

Northern Utilities, Inc.
Calculation of Lost Revenue Rate (LRR)
Effective November 1, 2018

Line	Sector		Reference
Residential Classes- R5, R6, R10, R11			
1	Sector Ending Balance-October 31, 2018	\$ 6,231	Page 2, Ln 2, Nov-2018
2	Lost Distribution Revenue-November 2018 through October 2019	\$ 136,054	Page 2, Ln 12, Total
3	Interest- November 2018 through October 2019	<u>\$ (992)</u>	Page 2, Ln 25, Total
4	Total to be recovered	\$ 141,293	Line 1+ Line 2+Line 3
5	Sector Sales - Therms- November 2018 through October 2019	<u>19,742,687</u>	Page 2, Line 15
6	Lost Revenue Rate (\$ per therm)	\$0.0072	Line 4 / Line 5
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Commercial & Industrial Classes-G40, G50, G41, G51, G42, G-52			
7	Sector Ending Balance-October 31, 2018	(5,050)	Page 2, Ln 29, Nov-2018
8	Lost Distribution Revenue-November 2018 through October 2019	\$ 85,811	Page 2, Ln 40, Total
9	Interest- November 2018 through October 2019	<u>\$ (714)</u>	Page 2, Ln 53, Total
10	Total to be recovered	\$ 80,046	Line 7+Line 8+Line 9
11	Sector Sales - Therms- November 2018 through October 2019	<u>55,326,580</u>	Page 2, Line 43
12	Lost Revenue Rate (\$ per therm)	\$0.0014	Line 10 / Line 11

Northern Utilities, Inc.
 Lost Revenue Reconciliation
 2019

Line	Sector / Description	Unit	Estimate Nov-18	Estimate Dec-18	Estimate Jan-19	Estimate Feb-19	Estimate Mar-19	Estimate Apr-19	Estimate May-19	Estimate Jun-19	Estimate Jul-19	Estimate Aug-19	Estimate Sep-19	Estimate Oct-19	Total
1	RESIDENTIAL														
2	Beginning Balance - (Over)/Under	\$'s	\$ 6,231	\$ 5,186	\$ (1,369)	\$ (16,953)	\$ (32,855)	\$ (41,583)	\$ (46,371)	\$ (44,502)	\$ (38,663)	\$ (30,321)	\$ (20,978)	\$ (10,837)	
3	COSTS														
4	Incremental Annualized Savings	Therms	16,984	18,550	1,603	3,205	4,684	6,287	7,890	9,492	11,095	12,697	14,177	15,779	122,443
5	Incremental Monthly Savings	Therms	1,415	1,546	134	267	390	524	657	791	925	1,058	1,181	1,315	10,204
6															-
7	Cumulative Savings - Current	Therms	1,415	2,961	3,095	3,362	3,752	4,276	4,934	5,725	6,649	7,707	8,889	10,204	62,968
8	Cumulative Savings - Prior	Therms	12,973	12,973	12,973	12,973	12,973	12,973	12,973	12,973	12,973	12,973	12,973	12,973	129,727
9	Cumulative LBR Savings	Therms	14,388	15,934	16,067	16,334	16,725	17,249	17,906	18,697	19,622	20,680	21,861	23,176	218,640
10															
11	Average Distribution Rate	\$/Therm	\$ 0.6655	\$ 0.6655	\$ 0.6655	\$ 0.6655	\$ 0.6655	\$ 0.6655	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.5880	
12	Lost Distribution Revenue	\$'s	\$ 9,576	\$ 10,605	\$ 10,693	\$ 10,871	\$ 11,131	\$ 11,480	\$ 10,528	\$ 10,993	\$ 11,537	\$ 12,159	\$ 12,854	\$ 13,627	\$ 136,054
13															
14	REVENUE														
15	Sector Sales	Therms	1,509,473	2,374,168	3,639,654	3,701,124	2,733,747	2,233,117	1,176,527	693,947	425,956	378,689	370,740	505,546	19,742,687
16	Lost Revenue Rate	\$/Therm	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	
17	Revenue	\$'s	\$ 10,868	\$ 17,094	\$ 26,206	\$ 26,648	\$ 19,683	\$ 16,078	\$ 8,471	\$ 4,996	\$ 3,067	\$ 2,727	\$ 2,669	\$ 3,640	\$ 142,147
18															
19	(Over)/Under-Recovery (Exc interest)	\$	\$ 4,939	\$ (1,304)	\$ (16,881)	\$ (32,729)	\$ (41,407)	\$ (46,182)	\$ (44,314)	\$ (38,505)	\$ (30,193)	\$ (20,889)	\$ (10,793)	\$ (850)	
20															
21	INTEREST														
22	Average Monthly Balance	\$	\$ 5,585	\$ 1,941	\$ (9,125)	\$ (24,841)	\$ (37,131)	\$ (43,882)	\$ (45,343)	\$ (41,504)	\$ (34,428)	\$ (25,605)	\$ (15,885)	\$ (5,844)	
23	Interest Rate-WSJ Prime Rate	Annual %	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	Total
24	Days per Month		30	31	31	28	31	30	31	30	31	31	30	31	365
25	Computed Interest	\$'s	\$ 247	\$ (65)	\$ (72)	\$ (126)	\$ (176)	\$ (190)	\$ (188)	\$ (158)	\$ (128)	\$ (89)	\$ (44)	\$ (4)	\$ (992)
26															
27	Ending Balance	\$'s	\$ 5,186	\$ (1,369)	\$ (16,953)	\$ (32,855)	\$ (41,583)	\$ (46,371)	\$ (44,502)	\$ (38,663)	\$ (30,321)	\$ (20,978)	\$ (10,837)	\$ (854)	
28	COMMERCIAL & INDUSTRIAL														
29	Beginning Balance - (Over)/Under	\$'s	\$ (5,050)	\$ (4,337)	\$ (4,725)	\$ (8,137)	\$ (11,154)	\$ (12,017)	\$ (11,107)	\$ (10,901)	\$ (8,570)	\$ (6,033)	\$ (3,248)	\$ (34)	
30															
31	COSTS														
32	Incremental Annualized Savings	Therms	34,773	37,979	3,169	6,339	9,264	12,434	15,603	18,772	21,941	25,111	28,036	31,206	244,627
33	Incremental Monthly Savings	Therms	2,898	3,165	264	528	772	1,036	1,300	1,564	1,828	2,093	2,336	2,600	20,386
34															-
35	Cumulative Savings - Current	Therms	2,898	6,063	6,327	6,855	7,627	8,663	9,963	11,528	13,356	15,449	17,785	20,386	126,899
36	Cumulative Savings - Prior	Therms	36,620	36,620	36,620	36,620	36,620	36,620	36,620	36,620	36,620	36,620	36,620	36,620	366,199
37	Cumulative LBR Savings	Therms	39,518	42,683	42,947	43,475	44,247	45,283	46,583	48,148	49,976	52,069	54,405	57,005	566,338
38															
39	Average Distribution Rate	\$/Therm	\$ 0.1913	\$ 0.1913	\$ 0.1913	\$ 0.1913	\$ 0.1913	\$ 0.1913	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1182	
40	Lost Distribution Revenue	\$'s	\$ 7,561	\$ 8,166	\$ 8,217	\$ 8,318	\$ 8,465	\$ 8,664	\$ 5,505	\$ 5,690	\$ 5,906	\$ 6,153	\$ 6,429	\$ 6,737	\$ 85,811
41															
42	REVENUE														
43	Sector Sales	Therms	4,743,334	5,949,685	8,281,593	8,065,912	6,626,460	5,506,128	3,751,759	2,374,269	2,388,382	2,396,136	2,296,955	2,945,966	55,326,577
44	Lost Revenue Rate	\$/Therm	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	\$0.0014	
45	Revenue	\$'s	\$ 6,641	\$ 8,330	\$ 11,594	\$ 11,292	\$ 9,277	\$ 7,709	\$ 5,252	\$ 3,324	\$ 3,344	\$ 3,355	\$ 3,216	\$ 4,124	\$ 77,457
46															
47	(Over)/Under-Recovery (Exc interest)	\$'s	\$ (4,130)	\$ (4,500)	\$ (8,103)	\$ (11,112)	\$ (11,966)	\$ (11,062)	\$ (10,854)	\$ (8,535)	\$ (6,007)	\$ (3,234)	\$ (34)	\$ 2,578	
48															
49	INTEREST														
50	Average Monthly Balance	\$	\$ (4,590)	\$ (4,418)	\$ (6,414)	\$ (9,624)	\$ (11,560)	\$ (11,539)	\$ (10,981)	\$ (9,718)	\$ (7,289)	\$ (4,634)	\$ (1,641)	\$ 1,272	
51	Interest Rate-WSJ Prime Rate	Annual %	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	Total
52	Days per Month		30	31	31	28	31	30	31	30	31	31	30	31	365
53	Computed Interest	\$'s	\$ (207)	\$ (225)	\$ (34)	\$ (43)	\$ (51)	\$ (45)	\$ (46)	\$ (35)	\$ (26)	\$ (14)	\$ (0)	\$ 11	\$ (714)
54															
55	Ending Balance	\$'s	\$ (4,337)	\$ (4,725)	\$ (8,137)	\$ (11,154)	\$ (12,017)	\$ (11,107)	\$ (10,901)	\$ (8,570)	\$ (6,033)	\$ (3,248)	\$ (34)	\$ 2,589	

NOTES:
 Line 11 and Line 39, see page 3.
 Line 4 and Line 32, see Page 4.

Northern Utilities, Inc.

Summary of Average Distribution Rate for Lost Revenue

Calculation of Average Distribution Rate for Lost Revenue (Detail)														
	(1) Number of Customers	(2) Customer Charge	(3)=(1)X(2) Calculated Customer Charge Revenue	(4) Billing Determinants - Winter		(5) Winter Distribution Rates		(6) = (4) X (5) Winter Distribution Revenue	(7) Billing Determinants - Summer		(8) Summer Distribution Rates		(9) = (7) X (8) Summer Distribution Revenue	
				First	Excess	First	Excess		First	Excess	First	Excess		
				Therms	Therms	Therms \$/thm	Therms \$/thm		Therms	Therms	Therms \$/thm	Therms \$/thm		Revenue
R-5 Residential, Heating	276,624	\$21.36	\$5,908,689	6,004,830	7,696,559	\$ 0.6660	\$ 0.6660	\$9,125,125	2,787,733	404,009	\$ 0.5870	\$ 0.5870	\$1,873,553	
R-10 Residential Heating, Low Income	9,283	\$8.54	\$79,277	218,844	207,950	\$ 0.6660	\$ 0.6660	\$284,245	83,384	11,668	\$ 0.5870	\$ 0.5870	\$55,796	
R-6 Residential, Non-Heating	16,385	\$21.36	\$349,984	54,507	97,776	\$ 0.6227	\$ 0.6227	\$94,827	55,088	36,667	\$ 0.6227	\$ 0.6227	\$57,136	
Total Residential Service	302,292		\$6,337,949	6,278,181	8,002,285			\$9,504,197	2,895,717	452,344			\$1,986,484	
G-40 Low Annual, High Winter Use	60,096	\$72.26	\$4,342,537	1,911,562	6,729,793	\$ 0.1795	\$ 0.1795	\$1,551,123	740,593	701,803	\$ 0.1795	\$ 0.1795	\$258,910	
G-50 Low Annual, Low Winter Use	9,672	\$72.26	\$698,899	223,046	707,885	\$ 0.1795	\$ 0.1795	\$167,102	220,235	600,792	\$ 0.1795	\$ 0.1795	\$147,374	
G-41 Medium Annual, High Winter Use	7,657	\$214.26	\$1,640,589	10,225,592		\$ 0.2334		\$2,386,653	2,464,309		\$ 0.1824		\$449,490	
G-51 Medium Annual, Low Winter Use	3,118	\$214.26	\$668,063	1,632,744	973,871	\$ 0.1648	\$ 0.1346	\$400,159	1,266,445	679,409	\$ 0.1287	\$ 0.1046	\$234,058	
G-42 High Annual, High Winter Use	394	\$1,285.55	\$506,507	4,787,340		\$ 0.1909		\$913,903	1,601,048		\$ 0.1161		\$185,882	
G-52 High Annual, Low Winter Use	397	\$1,285.55	\$510,363	8,385,776		\$ 0.1655		\$1,387,846	7,095,551		\$ 0.0762		\$540,681	
Total General Service	81,334		\$8,366,957	27,166,060	8,411,549			\$6,806,787	13,388,181	1,982,004			\$1,816,395	
Total Company	383,626		\$14,704,906	33,444,241	16,413,834			\$16,310,983	16,283,898	2,434,348			\$3,802,879	

Notes:

Column (1), Column (4) and Column (7): 2017 actual billing determinants.

Column (2), Column (5) and Column (8): Winter and Summer distribution rates effective May 1, 2018.

R-11 Rate Class is closed May 1, 2017. R-11 Rate Class Customers migrated to R-6 Rate Class.

Based on Actual Billing Determinants for 2017 at Current Distribution Rates- Winter

	(1) Total Volumetric Revenue	(2) Total Winter therms	(3)=(1)/(2) Average Distribution Rate \$/therm
R-5	\$9,125,125	13,701,389	\$0.6660
R-10	\$284,245	426,794	\$0.6660
R-6	\$94,827	152,283	\$0.6227
Total Residential Service	\$9,504,197	14,280,466	\$0.6655
G-40	\$1,551,123	8,641,355	\$0.1795
G-50	\$167,102	930,931	\$0.1795
G-41	\$2,386,653	10,225,592	\$0.2334
G-51	\$400,159	2,606,615	\$0.1535
G-42	\$913,903	4,787,340	\$0.1909
G-52	\$1,387,846	8,385,776	\$0.1655
Total General Service	\$6,806,787	35,577,609	\$0.1913

Based on Actual Billing Determinants for 2017 at Current Distribution Rates- Summer

	(1) Total Volumetric Revenue	(2) Total Summer therms	(3)=(1)/(2) Average Distribution Rate \$/therm
R-5	\$1,873,553	3,191,742	\$0.5870
R-10	\$55,796	95,052	\$0.5870
R-6	\$57,136	91,755	\$0.6227
Total Residential Service	\$1,986,484	3,378,549	\$0.5880
G-40	\$258,910	1,442,396	\$0.1795
G-50	\$147,374	821,027	\$0.1795
G-41	\$449,490	2,464,309	\$0.1824
G-51	\$234,058	1,945,854	\$0.1203
G-42	\$185,882	1,601,048	\$0.1161
G-52	\$540,681	7,095,551	\$0.0762
Total General Service	\$1,816,395	15,370,185	\$0.1182
Total	\$ 20,113,862	68,606,809	

Calculation of Average Distribution Rate for Lost Revenue Winter and Summer (Summary)

	(10)=(3)	(11) = (6) + (9)	(12)=(10)+(11)	(13)=(4)+(7)
	Total Calculated Customer	Total Volumetric Revenue	Total Distribution Revenue	Total Annual Therms
R-5	\$5,908,689	\$10,998,678	\$16,907,366	16,893,131
R-10	\$79,277	\$340,040	\$419,317	521,846
R-6	\$349,984	\$151,962	\$501,946	244,038
Total Residential Service	\$6,337,949	\$11,490,680	\$17,828,629	17,659,015
G-40	\$4,342,537	\$1,810,033	\$6,152,570	10,083,751
G-50	\$698,899	\$314,476	\$1,013,375	1,751,958
G-41	\$1,640,589	\$2,836,143	\$4,476,732	12,689,901
G-51	\$668,063	\$634,217	\$1,302,280	4,552,469
G-42	\$506,507	\$1,099,785	\$1,606,292	6,388,388
G-52	\$510,363	\$1,928,527	\$2,438,890	15,481,327
Total General Service	\$8,366,957	\$8,623,182	\$16,990,139	50,947,794
Total Company	\$14,704,906	\$20,113,862	\$34,818,768	68,606,809

**Northern Utilities, Inc.
 Gas Savings for LRR Calculation**

Planned Gas Savings - 2019		REVISÉD (1)
		Annual
1.	<u>Residential Programs</u>	<u>Therms</u>
2.	Home Energy Assistance	19,474
3.	EnergyStar® Homes	14,405
4.	Home Perf w/ EnergyStar®	16,552
5.	EnergyStar® Appliances	40,324
6.	Home Energy Reports	<u>32,520</u>
7.	Residential	123,275
8.		
9.	<u>Commercial & Industrial Programs</u>	
10.	Large Business Energy Solutions	161,503
11.	Small Business Energy Solutions	82,291
12.	Education (Gas)	-
13.	Commercial & Industrial	<u>243,794</u>

LBR Savings Allocation		Unit	Estimate Nov-18	Estimate Dec-18	Estimate Jan-19	Estimate Feb-19	Estimate Mar-19	Estimate Apr-19	Estimate May-19	Estimate Jun-19	Estimate Jul-19	Estimate Aug-19	Estimate Sep-19	Estimate Oct-19	Estimate Nov-19	Estimate Dec-19	Nov-18 to Oct-19 Total	Jan 19 to Dec-19 Total
14.	<u>Residential Programs</u>		<u>14.1%</u>	<u>15.4%</u>	<u>1.3%</u>	<u>2.6%</u>	<u>3.8%</u>	<u>5.1%</u>	<u>6.4%</u>	<u>7.7%</u>	<u>9.0%</u>	<u>10.3%</u>	<u>11.5%</u>	<u>12.8%</u>	<u>14.1%</u>	<u>15.4%</u>	<u>100.0%</u>	<u>100.0%</u>
15.	Annualized Therms (2)	Therms	16,984	18,550	1,603	3,205	4,684	6,287	7,890	9,492	11,095	12,697	14,177	15,779	17,382	18,984	122,443	123,275
16.																		
17.	Monthly Incremental	Therms	1,415	1,546	134	267	390	524	657	791	925	1,058	1,181	1,315	1,448	1,582		
18.	Monthly Cumulative	Therms	14,388	15,934	16,068	16,335	16,725	17,249	17,906	18,697	19,622	20,680	21,862	23,176	24,625	26,207	218,642	239,152
19.																		
20.	<u>Commercial & Industrial Programs</u>		<u>12%</u>	<u>25%</u>	<u>1.3%</u>	<u>2.6%</u>	<u>3.8%</u>	<u>5.1%</u>	<u>6.4%</u>	<u>7.7%</u>	<u>9.0%</u>	<u>10.3%</u>	<u>11.5%</u>	<u>12.8%</u>	<u>14.1%</u>	<u>15.4%</u>		
21.	Annualized Therms (3)	Therms	34,773	37,979	3,169	6,339	9,264	12,434	15,603	18,772	21,941	25,111	28,036	31,206	34,375	37,544	244,627	243,794
22.																		
23.	Monthly Incremental	Therms	2,898	3,165	264	528	772	1,036	1,300	1,564	1,828	2,093	2,336	2,600	2,865	3,129		
24.	Monthly Cumulative	Therms	39,518	42,683	42,947	43,475	44,247	45,283	46,583	48,148	49,976	52,069	54,405	57,006	59,870	62,999	566,339	607,007

Notes:

- 1) The Planned Savings - Therms were presented as MMBtu in the joint utilities' initial September 14, 2018 Core Energy Efficiency Filing.
- 2) The Residential Annualized Therm Savings were presented as MMBtu in the joint utilities' initial September 14, 2018 Core Energy Efficiency Filing. The resulting LBR was under-estimated by a magnitude of 10.
- 3) The Commercial & Industrial Annualized Therm Savings were incorrect in the joint utilities' initial September 14, 2018 Core Energy Efficiency Filing. The impact to savings was approximately 2,000 therms annually.

Northern Utilities, Inc.
Lost Revenue Reconciliation
2018

Line	Sector / Description	Unit	Recast Jan-18	Recast Feb-18	Recast Mar-18	Recast Apr-18	Recast May-18	Recast Jun-18	Estimate Jul-18	Estimate Aug-18	Estimate Sep-18	Estimate Oct-18	Total
1	RESIDENTIAL												
2	Beginning Balance - (Over)/Under	\$'s	\$ (1,945)	\$ (9,971)	\$ (15,078)	\$ (18,309)	\$ (20,467)	\$ (18,979)	\$ (15,464)	\$ (11,002)	\$ (5,884)	\$ (86)	
3	COSTS												
4	Incremental Annualized Savings	Therms	1,566	3,132	4,577	6,143	7,709	9,275	10,841	12,407	13,852	15,418	84,920
5	Incremental Monthly Savings	Therms	131	261	381	512	642	773	903	1,034	1,154	1,285	7,077
6													
7	Cumulative Savings - Current	Therms	131	392	773	1,285	1,927	2,700	3,604	4,638	5,792	7,077	28,317
8	Cumulative Savings - Prior	Therms	5,896	5,896	5,896	5,896	5,896	5,896	5,896	5,896	5,896	5,896	58,960
9	Cumulative LBR Savings	Therms	6,027	6,288	6,669	7,181	7,823	8,596	9,500	10,534	11,688	12,973	87,277
10													
11	Average Distribution Rate	\$/Therm	\$ 0.59030	\$ 0.59030	\$ 0.59030	\$ 0.59030	\$ 0.58797	\$ 0.58797	\$ 0.58797	\$ 0.58797	\$ 0.58797	\$ 0.58797	
12	Lost Distribution Revenue (Actual thru June)	\$'s	\$ 3,557	\$ 3,712	\$ 3,937	\$ 4,239	\$ 4,600	\$ 5,054	\$ 5,585	\$ 6,193	\$ 6,872	\$ 7,628	\$ 51,377
13													
14	REVENUE												
15	Sector Sales	Therms	4,123,832	3,131,798	2,560,049	2,284,269	1,103,933	546,360	385,426	375,540	383,364	477,483	15,372,054
16	Lost Revenue Rate	\$/Therm	\$0.0028	\$0.0028	\$0.0028	\$0.0028	\$0.0028	\$0.0028	\$0.0028	\$0.0028	\$0.0028	\$0.0028	
17	Revenue	\$'s	\$ 11,548	\$ 8,769	\$ 7,167	\$ 6,395	\$ 3,090	\$ 1,525	\$ 1,079	\$ 1,052	\$ 1,073	\$ 1,337	\$ 43,035
18													
19	(Over)/Under-Recovery (Exc interest)	\$	\$ (9,936)	\$ (15,029)	\$ (18,308)	\$ (20,465)	\$ (18,958)	\$ (15,449)	\$ (10,958)	\$ (5,860)	\$ (85)	\$ 6,205	
20													
21	INTEREST												
22	Average Monthly Balance	\$	\$ (5,940)	\$ (12,500)	\$ (16,693)	\$ (19,387)	\$ (19,712)	\$ (17,214)	\$ (13,211)	\$ (8,431)	\$ (2,985)	\$ 3,060	
23	Interest Rate-WSJ Prime Rate	Annual %	4.25%	4.25%	4.25%	4.50%	4.50%	4.50%	4.75%	4.75%	4.75%	5.00%	Total
24	Days per Month		31	28	31	30	31	30	31	31	30	31	365
25	Computed Interest	\$'s	\$ (36)	\$ (49)	\$ (1)	\$ (2)	\$ (21)	\$ (15)	\$ (44)	\$ (24)	\$ (0)	\$ 26	\$ (166)
26													
27	Ending Balance	\$'s	\$ (9,971)	\$ (15,078)	\$ (18,309)	\$ (20,467)	\$ (18,979)	\$ (15,464)	\$ (11,002)	\$ (5,884)	\$ (86)	\$ 6,231	
28	COMMERCIAL & INDUSTRIAL												
29	Beginning Balance - (Over)/Under	\$'s	\$ (1,656)	\$ (6,208)	\$ (8,815)	\$ (10,554)	\$ (11,255)	\$ (11,825)	\$ (11,111)	\$ (9,517)	\$ (8,184)	\$ (6,502)	
30													
31	COSTS												
32	Incremental Annualized Savings	Therms	3,206	6,412	9,371	12,578	15,784	18,990	22,196	25,402	28,361	31,567	173,867
33	Incremental Monthly Savings	Therms	267	534	781	1,048	1,315	1,583	1,850	2,117	2,363	2,631	14,489
34													
35	Cumulative Savings - Current	Therms	267	802	1,582	2,631	3,946	5,528	7,378	9,495	11,858	14,489	57,976
36	Cumulative Savings - Prior	Therms	22,131	22,131	22,131	22,131	22,131	22,131	22,131	22,131	22,131	22,131	221,310
37	Cumulative LBR Savings	Therms	22,398	22,933	23,713	24,762	26,077	27,659	29,509	31,626	33,989	36,620	279,286
38													
39	Average Distribution Rate	\$/Therm	\$ 0.19530	\$ 0.19530	\$ 0.19530	\$ 0.19530	\$ 0.11818	\$ 0.11818	\$ 0.11818	\$ 0.11818	\$ 0.11818	\$ 0.11818	
40	Lost Distribution Revenue	\$'s	\$ 4,374	\$ 4,479	\$ 4,631	\$ 4,836	\$ 3,082	\$ 3,269	\$ 3,487	\$ 3,737	\$ 4,017	\$ 4,328	\$ 40,240
41													
42	REVENUE												
43	Sector Sales	Therms	8,903,349	7,066,648	6,337,701	5,547,153	4,641,583	2,514,296	1,855,055	2,371,702	2,309,983	2,853,901	44,401,371
44	Lost Revenue Rate	\$/Therm	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	
45	Lost Distribution Revenue (Actual thru June)	\$'s	\$ 8,904	\$ 7,057	\$ 6,332	\$ 5,496	\$ 3,606	\$ 2,514	\$ 1,855	\$ 2,372	\$ 2,310	\$ 2,854	\$ 43,300
46													
47	(Over)/Under-Recovery (Exc interest)	\$'s	\$ (6,186)	\$ (8,786)	\$ (10,516)	\$ (11,214)	\$ (11,779)	\$ (11,070)	\$ (9,479)	\$ (8,151)	\$ (6,477)	\$ (5,029)	
48													
49	INTEREST												
50	Average Monthly Balance	\$	\$ (3,921)	\$ (7,497)	\$ (9,665)	\$ (10,884)	\$ (11,517)	\$ (11,447)	\$ (10,295)	\$ (8,834)	\$ (7,331)	\$ (5,766)	
51	Interest Rate-WSJ Prime Rate	Annual %	4.25%	4.25%	4.25%	4.50%	4.50%	4.50%	4.75%	4.75%	4.75%	5.00%	Total
52	Days per Month		31	28	31	30	31	30	31	31	30	31	365
53	Computed Interest	\$'s	\$ (22)	\$ (29)	\$ (38)	\$ (41)	\$ (45)	\$ (41)	\$ (38)	\$ (33)	\$ (25)	\$ (21)	\$ (334)
54													
55	Ending Balance	\$'s	\$ (6,208)	\$ (8,815)	\$ (10,554)	\$ (11,255)	\$ (11,825)	\$ (11,111)	\$ (9,517)	\$ (8,184)	\$ (6,502)	\$ (5,050)	

Note: Recast denotes change from accounting records. Savings recast to match original budget. Lost revenue is calculated based on original estimated savings. The final reconciliation using actual savings will be provided in the June 2019 filing. The Average Distribution rate for Residential and C&I Classes for the months of January through April 2018 are from the 2017 Annual Report (LRR Page 4 of 22) in Docket No. DE 14-216 on June 1, 2018.

Calculation of Lost Revenues - Northern Utilities, Inc.
Year 2019
 Savings and lost revenues are estimated on a calendar year basis. Does not include prior cumulative savings.

	REVISED (1) Annualized Therm Savings	"Installed" Savings												Total
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Residential														
Jan	1,603	134	134	134	134	134	134	134	134	134	134	134	134	1,603
Feb	3,205		267	267	267	267	267	267	267	267	267	267	267	2,938
Mar	4,684			390	390	390	390	390	390	390	390	390	390	3,904
Apr	6,287				524	524	524	524	524	524	524	524	524	4,715
May	7,890					657	657	657	657	657	657	657	657	5,260
Jun	9,492						791	791	791	791	791	791	791	5,537
Jul	11,095							925	925	925	925	925	925	5,547
Aug	12,697								1,058	1,058	1,058	1,058	1,058	5,291
Sep	14,177									1,181	1,181	1,181	1,181	4,726
Oct	15,779										1,315	1,315	1,315	3,945
Nov	17,382											1,448	1,448	2,897
Dec	18,984												1,582	1,582
Total	123,275	134	401	791	1,315	1,972	2,763	3,688	4,746	5,927	7,242	8,691	10,273	47,944
		134	534	1,325	2,640	4,613	7,376	11,064	15,810	21,738	28,980	37,671	47,944	
Proposed Distribution Rate		\$ 0.6655	\$ 0.6655	\$ 0.6655	\$ 0.6655	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.5880	\$ 0.6655	\$ 0.6655	
Lost Revenue		\$ 89	\$ 356	\$ 882	\$ 1,757	\$ 2,712	\$ 4,337	\$ 6,505	\$ 9,296	\$ 12,781	\$ 17,039	\$ 25,071	\$ 31,908	\$ 112,734
C&I														
Jan	3,169	264	264	264	264	264	264	264	264	264	264	264	264	3,169
Feb	6,339		528	528	528	528	528	528	528	528	528	528	528	5,810
Mar	9,264			772	772	772	772	772	772	772	772	772	772	7,720
Apr	12,434				1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	9,325
May	15,603					1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	10,402
Jun	18,772						1,564	1,564	1,564	1,564	1,564	1,564	1,564	10,950
Jul	21,941							1,828	1,828	1,828	1,828	1,828	1,828	10,971
Aug	25,111								2,093	2,093	2,093	2,093	2,093	10,463
Sep	28,036									2,336	2,336	2,336	2,336	9,345
Oct	31,206										2,600	2,600	2,600	7,801
Nov	34,375											2,865	2,865	5,729
Dec	37,544												3,129	3,129
Total	243,794	264	792	1,564	2,600	3,901	5,465	7,294	9,386	11,722	14,323	17,187	20,316	94,816
		264	1,056	2,621	5,221	9,122	14,587	21,881	31,267	42,989	57,312	74,499	94,816	
Proposed Distribution Rate		\$ 0.1913	\$ 0.1913	\$ 0.1913	\$ 0.1913	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1182	\$ 0.1913	\$ 0.1913	
Lost Revenue		\$ 51	\$ 202	\$ 501	\$ 999	\$ 1,078	\$ 1,724	\$ 2,586	\$ 3,695	\$ 5,080	\$ 6,773	\$ 14,253	\$ 18,140	\$ 55,083
Total Lost Revenue														\$ 167,816

Notes:

1) The Annualized Therm Savings were presented as MMBtu in the joint utilities' initial September 14, 2018 Core Energy Efficiency Filing.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical Residential Heating Bill - 754 therms/year
Comparison of Winter 2018-2019 vs. Winter 2017-2018

	Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual	
1 Typical Usage: therms (*)	56	95	135	138	111	83	618	45	28	16	14	15	18	136	754	
Winter 2018 - 2019																
4 Customer Charge units @	\$ 21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$128.16									
5 First 50 units @	\$0.6660	\$33.30	\$33.30	\$33.30	\$33.30	\$33.30	\$199.80									
6 Over 50 units @	\$0.6660	\$4.00	\$29.97	\$56.61	\$58.61	\$40.63	\$211.79									
7 COG 1	\$0.8271	\$46.32					\$46.32									
8 COG 2	\$0.8271	\$78.57					\$78.57									
9 COG 3	\$0.8271		\$111.66				\$111.66									
10 COG 4	\$0.8271			\$114.14			\$114.14									
11 COG 5	\$0.8271				\$91.81		\$91.81									
12 COG 6	\$0.8271					\$68.65	\$68.65									
13 LDAC	\$0.0691	\$3.87	\$6.56	\$9.33	\$9.54	\$7.67	\$5.74	\$42.70								
Summer 2019																
15 Customer Charge units @	\$ 21.36							\$ 21.36	\$21.36	\$21.36	\$21.36	\$ 21.36	\$21.36	\$128.16		
16 First 50 units @	\$0.5870	\$26.42	\$16.44	\$9.39	\$8.22	\$8.81	\$10.57	\$79.83								
17 Over 50 units @	\$0.5870	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00								
20 COG 1	\$0.3670	\$16.52					\$16.52								\$16.52	
21 COG 2	\$0.3670		\$10.28						\$10.28						\$10.28	
22 COG 3	\$0.3670			\$5.87						\$5.87					\$5.87	
23 COG 4	\$0.3670				\$5.14						\$5.14				\$5.14	
24 COG 5	\$0.3670					\$5.51						\$5.51			\$5.51	
25 COG 6	\$0.3670												\$6.61		\$6.61	
26 Summer Period 2019 Weighted Avg. COG	\$0.3670															
27 LDAC	\$ 0.0675	\$3.04	\$1.89	\$1.08	\$0.95	\$1.01	\$1.22	\$9.18								
28 TOTAL		\$108.84	\$169.77	\$232.26	\$236.94	\$194.76	\$151.02	\$1,093.60	\$67.33	\$49.96	\$37.70	\$35.66	\$36.68	\$39.75	\$267.08	\$1,360.68
Change																
Base Rate Change Winter 18-19 vs. Winter 17-18	\$ Change	\$1.76	\$6.94	\$12.25	\$12.65	\$9.06	\$5.34	\$47.99								
	% Change	2%	5%	6%	6%	5%	4%	5%								
COG Change Winter 18-19 vs. Winter 17-18	\$ Change	\$6.54	\$11.10	\$15.77	-\$5.18	-\$4.16	-\$3.11	\$20.95								
	% Change	7%	7%	8%	-2%	-2%	-2%	2%								
LDAC Change Winter 18-19 vs. Winter 17-18	\$ Change	\$0.73	\$1.24	\$1.77	\$1.81	\$1.45	\$1.09	\$8.10								
	% Change	1%	1%	1%	1%	1%	1%	1%								
Comparison of Winter 2017-2018 vs. Winter 2018-2019																
27 Typical Usage: therms	Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual	
28	56	95	135	138	111	83	618	45	28	16	14	15	18	136	754	
Winter 2017 - 2018																
30 Customer Charge units @	\$ 21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$128.16									
31 First 50 units @	\$0.6468	\$32.34	\$32.34	\$32.34	\$32.34	\$32.34	\$194.04									
32 Over 50 units @	\$0.5332	\$3.20	\$23.99	\$45.32	\$46.92	\$32.53	\$169.56									
33 COG 1	\$0.7103	\$39.78					\$39.78									
34 COG 2	\$0.7103	\$67.48					\$67.48									
35 COG 3	\$0.7103		\$95.89				\$95.89									
36 COG 4	\$0.8646			\$119.31			\$119.31									
37 COG 5	\$0.8646				\$95.97		\$95.97									
38 COG 6	\$0.8646					\$71.76	\$71.76									
39 Winter Period 17-18 Weighted Avg. COG	\$0.7932															
40 LDAC	\$ 0.0560	\$3.14	\$5.32	\$7.56	\$7.73	\$6.22	\$4.65	\$34.61								
Summer 2018																
42 Customer Charge units @	\$ 21.36							\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$128.16		
43 First 50 units @	\$0.5870	\$26.42	\$16.44	\$9.39	\$8.22	\$8.81	\$10.57	\$79.83								
44 Over 50 units @	\$0.5870	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00								
45 COG 1	\$0.3975	\$17.89					\$17.89								\$17.89	
46 COG 2	\$0.3975		\$11.13						\$11.13						\$11.13	
47 COG 3	\$0.3975			\$6.36						\$6.36					\$6.36	
48 COG 4	\$0.3975				\$5.57						\$5.57				\$5.57	
49 COG 5	\$0.3975					\$5.96						\$5.96			\$5.96	
50 COG 6	\$0.3975												\$7.16		\$7.16	
51 Summer Period 2018 Weighted Avg. COG	\$0.3975															
52 LDAC	\$ 0.0576	\$2.59	\$1.61	\$0.92	\$0.81	\$0.86	\$1.04	\$7.83								
53 TOTAL		\$99.81	\$150.49	\$202.47	\$227.66	\$188.41	\$147.71	\$1,016.56	\$68.25	\$50.54	\$38.03	\$35.95	\$36.99	\$40.12	\$269.89	\$1,286.44
54 Change		\$9.03	\$19.28	\$29.78	\$9.28	\$6.35	\$3.32	\$77.04	(\$0.93)	(\$0.58)	(\$0.33)	(\$0.29)	(\$0.31)	(\$0.37)	(\$2.80)	\$74.24
55 % Chg		9.05%	12.81%	14.71%	4.08%	3.37%	2.25%	7.6%	-1.36%	-1.14%	-0.87%	-0.80%	-0.84%	-0.92%	-1.04%	5.77%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

**Typical G-40 Commercial & Industrial Bill - 2,066 therms/year
 Comparison of Winter 2018-2019 vs. Winter 2017-2018**

		Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
1																
2	Typical Usage: therms (*)	145	265	390	407	327	237	1,771	112	58	30	26	31	38	295	2,066
3	Winter 2018 - 2019															
4	Customer Charge units @	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 433.56								
5	First 75 units @	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 80.78								
6	Over 75 units @	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 237.12								
7	COG 1	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 122.15								
8	COG 2	\$ 0.8424	\$ 223.24	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 223.24								
9	COG 3	\$ 0.8424	\$ 0.8424	\$ 328.54	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 328.54								
10	COG 4	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 342.86	\$ 0.8424	\$ 0.8424	\$ 342.86								
11	COG 5	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 275.46	\$ 0.8424	\$ 275.46								
12	COG 6	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 0.8424	\$ 199.65	\$ 199.65								
13	LDAC	\$ 0.0396	\$ 5.74	\$ 10.49	\$ 15.44	\$ 16.12	\$ 12.95	\$ 9.39	\$ 70.13							
14	Summer 2019															
15	Customer Charge units @	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 433.56	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 433.56	
16	First 75 units @	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 29.26	\$ 13.46	\$ 10.41	\$ 5.39	\$ 13.46	\$ 13.46	\$ 13.46	\$ 29.26	
17	Over 75 units @	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 6.64	\$ 6.64	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 6.64	
18	COG 1	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 44.33	\$ 44.33	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 44.33	
19	COG 2	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 22.96	\$ 22.96	\$ 22.96	\$ 22.96	\$ 22.96	\$ 22.96	\$ 22.96	\$ 22.96	
20	COG 3	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 11.87	\$ 11.87	\$ 11.87	\$ 11.87	\$ 11.87	\$ 11.87	\$ 11.87	\$ 11.87	
21	COG 4	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 10.29	\$ 10.29	\$ 10.29	\$ 10.29	\$ 10.29	\$ 10.29	\$ 10.29	\$ 10.29	
22	COG 5	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 12.27	\$ 12.27	\$ 12.27	\$ 12.27	\$ 12.27	\$ 12.27	\$ 12.27	\$ 12.27	
23	COG 6	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 15.04	\$ 15.04	\$ 15.04	\$ 15.04	\$ 15.04	\$ 15.04	\$ 15.04	\$ 15.04	
24	Summer Period 2019 Weighted Avg. COG	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	
25	LDAC	\$ 0.0380	\$ 0.0380	\$ 0.0380	\$ 0.0380	\$ 0.0380	\$ 0.0380	\$ 0.0380	\$ 4.26	\$ 2.20	\$ 1.14	\$ 0.99	\$ 1.18	\$ 1.44	\$ 11.21	
26	TOTAL	\$ 226.18	\$ 353.56	\$ 486.25	\$ 504.29	\$ 419.37	\$ 323.84	\$ 2,313.48	\$ 140.95	\$ 107.83	\$ 90.66	\$ 83.54	\$ 85.71	\$ 88.74	\$ 597.43	\$ 2,910.91
	Base Rate Change Winter 18-19 vs. Winter 17-1: \$ Change	\$ 4.10	\$ 3.51	\$ 2.90	\$ 2.82	\$ 3.21	\$ 3.65	\$ 20.18								
	% Change	2%	1%	1%	1%	1%	1%	1%								
	COG Change Winter 18-19 vs. Winter 17-18: \$ Change	\$ 17.23	\$ 31.48	\$ 46.33	-\$ 14.45	-\$ 11.61	-\$ 8.41	\$ 60.57								
	% Change	8%	10%	11%	-3%	-3%	-3%	3%								
	LDAC Change Winter 18-19 vs. Winter 17-18: \$ Change	\$ 1.49	\$ 2.73	\$ 4.02	\$ 4.19	\$ 3.37	\$ 2.44	\$ 18.24								
	% Change	1%	1%	1%	1%	1%	1%	1%								
27																
28	Typical Usage: therms	145	265	390	407	327	237	1,771	112	58	30	26	31	38	295	2,066
29	Winter 2017 - 2018															
30	Customer Charge units @	\$ 67.45	\$ 67.45	\$ 67.45	\$ 67.45	\$ 67.45	\$ 67.45	\$ 404.70								
31	First 75 units @	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 82.98								
32	Over 75 units @	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 0.1844	\$ 243.59								
33	COG 1	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 104.92								
34	COG 2	\$ 0.7236	\$ 191.75	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 191.75								
35	COG 3	\$ 0.7236	\$ 0.7236	\$ 282.20	\$ 0.7236	\$ 0.7236	\$ 0.7236	\$ 282.20								
36	COG 4	\$ 0.8779	\$ 0.8779	\$ 0.8779	\$ 357.31	\$ 0.8779	\$ 0.8779	\$ 357.31								
37	COG 5	\$ 0.8779	\$ 0.8779	\$ 0.8779	\$ 0.8779	\$ 287.07	\$ 0.8779	\$ 287.07								
38	COG 6	\$ 0.8779	\$ 0.8779	\$ 0.8779	\$ 0.8779	\$ 0.8779	\$ 208.06	\$ 208.06								
39	Winter Period 17-18 Weighted Avg. COG	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	\$ 0.8082	
40	LDAC	\$ 0.0293	\$ 0.0293	\$ 0.0293	\$ 0.0293	\$ 0.0293	\$ 0.0293	\$ 0.0293	\$ 4.25	\$ 7.76	\$ 11.43	\$ 11.93	\$ 9.58	\$ 6.94	\$ 51.89	
41	Summer 2018															
42	Customer Charge units @	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 433.56	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 72.26	\$ 433.56	
43	First 75 units @	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 46.31	\$ 13.46	\$ 10.41	\$ 5.39	\$ 13.46	\$ 13.46	\$ 13.46	\$ 46.31	
44	Over 75 units @	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 0.1795	\$ 6.64	\$ 6.64	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 6.64	
45	COG 1	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 47.64	\$ 47.64	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 47.64	
46	COG 2	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 24.67	\$ 24.67	\$ 24.67	\$ 24.67	\$ 24.67	\$ 24.67	\$ 24.67	\$ 24.67	
47	COG 3	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 12.76	\$ 12.76	\$ 12.76	\$ 12.76	\$ 12.76	\$ 12.76	\$ 12.76	\$ 12.76	
48	COG 4	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 11.06	\$ 11.06	\$ 11.06	\$ 11.06	\$ 11.06	\$ 11.06	\$ 11.06	\$ 11.06	
49	COG 5	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 13.19	\$ 13.19	\$ 13.19	\$ 13.19	\$ 13.19	\$ 13.19	\$ 13.19	\$ 13.19	
50	COG 6	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 16.17	\$ 16.17	\$ 16.17	\$ 16.17	\$ 16.17	\$ 16.17	\$ 16.17	\$ 16.17	
51	Summer Period 2018 Weighted Avg. COG	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	\$ 0.4254	
52	LDAC	\$ 0.0309	\$ 0.0309	\$ 0.0309	\$ 0.0309	\$ 0.0309	\$ 0.0309	\$ 0.0309	\$ 3.46	\$ 1.79	\$ 0.93	\$ 0.80	\$ 0.96	\$ 1.17	\$ 9.12	
53	TOTAL	\$ 203.36	\$ 315.83	\$ 433.00	\$ 511.73	\$ 424.40	\$ 326.16	\$ 2,214.48	\$ 143.47	\$ 109.14	\$ 91.33	\$ 88.79	\$ 91.97	\$ 96.42	\$ 621.12	\$ 2,835.60
54	Change	\$ 22.82	\$ 37.72	\$ 53.25	(\$ 7.44)	(\$ 5.03)	(\$ 2.32)	\$ 98.99	(\$ 2.52)	(\$ 1.30)	(\$ 0.68)	(\$ 5.25)	(\$ 6.26)	(\$ 7.68)	(\$ 23.69)	\$ 75.30
55	% Chg	11.22%	11.94%	12.30%	-1.45%	-1.19%	-0.71%	4.47%	-1.76%	-1.20%	-0.74%	-5.92%	-6.81%	-7.96%	-3.81%	2.66%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical G-41 Commercial & Industrial Bill - 20,667 therms/year
Comparison of Winter 2018-2019 vs. Winter 2017-2018

	Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
1 Typical Usage: therms (*)	1,665	2,567	3,605	3,735	3,064	2,162	16,798	1,219	755	443	412	451	589	3,869	20,667
Winter 2018 - 2019															
3 Customer Charge units @ \$ 214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56								
4 All units @ \$0.2334	\$388.61	\$599.14	\$841.41	\$871.75	\$715.14	\$504.61	\$3,920.65								
5 COG 1 \$0.8424	\$1,402.60						\$1,402.60								
6 COG 2 \$0.8424		\$2,162.44					\$2,162.44								
7 COG 3 \$0.8424			\$3,036.85				\$3,036.85								
8 COG 4 \$0.8424				\$3,146.36			\$3,146.36								
9 COG 5 \$0.8424					\$2,581.11		\$2,581.11								
10 COG 6 \$0.8424						\$1,821.27	\$1,821.27								
11 LDAC \$0.0396	\$65.93	\$101.65	\$142.76	\$147.91	\$121.33	\$85.62	\$665.20								
Summer 2019															
14 Customer Charge units @ \$ 214.26								\$ 214.26	\$214.26	\$214.26	\$214.26	\$ 214.26	\$214.26	\$1,285.56	
15 All units @ \$0.1824								\$222.35	\$137.71	\$80.80	\$75.15	\$82.26	\$107.43	\$705.71	
16 COG 1 \$0.3958								\$482.48						\$482.48	
17 COG 2 \$0.3958									\$298.83					\$298.83	
18 COG 3 \$0.3958										\$175.34				\$175.34	
19 COG 4 \$0.3958											\$163.07			\$163.07	
20 COG 5 \$0.3958												\$178.51		\$178.51	
21 COG 6 \$0.3958													\$233.13	\$233.13	
22 Summer Period 2019 Weighted Avg. COG \$0.3958															
23 LDAC \$ 0.0380								\$46.32	\$28.69	\$16.83	\$15.66	\$17.14	\$22.38	\$147.02	
24 TOTAL	\$2,071.40	\$3,077.49	\$4,235.28	\$4,380.28	\$3,631.85	\$2,625.75	\$20,022.05	\$965.41	\$679.49	\$487.24	\$468.13	\$492.17	\$577.20	\$3,669.64	\$23,691.69
Base Rate Change Winter 18-19 vs. Winter 17-18	\$18.70	\$19.33	\$20.05	\$20.14	\$19.67	\$19.04	\$116.94								
% Change	1%	1%	1%	0%	1%	1%	1%								
COG Change Winter 18-19 vs. Winter 17-18	\$197.80	\$304.96	\$428.27	-\$132.59	-\$108.77	-\$76.75	\$612.92								
% Change	11%	11%	11%	-3%	-3%	-3%	3%								
LDAC Change Winter 18-19 vs. Winter 17-18	\$17.15	\$26.44	\$37.13	\$38.47	\$31.56	\$22.27	\$173.02								
% Change	1%	1%	1%	1%	1%	1%	1%								
Winter 2017 - 2018															
25 Typical Usage: therms	1,665	2,567	3,605	3,735	3,064	2,162	16,798	1,219	755	443	412	451	589	3,869	20,667
28 Customer Charge units @ \$ 196.73	\$196.73	\$196.73	\$196.73	\$196.73	\$196.73	\$196.73	\$1,180.38								
29 All units @ \$0.2327	\$387.45	\$597.34	\$838.88	\$869.13	\$712.99	\$503.10	\$3,908.89								
30 COG 1 \$0.7236	\$1,204.79						\$1,204.79								
31 COG 2 \$0.7236		\$1,857.48					\$1,857.48								
32 COG 3 \$0.7236			\$2,608.58				\$2,608.58								
33 COG 4 \$0.8779				\$3,278.96			\$3,278.96								
34 COG 5 \$0.8779					\$2,689.89		\$2,689.89								
35 COG 6 \$0.8779						\$1,898.02	\$1,898.02								
36 Winter Period 17-18 Weighted Avg. COG \$0.8059															
37 LDAC \$ 0.0293	\$48.78	\$75.21	\$105.63	\$109.44	\$89.78	\$63.35	\$492.18								
Summer 2018															
39 Customer Charge units @ \$ 214.26								\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56	
40 All units @ \$0.1824								\$222.35	\$137.71	\$80.80	\$75.15	\$82.26	\$107.43	\$705.71	
41 COG 1 \$0.4254								\$518.56						\$518.56	
42 COG 2 \$0.4254									\$321.18					\$321.18	
43 COG 3 \$0.4254										\$188.45				\$188.45	
44 COG 4 \$0.4254											\$175.26			\$175.26	
45 COG 5 \$0.4254												\$191.86		\$191.86	
46 COG 6 \$0.4254													\$250.56	\$250.56	
47 Summer Period 2018 Wighted Avg. COG \$0.4254															
48 LDAC \$ 0.0309								\$37.67	\$23.33	\$13.69	\$12.73	\$13.94	\$18.20	\$119.55	
49 TOTAL	\$1,837.75	\$2,726.77	\$3,749.82	\$4,454.26	\$3,689.38	\$2,661.19	\$19,119.17	\$992.84	\$696.48	\$497.20	\$477.40	\$502.31	\$590.45	\$3,756.69	\$22,875.86
50 Change	\$233.65	\$350.73	\$485.46	(\$73.98)	(\$57.54)	(\$35.44)	\$902.88	(\$27.43)	(\$16.99)	(\$9.97)	(\$9.27)	(\$10.15)	(\$13.25)	(\$87.05)	\$815.83
51 % Chg	12.71%	12.86%	12.95%	-1.66%	-1.56%	-1.33%	4.72%	-2.76%	-2.44%	-2.00%	-1.94%	-2.02%	-2.24%	-2.32%	3.57%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical G-51 Commercial & Industrial Bill - 17,593 therms/year
Comparison of Winter 2018-2019 vs. Winter 2017-2018

		Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
1																
2	Typical Usage: therms (*)	1,369	1,582	1,899	1,882	1,798	1,517	10,047	1,393	1,305	1,186	1,207	1,171	1,284	7,546	17,593
3	Winter 2018 - 2019															
4	Customer Charge units @	\$ 214.26						\$1,285.56								
5	First 1,300 units @	\$0.1648						\$1,285.44								
6	Over 1,300 units @	\$0.1346						\$302.45								
7	COG 1	\$0.7254						\$993.07								
8	COG 2	\$0.7254	\$1,147.58					\$1,147.58								
9	COG 3	\$0.7254		\$1,377.53				\$1,377.53								
10	COG 4	\$0.7254			\$1,365.20			\$1,365.20								
11	COG 5	\$0.7254				\$1,304.27		\$1,304.27								
12	COG 6	\$0.7254					\$1,100.43	\$1,100.43								
13	LDAC	\$0.0396					\$60.07	\$397.86								
14	Summer 2019															
15	Customer Charge units @	\$ 214.26							\$ 214.26	\$214.26	\$214.26	\$214.26	\$ 214.26	\$214.26	\$1,285.56	
16	First 1,000 units @	\$0.1287							\$128.70	\$128.70	\$128.70				\$386.10	
17	Over 1,000 units @	\$0.1046							\$41.11	\$31.90	\$19.46				\$92.47	
18	COG 1	\$0.3269							\$455.37						\$455.37	
19	COG 2	\$0.3269								\$426.60					\$426.60	
20	COG 3	\$0.3269									\$387.70				\$387.70	
21	COG 4	\$0.3269										\$394.57			\$394.57	
22	COG 5	\$0.3269											\$382.80		\$382.80	
23	COG 6	\$0.3269												\$419.74	\$419.74	
24	Summer Period 2019 Weighted Avg. COG	\$0.3269														
25	LDAC	\$ 0.0380							\$52.93	\$49.59	\$45.07	\$45.87	\$44.50	\$48.79	\$286.75	
26	TOTAL							\$10,559.40	\$892.37	\$851.06	\$795.19	\$654.69	\$641.56	\$682.79	\$4,517.66	\$15,077.06
	Base Rate Change Winter 18-19 vs. Winter 17-18	\$ Change	\$3.57	\$0.99	-\$2.85	-\$2.64	-\$1.63	\$1.77								-\$0.79
		% Change	0%	0%	0%	0%	0%	0%								0%
	COG Change Winter 18-19 vs. Winter 17-18	\$ Change	\$141.01	\$162.95	\$195.60	-\$96.55	-\$92.24	-\$77.82								\$232.94
		% Change	11%	11%	11%	-5%	-5%	-5%								2%
	LDAC Change Winter 18-19 vs. Winter 17-18	\$ Change	\$14.10	\$16.29	\$19.56	\$19.38	\$18.52	\$15.63								\$103.48
		% Change	1%	1%	1%	1%	1%	1%								1%
27																
28	Typical Usage: therms	1,369	1,582	1,899	1,882	1,798	1,517	10,047	1,393	1,305	1,186	1,207	1,171	1,284	7,546	17,593
29	Winter 2017 - 2018															
30	Customer Charge units @	\$ 196.73						\$1,180.38								
31	First 1,300 units @	\$0.1749						\$1,364.22								
32	Over 1,300 units @	\$0.1467						\$329.63								
33	COG 1	\$0.6224						\$852.07								
34	COG 2	\$0.6224	\$984.64					\$984.64								
35	COG 3	\$0.6224		\$1,181.94				\$1,181.94								
36	COG 4	\$0.7767			\$1,461.75			\$1,461.75								
37	COG 5	\$0.7767				\$1,396.51		\$1,396.51								
38	COG 6	\$0.7767					\$1,178.25	\$1,178.25								
39	Winter Period 17-18 Weighted Avg. COG	\$0.7022														
40	LDAC	\$ 0.0293					\$44.45	\$294.38								
41	Summer 2018															
42	Customer Charge units @	\$ 214.26							\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56	
43	First 1,000 units @	\$0.1287							\$128.70	\$128.70	\$128.70	\$128.70	\$128.70	\$128.70	\$772.20	
44	Over 1,000 units @	\$0.1046							\$41.11	\$31.90	\$19.46	\$21.65	\$17.89	\$29.71	\$161.71	
45	COG 1	\$0.3543							\$493.54						\$493.54	
46	COG 2	\$0.3543								\$462.36					\$462.36	
47	COG 3	\$0.3543									\$420.20				\$420.20	
48	COG 4	\$0.3543										\$427.64			\$427.64	
49	COG 5	\$0.3543											\$414.89		\$414.89	
50	COG 6	\$0.3543												\$454.92	\$454.92	
51	Summer Period 2018 Wighted Avg. COG	\$0.3543														
52	LDAC	\$ 0.0309							\$43.04	\$40.32	\$36.65	\$37.30	\$36.18	\$39.68	\$233.17	
53	TOTAL							\$10,223.76	\$920.65	\$877.55	\$819.26	\$829.55	\$811.92	\$867.26	\$5,126.19	\$15,349.95
54	Change							\$335.64	(\$28.28)	(\$26.49)	(\$24.08)	(\$174.85)	(\$170.36)	(\$184.47)	(\$608.53)	(\$272.89)
55	% Chg							3.28%	-3.07%	-3.02%	-2.94%	-21.08%	-20.98%	-21.27%	-11.87%	-1.78%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. -- NEW HAMPSHIRE DIVISION

**Impact of Rate Changes on Residential Heating Bills by Usage Level
 Forecast Winter 2018-2019 vs. Actual Winter 2017-2018**

Residential Heating		
	<u>Winter 2017-2018</u>	<u>Winter 2018- 2019</u>
Customer Charge	\$21.36	\$21.36
First 50 Therms	\$0.6468	\$0.6660
Over 50 therms	\$0.5332	\$0.6660
LDAC	\$0.0560	\$0.0691
CGA	\$0.7932	\$0.8271

Usage (Therms)	Winter 2017-2018 Bill Amount	Winter 2018-2019 Bill Amount	Total Bill		Base Rate		CGA		LDAC	
			\$	%	\$	%	\$	%	\$	%
5	\$28.84	\$29.17	\$0.33	1.1%	\$0.10	0.3%	\$0.17	0.6%	\$0.07	0.2%
10	\$36.32	\$36.98	\$0.66	1.8%	\$0.19	0.5%	\$0.34	0.9%	\$0.13	0.4%
20	\$51.28	\$52.60	\$1.32	2.6%	\$0.38	0.7%	\$0.68	1.3%	\$0.26	0.5%
25	\$58.76	\$60.42	\$1.66	2.8%	\$0.48	0.8%	\$0.85	1.4%	\$0.33	0.6%
30	\$66.24	\$68.23	\$1.99	3.0%	\$0.58	0.9%	\$1.02	1.5%	\$0.39	0.6%
45	\$88.68	\$91.66	\$2.98	3.4%	\$0.86	1.0%	\$1.53	1.7%	\$0.59	0.7%
50	\$96.16	\$99.47	\$3.31	3.4%	\$0.96	1.0%	\$1.70	1.8%	\$0.66	0.7%
75	\$130.72	\$138.53	\$7.81	6.0%	\$4.28	3.3%	\$2.54	1.9%	\$0.98	0.7%
Average Monthly	\$199.84	\$216.64	\$16.80	8.4%	\$10.92	5.5%	\$4.24	2.1%	\$1.64	0.8%
150	\$234.40	\$255.69	\$21.29	9.1%	\$14.24	6.1%	\$5.09	2.2%	\$1.97	0.8%
200	\$303.52	\$333.80	\$30.28	10.0%	\$20.88	6.9%	\$6.78	2.2%	\$2.62	0.9%

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical Residential Heating Bill - 136 therms/Summer
Comparison of Summer 2019 vs. Summer 2018

			May	June	July	August	Sept	October	Summer	
1	Typical Usage: therms(*)		45	28	16	14	15	18	136	
2										
3	Summer 2019									
4	Customer Charge	units @	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$128.16	
5	First	50 units @	\$0.5870	\$26.42	\$16.44	\$9.39	\$8.22	\$8.81	\$79.83	
6	Over	50 units @	\$0.5870	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
7		COG 1	\$0.3670	\$16.52					\$16.52	
8		COG 2	\$0.3670	\$10.28					\$10.28	
9		COG 3	\$0.3670		\$5.87				\$5.87	
10		COG 4	\$0.3670			\$5.14			\$5.14	
11		COG 5	\$0.3670				\$5.51		\$5.51	
12		COG 6	\$0.3670					\$6.61	\$6.61	
13	Summer Period 2019 Avg. COG		\$0.3670*							
14		LDAC	\$0.0675	\$3.04	\$1.89	\$1.08	\$0.95	\$1.01	\$1.22	\$9.18
15	TOTAL			\$67.33	\$49.96	\$37.70	\$35.66	\$36.68	\$39.75	\$267.08
Base Rate Change Winter 18-19 vs. Winter 17-18			\$ Change	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
			% Change	0%	0%	0%	0%	0%	0%	0%
COG Change Winter 18-19 vs. Winter 17-18			\$ Change	-\$1.37	-\$0.85	-\$0.49	-\$0.43	-\$0.46	-\$0.55	-\$4.15
			% Change	-2%	-2%	-1%	-1%	-1%	-1%	-2%
LDAC Change Winter 18-19 vs. Winter 17-18			\$ Change	\$0.45	\$0.28	\$0.16	\$0.14	\$0.15	\$0.18	\$1.35
			% Change	1%	1%	0%	0%	0%	0%	0%
16	Typical Usage: therms		45	28	16	14	15	18	136	
17										
18	Summer 2018									
19	Customer Charge	units @	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$21.36	\$128.16	
20	First	50 units @	\$0.5870	\$26.42	\$16.44	\$9.39	\$8.22	\$8.81	\$79.83	
21	Over	50 units @	\$0.5870	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
22		COG 1	\$0.3975	\$17.89					\$17.89	
23		COG 2	\$0.3975	\$11.13					\$11.13	
24		COG 3	\$0.3975		\$6.36				\$6.36	
25		COG 4	\$0.3975			\$5.57			\$5.57	
26		COG 5	\$0.3975				\$5.96		\$5.96	
27		COG 6	\$0.3975					\$7.16	\$7.16	
28	Summer Period 2018 Avg. COG		\$0.3975*							
29		LDAC	\$0.0576	\$2.59	\$1.61	\$0.92	\$0.81	\$0.86	\$1.04	\$7.83
30	TOTAL			\$68.25	\$50.54	\$38.03	\$35.95	\$36.99	\$40.12	\$269.89
31	Change			-\$0.93	-\$0.58	-\$0.33	-\$0.29	-\$0.31	-\$0.37	-\$2.80
32	% Chg			-1.36%	-1.14%	-0.87%	-0.80%	-0.84%	-0.92%	-1.04%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical G-40 Commercial & Industrial Bill - 295 therms/Summer
Comparison of Summer 2019 vs. Summer 2018

			May	June	July	August	Sept	October	Summer
1									
2	Typical Usage: therms(*)		112	58	30	26	31	38	295
3	Summer 2019								
4	Customer Charge	units @ \$72.26	\$72.26	\$72.26	\$72.26	\$72.26	\$72.26	\$72.26	\$433.56
5	First	75 units @ \$0.1795	\$13.46	\$10.41	\$5.39	\$4.67	\$5.56	\$6.82	\$46.31
6	Over	75 units @ \$0.1795	\$6.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6.64
7		COG 1 \$0.3958	\$44.33						\$44.33
8		COG 2 \$0.3958		\$22.96					\$22.96
9		COG 3 \$0.3958			\$11.87				\$11.87
10		COG 4 \$0.3958				\$10.29			\$10.29
11		COG 5 \$0.3958					\$12.27		\$12.27
12		COG 6 \$0.3958						\$15.04	\$15.04
13	Summer Period 2019 Avg. COG \$0.3958*								
14		LDAC \$0.0380	\$4.26	\$2.20	\$1.14	\$0.99	\$1.18	\$1.44	\$11.21
15	TOTAL		\$140.95	\$107.83	\$90.66	\$88.21	\$91.27	\$95.57	\$614.48
	Base Rate Change Winter 18-19 vs. Winter 17-18		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$ Change		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% Change		0%	0%	0%	0%	0%	0%	0%
	COG Change Winter 18-19 vs. Winter 17-18		-\$3.32	-\$1.72	-\$0.89	-\$0.77	-\$0.92	-\$1.12	-\$8.73
	\$ Change		-\$3.32	-\$1.72	-\$0.89	-\$0.77	-\$0.92	-\$1.12	-\$8.73
	% Change		-2%	-2%	-1%	-1%	-1%	-1%	-1%
	LDAC Change Winter 18-19 vs. Winter 17-18		\$0.80	\$0.41	\$0.21	\$0.18	\$0.22	\$0.27	\$2.09
	\$ Change		\$0.80	\$0.41	\$0.21	\$0.18	\$0.22	\$0.27	\$2.09
	% Change		1%	0%	0%	0%	0%	0%	0%
16									
17	Typical Usage: therms		112	58	30	26	31	38	295
18	Summer 2018								
19	Customer Charge	units @ \$72.26	\$72.26	\$72.26	\$72.26	\$72.26	\$72.26	\$72.26	\$433.56
20	First	75 units @ \$0.1795	\$13.46	\$10.41	\$5.39	\$4.67	\$5.56	\$6.82	\$46.31
21	Over	75 units @ \$0.1795	\$6.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6.64
22		COG 1 \$0.4254	\$47.64						\$47.64
23		COG 2 \$0.4254		\$24.67					\$24.67
24		COG 3 \$0.4254			\$12.76				\$12.76
25		COG 4 \$0.4254				\$11.06			\$11.06
26		COG 5 \$0.4254					\$13.19		\$13.19
27		COG 6 \$0.4254						\$16.17	\$16.17
28	Summer Period 2018 Avg. COG \$0.4254*								
29		LDAC \$0.0309	\$3.46	\$1.79	\$0.93	\$0.80	\$0.96	\$1.17	\$9.12
30	TOTAL		\$143.47	\$109.14	\$91.33	\$88.79	\$91.97	\$96.42	\$621.12
31	Change		-\$2.52	-\$1.30	-\$0.68	-\$0.58	-\$0.70	-\$0.85	-\$6.64
32	% Chg		-1.76%	-1.20%	-0.74%	-0.66%	-0.76%	-0.89%	-1.07%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical G-41 Commercial & Industrial Bill - 3,869 therms/Summer
Comparison of Summer 2019 vs. Summer 2018

			May	June	July	August	Sept	October	Summer
1	Typical Usage: therms(1)		1,219	755	443	412	451	589	3,869
3	Summer 2019								
4	Customer Charge	units @ \$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56
5	All	units @ \$0.1824	\$222.35	\$137.71	\$80.80	\$75.15	\$82.26	\$107.43	\$705.71
6		COG 1 \$0.3958	\$482.48						\$482.48
7		COG 2 \$0.3958		\$298.83					\$298.83
8		COG 3 \$0.3958			\$175.34				\$175.34
9		COG 4 \$0.3958				\$163.07			\$163.07
10		COG 5 \$0.3958					\$178.51		\$178.51
11		COG 6 \$0.3958						\$233.13	\$233.13
12	Summer Period 2019 Avg. COG \$0.3958*								
13		LDAC \$0.0380	\$46.32	\$28.69	\$16.83	\$15.66	\$17.14	\$22.38	\$147.02
14	TOTAL		\$965.41	\$679.49	\$487.24	\$468.13	\$492.17	\$577.20	\$3,669.64
Base Rate Change Winter 18-19 vs. Winter 17-18			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
% Change			0%	0%	0%	0%	0%	0%	0%
COG Change Winter 18-19 vs. Winter 17-18			-\$36.08	-\$22.35	-\$13.11	-\$12.20	-\$13.35	-\$17.43	-\$114.52
% Change			-4%	-3%	-3%	-3%	-3%	-3%	-3%
LDAC Change Winter 18-19 vs. Winter 17-18			\$8.65	\$5.36	\$3.15	\$2.93	\$3.20	\$4.18	\$27.47
% Change			1%	1%	1%	1%	1%	1%	1%
<hr/>									
15	Typical Usage: therms		1,219	755	443	412	451	589	3,869
17	Summer 2018								
18	Customer Charge	units @ \$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56
19	All	units @ \$0.1824	\$222.35	\$137.71	\$80.80	\$75.15	\$82.26	\$107.43	\$705.71
20		COG 1 \$0.4254	\$518.56						\$518.56
21		COG 2 \$0.4254		\$321.18					\$321.18
22		COG 3 \$0.4254			\$188.45				\$188.45
23		COG 4 \$0.4254				\$175.26			\$175.26
24		COG 5 \$0.4254					\$191.86		\$191.86
25		COG 6 \$0.4254						\$250.56	\$250.56
26	Summer Period 2018 Avg. COG \$0.4254*								
27		LDAC \$0.0309	\$37.67	\$23.33	\$13.69	\$12.73	\$13.94	\$18.20	\$119.55
28	TOTAL		\$992.84	\$696.48	\$497.20	\$477.40	\$502.31	\$590.45	\$3,756.69
29	Change		-\$27.43	-\$16.99	-\$9.97	-\$9.27	-\$10.15	-\$13.25	-\$87.05
30	% Chg		-2.76%	-2.44%	-2.00%	-1.94%	-2.02%	-2.24%	-2.32%

*-Note- Weighted by usage. Actual Weather Normalized.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
Typical G-51 Commercial & Industrial Bill - 7,546 therms/Summer
Comparison of Summer 2019 vs. Summer 2018

			May	June	July	August	Sept	October	Summer	
1	Typical Usage: therms(1)		1,393	1,305	1,186	1,207	1,171	1,284	7,546	
2										
3	Summer 2019									
4	Customer Charge	units @	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56	
5	First	1,000 units @	\$0.1287	\$128.70	\$128.70	\$128.70	\$128.70	\$128.70	\$772.20	
6	Over	1,000 units @	\$0.1046	\$41.11	\$31.90	\$19.46	\$21.65	\$17.89	\$161.71	
7		COG 1	\$0.3269	\$455.37					\$455.37	
8		COG 2	\$0.3269		\$426.60				\$426.60	
9		COG 3	\$0.3269			\$387.70			\$387.70	
10		COG 4	\$0.3269				\$394.57		\$394.57	
11		COG 5	\$0.3269					\$382.80	\$382.80	
12		COG 6	\$0.3269					\$419.74	\$419.74	
13	Summer Period 2019 Avg. COG		\$0.3269*							
14		LDAC	\$0.0380	\$52.93	\$49.59	\$45.07	\$45.87	\$44.50	\$48.79	
15	TOTAL			\$892.37	\$851.06	\$795.19	\$805.05	\$788.14	\$841.20	
									\$4,973.01	
	Base Rate Change Winter 18-19 vs. Winter 17-18		\$ Change	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
			% Change	0%	0%	0%	0%	0%	0%	0%
	COG Change Winter 18-19 vs. Winter 17-18		\$ Change	-\$38.17	-\$35.76	-\$32.50	-\$33.07	-\$32.09	-\$35.18	-\$206.76
			% Change	-4%	-4%	-4%	-4%	-4%	-4%	-4%
	LDAC Change Winter 18-19 vs. Winter 17-18		\$ Change	\$9.89	\$9.27	\$8.42	\$8.57	\$8.31	\$9.12	\$53.58
			% Change	1%	1%	1%	1%	1%	1%	1%
16										
17	Typical Usage: therms		1,393	1,305	1,186	1,207	1,171	1,284	7,546	
18	Summer 2018									
19	Customer Charge	units @	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$214.26	\$1,285.56	
20	First	1,000 units @	\$0.1287	\$128.70	\$128.70	\$128.70	\$128.70	\$128.70	\$772.20	
21	Over	1,000 units @	\$0.1046	\$41.11	\$31.90	\$19.46	\$21.65	\$17.89	\$161.71	
22		COG 1	\$0.3543	\$493.54					\$493.54	
23		COG 2	\$0.3543		\$462.36				\$462.36	
24		COG 3	\$0.3543			\$420.20			\$420.20	
25		COG 4	\$0.3543				\$427.64		\$427.64	
26		COG 5	\$0.3543					\$414.89	\$414.89	
27		COG 6	\$0.3543					\$454.92	\$454.92	
28	Summer Period 2018 Avg. COG		\$0.3543*							
29		LDAC	\$0.0309	\$43.04	\$40.32	\$36.65	\$37.30	\$36.18	\$39.68	
30	TOTAL			\$920.65	\$877.55	\$819.26	\$829.55	\$811.92	\$867.26	
31	Change			-\$28.28	-\$26.49	-\$24.08	-\$24.50	-\$23.77	-\$26.07	
32	% Chg			-3.07%	-3.02%	-2.94%	-2.95%	-2.93%	-3.01%	

*-Note- Weighted by usage.

NORTHERN UTILITIES, INC. -- NEW HAMPSHIRE DIVISION

Impact of Rate Changes on Residential Heating Bills by Usage Level

Forecast Summer 2019 vs. Actual Summer 2018

Residential Heating		
	<u>Summer 2018</u>	<u>Summer 2019</u>
Customer Charge	\$21.36	\$21.36
First 50 Therms	\$0.5870	\$0.5870
Over 50 therms	\$0.5870	\$0.5870
LDAC	\$0.0576	\$0.0675
CGA	\$0.3975	\$0.3670

Usage (Therms)	Summer 2016 Bill Amount	Summer 2017 Bill Amount	Total Bill		Base Rate		COG		LDAC		
5	\$26.57	\$26.47	(\$0.10)	-0.4%	\$0.00	0.0%	(\$0.15)	-0.6%	\$0.05	0.2%	
10	\$31.78	\$31.58	(\$0.21)	-0.6%	\$0.00	0.0%	(\$0.31)	-1.0%	\$0.10	0.3%	
20	\$42.20	\$41.79	(\$0.41)	-1.0%	\$0.00	0.0%	(\$0.61)	-1.4%	\$0.20	0.5%	
Average Monthly	25	\$47.41	\$46.90	(\$0.52)	-1.1%	\$0.00	0.0%	(\$0.76)	-1.6%	\$0.25	0.5%
30	\$52.62	\$52.01	(\$0.62)	-1.2%	\$0.00	0.0%	(\$0.91)	-1.7%	\$0.30	0.6%	
45	\$68.25	\$67.33	(\$0.93)	-1.4%	\$0.00	0.0%	(\$1.37)	-2.0%	\$0.45	0.7%	
50	\$73.47	\$72.44	(\$1.03)	-1.4%	\$0.00	0.0%	(\$1.53)	-2.1%	\$0.50	0.7%	
75	\$99.52	\$97.97	(\$1.54)	-1.6%	\$0.00	0.0%	(\$2.29)	-2.3%	\$0.74	0.7%	
125	\$151.62	\$149.05	(\$2.57)	-1.7%	\$0.00	0.0%	(\$3.81)	-2.5%	\$1.24	0.8%	
150	\$177.68	\$174.59	(\$3.09)	-1.7%	\$0.00	0.0%	(\$4.58)	-2.6%	\$1.49	0.8%	
200	\$229.78	\$225.66	(\$4.12)	-1.8%	\$0.00	0.0%	(\$6.10)	-2.7%	\$1.98	0.9%	