30.28	\$79.85				\$57.11	\$30.28	\$87.39				\$7.54	9.4%			\$1.3308		\$1.4565	
100	\$72.27	\$50.47	\$122.74				\$83.19	\$50.47	\$133.66				\$10.91	8.9%			\$1.2274		\$1.3366	
175	\$114.86	\$88.32	\$203.18				\$132.09	\$88.32	\$220.40				\$17.22	8.5%			\$1.1610		\$1.2595	
12				\$22.31	\$4.83	\$27.14				\$25.81	\$4.88	\$30.69			\$3.55	13.1%		\$2.2617		\$2.5579
20				\$26.85	\$8.05	\$34.90				\$31.03	\$8.13	\$39.16			\$4.26	12.2%		\$1.7451		\$1.9582
30				\$32.53	\$12.08	\$44.61				\$37.55	\$12.20	\$49.75			\$5.15	11.5%		\$1.4868		\$1.6584

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (EnergyNorth Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE R-4 : LOW INCOME RESIDENTIAL HEATING

Line

Present Rates			Winter	Summer	Proposed Rates			Winter	Summer
Cost of Gas			\$0.4737	\$0.3715	Cost of Gas			\$0.4718	\$0.3738
LDAC			\$0.0310	\$0.0310	LDAC			\$0.0329	\$0.0329
Customer charge			\$6.20		Customer charge			\$7.20	
Sales rate					Sales rate				
First Block Size					First Block Size				
Block 1			\$0.2272	\$0.2272	Block 1			\$0.2608	\$0.2608
Block 2			\$0.2272	\$0.2272	Block 2			\$0.2608	\$0.2608

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
0	\$6.20	\$0.00	\$6.20	\$6.20	\$0.00	\$6.20	\$7.20	\$0.00	\$7.20	\$7.20	\$0.00	\$7.20	\$1.00	16.1%	\$1.00	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000
10	\$8.47	\$5.05	\$13.52	\$8.47	\$4.03	\$12.50	\$9.80	\$5.05	\$14.85	\$9.80	\$4.07	\$13.87	\$1.33	9.9%	\$1.38	11.0%	\$1.3517	\$1.2495	\$1.4851	\$1.3871
25	\$11.88	\$12.62	\$24.50	\$11.88	\$10.06	\$21.94	\$13.72	\$12.62	\$26.33	\$13.72	\$10.17	\$23.88	\$1.84	7.5%	\$1.94	8.9%	\$0.9798	\$0.8776	\$1.0533	\$0.9553
50	\$17.56	\$25.24	\$42.79	\$17.56	\$20.13	\$37.68	\$20.24	\$25.23	\$45.47	\$20.24	\$20.33	\$40.57	\$2.68	6.3%	\$2.89	7.7%	\$0.8558	\$0.7536	\$0.9094	\$0.8114
75	\$23.24	\$37.85	\$61.09	\$23.24	\$30.19	\$53.42	\$26.76	\$37.85	\$64.61	\$26.76	\$30.50	\$57.26	\$3.52	5.8%	\$3.83	7.2%	\$0.8145	\$0.7123	\$0.8614	\$0.7634
100	\$28.91	\$50.47	\$79.38	\$28.91	\$40.25	\$69.16	\$33.28	\$50.47	\$83.74	\$33.28	\$40.67	\$73.94	\$4.36	5.5%	\$4.78	6.9%	\$0.7938	\$0.6916	\$0.8374	\$0.7394
125	\$34.59	\$63.09	\$97.68	\$34.59	\$50.31	\$84.91	\$39.80	\$63.08	\$102.88	\$39.80	\$50.83	\$90.63	\$5.20	5.3%	\$5.72	6.7%	\$0.7814	\$0.6792	\$0.8230	\$0.7250
150	\$40.27	\$75.71	\$115.98	\$40.27	\$60.38	\$100.65	\$46.32	\$75.70	\$122.01	\$46.32	\$61.00	\$107.31	\$6.04	5.2%	\$6.67	6.6%	\$0.7732	\$0.6710	\$0.8134	\$0.7154
175	\$45.95	\$88.32	\$134.27	\$45.95	\$70.44	\$116.39	\$52.84	\$88.32	\$141.15	\$52.84	\$71.17	\$124.00	\$6.88	5.1%	\$7.61	6.5%	\$0.7673	\$0.6651	\$0.8066	\$0.7086
200	\$51.63	\$100.94	\$152.57	\$51.63	\$80.50	\$132.13	\$59.36	\$100.93	\$160.29	\$59.36	\$81.33	\$140.69	\$7.72	5.1%	\$8.56	6.5%	\$0.7628	\$0.6606	\$0.8014	\$0.7034
225	\$57.31	\$113.56	\$170.87	\$57.31	\$90.56	\$147.87	\$65.88	\$113.55	\$179.42	\$65.88	\$91.50	\$157.37	\$8.56	5.0%	\$9.50	6.4%	\$0.7594	\$0.6572	\$0.7974	\$0.6994
250	\$62.99	\$126.18	\$189.16	\$62.99	\$100.63	\$163.61	\$72.40	\$126.17	\$198.56	\$72.40	\$101.67	\$174.06	\$9.40	5.0%	\$10.45	6.4%	\$0.7566	\$0.6544	\$0.7942	\$0.6962
275	\$68.67	\$138.79	\$207.46	\$68.67	\$110.69	\$179.35	\$78.91	\$138.78	\$217.70	\$78.91	\$111.83	\$190.75	\$10.24	4.9%	\$11.39	6.4%	\$0.7544	\$0.6522	\$0.7916	\$0.6936
300	\$74.34	\$151.41	\$225.75	\$74.34	\$120.75	\$195.09	\$85.43	\$151.40	\$236.83	\$85.43	\$122.00	\$207.43	\$11.08	4.9%	\$12.34	6.3%	\$0.7525	\$0.6503	\$0.7894	\$0.6914
350	\$85.70	\$176.65	\$262.35	\$85.70	\$140.88	\$226.58	\$98.47	\$176.63	\$275.11	\$98.47	\$142.33	\$240.81	\$12.76	4.9%	\$14.23	6.3%	\$0.7496	\$0.6474	\$0.7860	\$0.6880
400	\$97.06	\$201.88	\$298.94	\$97.06	\$161.00	\$258.06	\$111.51	\$201.86	\$313.38	\$111.51	\$162.66	\$274.18	\$14.44	4.8%	\$16.12	6.2%	\$0.7473	\$0.6451	\$0.7834	\$0.6854
450	\$108.42	\$227.12	\$335.53	\$108.42	\$181.13	\$289.54	\$124.55	\$227.10	\$351.65	\$124.55	\$183.00	\$307.55	\$16.12	4.8%	\$18.01	6.2%	\$0.7456	\$0.6434	\$0.7814	\$0.6834
500	\$119.77	\$252.35	\$372.12	\$119.77	\$201.25	\$321.02	\$137.59	\$252.33	\$389.92	\$137.59	\$203.33	\$340.92	\$17.80	4.8%	\$19.90	6.2%	\$0.7442	\$0.6420	\$0.7798	\$0.6818
750	\$176.56	\$378.53	\$555.09	\$176.56	\$301.88	\$478.44	\$202.79	\$378.50	\$581.29	\$202.79	\$305.00	\$507.79	\$26.20	4.7%	\$29.35	6.1%	\$0.7401	\$0.6379	\$0.7751	\$0.6771
1,000	\$233.35	\$504.70	\$738.05	\$233.35	\$402.50	\$635.85	\$267.99	\$504.66	\$772.65	\$267.99	\$406.66	\$674.65	\$34.60	4.7%	\$38.80	6.1%	\$0.7380	\$0.6358	\$0.7727	\$0.6747
percentiles																				
70	\$22.10	\$35.33	\$57.43				\$25.45	\$35.33	\$60.78				\$3.35	5.8%			\$0.8204		\$0.8683	
100	\$28.91	\$50.47	\$79.38				\$33.28	\$50.47	\$83.74				\$4.36	5.5%			\$0.7938		\$0.8374	
150	\$40.27	\$75.71	\$115.98				\$46.32	\$75.70	\$122.01				\$6.04	5.2%			\$0.7732		\$0.8134	
14				\$9.38	\$5.64	\$15.01				\$10.85	\$5.69	\$16.54			\$1.53	10.2%		\$1.0724		\$1.1815
25				\$11.88	\$10.06	\$21.94				\$13.72	\$10.17	\$23.88			\$1.94	8.9%		\$0.8776		\$0.9553
40				\$15.28	\$16.10	\$31.38				\$17.63	\$16.27	\$33.89			\$2.51	8.0%		\$0.7846		\$0.8474

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (EnergyNorth Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-41 : COMMERCIAL/INDUSTRIAL - LOW ANNUAL USE, HIGH WINTER USE

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4724	\$0.3669	Cost of Gas	\$0.4705	\$0.3692
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$57.46		Customer charge	\$66.71	
Sales rate			Sales rate		
First Block Size	100	20	First Block Size	100	20
Block 1	\$0.4711	\$0.4711	Block 1	\$0.5433	\$0.5433
Block 2	\$0.3165	\$0.3165	Block 2	\$0.3650	\$0.3650

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
0	\$57	\$0	\$57	\$57	\$0	\$57	\$67	\$0	\$67	\$67	\$0	\$67	\$9.25	16.1%	\$9.25	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000
10	\$62	\$5	\$67	\$62	\$4	\$66	\$72	\$5	\$77	\$72	\$4	\$76	\$9.97	14.8%	\$10.01	15.1%	\$6.7374	\$6.6319	\$7.7344	\$7.6331
25	\$69	\$13	\$82	\$68	\$10	\$79	\$80	\$13	\$93	\$79	\$10	\$90	\$11.05	13.4%	\$11.04	14.0%	\$3.2898	\$3.1533	\$3.7319	\$3.5949
50	\$81	\$26	\$107	\$76	\$21	\$97	\$94	\$26	\$120	\$89	\$21	\$109	\$12.86	12.0%	\$12.36	12.7%	\$2.1405	\$1.9422	\$2.3977	\$2.1894
75	\$93	\$39	\$132	\$84	\$31	\$115	\$107	\$39	\$146	\$98	\$31	\$129	\$14.66	11.1%	\$13.67	11.8%	\$1.7575	\$1.5385	\$1.9529	\$1.7208
100	\$105	\$52	\$157	\$92	\$41	\$134	\$121	\$52	\$173	\$107	\$42	\$149	\$16.47	10.5%	\$14.99	11.2%	\$1.5659	\$1.367	\$1.7306	\$1.4866
150	\$120	\$78	\$198	\$108	\$62	\$170	\$139	\$78	\$217	\$125	\$63	\$188	\$18.89	9.5%	\$17.62	10.4%	\$1.3228	\$1.1349	\$1.4488	\$1.2523
200	\$136	\$104	\$240	\$124	\$83	\$207	\$158	\$104	\$262	\$143	\$84	\$227	\$21.31	8.9%	\$20.26	9.8%	\$1.2013	\$1.0339	\$1.3079	\$1.1352
250	\$152	\$130	\$282	\$140	\$104	\$243	\$176	\$130	\$306	\$162	\$105	\$266	\$23.73	8.4%	\$22.89	9.4%	\$1.1284	\$0.9734	\$1.2233	\$1.0649
300	\$168	\$156	\$324	\$155	\$124	\$280	\$194	\$156	\$350	\$180	\$126	\$305	\$26.16	8.1%	\$25.52	9.1%	\$1.0798	\$0.9330	\$1.1669	\$1.0181
350	\$184	\$182	\$366	\$171	\$145	\$316	\$212	\$182	\$394	\$198	\$147	\$345	\$28.58	7.8%	\$28.15	8.9%	\$1.0450	\$0.9042	\$1.1267	\$0.9846
400	\$200	\$208	\$408	\$187	\$166	\$353	\$231	\$208	\$439	\$216	\$168	\$384	\$31.00	7.6%	\$30.79	8.7%	\$1.0190	\$0.8825	\$1.0965	\$0.9595
500	\$231	\$260	\$491	\$219	\$207	\$426	\$267	\$260	\$527	\$253	\$209	\$462	\$35.85	7.3%	\$36.05	8.5%	\$0.9825	\$0.8523	\$1.0542	\$0.9244
600	\$263	\$312	\$575	\$250	\$249	\$499	\$304	\$312	\$616	\$289	\$251	\$541	\$40.70	7.1%	\$41.32	8.3%	\$0.9582	\$0.8321	\$1.0260	\$0.9010
700	\$294	\$364	\$659	\$282	\$290	\$572	\$340	\$364	\$704	\$326	\$293	\$619	\$45.54	6.9%	\$46.59	8.1%	\$0.9408	\$0.8177	\$1.0059	\$0.8842
800	\$326	\$416	\$742	\$314	\$332	\$645	\$377	\$416	\$793	\$362	\$335	\$697	\$50.39	6.8%	\$51.85	8.0%	\$0.9278	\$0.8069	\$0.9908	\$0.8717
900	\$358	\$468	\$826	\$345	\$373	\$719	\$413	\$468	\$881	\$399	\$377	\$776	\$55.24	6.7%	\$57.12	7.9%	\$0.9177	\$0.7984	\$0.9791	\$0.8619
1,000	\$389	\$520	\$910	\$377	\$415	\$792	\$450	\$520	\$970	\$435	\$419	\$854	\$60.08	6.6%	\$62.39	7.9%	\$0.9096	\$0.7917	\$0.9697	\$0.8541
1,250	\$469	\$650	\$1,119	\$456	\$518	\$975	\$541	\$650	\$1,191	\$526	\$524	\$1,050	\$72.20	6.5%	\$75.55	7.8%	\$0.8950	\$0.7796	\$0.9528	\$0.8400
1,500	\$548	\$780	\$1,328	\$535	\$622	\$1,157	\$632	\$780	\$1,412	\$618	\$628	\$1,246	\$84.31	6.3%	\$88.72	7.7%	\$0.8853	\$0.7715	\$0.9415	\$0.8307

Estimated Bill Percentiles

38	Winter - 25%	70	\$90	\$36	\$127				\$105	\$36	\$141				\$14.30	11.3%			\$1.8122		\$2.0165	
39	Winter - 50%	200	\$136	\$104	\$240				\$158	\$104	\$262				\$21.31	8.9%			\$1.2013		\$1.3079	
40	Winter - 75%	500	\$231	\$260	\$491				\$267	\$260	\$527				\$35.85	7.3%			\$0.9825		\$1.0542	
41	Summer - 25%	0				\$57	\$0	\$57				\$67	\$0	\$67			\$9.25	16.1%		\$0.0000	\$0.0000	
42	Summer - 50%	8				\$61	\$3	\$65				\$71	\$3	\$74			\$9.86	15.3%		\$8.0684	\$9.3008	
43	Summer - 75%	45				\$75	\$19	\$93				\$87	\$19	\$106			\$12.09	12.9%		\$2.0768	\$2.3455	

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (EnergyNorth Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-42 : COMMERCIAL/INDUSTRIAL - MEDIUM ANNUAL USE, HIGH WINTER USE

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4724	\$0.3669	Cost of Gas	\$0.4705	\$0.3692
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$172.39		Customer charge	\$200.14	
Sales rate			Sales rate		
First Block Size	1000	400	First Block Size	1000	400
Block 1	\$0.4284	\$0.4284	Block 1	\$0.4999	\$0.4999
Block 2	\$0.2855	\$0.2855	Block 2	\$0.3331	\$0.3331

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs				
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed		
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer	
0	\$172	\$0	\$172	\$172	\$0	\$172	\$200	\$0	\$200	\$200	\$0	\$200	\$27.75	16.1%	\$27.75	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
10	\$177	\$5	\$182	\$177	\$4	\$181	\$205	\$5	\$210	\$205	\$4	\$209	\$28.46	15.6%	\$28.50	15.8%	\$18.1878	\$18.0823	\$21.0339	\$20.9326	
25	\$183	\$13	\$196	\$183	\$10	\$193	\$213	\$13	\$226	\$213	\$10	\$223	\$29.53	15.1%	\$29.64	15.3%	\$7.8443	\$7.7388	\$9.0256	\$8.9243	
50	\$194	\$26	\$220	\$194	\$21	\$215	\$225	\$26	\$251	\$225	\$21	\$246	\$31.32	14.2%	\$31.53	14.7%	\$4.3964	\$4.2909	\$5.0228	\$4.9215	
75	\$205	\$39	\$244	\$205	\$31	\$236	\$238	\$39	\$277	\$238	\$31	\$269	\$33.10	13.6%	\$33.42	14.2%	\$3.2472	\$3.1417	\$3.6886	\$3.5873	
100	\$215	\$52	\$267	\$215	\$41	\$257	\$250	\$52	\$302	\$250	\$42	\$292	\$34.89	13.1%	\$35.31	13.8%	\$2.6725	\$2.5670	\$3.0214	\$2.9201	
150	\$237	\$78	\$315	\$237	\$62	\$299	\$275	\$78	\$353	\$275	\$63	\$338	\$38.46	12.2%	\$39.09	13.1%	\$2.0979	\$1.9924	\$2.3543	\$2.2530	
200	\$258	\$104	\$362	\$258	\$83	\$341	\$300	\$104	\$404	\$300	\$84	\$384	\$42.03	11.6%	\$42.87	12.6%	\$1.8106	\$1.7051	\$2.0207	\$1.9194	
250	\$279	\$130	\$410	\$279	\$104	\$383	\$325	\$130	\$455	\$325	\$105	\$430	\$45.60	11.1%	\$46.65	12.2%	\$1.6382	\$1.5327	\$1.8206	\$1.7193	
300	\$301	\$156	\$457	\$301	\$124	\$425	\$350	\$156	\$506	\$350	\$126	\$476	\$49.17	10.8%	\$50.43	11.9%	\$1.5232	\$1.4177	\$1.6872	\$1.5859	
350	\$322	\$182	\$504	\$322	\$145	\$467	\$375	\$182	\$557	\$375	\$147	\$522	\$52.75	10.5%	\$54.22	11.6%	\$1.4412	\$1.3357	\$1.5919	\$1.4906	
400	\$344	\$208	\$552	\$344	\$166	\$510	\$400	\$208	\$608	\$400	\$168	\$568	\$56.32	10.2%	\$58.00	11.4%	\$1.3796	\$1.2741	\$1.5204	\$1.4191	
500	\$387	\$260	\$647	\$372	\$207	\$580	\$450	\$260	\$710	\$433	\$209	\$643	\$63.46	9.8%	\$63.18	10.9%	\$1.2934	\$1.1593	\$1.4203	\$1.2857	
750	\$494	\$390	\$884	\$444	\$311	\$755	\$575	\$390	\$965	\$517	\$314	\$831	\$81.32	9.2%	\$76.12	10.1%	\$1.1785	\$1.0063	\$1.2869	\$1.1078	
1,000	\$601	\$520	\$1,121	\$515	\$415	\$930	\$700	\$520	\$1,220	\$600	\$419	\$1,019	\$99.17	8.8%	\$89.07	9.6%	\$1.1210	\$0.9297	\$1.2202	\$1.0188	
1,500	\$744	\$780	\$1,524	\$658	\$622	\$1,280	\$867	\$780	\$1,647	\$766	\$628	\$1,395	\$122.96	8.1%	\$114.96	9.0%	\$1.0159	\$0.8532	\$1.0979	\$0.9299	
2,000	\$886	\$1,040	\$1,927	\$801	\$829	\$1,630	\$1,033	\$1,040	\$2,073	\$933	\$838	\$1,771	\$146.75	7.6%	\$140.85	8.6%	\$0.9633	\$0.8150	\$1.0367	\$0.8854	
3,000	\$1,172	\$1,561	\$2,732	\$1,086	\$1,244	\$2,330	\$1,366	\$1,560	\$2,927	\$1,266	\$1,257	\$2,523	\$194.34	7.1%	\$192.63	8.3%	\$0.9108	\$0.7767	\$0.9756	\$0.8409	
4,000	\$1,457	\$2,081	\$3,538	\$1,371	\$1,659	\$3,030	\$1,699	\$2,081	\$3,780	\$1,599	\$1,675	\$3,275	\$241.92	6.8%	\$244.41	8.1%	\$0.8845	\$0.7576	\$0.9450	\$0.8187	
5,000	\$1,743	\$2,601	\$4,344	\$1,657	\$2,074	\$3,730	\$2,032	\$2,601	\$4,633	\$1,932	\$2,094	\$4,027	\$289.50	6.7%	\$296.19	7.9%	\$0.8687	\$0.7461	\$0.9266	\$0.8053	
Percentiles																					
1,300	\$686	\$676	\$1,363				\$800	\$676	\$1,476				\$113.45	8.3%			\$1.0482		\$1.1355		
2,000	\$886	\$1,040	\$1,927				\$1,033	\$1,040	\$2,073				\$146.75	7.6%			\$0.9633		\$1.0367		
3,500	\$1,314	\$1,821	\$3,135				\$1,533	\$1,821	\$3,353				\$218.13	7.0%			\$0.8958		\$0.9581		
45				\$192	\$19	\$210				\$223	\$19	\$241			\$31.15	14.8%		\$4.6740		\$5.3663	
350				\$322	\$145	\$467				\$375	\$147	\$522			\$54.22	11.6%		\$1.3357		\$1.4906	
750				\$444	\$311	\$755				\$517	\$314	\$831			\$76.12	10.1%		\$1.0063		\$1.1078	

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (EnergyNorth Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-43 : COMMERCIAL/INDUSTRIAL - HIGH ANNUAL USE, HIGH WINTER USE

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4724	\$0.3669	Cost of Gas	\$0.4705	\$0.3692
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$739.83		Customer charge	\$858.91	
Sales rate			Sales rate		
First Block Size			First Block Size		
Block 1	\$0.2633	\$0.1204	Block 1	\$0.3126	\$0.1429
Block 2	\$0.2633	\$0.1204	Block 2	\$0.3126	\$0.1429

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
200	\$793	\$104	\$897	\$764	\$83	\$847	\$921	\$104	\$1,025	\$888	\$84	\$971	\$128.93	14.4%	\$124.42	14.7%	\$4.4827	\$4.2343	\$5.1274	\$4.8564
500	\$872	\$260	\$1,132	\$800	\$207	\$1,007	\$1,015	\$260	\$1,275	\$930	\$209	\$1,140	\$143.71	12.7%	\$132.43	13.1%	\$2.2632	\$2.0148	\$2.5506	\$2.2796
1,000	\$1,003	\$520	\$1,523	\$860	\$415	\$1,275	\$1,172	\$520	\$1,692	\$1,002	\$419	\$1,421	\$168.34	11.1%	\$145.78	11.4%	\$1.5234	\$1.2749	\$1.6917	\$1.4207
1,250	\$1,069	\$650	\$1,719	\$890	\$518	\$1,409	\$1,250	\$650	\$1,900	\$1,038	\$524	\$1,561	\$180.66	10.5%	\$152.46	10.8%	\$1.3754	\$1.1270	\$1.5199	\$1.2489
1,500	\$1,135	\$780	\$1,915	\$920	\$622	\$1,542	\$1,328	\$780	\$2,108	\$1,073	\$628	\$1,702	\$192.97	10.1%	\$159.13	10.3%	\$1.2768	\$1.0283	\$1.4054	\$1.1344
1,750	\$1,201	\$910	\$2,111	\$951	\$726	\$1,676	\$1,406	\$910	\$2,316	\$1,109	\$733	\$1,842	\$205.29	9.7%	\$165.81	9.9%	\$1.2063	\$0.9579	\$1.3236	\$1.0526
2,000	\$1,267	\$1,040	\$2,307	\$981	\$829	\$1,810	\$1,484	\$1,040	\$2,525	\$1,145	\$838	\$1,983	\$217.60	9.4%	\$172.48	9.5%	\$1.1535	\$0.9050	\$1.2623	\$0.9913
2,500	\$1,398	\$1,301	\$2,699	\$1,041	\$1,037	\$2,078	\$1,641	\$1,300	\$2,941	\$1,216	\$1,047	\$2,263	\$242.24	9.0%	\$185.84	8.9%	\$1.0795	\$0.8310	\$1.1764	\$0.9054
3,000	\$1,530	\$1,561	\$3,090	\$1,101	\$1,244	\$2,345	\$1,797	\$1,560	\$3,357	\$1,288	\$1,257	\$2,544	\$266.87	8.6%	\$199.19	8.5%	\$1.0302	\$0.7817	\$1.1191	\$0.8481
3,500	\$1,662	\$1,821	\$3,482	\$1,161	\$1,451	\$2,613	\$1,953	\$1,821	\$3,774	\$1,359	\$1,466	\$2,825	\$291.50	8.4%	\$212.54	8.1%	\$0.9949	\$0.7465	\$1.0782	\$0.8072
4,000	\$1,793	\$2,081	\$3,874	\$1,221	\$1,659	\$2,880	\$2,109	\$2,081	\$4,190	\$1,431	\$1,675	\$3,106	\$316.13	8.2%	\$225.89	7.8%	\$0.9685	\$0.7201	\$1.0475	\$0.7765
4,500	\$1,925	\$2,341	\$4,266	\$1,282	\$1,866	\$3,148	\$2,266	\$2,341	\$4,607	\$1,502	\$1,885	\$3,387	\$340.76	8.0%	\$239.24	7.6%	\$0.9480	\$0.6995	\$1.0237	\$0.7527
5,000	\$2,057	\$2,601	\$4,658	\$1,342	\$2,074	\$3,415	\$2,422	\$2,601	\$5,023	\$1,574	\$2,094	\$3,668	\$365.39	7.8%	\$252.59	7.4%	\$0.9315	\$0.6831	\$1.0046	\$0.7336
6,000	\$2,320	\$3,121	\$5,441	\$1,462	\$2,488	\$3,950	\$2,735	\$3,121	\$5,856	\$1,717	\$2,513	\$4,230	\$414.66	7.6%	\$279.30	7.1%	\$0.9068	\$0.6584	\$0.9760	\$0.7050
7,000	\$2,583	\$3,641	\$6,225	\$1,583	\$2,903	\$4,486	\$3,047	\$3,641	\$6,689	\$1,860	\$2,932	\$4,792	\$463.92	7.5%	\$306.00	6.8%	\$0.8892	\$0.6408	\$0.9555	\$0.6845
8,000	\$2,847	\$4,162	\$7,008	\$1,703	\$3,318	\$5,021	\$3,360	\$4,161	\$7,521	\$2,002	\$3,351	\$5,353	\$513.18	7.3%	\$332.71	6.6%	\$0.8760	\$0.6276	\$0.9402	\$0.6692
9,000	\$3,110	\$4,682	\$7,792	\$1,823	\$3,732	\$5,556	\$3,673	\$4,681	\$8,354	\$2,145	\$3,770	\$5,915	\$562.45	7.2%	\$359.41	6.5%	\$0.8657	\$0.6173	\$0.9282	\$0.6572
10,000	\$3,373	\$5,202	\$8,575	\$1,944	\$4,147	\$6,091	\$3,985	\$5,202	\$9,187	\$2,288	\$4,189	\$6,477	\$611.71	7.1%	\$386.11	6.3%	\$0.8575	\$0.6091	\$0.9187	\$0.6477
15,000	\$4,690	\$7,803	\$12,493	\$2,546	\$6,221	\$8,766	\$5,549	\$7,802	\$13,351	\$3,003	\$6,283	\$9,286	\$858.03	6.9%	\$519.63	5.9%	\$0.8329	\$0.5844	\$0.8901	\$0.6191
20,000	\$6,007	\$10,404	\$16,411	\$3,148	\$8,294	\$11,442	\$7,112	\$10,403	\$17,515	\$3,718	\$8,377	\$12,095	\$1,104.34	6.7%	\$653.15	5.7%	\$0.8205	\$0.5721	\$0.8758	\$0.6048

Percentiles																				
9,000	\$3,110	\$4,682	\$7,792				\$3,673	\$4,681	\$8,354				\$562.45	7.2%			\$0.8657		\$0.9282	
15,000	\$4,690	\$7,803	\$12,493				\$5,549	\$7,802	\$13,351				\$858.03	6.9%			\$0.8329		\$0.8901	
25,000	\$7,323	\$13,005	\$20,328				\$8,675	\$13,004	\$21,679				\$1,350.66	6.6%			\$0.8131		\$0.8672	
450				\$794	\$187	\$981				\$923	\$188	\$1,112				\$131.09	13.4%		\$2,1792	\$2,4705
3,500				\$1,161	\$1,451	\$2,613				\$1,359	\$1,466	\$2,825				\$212.54	8.1%		\$0.7465	\$0.8072
10,000				\$1,944	\$4,147	\$6,091				\$2,288	\$4,189	\$6,477				\$386.11	6.3%		\$0.6091	\$0.6477

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (Energy/North Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-51 : COMMERCIAL/INDUSTRIAL - LOW ANNUAL USE, LOW WINTER USE

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4792	\$0.3786	Cost of Gas	\$0.4773	\$0.3809
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$57.46		Customer charge	\$66.71	
Sales rate			Sales rate		
First Block Size	100	100	First Block Size	100	100
Block 1	\$0.2839	\$0.2839	Block 1	\$0.3408	\$0.3408
Block 2	\$0.1846	\$0.1846	Block 2	\$0.2216	\$0.2216

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
0	\$57	\$0	\$57	\$57	\$0	\$57	\$67	\$0	\$67	\$67	\$0	\$67	\$9.25	16.1%	\$9.25	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000
10	\$60	\$5	\$66	\$60	\$4	\$65	\$70	\$5	\$75	\$70	\$4	\$74	\$9.82	15.0%	\$9.86	15.3%	\$6.5567	\$6.4561	\$7.5382	\$7.4418
25	\$65	\$13	\$78	\$65	\$11	\$75	\$75	\$13	\$88	\$75	\$11	\$86	\$10.67	13.7%	\$10.77	14.3%	\$3.1092	\$3.0086	\$3.5359	\$3.4395
50	\$72	\$26	\$98	\$72	\$21	\$93	\$84	\$26	\$110	\$84	\$22	\$105	\$12.09	12.3%	\$12.30	13.2%	\$1.9601	\$1.8595	\$2.2018	\$2.1054
75	\$79	\$40	\$118	\$79	\$32	\$111	\$92	\$40	\$132	\$92	\$32	\$125	\$13.51	11.4%	\$13.82	12.5%	\$1.5770	\$1.4764	\$1.7571	\$1.6607
100	\$86	\$53	\$139	\$86	\$43	\$128	\$101	\$53	\$153	\$101	\$43	\$144	\$14.93	10.8%	\$15.35	11.9%	\$1.3855	\$1.2849	\$1.5348	\$1.4384
150	\$95	\$79	\$174	\$95	\$64	\$159	\$112	\$79	\$191	\$112	\$65	\$176	\$16.77	9.6%	\$17.40	10.9%	\$1.1609	\$1.0603	\$1.2727	\$1.1763
200	\$104	\$105	\$210	\$104	\$85	\$190	\$123	\$105	\$228	\$123	\$86	\$209	\$18.62	8.9%	\$19.46	10.3%	\$1.0486	\$0.9480	\$1.1417	\$1.0453
250	\$114	\$132	\$245	\$114	\$107	\$220	\$134	\$132	\$266	\$134	\$108	\$242	\$20.47	8.3%	\$21.52	9.8%	\$0.9812	\$0.8806	\$1.0631	\$0.9667
300	\$123	\$158	\$281	\$123	\$128	\$251	\$145	\$158	\$303	\$145	\$129	\$274	\$22.31	7.9%	\$23.57	9.4%	\$0.9363	\$0.8357	\$1.0106	\$0.9142
350	\$132	\$184	\$316	\$132	\$149	\$281	\$156	\$184	\$341	\$156	\$151	\$307	\$24.16	7.6%	\$25.63	9.1%	\$0.9042	\$0.8036	\$0.9732	\$0.8768
400	\$141	\$211	\$352	\$141	\$171	\$312	\$167	\$211	\$378	\$167	\$172	\$339	\$26.01	7.4%	\$27.69	8.9%	\$0.8801	\$0.7795	\$0.9451	\$0.8487
500	\$160	\$264	\$423	\$160	\$213	\$373	\$189	\$263	\$453	\$189	\$215	\$405	\$29.70	7.0%	\$31.80	8.5%	\$0.8464	\$0.7458	\$0.9058	\$0.8094
600	\$178	\$316	\$494	\$178	\$256	\$434	\$212	\$316	\$528	\$212	\$258	\$470	\$33.39	6.8%	\$35.91	8.3%	\$0.8239	\$0.7233	\$0.8796	\$0.7832
700	\$197	\$369	\$566	\$197	\$298	\$495	\$234	\$369	\$603	\$234	\$301	\$535	\$37.08	6.6%	\$40.02	8.1%	\$0.8079	\$0.7073	\$0.8609	\$0.7645
800	\$215	\$422	\$637	\$215	\$341	\$556	\$256	\$422	\$677	\$256	\$344	\$600	\$40.77	6.4%	\$44.13	7.9%	\$0.7959	\$0.6953	\$0.8468	\$0.7504
900	\$234	\$474	\$708	\$234	\$384	\$617	\$278	\$474	\$752	\$278	\$388	\$666	\$44.47	6.3%	\$48.25	7.8%	\$0.7865	\$0.6859	\$0.8359	\$0.7395
1,000	\$252	\$527	\$779	\$252	\$426	\$678	\$300	\$527	\$827	\$300	\$431	\$731	\$48.16	6.2%	\$52.36	7.7%	\$0.7790	\$0.6784	\$0.8272	\$0.7308
1,250	\$298	\$659	\$957	\$298	\$533	\$831	\$356	\$659	\$1,014	\$356	\$538	\$894	\$57.39	6.0%	\$62.64	7.5%	\$0.7655	\$0.6649	\$0.8115	\$0.7151
1,500	\$344	\$791	\$1,135	\$344	\$640	\$984	\$411	\$790	\$1,201	\$411	\$646	\$1,057	\$66.62	5.9%	\$72.92	7.4%	\$0.7566	\$0.6560	\$0.8010	\$0.7046
percentiles																				
45	\$70	\$24	\$94				\$82	\$24	\$106				\$11.80	12.6%			\$2.0878		\$2.3501	
175	\$100	\$92	\$192				\$117	\$92	\$210				\$17.70	9.2%			\$1.0967		\$1.1978	
450	\$150	\$237	\$388				\$178	\$237	\$415				\$27.85	7.2%			\$0.8614		\$0.9233	
6				\$59	\$3	\$62				\$69	\$3	\$71			\$9.61	15.6%		\$10.2865		\$11.8888
60				\$74	\$26	\$100				\$87	\$26	\$113			\$12.91	12.9%		\$1.6680		\$1.8831
250				\$114	\$107	\$220				\$134	\$108	\$242			\$21.52	9.8%		\$0.8806		\$0.9667

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (Energy/North Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-52 : COMMERCIAL/INDUSTRIAL - MEDIUM ANNUAL USE, LOW WINTER USE

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4792	\$0.3786	Cost of Gas	\$0.4773	\$0.3809
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$172.39		Customer charge	\$200.14	
Sales rate			Sales rate		
First Block Size	1000	1000	First Block Size	1000	1000
Block 1	\$0.2439	\$0.1767	Block 1	\$0.2926	\$0.2120
Block 2	\$0.1624	\$0.1004	Block 2	\$0.1948	\$0.1205

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
200	\$221	\$105	\$327	\$208	\$85	\$293	\$259	\$105	\$364	\$243	\$86	\$329	\$37.48	11.5%	\$35.64	12.2%	\$1.6328	\$1.4650	\$1.8202	\$1.6432
300	\$246	\$158	\$404	\$225	\$128	\$353	\$288	\$158	\$446	\$264	\$129	\$393	\$42.35	10.5%	\$39.58	11.2%	\$1.3455	\$1.1777	\$1.4867	\$1.3097
400	\$270	\$211	\$481	\$243	\$171	\$414	\$317	\$211	\$528	\$285	\$172	\$457	\$47.22	9.8%	\$43.53	10.5%	\$1.2019	\$1.0341	\$1.3199	\$1.1429
500	\$294	\$264	\$558	\$261	\$213	\$474	\$346	\$263	\$610	\$306	\$215	\$521	\$52.08	9.3%	\$47.47	10.0%	\$1.1157	\$0.9479	\$1.2198	\$1.0428
600	\$319	\$316	\$635	\$278	\$256	\$534	\$376	\$316	\$692	\$327	\$258	\$586	\$56.95	9.0%	\$51.42	9.6%	\$1.0582	\$0.8904	\$1.1531	\$0.9761
700	\$343	\$369	\$712	\$296	\$298	\$595	\$405	\$369	\$774	\$349	\$301	\$650	\$61.82	8.7%	\$55.36	9.3%	\$1.0171	\$0.8494	\$1.1055	\$0.9284
800	\$367	\$422	\$789	\$314	\$341	\$655	\$434	\$422	\$856	\$370	\$344	\$714	\$66.68	8.5%	\$59.31	9.1%	\$0.9864	\$0.8186	\$1.0697	\$0.8927
900	\$392	\$474	\$866	\$331	\$384	\$715	\$463	\$474	\$938	\$391	\$388	\$778	\$71.55	8.3%	\$63.25	8.8%	\$0.9624	\$0.7946	\$1.0419	\$0.8649
1,000	\$416	\$527	\$943	\$349	\$426	\$775	\$493	\$527	\$1,020	\$412	\$431	\$843	\$76.42	8.1%	\$67.20	8.7%	\$0.9433	\$0.7755	\$1.0197	\$0.8427
1,100	\$433	\$580	\$1,012	\$359	\$469	\$828	\$512	\$580	\$1,092	\$424	\$474	\$898	\$79.66	7.9%	\$69.62	8.4%	\$0.9202	\$0.7529	\$0.9926	\$0.8162
1,200	\$449	\$632	\$1,081	\$369	\$512	\$881	\$532	\$632	\$1,164	\$436	\$517	\$953	\$82.90	7.7%	\$72.04	8.2%	\$0.9010	\$0.7340	\$0.9700	\$0.7941
1,300	\$465	\$685	\$1,150	\$379	\$554	\$934	\$551	\$685	\$1,236	\$448	\$560	\$1,008	\$86.14	7.5%	\$74.46	8.0%	\$0.8847	\$0.7181	\$0.9509	\$0.7754
1,400	\$481	\$738	\$1,219	\$389	\$597	\$986	\$571	\$738	\$1,308	\$460	\$603	\$1,063	\$89.38	7.3%	\$76.89	7.8%	\$0.8707	\$0.7044	\$0.9346	\$0.7594
1,500	\$497	\$791	\$1,288	\$399	\$640	\$1,039	\$590	\$790	\$1,381	\$472	\$646	\$1,118	\$92.62	7.2%	\$79.31	7.6%	\$0.8586	\$0.6926	\$0.9204	\$0.7455
1,750	\$538	\$922	\$1,460	\$424	\$746	\$1,171	\$639	\$922	\$1,561	\$502	\$753	\$1,256	\$100.72	6.9%	\$85.36	7.3%	\$0.8345	\$0.6689	\$0.8920	\$0.7177
2,000	\$579	\$1,054	\$1,633	\$450	\$853	\$1,302	\$688	\$1,054	\$1,741	\$533	\$861	\$1,394	\$108.82	6.7%	\$91.42	7.0%	\$0.8163	\$0.6512	\$0.8707	\$0.6969
2,500	\$660	\$1,318	\$1,977	\$500	\$1,066	\$1,566	\$785	\$1,317	\$2,102	\$593	\$1,076	\$1,669	\$125.02	6.3%	\$103.53	6.6%	\$0.7910	\$0.6263	\$0.8410	\$0.6677
3,000	\$741	\$1,581	\$2,322	\$550	\$1,279	\$1,829	\$882	\$1,581	\$2,463	\$653	\$1,292	\$1,945	\$141.22	6.1%	\$115.64	6.3%	\$0.7740	\$0.6097	\$0.8211	\$0.6483
4,000	\$903	\$2,108	\$3,011	\$650	\$1,706	\$2,356	\$1,077	\$2,108	\$3,185	\$774	\$1,722	\$2,496	\$173.62	5.8%	\$139.86	5.9%	\$0.7529	\$0.5890	\$0.7963	\$0.6240
5,000	\$1,066	\$2,635	\$3,701	\$751	\$2,132	\$2,883	\$1,272	\$2,635	\$3,907	\$894	\$2,153	\$3,047	\$206.02	5.6%	\$164.08	5.7%	\$0.7402	\$0.5766	\$0.7814	\$0.6094
percentiles																				
1,040	\$423	\$548	\$971				\$501	\$548	\$1,049				\$77.71	8.0%			\$0.9335		\$1.0082	
2,000	\$579	\$1,054	\$1,633				\$688	\$1,054	\$1,741				\$108.82	6.7%			\$0.8163		\$0.8707	
3,500	\$822	\$1,845	\$2,667				\$980	\$1,844	\$2,824				\$157.42	5.9%			\$0.7619		\$0.8069	
700				\$296	\$298	\$595				\$349	\$301	\$650			\$55.36	9.3%		\$0.8494		\$0.9284
1,040				\$353	\$443	\$797				\$417	\$448	\$865			\$68.17	8.6%		\$0.7659		\$0.8315
2,000				\$450	\$853	\$1,302				\$533	\$861	\$1,394			\$91.42	7.0%		\$0.6512		\$0.6969

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (Energy/North Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-53 : COMMERCIAL/INDUSTRIAL - HIGH ANNUAL USE, LOAD FACTOR LESS THAN 90%

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4792	\$0.3786	Cost of Gas	\$0.4773	\$0.3809
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$761.39		Customer charge	\$883.94	
Sales rate			Sales rate		
First Block Size			First Block Size		
Block 1	\$0.1705	\$0.0818	Block 1	\$0.2092	\$0.1003
Block 2	\$0.1705	\$0.0818	Block 2	\$0.2092	\$0.1003

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
1,000	\$932	\$527	\$1,459	\$843	\$426	\$1,270	\$1,093	\$527	\$1,620	\$984	\$431	\$1,415	\$161.25	11.1%	\$145.29	####	\$1.4589	\$1.2696	\$1.6201	\$1.4149
2,500	\$1,188	\$1,318	\$2,505	\$966	\$1,066	\$2,032	\$1,407	\$1,317	\$2,724	\$1,135	\$1,076	\$2,211	\$219.29	8.8%	\$179.40	8.8%	\$1.0020	\$0.8127	\$1.0897	\$0.8845
5,000	\$1,614	\$2,635	\$4,249	\$1,170	\$2,132	\$3,302	\$1,930	\$2,635	\$4,565	\$1,386	\$2,153	\$3,538	\$316.04	7.4%	\$236.26	7.2%	\$0.8497	\$0.6604	\$0.9130	\$0.7077
7,500	\$2,040	\$3,953	\$5,992	\$1,375	\$3,198	\$4,573	\$2,453	\$3,952	\$6,405	\$1,637	\$3,229	\$4,866	\$412.79	6.9%	\$293.12	6.4%	\$0.7990	\$0.6097	\$0.8540	\$0.6488
10,000	\$2,466	\$5,270	\$7,736	\$1,579	\$4,264	\$5,843	\$2,976	\$5,270	\$8,246	\$1,887	\$4,306	\$6,193	\$509.53	6.6%	\$349.97	6.0%	\$0.7736	\$0.5843	\$0.8246	\$0.6193
12,500	\$2,892	\$6,588	\$9,480	\$1,783	\$5,330	\$7,113	\$3,499	\$6,587	\$10,086	\$2,138	\$5,382	\$7,520	\$606.28	6.4%	\$406.83	5.7%	\$0.7584	\$0.5691	\$0.8069	\$0.6016
15,000	\$3,318	\$7,905	\$11,223	\$1,988	\$6,396	\$8,384	\$4,022	\$7,904	\$11,926	\$2,389	\$6,458	\$8,848	\$703.02	6.3%	\$463.68	5.5%	\$0.7482	\$0.5589	\$0.7951	\$0.5898
20,000	\$4,171	\$10,540	\$14,711	\$2,397	\$8,528	\$10,925	\$5,068	\$10,539	\$15,607	\$2,891	\$8,611	\$11,502	\$896.52	6.1%	\$577.40	5.3%	\$0.7355	\$0.5462	\$0.7804	\$0.5751
25,000	\$5,023	\$13,175	\$18,198	\$2,806	\$10,660	\$13,466	\$6,114	\$13,174	\$19,288	\$3,393	\$10,764	\$14,157	\$1,090.01	6.0%	\$691.11	5.1%	\$0.7279	\$0.5386	\$0.7715	\$0.5663
30,000	\$5,875	\$15,810	\$21,685	\$3,214	\$12,792	\$16,006	\$7,160	\$15,809	\$22,969	\$3,894	\$12,917	\$16,811	\$1,283.50	5.9%	\$804.82	5.0%	\$0.7228	\$0.5335	\$0.7656	\$0.5604
35,000	\$6,728	\$18,445	\$25,173	\$3,623	\$14,924	\$18,547	\$8,206	\$18,444	\$26,650	\$4,396	\$15,070	\$19,466	\$1,476.99	5.9%	\$918.53	5.0%	\$0.7192	\$0.5299	\$0.7614	\$0.5562
40,000	\$7,580	\$21,080	\$28,660	\$4,032	\$17,056	\$21,088	\$9,252	\$21,078	\$30,330	\$4,898	\$17,222	\$22,120	\$1,670.49	5.8%	\$1,032.25	4.9%	\$0.7165	\$0.5272	\$0.7583	\$0.5530
45,000	\$8,432	\$23,715	\$32,147	\$4,441	\$19,188	\$23,629	\$10,298	\$23,713	\$34,011	\$5,400	\$19,375	\$24,775	\$1,863.98	5.8%	\$1,145.96	4.8%	\$0.7144	\$0.5251	\$0.7558	\$0.5506
50,000	\$9,285	\$26,350	\$35,635	\$4,850	\$21,320	\$26,170	\$11,344	\$26,348	\$37,692	\$5,901	\$21,528	\$27,429	\$2,057.47	5.8%	\$1,259.67	4.8%	\$0.7127	\$0.5234	\$0.7538	\$0.5486
55,000	\$10,137	\$28,985	\$39,122	\$5,259	\$23,452	\$28,711	\$12,390	\$28,983	\$41,373	\$6,403	\$23,681	\$30,084	\$2,250.96	5.8%	\$1,373.38	4.8%	\$0.7113	\$0.5220	\$0.7522	\$0.5470
60,000	\$10,989	\$31,620	\$42,609	\$5,667	\$25,584	\$31,251	\$13,436	\$31,618	\$45,054	\$6,905	\$25,834	\$32,738	\$2,444.45	5.7%	\$1,487.10	4.8%	\$0.7102	\$0.5209	\$0.7509	\$0.5456
75,000	\$13,546	\$39,525	\$53,071	\$6,894	\$31,980	\$38,874	\$16,574	\$39,522	\$56,096	\$8,410	\$32,292	\$40,702	\$3,024.93	5.7%	\$1,828.23	4.7%	\$0.7076	\$0.5183	\$0.7479	\$0.5427
100,000	\$17,808	\$52,700	\$70,508	\$8,938	\$42,640	\$51,578	\$21,804	\$52,696	\$74,500	\$10,919	\$43,056	\$53,975	\$3,992.39	5.7%	\$2,396.79	4.6%	\$0.7051	\$0.5158	\$0.7450	\$0.5397
150,000	\$26,331	\$79,050	\$105,381	\$13,026	\$63,960	\$76,986	\$32,264	\$79,044	\$111,308	\$15,936	\$64,584	\$80,520	\$5,927.31	5.6%	\$3,533.92	4.6%	\$0.7025	\$0.5132	\$0.7421	\$0.5368
200,000	\$34,854	\$105,400	\$140,254	\$17,115	\$85,280	\$102,395	\$42,724	\$105,392	\$148,117	\$20,953	\$86,112	\$107,066	\$7,862.23	5.6%	\$4,671.04	4.6%	\$0.7013	\$0.5120	\$0.7406	\$0.5353
percentiles																				
10,000	\$2,466	\$5,270	\$7,736				\$2,976	\$5,270	\$8,246				\$509.53	6.6%			\$0.7736		\$0.8246	
15,000	\$3,318	\$7,905	\$11,223				\$4,022	\$7,904	\$11,926				\$703.02	6.3%			\$0.7482		\$0.7951	
30,000	\$5,875	\$15,810	\$21,685				\$7,160	\$15,809	\$22,969				\$1,283.50	5.9%			\$0.7228		\$0.7656	
5,000				\$1,170	\$2,132	\$3,302				\$1,386	\$2,153	\$3,538			\$236.26	7.2%		\$0.6604		\$0.7077
15,000				\$1,988	\$6,396	\$8,384				\$2,389	\$6,458	\$8,848			\$463.68	5.5%		\$0.5589		\$0.5898
20,000				\$2,397	\$8,528	\$10,925				\$2,891	\$8,611	\$11,502			\$577.40	5.3%		\$0.5462		\$0.5751

Estimated Bill Percentiles per 2010 MCS

Liberty Utilities (Energy/North Natural Gas) Corp.

COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES
RATE G-54 : COMMERCIAL/INDUSTRIAL - HIGH ANNUAL USE, LOAD FACTOR GREATER THAN 90%

Line

Present Rates			Proposed Rates		
	Winter	Summer		Winter	Summer
Cost of Gas	\$0.4792	\$0.3786	Cost of Gas	\$0.4773	\$0.3809
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.0497
Customer charge	\$761.39		Customer charge	\$883.94	
Sales rate			Sales rate		
First Block Size			First Block Size		
Block 1	\$0.0650	\$0.0353	Block 1	\$0.0900	\$0.0488
Block 2	\$0.0650	\$0.0353	Block 2	\$0.0900	\$0.0488

Use per Month (therms)	Monthly Bills at Present Rates						Monthly Bills at Proposed Rates						Change in Monthly Bill				Unit Costs			
	Winter			Summer			Winter			Summer			Winter		Summer		Current		Proposed	
	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	Base Rates	COG / LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
1,000	\$826	\$527	\$1,353	\$797	\$426	\$1,223	\$974	\$527	\$1,501	\$933	\$431	\$1,363	\$147.43	#####	\$140.23	####	\$1.3534	\$1.2231	\$1.5009	\$1.3633
2,500	\$924	\$1,318	\$2,242	\$850	\$1,066	\$1,916	\$1,109	\$1,317	\$2,426	\$1,006	\$1,076	\$2,082	\$184.76	8.2%	\$166.74	8.7%	\$0.8966	\$0.7662	\$0.9705	\$0.8329
5,000	\$1,087	\$2,635	\$3,722	\$938	\$2,132	\$3,070	\$1,334	\$2,635	\$3,969	\$1,128	\$2,153	\$3,281	\$246.96	6.6%	\$210.93	6.9%	\$0.7443	\$0.6140	\$0.7937	\$0.6561
7,500	\$1,249	\$3,953	\$5,202	\$1,026	\$3,198	\$4,224	\$1,559	\$3,952	\$5,511	\$1,250	\$3,229	\$4,479	\$309.17	5.9%	\$255.13	6.0%	\$0.6936	\$0.5632	\$0.7348	\$0.5972
10,000	\$1,412	\$5,270	\$6,682	\$1,114	\$4,264	\$5,378	\$1,784	\$5,270	\$7,053	\$1,372	\$4,306	\$5,677	\$371.38	5.6%	\$299.32	5.6%	\$0.6682	\$0.5378	\$0.7053	\$0.5677
12,500	\$1,574	\$6,588	\$8,162	\$1,202	\$5,330	\$6,532	\$2,009	\$6,587	\$8,596	\$1,494	\$5,382	\$6,876	\$433.59	5.3%	\$343.51	5.3%	\$0.6530	\$0.5226	\$0.6876	\$0.5501
15,000	\$1,737	\$7,905	\$9,642	\$1,291	\$6,396	\$7,687	\$2,233	\$7,904	\$10,138	\$1,616	\$6,458	\$8,074	\$495.80	5.1%	\$387.71	5.0%	\$0.6428	\$0.5124	\$0.6759	\$0.5383
20,000	\$2,062	\$10,540	\$12,602	\$1,467	\$8,528	\$9,995	\$2,683	\$10,539	\$13,223	\$1,860	\$8,611	\$10,471	\$620.22	4.9%	\$476.09	4.8%	\$0.6301	\$0.4997	\$0.6611	\$0.5236
25,000	\$2,388	\$13,175	\$15,563	\$1,643	\$10,660	\$12,303	\$3,133	\$13,174	\$16,307	\$2,104	\$10,764	\$12,868	\$744.63	4.8%	\$564.48	4.6%	\$0.6225	\$0.4921	\$0.6523	\$0.5147
30,000	\$2,713	\$15,810	\$18,523	\$1,820	\$12,792	\$14,612	\$3,583	\$15,809	\$19,392	\$2,348	\$12,917	\$15,265	\$869.05	4.7%	\$652.87	4.5%	\$0.6174	\$0.4871	\$0.6464	\$0.5088
35,000	\$3,038	\$18,445	\$21,483	\$1,996	\$14,924	\$16,920	\$4,033	\$18,444	\$22,476	\$2,592	\$15,070	\$17,661	\$993.47	4.6%	\$741.26	4.4%	\$0.6138	\$0.4834	\$0.6422	\$0.5046
40,000	\$3,363	\$21,080	\$24,443	\$2,172	\$17,056	\$19,228	\$4,483	\$21,078	\$25,561	\$2,836	\$17,222	\$20,058	\$1,117.89	4.6%	\$829.64	4.3%	\$0.6111	\$0.4807	\$0.6390	\$0.5015
45,000	\$3,688	\$23,715	\$27,403	\$2,349	\$19,188	\$21,537	\$4,932	\$23,713	\$28,646	\$3,080	\$19,375	\$22,455	\$1,242.30	4.5%	\$918.03	4.3%	\$0.6090	\$0.4786	\$0.6366	\$0.4990
50,000	\$4,014	\$26,350	\$30,364	\$2,525	\$21,320	\$23,845	\$5,382	\$26,348	\$31,730	\$3,323	\$21,528	\$24,852	\$1,366.72	4.5%	\$1,006.42	4.2%	\$0.6073	\$0.4769	\$0.6346	\$0.4970
55,000	\$4,339	\$28,985	\$33,324	\$2,702	\$23,452	\$26,154	\$5,832	\$28,983	\$34,815	\$3,567	\$23,681	\$27,248	\$1,491.14	4.5%	\$1,094.80	4.2%	\$0.6059	\$0.4755	\$0.6330	\$0.4954
60,000	\$4,664	\$31,620	\$36,284	\$2,878	\$25,584	\$28,462	\$6,282	\$31,618	\$37,900	\$3,811	\$25,834	\$29,645	\$1,615.56	4.5%	\$1,183.19	4.2%	\$0.6047	\$0.4744	\$0.6317	\$0.4941
75,000	\$5,640	\$39,525	\$45,165	\$3,407	\$31,980	\$35,387	\$7,632	\$39,522	\$47,154	\$4,543	\$32,292	\$36,835	\$1,988.81	4.4%	\$1,448.35	4.1%	\$0.6022	\$0.4718	\$0.6287	\$0.4911
100,000	\$7,266	\$52,700	\$59,966	\$4,289	\$42,640	\$46,929	\$9,881	\$52,696	\$62,577	\$5,763	\$43,056	\$48,819	\$2,610.89	4.4%	\$1,890.28	4.0%	\$0.5997	\$0.4693	\$0.6258	\$0.4882
150,000	\$10,518	\$79,050	\$89,568	\$6,053	\$63,960	\$70,013	\$14,379	\$79,044	\$93,423	\$8,203	\$64,584	\$72,787	\$3,855.07	4.3%	\$2,774.15	4.0%	\$0.5971	\$0.4668	\$0.6228	\$0.4852
200,000	\$13,771	\$105,400	\$119,171	\$7,817	\$85,280	\$93,097	\$18,877	\$105,392	\$124,270	\$10,642	\$86,112	\$96,755	\$5,099.24	4.3%	\$3,658.02	3.9%	\$0.5959	\$0.4655	\$0.6213	\$0.4838
percentiles																				
4,000	\$1,022	\$2,108	\$3,130				\$1,244	\$2,108	\$3,352				\$222.08	7.1%			\$0.7824		\$0.8379	
30,000	\$2,713	\$15,810	\$18,523				\$3,583	\$15,809	\$19,392				\$869.05	4.7%			\$0.6174		\$0.6464	
100,000	\$7,266	\$52,700	\$59,966				\$9,881	\$52,696	\$62,577				\$2,610.89	4.4%			\$0.5997		\$0.6258	
15,000				\$1,291	\$6,396	\$7,687				\$1,616	\$6,458	\$8,074			\$387.71	5.0%		\$0.5124		\$0.5383
50,000				\$2,525	\$21,320	\$23,845				\$3,323	\$21,528	\$24,852			\$1,006.42	4.2%		\$0.4769		\$0.4970
80,000				\$3,583	\$34,112	\$37,695				\$4,787	\$34,445	\$39,232			\$1,536.74	4.1%		\$0.4712		\$0.4904

Estimated Bill Percentiles per 2010 MCS

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.) Residential Non-Heating (R1)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	20	26	27	26	23	19	140
Winter:							
Cust. Chg	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$8.12	\$10.60	\$11.27	\$10.79	\$9.49	\$7.74	\$58.01
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$26.11	\$28.59	\$29.26	\$28.78	\$27.48	\$25.73	\$165.95
COG Rate - (Winter)	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718
COG amount - Winter	\$9.26	\$12.09	\$12.85	\$12.30	\$10.82	\$8.82	\$66.15
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
LDAC amount	\$0.65	\$0.84	\$0.90	\$0.86	\$0.75	\$0.61	\$4.61
Total Bill	\$36.02	\$41.53	\$43.01	\$41.94	\$39.06	\$35.16	\$236.71

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
14	11	9	9	11	13	69	209
\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95	\$215.89
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$5.99	\$4.72	\$3.83	\$3.92	\$4.37	\$5.53	\$28.37	\$86.38
\$23.98	\$22.72	\$21.82	\$21.91	\$22.36	\$23.53	\$136.32	\$302.27
\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.4396
\$5.41	\$4.27	\$3.46	\$3.54	\$3.95	\$5.00	\$25.64	\$91.79
\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
\$0.48	\$0.38	\$0.30	\$0.31	\$0.35	\$0.44	\$2.25	\$6.86
\$29.86	\$27.36	\$25.59	\$25.77	\$26.66	\$28.97	\$164.21	\$400.92

Winter Season (Jan. - Apr., Nov. - Dec.) Residential Non-Heating (R1)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	20	26	27	26	23	19	140
Winter:							
Cust. Chg	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$7.58	\$9.89	\$10.51	\$10.07	\$8.86	\$7.22	\$54.12
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$23.07	\$25.39	\$26.01	\$25.56	\$24.35	\$22.71	\$147.10
COG Rate - (Winter)	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737
COG amount - Winter	\$9.30	\$12.14	\$12.90	\$12.35	\$10.87	\$8.86	\$66.42
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310
LDAC amount	\$0.61	\$0.79	\$0.84	\$0.81	\$0.71	\$0.58	\$4.35
Total Bill	\$32.98	\$38.32	\$39.76	\$38.72	\$35.93	\$32.15	\$217.87
DIFFERENCE:							
Total Bill	\$3.04	\$3.20	\$3.25	\$3.22	\$3.13	\$3.01	\$18.84
% Change	9.21%	8.36%	8.17%	8.30%	8.71%	9.37%	8.65%
Base Rate	\$3.04	\$3.20	\$3.25	\$3.22	\$3.13	\$3.01	\$18.85
% Change	13.17%	12.62%	12.49%	12.58%	12.85%	13.26%	12.81%
COG & LDAC	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.01)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
14	11	9	9	11	13	69	209
\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98	\$185.96
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$5.59	\$4.41	\$3.58	\$3.66	\$4.08	\$5.16	\$26.47	\$80.60
\$21.08	\$19.91	\$19.07	\$19.16	\$19.58	\$20.66	\$119.45	\$266.56
\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.4401
\$5.38	\$4.24	\$3.44	\$3.52	\$3.93	\$4.97	\$25.48	\$91.90
\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310
\$0.45	\$0.35	\$0.29	\$0.29	\$0.33	\$0.41	\$2.13	\$6.47
\$26.91	\$24.50	\$22.80	\$22.97	\$23.83	\$26.04	\$147.06	\$364.93
\$2.96	\$2.86	\$2.79	\$2.80	\$2.83	\$2.92	\$17.15	\$35.99
10.98%	11.66%	12.23%	12.17%	11.88%	11.21%	11.66%	9.86%
\$2.90	\$2.81	\$2.75	\$2.76	\$2.79	\$2.86	\$16.86	\$35.71
13.73%	14.12%	14.42%	14.39%	14.24%	13.87%	14.12%	13.40%
\$0.06	\$0.05	\$0.04	\$0.04	\$0.04	\$0.06	\$0.29	\$0.28
1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	0.28%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.) Residential Heating (R3)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	83	122	145	139	105	62	657
Winter:							
Cust. Chg	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$54.29	\$79.49	\$94.79	\$90.32	\$68.73	\$40.72	\$428.33
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$72.28	\$97.48	\$112.78	\$108.31	\$86.72	\$58.71	\$536.28
COG Rate - (Winter)	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718
COG amount - Winter	\$39.29	\$57.52	\$68.59	\$65.36	\$49.73	\$29.46	\$309.96
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
LDAC amount	\$2.74	\$4.01	\$4.78	\$4.55	\$3.46	\$2.05	\$21.59
Total Bill	\$114.31	\$159.01	\$186.15	\$178.21	\$139.92	\$90.23	\$867.83

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
33	18	13	14	18	38	134	791
\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95	\$215.89
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$21.57	\$11.64	\$8.73	\$8.88	\$11.53	\$25.06	\$87.42	\$515.75
\$39.57	\$29.63	\$26.72	\$26.88	\$29.52	\$43.05	\$195.36	\$731.64
\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.4552
\$12.37	\$6.67	\$5.00	\$5.09	\$6.61	\$14.37	\$50.12	\$360.08
\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
\$1.09	\$0.59	\$0.44	\$0.45	\$0.58	\$1.26	\$4.41	\$26.00
\$53.02	\$36.89	\$32.16	\$32.42	\$36.71	\$58.69	\$249.89	\$1,117.71

Winter Season (Jan. - Apr., Nov. - Dec.) Residential Heating (R3)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	83	122	145	139	105	62	657
Winter:							
Cust. Chg	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$47.28	\$69.22	\$82.55	\$78.65	\$59.85	\$35.46	\$373.01
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$62.78	\$84.72	\$98.04	\$94.15	\$75.35	\$50.96	\$465.99
COG Rate - (Winter)	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737
COG amount - Winter	\$39.45	\$57.75	\$68.87	\$65.62	\$49.93	\$29.58	\$311.21
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310
LDAC amount	\$2.58	\$3.78	\$4.51	\$4.29	\$3.27	\$1.94	\$20.37
Total Bill	\$104.80	\$146.25	\$171.42	\$164.06	\$128.55	\$82.47	\$797.56
DIFFERENCE:							
Total Bill	\$9.50	\$12.76	\$14.73	\$14.15	\$11.37	\$7.75	\$70.26
% Change	9.07%	8.72%	8.59%	8.63%	8.84%	9.40%	8.81%
Base Rate	\$9.51	\$12.76	\$14.74	\$14.16	\$11.37	\$7.75	\$70.29
% Change	15.14%	15.06%	15.03%	15.04%	15.09%	15.22%	15.08%
COG & LDAC	(\$0.00)	(\$0.00)	(\$0.01)	(\$0.01)	(\$0.00)	(\$0.00)	(\$0.03)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
33	18	13	14	18	38	134	791
\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98	\$185.96
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$18.79	\$10.14	\$7.60	\$7.74	\$10.04	\$21.83	\$76.13	\$449.14
\$34.28	\$25.64	\$23.10	\$23.23	\$25.54	\$37.32	\$169.11	\$635.10
\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.4564
\$12.29	\$6.63	\$4.97	\$5.06	\$6.57	\$14.28	\$49.81	\$361.02
\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310
\$1.03	\$0.55	\$0.41	\$0.42	\$0.55	\$1.19	\$4.16	\$24.52
\$47.60	\$32.82	\$28.48	\$28.72	\$32.65	\$52.79	\$223.07	\$1,020.64
\$5.42	\$4.07	\$3.68	\$3.70	\$4.06	\$5.89	\$26.81	\$97.08
11.38%	12.41%	12.91%	12.88%	12.42%	11.16%	12.02%	9.51%
\$5.28	\$4.00	\$3.62	\$3.64	\$3.98	\$5.73	\$26.26	\$96.55
15.40%	15.60%	15.68%	15.67%	15.60%	15.36%	15.53%	15.20%
\$0.14	\$0.07	\$0.06	\$0.06	\$0.07	\$0.16	\$0.56	\$0.53
1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	0.14%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

141 Winter Season (Jan. - Apr., Nov. - Dec.)
142 Low Income Residential Heating (R4)

PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	81	118	140	133	103	62	636
Winter:							
Cust. Chg	\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$43.18
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$21.00	\$30.75	\$36.63	\$34.68	\$26.75	\$16.09	\$165.90
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$28.19	\$37.95	\$43.83	\$41.87	\$33.94	\$23.29	\$209.08
COG Rate - (Winter)	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718
COG amount - Winter	\$37.99	\$55.64	\$66.27	\$62.74	\$48.39	\$29.11	\$300.13
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
LDAC amount	\$2.65	\$3.88	\$4.62	\$4.37	\$3.37	\$2.03	\$20.90
Total Bill	\$68.83	\$97.46	\$114.71	\$108.98	\$85.70	\$54.42	\$530.11

Summer Season (May - Oct.)

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
33	18	14	14	18	38	134	770
\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$43.18	\$86.36
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$8.56	\$4.80	\$3.61	\$3.66	\$4.60	\$9.79	\$35.02	\$200.91
\$15.76	\$12.00	\$10.80	\$10.86	\$11.80	\$16.99	\$78.19	\$287.27
\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.4547
\$12.27	\$6.88	\$5.17	\$5.25	\$6.59	\$14.03	\$50.19	\$350.31
\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
\$1.08	\$0.60	\$0.45	\$0.46	\$0.58	\$1.23	\$4.41	\$25.32
\$29.10	\$19.48	\$16.42	\$16.57	\$18.97	\$32.25	\$132.79	\$662.90

171 Winter Season (Jan. - Apr., Nov. - Dec.)
172 Low Income Residential Heating (R4)

CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	81	118	140	133	103	62	636
Winter:							
Cust. Chg	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$37.19
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$18.29	\$26.79	\$31.90	\$30.20	\$23.30	\$14.01	\$144.50
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$24.49	\$32.99	\$38.10	\$36.40	\$29.50	\$20.21	\$181.69
COG Rate - (Winter)	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737
COG amount - Winter	\$38.14	\$55.86	\$66.53	\$62.99	\$48.58	\$29.23	\$301.33
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	0.0310
LDAC amount	\$2.50	\$3.66	\$4.35	\$4.12	\$3.18	\$1.91	\$19.72
Total Bill	\$65.12	\$92.50	\$108.99	\$103.51	\$81.26	\$51.35	\$502.74

Summer Season (May - Oct.)

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
33	18	14	14	18	38	134	770
\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$37.19	\$74.38
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$7.46	\$4.18	\$3.14	\$3.19	\$4.01	\$8.53	\$30.50	\$175.00
\$13.65	\$10.38	\$9.34	\$9.39	\$10.20	\$14.72	\$67.69	\$249.38
\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.3715	\$0.4559
\$12.19	\$6.84	\$5.14	\$5.22	\$6.55	\$13.94	\$49.88	\$351.21
\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310
\$1.02	\$0.57	\$0.43	\$0.44	\$0.55	\$1.16	\$4.16	\$23.88
\$26.87	\$17.79	\$14.90	\$15.04	\$17.30	\$29.83	\$121.73	\$624.48

202 DIFFERENCE:							
203 Total Bill	\$3.70	\$4.96	\$5.72	\$5.47	\$4.44	\$3.07	\$27.36
204 % Change	5.69%	5.36%	5.25%	5.28%	5.47%	5.98%	5.44%
205							
206 Base Rate	\$3.71	\$4.97	\$5.72	\$5.47	\$4.45	\$3.07	\$27.39
207 % Change	15.14%	15.05%	15.02%	15.03%	15.08%	15.20%	15.07%
208							
209 COG & LDAC	(\$0.00)	(\$0.00)	(\$0.01)	(\$0.01)	(\$0.00)	(\$0.00)	(\$0.02)
210 % Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

\$2.24	\$1.69	\$1.52	\$1.53	\$1.66	\$2.42	\$11.06	\$38.43
8.33%	9.52%	10.20%	10.16%	9.62%	8.10%	9.09%	6.15%
\$2.10	\$1.62	\$1.46	\$1.47	\$1.59	\$2.26	\$10.50	\$37.89
15.39%	15.58%	15.66%	15.66%	15.59%	15.35%	15.52%	15.19%
\$0.14	\$0.08	\$0.06	\$0.06	\$0.07	\$0.16	\$0.56	\$0.53
1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	0.14%

11-511

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.)							
Commercial/Industrial - Low Annual Use, High Winter Use (G-41)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	272	423	521	496	364	196	2,273
Winter:							
Cust. Chg	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.25
Headblock	\$54.33	\$54.33	\$54.33	\$54.33	\$54.33	\$54.33	\$326.00
Tailblock	\$62.84	\$117.86	\$153.80	\$144.50	\$96.49	\$35.00	\$610.49
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$183.88	\$238.90	\$274.84	\$265.54	\$217.54	\$156.04	\$1,336.74
COG Rate - (Winter)	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705
COG amount - Winter	\$128.06	\$198.99	\$245.33	\$233.33	\$171.45	\$92.17	\$1,069.32
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
LDAC amount	\$13.52	\$21.00	\$25.89	\$24.63	\$18.10	\$9.73	\$112.87
Total Bill	\$325.46	\$458.89	\$546.06	\$523.50	\$407.08	\$257.94	\$2,518.93

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
91	39	26	26	40	108	330	2,603
\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.25	\$800.51
\$10.87	\$10.87	\$10.87	\$10.87	\$10.87	\$10.87	\$65.20	\$391.20
\$25.82	\$6.95	\$2.07	\$2.36	\$7.25	\$32.09	\$76.56	\$687.04
\$103.40	\$84.53	\$79.65	\$79.94	\$84.83	\$109.66	\$542.01	\$1,878.75
\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.4577
\$33.51	\$14.42	\$9.48	\$9.78	\$14.72	\$39.85	\$121.75	\$1,191.07
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$4.51	\$1.94	\$1.28	\$1.31	\$1.98	\$5.36	\$16.38	\$129.25
\$141.42	\$100.89	\$90.41	\$91.03	\$101.53	\$154.87	\$680.14	\$3,199.07

Winter Season (Jan. - Apr., Nov. - Dec.)							
Commercial/Industrial - Low Annual Use, High Winter Use (G-41)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	272	423	521	496	364	196	2,273
Winter:							
Cust. Chg	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.76
Headblock	\$47.11	\$47.11	\$47.11	\$47.11	\$47.11	\$47.11	\$282.67
Tailblock	\$54.49	\$102.20	\$133.36	\$125.29	\$83.67	\$30.35	\$529.36
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$159.06	\$206.77	\$237.94	\$229.87	\$188.24	\$134.92	\$1,156.80
COG Rate - (Winter)	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724
COG amount - Winter	\$128.58	\$199.79	\$246.32	\$234.27	\$172.14	\$92.54	\$1,073.64
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
LDAC amount	\$13.01	\$20.22	\$24.92	\$23.71	\$17.42	\$9.36	\$108.64
Total Bill	\$300.65	\$426.78	\$509.18	\$487.85	\$377.80	\$236.82	\$2,339.08
DIFFERENCE:							
Total Bill	\$24.81	\$32.12	\$36.89	\$35.65	\$29.28	\$21.11	\$179.86
% Change	8.25%	7.53%	7.24%	7.31%	7.75%	8.91%	7.69%
Base Rate	\$24.82	\$32.13	\$36.91	\$35.67	\$29.29	\$21.12	\$179.94
% Change	15.60%	15.54%	15.51%	15.52%	15.56%	15.65%	15.56%
COG & LDAC	(\$0.01)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.01)	(\$0.01)	(\$0.09)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
91	39	26	26	40	108	330	2,603
\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.76	\$689.53
\$9.42	\$9.42	\$9.42	\$9.42	\$9.42	\$9.42	\$56.53	\$339.21
\$22.39	\$6.03	\$1.80	\$2.05	\$6.29	\$27.82	\$66.38	\$595.74
\$89.28	\$72.91	\$68.68	\$68.93	\$73.17	\$94.71	\$467.68	\$1,624.48
\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.4590
\$33.30	\$14.33	\$9.42	\$9.72	\$14.63	\$39.60	\$120.99	\$1,194.63
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
\$4.34	\$1.87	\$1.23	\$1.27	\$1.91	\$5.16	\$15.76	\$124.40
\$126.91	\$89.11	\$79.33	\$79.91	\$89.70	\$139.46	\$604.44	\$2,943.51
\$14.50	\$11.78	\$11.07	\$11.12	\$11.82	\$15.41	\$75.70	\$255.56
11.43%	13.22%	13.96%	13.91%	13.18%	11.05%	12.52%	8.68%
\$14.12	\$11.62	\$10.97	\$11.01	\$11.66	\$14.96	\$74.33	\$254.27
15.82%	15.93%	15.97%	15.97%	15.93%	15.79%	15.89%	15.65%
\$0.38	\$0.16	\$0.11	\$0.11	\$0.17	\$0.45	\$1.37	\$1.29
1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.10%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.) Commercial/Industrial - Medium Annual Use, High Winter Use (G-42)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	2,568	3,796	4,442	4,284	3,296	2,004	20,390
Winter:							
Cust. Chg	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$1,200.83
Headblock	\$499.87	\$499.87	\$499.87	\$499.87	\$499.87	\$499.87	\$2,999.22
Tailblock	\$522.19	\$931.43	\$1,146.64	\$1,093.74	\$764.63	\$334.59	\$4,793.22
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$1,222.20	\$1,631.44	\$1,846.65	\$1,793.75	\$1,464.63	\$1,034.60	\$8,993.27
COG Rate - (Winter)	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705
COG amount - Winter	\$1,208.12	\$1,786.19	\$2,090.18	\$2,015.45	\$1,550.56	\$943.12	\$9,593.61
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
LDAC amount	\$127.52	\$188.53	\$220.62	\$212.73	\$163.66	\$99.55	\$1,012.62
Total Bill	\$2,557.83	\$3,606.16	\$4,157.45	\$4,021.94	\$3,178.86	\$2,077.26	\$19,599.50

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
1,039	507	350	368	548	1,203	4,014	24,404
\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$1,200.83	\$2,401.67
\$199.95	\$199.95	\$174.72	\$184.06	\$199.95	\$199.95	\$1,158.58	\$4,157.80
\$212.86	\$35.52	\$0.00	\$0.00	\$49.14	\$267.46	\$564.98	\$5,358.20
\$612.95	\$435.61	\$374.86	\$384.20	\$449.23	\$667.54	\$2,924.39	\$11,917.66
\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.4538
\$383.62	\$187.05	\$129.05	\$135.95	\$202.15	\$444.13	\$1,481.95	\$11,075.56
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$51.60	\$25.16	\$17.36	\$18.29	\$27.19	\$59.74	\$199.34	\$1,211.96
\$1,048.17	\$647.82	\$521.27	\$538.44	\$678.56	\$1,171.42	\$4,605.69	\$24,205.19

Winter Season (Jan. - Apr., Nov. - Dec.) Commercial/Industrial - Medium Annual Use, High Winter Use (G-42)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	2,568	3,796	4,442	4,284	3,296	2,004	20,390
Winter:							
Cust. Chg	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35
Headblock	\$428.41	\$428.41	\$428.41	\$428.41	\$428.41	\$428.41	\$2,570.44
Tailblock	\$447.54	\$798.27	\$982.71	\$937.37	\$655.31	\$286.75	\$4,107.96
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$1,048.33	\$1,399.07	\$1,583.51	\$1,538.17	\$1,256.11	\$887.55	\$7,712.75
COG Rate - (Winter)	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724
COG amount - Winter	\$1,212.99	\$1,793.40	\$2,098.62	\$2,023.59	\$1,556.83	\$946.93	\$9,632.35
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
LDAC amount	\$122.74	\$181.47	\$212.35	\$204.76	\$157.53	\$95.82	\$974.65
Total Bill	\$2,384.07	\$3,373.93	\$3,894.47	\$3,766.52	\$2,970.46	\$1,930.29	\$18,319.75
DIFFERENCE:							
Total Bill	\$173.77	\$232.23	\$262.97	\$255.41	\$208.40	\$146.97	\$1,279.75
% Change	7.29%	6.88%	6.75%	6.78%	7.02%	7.61%	6.99%
Base Rate	\$173.87	\$232.37	\$263.14	\$255.58	\$208.53	\$147.04	\$1,280.53
% Change	16.58%	16.61%	16.62%	16.62%	16.60%	16.57%	16.60%
COG & LDAC	(\$0.10)	(\$0.14)	(\$0.17)	(\$0.16)	(\$0.13)	(\$0.08)	(\$0.78)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
1,039	507	350	368	548	1,203	4,014	24,404
\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35	\$2,068.71
\$171.36	\$171.36	\$149.74	\$157.75	\$171.36	\$171.36	\$992.94	\$3,563.38
\$182.43	\$30.44	\$0.00	\$0.00	\$42.11	\$229.22	\$484.21	\$4,592.17
\$526.19	\$374.20	\$322.13	\$330.14	\$385.87	\$572.97	\$2,511.50	\$10,224.25
\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.4550
\$381.23	\$185.89	\$128.24	\$135.10	\$200.89	\$441.37	\$1,472.72	\$11,105.07
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
\$49.67	\$24.22	\$16.71	\$17.60	\$26.17	\$57.50	\$191.87	\$1,166.52
\$957.09	\$584.30	\$467.09	\$482.85	\$612.93	\$1,071.84	\$4,176.09	\$22,495.84
\$91.09	\$63.52	\$54.18	\$55.59	\$65.64	\$99.58	\$429.60	\$1,709.34
9.52%	10.87%	11.60%	11.51%	10.71%	9.29%	10.29%	7.60%
\$86.76	\$61.41	\$52.73	\$54.06	\$63.36	\$94.57	\$412.89	\$1,693.42
16.49%	16.41%	16.37%	16.38%	16.42%	16.50%	16.44%	16.56%
\$4.32	\$2.11	\$1.45	\$1.53	\$2.28	\$5.01	\$16.71	\$15.93
1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.13%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.) Commercial/Industrial - High Annual Use, High Winter Use (G-43)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	23,661	31,955	31,276	29,903	24,765	17,078	158,638
Winter:							
Cust. Chg	\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$5,153.47
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$7,397.55	\$9,990.65	\$9,778.26	\$9,348.91	\$7,742.67	\$5,339.37	\$49,597.40
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$8,256.46	\$10,849.56	\$10,637.17	\$10,207.82	\$8,601.58	\$6,198.28	\$54,750.87
COG Rate - (Winter)	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705
COG amount - Winter	\$11,132.57	\$15,034.91	\$14,715.29	\$14,069.17	\$11,651.94	\$8,035.21	\$74,639.08
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
LDAC amount	\$1,175.06	\$1,586.96	\$1,553.22	\$1,485.02	\$1,229.88	\$848.13	\$7,878.26
Total Bill	\$20,564.08	\$27,471.43	\$26,905.68	\$25,762.01	\$21,483.40	\$15,081.61	\$137,268.21

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
11,030	6,524	5,278	6,059	7,044	12,595	48,531	207,169
\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$5,153.47	\$10,306.94
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$1,576.67	\$932.64	\$754.49	\$866.15	\$1,006.99	\$1,800.44	\$6,937.38	\$56,534.78
\$2,435.58	\$1,791.55	\$1,613.40	\$1,725.06	\$1,865.90	\$2,659.35	\$12,090.85	\$66,841.72
\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.4468
\$4,072.15	\$2,408.79	\$1,948.67	\$2,237.06	\$2,600.82	\$4,650.11	\$17,917.59	\$92,556.67
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$547.75	\$324.01	\$262.12	\$300.91	\$349.84	\$625.50	\$2,410.13	\$10,288.39
\$7,055.48	\$4,524.35	\$3,824.19	\$4,263.03	\$4,816.56	\$7,934.96	\$32,418.58	\$169,686.78

Winter Season (Jan. - Apr., Nov. - Dec.) Commercial/Industrial - High Annual Use, High Winter Use (G-43)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	23,661	31,955	31,276	29,903	24,765	17,078	158,638
Winter:							
Cust. Chg	\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$4,439.00
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$6,231.03	\$8,415.22	\$8,236.32	\$7,874.68	\$6,521.73	\$4,497.40	\$41,776.36
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$6,970.86	\$9,155.05	\$8,976.15	\$8,614.51	\$7,261.56	\$5,237.23	\$46,215.36
COG Rate - (Winter)	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724
COG amount - Winter	\$11,177.52	\$15,095.63	\$14,774.71	\$14,125.98	\$11,698.99	\$8,067.65	\$74,940.49
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
LDAC amount	\$1,131.00	\$1,527.46	\$1,494.99	\$1,429.34	\$1,183.77	\$816.33	\$7,582.89
Total Bill	\$19,279.38	\$25,778.13	\$25,245.85	\$24,169.84	\$20,144.32	\$14,121.21	\$128,738.74
DIFFERENCE:							
Total Bill	\$1,284.70	\$1,693.29	\$1,659.83	\$1,592.17	\$1,339.08	\$960.39	\$8,529.47
% Change	6.66%	6.57%	6.57%	6.59%	6.65%	6.80%	6.63%
Base Rate	\$1,285.60	\$1,694.51	\$1,661.02	\$1,593.31	\$1,340.02	\$961.05	\$8,535.51
% Change	18.44%	18.51%	18.50%	18.50%	18.45%	18.35%	18.47%
COG & LDAC	(\$0.90)	(\$1.22)	(\$1.19)	(\$1.14)	(\$0.94)	(\$0.65)	(\$6.04)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
11,030	6,524	5,278	6,059	7,044	12,595	48,531	207,169
\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$4,439.00	\$8,878.01
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$1,328.04	\$785.57	\$635.51	\$729.57	\$848.20	\$1,516.53	\$5,843.42	\$47,619.78
\$2,067.87	\$1,525.41	\$1,375.35	\$1,469.40	\$1,588.03	\$2,256.36	\$10,282.43	\$56,497.79
\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.4477
\$4,046.78	\$2,393.78	\$1,936.53	\$2,223.12	\$2,584.62	\$4,621.14	\$17,805.97	\$92,746.46
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
\$527.22	\$311.86	\$252.29	\$289.63	\$336.73	\$602.05	\$2,319.77	\$9,902.66
\$6,641.87	\$4,231.05	\$3,564.17	\$3,982.15	\$4,509.37	\$7,479.55	\$30,408.17	\$159,146.91
\$413.61	\$293.30	\$260.02	\$280.88	\$307.19	\$455.41	\$2,010.41	\$10,539.87
6.23%	6.93%	7.30%	7.05%	6.81%	6.09%	6.61%	6.62%
\$367.70	\$266.15	\$238.05	\$255.66	\$277.87	\$402.99	\$1,808.42	\$10,343.93
17.78%	17.45%	17.31%	17.40%	17.50%	17.86%	17.59%	18.31%
\$45.90	\$27.15	\$21.97	\$25.22	\$29.32	\$52.42	\$201.98	\$195.94
1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.19%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.)							
Commercial/Industrial - Low Annual Use, Low Winter Use (G-51)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	279	339	379	366	317	261	1,942
Winter:							
Cust. Chg	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.23
Headblock	\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$204.47
Tailblock	\$39.74	\$53.00	\$61.92	\$58.94	\$48.11	\$35.74	\$297.44
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$140.52	\$153.78	\$162.70	\$159.72	\$148.90	\$136.52	\$902.14
COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773
COG amount - Winter	\$133.33	\$161.88	\$181.10	\$174.67	\$151.36	\$124.70	\$927.04
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
LDAC amount	\$13.87	\$16.84	\$18.84	\$18.17	\$15.75	\$12.97	\$96.46
Total Bill	\$287.73	\$332.50	\$362.65	\$352.56	\$316.01	\$274.19	\$1,925.64

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
225	194	173	191	195	212	1,190	3,133
\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.23	\$800.46
\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$204.47	\$408.94
\$27.68	\$20.92	\$16.17	\$20.20	\$21.10	\$24.76	\$130.83	\$428.28
\$128.46	\$121.70	\$116.96	\$120.99	\$121.88	\$125.55	\$735.53	\$1,637.67
\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.4407
\$85.66	\$74.04	\$65.89	\$72.82	\$74.35	\$80.66	\$453.42	\$1,380.46
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$11.17	\$9.65	\$8.59	\$9.49	\$9.69	\$10.52	\$59.12	\$155.57
\$225.29	\$205.40	\$191.44	\$203.29	\$205.93	\$216.72	\$1,248.07	\$3,173.71

Winter Season (Jan. - Apr., Nov. - Dec.)							
Commercial/Industrial - Low Annual Use, Low Winter Use (G-51)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	279	339	379	366	317	261	1,942
Winter:							
Cust. Chg	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.74
Headblock	\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$170.36
Tailblock	\$33.11	\$44.16	\$51.59	\$49.11	\$40.09	\$29.77	\$247.83
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$118.96	\$130.01	\$137.44	\$134.96	\$125.94	\$115.63	\$762.94
COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792
COG amount - Winter	\$133.86	\$162.52	\$181.82	\$175.37	\$151.96	\$125.20	\$930.73
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
LDAC amount	\$13.35	\$16.21	\$18.14	\$17.49	\$15.16	\$12.49	\$92.84
Total Bill	\$266.18	\$308.74	\$337.41	\$327.82	\$293.06	\$253.31	\$1,786.51
DIFFERENCE:							
Total Bill	\$21.55	\$23.76	\$25.25	\$24.75	\$22.95	\$20.88	\$139.13
% Change	8.10%	7.70%	7.48%	7.55%	7.83%	8.24%	7.79%
Base Rate	\$21.56	\$23.77	\$25.26	\$24.76	\$22.96	\$20.89	\$139.20
% Change	18.12%	18.28%	18.38%	18.35%	18.23%	18.07%	18.25%
COG & LDAC	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.07)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
225	194	173	191	195	212	1,190	3,133
\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.74	\$689.49
\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$170.36	\$340.73
\$23.06	\$17.43	\$13.48	\$16.83	\$17.58	\$20.63	\$109.01	\$356.84
\$108.91	\$103.28	\$99.33	\$102.68	\$103.43	\$106.48	\$624.12	\$1,387.05
\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.4410
\$85.14	\$73.60	\$65.49	\$72.38	\$73.90	\$80.17	\$450.68	\$1,381.42
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
\$10.75	\$9.29	\$8.27	\$9.14	\$9.33	\$10.12	\$56.90	\$149.74
\$204.80	\$186.17	\$173.09	\$184.20	\$186.66	\$196.78	\$1,131.70	\$2,918.21
\$20.48	\$19.23	\$18.35	\$19.10	\$19.26	\$19.94	\$116.37	\$255.50
10.00%	10.33%	10.60%	10.37%	10.32%	10.14%	10.28%	8.76%
\$19.55	\$18.42	\$17.63	\$18.30	\$18.45	\$19.06	\$111.41	\$250.62
17.95%	17.84%	17.75%	17.82%	17.84%	17.90%	17.85%	18.07%
\$0.94	\$0.81	\$0.72	\$0.80	\$0.81	\$0.88	\$4.95	\$4.88
0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.32%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

Winter Season (Jan. - Apr., Nov. - Dec.) Commercial/Industrial - Medium Annual Use, Low Winter Use (G-52)							
PROPOSED	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	2,236	2,594	2,953	2,830	2,492	2,049	15,155
Winter:							
Cust. Chg	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$1,200.83
Headblock	\$292.58	\$292.58	\$292.58	\$292.58	\$292.58	\$292.58	\$1,755.48
Tailblock	\$240.82	\$310.61	\$380.56	\$356.65	\$290.77	\$204.35	\$1,783.76
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$733.54	\$803.33	\$873.28	\$849.37	\$783.49	\$697.07	\$4,740.08
COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773
COG amount - Winter	\$1,067.20	\$1,238.16	\$1,409.51	\$1,350.95	\$1,189.55	\$977.88	\$7,233.27
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
LDAC amount	\$111.04	\$128.83	\$146.66	\$140.56	\$123.77	\$101.75	\$752.60
Total Bill	\$1,911.78	\$2,170.32	\$2,429.45	\$2,340.89	\$2,096.81	\$1,776.70	\$12,725.95

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
1,655	1,433	1,349	1,430	1,501	1,720	9,088	24,242
\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$1,200.83	\$2,401.67
\$211.97	\$211.97	\$211.97	\$211.97	\$211.97	\$211.97	\$1,271.84	\$3,027.33
\$78.97	\$52.15	\$42.09	\$51.81	\$60.32	\$86.69	\$372.03	\$2,155.79
\$491.08	\$464.27	\$454.20	\$463.92	\$472.43	\$498.81	\$2,844.70	\$7,584.78
\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.4412
\$630.55	\$545.78	\$513.96	\$544.68	\$571.60	\$654.98	\$3,461.55	\$10,694.82
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$82.21	\$71.16	\$67.01	\$71.02	\$74.53	\$85.40	\$451.32	\$1,203.92
\$1,203.84	\$1,081.20	\$1,035.17	\$1,079.62	\$1,118.56	\$1,239.18	\$6,757.57	\$19,483.52

Winter Season (Jan. - Apr., Nov. - Dec.) Commercial/Industrial - Medium Annual Use, Low Winter Use (G-52)							
CURRENT	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
average Usage (Therms)	2,236	2,594	2,953	2,830	2,492	2,049	15,155
Winter:							
Cust. Chg	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35
Headblock	\$243.87	\$243.87	\$243.87	\$243.87	\$243.87	\$243.87	\$1,463.23
Tailblock	\$200.73	\$258.90	\$317.20	\$297.28	\$242.36	\$170.33	\$1,486.80
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$616.99	\$675.16	\$733.47	\$713.54	\$658.62	\$586.60	\$3,984.38
COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792
COG amount - Winter	\$1,071.45	\$1,243.09	\$1,415.12	\$1,356.33	\$1,194.29	\$981.78	\$7,262.06
COG Rate - (Summer)							
COG amount - Summer							
LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
LDAC amount	\$106.88	\$124.00	\$141.16	\$135.29	\$119.13	\$97.93	\$724.39
Total Bill	\$1,795.32	\$2,042.25	\$2,289.75	\$2,205.17	\$1,972.04	\$1,666.30	\$11,970.83

Summer Season (May - Oct.)							
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
1,655	1,433	1,349	1,430	1,501	1,720	9,088	24,242
\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35	\$2,068.71
\$176.68	\$176.68	\$176.68	\$176.68	\$176.68	\$176.68	\$1,060.11	\$2,523.33
\$65.82	\$43.47	\$35.08	\$43.18	\$50.28	\$72.26	\$310.09	\$1,796.89
\$414.90	\$392.55	\$384.16	\$392.26	\$399.35	\$421.34	\$2,404.55	\$6,388.93
\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.4415
\$626.74	\$542.48	\$510.86	\$541.40	\$568.15	\$651.02	\$3,440.65	\$10,702.71
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
\$79.13	\$68.49	\$64.50	\$68.35	\$71.73	\$82.19	\$434.40	\$1,158.79
\$1,120.77	\$1,003.52	\$959.51	\$1,002.01	\$1,039.23	\$1,154.56	\$6,279.59	\$18,250.42

DIFFERENCE:							
Total Bill	\$116.46	\$128.07	\$139.70	\$135.72	\$124.77	\$110.40	\$755.12
% Change	6.49%	6.27%	6.10%	6.15%	6.33%	6.63%	6.31%
Base Rate	\$116.55	\$128.17	\$139.81	\$135.83	\$124.86	\$110.48	\$755.70
% Change	18.89%	18.98%	19.06%	19.04%	18.96%	18.83%	18.97%
COG & LDAC	(\$0.09)	(\$0.10)	(\$0.11)	(\$0.11)	(\$0.09)	(\$0.08)	(\$0.58)
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

\$83.07	\$77.68	\$75.66	\$77.61	\$79.32	\$84.63	\$477.98	\$1,233.10
7.41%	7.74%	7.89%	7.75%	7.63%	7.33%	7.61%	6.76%
\$76.18	\$71.72	\$70.04	\$71.66	\$73.08	\$77.47	\$440.16	\$1,195.86
18.36%	18.27%	18.23%	18.27%	18.30%	18.39%	18.31%	18.72%
\$6.89	\$5.96	\$5.62	\$5.95	\$6.25	\$7.16	\$37.82	\$37.25
0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.31%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

561	Winter Season (Jan. - Apr., Nov. - Dec.)						
562	Commercial/Industrial - High Annual Use, Load Factor Less Than 90% (G-53)						
563	PROPOSED						
564		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
565	average Usage (Therms)	27,160	31,349	35,590	32,054	29,450	24,278
566							179,882
567	Winter:						
568	Cust. Chg	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94
569	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
570	Tailblock	\$5,681.96	\$6,558.33	\$7,445.50	\$6,705.72	\$6,161.05	\$5,079.01
571	HB Threshold						
572							
573	Summer:						
574	Cust. Chg						
575	Headblock						
576	Tailblock						
577	HB Threshold						
578							
579	Total Base Rate Amount	\$6,565.90	\$7,442.28	\$8,329.44	\$7,589.66	\$7,044.99	\$5,962.95
580							\$42,935.22
581	COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773
582	COG amount - Winter	\$12,963.57	\$14,963.03	\$16,987.12	\$15,299.29	\$14,056.61	\$11,587.92
583							\$85,857.54
584	COG Rate - (Summer)						
585	COG amount - Summer						
586							
587	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
588	LDAC amount	\$1,348.83	\$1,556.87	\$1,767.47	\$1,591.85	\$1,462.56	\$1,205.69
589							\$8,933.27
590	Total Bill	\$20,878.30	\$23,962.18	\$27,084.03	\$24,480.80	\$22,564.15	\$18,756.57
							\$137,726.03

Summer Season (May - Oct.)								
	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
	21,519	19,047	19,313	21,119	19,654	22,956	123,608	303,490
	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$5,303.65	\$10,607.30
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$2,159.31	\$1,911.32	\$1,938.03	\$2,119.27	\$1,972.17	\$2,303.59	\$12,403.69	\$50,035.25
	\$3,043.25	\$2,795.26	\$2,821.97	\$3,003.21	\$2,856.11	\$3,187.53	\$17,707.34	\$60,642.56
	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.4380
	\$8,196.40	\$7,255.05	\$7,356.45	\$8,044.40	\$7,486.04	\$8,744.03	\$47,082.38	\$132,939.91
	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
	\$1,068.65	\$945.92	\$959.14	\$1,048.83	\$976.03	\$1,140.05	\$6,138.62	\$15,071.89
	\$12,308.30	\$10,996.23	\$11,137.56	\$12,096.44	\$11,318.19	\$13,071.61	\$70,928.34	\$208,654.36

591	Winter Season (Jan. - Apr., Nov. - Dec.)						
592	Commercial/Industrial - High Annual Use, Load Factor Less Than 90% (G-53)						
593	CURRENT						
594		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
595	average Usage (Therms)	27,160	31,349	35,590	32,054	29,450	24,278
596							179,882
597	Winter:						
598	Cust. Chg	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39
599	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
600	Tailblock	\$4,629.87	\$5,343.97	\$6,066.86	\$5,464.06	\$5,020.25	\$4,138.57
601	HB Threshold						
602							
603	Summer:						
604	Cust. Chg						
605	Headblock						
606	Tailblock						
607	HB Threshold						
608							
609	Total Base Rate Amount	\$5,391.26	\$6,105.36	\$6,828.26	\$6,225.46	\$5,781.64	\$4,899.96
610							\$35,231.94
611	COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792
612	COG amount - Winter	\$13,015.17	\$15,022.60	\$17,054.74	\$15,360.19	\$14,112.57	\$11,634.05
613							\$86,199.31
614	COG Rate - (Summer)						
615	COG amount - Summer						
616							
617	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
618	LDAC amount	\$1,298.26	\$1,498.50	\$1,701.20	\$1,532.17	\$1,407.72	\$1,160.49
619							\$8,598.35
620	Total Bill	\$19,704.69	\$22,626.46	\$25,584.20	\$23,117.82	\$21,301.93	\$17,694.50
621							\$130,029.60
622	DIFFERENCE:						
623	Total Bill	\$1,173.61	\$1,335.72	\$1,499.83	\$1,362.98	\$1,262.23	\$1,062.07
624	% Change	5.96%	5.90%	5.86%	5.90%	5.93%	6.00%
625							5.92%
626	Base Rate	\$1,174.64	\$1,336.91	\$1,501.18	\$1,364.20	\$1,263.35	\$1,063.00
627	% Change	21.79%	21.90%	21.98%	21.91%	21.85%	21.69%
628							21.86%
629	COG & LDAC	(\$1.03)	(\$1.19)	(\$1.36)	(\$1.22)	(\$1.12)	(\$0.92)
630	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)								
	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
	21,519	19,047	19,313	21,119	19,654	22,956	123,608	303,490
	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37	\$9,136.73
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$1,759.49	\$1,557.41	\$1,579.18	\$1,726.86	\$1,607.00	\$1,877.05	\$10,106.98	\$40,770.55
	\$2,520.88	\$2,318.81	\$2,340.57	\$2,488.25	\$2,368.39	\$2,638.44	\$14,675.34	\$49,907.28
	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.4382
	\$8,146.91	\$7,211.24	\$7,312.03	\$7,995.82	\$7,440.84	\$8,691.23	\$46,798.08	\$132,997.39
	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
	\$1,028.58	\$910.45	\$923.18	\$1,009.51	\$939.44	\$1,097.31	\$5,908.47	\$14,506.82
	\$11,696.37	\$10,440.50	\$10,575.78	\$11,493.58	\$10,748.67	\$12,426.98	\$67,381.89	\$197,411.49
	\$611.93	\$555.73	\$561.78	\$602.86	\$569.52	\$644.63	\$3,546.44	\$11,242.87
	5.23%	5.32%	5.31%	5.25%	5.30%	5.19%	5.26%	5.70%
	\$522.37	\$476.45	\$481.40	\$514.96	\$487.72	\$549.09	\$3,032.00	\$10,735.28
	20.72%	20.55%	20.57%	20.70%	20.59%	20.81%	20.66%	21.51%
	\$89.56	\$79.27	\$80.38	\$87.90	\$81.80	\$95.54	\$514.45	\$507.59
	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.34%

Line
No

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Bill Impact Analysis - Cost of Gas Filing Methodology

631	Winter Season (Jan. - Apr., Nov. - Dec.)						
632	Commercial/Industrial - High Annual Use, Load Factor Greater Than 90% (G-54)						
633	PROPOSED						
634		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
635	average Usage (Therms)	61,794	48,201	46,759	46,199	40,987	48,188
636							292,128
637	Winter:						
638	Cust. Chg	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$5,303.65
639	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
640	Tailblock	\$5,559.41	\$4,336.53	\$4,206.81	\$4,156.44	\$3,687.49	\$4,335.34
641	HB Threshold						\$26,282.01
642							
643	Summer:						
644	Cust. Chg						
645	Headblock						
646	Tailblock						
647	HB Threshold						
648							
649	Total Base Rate Amount	\$6,443.35	\$5,220.47	\$5,090.75	\$5,040.38	\$4,571.43	\$5,219.28
650							\$31,585.66
651	COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773
652	COG amount - Winter	\$29,494.06	\$23,006.38	\$22,318.15	\$22,050.94	\$19,563.06	\$23,000.04
653							\$139,432.64
654	COG Rate - (Summer)						
655	COG amount - Summer						
656							
657	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
658	LDAC amount	\$3,068.79	\$2,393.76	\$2,322.15	\$2,294.35	\$2,035.49	\$2,393.10
659							\$14,507.63
660	Total Bill	\$39,006.20	\$30,620.61	\$29,731.05	\$29,385.66	\$26,169.99	\$30,612.42
							\$185,525.93

Summer Season (May - Oct.)							
	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	2020/21 Total
	58,766	61,809	64,600	68,379	65,031	64,466	
							383,051
							675,179
	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$5,303.65
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$2,867.24	\$3,015.75	\$3,151.90	\$3,336.30	\$3,172.92	\$3,145.38	\$18,689.48
							\$44,971.50
	\$3,751.18	\$3,899.69	\$4,035.84	\$4,220.24	\$4,056.86	\$4,029.32	\$23,993.14
							\$55,578.80
	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.4226
	\$22,383.82	\$23,543.16	\$24,606.08	\$26,045.63	\$24,770.18	\$24,555.16	\$145,904.03
							\$285,336.67
	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
	\$2,918.41	\$3,069.57	\$3,208.15	\$3,395.84	\$3,229.55	\$3,201.51	\$19,023.03
							\$33,530.66
	\$29,053.41	\$30,512.42	\$31,850.08	\$33,661.71	\$32,056.59	\$31,785.99	\$188,920.20
							\$374,446.13

661	Winter Season (Jan. - Apr., Nov. - Dec.)						
662	Commercial/Industrial - High Annual Use, Load Factor Greater Than 90% (G-54)						
663	CURRENT						
664		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
665	average Usage (Therms)	61,794	48,201	46,759	46,199	40,987	48,188
666							292,128
667	Winter:						
668	Cust. Chg	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37
669	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
670	Tailblock	\$4,019.42	\$3,135.29	\$3,041.49	\$3,005.08	\$2,666.03	\$3,134.42
671	HB Threshold						\$19,001.73
672							
673	Summer:						
674	Cust. Chg						
675	Headblock						
676	Tailblock						
677	HB Threshold						
678							
679	Total Base Rate Amount	\$4,780.81	\$3,896.68	\$3,802.89	\$3,766.47	\$3,427.43	\$3,895.82
680							\$23,570.10
681	COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792
682	COG amount - Winter	\$29,611.47	\$23,097.96	\$22,407.00	\$22,138.72	\$19,640.94	\$23,091.60
683							\$139,987.68
684	COG Rate - (Summer)						
685	COG amount - Summer						
686							
687	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
688	LDAC amount	\$2,953.73	\$2,304.01	\$2,235.09	\$2,208.33	\$1,959.18	\$2,303.38
689							\$13,963.71
690	Total Bill	\$37,346.02	\$29,298.66	\$28,444.97	\$28,113.52	\$25,027.54	\$29,290.79
691							\$177,521.50
692	DIFFERENCE:						
693	Total Bill	\$1,660.18	\$1,321.96	\$1,286.08	\$1,272.15	\$1,142.44	\$1,321.63
694	% Change	4.45%	4.51%	4.52%	4.53%	4.56%	4.51%
695							4.51%
696	Base Rate	\$1,662.54	\$1,323.79	\$1,287.86	\$1,273.91	\$1,144.01	\$1,323.46
697	% Change	34.78%	33.97%	33.87%	33.82%	33.38%	33.97%
698							34.01%
699	COG & LDAC	(\$2.35)	(\$1.84)	(\$1.78)	(\$1.76)	(\$1.56)	(\$1.84)
700	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season (May - Oct.)							
	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	2020/21 Total
	58,766	61,809	64,600	68,379	65,031	64,466	
							383,051
							675,179
	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$2,073.00	\$2,180.37	\$2,278.80	\$2,412.12	\$2,294.00	\$2,274.09	\$13,512.38
							\$32,514.12
	\$2,834.39	\$2,941.76	\$3,040.20	\$3,173.52	\$3,055.40	\$3,035.48	\$18,080.75
							\$41,650.85
	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.4221
	\$22,248.66	\$23,401.00	\$24,457.50	\$25,888.36	\$24,620.61	\$24,406.89	\$145,023.01
							\$285,010.70
	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
	\$2,809.00	\$2,954.48	\$3,087.87	\$3,268.52	\$3,108.47	\$3,081.48	\$18,309.83
							\$32,273.54
	\$27,892.04	\$29,297.25	\$30,585.57	\$32,330.40	\$30,784.47	\$30,523.85	\$181,413.59
							\$358,935.08
	\$1,161.37	\$1,215.17	\$1,264.50	\$1,331.31	\$1,272.12	\$1,262.14	\$7,506.61
	4.16%	4.15%	4.13%	4.12%	4.13%	4.13%	4.14%
							4.32%
	\$916.79	\$957.93	\$995.64	\$1,046.72	\$1,001.47	\$993.84	\$5,912.39
	32.35%	32.56%	32.75%	32.98%	32.78%	32.74%	32.70%
							33.44%
	\$244.58	\$257.24	\$268.86	\$284.59	\$270.65	\$268.30	\$1,594.22
	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%
							\$1,583.10
							0.50%