Northern Utilities - NEW HAMPSHIRE DIVISION
Simplified Market Based Allocator (SMBA) Calculations
DEMAND COSTS

NH Division Total Annual Demand Cost Allocation

1	**Resource**	**Costs**
2	Pipeline & Product Demand	$ 2,632,748
3	Storage	$ 11,165,290
4	On-system Peaking	$ 1,439,504
5	Total Gross Demand Cost	$ 15,237,543
6		
7	Capacity Assignment Demand Revenue Estimate	$ 3,258,243
8	NH Total Pipeline, Storage & Peaking Demand Cost	$ 15,237,543
9	Capacity Assignment as % of Total Gross Demand Cost	21.38%
10		
11		**Costs**
12	Pipeline & Product Demand	$ 562,960
13	Storage	$ 2,387,473
14	On-system Peaking	$ 307,809
15	Total Capacity Assignment Credit	$ 3,258,243
16		
17	NH Net Annual Demand Cost (Less Capacity Assignment)	
18		**Costs**
19	Pipeline & Product Demand	$ 2,069,788
20	Storage	$ 8,777,817
21	On-system Peaking	$ 1,131,695
22	Total Net Demand Cost (Less Capacity Assignment)	$ 11,979,300
23		
24	**DEVELOPMENT OF BASE AND REMAINING PIPELINE DEMAND COSTS**	
25		MMBtu/day
26	Pipeline MDQ	12,914
27	Less 21.38% NH Transp. Capacity Assignment	(2,761)
28	Net Pipeline MDQ	10,153
29		
30	Net Pipeline MDQ	10,153
31	Less: Firm Sales Base Use	3,281
32	Remaining Pipeline MDQ	6,872
33		
34		**Unit Cost**
35	Pipeline Unit Cost	$203.86
36		
37		**Costs**
38	Pipeline & Product Demand	$ 2,069,788
39	Less: Base Pipeline Use	$ 668,917
40	Remaining Pipeline Use	$ 1,400,871

1	**Resource**	
2	Pipeline & Product Demand	Schedule 21, LN 90 + Schedule 21, LN 93
3	Storage	Schedule 21, LN 91
4	On-system Peaking	Schedule 21, LN 92
5	Total Gross Demand Cost	Sum (LN 2 : LN 4)
6		
7	Capacity Assignment Demand Revenue Estimate	Schedule 5B
8	NH Total Pipeline, Storage & Peaking Demand Cost	LN 5
9	Capacity Assignment as % of Total Gross Demand Cost	LN 7 / LN 8
10		
11		
12	Pipeline & Product Demand	LN 2 * LN 9
13	Storage	LN 3 * LN 9
14	On-system Peaking	LN 4 * LN 9
15	Total Capacity Assignment Credit	Sum (LN 12 : LN 14)
16		
17	NH Net Annual Demand Cost (Less Capacity Assignment)	
18		
19	Pipeline & Product Demand	LN 2 - LN 12
20	Storage	LN 3 - LN 13
21	On-system Peaking	LN 4 - LN 14
22	Total Net Demand Cost (Less Capacity Assignment)	LN 5 - LN 15
23		
24	**DEVELOPMENT OF BASE AND REMAINING PIPELINE DEMAND**	
25		
26	Pipeline MDQ	Company Analysis
27	Less 21.38% NH Transp. Capacity Assignment	-(LN 26) * LN 9
28	Net Pipeline MDQ	Sum (LN 26 : LN 27)
29		
30	Net Pipeline MDQ	LN 28
31	Less: Firm Sales Base Use	Schedule 10B, LN 48 / 10
32	Remaining Pipeline MDQ	LN 30 - LN 31
33		
34		
35	Pipeline Unit Cost	LN 19 / LN 30
36		
37		
38	Pipeline & Product Demand	LN 19
39	Less: Base Pipeline Use	LN 35 * LN 31
40	Remaining Pipeline Use	LN 38 - LN 39

Northern Utilities - NEW HAMPSHIRE DIVISION
Simplified Market Based Allocator (SMBA) Calculations
DEMAND COSTS

41 **NH DIVISION MONTHLY PROPORTIONAL RESPONSIBILITY (PR ALLOCATORS)**
42 (Based on NH Firm Sales Sendout for Remaining Temperature Sensitive Load)
43

		Nov	Dec	Jan	Feb	Mar	Apr
44	**All Months**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**
45	Remaining Load for All Months	3,310,170	5,707,220	7,121,056	5,945,705	5,048,221	2,334,726
46	Rank	5	3	1	2	4	6
47	% Max Month	46.48%	80.15%	100.00%	83.49%	70.89%	32.79%
48	PR	2.74%	3.08%	16.51%	1.67%	6.10%	2.85%
49	CumPR	7.58%	16.77%	34.95%	18.44%	13.68%	4.84%
50							
51	**Peak Months Only**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**
52	Remaining Load for Peak Months Only	3,310,170	5,707,220	7,121,056	5,945,705	5,048,221	2,334,726
53	Rank	5	3	1	2	4	6
54	% Max Month	46.48%	80.15%	100.00%	83.49%	70.89%	32.79%
55	PR	2.74%	3.08%	16.51%	1.67%	6.10%	5.46%
56	CumPR	8.20%	17.39%	35.57%	19.07%	14.31%	5.46%

57

58 **DEMAND COST PR ALLOCATORS**

59		Nov	Dec	Jan	Feb	Mar	Apr
60	Pipeline - Base	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%
61	Pipeline - Remaining	7.58%	16.77%	34.95%	18.44%	13.68%	4.84%
62	Storage & Peaking	7.58%	16.77%	34.95%	18.44%	13.68%	4.84%
63	Capacity Release	8.20%	17.39%	35.57%	19.07%	14.31%	5.46%
64	Off-system Peaking	8.20%	17.39%	35.57%	19.07%	14.31%	5.46%
65	Interr. Margins & Off Sys Sales	8.20%	17.39%	35.57%	19.07%	14.31%	5.46%

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67 **DEMAND COSTS ALLOCATED TO MONTHS**

68		Nov	Dec	Jan	Feb	Mar	Apr
69	Pipeline - Base	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743
70	Pipeline - Remaining	$ 106,224	$ 234,915	$ 489,591	$ 258,373	$ 191,702	$ 67,845
71	Total Pipeline	$ 161,967	$ 290,658	$ 545,334	$ 314,116	$ 247,445	$ 123,588
72							
73	Storage &On-system Peaking	$ 751,408	$ 1,661,749	$ 3,463,278	$ 1,827,685	$ 1,356,066	$ 479,926
74	Off-system Peaking	$299,465	$634,796	$1,298,403	$695,920	$522,196	$199,463
75	Less Credits to Demand Cost						
76	Cap Rel Margins & Asset Mgt Credits	$ 256,463	$ 543,642	$ 1,111,958	$ 595,989	$ 447,211	$ 170,821
77	Interruptible Margins	$ -	$ -	$ -	$ -	$ -	$ -
78	Conversion Rate and Re-entry Rate Credits	$ 820	$ 1,739	$ 3,557	$ 1,907	$ 1,431	$ 546
79	Total Direct Demand Costs	$ 955,556	$ 2,041,823	$ 4,191,501	$ 2,239,826	$ 1,677,066	$ 631,610
80							
81	Indirect Demand Costs/(Credits)						
82	Miscellaneous Overhead						
83	Local Production & Storage						
84	Subtotal						

Northern Utilities - NEW HAMPSHIRE DIVISION
Simplified Market Based Allocator (SMBA) Calculations
DEMAND COSTS

41 **NH DIVISION MONTHLY PROPORTIONAL RESPONSIBILITY (PR ALLOCATORS)**
42 (Based on NH Firm Sales Sendout for Remaining Temperature Sensitive Load)
43

		May	Jun	Jul	Aug	Sep	Oct	Annual	Winter	Summer
44	**All Months**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Annual**	**Winter**	**Summer**
45	Remaining Load for All Months	758,321	223,882	0	5,852	85,104	1,116,887	31,657,143	29,467,097	2,190,045
46	Rank	8	9	12	11	10	7			
47	% Max Month	10.65%	3.14%	0.00%	0.08%	1.20%	15.68%			
48	PR	0.94%	0.22%	0.00%	0.01%	0.11%	0.72%	34.95%		
49	CumPR	1.27%	0.34%	0.00%	0.01%	0.12%	1.99%	100.00%	96.27%	3.73%

50

		Annual	Winter	Summer
51	**Peak Months Only**	**Annual**	**Winter**	**Summer**
52	Remaining Load for Peak Months Only	29,467,097	29,467,097	
53	Rank			
54	% Max Month			
55	PR	35.57%		
56	CumPR	100.00%	100.00%	0.00%

57
58 **DEMAND COST PR ALLOCATORS**

59		May	Jun	Jul	Aug	Sep	Oct	Annual	Winter	Summer
60	Pipeline - Base	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	100.00%	50.00%	50.00%
61	Pipeline - Remaining	1.27%	0.34%	0.00%	0.01%	0.12%	1.99%	100.00%	96.27%	3.73%
62	Storage & Peaking	1.27%	0.34%	0.00%	0.01%	0.12%	1.99%	100.00%	96.27%	3.73%
63	Capacity Release	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%
64	Off-system Peaking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%
65	Interr. Margins & Off Sys Sales	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%

66
67 **DEMAND COSTS ALLOCATED TO MONTHS**

68		May	Jun	Jul	Aug	Sep	Oct	Annual	Winter	Summer	Winter	Summer
69	Pipeline - Base	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 668,917	$ 334,458	$ 334,458	50.00%	50.00%
70	Pipeline - Remaining	$ 17,839	$ 4,697	$ -	$ 105	$ 1,664	$ 27,916	$ 1,400,871	$ 1,348,651	$ 52,221	96.27%	3.73%
71	Total Pipeline	$ 73,582	$ 60,440	$ 55,743	$ 55,848	$ 57,407	$ 83,659	$ 2,069,788	$ 1,683,109	$ 386,679	81.32%	18.68%
72												
73	Storage &On-system Peaking	$ 126,191	$ 33,227	$ -	$ 740	$ 11,769	$ 197,473	$ 9,909,512	$ 9,540,113	$ 369,400	96.27%	3.73%
74	Off-system Peaking	$0	$0	$0	$0	$0	$0	$ 3,650,243	$ 3,650,243	$ -	100.00%	0.00%
75	Less Credits to Demand Cost											
76	Cap Rel Margins & Asset Mgt Credits	$ -	$ -	$ -	$ -	$ -	$ -	$3,126,083	$ 3,126,083	$ -	100.00%	0.00%
77	Interruptible Margins	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
78	Conversion Rate and Re-entry Rate Credits	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ 10,000	$ -		
79	Total Direct Demand Costs	$ 199,773	$ 93,667	$ 55,743	$ 56,588	$ 69,176	$ 281,132	$ 12,493,460	$ 11,737,382	$ 756,079	93.95%	6.05%
80												
81	Indirect Demand Costs/(Credits)											
82	Miscellaneous Overhead							$ 580,455	$ 471,052	$ 109,403	81.15%	18.85%
83	Local Production & Storage							$ 476,106	$ 476,106	$ -	100.00%	0.00%
84	Subtotal							$ 1,056,561	$ 947,158	$ 109,403	89.65%	10.35%

Northern Utilities - NEW HAMPSHIRE DIVISION
Simplified Market Based Allocator (SMBA) Calculations
DEMAND COSTS

41	**NH DIVISION MONTHLY PROPORTIONAL RESPONSIBILITY (PR ALLOCATORS)**	
42	(Based on NH Firm Sales Sendout for Remaining Temperature Sensitive Load)	
43		
44	**All Months**	
45	Remaining Load for All Months	Schedule 10B, LN 80
46	Rank	Rank LN 45
47	% Max Month	LN 45 / MAX Month LN 45
48	PR	The difference between LN 47 for the month and LN 47 for next highest rank
49	CumPR	Cumulative Values, LN 48
50		
51	**Peak Months Only**	
52	Remaining Load for Peak Months Only	LN 45
53	Rank	Rank LN 52
54	% Max Month	LN 52 / MAX Month LN 52
55	PR	The difference between LN 54 for the month and LN 54 for next highest rank
56	CumPR	Cumulative Values, LN 55
57		
58	**DEMAND COST PR ALLOCATORS**	
59		
60	Pipeline - Base	1/12
61	Pipeline - Remaining	LN 49
62	Storage & Peaking	LN 49
63	Capacity Release	LN 56
64	Off-system Peaking	LN 56
65	Interr. Margins & Off Sys Sales	LN 56
66		
67	**DEMAND COSTS ALLOCATED TO MONTHS**	
68		
69	Pipeline - Base	LN 39 * LN 60
70	Pipeline - Remaining	LN 40 * LN 61
71	Total Pipeline	LN 69 + LN 70
72		
73	Storage &On-system Peaking	LN 62 * (Sum LN 20 : LN 21)
74	Off-system Peaking	
75	Less Credits to Demand Cost	
76	Cap Rel Margins & Asset Mgt Credits	Schedule 21, LN 95
77	Interruptible Margins	
78	Conversion Rate and Re-entry Rate Credits	
79	Total Direct Demand Costs	LN 71 + LN 73 + LN 74 - (Sum LN 75 : LN 78)
80		
81	Indirect Demand Costs/(Credits)	
82	Miscellaneous Overhead	Company Analysis
83	Local Production & Storage	Company Analysis
84	Subtotal	LN 82 + LN 83

Northern Utilities - NEW HAMPSHIRE DIVISION
COMMODITY COSTS

		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
	Supply Volumes - Therms															
1	New Hampshire Sales Pipeline	2,248,196	2,217,003	1,631,924	1,461,712	2,124,403	3,307,101	1,774,989	1,204,763	1,009,556	1,021,248	1,042,274	2,116,922	21,160,090	12,990,338	8,169,752
2	New Hampshire Sales Storage	1,127,261	2,434,371	3,484,541	3,474,809	2,830,766	0	0	0	0	0	0	0	13,351,748	13,351,748	0
3	New Hampshire Sales Peaking	895,812	2,031,895	2,984,060	1,900,051	1,118,944	7,776	7,787	7,570	7,587	7,633	7,241	8,021	8,984,376	8,938,537	45,839
4	Total New Hampshire Firm Sales Sendout	4,271,269	6,683,269	8,100,525	6,836,572	6,074,113	3,314,876	1,782,776	1,212,333	1,017,142	1,028,881	1,049,515	2,124,943	43,496,214	35,280,623	8,215,591
5																
6	New Hampshire Interruptible Sendout (Pipeline)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7																
8	Total Firm Sendout	4,271,269	6,683,269	8,100,525	6,836,572	6,074,113	3,314,876	1,782,776	1,212,333	1,017,142	1,028,881	1,049,515	2,124,943	43,496,214	35,280,623	8,215,591
9	Total Firm Sales	4,231,892	6,626,315	8,019,532	6,764,323	5,976,928	3,263,930	1,749,592	1,190,614	996,564	1,008,097	1,053,861	2,102,929	42,984,575	34,882,919	8,101,656
10	Difference (LAUF & Company Use)	39,377	56,954	80,993	72,249	97,185	50,946	33,185	21,719	20,578	20,784	(4,345)	22,014	511,639	397,704	113,935
11	Percent Difference	0.92%	0.85%	1.00%	1.06%	1.60%	1.54%	1.86%	1.79%	2.02%	2.02%	-0.41%	1.04%	1.18%	1.13%	1.39%
12																
13	**Variable Costs**															
14	New Hampshire Sales Pipeline Commodity	$ 675,924	$ 777,176	$ 766,900	$ 680,159	$ 712,421	$ 826,859	$ 431,688	$ 296,109	$ 249,562	$ 250,525	$ 243,514	$ 501,818	$ 6,412,656	$ 4,439,439	$ 1,973,217
15	New Hampshire Total Storage	$ 321,985	$ 683,543	$ 983,407	$ 981,943	$ 806,050	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,776,928	$ 3,776,928	$ -
16	New Hampshire Total Peaking	$ 723,913	$ 1,802,113	$ 2,176,245	$ 1,655,118	$ 803,041	$ 5,508	$ 5,429	$ 5,241	$ 5,226	$ 5,248	$ 4,945	$ 5,462	$ 7,197,490	$ 7,165,938	$ 31,552
17	New Hampshire Inventory Finance Charge	$ 339	$ 584	$ 729	$ 609	$ 517	$ 239	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,017	$ 3,017	$ -
18	Total New Hampshire Sales Variable Costs	$ 1,722,161	$ 3,263,416	$ 3,927,282	$ 3,317,829	$ 2,322,029	$ 832,606	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280	$ 17,390,091	$ 15,385,322	$ 2,004,769
19														$ -	$ -	$ -
20	New Hampshire Interruptible Commodity Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	Total New Hampshire Commodity Costs	$ 1,722,161	$ 3,263,416	$ 3,927,282	$ 3,317,829	$ 2,322,029	$ 832,606	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280	$ 17,390,091	$ 15,385,322	$ 2,004,769
22																
23	**Supply Cost/Therm**															
24	New Hampshire Sales Pipeline Commodity	$ 0.3007	$ 0.3506	$ 0.4699	$ 0.4653	$ 0.3354	$ 0.2500	$ 0.2432	$ 0.2458	$ 0.2472	$ 0.2453	$ 0.2336	$ 0.2371	$ 0.3031	$ 0.3417	$ 0.2415
25	New Hampshire Storage Excld Inventory Finance Costs	$ 0.2856	$ 0.2808	$ 0.2822	$ 0.2826	$ 0.2847	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 0.2829	$ 0.2829	$ -
26	New Hampshire Peaking Excld Inventory Finance Costs	$ 0.8081	$ 0.8869	$ 0.7293	$ 0.8711	$ 0.7177	$ 0.7084	$ 0.6972	$ 0.6924	$ 0.6889	$ 0.6875	$ 0.6830	$ 0.6810	$ 0.8011	$ 0.8017	$ 0.6883
27	New Hampshire Inventory Finance Costs per Dth Stor and Peak	$ 0.0002	$ 0.0001	$ 0.0001	$ 0.0001	$ 0.0001	$ 0.0307	$ -	$ -	$ -	$ -	$ -	$ -	$ 0.0001	$ 0.0001	$ -
28	Weighted Average Cost per Dth Sendout	$ 0.4032	$ 0.4883	$ 0.4848	$ 0.4853	$ 0.3823	$ 0.2512	$ 0.2452	$ 0.2486	$ 0.2505	$ 0.2486	$ 0.2367	$ 0.2387	$ 0.3998	$ 0.4361	$ 0.2440
29																
30	New Hampshire Interruptible Cost / Therm	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
31																
32	**Commodity Costs**															
33	Base Commodity, therms	984,353	1,017,165	1,017,165	918,730	1,017,165	977,510	1,017,165	984,353	1,011,313	1,017,165	984,353	1,017,165	11,963,605	5,932,089	6,031,516
34	Base Commodity Cost	$ 295,948	$ 356,570	$ 478,003	$ 427,500	$ 341,107	$ 244,402	$ 247,381	$ 241,937	$ 249,997	$ 249,524	$ 229,981	$ 241,120	$ 3,603,469	$ 2,143,530	$ 1,459,939
35	Remaining Commodity	$ 1,426,213	$ 2,906,846	$ 3,449,279	$ 2,890,328	$ 1,980,921	$ 588,204	$ 189,737	$ 59,414	$ 4,792	$ 6,249	$ 18,478	$ 266,160	$ 13,786,621	$ 13,241,792	$ 544,830
36	Total Commodity	$ 1,722,161	$ 3,263,416	$ 3,927,282	$ 3,317,829	$ 2,322,029	$ 832,606	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280	$ 17,390,091	$ 15,385,322	$ 2,004,769

Northern Utilities - NEW HAMPSHIRE DIVISION
COMMODITY COSTS

	Supply Volumes - Therms	
1	New Hampshire Sales Pipeline	Schedule 22, LN 10 * LN 46 * 10
2	New Hampshire Sales Storage	Schedule 22, LN 3 * LN 46 * 10
3	New Hampshire Sales Peaking	Schedule 22, LN 4 * LN 46 * 10
4	Total New Hampshire Firm Sales Sendout	Sum LN 1 : LN 3
5		
6	New Hampshire Interruptible Sendout (Pipeline)	Schedule 22, LN 8 * 10
7		
8	Total Firm Sendout	LN 4
9	Total Firm Sales	Schedule 10B, LN 11
10	Difference (LAUF & Company Use)	LN 8 - LN 9
11	Percent Difference	LN 10 / LN 8
12		
13	**Variable Costs**	
14	New Hampshire Sales Pipeline Commodity	Schedule 22, LN 59
15	New Hampshire Total Storage	Schedule 22, LN 60
16	New Hampshire Total Peaking	Schedule 22, LN 61
17	New Hampshire Inventory Finance Charge	Schedule 22, LN 64
18	Total New Hampshire Sales Variable Costs	Sum LN 14 : LN 17
19		
20	New Hampshire Interruptible Commodity Costs	Schedule 22, LN 30
21	Total New Hampshire Commodity Costs	LN 18 + LN 20
22		
23	**Supply Cost/Therm**	
24	New Hampshire Sales Pipeline Commodity	LN 14 / LN 1
25	New Hampshire Storage Excld Inventory Finance Costs	LN 15 / LN 2
26	New Hampshire Peaking Excld Inventory Finance Costs	LN 16 / LN 3
27	New Hampshire Inventory Finance Costs per Dth Stor and Peak	LN 17 / Sum (LN 2 : LN 3)
28	Weighted Average Cost per Dth Sendout	LN 18 / LN 8
29		
30	New Hampshire Interruptible Cost / Therm	LN 20 / LN 6
31		
32	**Commodity Costs**	
33	Base Commodity, therms	Schedule 10B, LN 64
34	Base Commodity Cost	Min (LN 24 * LN 33), LN 18
35	Remaining Commodity	LN 21 - LN 34
36	Total Commodity	LN 34 + LN 35

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Estimated Delivered City-Gate Commodity Costs and Volumes
November 2018 through April 2019

Denotes Confidential Information

Supply Source	Delivered City-Gate Costs	Delivered City-Gate Volumes	Delivered Cost per Dth
Tennessee Storage Path	[redacted]	220,233	[redacted]
FS-MA Path (TGP Zone 4 300 Leg)	[redacted]	192,675	[redacted]
Union Dawn Path (Dawn)	[redacted]	1,022,767	[redacted]
Union Dawn Storage Path	[redacted]	3,139,692	[redacted]
Algonquin Receipts Path	[redacted]	226,431	[redacted]
Peaking Contract 1	[redacted]	407,836	[redacted]
Tennessee Long-Haul Path	[redacted]	901,838	[redacted]
Tennessee Niagara Path	[redacted]	288,868	[redacted]
Iroquois Receipts Path	[redacted]	924,081	[redacted]
LNG	[redacted]	49,620	[redacted]
Maritimes Delivered	[redacted]	1,132,500	[redacted]
PNGTS Delivered (Dec - Feb)	[redacted]	672,638	[redacted]
Total Delivered Commodity Cost	$39,571,017	9,179,179	$4.311

REDACTED

Estimated Delivered City-Gate Commodity Costs and Volumes
May 2019 through October 2019

Denotes Confidential Information

Supply Source	Delivered City-Gate Costs	Delivered City-Gate Volumes	Delivered Cost per Dth
Algonquin Receipts Path	[redacted]	221,318	[redacted]
FS-MA Path (TGP Zone 4 300 Leg)	[redacted]	419,752	[redacted]
Union Dawn Path (Dawn)	[redacted]	758,542	[redacted]
Tennessee Long-Haul Path	[redacted]	916,780	[redacted]
LNG	[redacted]	12,880	[redacted]
Total Delivered Commodity Cost	$5,680,320	2,329,272	$2.439

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Analysis, Balances and Interest Calculation

			Winter						Summer					
	Sales Revenues		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
1	Volumes	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
2	Residential Heat & Non Heat		1,964,278	3,075,676	3,722,352	3,139,733	2,774,255	1,514,988	766,943	521,912	436,849	441,905	461,965	921,830
3	Sales HLF Classes		300,893	471,139	570,199	480,952	424,967	232,070	411,201	279,826	234,219	236,930	247,685	494,245
4	Sales LLF Classes		1,966,721	3,079,500	3,726,981	3,143,637	2,777,705	1,516,872	571,448	388,876	325,496	329,262	344,210	686,854
5	Total		4,231,892	6,626,315	8,019,532	6,764,323	5,976,928	3,263,930	1,749,592	1,190,614	996,564	1,008,097	1,053,861	2,102,929
6	Rates													
7	Residential Heat & Non Heat CGA		$0.8271	$0.8271	$0.8271	$0.8271	$0.8271	$0.8271	$0.3670	$0.3670	$0.3670	$0.3670	$0.3670	$0.3670
8	Sales HLF Classes CGA		$0.7254	$0.7254	$0.7254	$0.7254	$0.7254	$0.7254	$0.3269	$0.3269	$0.3269	$0.3269	$0.3269	$0.3269
9	Sales LLF Classes CGA		$0.8424	$0.8424	$0.8424	$0.8424	$0.8424	$0.8424	$0.3958	$0.3958	$0.3958	$0.3958	$0.3958	$0.3958
10	Revenues													
11	Residential Heat & Non Heat		$ (1,624,654)	$ (2,543,891)	$ (3,078,757)	$ (2,596,873)	$ (2,294,587)	$ (1,253,047)	$ (281,468)	$ (191,542)	$ (160,324)	$ (162,179)	$ (169,541)	$ (338,312)
12	Sales HLF Classes		$ (218,268)	$ (341,765)	$ (413,622)	$ (348,883)	$ (308,271)	$ (168,343)	$ (134,422)	$ (91,475)	$ (76,566)	$ (77,452)	$ (80,968)	$ (161,569)
13	Sales LLF Classes		$ (1,656,765)	$ (2,594,171)	$ (3,139,609)	$ (2,648,200)	$ (2,339,939)	$ (1,277,813)	$ (226,179)	$ (153,917)	$ (128,831)	$ (130,322)	$ (136,238)	$ (271,857)
14	Total Sales		$ (3,499,688)	$ (5,479,827)	$ (6,631,988)	$ (5,593,956)	$ (4,942,797)	$ (2,699,203)	$ (642,069)	$ (436,934)	$ (365,721)	$ (369,953)	$ (386,748)	$ (771,737)
15														
16			Winter						Summer					
17	**Gas Costs and Credits**		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
18		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
19	Demand Costs (net of Capacity Assignment)													
20	Pipeline		$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482	$ 172,482
21	Storage		$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485	$ 731,485
22	On-system Peaking		$ 112,545	$ 159,501	$ 159,501	$ 159,501	$ 159,501	$ 87,989	$ 87,989	$ 41,033	$ 41,033	$ 41,033	$ 41,033	$ 41,033
23	Off-System Peaking		$ 730,049	$ 730,049	$ 730,049	$ 730,049	$ 730,049	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	Total Demand Costs		$ 1,746,561	$ 1,793,517	$ 1,793,517	$ 1,793,517	$ 1,793,517	$ 991,956	$ 991,956	$ 945,000	$ 945,000	$ 945,000	$ 945,000	$ 945,000
25														
26	Asset Management and Capacity Release													
27	NUI AMA Revenue		$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)	$ (585,133)
28	NUI Capacity Release		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
29	NUI AMA Rev & Cap. Release Subtotal													
30	NH AMA Revenue		$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)
31	NH Capacity Release													
32	NH Total Asset Management and Capacity Release		$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)	$ (260,507)
33														
34	Re-entry Rate & Conversion Rate Revenue		$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ -	$ -	$ -	$ -	$ -	$ -
35														
36	Net Demand Costs		$ 1,484,388	$ 1,531,344	$ 1,531,344	$ 1,531,344	$ 1,531,344	$ 729,783	$ 731,449	$ 684,493	$ 684,493	$ 684,493	$ 684,493	$ 684,493
37														
38	NUI Commodity Costs													
39	NUI Total Pipeline Volumes		570,060	556,881	406,460	367,544	541,084	912,309	494,604	334,214	288,763	290,326	302,280	572,717
40	Pipeline Costs Modeled in Sendout™		$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630
41	NYMEX Price Used for Forecast		$ 2.8900	$ 2.9790	$ 3.0660	$ 3.0300	$ 2.9260	$ 2.6350	$ 2.6030	$ 2.6340	$ 2.6670	$ 2.6710	$ 2.6530	$ 2.6690
42	NYMEX Price Used for Update		$ 2.8900	$ 2.9790	$ 3.0660	$ 3.0300	$ 2.9260	$ 2.6350	$ 2.6030	$ 2.6340	$ 2.6670	$ 2.6710	$ 2.6530	$ 2.6690
43	Increase/(Decrease) NYMEX Price													
44	Increase/(Decrease) in Pipeline Costs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
45	Updated Pipeline Costs		$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630
46	Interruptible Volumes - NH		0	0	0	0	0	0	0	0	0	0	0	0
47	Average Supply Cost ($/MMBtu)		$ 3.01	$ 3.51	$ 4.70	$ 4.65	$ 3.35	$ 2.50	$ 2.43	$ 2.46	$ 2.47	$ 2.45	$ 2.34	$ 2.37
48	Interruptible Cost - NH		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
49	Total Updated Pipeline Costs		$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630
50	New Hampshire Allocated Percentage		39.44%	39.81%	40.15%	39.77%	39.26%	36.25%	35.89%	36.05%	34.96%	35.18%	34.48%	36.96%
51	NH Updated Pipeline Costs		$ 675,924	$ 777,176	$ 766,900	$ 680,159	$ 712,421	$ 826,859	$ 431,688	$ 296,109	$ 249,562	$ 250,525	$ 243,514	$ 501,818
52	NH Commodity Costs													
53	Pipeline		$ 675,924	$ 777,176	$ 766,900	$ 680,159	$ 712,421	$ 826,859	$ 431,688	$ 296,109	$ 249,562	$ 250,525	$ 243,514	$ 501,818
54	Storage		$ 321,985	$ 683,543	$ 983,407	$ 981,943	$ 806,050	$ -	$ -	$ -	$ -	$ -	$ -	$ -
55	Peaking		$ 723,913	$ 1,802,113	$ 2,176,245	$ 1,655,118	$ 803,041	$ 5,508	$ 5,429	$ 5,241	$ 5,226	$ 5,248	$ 4,945	$ 5,462
56	Total Commodity Costs		$ 1,721,822	$ 3,262,831	$ 3,926,553	$ 3,317,220	$ 2,321,512	$ 832,367	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollectior

	Sales Revenues	Winter	Summer	Prior Period	Total
1	Volumes				
2	Residential Heat & Non Heat				19,742,687
3	Sales HLF Classes				4,384,327
4	Sales LLF Classes				18,857,561
5	Total				42,984,575
6	Rates				
7	Residential Heat & Non Heat CGA				
8	Sales HLF Classes CGA				
9	Sales LLF Classes CGA				
10	Revenues				
11	Residential Heat & Non Heat				$ (14,695,175)
12	Sales HLF Classes				$ (2,421,604)
13	Sales LLF Classes				$ (14,703,841)
14	Total Sales	$ (28,847,459)	$ (2,973,162)		$ (31,820,621)
15					
16					
17	**Gas Costs and Credits**				
18					Total
19	Demand Costs (net of Capacity Assignment)				
20	Pipeline				$ 2,069,788
21	Storage				$ 8,777,817
22	On-system Peaking				$ 1,131,695
23	Off-System Peaking				$ 3,650,243
24	Total Demand Costs				$ 15,629,544
25					
26	Asset Management and Capacity Release				
27	NUI AMA Revenue				$ (7,021,600)
28	NUI Capacity Release				$ -
29	NUI AMA Rev & Cap. Release Subtotal				$ -
30	NH AMA Revenue				$ (3,126,083)
31	NH Capacity Release				$ -
32	NH Total Asset Management and Capacity Release		$ -	$ -	$ (3,126,083)
33					
34	Re-entry Rate & Conversion Rate Revenue	$ (10,000)	$ -		$ (10,000)
35					
36	Net Demand Costs	$ 8,339,544	$ 4,153,916		$ 12,493,460
37					
38	NUI Commodity Costs				
39	NUI Total Pipeline Volumes				5,637,242
40	Pipeline Costs Modeled in Sendout™				$ 16,896,179
41	NYMEX Price Used for Forecast				
42	NYMEX Price Used for Update				
43	Increase/(Decrease) NYMEX Price				
44	Increase/(Decrease) in Pipeline Costs				
45	Updated Pipeline Costs				
46	Interruptible Volumes - NH				
47	Average Supply Cost ($/MMBtu)				
48	Interruptible Cost - NH				
49	Total Updated Pipeline Costs				
50	New Hampshire Allocated Percentage				
51	NH Updated Pipeline Costs				$ 6,412,656
52	NH Commodity Costs				
53	Pipeline				$ 6,412,656
54	Storage				$ 3,776,928
55	Peaking				$ 7,197,490
56	Total Commodity Costs	$ 15,382,305	$ 2,004,769		$ 17,387,074

Northern Utilities

NEW HAMPSHIRE (Over) / Undercollection Analysis, Balances and Interest Calculation

57	Inventory Finance Charge		$ 339	$ 584	$ 729	$ 609	$ 517	$ 239	$ -	$ -	$ -	$ -	$ -	$ -
58														
59	**Total Anticipated Direct Cost of Gas**		$ 3,206,548	$ 4,794,759	$ 5,458,625	$ 4,849,172	$ 3,853,372	$ 1,562,389	$ 1,168,567	$ 985,844	$ 939,282	$ 940,266	$ 932,952	$ 1,191,773
60			Winter						Summer					
61			(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
62		Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
63	Working Capital													
64	Total Anticipated Direct Cost of Gas		$ 3,206,548	$ 4,794,759	$ 5,458,625	$ 4,849,172	$ 3,853,372	$ 1,562,389	$ 1,168,567	$ 985,844	$ 939,282	$ 940,266	$ 932,952	$ 1,191,773
65	Working Capital Percentage		0.2742%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
66	Working Capital Allowance		$ 8,794	$ 13,149	$ 14,970	$ 13,299	$ 10,568	$ 4,285	$ 3,205	$ 2,704	$ 2,576	$ 2,579	$ 2,559	$ 3,268
67	Beginning Period Working Capital Balance		$ 9,784	$ 18,637	$ 31,891	$ 47,026	$ 60,548	$ 71,390	$ 75,981	$ 79,509	$ 82,550	$ 85,475	$ 88,415	$ 91,347
68	End of Period Working Capital Allowance		$ 18,578	$ 31,786	$ 46,861	$ 60,324	$ 71,116	$ 75,675	$ 79,186	$ 82,213	$ 85,126	$ 88,054	$ 90,974	$ 94,616
69	Interest		$ 59	$ 105	$ 164	$ 224	$ 274	$ 306	$ 323	$ 337	$ 349	$ 362	$ 374	$ 387
70	End of period with Interest	$ 9,784	$ 18,637	$ 31,891	$ 47,026	$ 60,548	$ 71,390	$ 75,981	$ 79,509	$ 82,550	$ 85,475	$ 88,415	$ 91,347	$ 95,003
71	Bad Debt													
72	Projected Bad Debt	$ -	$ 18,865	$ 9,432	$ -	$ -	$ -	$ -	$ 9,432	$ 28,297	$ 28,297	$ 37,729	$ 28,297	$ 28,297
73	Beginning Period Bad Debt Balance		$ (19,099)	$ (275)	$ 9,176	$ 9,214	$ 9,252	$ 9,291	$ 9,330	$ 18,820	$ 47,255	$ 75,808	$ 113,931	$ 142,762
74	End of Period Bad Debt Balance		*$ (235)*	*$ 9,157*	*$ 9,176*	*$ 9,214*	*$ 9,252*	*$ 9,291*	*$ 18,762*	*$ 47,117*	*$ 75,552*	*$ 113,537*	*$ 142,228*	*$ 171,059*
75	Interest		$ (40)	$ 19	$ 38	$ 38	$ 39	$ 39	$ 59	$ 137	$ 256	$ 394	$ 534	$ 654
76	End of Period Bad Debt Balance with Interest	$ (19,099)	$ (275)	$ 9,176	$ 9,214	$ 9,252	$ 9,291	$ 9,330	$ 18,820	$ 47,255	$ 75,808	$ 113,931	$ 142,762	$ 171,713
77	Local Production and Storage Capacity		$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ -	$ -	$ -	$ -	$ -	$ -
78			$ -	$ -	$ -									
79	Miscellaneous Overhead		$ 78,509	$ 78,509	$ 78,509	$ 78,509	$ 78,509	$ 78,509	$ 18,234	$ 18,234	$ 18,234	$ 18,234	$ 18,234	$ 18,234
80														
81	Gas Cost Other than Bad Debt and Working Capital Over/Under Collection													
82	Beginning Balance Over/Under Collection		$ 680,009	$ 547,281	$ 21,255	$ (996,275)	$ (1,588,573)	$ (2,528,698)	$ (3,520,228)	$ (2,989,029)	$ (2,433,158)	$ (1,850,269)	$ (1,268,205)	$ (707,875)
83	Net Costs - Revenues		$ (135,280)	$ (527,208)	$ (1,015,503)	$ (586,924)	$ (931,565)	$ (978,955)	$ 544,732	$ 567,144	$ 591,795	$ 588,547	$ 564,438	$ 438,270
84	Ending Balance before Interest		$ 544,730	$ 20,073	$ (994,248)	$ (1,583,200)	$ (2,520,138)	$ (3,507,653)	$ (2,975,496)	$ (2,421,885)	$ (1,841,363)	$ (1,261,722)	$ (703,767)	$ (269,605)
85	Average Balance		$ 612,369	$ 283,677	$ (486,497)	$ (1,289,737)	$ (2,054,356)	$ (3,018,175)	$ (3,247,862)	$ (2,705,457)	$ (2,137,261)	$ (1,555,995)	$ (985,986)	$ (488,740)
86	Interest Rate		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
87	Interest Expense		$ 2,552	$ 1,182	$ (2,027)	$ (5,374)	$ (8,560)	$ (12,576)	$ (13,533)	$ (11,273)	$ (8,905)	$ (6,483)	$ (4,108)	$ (2,036)
88	Ending Balance Incl Interest Expense	$ 680,009	$ 547,281	$ 21,255	$ (996,275)	$ (1,588,573)	$ (2,528,698)	$ (3,520,228)	$ (2,989,029)	$ (2,433,158)	$ (1,850,269)	$ (1,268,205)	$ (707,875)	$ (271,641)
89	**Total Over/Under Collection Ending Balance**	$ 670,694	$ 565,643	$ 62,322	$ (940,036)	$ (1,518,773)	$ (2,448,017)	$ (3,434,918)	$ (2,890,700)	$ (2,303,354)	$ (1,688,986)	$ (1,065,859)	$ (473,766)	$ (4,925)
90														
91	**Total Indirect Cost of Gas**	$ 670,694	$ 188,088	$ 181,747	$ 171,005	$ 166,046	$ 160,180	$ 149,914	$ 17,720	$ 38,436	$ 40,807	$ 52,814	$ 45,889	$ 48,804
92														
93	**Total Cost of Gas**	$ 670,694	$ 3,394,637	$ 4,976,506	$ 5,629,630	$ 5,015,219	$ 4,013,553	$ 1,712,303	$ 1,186,287	$ 1,024,280	$ 980,089	$ 993,081	$ 978,841	$ 1,240,577
94														
95	**Total Interest**	$ -	$ 2,570	$ 1,306	$ (1,825)	$ (5,112)	$ (8,247)	$ (12,231)	$ (13,151)	$ (10,798)	$ (8,300)	$ (5,727)	$ (3,201)	$ (995)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollectior

57	Inventory Finance Charge				$ 3,017
58					
59	**Total Anticipated Direct Cost of Gas**	$ 23,724,866	$ 6,158,685		$ 29,883,551
60					
61					
62					Total
63	Working Capital				
64	Total Anticipated Direct Cost of Gas				$ 29,883,551
65	Working Capital Percentage				
66	Working Capital Allowance	$ 65,065	$ 16,890	$ 9,784	$ 91,739
67	Beginning Period Working Capital Balance				
68	End of Period Working Capital Allowance				
69	Interest	$ 1,133	$ 2,132		$ 3,265
70	End of period with Interest				
71	Bad Debt				
72	Projected Bad Debt	$ 28,297	$ 160,349	$ (19,099)	$ 169,547
73	Beginning Period Bad Debt Balance				
74	End of Period Bad Debt Balance				
75	Interest	$ 132	$ 2,034		$ 2,166
76	End of Period Bad Debt Balance with Interest				
77	Local Production and Storage Capacity				$ 476,106
78					$ -
79	Miscellaneous Overhead				$ 580,455
80					
81	Gas Cost Other than Bad Debt and Working Capita				
82	Beginning Balance Over/Under Collection				$ (16,633,766)
83	Net Costs - Revenues				$ (880,509)
84	Ending Balance before Interest				$ (17,514,274)
85	Average Balance				$ (17,074,020)
86	Interest Rate				
87	Interest Expense				$ (71,142)
88	Ending Balance Incl Interest Expense				
89	**Total Over/Under Collection Ending Balance**				
90					
91	**Total Indirect Cost of Gas**	$ 1,016,981	$ 244,470	$ 670,694	$ 1,932,144
92					
93	**Total Cost of Gas**	$ 24,741,847	$ 6,403,154	$ 670,694	$ 31,815,695
94					
95	**Total Interest**	$ (23,538)	$ (42,173)		$ (65,711)

Northern Utilities Inc.
Calculation of Bad Debt Expense

1	**Actual Bad Debt Expense 12 Months Ended July 31, 2018**			
2				
3	Total	$	452,112	Company Analysis
4	Distribution	$	262,580	Company Analysis
5	Distribution (%)		58.08%	LN 4 / LN 3
6	Non-Distribution	$	189,532	Company Analysis
7	Non-Distribution(%)		41.92%	LN 6 / LN 3
8				
9	Winter Demand Cost %		93.95%	Schedule 1A, LN 79
10	Summer Demand Cost %		6.05%	Schedule 1A, LN 79
11				
12	**Forecast Bad Debt Expense 12 Months Ended December 31, 2019**			*
13				
14	Annual Total	$	450,000	Company Forecast
15	Annual Non-Distribution	$	188,646	LN 14 * LN 7
16	Winter Non-Distribution	**$**	**177,230**	LN 15 * LN 9
17	Summer Non-Distribution	**$**	**11,416**	LN 15 * LN 10

Northern Utilities, Inc.
Estimated Gas Supply Demand Costs
November 1, 2018 through October 31, 2019

Line	Description	Estimate	Reference
1.	Pipeline Demand Costs	$ 5,933,077	Page 3 - Pipeline Allocated Cost
2.	Storage Allocated Pipeline Demand Costs	$ 21,768,704	Page 3 - Storage Allocated Cost
3.	Storage Demand Costs	$ 2,979,855	Page 4 - Annual Fixed Charges
4.	Peaking Allocated Pipeline Demand Costs	$ 2,186,690	Page 3 - Peaking Allocated Cost
5.	Peaking Contract Costs	$ 9,888,800	Page 5, Annual Fixed Charges
6.	Asset Management and Capacity Release Revenue	$ (7,021,600)	Page 6 - Total Asset Management and Capacity Release Revenue
7.	Total Demand Costs	$ 35,735,528	Sum Lines 1 through 6.

Northern Utilities, Inc.
Pipeline Contract Demand Cost Estimates
November 1, 2018 through October 31, 2019

Capacity Path	Segment	Pipeline	Contract ID	Rate	Negotiated Rate	Maximum Daily Quantity (Dth)	Monthly Demand Rate ($/MDQ)	Months Per Year	Reference (Att NUI-FXW-10, Page 1)	Monthly Demand	Annual Demand
Tennessee Zone 0/L Pools	1A	Tennessee	5083	FT-A	No	4,605	$ 23.2175	12	Line 6	$ 106,917	$ 1,282,999
Tennessee Zone 0/L Pools	2A	Granite	16-100-FT-NN	FT-NN	No	4,589	$ 4.4212	12	Line 3	$ 20,289	$ 243,467
Tennessee Zone 0/L Pools	1B	Tennessee	5083	FT-A	No	8,550	$ 20.6094	12	Line 7	$ 176,210	$ 2,114,524
Tennessee Zone 0/L Pools	2B	Granite	16-100-FT-NN	FT-NN	No	8,520	$ 4.4212	12	Line 3	$ 37,669	$ 452,023
Tennessee Niagara	1A	Tennessee	5292	FT-A	No	1,406	$ 7.1569	12	Line 9	$ 10,063	$ 120,751
Tennessee Niagara	2A	Granite	16-100-FT-NN	FT-NN	No	1,401	$ 4.4212	12	Line 3	$ 6,194	$ 74,329
Tennessee Niagara	1B	Tennessee	39735	FT-A	No	929	$ 7.1569	12	Line 9	$ 6,649	$ 79,785
Tennessee Niagara	2B	Granite	16-100-FT-NN	FT-NN	No	926	$ 4.4212	12	Line 3	$ 4,094	$ 49,128
Iroquois Receipts	1	Iroquois	R181001	RTS-1	No	5,715	$ 5.5997	12	Line 4	$ 32,002	$ 384,027
Iroquois Receipts	1	Iroquois	R181001	RTS-1	No	854	$ 5.5997	12	Line 4	$ 4,782	$ 57,386
Iroquois Receipts	2A	Tennessee	95196	FT-A	No	1,382	$ 7.1569	12	Line 9	$ 9,891	$ 118,690
Iroquois Receipts	2B	Tennessee	95196	FT-A	No	844	$ 7.1569	12	Line 9	$ 6,040	$ 72,485
Iroquois Receipts	3B	Granite	16-100-FT-NN	FT-NN	No	841	$ 4.4212	12	Line 3	$ 3,718	$ 44,619
Iroquois Receipts	2C	Tennessee	41099	FT-A	No	4,267	$ 7.1569	12	Line 9	$ 30,538	$ 366,462
Iroquois Receipts	3C	Algonquin	93002F	AFT-1 (AFT-2)	No	4,211	$ 6.1138	12	Line 1	$ 25,745	$ 308,943
Leidy Hub	1	Texas Eastern	800384	FT-1	No	965	$ 5.5940	12	Line 10	$ 5,398	$ 64,779
Leidy Hub	2	Algonquin	93201A1C	AFT-1 (F-2/F-3)	No	965	$ 6.5734	12	Line 2	$ 6,343	$ 76,120
Transco Zone 6, non-NY	1	Algonquin	93201A1C	AFT-1 (F-2/F-3)	No	286	$ 6.5734	12	Line 2	$ 1,880	$ 22,560
Tennessee Firm Storage	2	Tennessee	5265	FT-A	No	2,653	$ 8.1481	12	Line 8	$ 21,617	$ 259,403
Tennessee Firm Storage	3	Granite	16-100-FT-NN	FT-NN	No	2,644	$ 4.4212	12	Line 3	$ 11,690	$ 140,276
Union Dawn Storage	2	Union	M12256	M12	No	40,720	$ 3.0149	12	Line 12	$ 122,767	$ 1,473,201
Union Dawn Storage	3A	TransCanada	57901	FT	No	34,000	$ 18.7908	12	Line 11	$ 638,887	$ 7,666,646
Union Dawn Storage	3B	TransCanada	57055	FT	No	6,003	$ 18.7908	12	Line 11	$ 112,801	$ 1,353,614
Union Dawn Storage	4	PNGTS	FTN-NUI-0001	FT	Yes	40,003	$ 18.2500	12	Line 5	$ 730,055	$ 8,760,657
Union Dawn Storage	5	Granite	16-100-FT-NN	FT-NN	No	39,863	$ 4.4212	12	Line 3	$ 176,242	$ 2,114,908
Peaking Capacity (Nov-Oct)	N/A	Granite	16-100-FT-NN	FT-NN	No	26,216	$ 4.4212	12	Line 3	$ 115,906	$ 1,390,874
Peaking Capacity (Nov-Apr)	N/A	Granite	16-100-FT-NN	FT-NN	No	30,000	$ 4.4212	6	Line 3	$ 132,636	$ 795,816
Total Annual Demand Costs											$ 29,888,472

Northern Utilities, Inc.
PIpeline Contract Demand Cost Allocations
November 1, 2018 through October 31, 2019

Capacity Path	Segment	Pipeline	Contract ID	MDQ	Pipeline MDQ	Storage MDQ	Peaking MDQ	Pipeline %	Storage %	Peaking %	Annual Demand	Annual Pipeline Allocated Cost	Annual Storage Allocated Cost	Annual Peaking Allocated Cost
Tennessee Zone 0/L Pools	1A	Tennessee	5083	4,605	4,605	-	-	100%	0%	0%	$ 1,282,999	$ 1,282,999	$ -	$ -
Tennessee Zone 0/L Pools	2A	Granite	16-100-FT-NN	4,589	4,589	-	-	100%	0%	0%	$ 243,467	$ 243,467	$ -	$ -
Tennessee Zone 0/L Pools	1B	Tennessee	5083	8,550	8,550	-	-	100%	0%	0%	$ 2,114,524	$ 2,114,524	$ -	$ -
Tennessee Zone 0/L Pools	2B	Granite	16-100-FT-NN	8,520	8,520	-	-	100%	0%	0%	$ 452,023	$ 452,023	$ -	$ -
Tennessee Niagara	1A	Tennessee	5292	1,406	1,406	-	-	100%	0%	0%	$ 120,751	$ 120,751	$ -	$ -
Tennessee Niagara	2A	Granite	16-100-FT-NN	1,401	1,401	-	-	100%	0%	0%	$ 74,329	$ 74,329	$ -	$ -
Tennessee Niagara	1B	Tennessee	39735	929	929	-	-	100%	0%	0%	$ 79,785	$ 79,785	$ -	$ -
Tennessee Niagara	2B	Granite	16-100-FT-NN	926	926	-	-	100%	0%	0%	$ 49,128	$ 49,128	$ -	$ -
Iroquois Receipts	1	Iroquois	R181001	5,715	5,715	-	-	100%	0%	0%	$ 384,027	$ 384,027	$ -	$ -
Iroquois Receipts	1	Iroquois	R181001	854	854	-	-	100%	0%	0%	$ 57,386	$ 57,386	$ -	$ -
Iroquois Receipts	2A	Tennessee	95196	1,382	1,382	-	-	100%	0%	0%	$ 118,690	$ 118,690	$ -	$ -
Iroquois Receipts	2B	Tennessee	95196	844	844	-	-	100%	0%	0%	$ 72,485	$ 72,485	$ -	$ -
Iroquois Receipts	3B	Granite	16-100-FT-NN	841	841	-	-	100%	0%	0%	$ 44,619	$ 44,619	$ -	$ -
Iroquois Receipts	2C	Tennessee	41099	4,267	4,267	-	-	100%	0%	0%	$ 366,462	$ 366,462	$ -	$ -
Iroquois Receipts	3C	Algonquin	93002F	4,211	4,211	-	-	100%	0%	0%	$ 308,943	$ 308,943	$ -	$ -
Leidy Hub	1	Texas Eastern	800384	965	965	-	-	100%	0%	0%	$ 64,779	$ 64,779	$ -	$ -
Leidy Hub	2	Algonquin	93201A1C	965	965	-	-	100%	0%	0%	$ 76,120	$ 76,120	$ -	$ -
Transco Zone 6, non-NY	1	Algonquin	93201A1C	286	286	-	-	100%	0%	0%	$ 22,560	$ 22,560	$ -	$ -
Tennessee Firm Storage	2	Tennessee	5265	2,653	-	2,653	-	0%	100%	0%	$ 259,403	$ -	$ 259,403	$ -
Tennessee Firm Storage	3	Granite	16-100-FT-NN	2,644	-	2,644	-	0%	100%	0%	$ 140,276	$ -	$ 140,276	$ -
Union Dawn Storage	2	Union	M12256	40,720	-	40,720	-	0%	100%	0%	$ 1,473,201	$ -	$ 1,473,201	$ -
Union Dawn Storage	3A	TransCanada	57901	34,000	-	34,000	-	0%	100%	0%	$ 7,666,646	$ -	$ 7,666,646	$ -
Union Dawn Storage	3B	TransCanada	57055	6,003	-	6,003	-	0%	100%	0%	$ 1,353,614	$ -	$ 1,353,614	$ -
Union Dawn Storage	4	PNGTS	FTN-NUI-0001	40,003	-	40,003	-	0%	100%	0%	$ 8,760,657	$ -	$ 8,760,657	$ -
Union Dawn Storage	5	Granite	16-100-FT-NN	39,863	-	39,863	-	0%	100%	0%	$ 2,114,908	$ -	$ 2,114,908	$ -
Peaking Capacity (Nov-Oct)	N/A	Granite	16-100-FT-NN	26,216	-	-	26,216	0%	0%	100%	$ 1,390,874	$ -	$ -	$ 1,390,874
Peaking Capacity (Nov-Apr)	N/A	Granite	16-100-FT-NN	30,000	-	-	30,000	0%	0%	100%	$ 795,816	$ -	$ -	$ 795,816
Total Annual Demand Costs											$ 29,888,472	$ 5,933,077	$ 21,768,704	$ 2,186,690

Northern Utilities, Inc.
Storage Contract Demand Cost Estimates
November 1, 2018 through October 31, 2019

Vendor	Contract ID	Rate	Negotiated	MSQ (Dth)	MDWQ	Space Rate	Demand Rate	Months Per Year	Reference (Att NUI-FXW-10, Page 2)	Annual Space Charge	Annual Demand Charge	Annual Fixed Charges
Tennessee	5195	FS-MA	No	259,337	4,243	$ 0.0205	$ 1.4938	12	Line 1	$ 63,797	$ 76,058	$ 139,855
Union	LST086	Storage	Yes	4,000,000	41,200	$ 0.0592		12	Line 2	$ 2,840,000		$ 2,840,000

Total Annual Fixed Charges	$ 2,979,855

MSQ = Maximum Space Quantity
MDWQ = Maximum Daily Withdrawal Quantity

REDACTED

Northern Utilities, Inc.
Peaking Contract Demand Cost Estimates
November 1, 2018 through October 31, 2019

Denotes Confidential Information

Resource	Supplier	Contract Quantity	Maximum Daily Quantity	Months per Year	Annual Fixed Charges
LNG Contract	[redacted]	125,000	5,000	5	[redacted]
Peaking Contract 1	[redacted]	600,000	40,000	5	[redacted]
Total Peaking Supply Contract Demand Costs					$ 9,888,800

REDACTED

Northern Utilities, Inc.
Natural Gas Commodity Price Forecast
Based upon NYMEX Settlement for August 29, 2018

Denotes Confidential Information

		Estimated Adders to NYMEX Last Day Settlement											
Line	Supply Source	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
1	Tennesee Zone 4 200 Leg Pool	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2	Tennessee Zone 0	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
3	Tennessee Zone L	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Tennessee Niagara	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
5	Iroquois Receipts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Dawn	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7	Leidy Hub	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
8	Texas Eastern Zone M-3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
9	Transco Zone 6, Non-NY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
10	Tennesee Zone 4 313 Pool	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
11	W10 Dawn Supply	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
12	Maritimes Delivered Baseload	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	PNGTS Delivered Baseload	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	LNG Contract	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Peaking Contract 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16	Incremental Supply	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
17	NYMEX	$2.82	$2.94	$3.02	$2.99	$2.89	$2.63	$2.60	$2.63	$2.66	$2.67	$2.66	$2.68

Northern Utilities, Inc.
Transportation Contract Rates
November 2018 through October 2019

Fixed Demand Rates

Line	Pipeline	Rate Schedule	Receipt	Delivery	Notes	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
1	Algonquin	AFT-1 (AFT-2)	N/A	N/A		Page 4	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138	$ 6.1138
2	Algonquin	AFT-1 (F-2/F-3)	N/A	N/A		Page 4	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734	$ 6.5734
3	Granite	FT-NN	N/A	N/A		Page 6	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212	$ 4.4212
4	Iroquois	RTS-1	Zone 1	Zone 1		Page 7	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.9982	$ 5.5997	$ 5.5997
5	PNGTS	FT	N/A	N/A	1	Page 8	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500	$ 18.2500
6	Tennessee	FT-A	Zone 0	Zone 6		Page 9	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175	$ 23.2175
7	Tennessee	FT-A	Zone L	Zone 6		Page 9	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094	$ 20.6094
8	Tennessee	FT-A	Zone 4	Zone 6		Page 9	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481	$ 8.1481
9	Tennessee	FT-A	Zone 5	Zone 6		Page 9	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569	$ 7.1569
10	Texas Eastern	FT-1/FTS	M3	M3	2	Pages 13, 17	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940	$ 5.5940
11	TransCanada	FT	Parkway	E. Hereford		Page 18	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908	$ 18.7908
12	Union	M12	Dawn	Parkway		Page 18	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149	$ 3.0149

Variable Transportation Commodity Rates

Line	Pipeline	Rate Schedule	Receipt	Delivery	Notes	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
13	Algonquin	AFT-1 (AFT-2)	N/A	N/A	3	Page 4, 25	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
14	Algonquin	AFT-1 (F-2/F-3)	N/A	N/A	3	Page 4, 25	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125
15	Granite	FT-NN	N/A	N/A	3	Page 6, 25	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
16	Iroquois	RTS-1	Zone 1	Zone 1	3	Pages 7, 25	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047
17	LNG Trucking		Everett, MA	LNG Plant		Page 23	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300	$ 1.2300
18	PNGTS	FT	N/A	N/A	1, 3	Page 8, 25	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
19	Tennessee	FT-A	Zone 0	Zone 6	3, 4	Page 10, 11, 25	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529	$ 0.3529
20	Tennessee	FT-A	Zone L	Zone 6	3, 4	Page 10, 11, 25	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075
21	Tennessee	FT-A	Zone 4	Zone 6	3, 4	Page 10, 11, 25	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181
22	Tennessee	FT-A	Zone 5	Zone 6	3, 4	Page 10, 11, 25	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891
23	Texas Eastern	FT-1/FTS	M3	M3	3	Page 13, 25	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198
24	TransCanada	FT	Parkway	E. Hereford		Page 18	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	Union	M12	Dawn	Parkway		Page 18	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049

Transportation Fuel Rates

Line	Pipeline	Rate Schedule	Receipt	Delivery	Notes	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
26	Algonquin	AFT-1 (AFT-2)	N/A	N/A		Page 5	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%
27	Algonquin	AFT-1 (F-2/F-3)	N/A	N/A		Page 5	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%
28	Granite	FT-NN	N/A	N/A		Page 6	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
29	Iroquois	RTS-1	Zone 1	Zone 1	5	Page 24	0.04%	0.04%	0.04%	0.04%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	PNGTS	FT	N/A	N/A	5	Page 24	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
31	Tennessee	FT-A	Zone 0	Zone 6		Page 11	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%
32	Tennessee	FT-A	Zone L	Zone 6		Page 11	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%
33	Tennessee	FT-A	Zone 4	Zone 6		Page 11	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%
34	Tennessee	FT-A	Zone 5	Zone 6		Page 11	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
35	Texas Eastern	FT-1/FTS	M3	M3		Page 15,16	1.22%	1.40%	1.40%	1.40%	1.40%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%
36	TransCanada	FT	Parkway	E. Hereford	5	Page 24	1.59%	1.59%	1.59%	1.59%	1.59%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%
37	Union	M12	Dawn	Parkway	6	Page 21	1.04%	1.04%	1.04%	1.04%	1.04%	0.58%	0.58%	0.58%	0.58%	0.58%	0.58%	0.58%

Note 1 Negotiated Rate = $0.60 per Dth per Day times 365 days divided by 12 months = $18.25 per Dth per month demand charge.
Note 2 FT-1 Demand Rate = $4.934 plus FT-1 / FTS Rate = $0.66, totals to $5.594
Note 3 Variable Rate includes ACA Charge on Page 24.
Note 4 Tennessee Variable Transportation Commodity Rates are calculated by adding the Maximum Commodity Rates found on Page 20 to the applicable EPCR found on page 21.
Note 5 Fuel Rates Estimated based on 12 months historic data.
Note 6 For modelling purposes, seasonal average fuel rates are used for Union.

Northern Utilities, Inc.
Underground Storage Contract Rates
November 2018 through October 2019

Line	Storage	Rate Schedule	Notes	Reference	Space Rate	Demand Rate	Withdrawal Rate	Withdrawal Fuel Loss	Injection Rate	Injection Fuel Loss
1	Tennessee	FS-MA		Page 12	$ 0.0205	$ 1.4938	$ 0.0087	0.00%	$ 0.0087	1.51%
2	Union	Storage	1	Page 26	$ 0.0592	$ -	$ 0.005	0.60%	$ 0.005	0.60%

Note 1 The demand charge for Union Storage shall be $236,666.67 per month divided by Maximum Storage Balance of 4,000,000 Dth.
The Withdrawal Rate and Injection Rate are equal to $0.007 CDN/GJ divided by 1.055056 (GJ/Dth conversion) times exchange rate.

Rate Schedule AFT-1
Firm Transportation Service

Maximum Reservation Charge: Conversion From:	Base-------$/Dth ---------- Tariff Rate 1/	Total Rate
(F-1/WS-1)	$6.5734	$6.5734
(F-2/F-3)	$6.5734	$6.5734
(F-4)	$6.5734	$6.5734
(STB/SS-3)	$6.5734	$6.5734
(FTP)	$11.8368	$11.8368
(PSS-T)	$9.7854	$9.7854
(AFT-2)	$6.1138	$6.1138
(AFT-3)	$10.7554	$10.7554
(AFT-5)	$12.6265	$12.6265
(ITP)	$13.0110	$13.0110
(X-35)	$10.2027	$10.2027
(X-39)	$13.2089	$13.2089
Minimum Reservation Charge:	$0.0000	$0.0000

Maximum Commodity Charge:	Base $/Dth Tariff Rate 1/ 2/
(F-1/WS-1)	$0.0112
(F-2/F-3)	$0.0112
(F-4)	$0.0112
(STB/SS-3)	$0.0112
(FTP)	$0.0000
(PSS-T)	$0.0000
(AFT-2)	$0.0000
(AFT-3)	$0.0000
(AFT-5)	$0.0000
(ITP)	$0.0000
(X-35)	$0.0000
(X-39)	$0.0000
Minimum Commodity Charge:	
AFT-1 (F-1/WS-1)	$0.0112
AFT-1 (F-2/F-3)	$0.0112
AFT-1 (F-4)	$0.0112
AFT-1 (STB/SS-3)	$0.0112
AFT-1 (All other)	$0.0000

Maximum Authorized Overrun Commodity Charge:	Base $/Dth Tariff Rate 1/ 2/
(F-1/WS-1)	$0.2273
(F-2/F-3)	$0.2273
(F-4)	$0.2273
(STB/SS-3)	$0.2273
(FTP)	$0.3892
(PSS-T)	$0.3217
(AFT-2)	$0.2010
(AFT-3)	$0.3536
(AFT-5)	$0.4151
(ITP)	$0.4278
(X-35)	$0.3354
(X-39)	$0.4343
Minimum Authorized Overrun Commodity Charge:	
AFT-1 (F-1/WS-1)	$0.0112
AFT-1 (F-2/F-3)	$0.0112
AFT-1 (F-4)	$0.0112
AFT-1 (STB/SS-3)	$0.0112
AFT-1 (All other)	$0.0000

1/ The Base Tariff is the effective rate on file with the Commission, excluding adjustments approved by the Commission.

FUEL REIMBURSEMENT PERCENTAGES

Period	Duration	FRP
SYSTEM SERVICES:		
Winter	December 1 - January 31 1/	1.08%
	February 1 - March 31	1.04%
Spring, Summer And Fall	April 1 - November 30 1/	0.68%
INCREMENTAL RAMAPO SERVICE:		
Winter	December 1 - January 31 1/	0.79%
	February 1 - March 31	0.60%
Spring, Summer And Fall	April 1 - November 30 1/	0.53%
INCREMENTAL AIM SERVICE:		
Winter	December 1 - January 31 1/	3.68%
	February 1 - March 31	3.31%
Spring, Summer And Fall	April 1 - November 30 1/	1.93%
INCREMENTAL ATLANTIC BRIDGE SERVICE:		
Winter	December 1 - January 31 1/	2.61%
	February 1 - March 31	2.61%
Spring, Summer And Fall	April 1 - November 30 1/	2.61%

1/ For all receipt points other than Beverly, Meter No. 00215

Fuel Reimbursement Percentages (FRP) pursuant to Section 32 of the General Terms and Conditions of this FERC Gas Tariff.

4.2 Rate Schedule FT-NN
Firm Transportation Service
Currently Effective Rates

	$/Dth	
	Base Tariff Rate	ACA Adj.
Reservation Charge:		
Maximum	$4.4212	N/A
Minimum	$0.0000	N/A
Commodity Charge:		
Maximum	$0.0000	a/
Minimum	$0.0000	a/
Authorized Overrun Commodity Charge:		
Maximum	$0.1453	a/
Minimum	$0.0000	a/
Fuel and Losses		
Percentage	0.35%	N/A
Volumetric Reservation Charge		
Maximum	$0.1453	a/
Minimum	$0.0000	a/

a/ The ACA Adj. Surcharge is revised annually and posted on the FERC website at the web address http://www.ferc.gov on the Annual Charges page of the Natural Gas Section. The ACA Adj. Surcharge is incorporated by reference in the Transporter’s Tariff and shall apply to all transportation under this Rate Schedule as provided in Section 6.17 of the General Terms and Conditions.

---------- NON-EASTCHESTER RATES (All in $ Per Dth) 1/ ----------

	Minimum	Maximum		
		Effective 9/1/2016	Effective 9/1/2017	Effective 9/1/2018
RTS DEMAND (Monthly):				
Zone 1	$0.0000	$ 6.1928	$ 5.9982	$ 5.5997
Zone 2	$0.0000	$ 5.3381	$ 5.1678	$ 4.7998
Inter-Zone	$0.0000	$10.4755	$ 9.8672	$ 8.8026
RTS COMMODITY (Daily):				
Zone 1	$0.0034	$ 0.0034	$ 0.0034	$ 0.0034
Zone 2	$0.0022	$ 0.0022	$ 0.0022	$ 0.0022
Inter-Zone	$0.0056	$ 0.0056	$ 0.0056	$ 0.0056
ITS COMMODITY (Daily):				
Zone 1	$0.0034	$ 0.2070	$ 0.2006	$ 0.1875
Zone 2	$0.0022	$ 0.1777	$ 0.1721	$ 0.1600
Inter-Zone	$0.0056	$ 0.3500	$ 0.3300	$ 0.2950
VOLUMETRIC CAPACITY RELEASE (Daily) 2/:				
Zone 1	$0.0000	$ 0.2036	$ 0.1972	$ 0.1841
Zone 2	$0.0000	$ 0.1755	$ 0.1699	$ 0.1578
Inter-Zone	$0.0000	$ 0.3444	$ 0.3244	$ 0.2894

**SEE SHEET NOS. 4A, 4B, AND 4C FOR ADJUSTMENTS TO RATES WHICH MAY BE APPLICABLE

(Footnotes continued on Sheet 4.01)

Exhibit B
to Precedent Agreement

NEGOTIATED RATES

Negotiated Rate: $0.60/Dth/Day

Additional Terms: Shipper shall have the right to deliver, on a secondary basis, to the following meters, at the Negotiated Rate of $0.60/Dth/day. Delivery to all other secondary delivery points on this Negotiated Rate contract shall be priced at the Maximum Recourse Rate.

Meter #	Name	Operator
05-0525	Westbrook	M&NE
05-0600	Westbrook	Granite State
02-0650	Gorham	Maine Natural Gas
05-0725	Eliot	Granite State
05-0750	Eliot CNG	XPress Natural Gas
02-0775	Newington	Essential Power
02-0900	Newington	Eversource
05-0850	Newington	Granite State
05-1000	Haverhill	Tennessee Gas Pipeline
05-1025	Haverhill	National Grid
05-1050	Methuen	M&NE
05-1150	Dracut	Tennessee Gas Pipeline

NEGOTIATED RATE SURCHARGE MECHANISM:

PNGTS may file a limited Section 4 rate proceeding to add a surcharge to Shipper's negotiated rate, taking into account Shipper's contractual obligation(s) relative to the total contractual obligations of all classes of transportation agreements, to reflect a cost of service impact of certain "Eligible Costs," defined as costs resulting from mandated compliance with new or revised requirements, regulations or legislation, that becomes effective on or after November 1, 2014, addressing (a) government-mandated environmental compliance obligations, e.g., climate change and greenhouse gas emissions, (b) compliance with the required use of best available control technology for emissions as mandated by the Environmental Protection Agency (or successor thereto), (c) Commission-mandated generic pipeline initiatives implemented on an industry-wide basis, including but not limited to the Commission's proposed policy regarding the modernization of natural gas facilities in Docket No. PL15-1-000 and (d) additional pipeline safety requirements issued by the United States Department of Transportation Pipeline and Hazardous Materials Safety Administration (or successor thereto) as a result of either new

RATES PER DEKATHERM

FIRM TRANSPORTATION RATES
RATE SCHEDULE FOR FT-A

Base
Reservation Rates

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$5.5411		$11.5794	$15.5758	$15.8514	$17.4175	$18.4879	$23.1959
L		$4.9193						
1	$8.3417		$7.9962	$10.6413	$15.0745	$14.8460	$16.7429	$20.5878
2	$15.5759		$10.5774	$5.5014	$5.1427	$6.5803	$9.0504	$11.6830
3	$15.8514		$8.3784	$5.5458	$4.0009	$6.1457	$11.1149	$12.8437
4	$20.1259		$18.5544	$7.0708	$10.7456	$5.2598	$5.6884	$8.1265
5	$23.9973		$16.8625	$7.4172	$8.9748	$5.8432	$5.4810	$7.1353
6	$27.7603		$19.3678	$13.3296	$14.6845	$10.3726	$5.4568	$4.7237

Daily Base
Reservation Rate 1/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.1822		$0.3807	$0.5121	$0.5211	$0.5726	$0.6078	$0.7626
L		$0.1617						
1	$0.2742		$0.2629	$0.3499	$0.4956	$0.4881	$0.5505	$0.6769
2	$0.5121		$0.3478	$0.1809	$0.1691	$0.2163	$0.2975	$0.3841
3	$0.5211		$0.2755	$0.1823	$0.1315	$0.2021	$0.3654	$0.4223
4	$0.6617		$0.6100	$0.2325	$0.3533	$0.1729	$0.1870	$0.2672
5	$0.7890		$0.5544	$0.2439	$0.2951	$0.1921	$0.1802	$0.2346
6	$0.9127		$0.6367	$0.4382	$0.4828	$0.3410	$0.1794	$0.1553

Maximum Reservation
Rates 2 /, 3 /

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$5.5627		$11.6010	$15.5974	$15.8730	$17.4391	$18.5095	$23.2175
L		$4.9409						
1	$8.3633		$8.0178	$10.6629	$15.0961	$14.8676	$16.7645	$20.6094
2	$15.5975		$10.5990	$5.5230	$5.1643	$6.6019	$9.0720	$11.7046
3	$15.8730		$8.4000	$5.5674	$4.0225	$6.1673	$11.1365	$12.8653
4	$20.1475		$18.5760	$7.0924	$10.7672	$5.2814	$5.7100	$8.1481
5	$24.0189		$16.8841	$7.4388	$8.9964	$5.8648	$5.5026	$7.1569
6	$27.7819		$19.3894	$13.3512	$14.7061	$10.3942	$5.4784	$4.7453

Notes:

1/ Applicable to demand charge credits and secondary points under discounted rate agreements.
2/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of $0.0000.
3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of $0.0216.

RATES PER DEKATHERM

COMMODITY RATES
RATE SCHEDULE FOR FT-A

Base
Commodity Rates

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.0032		$0.0115	$0.0177	$0.0219	$0.2668	$0.2546	$0.3030
L		$0.0012						
1	$0.0042		$0.0081	$0.0147	$0.0179	$0.2269	$0.2313	$0.2641
2	$0.0167		$0.0087	$0.0012	$0.0028	$0.0734	$0.1178	$0.1305
3	$0.0207		$0.0169	$0.0026	$0.0002	$0.0982	$0.1358	$0.1482
4	$0.0250		$0.0205	$0.0087	$0.0105	$0.0454	$0.0642	$0.1041
5	$0.0284		$0.0256	$0.0100	$0.0118	$0.0639	$0.0633	$0.0787
6	$0.0346		$0.0300	$0.0143	$0.0163	$0.0984	$0.0533	$0.0324

Minimum
Commodity Rates 1/, 2/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.0032		$0.0115	$0.0177	$0.0219	$0.0250	$0.0284	$0.0346
L		$0.0012						
1	$0.0042		$0.0081	$0.0147	$0.0179	$0.0210	$0.0256	$0.0300
2	$0.0167		$0.0087	$0.0012	$0.0028	$0.0056	$0.0100	$0.0143
3	$0.0207		$0.0169	$0.0026	$0.0002	$0.0081	$0.0118	$0.0163
4	$0.0250		$0.0205	$0.0087	$0.0105	$0.0028	$0.0046	$0.0092
5	$0.0284		$0.0256	$0.0100	$0.0118	$0.0046	$0.0046	$0.0066
6	$0.0346		$0.0300	$0.0143	$0.0163	$0.0086	$0.0041	$0.0020

Maximum
Commodity Rates 1/, 2/, 3/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.0041		$0.0124	$0.0186	$0.0228	$0.2677	$0.2555	$0.3039
L		$0.0021						
1	$0.0051		$0.0090	$0.0156	$0.0188	$0.2278	$0.2322	$0.2650
2	$0.0176		$0.0096	$0.0021	$0.0037	$0.0743	$0.1187	$0.1314
3	$0.0216		$0.0178	$0.0035	$0.0011	$0.0991	$0.1367	$0.1491
4	$0.0259		$0.0214	$0.0096	$0.0114	$0.0463	$0.0651	$0.1050
5	$0.0293		$0.0265	$0.0109	$0.0127	$0.0648	$0.0642	$0.0796
6	$0.0355		$0.0309	$0.0152	$0.0172	$0.0993	$0.0542	$0.0333

Notes:

1/ Rates stated above exclude the ACA Surcharge as revised annually and posted on the FERC website at http://www.ferc.gov on the Annual Charges page of the Natural Gas section. The ACA Surcharge is incorporated by reference into Transporter's Tariff and shall apply to all transportation under this Rate Schedule as provided in Article XXIV of the General Terms and Conditions.

2/ The applicable F&LR's and EPCR's, determined pursuant to Article XXXVII of the General Terms and Conditions, are listed on Sheet No. 32.

3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of $0.0009.

FUEL AND EPCR

F&LR 1/, 2/, 3/, 4/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	0.51%		1.54%	2.28%	2.86%	3.33%	3.75%	4.44%
L		0.26%						
1	0.63%		1.12%	1.92%	2.31%	2.82%	3.41%	3.88%
2	2.33%		1.19%	0.25%	0.46%	0.85%	1.43%	1.93%
3	2.86%		2.31%	0.46%	0.14%	1.17%	1.69%	2.20%
4	3.33%		2.62%	1.19%	1.41%	0.48%	0.73%	1.24%
5	3.88%		3.41%	1.44%	1.69%	0.72%	0.71%	0.91%
6	4.63%		4.02%	1.93%	2.20%	1.17%	0.57%	0.30%

EPCR 3/, 4/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.0039		$0.0151	$0.0233	$0.0290	$0.0350	$0.0398	$0.0477
L		$0.0013						
1	$0.0053		$0.0105	$0.0193	$0.0236	$0.0293	$0.0359	$0.0412
2	$0.0233		$0.0113	$0.0012	$0.0034	$0.0076	$0.0138	$0.0190
3	$0.0290		$0.0236	$0.0034	$0.0000	$0.0111	$0.0164	$0.0219
4	$0.0350		$0.0271	$0.0113	$0.0137	$0.0036	$0.0063	$0.0118
5	$0.0398		$0.0359	$0.0138	$0.0164	$0.0062	$0.0061	$0.0082
6	$0.0477		$0.0412	$0.0190	$0.0219	$0.0110	$0.0046	$0.0017

1/ Included in the above F&LR is the Losses component of the F&LR equal to 0.10%.
2/ For service that is rendered entirely by displacement and for gas scheduled and allocated for receipt at the Dracut, Massachusetts receipt point, Shipper shall render only the quantity of gas associated with Losses of 0.10%.
3/ The F&LR's and EPCR's listed above are applicable to FT-A, FT-BH, FT-G, FT-GS, and IT.
4/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.

RATES PER DEKATHERM

FIRM STORAGE SERVICE
RATE SCHEDULE FS

Rate Schedule and Rate	Base Tariff Rate	Max Tariff Rate	F&LR 2/, 3/	EPCR 2/
FIRM STORAGE SERVICE (FS) - PRODUCTION AREA				
Deliverability Rate	$2.0334	$2.0334 1/		
Space Rate	$0.0207	$0.0207 1/		
Injection Rate	$0.0073	$0.0073	1.51%	$0.0000
Withdrawal Rate	$0.0073	$0.0073		
Overrun Rate	$0.2441	$0.2441 1/		
FIRM STORAGE SERVICE (FS) - MARKET AREA				
Deliverability Rate	$1.4938	$1.4938 1/		
Space Rate	$0.0205	$0.0205 1/		
Injection Rate	$0.0087	$0.0087	1.51%	$0.0000
Withdrawal Rate	$0.0087	$0.0087		
Overrun Rate	$0.1793	$0.1793 1/		

Notes:

1/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of $0.000.
2/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.
3/ The applicable F&LR pursuant to Article XXXVII of the General Terms and Conditions, associated with Losses is equal to -0.09%.

CURRENTLY EFFECTIVE SERVICE RATES APPLICABLE TO OPEN ACCESS, PART 284, RATE SCHEDULES IN FERC GAS TARIFF, EIGHTH REVISED VOLUME NO. 1

FT-1
RESERVATION
CHARGES

Pursuant to Sections 3.2(A), 3.3(A), and 3.5 of Rate Schedule FT-1:

	FT-1 RESERVATION CHARGE* $/dth		FT-1 RESERVATION CHARGE ADJUSTMENT $/dth	
ACCESS AREA	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
STX-AAB	6.5820	0.0000	0.2164	0.0000
WLA-AAB	2.6030	0.0000	0.0856	0.0000
ELA-AAB	2.1520	0.0000	0.0708	0.0000
ETX-AAB	1.9660	0.0000	0.0646	0.0000
STX-STX	5.5170	0.0000	0.1814	0.0000
STX-WLA	5.6750	0.0000	0.1865	0.0000
STX-ELA	6.5900	0.0000	0.2167	0.0000
STX-ETX	6.5900	0.0000	0.2167	0.0000
WLA-WLA	1.8400	0.0000	0.0604	0.0000
WLA-ELA	2.6110	0.0000	0.0858	0.0000
WLA-ETX	2.6110	0.0000	0.0858	0.0000
ELA-ELA	2.1600	0.0000	0.0710	0.0000
ETX-ETX	1.9740	0.0000	0.0649	0.0000
ETX-ELA	2.1600	0.0000	0.0710	0.0000
MARKET AREA	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
M1-M1	4.2140	0.0000	0.1385	0.0000
M1-M2	7.8720	0.0000	0.2588	0.0000
M1-M3	10.3680	0.0000	0.3409	0.0000
M2-M2	6.0950	0.0000	0.2004	0.0000
M2-M3	8.7290	0.0000	0.2870	0.0000
M3-M3	4.9340	0.0000	0.1622	0.0000

* Reservation Charge reflects a storage surcharge of: 0.0970

CURRENTLY EFFECTIVE SERVICE RATES APPLICABLE TO OPEN ACCESS, PART 284, RATE SCHEDULES IN FERC GAS TARIFF, EIGHTH REVISED VOLUME NO. 1

FT-1
USAGE
CHARGES

ZONE RATE
$/dth

Pursuant to Sections 3.2(A) and 3.3(A) of Rate Schedule FT-1:

	STX	WLA	ELA	ETX	M1	M2	M3
USAGE-1 - MAXIMUM							
from STX	0.0036	0.0040	0.0082	0.0082	0.0218	0.0478	0.0644
from WLA	0.0040	0.0019	0.0051	0.0051	0.0187	0.0447	0.0613
from ELA	0.0082	0.0051	0.0036	0.0036	0.0172	0.0432	0.0598
from ETX	0.0082	0.0051	0.0036	0.0036	0.0172	0.0432	0.0598
from M1	0.0218	0.0187	0.0172	0.0172	0.0136	0.0396	0.0562
from M2	0.0478	0.0447	0.0432	0.0432	0.0396	0.0269	0.0447
from M3	0.0644	0.0613	0.0598	0.0598	0.0562	0.0447	0.0185
USAGE-1 - MINIMUM							
from STX	0.0000	0.0000	0.0039	0.0039	0.0133	0.0393	0.0559
from WLA	0.0000	0.0000	0.0008	0.0008	0.0102	0.0362	0.0528
from ELA	0.0039	0.0008	0.0000	0.0000	0.0087	0.0347	0.0513
from ETX	0.0039	0.0008	0.0000	0.0000	0.0087	0.0347	0.0513
from M1	0.0133	0.0102	0.0087	0.0087	0.0094	0.0354	0.0520
from M2	0.0393	0.0362	0.0347	0.0347	0.0354	0.0227	0.0405
from M3	0.0559	0.0528	0.0513	0.0513	0.0520	0.0405	0.0143
USAGE-1 - BACKHAUL MAXIMUM							
from STX	0.0088						
from WLA		0.0059					
from ELA			0.0087				
from ETX				0.0087			
from M1				0.0221	0.0185		
from M2				0.0515	0.0479	0.0336	
from M3						0.0538	0.0243
USAGE-1 - BACKHAUL MINIMUM							
from STX	0.0046						
from WLA		0.0017					
from ELA			0.0044				
from ETX				0.0044			
from M1				0.0136	0.0143		
from M2				0.0430	0.0437	0.0294	
from M3						0.0496	0.0201
USAGE-2	0.1083	0.1083	0.1083	0.1083	0.2604	0.4067	0.5054

ACA COMMODITY SURCHARGE TO APPLICABLE CUSTOMERS, PURSUANT TO SECTION 15.5 OF THE GENERAL TERMS AND CONDITIONS.

CURRENTLY EFFECTIVE PERCENTAGES FOR APPLICABLE SHRINKAGE FOR ASA RATE SCHEDULES
_________Effective During the Winter Period: December 1 through March 31__________

FOR TRANSPORTATION SERVICE		STX (%)	WLA (%)	ELA (%)	ETX (%)	M1 (%)	M2 (%)	M3 (%)
|	from STX	1.09	1.25	2.12	2.12	3.08	4.70	5.81
Base	from WLA	0.50	0.50	1.38	1.38	2.34	3.96	5.07
Applicable	from ELA	1.05	1.05	1.05	1.05	2.01	3.63	4.74
Shrinkage	from ETX	1.09	1.05	1.05	1.05	2.01	3.63	4.74
Percentage	from M1	3.08	2.34	2.01	2.01	0.96	2.58	3.69
|	from M2	4.70	3.96	3.63	3.63	2.58	1.80	2.90
|	from M3	5.81	5.07	4.74	4.74	3.69	2.90	1.28
|	from STX	-0.14	-0.22	-0.69	-0.69	-0.45	-1.06	-1.50
Applicable	from WLA	0.53	0.29	-0.12	-0.12	0.12	-0.49	-0.93
Shrinkage	from ELA	0.38	0.21	0.20	0.20	0.44	-0.17	-0.61
Adjustment	from ETX	0.34	0.21	0.20	0.20	0.44	-0.17	-0.61
Percentage	from M1	-0.45	0.12	0.44	0.44	0.24	-0.37	-0.81
|	from M2	-1.06	-0.49	-0.17	-0.17	-0.37	-0.08	-0.50
|	from M3	-1.50	-0.93	-0.61	-0.61	-0.81	-0.50	0.12
|	from STX	0.95	1.03	1.43	1.43	2.63	3.64	4.31
Applicable	from WLA	1.03	0.79	1.26	1.26	2.46	3.47	4.14
Shrinkage	from ELA	1.43	1.26	1.25	1.25	2.45	3.46	4.13
Percentage	from ETX	1.43	1.26	1.25	1.25	2.45	3.46	4.13
|	from M1	2.63	2.46	2.45	2.45	1.20	2.21	2.88
|	from M2	3.64	3.47	3.46	3.46	2.21	1.72	2.40
|	from M3	4.31	4.14	4.13	4.13	2.88	2.40	1.40

FOR TRANSPORTATION SERVICE UNDER CONTRACTS WITH PARTIAL BACKHAUL PATHS		STX (%)	WLA (%)	ELA (%)	ETX (%)	M1 (%)	M2 (%)	M3 (%)
|	from STX	0.00						
Base	from WLA		0.00					
Applicable	from ELA			0.00				
Shrinkage	from ETX				0.00			
Percentage	from M1				0.00	0.00		
|	from M2				0.00	0.00	0.00	
|	from M3						0.00	0.00
|	from STX	0.00						
Applicable	from WLA		0.00					
Shrinkage	from ELA			0.00				
Adjustment	from ETX				1.25			
Percentage	from M1				1.25	0.00		
|	from M2				1.25	0.00	0.00	
|	from M3						0.00	0.00
|	from STX	0.00						
Applicable	from WLA		0.00					
Shrinkage	from ELA			0.00				
Percentage	from ETX				1.25			
|	from M1				1.25	0.00		
|	from M2				1.25	0.00	0.00	
|	from M3						0.00	0.00

FOR STORAGE SERVICE	Base Applicable Shrinkage Percentage	Applicable Shrinkage Adjustment Percentage	Applicable Shrinkage Percentage
Monthly W/d (SS,SS-1,X-28)	2.86 %	-1.11 %	1.75 %
Monthly W/d (FSS,ISS-1)	1.76 %	-1.30 %	0.46 %
Monthly Injections	1.76 %	-1.30 %	0.46 %
Monthly Inventory Level	0.08 %	-0.04 %	0.04 %

Footnote: Due to the bidirectional flow patterns of Pipeline’s Access Area Zones, there is no distinction between forwardhauls and backhauls for applicable Shrinkage purposes in the Access Area Zones.

CURRENTLY EFFECTIVE PERCENTAGES FOR APPLICABLE SHRINKAGE FOR ASA RATE SCHEDULES

____Effective During the Spring, Summer and Fall Periods: April 1 through November 30____

FOR TRANSPORTATION SERVICE		STX (%)	WLA (%)	ELA (%)	ETX (%)	M1 (%)	M2 (%)	M3 (%)
|	from STX	0.93	1.04	1.64	1.64	2.49	3.59	4.34
Base	from WLA	0.53	0.53	1.13	1.13	1.98	3.08	3.83
Applicable	from ELA	0.91	0.91	0.91	0.91	1.76	2.86	3.61
Shrinkage	from ETX	0.93	0.91	0.91	0.91	1.76	2.86	3.61
Percentage	from M1	2.49	1.98	1.76	1.76	0.85	1.95	2.70
|	from M2	3.59	3.08	2.86	2.86	1.95	1.42	2.17
|	from M3	4.34	3.83	3.61	3.61	2.70	2.17	1.07
|	from STX	0.02	-0.04	-0.37	-0.37	-0.11	-0.61	-0.96
Applicable	from WLA	0.47	0.32	0.02	0.02	0.28	-0.22	-0.57
Shrinkage	from ELA	0.36	0.24	0.22	0.22	0.48	-0.02	-0.37
Adjustment	from ETX	0.34	0.24	0.22	0.22	0.48	-0.02	-0.37
Percentage	from M1	-0.11	0.28	0.48	0.48	0.26	-0.24	-0.59
|	from M2	-0.61	-0.22	-0.02	-0.02	-0.24	0.00	-0.35
|	from M3	-0.96	-0.57	-0.37	-0.37	-0.59	-0.35	0.15
|	from STX	0.95	1.00	1.27	1.27	2.38	2.98	3.38
Applicable	from WLA	1.00	0.85	1.15	1.15	2.26	2.86	3.26
Shrinkage	from ELA	1.27	1.15	1.13	1.13	2.24	2.84	3.24
Percentage	from ETX	1.27	1.15	1.13	1.13	2.24	2.84	3.24
|	from M1	2.38	2.26	2.24	2.24	1.11	1.71	2.11
|	from M2	2.98	2.86	2.84	2.84	1.71	1.42	1.82
|	from M3	3.38	3.26	3.24	3.24	2.11	1.82	1.22

FOR TRANSPORTATION SERVICE UNDER CONTRACTS WITH PARTIAL BACKHAUL PATHS		STX (%)	WLA (%)	ELA (%)	ETX (%)	M1 (%)	M2 (%)	M3 (%)
|	from STX	0.00						
Base	from WLA		0.00					
Applicable	from ELA			0.00				
Shrinkage	from ETX				0.00			
Percentage	from M1				0.00	0.00		
|	from M2				0.00	0.00	0.00	
|	from M3						0.00	0.00
|	from STX	0.00						
Applicable	from WLA		0.00					
Shrinkage	from ELA			0.00				
Adjustment	from ETX				1.13			
Percentage	from M1				1.13	0.00		
|	from M2				1.13	0.00	0.00	
|	from M3						0.00	0.00
|	from STX	0.00						
Applicable	from WLA		0.00					
Shrinkage	from ELA			0.00				
Percentage	from ETX				1.13			
|	from M1				1.13	0.00		
|	from M2				1.13	0.00	0.00	
|	from M3						0.00	0.00

FOR STORAGE SERVICE	Base Applicable Shrinkage Percentage	Applicable Shrinkage Adjustment Percentage	Applicable Shrinkage Percentage
Monthly W/d (SS,SS-1,X-28)	2.70 %	-1.08 %	1.62 %
Monthly W/d (FSS,ISS-1)	1.76 %	-1.30 %	0.46 %
Monthly Injections	1.76 %	-1.30 %	0.46 %
Monthly Inventory Level	0.08 %	-0.04 %	0.04 %

Footnote: Due to the bidirectional flow patterns of Pipeline’s Access Area Zones, there is no distinction between forwardhauls and backhauls for applicable Shrinkage purposes in the Access Area Zones.

CURRENTLY EFFECTIVE SERVICE RATES APPLICABLE TO OPEN ACCESS, PART 284, RATE SCHEDULES IN FERC GAS TARIFF, EIGHTH REVISED VOLUME NO. 1

FT-1 INCREMENTAL FACILITY CHARGE

		INCREMENTAL FACILITY CHARGE $/dth Maximum	Minimum
PURSUANT TO SECTION 3.4 OF RATE SCHEDULE FT-1:			
To applicable customers converting from Rate Schedule FTS in Docket No. CP82-446:	RESERVATION CHARGE	0.6600	0.0000
	RESERVATION CHARGE ADJUSTMENT	0.0217	0.0000

Customer	dth
Bay State Gas Company	4,235
Boston Gas Company d/b/a National Grid	21,394
Colonial Gas Company d/b/a National Grid	1,951
Connecticut Natural Gas Corporation	6,340
Town of Middleborough, Massachusetts	116
New Jersey Natural Gas Company	1,060
Northern Utilities, Inc.	965
Southern Connecticut Gas Company	4,922
Yankee Gas Services Company	6,066

To applicable customers converting from Rate Schedule FTS-4 in Docket No. CP87-4:	RESERVATION CHARGE	3.0110	0.0000
	RESERVATION CHARGE ADJUSTMENT	0.0990	0.0000

Customer	dth
Brooklyn Union Gas Company d/b/a National Grid	27,500
KeySpan Gas East Corporation d/b/a National Grid	22,500
New Jersey Natural Gas Company	40,000
Pivotal Utility Holdings, Inc.	10,000
Public Service Electric & Gas Company	40,000

To applicable customers converting from Rate Schedule FTS-5 in Docket No. CP87-312:	RESERVATION CHARGE	0.0000	0.0000
	RESERVATION CHARGE ADJUSTMENT	0.0000	0.0000

Customer	dth
Colonial Gas Company d/b/a National Grid	2,326
Northeast Energy Associates	14,000
UGI Central Penn Gas, Inc.	4,000
Yankee Gas Services Company	125

To applicable customers converting from Rate Schedule FTS-7 in Docket No. CP80-170:	RESERVATION CHARGE	0.0000	0.0000
	RESERVATION CHARGE ADJUSTMENT	0.0000	0.0000

Customer	dth
Connecticut Natural Gas Corporation	4,231
Yankee Gas Services Company	3,015

To applicable customers converting from Rate Schedule FTS-8 in Docket No. CP85-803:	RESERVATION CHARGE	0.0000	0.0000
	RESERVATION CHARGE ADJUSTMENT	0.0000	0.0000

Customer	dth
Yankee Gas Services Company	39

Canadian Transportation Rates

Line	Item	Units	Currently Approved Tolls	Reference
1	Union Parkway Belt to East Hereford on TCPL			
2	Demand Toll	$CAD / GJ	$ 20.86766	Page 18
3	Delivery Pressure Demand Toll	$CAD / GJ	$ 0.67038	Page 17
4	Abandonment Surcharge	$CAD / GJ	$ 1.62212	Page 17
5	Total Demand Toll	$CAD / GJ	$ 23.16016	Line 2 plus Line 3
6	$CAD to $US	Ratio	0.7690	Page 20
7	Total Demand Toll	$US / GJ	$ 17.8102	Line 4 times Line 5
8	GJ per Dth	Ratio	1.055056	
9	Total Demand Toll	$US / Dth	$ 18.7908	Line 6 divided by Line 7
10				
11	Dawn to Parkway on Union Pipeline			
12	Total Demand Toll	$CAD / GJ	$ 3.7160	Page 19
13	$CAD to $US	Ratio	0.7690	Page 20
14	Total Demand Toll	$US / GJ	$ 2.8576	Line 13 times Line 14
15	GJ per Dth	Ratio	1.055056	
16	Total Demand Toll	$US / Dth	$ 3.0149	Line 15 divided by Line 16
17	Dawn to Parkway on Union Pipeline - Commodity			
18				
19	Total Demand Toll	$CAD / GJ	$ 0.0060	Page 19
20	$CAD to $US	Ratio	0.7690	Page 20
21	Total Demand Toll	$US / GJ	$ 0.0046	Line 19 times Line 20
22	GJ per Dth	Ratio	1.055056	
23	Total Demand Toll	$US / Dth	$ 0.0049	Line 21 divided by Line 22

Enhanced Market Balancing Service

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)
	(a)	(b)	(c)	(d)	(e)
1	Union Parkway Belt to Union EDA	11.32565	0.3724	0.65092	0.0214

Delivery Pressure

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
2	Average Delivery Pressure Toll	0.67038	0.0220

Note: Delivery Pressure toll applies to the following locations: Emerson 1 , Emerson 2, Union SWDA, Enbridge SWDA, Dawn Export, Niagara Falls, Iroquois, Chippawa and East Hereford.
The Daily Equivalent Toll is only applicable to STS Injections, IT, Diversions, STFT and SSS.

Union Dawn Receipt Point Surcharge

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
3	Union Dawn Receipt Point Surcharge	0.14587	0.0048

Short Notice Balancing (SNB) Service

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
4	SNB Toll	3.43648	0.1130

Note: This SNB Toll is a representative toll for the Eastern Region.

Energy Deficient Gas Allowance (EDGA) Service

Line No.	Particulars	Capacity Charge ($/GJ/D)
	(a)	(b)
5	Western Section	1.4886
6	Eastern Section	0.3640

Note: The EDGA Service capacity charge for the Western Section is the effective Empress to North Bay Junction FT Toll and the capacity charge for the Eastern Section is the effective Parkway to North Bay Junction FT Toll.
The EDGA Service fuel charge for the Western Section includes the effective Empress to North Bay Junction monthly fuel ratio and the fuel charge for the Eastern Section includes the effective Parkway to North Bay Junction monthly fuel ratio.

Line No.	Receipt Point	Delivery Point	FT Toll ($/GJ/Month)	Daily Equivalent FT for IT / STFT ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)
1	Union NDA	Enbridge CDA	-	0.3946	-	0.0343
2	Union NDA	Enbridge Parkway CDA	-	0.3986	-	0.0348
3	Union NDA	Enbridge EDA	-	0.4283	-	0.0381
4	Union NDA	KPUC EDA	-	0.5045	-	0.0466
5	Union NDA	GMIT EDA	-	0.5546	-	0.0521
6	Union NDA	Enbridge SWDA	-	0.5278	-	0.0492
7	Union NDA	Union SWDA	-	0.5299	-	0.0494
8	Union NDA	Chippawa	-	0.4756	-	0.0433
9	Union NDA	Cornwall	-	0.4586	-	0.0414
10	Union NDA	East Hereford	-	0.6614	-	0.0641
11	Union NDA	Emerson 1	-	0.9288	-	0.0992
12	Union NDA	Emerson 2	-	0.9288	-	0.0992
13	Union NDA	Iroquois	-	0.4397	-	0.0393
14	Union NDA	Kirkwall	-	0.4204	-	0.0372
15	Union NDA	Napierville	-	0.5461	-	0.0512
16	Union NDA	Niagara Falls	-	0.4742	-	0.0432
17	Union NDA	North Bay Junction	-	0.1848	-	0.0120
18	Union NDA	Philipsburg	-	0.5561	-	0.0523
19	Union NDA	Spruce	-	0.8519	-	0.0902
20	Union NDA	St. Clair	-	0.5149	-	0.0507
21	Union NDA	Welwyn	-	1.0634	-	0.1150
22	Union NDA	Dawn Export	-	0.5278	-	0.0492
23	Union Parkway Belt	Empress	63.22226	2.0785	5.51241	0.1812
24	Union Parkway Belt	TransGas SSDA	54.10243	1.7787	4.67474	0.1537
25	Union Parkway Belt	Centram SSDA	50.36574	1.6559	4.33164	0.1424
26	Union Parkway Belt	Centram MDA	44.71341	1.4700	3.81243	0.1253
27	Union Parkway Belt	Centrat MDA	44.27389	1.4556	3.77197	0.1240
28	Union Parkway Belt	Union WDA	34.53326	1.1353	2.87711	0.0946
29	Union Parkway Belt	Nipigon WDA	30.53408	1.0039	2.50998	0.0825
30	Union Parkway Belt	Union NDA	14.71771	0.4839	1.05728	0.0348
31	Union Parkway Belt	Calstock NDA	23.58052	0.7753	1.87123	0.0615
32	Union Parkway Belt	Tunis NDA	18.10674	0.5953	1.36845	0.0450
33	Union Parkway Belt	GMIT NDA	14.03851	0.4615	0.99463	0.0327
34	Union Parkway Belt	Union SSMDA	21.07662	0.6929	1.64128	0.0540
35	Union Parkway Belt	Union NCDA	7.38395	0.2428	0.38355	0.0126
36	Union Parkway Belt	Union CDA	4.79732	0.1577	0.14600	0.0048
37	Union Parkway Belt	Union ECDA	3.75676	0.1235	0.05049	0.0017
38	Union Parkway Belt	Union EDA	10.29604	0.3385	0.65092	0.0214
39	Union Parkway Belt	Union Parkway Belt	3.51465	0.1156	0.02798	0.0009
40	Union Parkway Belt	Enbridge CDA	5.26756	0.1732	0.18919	0.0062
41	Union Parkway Belt	Enbridge Parkway CDA	3.51465	0.1156	0.02798	0.0009
42	Union Parkway Belt	Enbridge EDA	13.18532	0.4335	0.91645	0.0301
43	Union Parkway Belt	KPUC EDA	9.90367	0.3256	0.61503	0.0202
44	Union Parkway Belt	GMIT EDA	16.93265	0.5567	1.26047	0.0414
45	Union Parkway Belt	Enbridge SWDA	8.28428	0.2724	0.46629	0.0153
46	Union Parkway Belt	Union SWDA	8.35972	0.2748	0.47328	0.0156
47	Union Parkway Belt	Chippawa	6.35435	0.2089	0.28896	0.0095
48	Union Parkway Belt	Cornwall	13.37938	0.4399	0.93410	0.0307
49	Union Parkway Belt	East Hereford	20.86766	0.6861	1.62212	0.0533
50	Union Parkway Belt	Emerson 1	41.71007	1.3713	3.53655	0.1163
51	Union Parkway Belt	Emerson 2	41.71007	1.3713	3.53655	0.1163
52	Union Parkway Belt	Iroquois	12.48908	0.4106	0.85258	0.0280
53	Union Parkway Belt	Kirkwall	4.31795	0.1420	0.10190	0.0034
54	Union Parkway Belt	Napierville	16.60963	0.5461	1.23096	0.0405
55	Union Parkway Belt	Niagara Falls	6.30416	0.2073	0.28440	0.0094
56	Union Parkway Belt	North Bay Junction	11.07136	0.3640	0.72209	0.0237
57	Union Parkway Belt	Philipsburg	16.97676	0.5581	1.26473	0.0416
58	Union Parkway Belt	Spruce	44.27389	1.4556	3.77197	0.1240
59	Union Parkway Belt	St. Clair	8.78494	0.2888	0.51222	0.0168
60	Union Parkway Belt	Welwyn	50.36574	1.6559	4.33164	0.1424
61	Union Parkway Belt	Dawn Export	8.28428	0.2724	0.46629	0.0153
62	Union SSMDA	Empress	-	1.2649	-	0.1386
63	Union SSMDA	TransGas SSDA	-	1.0300	-	0.1111
64	Union SSMDA	Centram SSDA	-	0.9338	-	0.0998
65	Union SSMDA	Centram MDA	-	0.7882	-	0.0827
66	Union SSMDA	Centrat MDA	-	0.7876	-	0.0827
67	Union SSMDA	Union WDA	-	1.0598	-	0.1146
68	Union SSMDA	Nipigon WDA	-	1.1416	-	0.1241
69	Union SSMDA	Union NDA	-	0.8315	-	0.0878
70	Union SSMDA	Calstock NDA	-	1.0598	-	0.1146
71	Union SSMDA	Tunis NDA	-	0.9188	-	0.0980
72	Union SSMDA	GMIT NDA	-	0.8140	-	0.0857
73	Union SSMDA	Union SSMDA	-	0.0905	-	0.0009
74	Union SSMDA	Union NCDA	-	0.6757	-	0.0656
75	Union SSMDA	Union CDA	-	0.5678	-	0.0536
76	Union SSMDA	Union ECDA	-	0.5774	-	0.0547
77	Union SSMDA	Union EDA	-	0.7545	-	0.0744
78	Union SSMDA	Union Parkway Belt	-	0.5709	-	0.0540
79	Union SSMDA	Enbridge CDA	-	0.6123	-	0.0586
80	Union SSMDA	Enbridge Parkway CDA	-	0.5709	-	0.0540
81	Union SSMDA	Enbridge EDA	-	0.8328	-	0.0832

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Current M12 Rates and Fuel

Current OEB approved rates effective April 1, 2018

		Contracted Quantity			Authorized Overrun		
Receipt Point	**Delivery Point**	**Monthly Demand Charge $CDN/GJ**	**Month**	**Fuel %**	**Commodity Charge $CDN/GJ**	**Fuel %**	**Cap-and-Trade Facility-Related Charges* $CDN/GJ**
Dawn	Parkway (TCPL/EGT)	$3.716	January	1.166%	$0.122	1.786%	$0.006
			February	1.107%		1.727%	
			March	1.033%		1.653%	
			April	0.879%		1.499%	
			May	0.626%		1.246%	
			June	0.523%		1.143%	
			July	0.508%		1.128%	
			August	0.405%		1.025%	
			September	0.401%		1.021%	
			October	0.750%		1.371%	
			November	0.894%		1.514%	
			December	1.012%		1.632%	
Dawn	Kirkwall	$3.154	January	0.882%	$0.104	1.502%	$0.006
			February	0.831%		1.451%	
			March	0.742%		1.362%	
			April	0.546%		1.166%	
			May	0.373%		0.993%	
			June	0.275%		0.895%	
			July	0.262%		0.882%	
			August	0.159%		0.779%	
			September	0.159%		0.779%	
			October	0.461%		1.081%	
			November	0.624%		1.244%	
			December	0.743%		1.363%	
Kirkwall	Parkway (TCPL/EGT)	$0.561	January	0.442%	$0.018	1.062%	$0.006
			February	0.434%		1.054%	
			March	0.449%		1.069%	
			April	0.491%		1.111%	
			May	0.411%		1.031%	
			June	0.406%		1.026%	
			July	0.404%		1.024%	
			August	0.404%		1.024%	
			September	0.400%		1.020%	
			October	0.448%		1.068%	
			November	0.427%		1.047%	
			December	0.428%		1.048%	

Service	**Description**	**Monthly Demand Charge $CDN/GJ**
F24-T	Firm All Day Transportation	$0.07000

Notes:

* Cap-and-Trade Facility-Related Charges are applied to all quantities transported.

The above Rate Summary is **not** intended to replace the regulated M12 rate schedule.

In the case of a discrepancy between these summaries and the regulated rate schedules, the **rate schedule** will be deemed correct.

All services are subject to any applicable taxes.

If you have any questions please contact your Account Manager

BANK OF CANADA
BANQUE DU CANADA

Daily Exchange Rates Lookup

Terms and Conditions

All Bank of Canada exchange rates are indicative rates only, obtained from averages of aggregated price quotes from financial institutions. Please read our full **Terms and Conditions** for details.

Data Available as: CSV, JSON and XML

New Lookup

View data for the past:

- 1 Week
- 2 Weeks
- 1 Month
- 3 Months
- 6 Months
- 1 Year

US dollar (USD)

Date	USD → CAD	CAD → USD
2018-06-12	1.3004	0.7690

REDACTED

LNG TRANSPORTATION RATE AGREEMENT

DATE: June 25, 2018

CONFIDENTIAL

[redacted]

SHIPPER:

Northern Utilities Inc.
6 Liberty Lane West
Hampton, NH 03842

EFFECTIVE DATE: 11/01/18

EXPIRATION DATE: 10/31/19

			COMMODITY
ORIGIN	**DESTINATION**	**DATE**	**RATE**
Everett, MA	Lewiston, ME	11/01/18 to 10/31/19	[redacted]

OTHER TERMS AND CONDITIONS:

[redacted]

[redacted]

SHIPPER: **Northern Utilities Inc.**

By: ______________________

Robert Furino

Its: **Vice President**

Historic Fuel Retention Ratios

Pipeline	Receipt	Delivery	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Nov - Mar	May - Oct, Apr	Average
Iroquois	Zone 1	Zone 1	-1.00%	-0.30%	0.00%	0.10%	-0.30%	-0.30%	-0.30%	0.10%	0.30%	0.30%	-0.20%	-0.50%	0.04%	-0.33%	-0.18%
PNGTS	N/A	N/A	-0.80%	-0.80%	-0.80%	-0.80%	-0.80%	-0.80%	-0.80%	-0.80%	-0.60%	-0.60%	-0.60%	-0.40%	-0.68%	-0.74%	-0.72%
TransCanada	Parkway	E. Hereford	0.90%	1.28%	0.78%	0.48%	1.07%	0.85%	1.68%	1.63%	1.55%	1.74%	1.33%	1.34%	1.59%	0.96%	1.22%

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

FY 2017 GAS ANNUAL CHARGES
CORRECTION FOR ANNUAL CHARGES UNIT CHARGE
June 26, 2018

The annual charges unit charge (ACA) to be applied to in fiscal year 2019 for recovery of FY 2018 Current year and 2017 True-Up is **$0.0013** per Dekatherm (Dth). The new ACA surcharge will become effective October 1, 2018.

The following calculations were used to determine the FY 2018 unit charge:

2018 CURRENT:

Estimated Program Cost $66,791,000 divided by 49,985,774,086 Dth = 0.0013362002

2017 TRUE-UP:

Debit/Credit Cost ($316,993) divided by 47,717,356,257 Dth = (0.0000066431)

TOTAL UNIT CHARGE = 0.0013295571

If you have any questions, please contact Raven A. Rodriguez at (202)502-6276 or e-mail at Raven.Rodriguez@ferc.gov.

SCHEDULE 2
Page 1 of 1
Contract No. LST086

PRICING PROVISIONS

Shipper agrees to pay Union the following for the Storage Services:

(a) **Monthly Demand Charge:** For the period of April, 2018 to March, 2023 inclusive, a monthly demand charge of $236,666.67 US if the Maximum Storage Balance is 4,220,224 GJ (4,000,000 MMBtu); or a monthly demand charge of $201,666.67 US if Shipper elects a lower Maximum Storage Balance of 3,587,190 GJ (3,400,000 MMBtu).

(b) **Demand Charge Escalation:** *Intentionally blank*

(c) **Variable Storage Charges:**

- (i) Firm: For each GJ of gas withdrawn from or injected into the Storage Account on a firm basis, a charge equal to $0.007 CDN/GJ;
- (ii) Interruptible: For each GJ of gas withdrawn from or injected into the Storage Account on an interruptible basis, a charge equal to the price set out under the heading 'If Shipper supplies fuel Commodity Charge Price/GJ' in the 'Storage Services' section under '(C) Pricing' in the MPSS (currently $0.041CDN/GJ);
- (iii) Authorized Overrun: For each GJ of gas withdrawn from or injected into the Storage Account on an authorized overrun basis, a charge equal to the price set out under the heading 'If Shipper supplies fuel Commodity Charge Price/GJ' in the 'Authorized Overrun' section under '(C) Pricing' in the MPSS (currently $0.041CDN/GJ);
- (iv) Dehydration Charge: Not Applicable.

(d) **Fuel:**

- (i) Firm and Interruptible: For each GJ of gas withdrawn from or injected into the Storage Account on a firm or interruptible basis, an amount of fuel in kind equal to the fuel ratio set out under the heading of 'If Shipper supplies fuel' in the 'Storage Services' section under '(C) Pricing' in the MPSS (currently 0.600%).
- (ii) Authorized Overrun: For each GJ of gas withdrawn from or injected into the Storage Account on an authorized overrun basis, an amount of fuel in kind equal to the fuel ratio set out under the heading of 'If Shipper supplies fuel' in the 'Authorized Overrun' section under '(C) Pricing' in the MPSS (currently 1.03%).

(e) **Late Season Balance Charge and Early Season Balance Charge:** *Intentionally blank*

(f) **Shortfall Charge:** *Intentionally blank*

(g) **Other Charges:** Any and all other charges as may be set out in this Contract, and any charges relating to Unauthorized Overrun, Drafted Storage Balance and Overrun of Maximum Storage Balance as set out in the MPSS.

REDACTED

Northern Utilities, Inc.
Asset Management and Capacity Release Revenue Projections
November 1, 2018 through October 31, 2019

Denotes Confidential Information

Capacity Path	Projected Revenue
Tennessee Zone 0/L Pools	[redacted]
Tennessee Niagara	[redacted]
Iroquois Receipts	[redacted]
Leidy Hub & Transco Zone 6, non-NY	[redacted]
Union Dawn Storage	[redacted]
Total Asset Management	$ (7,021,600)

Northern Utilities, Inc. New Hampshire Division Retail Marketer Capacity Assignment Revenue Projections November 2018 through October 2019		
Item	Revenue	Reference
Pipeline Contract Capacity Assignment	$ (2,863,341)	Page 2
Storage Contract Capacity Assignment	$ (261,343)	Page 3
On-System Peaking Service Demand	$ (172,237)	Page 4
Asset Management Revenue Assigned to Retail Suppliers	$ 38,678	Page 5
Total Division Capacity Assignment Demand Revenue	$ (3,258,243)	Sum of Items Above

Northern Utilities, Inc.
New Hampshire Division Pipeline Capacity Assignment Estimates
November 2018 through October 2019

Capacity Path	Segment	Pipeline	Contract ID	Pipeline Allocated Cost	Storage Allocated Cost	Peaking Allocated Cost	Capacity Assigned? (Y/N)	Pipeline Allocated MDQ	Storage Allocated MDQ	Peaking Allocated MDQ	Assigned Pipeline MDQ	Assigned Storage MDQ	Assigned Peaking MDQ	Assigned Pipeline Credits	Assigned Storage Credits	Assigned Peaking Credits	ME Annual Cap Assign Credit
Tennessee Zone 0/L Pools	1A	Tennessee	5083	$ 1,282,999	$ -	$ -	Y	4,605	-	-	(592)	-	-	$ (164,937)	$ -	$ -	$ (164,937)
Tennessee Zone 0/L Pools	2A	Granite	16-100-FT-NN	$ 243,467	$ -	$ -	Y	4,589	-	-	(590)	-	-	$ (31,302)	$ -	$ -	$ (31,302)
Tennessee Zone 0/L Pools	1B	Tennessee	5083	$ 2,114,524	$ -	$ -	Y	8,550	-	-	(1,099)	-	-	$ (271,797)	$ -	$ -	$ (271,797)
Tennessee Zone 0/L Pools	2B	Granite	16-100-FT-NN	$ 452,023	$ -	$ -	Y	8,520	-	-	(1,095)	-	-	$ (58,095)	$ -	$ -	$ (58,095)
Tennessee Niagara	1A	Tennessee	5292	$ 120,751	$ -	$ -	Y	1,406	-	-	(181)	-	-	$ (15,545)	$ -	$ -	$ (15,545)
Tennessee Niagara	2A	Granite	16-100-FT-NN	$ 74,329	$ -	$ -	Y	1,401	-	-	(180)	-	-	$ (9,550)	$ -	$ -	$ (9,550)
Tennessee Niagara	1B	Tennessee	39735	$ 79,785	$ -	$ -	Y	929	-	-	(119)	-	-	$ (10,220)	$ -	$ -	$ (10,220)
Tennessee Niagara	2B	Granite	16-100-FT-NN	$ 49,128	$ -	$ -	Y	926	-	-	(119)	-	-	$ (6,313)	$ -	$ -	$ (6,313)
Iroquois Receipts	1	Iroquois	R181001	$ 384,027	$ -	$ -	Y	5,715	-	-	(734)	-	-	$ (49,322)	$ -	$ -	$ (49,322)
Iroquois Receipts	1	Iroquois	R181001	$ 57,386	$ -	$ -	Y	854	-	-	(110)	-	-	$ (7,392)	$ -	$ -	$ (7,392)
Iroquois Receipts	2A	Tennessee	95196	$ 118,690	$ -	$ -	Y	1,382	-	-	(178)	-	-	$ (15,287)	$ -	$ -	$ (15,287)
Iroquois Receipts	2B	Tennessee	95196	$ 72,485	$ -	$ -	Y	844	-	-	(108)	-	-	$ (9,275)	$ -	$ -	$ (9,275)
Iroquois Receipts	3B	Granite	16-100-FT-NN	$ 44,619	$ -	$ -	Y	841	-	-	(108)	-	-	$ (5,730)	$ -	$ -	$ (5,730)
Iroquois Receipts	2C	Tennessee	41099	$ 366,462	$ -	$ -	Y	4,267	-	-	(548)	-	-	$ (47,064)	$ -	$ -	$ (47,064)
Iroquois Receipts	3C	Algonquin	93002F	$ 308,943	$ -	$ -	Y	4,211	-	-	(541)	-	-	$ (39,691)	$ -	$ -	$ (39,691)
Leidy Hub	1	Texas Eastern	800384	$ 64,779	$ -	$ -	Y	965	-	-	(124)	-	-	$ (8,324)	$ -	$ -	$ (8,324)
Leidy Hub	2	Algonquin	93201A1C	$ 76,120	$ -	$ -	Y	965	-	-	(124)	-	-	$ (9,781)	$ -	$ -	$ (9,781)
Transco Zone 6, non-NY	1	Algonquin	93201A1C	$ 22,560	$ -	$ -	Y	286	-	-	(37)	-	-	$ (2,919)	$ -	$ -	$ (2,919)
Tennessee Firm Storage	2	Tennessee	5265	$ -	$ 259,403	$ -	Y	-	2,653	-	-	(233)	-	$ -	$ (22,782)	$ -	$ (22,782)
Tennessee Firm Storage	3	Granite	16-100-FT-NN	$ -	$ 140,276	$ -	Y	-	2,644	-	-	(232)	-	$ -	$ (12,309)	$ -	$ (12,309)
Union Dawn Storage	2	Union	M12256	$ -	$ 1,473,201	$ -	Y	-	40,720	-	-	(3,571)	-	$ -	$ (129,194)	$ -	$ (129,194)
Union Dawn Storage	3A	TransCanada	57901	$ -	$ 7,666,646	$ -	Y	-	34,000	-	-	(2,982)	-	$ -	$ (672,410)	$ -	$ (672,410)
Union Dawn Storage	3B	TransCanada	57055	$ -	$ 1,353,614	$ -	Y	-	6,003	-	-	(526)	-	$ -	$ (118,608)	$ -	$ (118,608)
Union Dawn Storage	4	PNGTS	FTN-NUI-0001	$ -	$ 8,760,657	$ -	Y	-	40,003	-	-	(3,508)	-	$ -	$ (768,252)	$ -	$ (768,252)
Union Dawn Storage	5	Granite	16-100-FT-NN	$ -	$ 2,114,908	$ -	Y	-	39,863	-	-	(3,496)	-	$ -	$ (185,478)	$ -	$ (185,478)
Peaking Capacity (Nov-Oct)	N/A	Granite	16-100-FT-NN	$ -	$ -	$ 1,390,874	Y	-	-	26,216	-	-	(2,299)	$ -	$ -	$ (121,972)	$ (121,972)
Peaking Capacity (Nov-Apr)	N/A	Granite	16-100-FT-NN	$ -	$ -	$ 795,816	Y	-	-	30,000	-	-	(2,631)	$ -	$ -	$ (69,793)	$ (69,793)
Total Capacity Assignment Credits														$ (762,543)	$ (1,909,033)	$ (191,765)	$ (2,863,341)
										Percentage Assigned	12.85%	8.77%	8.77%				

Northern Utilities, Inc.
New Hampshire Division Storage Contract Capacity Assignment Estimates
November 2018 through October 2019

Vendor	Contract ID	Annual Fixed Charges	Capacity Assigned (Y/N)	Company Managed (Y/N)	Storage Assigned ME	Assigned MSQ	Assigned MDWQ	Annual Cap Assign Credit
Tennessee	5195	$ 139,855	Y	N	8.77%	(22,745)	(372)	$ (12,266)
Union	LST068	$ 2,840,000	Y	N	8.77%	(350,813)	(3,613)	$ (249,077)

Total Division Storage Capacity Assignment	$ (261,343)

MSQ = Maximum Space Quantity
MDWQ = Maximum Daily Withdrawal Quantity

Northern Utilities, Inc.
New Hampshire Division
On-System Peaking Demand Capacity Assignment Revenues
November 2018 through October 2019

Month	On-System Peaking Demand TCQ	Rate	Demand Revenue
Nov-18	570	$ 50.35	$ (28,706)
Dec-18	570	$ 50.35	$ (28,706)
Jan-19	570	$ 50.35	$ (28,706)
Feb-19	570	$ 50.35	$ (28,706)
Mar-19	570	$ 50.35	$ (28,706)
Apr-19	570	$ 50.35	$ (28,706)

Total Division Peaking Demand Revenue	$ (172,237)

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Northern Utilities, Inc.
New Hampshire Division
Asset Management and Capacity Release Revenue Assigned to Retail Suppliers
November 2018 through October 2019

Asset Management Agreeement Revenue

Resources	Projected Value	Company-Managed Resources	Resource Type	Percentage Capacity Assigned	Annual Value to Retail Marketers
Tennessee Zone 0/L Pools	[redacted]	No	Pipeline	12.85%	[redacted]
Tennessee Niagara	[redacted]	No	Storage	8.77%	[redacted]
Iroquois Receipts	[redacted]	Yes	Pipeline	12.85%	[redacted]
Leidy Hub & Transco Zone 6, non-NY	[redacted]	No	Pipeline	12.85%	[redacted]
Union Dawn Storage	[redacted]	No	Pipeline	12.85%	[redacted]
Total Asset Management	$ (7,021,600)				$ 38,678

Northern Utilities, Inc.
New Hampshire Division Peaking Capacity Assignment Demand Rate
November 2018 through October 2019

Line	Description	Northern	NH Division
1	Capacity Allocation Factor		44.11%
2	Peaking Plants	6,500	2,867
3	Total	6,500	2,867
4	LNG Demand Costs	$ 1,010,000	$ 445,511
5	Peaking Plants Fixed Costs		$ 420,658
6	Total On-System Peaking Fixed Costs		$ 866,169
7	NH Division Peaking Service Demand Rate		$ 50.35

Northern Utilities
New Hampshire Division
Retail Supplier Capacity Assignment Estimates
November 2018 through October 2019

	Pipeline MDQ	Storage MDQ	Peaking MDQ	Total MDQ
HLF Allocation	65.18%	14.07%	20.75%	100.00%
LLF Allocation	9.77%	36.45%	53.78%	100.00%
HLF TCQ	2,080	449	662	3,191
LLF TCQ	873	3,256	4,804	8,932
Retail Supplier Total	2,971	3,728	5,501	12,200
Northern MDQ	23,121	42,507	62,716	128,344
Cap Assign/ Total MDQ	12.85%	8.77%	8.77%	9.51%

On System Peaking			6,500	
On System Peaking Allocation			10.36%	

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Northern Utilities, Inc.
Commodity Cost by Supply Source
November 2018 through April 2019

Description	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Season
Pipeline Supplies							
FS-MA Path (TGP Zone 4 300 Leg)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Union Dawn Path (Dawn)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 4 200 Leg	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 0	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone L	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Long-Haul Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Leidy Hub	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Texas Eastern Zone M-3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transco Zone 6, non-NY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Algonquin Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Iroquois Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Niagara Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Pipeline	$ 1,836,929	$ 2,116,094	$ 2,152,560	$ 1,926,934	$ 1,965,059	$ 2,298,200	$ 12,295,776
NH CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Pipeline	**$ 1,713,896**	**$ 1,952,159**	**$ 1,910,102**	**$ 1,710,242**	**$ 1,814,531**	**$ 2,281,006**	**$ 11,381,935**
Underground Storage							
Tennessee Storage Path	$ -	$ 172,361	$ 172,361	$ 154,777	$ 37,268	$ -	$ 536,767
Union Dawn Storage Path	$ 816,436	$ 1,544,604	$ 2,276,990	$ 2,314,292	$ 2,015,735	$ -	$ 8,968,058
Net Storage	**$ 816,436**	**$ 1,716,965**	**$ 2,449,351**	**$ 2,469,069**	**$ 2,053,003**	**$ -**	**$ 9,504,825**
Peaking Supplies							
Peaking Contract 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Peaking Contracts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PNGTS Delivered (Dec - Feb)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Maritimes Delivered	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Baseload Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Incremental Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LNG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Peaking	$ 1,835,577	$ 4,552,111	$ 5,477,956	$ 4,187,350	$ 2,058,117	$ 15,195	$ 18,126,305
NH CM Peaking Service	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Peaking Service	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Peaking	**$ 1,835,577**	**$ 4,526,660**	**$ 5,420,325**	**$ 4,161,751**	**$ 2,045,340**	**$ 15,195**	**$ 18,004,848**
Total NUI Commodity	$ 4,488,942	$ 8,385,171	$ 10,079,867	$ 8,583,353	$ 6,076,178	$ 2,313,394	$ 39,926,906
Company Managed Sales	$ (123,033)	$ (189,386)	$ (300,088)	$ (242,291)	$ (163,305)	$ (17,194)	$ (1,035,298)
Net Commodity Costs	**$ 4,365,909**	**$ 8,195,784**	**$ 9,779,779**	**$ 8,341,062**	**$ 5,912,874**	**$ 2,296,200**	**$ 38,891,608**

Northern Utilities, Inc.
Commodity Volumes by Supply Source (Dth)
November 2018 through April 2019

Description	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Season
Pipeline Supplies							
FS-MA Path (TGP Zone 4 300 Leg)	68,438	0	0	371	55,428	68,438	192,675
Union Dawn Path (Dawn)	145,569	150,421	0	0	79,143	647,635	1,022,767
Tennessee Zone 4 200 Leg	0	0	0	0	0	149,475	149,475
Tennessee Zone 0	0	0	0	0	0	0	0
Tennessee Zone L	149,476	154,459	154,459	139,511	154,459	0	752,363
Tennessee Long-Haul Path	149,476	154,459	154,459	139,511	154,459	149,475	901,838
Leidy Hub	28,753	29,592	29,592	26,739	29,604	28,753	173,033
Texas Eastern Zone M-3	197	323	323	281	311	197	1,632
Transco Zone 6, non-NY	8,580	8,866	8,866	8,008	8,866	8,580	51,766
Algonquin Receipts Path	37,530	38,781	38,781	35,028	38,781	37,530	226,431
Iroquois Receipts Path	151,226	194,804	194,804	176,000	194,857	12,389	924,081
Tennessee Niagara Path	56,612	58,499	58,499	52,838	58,499	3,922	288,868
Total Pipeline	608,850	596,964	446,543	403,748	581,167	919,389	3,556,660
NH CM Pipeline (Leidy/M-3)	-3,720	-3,844	-3,844	-3,472	-3,844	-3,720	-22,444
ME CM Pipeline (Leidy/M-3)	-1,740	-1,798	-1,798	-1,624	-1,798	-1,740	-10,498
NH CM Pipeline (Transco)	-1,110	-1,147	-1,147	-1,036	-1,147	-1,110	-6,697
ME CM Pipeline (Transco)	-510	-527	-527	-476	-527	-510	-3,077
NH CM Pipeline (Iroq Rec)	-21,570	-22,289	-22,289	-20,132	-22,289	0	-108,569
ME CM Pipeline (Iroq Rec)	-10,140	-10,478	-10,478	-9,464	-10,478	0	-51,038
Net Pipeline	**570,060**	**556,881**	**406,460**	**367,544**	**541,084**	**912,309**	**3,354,337**
Underground Storage							
Tennessee Storage Path	0	70,719	70,719	63,505	15,291	0	220,233
Union Dawn Storage Path	285,832	540,762	797,168	810,227	705,703	0	3,139,692
Net Storage	**285,832**	**611,481**	**867,887**	**873,732**	**720,994**	**0**	**3,359,925**
Peaking Supplies							
Peaking Contract 1	0	47,545	248,171	60,060	52,060	0	407,836
Off-System Peaking Contracts	0	47,545	248,171	60,060	52,060	0	407,836
PNGTS Delivered (Dec - Feb)	0	231,686	231,686	209,265	0	0	672,638
Maritimes Delivered	225,000	232,500	232,500	210,000	232,500	0	1,132,500
Baseload Delivered Supplies	225,000	464,186	464,186	419,265	232,500	0	1,805,138
Incremental Delivered Supplies	0	0	0	0	0	0	0
LNG	2,145	2,217	38,895	2,002	2,217	2,145	49,620
Total Peaking	227,145	513,948	751,252	481,327	286,776	2,145	2,262,593
NH CM Peaking Service	0	-2,280	-5,130	-2,280	-1,140	0	-10,830
ME CM Peaking Service	0	-1,284	-2,889	-1,284	-642	0	-6,099
Net Peaking	**227,145**	**510,384**	**743,233**	**477,763**	**284,994**	**2,145**	**2,245,664**
Total NUI Commodity	1,121,827	1,722,392	2,065,682	1,758,806	1,588,937	921,534	9,179,179
Company Managed Sales	-38,790	-43,647	-48,102	-39,768	-41,865	-7,080	-219,252
Net Commodity Costs	**1,083,037**	**1,678,745**	**2,017,580**	**1,719,038**	**1,547,072**	**914,454**	**8,959,927**

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Northern Utilities, Inc.
Average Delivered Commodity Cost by Supply Source ($/Dth)
November 2018 through April 2019

Description	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Season
Pipeline Supplies							
FS-MA Path (TGP Zone 4 300 Leg)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Union Dawn Path (Dawn)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 4 200 Leg	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 0	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone L	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Long-Haul Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Leidy Hub	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Texas Eastern Zone M-3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transco Zone 6, non-NY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Algonquin Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Iroquois Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Niagara Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Pipeline	$ 3.017	$ 3.545	$ 4.821	$ 4.773	$ 3.381	$ 2.500	$ 3.457
NH CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Pipeline	**$ 3.007**	**$ 3.506**	**$ 4.699**	**$ 4.653**	**$ 3.354**	**$ 2.500**	**$ 3.393**
Underground Storage							
Tennessee Storage Path		$ 2.437	$ 2.437	$ 2.437	$ 2.437		$ 2.437
Union Dawn Storage Path	$ 2.856	$ 2.856	$ 2.856	$ 2.856	$ 2.856		$ 2.856
Net Storage	**$ 2.856**	**$ 2.808**	**$ 2.822**	**$ 2.826**	**$ 2.847**		**$ 2.829**
Peaking Supplies							
Peaking Contract 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Peaking Contracts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PNGTS Delivered (Dec - Feb)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Maritimes Delivered	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Baseload Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Incremental Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LNG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Peaking	$ 8.081	$ 8.857	$ 7.292	$ 8.700	$ 7.177	$ 7.084	$ 8.011
NH CM Peaking Service	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Peaking Service	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Peaking	**$ 8.081**	**$ 8.869**	**$ 7.293**	**$ 8.711**	**$ 7.177**	**$ 7.084**	**$ 8.018**
Total NUI Commodity	$ 4.001	$ 4.868	$ 4.880	$ 4.880	$ 3.824	$ 2.510	$ 4.350
Company Managed Sales	$ 3.172	$ 4.339	$ 6.239	$ 6.093	$ 3.901	$ 2.429	$ 4.722
Net Commodity Costs	**$ 4.031**	**$ 4.882**	**$ 4.847**	**$ 4.852**	**$ 3.822**	**$ 2.511**	**$ 4.341**

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Northern Utilities, Inc.
Commodity Cost by Supply Source
May 2019 through October 2019

Description	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Season
Pipeline Supplies							
FS-MA Path (TGP Zone 4 300 Leg)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
W10 Path (Dawn)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 4 200 Leg	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 0	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone L	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Long-Haul Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Texas Eastern Zone M-3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transco Zone 6, non-NY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transco Zone 6, non-NY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Algonquin Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Iroquois Receipts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Niagara Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Pipeline	$ 1,215,703	$ 833,714	$ 726,642	$ 724,873	$ 717,895	$ 1,369,997	$ 5,588,824
NH CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Pipeline	**$ 1,202,907**	**$ 821,440**	**$ 713,823**	**$ 712,207**	**$ 706,238**	**$ 1,357,630**	**$ 5,514,245**
Underground Storage							
Tennessee Storage Path	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Washington 10 Storage Path	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Storage	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Peaking Supplies							
Peaking Contract 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Peaking Contracts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PNGTS Delivered (Dec - Feb)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Maritimes Delivered	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Baseload Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Incremental Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LNG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Peaking	$ 15,129	$ 14,540	$ 14,949	$ 14,918	$ 14,342	$ 14,778	$ 88,655
NH Peaking Service - 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME Peaking Service - 1 (On-System)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Peaking	**$ 15,129**	**$ 14,540**	**$ 14,949**	**$ 14,918**	**$ 14,342**	**$ 14,778**	**$ 88,655**
Total NUI Commodity	$ 1,230,832	$ 848,253	$ 741,591	$ 739,791	$ 732,238	$ 1,384,775	$ 5,677,479
Company Managed Sales	$ (12,796)	$ (12,274)	$ (12,819)	$ (12,666)	$ (11,657)	$ (12,367)	$ (74,579)
Net Commodity Costs	**$ 1,218,036**	**$ 835,979**	**$ 728,772**	**$ 727,125**	**$ 720,581**	**$ 1,372,407**	**$ 5,602,900**

Northern Utilities, Inc.
Commodity Volumes by Supply Source (Dth)
May 2019 through October 2019

Description	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Season
Pipeline Supplies							
FS-MA Path (TGP Zone 4 300 Leg)	70,719	68,438	70,719	70,719	68,438	70,719	419,752
Union Dawn Path (Dawn)	236,288	84,231	30,448	40,876	52,297	314,401	758,542
Tennessee Zone 4 200 Leg	154,458	149,475	154,458	154,458	149,475	154,458	916,780
Tennessee Zone 0	0	0	0	0	0	0	0
Tennessee Zone L	0	0	0	0	0	0	0
Tennessee Long-Haul Path	154,458	149,475	154,458	154,458	149,475	154,458	916,780
Leidy Hub	29,712	28,753	29,712	29,712	28,753	29,712	176,353
Texas Eastern Zone M-3	203	197	203	203	197	203	1,207
Transco Zone 6, non-NY	8,866	8,580	8,866	0	8,580	8,866	43,758
Algonquin Receipts Path	38,781	37,530	38,781	29,915	37,530	38,781	221,318
Iroquois Receipts Path	0	0	0	0	0	0	0
Tennessee Niagara Path	0	0	0	0	0	0	0
Total Pipeline	500,246	339,674	294,405	295,968	307,740	578,359	2,316,392
NH CM Pipeline (Leidy/M-3)	-3,844	-3,720	-3,844	-3,844	-3,720	-3,844	-22,816
ME CM Pipeline (Leidy/M-3)	-1,798	-1,740	-1,798	-1,798	-1,740	-1,798	-10,672
NH CM Pipeline (Transco)	0	0	0	0	0	0	0
ME CM Pipeline (Transco)	0	0	0	0	0	0	0
NH CM Pipeline (Iroq Rec)	0	0	0	0	0	0	0
ME CM Pipeline (Iroq Rec)	0	0	0	0	0	0	0
Net Pipeline	**494,604**	**334,214**	**288,763**	**290,326**	**302,280**	**572,717**	**2,282,904**
Underground Storage							
Tennessee Storage Path	0	0	0	0	0	0	0
Union Dawn Storage Path	0	0	0	0	0	0	0
Net Storage	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Peaking Supplies							
Peaking Contract 1	0	0	0	0	0	0	0
Off-System Peaking Contracts	0	0	0	0	0	0	0
PNGTS Delivered (Dec - Feb)	0	0	0	0	0	0	0
Maritimes Delivered	0	0	0	0	0	0	0
Baseload Delivered Supplies	0	0	0	0	0	0	0
Incremental Delivered Supplies	0	0	0	0	0	0	0
LNG	2,170	2,100	2,170	2,170	2,100	2,170	12,880
Total Peaking	2,170	2,100	2,170	2,170	2,100	2,170	12,880
NH CM Peaking Service	0	0	0	0	0	0	0
ME CM Peaking Service	0	0	0	0	0	0	0
Net Peaking	**2,170**	**2,100**	**2,170**	**2,170**	**2,100**	**2,170**	**12,880**
Total NUI Commodity	502,416	341,774	296,575	298,138	309,840	580,529	2,329,272
Company Managed Sales	-5,642	-5,460	-5,642	-5,642	-5,460	-5,642	-33,488
Net Commodity Costs	**496,774**	**336,314**	**290,933**	**292,496**	**304,380**	**574,887**	**2,295,784**

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Denotes Confidential Information

Northern Utilities, Inc.
Commodity Volumes by Supply Source (Dth)
May 2019 through October 2019

Description	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Season
Pipeline Supplies							
FS-MA Path (TGP Zone 4 300 Leg)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Union Dawn Path (Dawn)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 4 200 Leg	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone 0	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Zone L	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Long-Haul Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Leidy Hub	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Texas Eastern Zone M-3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transco Zone 6, non-NY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Algonquin Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Iroquois Receipts Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Tennessee Niagara Path	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Pipeline	$ 2.430	$ 2.454	$ 2.468	$ 2.449	$ 2.333	$ 2.369	$ 2.413
NH CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Leidy/M-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Transco)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NH CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Pipeline (Iroq Rec)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Pipeline	**$ 2.432**	**$ 2.458**	**$ 2.472**	**$ 2.453**	**$ 2.336**	**$ 2.371**	**$ 2.415**
Underground Storage							
Tennessee Storage Path							
Union Dawn Storage Path							
Net Storage							
Peaking Supplies							
Peaking Contract 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Off-System Peaking Contracts	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PNGTS Delivered (Dec - Feb)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Maritimes Delivered	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Baseload Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Incremental Delivered Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LNG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Peaking	$ 6.972	$ 6.924	$ 6.889	$ 6.875	$ 6.830	$ 6.810	$ 6.883
NH CM Peaking Service	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ME CM Peaking Service	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Peaking	**$ 6.972**	**$ 6.924**	**$ 6.889**	**$ 6.875**	**$ 6.830**	**$ 6.810**	**$ 6.883**
Total NUI Commodity	$ 2.450	$ 2.482	$ 2.501	$ 2.481	$ 2.363	$ 2.385	$ 2.437
Company Managed Sales	$ 2.268	$ 2.248	$ 2.272	$ 2.245	$ 2.135	$ 2.192	$ 2.227
Net Commodity Costs	**$ 2.452**	**$ 2.486**	**$ 2.505**	**$ 2.486**	**$ 2.367**	**$ 2.387**	**$ 2.441**

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Northern Utilities, Inc.
New Hampshire Division
Schedule 6B
Page 1 of 17

Source of Supply: Tennessee Zone 4 200 Leg Pool
Delivered to Northern via Tennessee and Granite Pipelines

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Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	-	-	-	-	-	151,883	151,883
2	City Gate Delivered Volume	Line 34	-	-	-	-	-	149,475	149,475
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26 and 36	$ -	$ -	$ -	$ -	$ -	$ 17,909	$ 17,909
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 4 Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	151,883	151,883
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.635
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ 400,213	$ 400,213
12	NYMEX Basis Price	Att FXW-9, Line 1 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 2								
19	Tennessee Gas Pipeline (Contract 5083)								
20	Receipt Point: Tennessee Zone 4 200 Leg Pool								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 15	-	-	-	-	-	151,883	151,883
23	Fuel Loss Rate	Att FXW-9, Line 33 of Page 2						1.24%	1.24%
24	Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	150,000	150,000
25	Variable Transportation Rate	Att FXW-9, Line 21 of Page 2						$ 0.1181	$ 0.1181
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ 17,715	$ 17,715
27									
28	Transportation Segment 3								
29	Granite State Gas Transmission (Contract 14-001-FT-NN)								
30	Receipt Point: Pleasant St.								
31	Delivery Point: Northern City Gates								
32	Received Volume	Line 24	-	-	-	-	-	150,000	150,000
33	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
34	City Gate Delivered Volume	Line 32 times (1 - Line 33)	-	-	-	-	-	149,475	149,475
35	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
36	Variable Transportation Costs	Line 34 times Line 35	$ -	$ -	$ -	$ -	$ -	$ 194	$ 194

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Source of Supply: Tennessee Zone 0
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 22	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 34	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 2 times Line 3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26 and 36	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 4 and 5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 6 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 0 Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 2 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1A								
19	Tennessee Gas Pipeline (Contract 5083)								
20	Receipt Point: Tennessee Zone 0								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 31 of Page 2							
24	Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 19 of Page 2							
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27									
28	Transportation Segment 2A								
29	Granite State Gas Transmission (Contract 14-001-FT-NN)								
30	Receipt Point: Pleasant St.								
31	Delivery Point: Northern City Gates								
32	Received Volume	Line 24	-	-	-	-	-	-	-
33	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
34	City Gate Delivered Volume	Line 32 times (1 - Line 33)	-	-	-	-	-	-	-
35	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
36	Variable Transportation Costs	Line 34 times Line 35	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Tennessee Zone L
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 22	156,056	161,258	161,258	145,652	161,258	-	785,482
2	City Gate Delivered Volume	Line 34	149,476	154,459	154,459	139,511	154,459	-	752,363
3	Total Purchase Cost	Line 2 times Line 3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26 and 36	$ 46,320	$ 47,864	$ 47,864	$ 43,232	$ 47,864	$ -	$ 233,142
5	Total City Gate Delivered Costs	Sum Lines 4 and 5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 6 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone L Supply Costs								
9	Purchased Volumes	Sendout Optimization	156,056	161,258	161,258	145,652	161,258	-	785,482
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.978
11	NYMEX Cost	Line 9 times Line 10	$ 451,002	$ 480,387	$ 494,417	$ 441,326	$ 471,841	$ -	$ 2,338,973
12	NYMEX Basis Price	Att FXW-9, Line 3 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1B								
19	Tennessee Gas Pipeline (Contract 5083)								
20	Receipt Point: Tennessee Zone L								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 9	156,056	161,258	161,258	145,652	161,258	-	785,482
23	Fuel Loss Rate	Att FXW-9, Line 32 of Page 2	3.88%	3.88%	3.88%	3.88%	3.88%		3.88%
24	Delivered Volume	Line 22 times (1 - Line 23)	150,001	155,001	155,001	140,001	155,001	-	755,005
25	Variable Transportation Rate	Att FXW-9, Line 20 of Page 2	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075	$ 0.3075		$ 0.3075
26	Variable Transportation Costs	Line 24 times Line 25	$ 46,125	$ 47,663	$ 47,663	$ 43,050	$ 47,663	$ -	$ 232,164
27									
28	Transportation Segment 2B								
29	Granite State Gas Transmission (Contract 14-001-FT-NN)								
30	Receipt Point: Pleasant St.								
31	Delivery Point: Northern City Gates								
32	Received Volume	Line 24	150,001	155,001	155,001	140,001	155,001	-	755,005
33	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
34	City Gate Delivered Volume	Line 32 times (1 - Line 33)	149,476	154,459	154,459	139,511	154,459	-	752,363
35	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
36	Variable Transportation Costs	Line 34 times Line 35	$ 194	$ 201	$ 201	$ 181	$ 201	$ -	$ 978

REDACTED

Source of Supply: Niagara (Interconnect of TransCanada and Tennessee Pipelines)
Delivered to Northern via Tennessee and Granite Pipelines
Delivered to Northern via Tennessee and Bay State Exhange Agreement

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	57,332	59,243	59,243	53,510	59,243	3,972	292,545
2	City Gate Delivered Volume	Line 44	56,612	58,499	58,499	52,838	58,499	3,922	288,868
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26, 36 and 46	$ 5,135	$ 5,307	$ 5,307	$ 4,793	$ 5,307	$ 356	$ 26,204
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Niagara Supply Costs								
9	Purchased Volumes	Sendout Optimization	57,332	59,243	59,243	53,510	59,243	3,972	292,545
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.973
11	NYMEX Cost	Line 9 times Line 10	$ 165,690	$ 176,486	$ 181,640	$ 162,136	$ 173,346	$ 10,467	$ 869,765
12	NYMEX Basis Price	Att FXW-9, Line 4 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1A								
19	Tennessee Gas Pipeline (Contract 5292)								
20	Receipt Point: Niagara								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 9	34,522	35,673	35,673	32,221	35,673	2,219	175,981
23	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
24	Delivered Volume	Line 22 times (1 - Line 23)	34,208	35,348	35,348	31,927	35,348	2,199	174,379
25	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891
26	Variable Transportation Costs	Line 24 times Line 25	$ 3,048	$ 3,150	$ 3,150	$ 2,845	$ 3,150	$ 196	$ 15,537
27									
28	Transportation Segment 1B								
29	Tennessee Gas Pipeline (Contract 39375)								
30	Receipt Point: Niagara								
31	Delivery Point: Pleasant St. (Interconnection with Granite)								
32	Received Volume	Line 9	22,810	23,570	23,570	21,289	23,570	1,753	116,564
33	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
34	Delivered Volume	Line 32 times (1 - Line 33)	22,603	23,356	23,356	21,096	23,356	1,737	115,504
35	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891
36	Variable Transportation Costs	Line 34 times Line 35	$ 2,014	$ 2,081	$ 2,081	$ 1,880	$ 2,081	$ 155	$ 10,291
37									
38	Transportation Segment 2B								
39	Granite State Gas Transmission (Contract 14-001-FT-NN)								
40	Receipt Point: Pleasant St.								
41	Delivery Point: Northern City Gates								
42	Received Volume	Line 34	56,811	58,704	58,704	53,023	58,704	3,936	289,883
43	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
44	City Gate Delivered Volume	Line 42 times (1 - Line 43)	56,612	58,499	58,499	52,838	58,499	3,922	288,868
45	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
46	Variable Transportation Costs	Line 44 times Line 45	$ 74	$ 76	$ 76	$ 69	$ 76	$ 5	$ 376

REDACTED

Source of Supply: Iroquois Receipts (Interconnect of TransCanada and Iroquoios Pipelines)
Delivered to Northern via Iroquois, Tennessee and Granite Pipelines
Delivered to Northern via Iroquois, Tennessee, Algonquin Pipelines and Bay State Exchange Agreement

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	153,437	198,189	198,189	179,009	198,189	12,541	939,554
2	City Gate Delivered Volume	Line 37	151,226	194,804	194,804	176,000	194,857	12,389	924,081
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 29, 39, 49, 59, 69 and 79	$ 14,417	$ 18,621	$ 18,621	$ 16,819	$ 18,621	$ 1,175	$ 88,276
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Irqoquois Receipts Supply Costs								
9	Purchased Volumes	Sendout Optimization	153,437	198,189	198,189	179,009	198,189	12,541	939,554
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.977
11	NYMEX Cost	Line 9 times Line 10	$ 443,432	$ 590,405	$ 607,648	$ 542,399	$ 579,901	$ 33,046	$ 2,796,831
12	NYMEX Basis Price	Att FXW-9, Line 5 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 5								
19	Iroquois Pipeline (Contract R181001)								
20	Receipt Point: Waddington								
21	Delivery Point: Wright (Interconnection with Tennessee)								
22	Total Contract Recevied Volume	Sendout Optimization	153,437	198,189	198,189	179,009	198,189	12,541	939,554
23	Received Volume	Line 9	153,437	198,189	198,189	179,009	198,189	12,541	939,554
24	Percentage Allocated	Line 23 divided by Line 22	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100%
25	Received Volume	Line 14	153,437	198,189	198,189	179,009	198,189	12,541	939,554
26	Fuel Loss Rate	Att FXW-9, Line 29 of Page 2	0.04%	0.04%	0.04%	0.04%	0.04%	0.00%	0.04%
27	Delivered Volume	Line 25 times (1 - Line 26)	153,375	198,110	198,110	178,938	198,110	12,541	939,184
28	Variable Transportation Rate	Att FXW-9, Line 16 of Page 2	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ 0.0047	$ -
29	Variable Transportation Costs	Line 27 times Line 28	$ 721	$ 931	$ 931	$ 841	$ 931	$ 59	$ -
30									
31	Transporation Segment 6A								
32	Tennessee Gas Pipeline (Contract 95196)								
33	Receipt Point: Wright								
34	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
35	Received Volume	Line 27	33,473	43,235	43,235	39,051	43,235	5,579	207,809
36	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
37	City Gate Delivered Volume	Line 35 times (1 - Line 36)	33,168	42,842	42,842	38,696	42,842	5,528	205,918
38	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891
39	Variable Transportation Costs	Line 37 times Line 38	$ 2,955	$ 3,817	$ 3,817	$ 3,448	$ 3,817	$ 493	$ 18,347
40									
41	Transportation Segment 6B								
42	Tennessee Gas Pipeline (Contract 95196)								
43	Receipt Point: Wright								
44	Delivery Point: Pleasant St. (Interconnection with Granite)								
45	Received Volume	Line 37	16,578	21,414	21,414	19,342	21,414	2,763	102,925
46	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
47	Delivered Volume	Line 45 times (1 - Line 46)	16,428	21,219	21,219	19,166	21,219	2,738	101,988
48	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891
49	Variable Transportation Costs	Line 47 times Line 48	$ 1,464	$ 1,891	$ 1,891	$ 1,708	$ 1,891	$ 244	$ 9,087
50									
51	Transportation Segment 7B								
52	Granite State Gas Transmission (Contract 14-001-FT-NN)								
53	Receipt Point: Pleasant St.								
54	Delivery Point: Northern City Gates								
55	Received Volume	Line 47	16,428	21,219	21,219	19,166	21,219	2,738	101,988
56	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
57	City Gate Delivered Volume	Line 55 times (1 - Line 56)	16,370	21,145	21,145	19,098	21,145	2,728	101,631
58	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
59	Variable Transportation Costs	Line 57 times Line 58	$ 21	$ 27	$ 27	$ 25	$ 27	$ 4	$ 132
60									
61	Transportation Segment 6C								
62	Tennessee Gas Pipeline (Contract 41099)								
63	Receipt Point: Wright								
64	Delivery Point: Mendon (Interconnection with Algonquin)								
65	Received Volume	Line 27	103,324	133,460	133,460	120,545	133,460	4,199	628,450
66	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
67	Delivered Volume	Line 65 times (1 - Line 66)	102,384	132,246	132,246	119,448	132,246	4,161	622,731
68	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891	$ 0.0891
69	Variable Transportation Costs	Line 67 times Line 68	$ 9,122	$ 11,783	$ 11,783	$ 10,643	$ 11,783	$ 371	$ 55,485
70									
71	Transportation Segment 7C								
72	Algonquin Gas Transmission (Contract 93200F)								
73	Receipt Point: Mendon								
74	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
75	Received Volume	Line 67	102,384	132,246	132,246	119,448	132,246	4,161	622,731
76	Fuel Loss Rate	Att FXW-9, Line 26 of Page 2	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	1.00%
77	City Gate Delivered Volume	Line 75 times (1 - Line 76)	101,688	130,818	130,818	118,206	130,871	4,133	616,532
78	Variable Transportation Rate	Att FXW-9, Line 13 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
79	Variable Transportation Costs	Line 77 times Line 78	$ 133	$ 172	$ 172	$ 155	$ 172	$ 5	$ 810

REDACTED

Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	29,308	30,340	30,340	27,404	30,340	29,308	177,038
2	City Gate Delivered Volume	Sum Lines 37	28,753	29,592	29,592	26,739	29,604	28,753	173,033
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 39	$ 933	$ 962	$ 962	$ 869	$ 962	$ 933	$ 5,621
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Texas Eastern Zone M-3 Purchases								
9	Purchased Volumes	Sendout Optimization	29,308	30,340	30,340	27,404	30,340	29,308	177,038
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.921
11	NYMEX Cost	Line 9 times Line 10	$ 84,699	$ 90,382	$ 93,022	$ 83,033	$ 88,774	$ 77,225	$ 517,135
12	NYMEX Basis Price	Att FXW-9, Line 7 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Algonquin Pipeline (Contract 93201A1C)								
20	Receipt Point: Algonquin Receipt Points								
21	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
22	Received Volume	Line 15	29,308	30,340	30,340	27,404	30,340	29,308	177,038
23	Fuel Loss Rate	Att FXW-9, Line 35 of Page 2	1.22%	1.40%	1.40%	1.40%	1.40%	1.22%	1.20%
24	Delivered Volume	Line 22 times (1 - Line 23)	28,950	29,915	29,915	27,020	29,915	28,950	174,665
25	Variable Transportation Rate	Att FXW-9, Line 23 of Page 2	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198	$ 0.0198
26	Variable Transportation Costs	Line 24 times Line 25	$ 573	$ 592	$ 592	$ 535	$ 592	$ 573	$ 3,458
27									
28	Transportation Segment 1								
29	Algonquin Pipeline (Contract 93201A1C)								
30	Receipt Point: Algonquin Receipt Points								
31	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
32	Total Contract Recevied Volume	Sendout Optimization	29,148	30,242	30,242	27,304	30,229	29,148	176,313
33	Received Volume	Line 14	28,950	29,915	29,915	27,020	29,915	28,950	174,665
34	Percentage Allocated	Line 33 divided by Line 32	99.32%	98.92%	98.92%	98.96%	98.96%	99.32%	99.07%
35	Received Volume	Line 15	28,950	29,915	29,915	27,020	29,915	28,950	174,665
36	Fuel Loss Rate	Att FXW-9, Line 27 of Page 2	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	1.20%
37	City Gate Delivered Volume	Line 35 times (1 - Line 36)	28,753	29,592	29,592	26,739	29,604	28,753	173,033
38	Variable Transportation Rate	Att FXW-9, Line 14 of Page 2	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125
39	Variable Transportation Costs	Line 37 times Line 38	$ 359	$ 370	$ 370	$ 334	$ 370	$ 359	$ 2,163

REDACTED

Northern Utilities, Inc.
New Hampshire Division
Schedule 6B
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Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	198	327	327	284	314	198	1,648
2	City Gate Delivered Volume	Sum Lines 27	197	323	323	281	311	197	1,632
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 29	$ 2	$ 4	$ 4	$ 4	$ 4	$ 2	$ 20
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Texas Eastern Zone M-3 Purchases								
9	Purchased Volumes	Sendout Optimization	198	327	327	284	314	198	1,648
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.943
11	NYMEX Cost	Line 9 times Line 10	$ 573	$ 973	$ 1,001	$ 860	$ 920	$ 522	$ 4,850
12	NYMEX Basis Price	Att FXW-9, Line 8 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Algonquin Pipeline (Contract 93201A1C)								
20	Receipt Point: Algonquin Receipt Points								
21	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
22	Total Contract Recevied Volume	Sendout Optimization	29,148	30,242	30,242	27,304	30,229	29,148	176,313
23	Received Volume	Line 14	198	327	327	284	314	198	1,648
24	Percentage Allocated	Line 23 divided by Line 22	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	0.93%
25	Received Volume	Line 15	198	327	327	284	314	198	1,648
26	Fuel Loss Rate	Att FXW-9, Line 27 of Page 2	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	1.20%
27	City Gate Delivered Volume	Line 25 times (1 - Line 26)	197	323	323	281	311	197	1,632
28	Variable Transportation Rate	Att FXW-9, Line 14 of Page 2	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125
29	Variable Transportation Costs	Line 27 times Line 28	$ 2	$ 4	$ 4	$ 4	$ 4	$ 2	$ 20

REDACTED

Northern Utilities, Inc.
New Hampshire Division
Schedule 6B
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Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	8,639	8,963	8,963	8,092	8,959	8,639	52,254
2	City Gate Delivered Volume	Sum Lines 24	8,580	8,866	8,866	8,008	8,866	8,580	51,766
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26	$ 107	$ 111	$ 111	$ 100	$ 111	$ 107	$ 647
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tranco Zone 6, non-NY Purchases								
9	Purchased Volumes	Sendout Optimization	8,639	8,963	8,963	8,092	8,959	8,639	52,254
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.921
11	NYMEX Cost	Line 9 times Line 10	$ 24,966	$ 26,700	$ 27,480	$ 24,519	$ 26,215	$ 22,763	$ 152,643
12	NYMEX Basis Price	Att FXW-9, Line 9 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Algonquin Pipeline (Contract 93201A1C)								
20	Receipt Point: Algonquin Receipt Points								
21	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
22	Received Volume	Line 15	8,639	8,963	8,963	8,092	8,959	8,639	52,254
23	Fuel Loss Rate	Att FXW-9, Line 27 of Page 2	0.68%	1.08%	1.08%	1.04%	1.04%	0.68%	1.20%
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	8,580	8,866	8,866	8,008	8,866	8,580	51,766
25	Variable Transportation Rate	Att FXW-9, Line 14 of Page 2	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125
26	Variable Transportation Costs	Line 24 times Line 25	$ 107	$ 111	$ 111	$ 100	$ 111	$ 107	$ 647

REDACTED

Source of Supply: Tennessee Zone 4
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	69,541	-	-	377	56,321	69,541	195,779
2	City Gate Delivered Volume	Line 37	68,438	-	-	371	55,428	68,438	192,675
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 29 and 39	$ 8,200	$ -	$ -	$ 44	$ 6,641	$ 8,200	$ 23,085
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 4 Supply Costs								
9	Purchased Volumes	Sendout Optimization	69,541	-	-	377	56,321	69,541	195,779
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.810
11	NYMEX Cost	Line 9 times Line 10	$ 200,972	$ -	$ -	$ 1,142	$ 164,796	$ 183,239	$ 550,149
12	NYMEX Basis Price	Att FXW-9, Line 10 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 2								
19	Tennessee Gas Pipeline (Contract 5265)								
20	Receipt Point: Tennessee FS-MA 300 Leg								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Total Contract Recevied Volume	Sendout Optimization	69,541	71,859	71,859	64,904	71,859	69,541	419,561
23	Received Volume	Line 14	69,541	-	-	377	56,321	69,541	195,779
24	Percentage Allocated	Line 23 divided by Line 22	100.00%	0.00%	0.00%	0.58%	78.38%	100.00%	46.66%
25	Received Volume	Line 9	69,541	-	-	377	56,321	69,541	195,779
26	Fuel Loss Rate	Att FXW-9, Line 33 of Page 2	1.24%			1.24%	1.24%	1.24%	1.24%
27	Delivered Volume	Line 25 times (1 - Line 26)	68,678	-	-	372	55,623	68,678	193,352
28	Variable Transportation Rate	Att FXW-9, Line 21 of Page 2	$ 0.1181			$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181
29	Variable Transportation Costs	Line 27 times Line 28	$ 8,111	$ -	$ -	$ 44	$ 6,569	$ 8,111	$ 22,835
30									
31	Transportation Segment 3								
32	Granite State Gas Transmission (Contract 14-001-FT-NN)								
33	Receipt Point: Pleasant St.								
34	Delivery Point: Northern City Gates								
35	Received Volume	Line 27	68,678	-	-	372	55,623	68,678	193,352
36	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
37	City Gate Delivered Volume	Line 35 times (1 - Line 36)	68,438	-	-	371	55,428	68,438	192,675
38	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
39	Variable Transportation Costs	Line 37 times Line 38	$ 89	$ -	$ -	$ 0	$ 72	$ 89	$ 250

Source of Supply: Tennessee FS-MA Inventory
Delivered to Northern via Tennessee and Granite Pipelines

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Gross Withdrawn Volume	Line 9	-	71,859	71,859	64,528	15,537	-	223,782
2	City Gate Delivered Volume	Line 38	-	70,719	70,719	63,505	15,291	-	220,233
3	Total Withdrawal Costs	Line 16	$ -	$ 163,888	$ 163,888	$ 147,168	$ 35,436	$ -	$ 510,379
4	Variable Transportation Costs	Sum Lines 30 and 40	$ -	$ 8,473	$ 8,473	$ 7,609	$ 1,832	$ -	$ 26,387
5	Total City Gate Delivered Costs	Line 3 plus Line 4	$ -	$ 172,361	$ 172,361	$ 154,777	$ 37,268	$ -	$ 536,767
6	Average Delivered Price	Line 5 divided by Line 2		$ 2.437	$ 2.437	$ 2.437	$ 2.437		$ 2.437
7									
8	Tennessee FS-MA Withdrawn Inventory (Segment 1)								
9	Gross Withdrawn Volume	Sendout Optimization	-	71,859	71,859	64,528	15,537	-	223,782
10	Withdrawal Rate	Att to Sch 5A, Line 1 of Page 3		$ 0.0087	$ 0.0087	$ 0.0087	$ 0.0087		$ 0.0087
11	Withdrawal Charges	Line 9 times Line 10	$ -	$ 625	$ 625	$ 561	$ 135	$ -	$ 1,947
12	Inventory Rate	FXW-8		$ 2.2720	$ 2.2720	$ 2.2720	$ 2.2720		$ 2.2720
13	Withdrawn Inventory Value	Line 9 times Line 12	$ -	$ 163,263	$ 163,263	$ 146,607	$ 35,300	$ -	$ 508,432
14	Withdrawal Fuel Losses	Att to Sch 5A, Line 1 of Page 3 times Line 9	-	-	-	-	-	-	-
15	Net Withdrawn Volume	Line 9 minus Line 14	-	71,859	71,859	64,528	15,537	-	223,782
16	Total Withdrawal Costs	Line 11 plus Line 13	$ -	$ 163,888	$ 163,888	$ 147,168	$ 35,436	$ -	$ 510,379
17									
18	Transportation Fuel Losses and Variable Charges								
19	Transportation Segment 2								
20	Tennessee Gas Pipeline (Contract 5265)								
21	Receipt Point: Tennessee FS-MA Withdrawal Meter								
22	Delivery Point: Pleasant St. (Interconnection with Granite)								
23	Total Contract Recevied Volume	Sendout Optimization	69,541	71,859	71,859	64,904	71,859	69,541	419,561
24	Received Volume	Line 15	-	71,859	71,859	64,528	15,537	-	223,782
25	Percentage Allocated	Line 24 divided by Line 23	0.00%	100.00%	100.00%	99.42%	21.62%	0.00%	53.34%
26	Received Volume	Line 24	-	71,859	71,859	64,528	15,537	-	223,782
27	Fuel Loss Rate	Att FXW-9, Line 33 of Page 2		1.24%	1.24%	1.24%	1.24%		1.24%
28	Delivered Volume	Line 26 times (1 - Line 27)	-	70,967	70,967	63,728	15,344	-	221,007
29	Variable Transportation Rate	Att FXW-9, Line 21 of Page 2		$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181		$ 0.1181
30	Variable Transportation Costs	Line 28 times Line 29	$ -	$ 8,381	$ 8,381	$ 7,526	$ 1,812	$ -	$ 26,101
31									
32	Transportation Segment 3								
33	Granite State Gas Transmission (Contract 14-001-FT-NN)								
34	Receipt Point: Pleasant St.								
35	Delivery Point: Northern City Gates								
36	Received Volume	Line 28	-	70,967	70,967	63,728	15,344	-	221,007
37	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
38	City Gate Delivered Volume	Line 36 times (1 - Line 37)	-	70,719	70,719	63,505	15,291	-	220,233
39	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
40	Variable Transportation Costs	Line 38 times Line 39	$ -	$ 92	$ 92	$ 83	$ 20	$ -	$ 286

Source of Supply: Washington 10 Inventory
Delivered to Northern via TransCanada, PNGTS and Granite Pipelines

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Gross Withdrawn Volume	Line 9	296,311	560,587	826,394	839,932	731,576	-	3,254,801
2	City Gate Delivered Volume	Line 64	285,832	540,762	797,168	810,227	705,703	-	3,139,692
3	Total Withdrawal Costs	Line 16	$ 814,264	$ 1,540,494	$ 2,270,931	$ 2,308,133	$ 2,010,371	$ -	$ 8,944,193
4	Variable Transportation Costs	Sum Lines 30, 43, 56 and 66	$ 2,173	$ 4,110	$ 6,059	$ 6,159	$ 5,364	$ -	$ 23,865
5	Total City Gate Delivered Costs	Line 3 plus Line 4	$ 816,436	$ 1,544,604	$ 2,276,990	$ 2,314,292	$ 2,015,735	$ -	$ 8,968,058
6	Average Delivered Price	Line 5 divided by Line 2	$ 2.856	$ 2.856	$ 2.856	$ 2.856	$ 2.856		$ 2.856
7									
8	<u>Washington 10 Withdrawn Inventory (Segment 1)</u>								
9	Gross Withdrawn Volume	Sendout Optimization	296,311	560,587	826,394	839,932	731,576	-	3,254,801
10	Withdrawal Rate	Att to Sch 5A, Line 3 of Page 3	$ 0.005	$ 0.005	$ 0.005	$ 0.005	$ 0.005		$ 0.005
11	Withdrawal Charges	Line 9 times Line 10	$ 1,482	$ 2,803	$ 4,132	$ 4,200	$ 3,658	$ -	$ 16,274
12	Inventory Rate	FXW-8	$ 2.743	$ 2.743	$ 2.743	$ 2.743	$ 2.743		$ 2.743
13	Withdrawn Inventory Value	Line 9 times Line 12	$ 812,782	$ 1,537,691	$ 2,266,799	$ 2,303,933	$ 2,006,713	$ -	$ 8,927,919
14	Withdrawal Fuel Losses	Att to Sch 5A, Line 3 of Page 3 times Line	$ 1,777.863	$ 3,363.525	$ 4,958.374	$ 5,039.612	$ 4,389.465	$ -	$ 19,528.839
15	Net Withdrawn Volume	Line 9 minus Line 14	294,533	557,224	821,436	834,892	727,187	-	3,235,272
16	Total Withdrawal Costs	Line 11 plus Line 13	$ 814,264	$ 1,540,494	$ 2,270,931	$ 2,308,133	$ 2,010,371	$ -	$ 8,944,193
17									
18	Transportation Fuel Losses and Variable Charges								
19	Transportation Segment 3								
20	TransCanada Pipeline (Contract 33322)								
21	Receipt Point: Union Dawn								
22	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
23	Total Contract Recevied Volume	Sendout Optimization	444,533	712,224	821,436	834,892	808,739	660,038	4,281,862
24	Received Volume	Line 15	294,533	557,224	821,436	834,892	727,187	-	3,235,272
25	Percentage Allocated	Line 24 divided by Line 23	66.26%	78.24%	100.00%	100.00%	89.92%	0.00%	75.56%
26	Received Volume	Line 24	294,533	557,224	821,436	834,892	727,187	-	3,235,272
27	Fuel Loss Rate	Att FXW-9, Line 37 of Page 2	1.04%	1.04%	1.04%	1.04%	1.04%		1.04%
28	Delivered Volume	Line 26 times (1 - Line 27)	291,470	551,429	812,893	826,209	719,624	-	3,201,625
29	Variable Transportation Rate	Att FXW-9, Line 25 of Page 2	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049		$ 0.0049
30	Variable Transportation Costs	Line 28 times Line 29	$ 1,428	$ 2,702	$ 3,983	$ 4,048	$ 3,526	$ -	$ 15,688
31									
32	Transportation Segment 3								
33	TransCanada Pipeline (Contract 33322)								
34	Receipt Point: Union Dawn								
35	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
36	Total Contract Recevied Volume	Sendout Optimization	439,910	704,817	812,893	826,209	800,328	656,209	4,240,366
37	Received Volume	Line 28	291,470	551,429	812,893	826,209	719,624	-	3,201,625
38	Percentage Allocated	Line 37 divided by Line 36	66.26%	78.24%	100.00%	100.00%	89.92%	0.00%	75.50%
39	Received Volume	Line 37	291,470	551,429	812,893	826,209	719,624	-	3,201,625
40	Fuel Loss Rate	Att FXW-9, Line 36 of Page 2	1.59%	1.59%	1.59%	1.59%	1.59%		
41	Delivered Volume	Line 39 times (1 - Line 40)	286,836	542,661	799,968	813,073	708,182	-	3,150,719
42	Variable Transportation Rate	Att FXW-9, Line 24 of Page 2	$ -	$ -	$ -	$ -	$ -		$ -
43	Variable Transportation Costs	Line 41 times Line 42	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44									
45	Transportation Segment 4								
46	PNGTS (Contract 1997-004)								
47	Receipt Point: Pittsburgh, NH (Interconnects with TransCanada at E. Hereford)								
48	Delivery Point: Granite (Westbrook, Newington, Eliot)								
49	Total Contract Recevied Volume	Sendout Optimization	432,916	693,610	799,968	813,073	787,603	649,910	4,177,079
50	Received Volume	Line 41	286,836	542,661	799,968	813,073	708,182	-	3,150,719
51	Percentage Allocated	Line 50 divided by Line 49	66.26%	78.24%	100.00%	100.00%	89.92%	0.00%	75.43%
52	Total Contract Recevied Volume	Sendout Optimization	286,836	542,661	799,968	813,073	708,182	-	3,150,719
53	Fuel Loss Rate	Att FXW-9, Line 30 of Page 2	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%
54	Delivered Volume	Line 52 times (1 - Line 53)	286,836	542,661	799,968	813,073	708,182	-	3,150,719
55	Variable Transportation Rate	Att FXW-9, Line 18 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013		$ 0.0013
56	Variable Transportation Costs	Line 54 times Line 55	$ 373	$ 705	$ 1,040	$ 1,057	$ 921	$ -	$ 4,096
57									
58	Transportation Segment 5								
59	Granite State Gas Transmission (Contract 14-001-FT-NN)								
60	Receipt Point: Westbrook, Newington, Eliot								
61	Delivery Point: Northern City Gates								
62	Received Volume	Line 54	286,836	542,661	799,968	813,073	708,182	-	3,150,719
63	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
64	City Gate Delivered Volume	Line 62 times (1 - Line 63)	285,832	540,762	797,168	810,227	705,703	-	3,139,692
65	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
66	Variable Transportation Costs	Line 64 times Line 65	$ 372	$ 703	$ 1,036	$ 1,053	$ 917	$ -	$ 4,082

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Source of Supply: PNGTS (Westbrook, ME)
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	150,000	155,000	-	-	81,552	660,038	1,046,590
2	City Gate Delivered Volume	Line 65	145,569	150,421	-	-	79,143	647,635	1,022,767
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 30, 44, 58 and 67	$ 1,106	$ 1,143	$ -	$ -	$ 602	$ 4,902	$ 7,754
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Portland Supply Costs								
9	Purchased Volumes	Sendout Optimization	150,000	155,000	-	-	81,552	660,038	1,046,590
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.745
11	NYMEX Cost	Line 9 times Line 10	$ 433,500	$ 461,745	$ -	$ -	$ 238,621	$ 1,739,199	$ 2,873,065
12	NYMEX Basis Price	Att FXW-9, Line 11 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 2B								
19	Transportation Segment 3								
20	TransCanada Pipeline (Contract 33322)								
21	Receipt Point: Union Dawn								
22	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
23	Total Contract Recevied Volume	Sendout Optimization	444,533	712,224	821,436	834,892	808,739	660,038	4,281,862
24	Received Volume	Line 9	150,000	155,000	-	-	81,552	660,038	1,046,590
25	Percentage Allocated	Line 24 divided by Line 23	33.74%	21.76%	0.00%	0.00%	10.08%	100.00%	24.44%
26	Received Volume	Line 9	150,000	155,000	-	-	81,552	660,038	1,046,590
27	Fuel Loss Rate	Att FXW-9, Line 37 of Page 2	1.04%	1.04%			1.04%	0.58%	0.75%
28	Delivered Volume	Line 26 times (1 - Line 27)	148,440	153,388	-	-	80,704	656,209	1,038,741
29	Variable Transportation Rate	Att FXW-9, Line 25 of Page 2	$ 0.0049	$ 0.0049			$ 0.0049	$ 0.0049	$ 0.0049
30	Variable Transportation Costs	Line 28 times Line 29	$ 727	$ 752	$ -	$ -	$ 395	$ 3,215	$ 5,090
31									
32	Transportation Segment 2B								
33	Transportation Segment 3								
34	TransCanada Pipeline (Contract 33322)								
35	Receipt Point: Union Dawn								
36	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
37	Total Contract Recevied Volume	Sendout Optimization	439,910	704,817	812,893	826,209	800,328	656,209	4,240,366
38	Received Volume	Line 28	148,440	153,388	-	-	80,704	656,209	1,038,741
39	Percentage Allocated	Line 38 divided by Line 37	33.74%	21.76%	0.00%	0.00%	10.08%	100.00%	24.50%
40	Received Volume	Line 28	148,440	153,388	-	-	80,704	656,209	1,038,741
41	Fuel Loss Rate	Att FXW-9, Line 36 of Page 2	1.59%	1.59%			1.59%	0.96%	1.19%
42	Delivered Volume	Line 40 times (1 - Line 41)	146,080	150,949	-	-	79,421	649,910	1,026,359
43	Variable Transportation Rate	Att FXW-9, Line 24 of Page 2	$ -	$ -			$ -	$ -	$ -
44	Variable Transportation Costs	Line 42 times Line 43	$ -	$ -	$ -	$ -	$ -	$ -	$ -
45									
46	Transportation Segment 2B								
47	Transportation Segment 3								
48	TransCanada Pipeline (Contract 33322)								
49	Receipt Point: Union Dawn								
50	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
51	Total Contract Recevied Volume	Sendout Optimization	432,916	693,610	799,968	813,073	787,603	649,910	4,177,079
52	Received Volume	Line 42	146,080	150,949	-	-	79,421	649,910	1,026,359
53	Percentage Allocated	Line 52 divided by Line 51	33.74%	21.76%	0.00%	0.00%	10.08%	100.00%	24.57%
54	Received Volume	Line 42	146,080	150,949	-	-	79,421	649,910	1,026,359
55	Fuel Loss Rate	Att FXW-9, Line 30 of Page 2	0.00%	0.00%			0.00%	0.00%	0.00%
56	Delivered Volume	Line 54 times (1 - Line 55)	146,080	150,949	-	-	79,421	649,910	1,026,359
57	Variable Transportation Rate	Att FXW-9, Line 18 of Page 2	$ 0.0013	$ 0.0013			$ 0.0013	$ 0.0013	$ 0.0013
58	Variable Transportation Costs	Line 56 times Line 57	$ 190	$ 196	$ -	$ -	$ 103	$ 845	$ 1,334
59									
60	Granite State Gas Transmission (Contract 14-001-FT-NN)								
61	Receipt Point: Westbrook, Newington, Eliot								
62	Delivery Point: Northern City Gates								
63	Received Volume	Line 56	146,080	150,949	-	-	79,421	649,910	1,026,359
64	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
65	City Gate Delivered Volume	Line 63 times (1 - Line 64)	145,569	150,421	-	-	79,143	647,635	1,022,767
66	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
67	Variable Transportation Costs	Line 65 times Line 66	$ 189	$ 196	$ -	$ -	$ 103	$ 842	$ 1,330

REDACTED

Source of Supply: Maritimes Baseload Supply
City-Gate Delivered Supply

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	225,000	232,500	232,500	210,000	232,500	-	1,132,500
2	City Gate Delivered Volume	Line 1	225,000	232,500	232,500	210,000	232,500	-	1,132,500
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Maritimes Supply Costs								
9	Purchased Volumes	Sendout Optimization	225,000	232,500	232,500	210,000	232,500	-	1,132,500
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 2.978
11	NYMEX Cost	Line 9 times Line 10	$ 650,250	$ 692,618	$ 712,845	$ 636,300	$ 680,295	$ -	$ 3,372,308
12	NYMEX Basis Price	Att FXW-9, Line 12 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

REDACTED

Source of Supply: PNGTS (Westbrook, ME)
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	-	232,500	232,500	210,000	-	-	675,000
2	City Gate Delivered Volume	Line 24	-	231,686	231,686	209,265	-	-	672,638
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Line 26	$ -	$ 301	$ 301	$ 272	$ -	$ -	$ 874
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Portland Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	232,500	232,500	210,000	-	-	675,000
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 3.025
11	NYMEX Cost	Line 9 times Line 10	$ -	$ 692,618	$ 712,845	$ 636,300	$ -	$ -	$ 2,041,763
12	NYMEX Basis Price	Att FXW-9, Line 13 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Granite State Gas Transmission (Contract 14-001-FT-NN)								
20	Receipt Point: Granite (Westbrook)								
21	Delivery Point: Northern City Gates								
22	Received Volume	Line 9	-	232,500	232,500	210,000	-	-	675,000
23	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	-	231,686	231,686	209,265	-	-	672,638
25	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ 301	$ 301	$ 272	$ -	$ -	$ 874

Source of Supply: Northern LNG Inventory
On-System Storage

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Gross Withdrawn Volume	Line 9	2,145	2,217	38,895	2,002	2,217	2,145	49,620
2	City Gate Delivered Volume	Line 15	2,145	2,217	38,895	2,002	2,217	2,145	49,620
3	Total Withdrawal Costs	Line 16	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Line 3 plus Line 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Northern LNG Withdrawn Inventory								
9	Gross Withdrawn Volume	Sendout Optimization	2,145	2,217	38,895	2,002	2,217	2,145	49,620
10	Withdrawal Rate	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Withdrawal Charges	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Inventory Rate	FXW-8	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	Withdrawn Inventory Value	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Withdrawal Fuel Losses	N/A	-	-	-	-	-	-	-
15	Net Withdrawn Volume	Line 9 minus Line 14	2,145	2,217	38,895	2,002	2,217	2,145	49,620
16	Total Withdrawal Costs	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

REDACTED

Source of Supply: Peaking Contract 1
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	-	47,712	249,043	60,271	52,243	-	409,268
2	City Gate Delivered Volume	Line 24	-	47,545	248,171	60,060	52,060	-	407,836
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Line 26	$ -	$ 62	$ 323	$ 78	$ 68	$ -	$ 530
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Peaking Contract 1 Costs								
9	Purchased Volumes	Sendout Optimization	-	47,712	249,043	60,271	52,243	-	409,268
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	$ 3.033
11	NYMEX Cost	Line 9 times Line 10	$ -	$ 142,135	$ 763,565	$ 182,621	$ 152,862	$ -	$ 1,241,182
12	NYMEX Basis Price	Att FXW-9, Line 15 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Granite State Gas Transmission (Contract 14-001-FT-NN)								
20	Receipt Point: Pleasant St.								
21	Delivery Point: Northern City Gates								
22	Received Volume	Line 9	-	47,712	249,043	60,271	52,243	-	409,268
23	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	-	47,545	248,171	60,060	52,060	-	407,836
25	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ 62	$ 323	$ 78	$ 68	$ -	$ 530

Source of Supply: Incremental Spot Purchases
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	2018-2019 Winter
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 24	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Line 26	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 6 Supply								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.890	$ 2.979	$ 3.066	$ 3.030	$ 2.926	$ 2.635	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 16 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Granite State Gas Transmission (Contract 14-001-FT-NN)								
20	Receipt Point: Newington or Westbrook								
21	Delivery Point: Northern City Gates								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Tennessee Zone 4 200 Leg Pool
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	156,946	151,883	156,946	156,946	151,883	156,946	931,551
2	City Gate Delivered Volume	Line 34	154,458	149,475	154,458	154,458	149,475	154,458	916,780
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26 and 36	$ 18,506	$ 17,909	$ 18,506	$ 18,506	$ 17,909	$ 18,506	$ 109,844
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 4 Supply Costs								
9	Purchased Volumes	Sendout Optimization	156,946	151,883	156,946	156,946	151,883	156,946	931,551
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	$ 2.650
11	NYMEX Cost	Line 9 times Line 10	$ 408,531	$ 400,061	$ 418,575	$ 419,203	$ 402,947	$ 418,889	$ 2,468,206
12	NYMEX Basis Price	Att FXW-9, Line 1 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 2								
19	Tennessee Gas Pipeline (Contract 5083)								
20	Receipt Point: Tennessee Zone 4 200 Leg Pool								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 15	156,946	151,883	156,946	156,946	151,883	156,946	931,551
23	Fuel Loss Rate	Att FXW-9, Line 33 of Page 2	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%
24	Delivered Volume	Line 22 times (1 - Line 23)	155,000	150,000	155,000	155,000	150,000	155,000	920,000
25	Variable Transportation Rate	Att FXW-9, Line 21 of Page 2	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181
26	Variable Transportation Costs	Line 24 times Line 25	$ 18,306	$ 17,715	$ 18,306	$ 18,306	$ 17,715	$ 18,306	$ 108,652
27									
28	Transportation Segment 3								
29	Granite State Gas Transmission (Contract 14-001-FT-NN)								
30	Receipt Point: Pleasant St.								
31	Delivery Point: Northern City Gates								
32	Received Volume	Line 24	155,000	150,000	155,000	155,000	150,000	155,000	920,000
33	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
34	City Gate Delivered Volume	Line 32 times (1 - Line 33)	154,458	149,475	154,458	154,458	149,475	154,458	916,780
35	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
36	Variable Transportation Costs	Line 34 times Line 35	$ 201	$ 194	$ 201	$ 201	$ 194	$ 201	$ 1,192

REDACTED

Source of Supply: Tennessee Zone 0
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 22	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 34	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 2 times Line 3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26 and 36	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 4 and 5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 6 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 0 Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 2 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1A								
19	Tennessee Gas Pipeline (Contract 5083)								
20	Receipt Point: Tennessee Zone 0								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 31 of Page 2							
24	Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 19 of Page 2							
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27									
28	Transportation Segment 2A								
29	Granite State Gas Transmission (Contract 14-001-FT-NN)								
30	Receipt Point: Pleasant St.								
31	Delivery Point: Northern City Gates								
32	Received Volume	Line 24	-	-	-	-	-	-	-
33	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
34	City Gate Delivered Volume	Line 32 times (1 - Line 33)	-	-	-	-	-	-	-
35	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
36	Variable Transportation Costs	Line 34 times Line 35	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Tennessee Zone L
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 22	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 34	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 2 times Line 3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26 and 36	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 4 and 5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 6 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone L Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 3 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1B								
19	Tennessee Gas Pipeline (Contract 5083)								
20	Receipt Point: Tennessee Zone L								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 32 of Page 2							
24	Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 20 of Page 2							
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27									
28	Transportation Segment 2B								
29	Granite State Gas Transmission (Contract 14-001-FT-NN)								
30	Receipt Point: Pleasant St.								
31	Delivery Point: Northern City Gates								
32	Received Volume	Line 24	-	-	-	-	-	-	-
33	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
34	City Gate Delivered Volume	Line 32 times (1 - Line 33)	-	-	-	-	-	-	-
35	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
36	Variable Transportation Costs	Line 34 times Line 35	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Niagara (Interconnect of TransCanada and Tennessee Pipelines)
Delivered to Northern via Tennessee and Granite Pipelines
Delivered to Northern via Tennessee and Bay State Exhange Agreement

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 44	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26, 36 and 46	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Niagara Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 4 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1A								
19	Tennessee Gas Pipeline (Contract 5292)								
20	Receipt Point: Niagara								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2							
24	Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2							
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27									
28	Transportation Segment 1B								
29	Tennessee Gas Pipeline (Contract 39375)								
30	Receipt Point: Niagara								
31	Delivery Point: Pleasant St. (Interconnection with Granite)								
32	Received Volume	Line 9	-	-	-	-	-	-	-
33	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2							
34	Delivered Volume	Line 32 times (1 - Line 33)	-	-	-	-	-	-	-
35	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2							
36	Variable Transportation Costs	Line 34 times Line 35	$ -	$ -	$ -	$ -	$ -	$ -	$ -
37									
38	Transportation Segment 2B								
39	Granite State Gas Transmission (Contract 14-001-FT-NN)								
40	Receipt Point: Pleasant St.								
41	Delivery Point: Northern City Gates								
42	Received Volume	Line 34	-	-	-	-	-	-	-
43	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
44	City Gate Delivered Volume	Line 42 times (1 - Line 43)	-	-	-	-	-	-	-
45	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
46	Variable Transportation Costs	Line 44 times Line 45	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Iroquois Receipts (Interconnect of TransCanada and Iroquoios Pipelines)
Delivered to Northern via Iroquois, Tennessee and Granite Pipelines
Delivered to Northern via Iroquois, Tennessee, Algonquin Pipelines and Bay State Exchange Agreement

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 37	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 29, 39, 49, 59, 69 and 79	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Irqoquois Receipts Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 5 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 5								
19	Iroquois Pipeline (Contract R181001)								
20	Receipt Point: Waddington								
21	Delivery Point: Wright (Interconnection with Tennessee)								
22	Total Contract Recevied Volume	Sendout Optimization	-	-	-	-	-	-	-
23	Received Volume	Line 9	-	-	-	-	-	-	-
24	Percentage Allocated	Line 23 divided by Line 22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
25	Received Volume	Line 14	-	-	-	-	-	-	-
26	Fuel Loss Rate	Att FXW-9, Line 29 of Page 2							
27	Delivered Volume	Line 25 times (1 - Line 26)	-	-	-	-	-	-	-
28	Variable Transportation Rate	Att FXW-9, Line 16 of Page 2							
29	Variable Transportation Costs	Line 27 times Line 28	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30									
31	Transporation Segment 6A								
32	Tennessee Gas Pipeline (Contract 95196)								
33	Receipt Point: Wright								
34	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
35	Received Volume	Line 27	-	-	-	-	-	-	-
36	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2							
37	City Gate Delivered Volume	Line 35 times (1 - Line 36)	-	-	-	-	-	-	-
38	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2							
39	Variable Transportation Costs	Line 37 times Line 38	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40									
41	Transportation Segment 6B								
42	Tennessee Gas Pipeline (Contract 95196)								
43	Receipt Point: Wright								
44	Delivery Point: Pleasant St. (Interconnection with Granite)								
45	Received Volume	Line 37	-	-	-	-	-	-	-
46	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2							
47	Delivered Volume	Line 45 times (1 - Line 46)	-	-	-	-	-	-	-
48	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2							
49	Variable Transportation Costs	Line 47 times Line 48	$ -	$ -	$ -	$ -	$ -	$ -	$ -
50									
51	Transportation Segment 7B								
52	Granite State Gas Transmission (Contract 14-001-FT-NN)								
53	Receipt Point: Pleasant St.								
54	Delivery Point: Northern City Gates								
55	Received Volume	Line 47	-	-	-	-	-	-	-
56	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
57	City Gate Delivered Volume	Line 55 times (1 - Line 56)	-	-	-	-	-	-	-
58	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
59	Variable Transportation Costs	Line 57 times Line 58	$ -	$ -	$ -	$ -	$ -	$ -	$ -
60									
61	Transportation Segment 6C								
62	Tennessee Gas Pipeline (Contract 41099)								
63	Receipt Point: Wright								
64	Delivery Point: Mendon (Interconnection with Algonquin)								
65	Received Volume	Line 27	-	-	-	-	-	-	-
66	Fuel Loss Rate	Att FXW-9, Line 34 of Page 2							
67	Delivered Volume	Line 65 times (1 - Line 66)	-	-	-	-	-	-	-
68	Variable Transportation Rate	Att FXW-9, Line 22 of Page 2							
69	Variable Transportation Costs	Line 67 times Line 68	$ -	$ -	$ -	$ -	$ -	$ -	$ -
70									
71	Transportation Segment 7C								
72	Algonquin Gas Transmission (Contract 93200F)								
73	Receipt Point: Mendon								
74	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
75	Received Volume	Line 67	-	-	-	-	-	-	-
76	Fuel Loss Rate	Att FXW-9, Line 26 of Page 2							
77	City Gate Delivered Volume	Line 75 times (1 - Line 76)	-	-	-	-	-	-	-
78	Variable Transportation Rate	Att FXW-9, Line 13 of Page 2							
79	Variable Transportation Costs	Line 77 times Line 78	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	30,284	29,308	30,284	30,284	29,308	30,284	179,753
2	City Gate Delivered Volume	Sum Lines 37	29,712	28,753	29,712	29,712	28,753	29,712	176,353
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 39	$ 964	$ 933	$ 964	$ 964	$ 933	$ 964	$ 5,720
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Texas Eastern Zone M-3 Purchases								
9	Purchased Volumes	Sendout Optimization	30,284	29,308	30,284	30,284	29,308	30,284	179,753
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	$ 2.650
11	NYMEX Cost	Line 9 times Line 10	$ 78,830	$ 77,196	$ 80,769	$ 80,890	$ 77,753	$ 80,829	$ 476,267
12	NYMEX Basis Price	Att FXW-9, Line 7 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Algonquin Pipeline (Contract 93201A1C)								
20	Receipt Point: Algonquin Receipt Points								
21	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
22	Received Volume	Line 15	30,284	29,308	30,284	30,284	29,308	30,284	179,753
23	Fuel Loss Rate	Att FXW-9, Line 35 of Page 2	1.22%	1.22%	1.22%		1.22%	1.22%	1.20%
24	Delivered Volume	Line 22 times (1 - Line 23)	29,915	28,950	29,915	29,915	28,950	29,915	177,560
25	Variable Transportation Rate	Att FXW-9, Line 23 of Page 2	$ 0.0198	$ 0.0198	$ 0.0198		$ 0.0198	$ 0.0198	$ 0.0198
26	Variable Transportation Costs	Line 24 times Line 25	$ 592	$ 573	$ 592	$ 592	$ 573	$ 592	$ 3,516
27									
28	Transportation Segment 1								
29	Algonquin Pipeline (Contract 93201A1C)								
30	Receipt Point: Algonquin Receipt Points								
31	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
32	Total Contract Recevied Volume	Sendout Optimization	30,120	29,148	30,120	30,120	29,148	30,120	178,776
33	Received Volume	Line 14	29,915	28,950	29,915	29,915	28,950	29,915	177,560
34	Percentage Allocated	Line 33 divided by Line 32	99.32%	99.32%	99.32%	99.32%	99.32%	99.32%	99.32%
35	Received Volume	Line 15	29,915	28,950	29,915	29,915	28,950	29,915	177,560
36	Fuel Loss Rate	Att FXW-9, Line 27 of Page 2	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%	1.20%
37	City Gate Delivered Volume	Line 35 times (1 - Line 36)	29,712	28,753	29,712	29,712	28,753	29,712	176,353
38	Variable Transportation Rate	Att FXW-9, Line 14 of Page 2	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125
39	Variable Transportation Costs	Line 37 times Line 38	$ 371	$ 359	$ 371	$ 371	$ 359	$ 371	$ 2,204

REDACTED

Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	205	198	205	205	198	205	1,216
2	City Gate Delivered Volume	Sum Lines 27	203	197	203	203	197	203	1,207
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 29	$ 3	$ 2	$ 3	$ 3	$ 2	$ 3	$ 15
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Texas Eastern Zone M-3 Purchases								
9	Purchased Volumes	Sendout Optimization	205	198	205	205	198	205	1,216
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	$ 2.650
11	NYMEX Cost	Line 9 times Line 10	$ 533	$ 522	$ 546	$ 547	$ 526	$ 547	$ 3,221
12	NYMEX Basis Price	Att FXW-9, Line 8 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Algonquin Pipeline (Contract 93201A1C)								
20	Receipt Point: Algonquin Receipt Points								
21	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
22	Total Contract Recevied Volume	Sendout Optimization	30,120	29,148	30,120	30,120	29,148	30,120	178,776
23	Received Volume	Line 14	205	198	205	205	198	205	1,216
24	Percentage Allocated	Line 23 divided by Line 22	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%
25	Received Volume	Line 15	205	198	205	205	198	205	1,216
26	Fuel Loss Rate	Att FXW-9, Line 27 of Page 2	0.68%	0.68%	0.68%	0.68%	0.68%	0.68%	1.20%
27	City Gate Delivered Volume	Line 25 times (1 - Line 26)	203	197	203	203	197	203	1,207
28	Variable Transportation Rate	Att FXW-9, Line 14 of Page 2	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125	$ 0.0125
29	Variable Transportation Costs	Line 27 times Line 28	$ 3	$ 2	$ 3	$ 3	$ 2	$ 3	$ 15

REDACTED

Source of Supply: Algonquin Receipts
Delivered to Northern via Algonquin Pipeline and Bay State Exchange

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	8,927	8,639	8,927	-	8,639	8,927	44,058
2	City Gate Delivered Volume	Sum Lines 24	8,866	8,580	8,866	-	8,580	8,866	43,758
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 26	$ 111	$ 107	$ 111	$ -	$ 107	$ 111	$ 547
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tranco Zone 6, non-NY Purchases								
9	Purchased Volumes	Sendout Optimization	8,927	8,639	8,927	-	8,639	8,927	44,058
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	$ 2.645
11	NYMEX Cost	Line 9 times Line 10	$ 23,236	$ 22,754	$ 23,808	$ -	$ 22,919	$ 23,825	$ 116,542
12	NYMEX Basis Price	Att FXW-9, Line 9 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Algonquin Pipeline (Contract 93201A1C)								
20	Receipt Point: Algonquin Receipt Points								
21	Delivery Point: Bay State City Gate (Delivered to Northern via Exchange Agreement)								
22	Received Volume	Line 15	8,927	8,639	8,927	-	8,639	8,927	44,058
23	Fuel Loss Rate	Att FXW-9, Line 27 of Page 2	0.68%	0.68%	0.68%		0.68%	0.68%	1.20%
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	8,866	8,580	8,866	-	8,580	8,866	43,758
25	Variable Transportation Rate	Att FXW-9, Line 14 of Page 2	$ 0.0125	$ 0.0125	$ 0.0125		$ 0.0125	$ 0.0125	$ 0.0125
26	Variable Transportation Costs	Line 24 times Line 25	$ 111	$ 107	$ 111	$ -	$ 107	$ 111	$ 547

REDACTED

Source of Supply: Tennessee Zone 4
Delivered to Northern via Tennessee and Granite Pipelines

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	71,859	69,541	71,859	71,859	69,541	71,859	426,515
2	City Gate Delivered Volume	Line 37	70,719	68,438	70,719	70,719	68,438	70,719	419,752
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 29 and 39	$ 8,473	$ 8,200	$ 8,473	$ 8,473	$ 8,200	$ 8,473	$ 50,293
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 4 Supply Costs								
9	Purchased Volumes	Sendout Optimization	71,859	69,541	71,859	71,859	69,541	71,859	426,515
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	$ 2.650
11	NYMEX Cost	Line 9 times Line 10	$ 187,048	$ 183,170	$ 191,647	$ 191,934	$ 184,491	$ 191,790	$ 1,130,080
12	NYMEX Basis Price	Att FXW-9, Line 10 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 2								
19	Tennessee Gas Pipeline (Contract 5265)								
20	Receipt Point: Tennessee FS-MA 300 Leg								
21	Delivery Point: Pleasant St. (Interconnection with Granite)								
22	Total Contract Recevied Volume	Sendout Optimization	71,859	69,541	71,859	71,859	69,541	71,859	426,515
23	Received Volume	Line 14	71,859	69,541	71,859	71,859	69,541	71,859	426,515
24	Percentage Allocated	Line 23 divided by Line 22	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
25	Received Volume	Line 9	71,859	69,541	71,859	71,859	69,541	71,859	426,515
26	Fuel Loss Rate	Att FXW-9, Line 33 of Page 2	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%
27	Delivered Volume	Line 25 times (1 - Line 26)	70,967	68,678	70,967	70,967	68,678	70,967	421,226
28	Variable Transportation Rate	Att FXW-9, Line 21 of Page 2	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181	$ 0.1181
29	Variable Transportation Costs	Line 27 times Line 28	$ 8,381	$ 8,111	$ 8,381	$ 8,381	$ 8,111	$ 8,381	$ 49,747
30									
31	Transportation Segment 3								
32	Granite State Gas Transmission (Contract 14-001-FT-NN)								
33	Receipt Point: Pleasant St.								
34	Delivery Point: Northern City Gates								
35	Received Volume	Line 27	70,967	68,678	70,967	70,967	68,678	70,967	421,226
36	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
37	City Gate Delivered Volume	Line 35 times (1 - Line 36)	70,719	68,438	70,719	70,719	68,438	70,719	419,752
38	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
39	Variable Transportation Costs	Line 37 times Line 38	$ 92	$ 89	$ 92	$ 92	$ 89	$ 92	$ 546

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Source of Supply: Tennessee FS-MA Inventory
Delivered to Northern via Tennessee and Granite Pipelines

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Gross Withdrawn Volume	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 38	-	-	-	-	-	-	-
3	Total Withdrawal Costs	Line 16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Variable Transportation Costs	Sum Lines 30 and 40	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Line 3 plus Line 4	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Average Delivered Price	Line 5 divided by Line 2							
7									
8	<u>Tennessee FS-MA Withdrawn Inventory (Segment 1)</u>								
9	Gross Withdrawn Volume	Sendout Optimization	-	-	-	-	-	-	-
10	Withdrawal Rate	Att to Sch 5A, Line 1 of Page 3							
11	Withdrawal Charges	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Inventory Rate	FXW-8							
13	Withdrawn Inventory Value	Line 9 times Line 12	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Withdrawal Fuel Losses	Att to Sch 5A, Line 1 of Page 3 times Line 9	-	-	-	-	-	-	-
15	Net Withdrawn Volume	Line 9 minus Line 14	-	-	-	-	-	-	-
16	Total Withdrawal Costs	Line 11 plus Line 13	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17									
18	<u>Transportation Fuel Losses and Variable Charges</u>								
19	Transportation Segment 2								
20	Tennessee Gas Pipeline (Contract 5265)								
21	Receipt Point: Tennessee FS-MA Withdrawal Meter								
22	Delivery Point: Pleasant St. (Interconnection with Granite)								
23	Total Contract Recevied Volume	Sendout Optimization	71,859	69,541	71,859	71,859	69,541	71,859	426,515
24	Received Volume	Line 15	-	-	-	-	-	-	-
25	Percentage Allocated	Line 24 divided by Line 23	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
26	Received Volume	Line 24	-	-	-	-	-	-	-
27	Fuel Loss Rate	Att FXW-9, Line 33 of Page 2							
28	Delivered Volume	Line 26 times (1 - Line 27)	-	-	-	-	-	-	-
29	Variable Transportation Rate	Att FXW-9, Line 21 of Page 2							
30	Variable Transportation Costs	Line 28 times Line 29	$ -	$ -	$ -	$ -	$ -	$ -	$ -
31									
32	Transportation Segment 3								
33	Granite State Gas Transmission (Contract 14-001-FT-NN)								
34	Receipt Point: Pleasant St.								
35	Delivery Point: Northern City Gates								
36	Received Volume	Line 28	-	-	-	-	-	-	-
37	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
38	City Gate Delivered Volume	Line 36 times (1 - Line 37)	-	-	-	-	-	-	-
39	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
40	Variable Transportation Costs	Line 38 times Line 39	$ -	$ -	$ -	$ -	$ -	$ -	$ -

CONFIDENTIAL

Northern Utilities, Inc.
New Hampshire Division
Schedule 6C
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Source of Supply: Washington 10 Inventory
Delivered to Northern via TransCanada, PNGTS and Granite Pipelines

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Gross Withdrawn Volume	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 64	-	-	-	-	-	-	-
3	Total Withdrawal Costs	Line 16	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Variable Transportation Costs	Sum Lines 30, 43, 56 and 66	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Line 3 plus Line 4	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Average Delivered Price	Line 5 divided by Line 2							
7									
8	<u>Washington 10 Withdrawn Inventory (Segment 1)</u>								
9	Gross Withdrawn Volume	Sendout Optimization	-	-	-	-	-	-	-
10	Withdrawal Rate	Att to Sch 5A, Line 3 of Page 3							
11	Withdrawal Charges	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Inventory Rate	FXW-8							
13	Withdrawn Inventory Value	Line 9 times Line 12	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Withdrawal Fuel Losses	Att to Sch 5A, Line 3 of Page 3 times Line	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Net Withdrawn Volume	Line 9 minus Line 14	-	-	-	-	-	-	-
16	Total Withdrawal Costs	Line 11 plus Line 13	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17									
18	Transportation Fuel Losses and Variable Charges								
19	Transportation Segment 3								
20	TransCanada Pipeline (Contract 33322)								
21	Receipt Point: Union Dawn								
22	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
23	Total Contract Recevied Volume	Sendout Optimization	240,813	85,844	31,031	41,659	53,299	320,422	773,069
24	Received Volume	Line 15	-	-	-	-	-	-	-
25	Percentage Allocated	Line 24 divided by Line 23	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
26	Received Volume	Line 24	-	-	-	-	-	-	-
27	Fuel Loss Rate	Att FXW-9, Line 37 of Page 2							
28	Delivered Volume	Line 26 times (1 - Line 27)	-	-	-	-	-	-	-
29	Variable Transportation Rate	Att FXW-9, Line 25 of Page 2							
30	Variable Transportation Costs	Line 28 times Line 29	$ -	$ -	$ -	$ -	$ -	$ -	$ -
31									
32	Transportation Segment 3								
33	TransCanada Pipeline (Contract 33322)								
34	Receipt Point: Union Dawn								
35	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
36	Total Contract Recevied Volume	Sendout Optimization	239,417	85,347	30,851	41,417	52,990	318,564	768,585
37	Received Volume	Line 28	-	-	-	-	-	-	-
38	Percentage Allocated	Line 37 divided by Line 36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39	Received Volume	Line 37	-	-	-	-	-	-	-
40	Fuel Loss Rate	Att FXW-9, Line 36 of Page 2							
41	Delivered Volume	Line 39 times (1 - Line 40)	-	-	-	-	-	-	-
42	Variable Transportation Rate	Att FXW-9, Line 24 of Page 2							
43	Variable Transportation Costs	Line 41 times Line 42	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44									
45	Transportation Segment 4								
46	PNGTS (Contract 1997-004)								
47	Receipt Point: Pittsburgh, NH (Interconnects with TransCanada at E. Hereford)								
48	Delivery Point: Granite (Westbrook, Newington, Eliot)								
49	Total Contract Recevied Volume	Sendout Optimization	237,118	84,527	30,555	41,020	52,481	315,506	761,207
50	Received Volume	Line 41	-	-	-	-	-	-	-
51	Percentage Allocated	Line 50 divided by Line 49	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
52	Total Contract Recevied Volume	Sendout Optimization	-	-	-	-	-	-	-
53	Fuel Loss Rate	Att FXW-9, Line 30 of Page 2							
54	Delivered Volume	Line 52 times (1 - Line 53)	-	-	-	-	-	-	-
55	Variable Transportation Rate	Att FXW-9, Line 18 of Page 2							
56	Variable Transportation Costs	Line 54 times Line 55	$ -	$ -	$ -	$ -	$ -	$ -	$ -
57									
58	Transportation Segment 5								
59	Granite State Gas Transmission (Contract 14-001-FT-NN)								
60	Receipt Point: Westbrook, Newington, Eliot								
61	Delivery Point: Northern City Gates								
62	Received Volume	Line 54	-	-	-	-	-	-	-
63	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
64	City Gate Delivered Volume	Line 62 times (1 - Line 63)	-	-	-	-	-	-	-
65	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
66	Variable Transportation Costs	Line 64 times Line 65	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: PNGTS (Westbrook, ME)
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	240,813	85,844	31,031	41,659	53,299	320,422	773,069
2	City Gate Delivered Volume	Line 65	236,288	84,231	30,448	40,876	52,297	314,401	758,542
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Sum Lines 30, 44, 58 and 67	$ 1,789	$ 638	$ 230	$ 309	$ 396	$ 2,380	$ 5,742
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Portland Supply Costs								
9	Purchased Volumes	Sendout Optimization	240,813	85,844	31,031	41,659	53,299	320,422	773,069
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	$ 2.643
11	NYMEX Cost	Line 9 times Line 10	$ 626,837	$ 226,114	$ 82,759	$ 111,271	$ 141,402	$ 855,207	$ 2,043,591
12	NYMEX Basis Price	Att FXW-9, Line 11 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 2B								
19	Transportation Segment 3								
20	TransCanada Pipeline (Contract 33322)								
21	Receipt Point: Union Dawn								
22	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
23	Total Contract Recevied Volume	Sendout Optimization	240,813	85,844	31,031	41,659	53,299	320,422	773,069
24	Received Volume	Line 9	240,813	85,844	31,031	41,659	53,299	320,422	773,069
25	Percentage Allocated	Line 24 divided by Line 23	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
26	Received Volume	Line 9	240,813	85,844	31,031	41,659	53,299	320,422	773,069
27	Fuel Loss Rate	Att FXW-9, Line 37 of Page 2	0.58%	0.58%	0.58%	0.58%	0.58%	0.58%	0.58%
28	Delivered Volume	Line 26 times (1 - Line 27)	239,417	85,347	30,851	41,417	52,990	318,564	768,585
29	Variable Transportation Rate	Att FXW-9, Line 25 of Page 2	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049	$ 0.0049
30	Variable Transportation Costs	Line 28 times Line 29	$ 1,173	$ 418	$ 151	$ 203	$ 260	$ 1,561	$ 3,766
31									
32	Transportation Segment 2B								
33	Transportation Segment 3								
34	TransCanada Pipeline (Contract 33322)								
35	Receipt Point: Union Dawn								
36	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
37	Total Contract Recevied Volume	Sendout Optimization	239,417	85,347	30,851	41,417	52,990	318,564	768,585
38	Received Volume	Line 28	239,417	85,347	30,851	41,417	52,990	318,564	768,585
39	Percentage Allocated	Line 38 divided by Line 37	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
40	Received Volume	Line 28	239,417	85,347	30,851	41,417	52,990	318,564	768,585
41	Fuel Loss Rate	Att FXW-9, Line 36 of Page 2	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%	0.96%
42	Delivered Volume	Line 40 times (1 - Line 41)	237,118	84,527	30,555	41,020	52,481	315,506	761,207
43	Variable Transportation Rate	Att FXW-9, Line 24 of Page 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44	Variable Transportation Costs	Line 42 times Line 43	$ -	$ -	$ -	$ -	$ -	$ -	$ -
45									
46	Transportation Segment 2B								
47	Transportation Segment 3								
48	TransCanada Pipeline (Contract 33322)								
49	Receipt Point: Union Dawn								
50	Delivery Point: E. Hereford (Interconnects with PNGTS at Pittsburgh)								
51	Total Contract Recevied Volume	Sendout Optimization	237,118	84,527	30,555	41,020	52,481	315,506	761,207
52	Received Volume	Line 42	237,118	84,527	30,555	41,020	52,481	315,506	761,207
53	Percentage Allocated	Line 52 divided by Line 51	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
54	Received Volume	Line 42	237,118	84,527	30,555	41,020	52,481	315,506	761,207
55	Fuel Loss Rate	Att FXW-9, Line 30 of Page 2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
56	Delivered Volume	Line 54 times (1 - Line 55)	237,118	84,527	30,555	41,020	52,481	315,506	761,207
57	Variable Transportation Rate	Att FXW-9, Line 18 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
58	Variable Transportation Costs	Line 56 times Line 57	$ 308	$ 110	$ 40	$ 53	$ 68	$ 410	$ 990
59									
60	Granite State Gas Transmission (Contract 14-001-FT-NN)								
61	Receipt Point: Westbrook, Newington, Eliot								
62	Delivery Point: Northern City Gates								
63	Received Volume	Line 56	237,118	84,527	30,555	41,020	52,481	315,506	761,207
64	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
65	City Gate Delivered Volume	Line 63 times (1 - Line 64)	236,288	84,231	30,448	40,876	52,297	314,401	758,542
66	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013
67	Variable Transportation Costs	Line 65 times Line 66	$ 307	$ 110	$ 40	$ 53	$ 68	$ 409	$ 986

REDACTED

Source of Supply: Maritimes Baseload Supply
City-Gate Delivered Supply

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 1	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Maritimes Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 12 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

REDACTED

Source of Supply: PNGTS (Westbrook, ME)
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 24	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Line 26	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Portland Supply Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 13 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Granite State Gas Transmission (Contract 14-001-FT-NN)								
20	Receipt Point: Granite (Westbrook)								
21	Delivery Point: Northern City Gates								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Northern LNG Inventory
On-System Storage

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Gross Withdrawn Volume	Line 9	2,170	2,100	2,170	2,170	2,100	2,170	12,880
2	City Gate Delivered Volume	Line 15	2,170	2,100	2,170	2,170	2,100	2,170	12,880
3	Total Withdrawal Costs	Line 16	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Line 3 plus Line 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Northern LNG Withdrawn Inventory								
9	Gross Withdrawn Volume	Sendout Optimization	2,170	2,100	2,170	2,170	2,100	2,170	12,880
10	Withdrawal Rate	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Withdrawal Charges	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Inventory Rate	FXW-8	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	Withdrawn Inventory Value	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Withdrawal Fuel Losses	N/A	-	-	-	-	-	-	-
15	Net Withdrawn Volume	Line 9 minus Line 14	2,170	2,100	2,170	2,170	2,100	2,170	12,880
16	Total Withdrawal Costs	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

REDACTED

Source of Supply: Peaking Contract 1
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 24	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Line 26	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Peaking Contract 1 Costs								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 15 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Granite State Gas Transmission (Contract 14-001-FT-NN)								
20	Receipt Point: Pleasant St.								
21	Delivery Point: Northern City Gates								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	-
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -

REDACTED

Source of Supply: Incremental Spot Purchases
Delivered to Northern via Granite Pipeline

Denotes Confidential Information

Line	City Gate Delivered Costs	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	2019 Summer
1	Purchased Volumes	Line 9	-	-	-	-	-	-	-
2	City Gate Delivered Volume	Line 24	-	-	-	-	-	-	-
3	Total Purchase Cost	Line 15	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	Variable Transportation Costs	Line 26	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Total City Gate Delivered Costs	Sum Lines 3 and 4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	Average Delivered Price	Line 5 divided by Line 2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7									
8	Tennessee Zone 6 Supply								
9	Purchased Volumes	Sendout Optimization	-	-	-	-	-	-	-
10	Monthly NYMEX Price	Att FXW-9, Line 17 of Page 1	$ 2.603	$ 2.634	$ 2.667	$ 2.671	$ 2.653	$ 2.669	
11	NYMEX Cost	Line 9 times Line 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	NYMEX Basis Price	Att FXW-9, Line 16 of Page 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	NYMEX Basis Costs	Line 9 times Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
14	Total Purchase Price	Line 10 plus Line 12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
15	Total Purchase Cost	Line 11 plus Line 13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
16									
17	Transportation Fuel Losses and Variable Charges								
18	Transportation Segment 1								
19	Granite State Gas Transmission (Contract 14-001-FT-NN)								
20	Receipt Point: Newington or Westbrook								
21	Delivery Point: Northern City Gates								
22	Received Volume	Line 9	-	-	-	-	-	-	-
23	Fuel Loss Rate	Att FXW-9, Line 28 of Page 2	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	
24	City Gate Delivered Volume	Line 22 times (1 - Line 23)	-	-	-	-	-	-	-
25	Variable Transportation Rate	Att FXW-9, Line 15 of Page 2	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	$ 0.0013	-
26	Variable Transportation Costs	Line 24 times Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Re-entry Rate & Conversion Rate
Volumes and Revenues

	Re-entry Rate		Conversion Rate	
Month	Volumes	Revenues	Volumes	Revenues
Dec-17	25,074	$206	-	$0
Jan-18	110,821	$909	-	$0
Feb-18	110,240	$904	-	$0
Mar-18	98,259	$806	-	$0
Apr-18	78,367	$643	-	$0
May-18	8,518	$70	-	$0
Jun-18	27,142	$224	-	$0
	458,419	$3,761	-	$0

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

Typical Residential Heating Bill - 754 therms/year

Comparison of Winter 2018-2019 vs. Winter 2017-2018

1				Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
2		Typical Usage: therms (*)		56	95	135	138	111	83	618	45	28	16	14	15	18	136	754
3		**Winter 2018 - 2019**																
4	Customer Charge	units @	$ 21.36	$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	$33.30	$199.80								
6	Over	50 units @	$0.6660	$4.00	$29.97	$56.61	$58.61	$40.63	$21.98	$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	$0.0683	$3.82	$6.49	$9.22	$9.43	$7.58	$5.67	$42.21								
14		**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	
21		COG 2	$0.3670									$10.28					$10.28	
22		COG 3	$0.3670										$5.87				$5.87	
23		COG 4	$0.3670											$5.14			$5.14	
24		COG 5	$0.3670												$5.51		$5.51	
25		COG 6	$0.3670													$6.61	$6.61	
26	Summer Period 2019 Weighted Avg. COG		$0.3670															
27		LDAC	$ 0.0667								$3.00	$1.87	$1.07	$0.93	$1.00	$1.20	$9.07	
28			**TOTAL**	$108.80	$169.69	$232.15	$236.83	$194.68	$150.96	**$1,093.11**	$67.29	$49.94	$37.69	$35.65	$36.67	$39.73	$266.98	$1,360.08
	Base Rate Change Winter 18-19 vs. Winter 17-18		**$ 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**	$0.69	$1.17	$1.66	$1.70	$1.37	$1.02	**$7.60**								
			% Change	1%	1%	1%	1%	1%	1%	**1%**								

27				Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
28		Typical Usage: therms		56	95	135	138	111	83	618	45	28	16	14	15	18	136	754
29		**Winter 2017 - 2018**																
30	Customer Charge	units @	$ 21.36	$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	$32.34	$194.04								
32	Over	50 units @	$0.5332	$3.20	$23.99	$45.32	$46.92	$32.53	$17.60	$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								
41		**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	
46		COG 2	$0.3975									$11.13					$11.13	
47		COG 3	$0.3975										$6.36				$6.36	
48		COG 4	$0.3975											$5.57			$5.57	
49		COG 5	$0.3975												$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**	$8.99	$19.20	$29.68	$9.17	$6.26	$3.25	**$76.55**	($0.96)	($0.60)	($0.34)	($0.30)	($0.32)	($0.39)	**($2.91)**	$73.64
55			**% Chg**	9.00%	12.76%	14.66%	4.03%	3.32%	2.20%	**7.5%**	-1.41%	-1.19%	-0.90%	-0.83%	-0.87%	-0.96%	**-1.08%**	5.72%

*-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

1				Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
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	$72.26	$433.56								
5	First	75 units @	$0.1795	$13.46	$13.46	$13.46	$13.46	$13.46	$13.46	$80.78								
6	Over	75 units @	$0.1795	$12.57	$34.11	$56.54	$59.59	$45.23	$29.08	$237.12								
7		COG 1	$0.8424	$122.15						$122.15								
8		COG 2	$0.8424		$223.24					$223.24								
9		COG 3	$0.8424			$328.54				$328.54								
10		COG 4	$0.8424				$342.86			$342.86								
11		COG 5	$0.8424					$275.46		$275.46								
12		COG 6	$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	$72.26	$433.56	
16	First	75 units @	$0.1795								$13.46	$10.41	$5.39				$29.26	
17	Over	75 units @	$0.1795								$6.64	$0.00	$0.00				$6.64	
18		COG 1	$0.3958								$44.33						$44.33	
19		COG 2	$0.3958									$22.96					$22.96	
20		COG 3	$0.3958										$11.87				$11.87	
21		COG 4	$0.3958											$10.29			$10.29	
22		COG 5	$0.3958												$12.27		$12.27	
23		COG 6	$0.3958													$15.04	$15.04	
24	Summer Period 2019 Weighted Avg. COG		$0.3958															
25		LDAC	$ 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

27				Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
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	$67.45	$404.70								
31	First	75 units @	$0.1844	$13.83	$13.83	$13.83	$13.83	$13.83	$13.83	$82.98								
32	Over	75 units @	$0.1844	$12.91	$35.04	$58.09	$61.22	$46.47	$29.87	$243.59								
33		COG 1	$0.7236	$104.92						$104.92								
34		COG 2	$0.7236		$191.75					$191.75								
35		COG 3	$0.7236			$282.20				$282.20								
36		COG 4	$0.8779				$357.31			$357.31								
37		COG 5	$0.8779					$287.07		$287.07								
38		COG 6	$0.8779						$208.06	$208.06								
39	Winter Period 17-18 Weighted Avg. COG		$0.8082															
40		LDAC	$ 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	$72.26	$433.56	
43	First	75 units @	$0.1795								$13.46	$10.41	$5.39	$4.67	$5.56	$6.82	$46.31	
44	Over	75 units @	$0.1795								$6.64	$0.00	$0.00	$0.00	$0.00	$0.00	$6.64	
45		COG 1	$0.4254								$47.64						$47.64	
46		COG 2	$0.4254									$24.67					$24.67	
47		COG 3	$0.4254										$12.76				$12.76	
48		COG 4	$0.4254											$11.06			$11.06	
49		COG 5	$0.4254												$13.19		$13.19	
50		COG 6	$0.4254													$16.17	$16.17	
51	Summer Period 2018 Weighted Avg. COG		$0.4254															
52		LDAC	$ 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
	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																	
Customer Charge	units @	$ 214.26	$214.26	$214.26	$214.26	$214.26	$214.26	$214.26	$1,285.56								
All	units @	$0.2334	$388.61	$599.14	$841.41	$871.75	$715.14	$504.61	$3,920.65								
	COG 1	$0.8424	$1,402.60						$1,402.60								
	COG 2	$0.8424		$2,162.44					$2,162.44								
	COG 3	$0.8424			$3,036.85				$3,036.85								
	COG 4	$0.8424				$3,146.36			$3,146.36								
	COG 5	$0.8424					$2,581.11		$2,581.11								
	COG 6	$0.8424						$1,821.27	$1,821.27								
	LDAC	$0.0396	$65.93	$101.65	$142.76	$147.91	$121.33	$85.62	$665.20								
Summer 2019																	
Customer Charge	units @	$ 214.26								$ 214.26	$214.26	$214.26	$214.26	$ 214.26	$214.26	$1,285.56	
All	units @	$0.1824								$222.35	$137.71	$80.80	$75.15	$82.26	$107.43	$705.71	
	COG 1	$0.3958								$482.48						$482.48	
	COG 2	$0.3958									$298.83					$298.83	
	COG 3	$0.3958										$175.34				$175.34	
	COG 4	$0.3958											$163.07			$163.07	
	COG 5	$0.3958												$178.51		$178.51	
	COG 6	$0.3958													$233.13	$233.13	
Summer Period 2019 Weighted Avg. COG		$0.3958															
	LDAC	$ 0.0380								$46.32	$28.69	$16.83	$15.66	$17.14	$22.38	$147.02	
		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

			Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
	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 2017 - 2018																	
Customer Charge	units @	$ 196.73	$196.73	$196.73	$196.73	$196.73	$196.73	$196.73	$1,180.38								
All	units @	$0.2327	$387.45	$597.34	$838.88	$869.13	$712.99	$503.10	$3,908.89								
	COG 1	$0.7236	$1,204.79						$1,204.79								
	COG 2	$0.7236		$1,857.48					$1,857.48								
	COG 3	$0.7236			$2,608.58				$2,608.58								
	COG 4	$0.8779				$3,278.96			$3,278.96								
	COG 5	$0.8779					$2,689.89		$2,689.89								
	COG 6	$0.8779						$1,898.02	$1,898.02								
Winter Period 17-18 Weighted Avg. COG		$0.8059															
	LDAC	$ 0.0293	$48.78	$75.21	$105.63	$109.44	$89.78	$63.35	$492.18								
Summer 2018																	
Customer Charge	units @	$ 214.26								$214.26	$214.26	$214.26	$214.26	$214.26	$214.26	$1,285.56	
All	units @	$0.1824								$222.35	$137.71	$80.80	$75.15	$82.26	$107.43	$705.71	
	COG 1	$0.4254								$518.56						$518.56	
	COG 2	$0.4254									$321.18					$321.18	
	COG 3	$0.4254										$188.45				$188.45	
	COG 4	$0.4254											$175.26			$175.26	
	COG 5	$0.4254												$191.86		$191.86	
	COG 6	$0.4254													$250.56	$250.56	
Summer Period 2018 Wighted Avg. COG		$0.4254															
	LDAC	$ 0.0309								$37.67	$23.33	$13.69	$12.73	$13.94	$18.20	$119.55	
		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
		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
		% 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
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
Winter 2018 - 2019																	
Customer Charge	units @	$ 214.26	$214.26	$214.26	$214.26	$214.26	$214.26	$214.26	$1,285.56								
First	1,300 units @	$0.1648	$214.24	$214.24	$214.24	$214.24	$214.24	$214.24	$1,285.44								
Over	1,300 units @	$0.1346	$9.29	$37.96	$80.63	$78.34	$67.03	$29.21	$302.45								
	COG 1	$0.7254	$993.07						$993.07								
	COG 2	$0.7254		$1,147.58					$1,147.58								
	COG 3	$0.7254			$1,377.53				$1,377.53								
	COG 4	$0.7254				$1,365.20			$1,365.20								
	COG 5	$0.7254					$1,304.27		$1,304.27								
	COG 6	$0.7254						$1,100.43	$1,100.43								
	LDAC	$0.0396	$54.21	$62.65	$75.20	$74.53	$71.20	$60.07	$397.86								
Summer 2019																	
Customer Charge	units @	$ 214.26								$ 214.26	$214.26	$214.26	$214.26	$ 214.26	$214.26	$1,285.56	
First	1,000 units @	$0.1287								$128.70	$128.70	$128.70				$386.10	
Over	1,000 units @	$0.1046								$41.11	$31.90	$19.46				$92.47	
	COG 1	$0.3269								$455.37						$455.37	
	COG 2	$0.3269									$426.60					$426.60	
	COG 3	$0.3269										$387.70				$387.70	
	COG 4	$0.3269											$394.57			$394.57	
	COG 5	$0.3269												$382.80		$382.80	
	COG 6	$0.3269													$419.74	$419.74	
Summer Period 2019 Weighted Avg. COG		$0.3269															
	LDAC	$ 0.0380								$52.93	$49.59	$45.07	$45.87	$44.50	$48.79	$286.75	
	TOTAL		$1,485.07	$1,676.69	$1,961.86	$1,946.57	$1,871.00	$1,618.21	**$10,559.40**	$892.37	$851.06	$795.19	$654.69	$641.56	$682.79	$4,517.66	$15,077.06

			Nov	Dec	Jan	Feb	Mar	Apr	Winter	May	June	July	August	Sept	October	Summer	Annual
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
Winter 2017 - 2018																	
Customer Charge	units @	$ 196.73	$196.73	$196.73	$196.73	$196.73	$196.73	$196.73	$1,180.38								
First	1,300 units @	$0.1749	$227.37	$227.37	$227.37	$227.37	$227.37	$227.37	$1,364.22								
Over	1,300 units @	$0.1467	$10.12	$41.37	$87.87	$85.38	$73.06	$31.83	$329.63								
	COG 1	$0.6224	$852.07						$852.07								
	COG 2	$0.6224		$984.64					$984.64								
	COG 3	$0.6224			$1,181.94				$1,181.94								
	COG 4	$0.7767				$1,461.75			$1,461.75								
	COG 5	$0.7767					$1,396.51		$1,396.51								
	COG 6	$0.7767						$1,178.25	$1,178.25								
Winter Period 17-18 Weighted Avg. COG		$0.7022															
	LDAC	$ 0.0293	$40.11	$46.35	$55.64	$55.14	$52.68	$44.45	$294.38								
Summer 2018																	
Customer Charge	units @	$ 214.26								$214.26	$214.26	$214.26	$214.26	$214.26	$214.26	$1,285.56	
First	1,000 units @	$0.1287								$128.70	$128.70	$128.70	$128.70	$128.70	$128.70	$772.20	
Over	1,000 units @	$0.1046								$41.11	$31.90	$19.46	$21.65	$17.89	$29.71	$161.71	
	COG 1	$0.3543								$493.54						$493.54	
	COG 2	$0.3543									$462.36					$462.36	
	COG 3	$0.3543										$420.20				$420.20	
	COG 4	$0.3543											$427.64			$427.64	
	COG 5	$0.3543												$414.89		$414.89	
	COG 6	$0.3543													$454.92	$454.92	
Summer Period 2018 Wighted Avg. COG		$0.3543															
	LDAC	$ 0.0309								$43.04	$40.32	$36.65	$37.30	$36.18	$39.68	$233.17	
	TOTAL		$1,326.40	$1,496.46	$1,749.55	$2,026.37	$1,946.34	$1,678.64	**$10,223.76**	$920.65	$877.55	$819.26	$829.55	$811.92	$867.26	$5,126.19	$15,349.95
	Change		$158.67	$180.23	$212.31	($79.80)	($75.34)	($60.42)	**$335.64**	($28.28)	($26.49)	($24.08)	($174.85)	($170.36)	($184.47)	**($608.53)**	($272.89)
	% Chg		11.96%	12.04%	12.14%	-3.94%	-3.87%	-3.60%	**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	**Winter 2017-2018**	**Winter 2018- 2019**
Customer Charge	$21.36	$21.36
First 50 Therms	$0.6468	$0.6660
Over 50 therms	$0.5332	$0.6660
LDAC	$0.0560	$0.0683
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%	$0.06	0.2%
	10	$36.32	$36.97	$0.65	1.8%	$0.19	0.5%	$0.34	0.9%	$0.12	0.3%
	20	$51.28	$52.59	$1.31	2.6%	$0.38	0.7%	$0.68	1.3%	$0.25	0.5%
	25	$58.76	$60.40	$1.64	2.8%	$0.48	0.8%	$0.85	1.4%	$0.31	0.5%
	30	$66.24	$68.20	$1.96	3.0%	$0.58	0.9%	$1.02	1.5%	$0.37	0.6%
	45	$88.68	$91.62	$2.94	3.3%	$0.86	1.0%	$1.53	1.7%	$0.55	0.6%
	50	$96.16	$99.43	$3.27	3.4%	$0.96	1.0%	$1.70	1.8%	$0.62	0.6%
	75	$130.72	$138.47	$7.75	5.9%	$4.28	3.3%	$2.54	1.9%	$0.92	0.7%
Average Monthly	125	$199.84	$216.54	$16.70	8.4%	$10.92	5.5%	$4.24	2.1%	$1.54	0.8%
	150	$234.40	$255.57	$21.17	9.0%	$14.24	6.1%	$5.09	2.2%	$1.85	0.8%
	200	$303.52	$333.64	$30.12	9.9%	$20.88	6.9%	$6.78	2.2%	$2.46	0.8%

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION

Typical Residential Heating Bill - 136 therms/Summer

Comparison of Summer 2019 vs. Summer 2018

1				**May**	**June**	**July**	**August**	**Sept**	**October**	**Summer**
2	Typical Usage: therms(*)			45	28	16	14	15	18	**136**
3	**Summer 2019**									
4	Customer Charge	units @	$21.36	$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	$10.57	$79.83
6	Over	50 units @	$0.5870	$0.00	$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	$0.0667	$3.00	$1.87	$1.07	$0.93	$1.00	$1.20	$9.07
15		**TOTAL**		$67.29	$49.94	$37.69	$35.65	$36.67	$39.73	**$266.98**
16				**May**	**June**	**July**	**August**	**Sept**	**October**	**Summer**
17	Typical Usage: therms			45	28	16	14	15	18	**136**
18	**Summer 2018**									
19	Customer Charge	units @	$21.36	$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	$10.57	$79.83
21	Over	50 units @	$0.5870	$0.00	$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**		-$0.96	-$0.60	-$0.34	-$0.30	-$0.32	-$0.39	**-$2.91**
32		**% Chg**		-1.41%	-1.19%	-0.90%	-0.83%	-0.87%	-0.96%	**-1.08%**

*-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					May	June	July	August	Sept	October	Summer
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**
16					May	June	July	August	Sept	October	Summer
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

1				May	June	July	August	Sept	October	Summer
2		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
15				**May**	**June**	**July**	**August**	**Sept**	**October**	**Summer**
16		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

1					May	June	July	August	Sept	October	Summer
2			Typical Usage: therms(1)		1,393	1,305	1,186	1,207	1,171	1,284	7,546
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	First	1,000	units @	$0.1287	$128.70	$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	$29.71	$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	$286.75
15			**TOTAL**		$892.37	$851.06	$795.19	$805.05	$788.14	$841.20	$4,973.01
16					May	June	July	August	Sept	October	Summer
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	$214.26	$1,285.56
20	First	1,000	units @	$0.1287	$128.70	$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	$29.71	$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	$233.17
30			**TOTAL**		$920.65	$877.55	$819.26	$829.55	$811.92	$867.26	**$5,126.19**
31			**Change**		-$28.28	-$26.49	-$24.08	-$24.50	-$23.77	-$26.07	**-$153.18**
32			**% Chg**		-3.07%	-3.02%	-2.94%	-2.95%	-2.93%	-3.01%	**-2.99%**

*-Note- Wei *-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	**Summer 2018**	**Summer 2019**
Customer Charge	$21.36	$21.36
First 50 Therms	$0.5870	$0.5870
Over 50 therms	$0.5870	$0.5870
LDAC	$0.0576	$0.0667
CGA	$0.3975	$0.3670

	Usage (Therms)	Summer 2016 Bill Amount	Summer 2017 Bill Amount	Total Bill		Base Rate		COG		LDAC	
	5	$26.57	$26.46	($0.11)	-0.4%	$0.00	0.0%	($0.15)	-0.6%	$0.05	0.2%
	10	$31.78	$31.57	($0.21)	-0.7%	$0.00	0.0%	($0.31)	-1.0%	$0.09	0.3%
	20	$42.20	$41.77	($0.43)	-1.0%	$0.00	0.0%	($0.61)	-1.4%	$0.18	0.4%
Average Monthly	25	$47.41	$46.88	($0.53)	-1.1%	$0.00	0.0%	($0.76)	-1.6%	$0.23	0.5%
	30	$52.62	$51.98	($0.64)	-1.2%	$0.00	0.0%	($0.91)	-1.7%	$0.27	0.5%
	45	$68.25	$67.29	($0.96)	-1.4%	$0.00	0.0%	($1.37)	-2.0%	$0.41	0.6%
	50	$73.47	$72.40	($1.07)	-1.5%	$0.00	0.0%	($1.53)	-2.1%	$0.46	0.6%
	75	$99.52	$97.91	($1.60)	-1.6%	$0.00	0.0%	($2.29)	-2.3%	$0.68	0.7%
	125	$151.62	$148.95	($2.67)	-1.8%	$0.00	0.0%	($3.81)	-2.5%	$1.14	0.8%
	150	$177.68	$174.47	($3.21)	-1.8%	$0.00	0.0%	($4.58)	-2.6%	$1.37	0.8%
	200	$229.78	$225.50	($4.28)	-1.9%	$0.00	0.0%	($6.10)	-2.7%	$1.82	0.8%

Northern Utilities, Inc.
New Hampshire Division
Schedule 9
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Northern Utilities New Hampshire Division
Cost of Gas Rate Comparison - Residential Rate Classes
(rates per therm)

Proposed Rates	2017-2018 Actual Cost of Gas Rates						Average	Variance
November 2018 - April 2019	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter 17-18	
$0.8271	$0.7107	$0.7107	$0.7107	$0.8646	$0.8646	$0.8646	$0.7877	$0.0395
May 2019 - October 2019	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer 2018	
$0.3670	$0.3975	$0.3975	$0.3975	$0.3975	$0.3975	$0.3975	$0.3975	($0.0305)

Northern Utilities - NEW HAMPSHIRE DIVISION
Allocation of Demand Costs to Customer Classes

Base Capacity Costs

1	**BASE SENDOUT BY CLASS**	**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**SUMMER**
2	**Total Therms**															
3	Res Heat	420,986	435,019	435,019	392,921	435,019	420,986	435,019	420,986	432,517	435,019	420,986	435,019	5,119,499	2,539,952	2,579,548
4	Res General	10,510	10,860	10,860	9,809	10,860	10,510	10,860	10,510	10,798	10,860	10,510	10,860	127,811	63,411	64,400
5	G50 Low Annual-Low Winter	81,392	84,106	84,106	75,966	84,106	74,549	84,106	81,392	83,622	84,106	81,392	84,106	982,948	484,225	498,723
6	G40 Low Annual-High Winter	136,060	140,595	140,595	126,989	140,595	136,060	140,595	136,060	139,786	140,595	136,060	140,595	1,654,586	820,894	833,692
7	G51 Med Annual-Low Winter	129,005	133,305	133,305	120,404	133,305	129,005	133,305	129,005	132,538	133,305	129,005	133,305	1,568,792	778,329	790,463
8	G41 Med Annual-High Winter	144,172	148,977	148,977	134,560	148,977	144,172	148,977	144,172	148,120	148,977	144,172	148,977	1,753,231	869,836	883,396
9	G52 High Annual-Low Winter	20,952	21,651	21,651	19,555	21,651	20,952	21,651	20,952	21,526	21,651	20,952	21,651	254,794	126,412	128,382
10	G42 High Annual-High Winter	41,276	42,652	42,652	38,524	42,652	41,276	42,652	41,276	42,406	42,652	41,276	42,652	501,943	249,031	252,913
11	Total Firm Sales	984,353	1,017,165	1,017,165	918,730	1,017,165	977,510	1,017,165	984,353	1,011,313	1,017,165	984,353	1,017,165	11,963,605	5,932,089	6,031,516
12																
13	**% of Total**															
14	Res Heat	42.77%	42.77%	42.77%	42.77%	42.77%	43.07%	42.77%	42.77%	42.77%	42.77%	42.77%	42.77%			
15	Res General	1.07%	1.07%	1.07%	1.07%	1.07%	1.08%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%			
16	G50 Low Annual-Low Winter	8.27%	8.27%	8.27%	8.27%	8.27%	7.63%	8.27%	8.27%	8.27%	8.27%	8.27%	8.27%			
17	G40 Low Annual-High Winter	13.82%	13.82%	13.82%	13.82%	13.82%	13.92%	13.82%	13.82%	13.82%	13.82%	13.82%	13.82%			
18	G51 Med Annual-Low Winter	13.11%	13.11%	13.11%	13.11%	13.11%	13.20%	13.11%	13.11%	13.11%	13.11%	13.11%	13.11%			
19	G41 Med Annual-High Winter	14.65%	14.65%	14.65%	14.65%	14.65%	14.75%	14.65%	14.65%	14.65%	14.65%	14.65%	14.65%			
20	G52 High Annual-Low Winter	2.13%	2.13%	2.13%	2.13%	2.13%	2.14%	2.13%	2.13%	2.13%	2.13%	2.13%	2.13%			
21	G42 High Annual-High Winter	4.19%	4.19%	4.19%	4.19%	4.19%	4.22%	4.19%	4.19%	4.19%	4.19%	4.19%	4.19%			
22	Total Firm Sales	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%			

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24	**PIPELINE BASE DEMAND COSTS**	**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**SUMMER**
25	TOTAL PIPELINE BASE DEMAND COST	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 55,743	$ 668,917	$ 334,458	$ 334,458
26	Res Heat	$ 23,840	$ 23,840	$ 23,840	$ 23,840	$ 23,840	$ 24,007	$ 23,840	$ 23,840	$ 23,840	$ 23,840	$ 23,840	$ 23,840	$ 286,248	$ 143,207	$ 143,041
27	Res General	$ 595	$ 595	$ 595	$ 595	$ 595	$ 599	$ 595	$ 595	$ 595	$ 595	$ 595	$ 595	$ 7,146	$ 3,575	$ 3,571
28	G50 Low Annual-Low Winter	$ 4,609	$ 4,609	$ 4,609	$ 4,609	$ 4,609	$ 4,251	$ 4,609	$ 4,609	$ 4,609	$ 4,609	$ 4,609	$ 4,609	$ 54,952	$ 27,297	$ 27,655
29	G40 Low Annual-High Winter	$ 7,705	$ 7,705	$ 7,705	$ 7,705	$ 7,705	$ 7,759	$ 7,705	$ 7,705	$ 7,705	$ 7,705	$ 7,705	$ 7,705	$ 92,513	$ 46,284	$ 46,230
30	G51 Med Annual-Low Winter	$ 7,305	$ 7,305	$ 7,305	$ 7,305	$ 7,305	$ 7,357	$ 7,305	$ 7,305	$ 7,305	$ 7,305	$ 7,305	$ 7,305	$ 87,716	$ 43,884	$ 43,833
31	G41 Med Annual-High Winter	$ 8,164	$ 8,164	$ 8,164	$ 8,164	$ 8,164	$ 8,221	$ 8,164	$ 8,164	$ 8,164	$ 8,164	$ 8,164	$ 8,164	$ 98,029	$ 49,043	$ 48,986
32	G52 High Annual-Low Winter	$ 1,187	$ 1,187	$ 1,187	$ 1,187	$ 1,187	$ 1,195	$ 1,187	$ 1,187	$ 1,187	$ 1,187	$ 1,187	$ 1,187	$ 14,246	$ 7,127	$ 7,119
33	G42 High Annual-High Winter	$ 2,337	$ 2,337	$ 2,337	$ 2,337	$ 2,337	$ 2,354	$ 2,337	$ 2,337	$ 2,337	$ 2,337	$ 2,337	$ 2,337	$ 28,065	$ 14,041	$ 14,024
34																
35	Residential	$ 24,435	$ 24,435	$ 24,435	$ 24,435	$ 24,435	$ 24,606	$ 24,435	$ 24,435	$ 24,435	$ 24,435	$ 24,435	$ 24,435	$ 293,394	$ 146,783	$ 146,612
36	SALES HLF CLASSES	$ 13,101	$ 13,101	$ 13,101	$ 13,101	$ 13,101	$ 12,803	$ 13,101	$ 13,101	$ 13,101	$ 13,101	$ 13,101	$ 13,101	$ 156,915	$ 78,308	$ 78,607
37	SALES LLF CLASSES	$ 18,207	$ 18,207	$ 18,207	$ 18,207	$ 18,207	$ 18,334	$ 18,207	$ 18,207	$ 18,207	$ 18,207	$ 18,207	$ 18,207	$ 218,608	$ 109,367	$ 109,240

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Northern Utilities - NEW HAMPSHI
Allocation of Demand Costs to Cus

Base Capacity Costs

1	**BASE SENDOUT BY CLASS**	
2	**Total Therms**	
3	Res Heat	Schedule 10B, LN 52
4	Res General	Schedule 10B, LN 53
5	G50 Low Annual-Low Winter	Schedule 10B, LN 54
6	G40 Low Annual-High Winter	Schedule 10B, LN 55
7	G51 Med Annual-Low Winter	Schedule 10B, LN 56
8	G41 Med Annual-High Winter	Schedule 10B, LN 57
9	G52 High Annual-Low Winter	Schedule 10B, LN 58
10	G42 High Annual-High Winter	Schedule 10B, LN 59
11	Total Firm Sales	Sum LN 3 : LN 10
12		
13	**% of Total**	
14	Res Heat	LN 3 / LN 11
15	Res General	LN 4 / LN 11
16	G50 Low Annual-Low Winter	LN 5 / LN 11
17	G40 Low Annual-High Winter	LN 6 / LN 11
18	G51 Med Annual-Low Winter	LN 7 / LN 11
19	G41 Med Annual-High Winter	LN 8 / LN 11
20	G52 High Annual-Low Winter	LN 9 / LN 11
21	G42 High Annual-High Winter	LN 10 / LN 11
22	Total Firm Sales	LN 11 / LN 11
23		
24	**PIPELINE BASE DEMAND COSTS**	
25	TOTAL PIPELINE BASE DEMAND COST	Schedule 1A, LN 69
26	Res Heat	LN 25 * LN 14
27	Res General	LN 25 * LN 15
28	G50 Low Annual-Low Winter	LN 25 * LN 16
29	G40 Low Annual-High Winter	LN 25 * LN 17
30	G51 Med Annual-Low Winter	LN 25 * LN 18
31	G41 Med Annual-High Winter	LN 25 * LN 19
32	G52 High Annual-Low Winter	LN 25 * LN 20
33	G42 High Annual-High Winter	LN 25 * LN 21
34		
35	Residential	LN 26 + LN 27
36	SALES HLF CLASSES	LN 28 + LN 30 + LN 32
37	SALES LLF CLASSES	LN 29 + LN 31 + LN 33
38		

Remaining Capacity Costs

		Column A	Column B	Column C	Column D
39		Design Day Demand (MMBtu)	Avg Daily Base Use Load (MMBtu)	Remaining Design Day Demand (MMBtu)	% of Total Remaining Design Day Demand
40	Res Heat	26,619	1,403	25,216	44.64%
41	Res General	292	35	257	0.45%
42	G50 Low Annual-Low Winter	823	271	552	0.98%
43	G40 Low Annual-High Winter	11,781	454	11,327	20.05%
44	G51 Med Annual-Low Winter	2,013	430	1,583	2.80%
45	G41 Med Annual-High Winter	14,237	481	13,756	24.35%
46	G52 High Annual-Low Winter	821	70	751	1.33%
47	G42 High Annual-High Winter	3,182	138	3,044	5.39%
48	TOTAL	59,768	3,282	56,485	100.00%

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50 **REMAINING PIPELINE DEMAND**

51		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
52	NH DIVISION TOTAL - REMAINING PIPELI	$ 106,224	$ 234,915	$ 489,591	$ 258,373	$ 191,702	$ 67,845	$ 17,839	$ 4,697	$ -	$ 105	$ 1,664	$ 27,916	$ 1,400,871	$ 1,348,651	$ 52,221
53																
54	Res Heat	$ 47,419	$ 104,868	$ 218,558	$ 115,340	$ 85,577	$ 30,287	$ 7,964	$ 2,097	$ -	$ 47	$ 743	$ 12,462	$ 625,361	$ 602,049	$ 23,312
55	Res General	$ 483	$ 1,069	$ 2,228	$ 1,176	$ 872	$ 309	$ 81	$ 21	$ -	$ 0	$ 8	$ 127	$ 6,374	$ 6,136	$ 238
56	G50 Low Annual-Low Winter	$ 1,038	$ 2,296	$ 4,784	$ 2,525	$ 1,873	$ 663	$ 174	$ 46	$ -	$ 1	$ 16	$ 273	$ 13,690	$ 13,180	$ 510
57	G40 Low Annual-High Winter	$ 21,301	$ 47,108	$ 98,178	$ 51,812	$ 38,442	$ 13,605	$ 3,577	$ 942	$ -	$ 21	$ 334	$ 5,598	$ 280,916	$ 270,445	$ 10,472
58	G51 Med Annual-Low Winter	$ 2,977	$ 6,583	$ 13,721	$ 7,241	$ 5,372	$ 1,901	$ 500	$ 132	$ -	$ 3	$ 47	$ 782	$ 39,259	$ 37,796	$ 1,463
59	G41 Med Annual-High Winter	$ 25,869	$ 57,209	$ 119,229	$ 62,921	$ 46,685	$ 16,522	$ 4,344	$ 1,144	$ -	$ 25	$ 405	$ 6,798	$ 341,152	$ 328,435	$ 12,717
60	G52 High Annual-Low Winter	$ 1,412	$ 3,123	$ 6,509	$ 3,435	$ 2,549	$ 902	$ 237	$ 62	$ -	$ 1	$ 22	$ 371	$ 18,625	$ 17,931	$ 694
61	G42 High Annual-High Winter	$ 5,724	$ 12,660	$ 26,384	$ 13,924	$ 10,331	$ 3,656	$ 961	$ 253	$ -	$ 6	$ 90	$ 1,504	$ 75,493	$ 72,679	$ 2,814
62	TOTAL	$ 106,224	$ 234,915	$ 489,591	$ 258,373	$ 191,702	$ 67,845	$ 17,839	$ 4,697	$ -	$ 105	$ 1,664	$ 27,916	$ 1,400,871	$ 1,348,651	$ 52,221
63																
64	Residential	$ 47,903	$ 105,937	$ 220,785	$ 116,516	$ 86,450	$ 30,595	$ 8,045	$ 2,118	$ -	$ 47	$ 750	$ 12,589	$ 631,735	$ 608,186	$ 23,549
65	SALES HLF CLASSES	$ 5,427	$ 12,003	$ 25,015	$ 13,201	$ 9,795	$ 3,466	$ 911	$ 240	$ -	$ 5	$ 85	$ 1,426	$ 71,575	$ 68,906	$ 2,668
66	SALES LLF CLASSES	$ 52,894	$ 116,976	$ 243,791	$ 128,656	$ 95,458	$ 33,784	$ 8,883	$ 2,339	$ -	$ 52	$ 828	$ 13,901	$ 697,562	$ 671,559	$ 26,003

67

68 **STORAGE AND ON-SYSTEM PEAKING DEMAND**

69		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
70	NH DIVISION TOTAL - PEAKING & STORA	$ 751,408	$ 1,661,749	$ 3,463,278	$ 1,827,685	$ 1,356,066	$ 479,926	$ 126,191	$ 33,227	$ -	$ 740	$ 11,769	$ 197,473	$ 9,909,512	$ 9,540,113	$ 369,400
71																
72	Res Heat	$ 335,435	$ 741,819	$ 1,546,038	$ 815,894	$ 605,360	$ 214,243	$ 56,333	$ 14,833	$ -	$ 330	$ 5,254	$ 88,154	$ 4,423,692	$ 4,258,789	$ 164,903
73	Res General	$ 3,419	$ 7,561	$ 15,758	$ 8,316	$ 6,170	$ 2,184	$ 574	$ 151	$ -	$ 3	$ 54	$ 898	$ 45,088	$ 43,407	$ 1,681
74	G50 Low Annual-Low Winter	$ 7,343	$ 16,239	$ 33,845	$ 17,861	$ 13,252	$ 4,690	$ 1,233	$ 325	$ -	$ 7	$ 115	$ 1,930	$ 96,840	$ 93,230	$ 3,610
75	G40 Low Annual-High Winter	$ 150,680	$ 333,230	$ 694,491	$ 366,505	$ 271,932	$ 96,239	$ 25,305	$ 6,663	$ -	$ 148	$ 2,360	$ 39,599	$ 1,987,153	$ 1,913,077	$ 74,076
76	G51 Med Annual-Low Winter	$ 21,058	$ 46,570	$ 97,058	$ 51,221	$ 38,004	$ 13,450	$ 3,536	$ 931	$ -	$ 21	$ 330	$ 5,534	$ 277,714	$ 267,361	$ 10,352
77	G41 Med Annual-High Winter	$ 182,989	$ 404,683	$ 843,407	$ 445,093	$ 330,241	$ 116,876	$ 30,731	$ 8,092	$ -	$ 180	$ 2,866	$ 48,090	$ 2,413,250	$ 2,323,290	$ 89,959
78	G52 High Annual-Low Winter	$ 9,990	$ 22,094	$ 46,046	$ 24,300	$ 18,030	$ 6,381	$ 1,678	$ 442	$ -	$ 10	$ 156	$ 2,625	$ 131,752	$ 126,840	$ 4,911
79	G42 High Annual-High Winter	$ 40,493	$ 89,552	$ 186,636	$ 98,494	$ 73,079	$ 25,863	$ 6,800	$ 1,791	$ -	$ 40	$ 634	$ 10,642	$ 534,024	$ 514,117	$ 19,907
80	TOTAL	$ 751,408	$ 1,661,749	$ 3,463,278	$ 1,827,685	$ 1,356,066	$ 479,926	$ 126,191	$ 33,227	$ -	$ 740	$ 11,769	$ 197,473	$ 9,909,512	$ 9,540,113	$ 369,400
81																
82	Residential	$ 338,854	$ 749,380	$ 1,561,795	$ 824,210	$ 611,530	$ 216,427	$ 56,907	$ 14,984	$ -	$ 334	$ 5,307	$ 89,052	$ 4,468,780	$ 4,302,196	$ 166,584
83	SALES HLF CLASSES	$ 38,392	$ 84,904	$ 176,949	$ 93,382	$ 69,285	$ 24,521	$ 6,447	$ 1,698	$ -	$ 38	$ 601	$ 10,089	$ 506,306	$ 487,432	$ 18,874
84	SALES LLF CLASSES	$ 374,162	$ 827,466	$ 1,724,534	$ 910,093	$ 675,251	$ 238,978	$ 62,837	$ 16,545	$ -	$ 369	$ 5,860	$ 98,331	$ 4,934,427	$ 4,750,485	$ 183,942

85

86 **Off-SYSTEM PEAKING DEMAND**

87		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
88	NH DIVISION - OFF-SYSTEM PEAKING	$ 299,465	$ 634,796	$ 1,298,403	$ 695,920	$ 522,196	$ 199,463	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,650,243	$ 3,650,243	$ -
89																
90	Res Heat	$ 133,684	$ 283,379	$ 579,618	$ 310,665	$ 233,113	$ 89,042	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,629,500	$ 1,629,500	$ -
91	Res General	$ 1,363	$ 2,888	$ 5,908	$ 3,166	$ 2,376	$ 908	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,608	$ 16,608	$ -
92	G50 Low Annual-Low Winter	$ 2,927	$ 6,204	$ 12,689	$ 6,801	$ 5,103	$ 1,949	$ -	$ -	$ -	$ -	$ -	$ -	$ 35,672	$ 35,672	$ -
93	G40 Low Annual-High Winter	$ 60,052	$ 127,296	$ 260,369	$ 139,553	$ 104,716	$ 39,998	$ -	$ -	$ -	$ -	$ -	$ -	$ 731,983	$ 731,983	$ -
94	G51 Med Annual-Low Winter	$ 8,392	$ 17,790	$ 36,388	$ 19,503	$ 14,635	$ 5,590	$ -	$ -	$ -	$ -	$ -	$ -	$ 102,298	$ 102,298	$ -
95	G41 Med Annual-High Winter	$ 72,928	$ 154,591	$ 316,198	$ 169,476	$ 127,170	$ 48,575	$ -	$ -	$ -	$ -	$ -	$ -	$ 888,939	$ 888,939	$ -
96	G52 High Annual-Low Winter	$ 3,982	$ 8,440	$ 17,263	$ 9,253	$ 6,943	$ 2,652	$ -	$ -	$ -	$ -	$ -	$ -	$ 48,532	$ 48,532	$ -
97	G42 High Annual-High Winter	$ 16,138	$ 34,209	$ 69,971	$ 37,503	$ 28,141	$ 10,749	$ -	$ -	$ -	$ -	$ -	$ -	$ 196,712	$ 196,712	$ -
98	TOTAL	$ 299,465	$ 634,796	$ 1,298,403	$ 695,920	$ 522,196	$ 199,463	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,650,243	$ 3,650,243	$ -
99																
100	Residential	$ 135,046	$ 286,267	$ 585,526	$ 313,831	$ 235,489	$ 89,950	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,646,109	$ 1,646,109	$ -
101	SALES HLF CLASSES	$ 16,663	$ 35,322	$ 72,247	$ 38,723	$ 29,056	$ 11,099	$ -	$ -	$ -	$ -	$ -	$ -	$ 203,110	$ 203,110	$ -
102	SALES LLF CLASSES	$ 282,802	$ 599,475	$ 1,226,156	$ 657,197	$ 493,139	$ 188,364	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,447,134	$ 3,447,134	$ -

103

104

Remaining Capacity Costs

39		
40	Res Heat	Company Analysis
41	Res General	Company Analysis
42	G50 Low Annual-Low Winter	Company Analysis
43	G40 Low Annual-High Winter	Company Analysis
44	G51 Med Annual-Low Winter	Company Analysis
45	G41 Med Annual-High Winter	Company Analysis
46	G52 High Annual-Low Winter	Company Analysis
47	G42 High Annual-High Winter	Company Analysis
48	TOTAL	Sum LN 40 : LN 47
49		
50	**REMAINING PIPELINE DEMAND**	
51		
52	NH DIVISION TOTAL - REMAINING PIPELI	Schedule 1A, LN 70
53		
54	Res Heat	LN 40 Col D * LN 52
55	Res General	LN 41 Col D * LN 52
56	G50 Low Annual-Low Winter	LN 42 Col D * LN 52
57	G40 Low Annual-High Winter	LN 43 Col D * LN 52
58	G51 Med Annual-Low Winter	LN 44 Col D * LN 52
59	G41 Med Annual-High Winter	LN 45 Col D * LN 52
60	G52 High Annual-Low Winter	LN 46 Col D * LN 52
61	G42 High Annual-High Winter	LN 47 Col D * LN 52
62	TOTAL	Sum LN 54 : LN 61
63		
64	Residential	LN 54 + LN 55
65	SALES HLF CLASSES	LN 56 + LN 58 + LN 60
66	SALES LLF CLASSES	LN 57 + LN 59 + LN 61
67		
68	**STORAGE AND ON-SYSTEM PEAKING DE**	
69		
70	NH DIVISION TOTAL - PEAKING & STORA	Schedule 1A, LN 73
71		
72	Res Heat	LN 40 Col D * LN 70
73	Res General	LN 41 Col D * LN 70
74	G50 Low Annual-Low Winter	LN 42 Col D * LN 70
75	G40 Low Annual-High Winter	LN 43 Col D * LN 70
76	G51 Med Annual-Low Winter	LN 44 Col D * LN 70
77	G41 Med Annual-High Winter	LN 45 Col D * LN 70
78	G52 High Annual-Low Winter	LN 46 Col D * LN 70
79	G42 High Annual-High Winter	LN 47 Col D * LN 70
80	TOTAL	Sum LN 72 : LN 79
81		
82	Residential	LN 72 + LN 73
83	SALES HLF CLASSES	LN 74 + LN 76 + LN 78
84	SALES LLF CLASSES	LN 75 + LN 77 + LN 79
85		
86	**Off-SYSTEM PEAKING DEMAND**	
87		
88	NH DIVISION - OFF-SYSTEM PEAKING	Schedule 1A, LN 74
89		
90	Res Heat	LN 40 Col D * LN 88
91	Res General	LN 41 Col D * LN 88
92	G50 Low Annual-Low Winter	LN 42 Col D * LN 88
93	G40 Low Annual-High Winter	LN 43 Col D * LN 88
94	G51 Med Annual-Low Winter	LN 44 Col D * LN 88
95	G41 Med Annual-High Winter	LN 45 Col D * LN 88
96	G52 High Annual-Low Winter	LN 46 Col D * LN 88
97	G42 High Annual-High Winter	LN 47 Col D * LN 88
98	TOTAL	Sum LN 90 : LN 97
99		
100	Residential	LN 90 + LN 91
101	SALES HLF CLASSES	LN 92 + LN 94 + LN 96
102	SALES LLF CLASSES	LN 93 + LN 95 + LN 97
103		
104		

105 **CAPACITY RELEASE MARGINS & ASSET MANAGEMENT CREDIT BY CLASS**

106		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
107	NH DIVISION - MONTHLY CAP. RELEASE	$ (256,463)	$ (543,642)	$ (1,111,958)	$ (595,989)	$ (447,211)	$ (170,821)	$ -	$ -	$ -	$ -	$ -	$ -	$ (3,126,083)	$ (3,126,083)	$ -
108																
109	Res Heat	$ (114,487)	$ (242,687)	$ (496,388)	$ (266,055)	$ (199,639)	$ (76,256)	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,395,511)	$ (1,395,511)	$ -
110	Res General	$ (1,167)	$ (2,474)	$ (5,059)	$ (2,712)	$ (2,035)	$ (777)	$ -	$ -	$ -	$ -	$ -	$ -	$ (14,223)	$ (14,223)	$ -
111	G50 Low Annual-Low Winter	$ (2,506)	$ (5,313)	$ (10,867)	$ (5,824)	$ (4,370)	$ (1,669)	$ -	$ -	$ -	$ -	$ -	$ -	$ (30,549)	$ (30,549)	$ -
112	G40 Low Annual-High Winter	$ (51,429)	$ (109,016)	$ (222,981)	$ (119,514)	$ (89,679)	$ (34,255)	$ -	$ -	$ -	$ -	$ -	$ -	$ (626,873)	$ (626,873)	$ -
113	G51 Med Annual-Low Winter	$ (7,187)	$ (15,236)	$ (31,163)	$ (16,703)	$ (12,533)	$ (4,787)	$ -	$ -	$ -	$ -	$ -	$ -	$ (87,608)	$ (87,608)	$ -
114	G41 Med Annual-High Winter	$ (62,456)	$ (132,392)	$ (270,794)	$ (145,140)	$ (108,909)	$ (41,600)	$ -	$ -	$ -	$ -	$ -	$ -	$ (761,291)	$ (761,291)	$ -
115	G52 High Annual-Low Winter	$ (3,410)	$ (7,228)	$ (14,784)	$ (7,924)	$ (5,946)	$ (2,271)	$ -	$ -	$ -	$ -	$ -	$ -	$ (41,563)	$ (41,563)	$ -
116	G42 High Annual-High Winter	$ (13,821)	$ (29,297)	$ (59,923)	$ (32,118)	$ (24,100)	$ (9,206)	$ -	$ -	$ -	$ -	$ -	$ -	$ (168,465)	$ (168,465)	$ -
117	TOTAL	$ (256,463)	$ (543,642)	$ (1,111,958)	$ (595,989)	$ (447,211)	$ (170,821)	$ -	$ -	$ -	$ -	$ -	$ -	$ (3,126,083)	$ (3,126,083)	$ -
118																
119	Residential	$ (115,654)	$ (245,160)	$ (501,447)	$ (268,766)	$ (201,673)	$ (77,033)	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,409,734)	$ (1,409,734)	$ -
120	SALES HLF CLASSES	$ (13,103)	$ (27,776)	$ (56,813)	$ (30,451)	$ (22,849)	$ (8,728)	$ -	$ -	$ -	$ -	$ -	$ -	$ (159,721)	$ (159,721)	$ -
121	SALES LLF CLASSES	$ (127,705)	$ (270,706)	$ (553,698)	$ (296,772)	$ (222,688)	$ (85,060)	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,556,628)	$ (1,556,628)	$ -

122

123 **MISCELLANEOUS CREDITS BY CLASS (Includes Re-entry Rate & Conversion Rate Revenues and Interruptible Margins**

124		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
125	NH DIVISION - MISCELLANEOUS CREDIT	$ (820)	$ (1,739)	$ (3,557)	$ (1,907)	$ (1,431)	$ (546)	$ -	$ -	$ -	$ -	$ -	$ -	$ (10,000)	$ (10,000)	$ -
126																
127	Res Heat	$ (366)	$ (776)	$ (1,588)	$ (851)	$ (639)	$ (244)	$ -	$ -	$ -	$ -	$ -	$ -	$ (4,464)	$ (4,464)	$ -
128	Res General	$ (4)	$ (8)	$ (16)	$ (9)	$ (7)	$ (2)	$ -	$ -	$ -	$ -	$ -	$ -	$ (45)	$ (45)	$ -
129	G50 Low Annual-Low Winter	$ (8)	$ (17)	$ (35)	$ (19)	$ (14)	$ (5)	$ -	$ -	$ -	$ -	$ -	$ -	$ (98)	$ (98)	$ -
130	G40 Low Annual-High Winter	$ (165)	$ (349)	$ (713)	$ (382)	$ (287)	$ (110)	$ -	$ -	$ -	$ -	$ -	$ -	$ (2,005)	$ (2,005)	$ -
131	G51 Med Annual-Low Winter	$ (23)	$ (49)	$ (100)	$ (53)	$ (40)	$ (15)	$ -	$ -	$ -	$ -	$ -	$ -	$ (280)	$ (280)	$ -
132	G41 Med Annual-High Winter	$ (200)	$ (424)	$ (866)	$ (464)	$ (348)	$ (133)	$ -	$ -	$ -	$ -	$ -	$ -	$ (2,435)	$ (2,435)	$ -
133	G52 High Annual-Low Winter	$ (11)	$ (23)	$ (47)	$ (25)	$ (19)	$ (7)	$ -	$ -	$ -	$ -	$ -	$ -	$ (133)	$ (133)	$ -
134	G42 High Annual-High Winter	$ (44)	$ (94)	$ (192)	$ (103)	$ (77)	$ (29)	$ -	$ -	$ -	$ -	$ -	$ -	$ (539)	$ (539)	$ -
135	TOTAL	$ (820)	$ (1,739)	$ (3,557)	$ (1,907)	$ (1,431)	$ (546)	$ -	$ -	$ -	$ -	$ -	$ -	$ (10,000)	$ (10,000)	$ -
136																
137	Residential	$ (370)	$ (784)	$ (1,604)	$ (860)	$ (645)	$ (246)	$ -	$ -	$ -	$ -	$ -	$ -	$ (4,510)	$ (4,510)	$ -
138	SALES HLF CLASSES	$ (46)	$ (97)	$ (198)	$ (106)	$ (80)	$ (30)	$ -	$ -	$ -	$ -	$ -	$ -	$ (556)	$ (556)	$ -
139	SALES LLF CLASSES	$ (775)	$ (1,642)	$ (3,359)	$ (1,800)	$ (1,351)	$ (516)	$ -	$ -	$ -	$ -	$ -	$ -	$ (9,444)	$ (9,444)	$ -

140

141 **TOTAL NON-BASE CAPACITY COSTS**

142		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
143	Res Heat	$ 401,684	$ 886,603	$ 1,846,238	$ 974,993	$ 723,773	$ 257,072	$ 64,296	$ 16,929	$ -	$ 377	$ 5,996	$ 100,616	$ 5,278,579	$ 5,090,364	$ 188,215
144	Res General	$ 4,094	$ 9,037	$ 18,817	$ 9,937	$ 7,377	$ 2,620	$ 655	$ 173	$ -	$ 4	$ 61	$ 1,026	$ 53,801	$ 51,883	$ 1,918
145	G50 Low Annual-Low Winter	$ 8,793	$ 19,409	$ 40,416	$ 21,344	$ 15,844	$ 5,628	$ 1,408	$ 371	$ -	$ 8	$ 131	$ 2,203	$ 115,555	$ 111,434	$ 4,120
146	G40 Low Annual-High Winter	$ 180,439	$ 398,268	$ 829,343	$ 437,974	$ 325,124	$ 115,479	$ 28,882	$ 7,605	$ -	$ 169	$ 2,694	$ 45,197	$ 2,371,174	$ 2,286,626	$ 84,547
147	G51 Med Annual-Low Winter	$ 25,217	$ 55,660	$ 115,904	$ 61,209	$ 45,438	$ 16,139	$ 4,036	$ 1,063	$ -	$ 24	$ 376	$ 6,317	$ 331,382	$ 319,566	$ 11,816
148	G41 Med Annual-High Winter	$ 219,130	$ 483,667	$ 1,007,175	$ 531,887	$ 394,839	$ 140,240	$ 35,075	$ 9,236	$ -	$ 206	$ 3,271	$ 54,889	$ 2,879,614	$ 2,776,938	$ 102,677
149	G52 High Annual-Low Winter	$ 11,963	$ 26,406	$ 54,987	$ 29,038	$ 21,556	$ 7,656	$ 1,915	$ 504	$ -	$ 11	$ 179	$ 2,997	$ 157,213	$ 151,607	$ 5,606
150	G42 High Annual-High Winter	$ 48,491	$ 107,030	$ 222,876	$ 117,700	$ 87,373	$ 31,034	$ 7,762	$ 2,044	$ -	$ 46	$ 724	$ 12,146	$ 637,225	$ 614,504	$ 22,721
151	TOTAL	$ 899,813	$ 1,986,080	$ 4,135,758	$ 2,184,083	$ 1,621,323	$ 575,867	$ 144,030	$ 37,924	$ -	$ 845	$ 13,433	$ 225,389	$ 11,824,544	$ 11,402,923	$ 421,620
152																
153	Residential	$ 405,778	$ 895,640	$ 1,865,056	$ 984,931	$ 731,150	$ 259,692	$ 64,952	$ 17,102	$ -	$ 381	$ 6,058	$ 101,641	$ 5,332,380	$ 5,142,247	$ 190,133
154	SALES HLF CLASSES	$ 45,974	$ 101,475	$ 211,308	$ 111,591	$ 82,838	$ 29,423	$ 7,359	$ 1,938	$ -	$ 43	$ 686	$ 11,516	$ 604,150	$ 582,608	$ 21,542
155	SALES LLF CLASSES	$ 448,060	$ 988,965	$ 2,059,394	$ 1,087,561	$ 807,335	$ 286,752	$ 71,720	$ 18,884	$ -	$ 421	$ 6,689	$ 112,232	$ 5,888,014	$ 5,678,068	$ 209,945

156

157 **TOTAL CAPACITY COSTS**

158		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	SUMMER
159	Res Heat	$ 425,524	$ 910,443	$ 1,870,078	$ 998,834	$ 747,613	$ 281,079	$ 88,136	$ 40,770	$ 23,840	$ 24,217	$ 29,837	$ 124,456	$ 5,564,827	$ 5,233,572	$ 331,255
160	Res General	$ 4,689	$ 9,632	$ 19,413	$ 10,533	$ 7,972	$ 3,220	$ 1,251	$ 768	$ 595	$ 599	$ 656	$ 1,621	$ 60,947	$ 55,458	$ 5,489
161	G50 Low Annual-Low Winter	$ 13,403	$ 24,018	$ 45,026	$ 25,953	$ 20,453	$ 9,879	$ 6,017	$ 4,980	$ 4,609	$ 4,617	$ 4,740	$ 6,812	$ 170,507	$ 138,732	$ 31,775
162	G40 Low Annual-High Winter	$ 188,144	$ 405,973	$ 837,048	$ 445,679	$ 332,829	$ 123,237	$ 36,587	$ 15,310	$ 7,705	$ 7,874	$ 10,399	$ 52,902	$ 2,463,687	$ 2,332,910	$ 130,777
163	G51 Med Annual-Low Winter	$ 32,523	$ 62,965	$ 123,210	$ 68,514	$ 52,743	$ 23,495	$ 11,342	$ 8,368	$ 7,305	$ 7,329	$ 7,682	$ 13,622	$ 419,099	$ 363,450	$ 55,648
164	G41 Med Annual-High Winter	$ 227,294	$ 491,832	$ 1,015,340	$ 540,051	$ 403,003	$ 148,462	$ 43,240	$ 17,400	$ 8,164	$ 8,370	$ 11,436	$ 63,053	$ 2,977,643	$ 2,825,981	$ 151,662
165	G52 High Annual-Low Winter	$ 13,150	$ 27,592	$ 56,173	$ 30,225	$ 22,743	$ 8,851	$ 3,101	$ 1,691	$ 1,187	$ 1,198	$ 1,365	$ 4,183	$ 171,459	$ 158,735	$ 12,725
166	G42 High Annual-High Winter	$ 50,828	$ 109,367	$ 225,214	$ 120,038	$ 89,711	$ 33,387	$ 10,099	$ 4,381	$ 2,337	$ 2,383	$ 3,061	$ 14,484	$ 665,291	$ 628,545	$ 36,746
167	TOTAL	$ 955,556	$ 2,041,823	$ 4,191,501	$ 2,239,826	$ 1,677,066	$ 631,610	$ 199,773	$ 93,667	$ 55,743	$ 56,588	$ 69,176	$ 281,132	$ 12,493,460	$ 11,737,382	$ 756,079
168																
169	Residential	$ 430,214	$ 920,075	$ 1,889,491	$ 1,009,366	$ 755,585	$ 284,299	$ 89,387	$ 41,537	$ 24,435	$ 24,816	$ 30,493	$ 126,076	$ 5,625,774	$ 5,289,029	$ 336,745
170	SALES HLF CLASSES	$ 59,075	$ 114,576	$ 224,409	$ 124,692	$ 95,939	$ 42,225	$ 20,460	$ 15,039	$ 13,101	$ 13,144	$ 13,787	$ 24,617	$ 761,065	$ 660,916	$ 100,148
171	SALES LLF CLASSES	$ 466,267	$ 1,007,172	$ 2,077,601	$ 1,105,767	$ 825,542	$ 305,086	$ 89,926	$ 37,091	$ 18,207	$ 18,627	$ 24,895	$ 130,439	$ 6,106,621	$ 5,787,436	$ 319,185
172																
173	% ALLOCATION BETWEEN SALES HLF AND LLF															
174	SALES HLF CLASSES														10.25%	23.88%
175	SALES LLF CLASSES														89.75%	76.12%

105	**CAPACITY RELEASE MARGINS & ASSET**	
106		
107	NH DIVISION - MONTHLY CAP. RELEASE	Schedule 1A, LN 76
108		
109	Res Heat	LN 40 Col D * LN 107
110	Res General	LN 41 Col D * LN 107
111	G50 Low Annual-Low Winter	LN 42 Col D * LN 107
112	G40 Low Annual-High Winter	LN 43 Col D * LN 107
113	G51 Med Annual-Low Winter	LN 44 Col D * LN 107
114	G41 Med Annual-High Winter	LN 45 Col D * LN 107
115	G52 High Annual-Low Winter	LN 46 Col D * LN 107
116	G42 High Annual-High Winter	LN 47 Col D * LN 107
117	TOTAL	Sum LN 109 : LN 116
118		
119	Residential	LN 109 + LN 110
120	SALES HLF CLASSES	LN 111 + LN 113 + LN 115
121	SALES LLF CLASSES	LN 112 + LN 114 + LN 116
122		
123	**MISCELLANEOUS CREDITS BY CLASS (I**	
124		
125	NH DIVISION - MISCELLANEOUS CREDIT	Schedule 1A, LN 77 + LN 78
126		
127	Res Heat	LN 40 Col D * LN 125
128	Res General	LN 41 Col D * LN 125
129	G50 Low Annual-Low Winter	LN 42 Col D * LN 125
130	G40 Low Annual-High Winter	LN 43 Col D * LN 125
131	G51 Med Annual-Low Winter	LN 44 Col D * LN 125
132	G41 Med Annual-High Winter	LN 45 Col D * LN 125
133	G52 High Annual-Low Winter	LN 46 Col D * LN 125
134	G42 High Annual-High Winter	LN 47 Col D * LN 125
135	TOTAL	Sum LN 127 : LN 134
136		
137	Residential	LN 127 + LN 128
138	SALES HLF CLASSES	LN 129 + LN 131 + LN 133
139	SALES LLF CLASSES	LN 130 + LN 132 + LN 134
140		
141	**TOTAL NON-BASE CAPACITY COSTS**	
142		
143	Res Heat	Sum of Ln 54, 72, 90, 109, 127
144	Res General	Sum of Ln 55, 73, 91, 110, 128
145	G50 Low Annual-Low Winter	Sum of Ln 56, 74, 92, 111, 129
146	G40 Low Annual-High Winter	Sum of Ln 57, 75, 93, 112, 130
147	G51 Med Annual-Low Winter	Sum of Ln 58, 76, 94, 113, 131
148	G41 Med Annual-High Winter	Sum of Ln 59, 77, 95, 114, 132
149	G52 High Annual-Low Winter	Sum of Ln 60, 78, 96, 115, 133
150	G42 High Annual-High Winter	Sum of Ln 61, 79, 97, 116, 134
151	TOTAL	Sum LN 143 : LN 150
152		
153	Residential	LN 143 + LN 144
154	SALES HLF CLASSES	LN 145 + LN 147 + LN 149
155	SALES LLF CLASSES	LN 146 + LN 148 + LN 150
156		
157	**TOTAL CAPACITY COSTS**	
158		
159	Res Heat	LN 143 + LN 26
160	Res General	LN 144 + LN 27
161	G50 Low Annual-Low Winter	LN 145 + LN 28
162	G40 Low Annual-High Winter	LN 146 + LN 29
163	G51 Med Annual-Low Winter	LN 147 + LN 30
164	G41 Med Annual-High Winter	LN 148 + LN 31
165	G52 High Annual-Low Winter	LN 149 + LN 32
166	G42 High Annual-High Winter	LN 150 + LN 33
167	TOTAL	Sum LN 159 : LN 166
168		
169	Residential	LN 159 + LN 160
170	SALES HLF CLASSES	LN 161 + LN 163 + LN 165
171	SALES LLF CLASSES	LN 162 + LN 164 + LN 166
172		
173	% ALLOCATION BETWEEN SALES HLF A	
174	SALES HLF CLASSES	LN 170 / (LN170 + LN 171)
175	SALES LLF CLASSES	LN 171 / (LN 170 + LN 171)

Northern Utilities - NEW HAMPSHIRE DIVISION
2018 - 2019 Period

	Forecasted Normal Sales By Class- Therms															
Line	Calendar Month Firm Sales Volumes															
No.	Normal Winter	**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**Summer**
1	Res Heat	1,942,964	3,042,302	3,681,961	3,105,665	2,744,152	1,498,549	748,262	509,200	426,209	431,141	450,713	899,377	19,480,496	16,015,594	3,464,902
2	Res General	21,314	33,374	40,391	34,069	30,103	16,439	18,681	12,712	10,641	10,764	11,252	22,453	262,192	175,689	86,503
3	**Total Residential**	**1,964,278**	**3,075,676**	**3,722,352**	**3,139,733**	**2,774,255**	**1,514,988**	**766,943**	**521,912**	**436,849**	**441,905**	**461,965**	**921,830**	**19,742,687**	**16,191,282**	**3,551,405**
4	G50 Low Annual-Low Winter	95,248	149,140	180,498	152,246	134,524	73,462	144,667	98,447	82,402	83,356	87,140	173,883	1,455,015	785,120	669,895
5	G40 Low Annual-High Winter	1,010,525	1,582,285	1,914,968	1,615,239	1,427,219	779,387	241,833	164,570	137,748	139,342	145,667	290,672	9,449,455	8,329,623	1,119,832
6	G51 Med Annual-Low Winter	170,567	267,074	323,227	272,636	240,900	131,553	229,293	156,036	130,605	132,117	138,114	275,600	2,467,723	1,405,957	1,061,766
7	G41 Med Annual-High Winter	776,934	1,216,526	1,472,307	1,241,863	1,097,305	599,225	256,251	174,381	145,960	147,649	154,352	308,002	7,590,755	6,404,159	1,186,596
8	G52 High Annual-Low Winter	35,078	54,925	66,474	56,069	49,543	27,055	37,240	25,342	21,212	21,458	22,432	44,761	461,589	289,143	172,446
9	G42 High Annual-High Winter	179,262	280,690	339,706	286,535	253,182	138,259	73,364	49,925	41,788	42,271	44,190	88,180	1,817,352	1,477,634	339,718
10	**Total C&I**	**2,267,614**	**3,550,640**	**4,297,180**	**3,624,589**	**3,202,672**	**1,748,942**	**982,649**	**668,702**	**559,715**	**566,192**	**591,895**	**1,181,099**	**23,241,888**	**18,691,637**	**4,550,251**
11	**Total Sales**	**4,231,892**	**6,626,315**	**8,019,532**	**6,764,323**	**5,976,928**	**3,263,930**	**1,749,592**	**1,190,614**	**996,564**	**1,008,097**	**1,053,861**	**2,102,929**	**42,984,575**	**34,882,919**	**8,101,656**
12																
13	Residential Heat & Non Heat	1,964,278	3,075,676	3,722,352	3,139,733	2,774,255	1,514,988	766,943	521,912	436,849	441,905	461,965	921,830	19,742,687	16,191,282	3,551,405
14	SALES HLF CLASSES	300,893	471,139	570,199	480,952	424,967	232,070	411,201	279,826	234,219	236,930	247,685	494,245	4,384,327	2,480,220	1,904,106
15	SALES LLF CLASSES	1,966,721	3,079,500	3,726,981	3,143,637	2,777,705	1,516,872	571,448	388,876	325,496	329,262	344,210	686,854	18,857,561	16,211,416	2,646,145
16	**Total Firm Sales**	**4,231,892**	**6,626,315**	**8,019,532**	**6,764,323**	**5,976,928**	**3,263,930**	**1,749,592**	**1,190,614**	**996,564**	**1,008,097**	**1,053,861**	**2,102,929**	**42,984,575**	**34,882,919**	**8,101,656**
17																
18	**ESTIMATED SENDOUT BY CLASS - Therms**															
19	Calendar Month Sendout Volumes (Includes Loss & Unaccounted For)															
20	Normal Winter	**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**SUMMER**
21	Res Heat	1,971,720	3,087,328	3,736,454	3,151,628	2,784,766	1,520,728	759,337	516,736	432,517	437,522	457,384	912,688	19,768,807	16,252,625	3,516,182
22	Res General	21,629	33,867	40,988	34,573	30,548	16,682	18,957	12,901	10,798	10,923	11,419	22,786	266,072	178,289	87,783
23	G50 Low Annual-Low Winter	96,658	151,348	183,169	154,500	136,515	74,549	146,808	99,904	83,622	84,589	88,429	176,457	1,476,549	796,739	679,810
24	G40 Low Annual-High Winter	1,025,481	1,605,703	1,943,310	1,639,145	1,448,342	790,922	245,412	167,005	139,786	141,404	147,823	294,974	9,589,307	8,452,901	1,136,405
25	G51 Med Annual-Low Winter	173,091	271,027	328,011	276,671	244,466	133,500	232,687	158,346	132,538	134,072	140,158	279,679	2,504,245	1,426,765	1,077,480
26	G41 Med Annual-High Winter	788,432	1,234,531	1,494,097	1,260,242	1,113,545	608,094	260,044	176,962	148,120	149,834	156,636	312,560	7,703,098	6,498,941	1,204,157
27	G52 High Annual-Low Winter	35,597	55,738	67,457	56,899	50,276	27,455	37,792	25,718	21,526	21,775	22,764	45,424	468,421	293,423	174,998
28	G42 High Annual-High Winter	181,915	284,844	344,734	290,776	256,929	140,306	74,449	50,664	42,406	42,897	44,844	89,485	1,844,249	1,499,503	344,746
29	**Subtotal**															
30	Residential	1,993,349	3,121,196	3,777,443	3,186,201	2,815,314	1,537,410	778,294	529,636	443,315	448,445	468,803	935,473	20,034,879	16,430,913	3,603,966
31	SALES HLF CLASSES	305,346	478,112	578,638	488,070	431,257	235,504	417,287	283,968	237,686	240,436	251,351	501,559	4,449,215	2,516,927	1,932,287
32	SALES LLF CLASSES	1,995,828	3,125,077	3,782,140	3,190,163	2,818,815	1,539,322	579,905	394,631	330,313	334,136	349,304	697,019	19,136,653	16,451,345	2,685,308
33	**Total Firm Sales**	4,294,524	6,724,385	8,138,221	6,864,435	6,065,386	3,312,236	1,775,486	1,208,235	1,011,313	1,023,017	1,069,458	2,134,052	43,620,747	35,399,186	8,221,561

Northern Utilities - NEW HAMPSHIRE DIVISION
2018 - 2019 Period

	Forecasted Normal Sales By Class- Therms	
Line	Calendar Month Firm Sales Volumes	
No.	**Firm Sales**	
1	Res Heat	(Attachment 2 to Schedule 10B, Page 1) * 10
2	Res General	(Attachment 2 to Schedule 10B, Page 1) * 10
3	**Total Residential**	Sum LN 1 : LN 2
4	G50 Low Annual-Low Winter	(Attachment 2 to Schedule 10B, Page 1) * 10
5	G40 Low Annual-High Winter	(Attachment 2 to Schedule 10B, Page 1) * 10
6	G51 Med Annual-Low Winter	(Attachment 2 to Schedule 10B, Page 1) * 10
7	G41 Med Annual-High Winter	(Attachment 2 to Schedule 10B, Page 1) * 10
8	G52 High Annual-Low Winter	(Attachment 2 to Schedule 10B, Page 1) * 10
9	G42 High Annual-High Winter	(Attachment 2 to Schedule 10B, Page 1) * 10
10	**Total C&I**	Sum LN 4 : LN 9
11	**Total Sales**	LN 3 + LN 10
12		
13	Residential Heat & Non Heat	LN 3
14	SALES HLF CLASSES	LN 4 + LN 6 + LN 8
15	SALES LLF CLASSES	LN 5 + LN 7 + LN 9
16	**Total Firm Sales**	Sum LN 13 : LN 15
17		
18	**ESTIMATED SENDOUT BY CLASS - Therms**	
19	Calendar Month Sendout Volumes (Includes Loss & Unaccounted For)	Unaccounted For)
20	Normal Winter	
21	Res Heat	LN 1 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
22	Res General	LN 2 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
23	G50 Low Annual-Low Winter	LN 4 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
24	G40 Low Annual-High Winter	LN 5 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
25	G51 Med Annual-Low Winter	LN 6 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
26	G41 Med Annual-High Winter	LN 7 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
27	G52 High Annual-Low Winter	LN 8 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
28	G42 High Annual-High Winter	LN 9 x Adj factor (Attachment 2 to Schedule 10 B, Page 3)
29	**Subtotal**	
30	Residential	LN 21 + LN 22
31	SALES HLF CLASSES	LN 23 + LN 25 + LN 27
32	SALES LLF CLASSES	LN 24 + LN 26 + LN 28
33	**Total Firm Sales**	Sum LN 30 : LN 32

Northern Utilities - NEW HAMPSHIRE DIVISION
Sendout by Class - Allocation between Base & Remaining Sendout

34		
35	**DAILY BASE GAS ENTITLEMENT - Therms/day**	
36	Res Heat	14,033
37	Res General	350
38	G50 Low Annual-Low Winter	2,713
39	G40 Low Annual-High Winter	4,535
40	G51 Med Annual-Low Winter	4,300
41	G41 Med Annual-High Winter	4,806
42	G52 High Annual-Low Winter	698
43	G42 High Annual-High Winter	1,376
44	**Subtotal**	
45	Residential	14,383
46	SALES HLF CLASSES	7,712
47	SALES LLF CLASSES	10,717
48	**Total Firm Sales**	**32,812**

49	**BASE SENDOUT BY CLASS - Therms**															
50	Days per Month	30	31	31	28	31	30	31	30	31	31	30	31			
51		**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**SUMMER**
52	Res Heat	420,986	435,019	435,019	392,921	435,019	420,986	435,019	420,986	432,517	435,019	420,986	435,019	5,119,499	2,539,952	2,579,548
53	Res General	10,510	10,860	10,860	9,809	10,860	10,510	10,860	10,510	10,798	10,860	10,510	10,860	127,811	63,411	64,400
54	G50 Low Annual-Low Winter	81,392	84,106	84,106	75,966	84,106	74,549	84,106	81,392	83,622	84,106	81,392	84,106	982,948	484,225	498,723
55	G40 Low Annual-High Winter	136,060	140,595	140,595	126,989	140,595	136,060	140,595	136,060	139,786	140,595	136,060	140,595	1,654,586	820,894	833,692
56	G51 Med Annual-Low Winter	129,005	133,305	133,305	120,404	133,305	129,005	133,305	129,005	132,538	133,305	129,005	133,305	1,568,792	778,329	790,463
57	G41 Med Annual-High Winter	144,172	148,977	148,977	134,560	148,977	144,172	148,977	144,172	148,120	148,977	144,172	148,977	1,753,231	869,836	883,396
58	G52 High Annual-Low Winter	20,952	21,651	21,651	19,555	21,651	20,952	21,651	20,952	21,526	21,651	20,952	21,651	254,794	126,412	128,382
59	G42 High Annual-High Winter	41,276	42,652	42,652	38,524	42,652	41,276	42,652	41,276	42,406	42,652	41,276	42,652	501,943	249,031	252,913
60	**Subtotal**															
61	Residential	431,497	445,880	445,880	402,730	445,880	431,497	445,880	431,497	443,315	445,880	431,497	445,880	5,247,311	2,603,363	2,643,948
62	SALES HLF CLASSES	231,349	239,061	239,061	215,926	239,061	224,506	239,061	231,349	237,686	239,061	231,349	239,061	2,806,533	1,388,965	1,417,568
63	SALES LLF CLASSES	321,507	332,224	332,224	300,073	332,224	321,507	332,224	321,507	330,313	332,224	321,507	332,224	3,909,761	1,939,761	1,970,000
64	**Total Firm Sales**	984,353	1,017,165	1,017,165	918,730	1,017,165	977,510	1,017,165	984,353	1,011,313	1,017,165	984,353	1,017,165	11,963,605	5,932,089	6,031,516
65																

66	**REMAINING SENDOUT BY CLASS - Therms**															
67		**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**SUMMER**
68	Res Heat	1,550,733	2,652,309	3,301,435	2,758,708	2,349,746	1,099,741	324,317	95,749	-	2,503	36,397	477,668	14,649,308	13,712,673	936,635
69	Res General	11,119	23,007	30,128	24,763	19,688	6,172	8,097	2,390	-	62	909	11,925	138,261	114,877	23,384
70	G50 Low Annual-Low Winter	15,266	67,242	99,064	78,533	52,410	-	62,703	18,512	-	484	7,037	92,351	493,601	312,515	181,087
71	G40 Low Annual-High Winter	889,421	1,465,107	1,802,714	1,512,155	1,307,746	654,862	104,817	30,945	-	809	11,763	154,379	7,934,721	7,632,007	302,714
72	G51 Med Annual-Low Winter	44,086	137,722	194,706	156,267	111,161	4,495	99,382	29,341	-	767	11,153	146,374	935,454	648,436	287,017
73	G41 Med Annual-High Winter	644,260	1,085,553	1,345,120	1,125,682	964,568	463,922	111,066	32,790	-	857	12,465	163,583	5,949,867	5,629,105	320,761
74	G52 High Annual-Low Winter	14,645	34,088	45,807	37,344	28,625	6,503	16,141	4,765	-	125	1,811	23,773	213,627	167,011	46,616
75	G42 High Annual-High Winter	140,639	242,192	302,082	252,252	214,277	99,030	31,798	9,388	-	245	3,569	46,833	1,342,305	1,250,472	91,833
76	**Subtotal**															
77	Residential	1,561,853	2,675,316	3,331,563	2,783,471	2,369,434	1,105,913	332,414	98,140	-	2,565	37,306	489,594	14,787,569	13,827,550	960,018
78	SALES HLF CLASSES	73,997	239,051	339,577	272,144	192,196	10,998	178,226	52,618	-	1,375	20,002	262,498	1,642,682	1,127,962	514,719
79	SALES LLF CLASSES	1,674,321	2,792,853	3,449,916	2,890,090	2,486,591	1,217,815	247,681	73,124	-	1,911	27,797	364,795	15,226,892	14,511,585	715,308
80	**Total Firm Sales**	3,310,170	5,707,220	7,121,056	5,945,705	5,048,221	2,334,726	758,321	223,882	-	5,852	85,104	1,116,887	31,657,143	29,467,097	2,190,045

Northern Utilities - NEW HAMPSHIRE DIVISION
Sendout by Class - Allocation between Base & Remaining Sendout

34		
35	DAILY BASE GAS ENTITLEMENT - Therms/day	
36	Res Heat	Avg (LN 21 Jul : LN 21 Aug) / 31 days
37	Res General	Avg (LN 22 Jul : LN 22 Aug) / 31 days
38	G50 Low Annual-Low Winter	Avg (LN 23 Jul : LN 23 Aug) / 31 days
39	G40 Low Annual-High Winter	Avg (LN 24 Jul : LN 24 Aug) / 31 days
40	G51 Med Annual-Low Winter	Avg (LN 25 Jul : LN 25 Aug) / 31 days
41	G41 Med Annual-High Winter	Avg (LN 26 Jul : LN 26 Aug) / 31 days
42	G52 High Annual-Low Winter	Avg (LN 27 Jul : LN 27 Aug) / 31 days
43	G42 High Annual-High Winter	Avg (LN 28 Jul : LN 28 Aug) / 31 days
44	**Subtotal**	
45	Residential	LN 36 + LN 37
46	SALES HLF CLASSES	LN 38 + LN 40 + LN 42
47	SALES LLF CLASSES	LN 39 + LN 41 + LN 43
48	**Total Firm Sales**	Sum LN 45 : LN 47
49	**BASE SENDOUT BY CLASS - Therms**	
50	Days per Month	
51		
52	Res Heat	MIN(LN 36 * LN 50, LN 21)
53	Res General	MIN(LN 37 * LN 50, LN 22)
54	G50 Low Annual-Low Winter	MIN(LN 38 * LN 50, LN 23)
55	G40 Low Annual-High Winter	MIN(LN 39 * LN 50, LN 24)
56	G51 Med Annual-Low Winter	MIN(LN 40 * LN 50, LN 25)
57	G41 Med Annual-High Winter	MIN(LN 41 * LN 50, LN 26)
58	G52 High Annual-Low Winter	MIN(LN 42 * LN 50, LN 27)
59	G42 High Annual-High Winter	MIN(LN 43 * LN 50, LN 28)
60	**Subtotal**	
61	Residential	LN 52 + LN 53
62	SALES HLF CLASSES	LN 54 + LN 56 + LN 58
63	SALES LLF CLASSES	LN 55 + LN 57 + LN 59
64	**Total Firm Sales**	Sum LN 61 : LN 63
65		
66	REMAINING SENDOUT BY CLASS - Therms	
67		
68	Res Heat	LN 21 - LN 52
69	Res General	LN 22 - LN 53
70	G50 Low Annual-Low Winter	LN 23 - LN 54
71	G40 Low Annual-High Winter	LN 24 - LN 55
72	G51 Med Annual-Low Winter	LN 25 - LN 56
73	G41 Med Annual-High Winter	LN 26 - LN 57
74	G52 High Annual-Low Winter	LN 27 - LN 58
75	G42 High Annual-High Winter	LN 28 - LN 59
76	**Subtotal**	
77	Residential	LN 68 + LN 69
78	SALES HLF CLASSES	LN 70 + LN 72 + LN 74
79	SALES LLF CLASSES	LN 71 + LN 73 + LN 75
80	**Total Firm Sales**	Sum LN 77 : LN 79

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

	Total Division Metered Deliveries (Dth)										
	2018-2019	2018-2019 Compared to 2017-2018					2018-2019 Compared to 2016-2017				
	Forecast	2017-2018 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern	2016-2017 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern
Column	1	2	3	4	5	6	7	8	9	10	11
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(3-5)	Note 4.	(1-5)	(6/5)	Note 5.	(8-10)
Nov	717,704	681,817	35,887	5.3%	13,273	22,614	664,929	52,775	7.9%	30,397	22,378
Dec	933,244	932,460	784	0.1%	18,054	-17,270	910,231	23,012	2.5%	39,883	-16,871
Jan	1,293,866	1,228,507	65,359	5.3%	23,749	41,609	1,169,554	124,312	10.6%	51,354	72,958
Feb	1,267,828	1,231,407	36,421	3.0%	23,825	12,595	1,164,164	103,664	8.9%	50,552	53,112
Mar	1,045,573	1,043,397	2,176	0.2%	20,167	-17,991	1,035,769	9,803	0.9%	45,931	-36,128
Apr	881,516	826,476	55,040	6.7%	15,938	39,102	803,777	77,739	9.7%	36,840	40,899
May	602,510	574,552	27,959	4.9%	11,140	16,818	568,537	33,974	6.0%	26,148	7,826
Jun	386,934	399,882	-12,948	-3.2%	7,829	-20,777	385,479	1,456	0.4%	15,408	-13,952
Jul	399,733	384,003	15,730	4.1%	7,519	8,211	387,504	12,229	3.2%	15,490	-3,262
Aug	382,551	378,753	3,799	1.0%	7,384	-3,586	366,064	16,487	4.5%	14,570	1,917
Sep	363,501	365,109	-1,607	-0.4%	7,082	-8,690	356,844	6,658	1.9%	14,129	-7,471
Oct	461,821	448,653	13,168	2.9%	8,654	4,514	427,725	34,095	8.0%	16,824	17,271
Winter	6,139,730	5,944,063	195,667	3.3%	115,008	80,659	5,748,425	391,304	6.8%	255,837	135,467
Summer	2,597,051	2,550,951	46,100	1.8%	49,608	-3,508	2,492,152	104,898	4.2%	101,616	3,282
Annual	8,736,780	8,495,014	241,767	2.8%	164,616	77,151	8,240,578	496,203	6.0%	351,394	144,809

Note 1 Company Forecast
Note 2 Pages 2 - 4; Sum of Column 2 of Billed Deliveries table. Actual Data through May is weather normalized.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Pages 2 - 4; Sum of Column 7 of Billed Deliveries Table. Actual Data provided is weather normalized.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

	Total Division Meter Counts						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	33,550	32,909	641	1.9%	32,083	1,467	4.6%
Dec	33,677	33,037	640	1.9%	32,263	1,414	4.4%
Jan	33,728	33,088	640	1.9%	32,309	1,419	4.4%
Feb	33,753	33,112	641	1.9%	32,348	1,405	4.3%
Mar	33,787	33,146	641	1.9%	32,352	1,435	4.4%
Apr	33,809	33,169	640	1.9%	32,327	1,482	4.6%
May	33,630	32,990	640	1.9%	32,151	1,479	4.6%
Jun	33,311	32,672	640	2.0%	32,031	1,280	4.0%
Jul	33,308	32,669	640	2.0%	32,028	1,280	4.0%
Aug	33,448	32,809	640	1.9%	32,168	1,280	4.0%
Sep	33,616	32,977	640	1.9%	32,336	1,280	4.0%
Oct	33,856	33,216	641	1.9%	32,575	1,281	3.9%
Winter	33,717	33,077	640	1.9%	32,280	1,437	4.5%
Summer	33,528	32,889	640	1.9%	32,215	1,314	4.1%
Annual	33,623	32,983	640	1.9%	32,248	1,375	4.3%

Note 1 Company Forecast
Note 2 Actual data through May. Forecast data beginning June. Page 2 - 4; Sum of Column 2 of Meter Counts table.
Note 3 Actual Data. Page 2 - 4; Sum of Column 5 of Meter Counts table.

	Total Division Use Per Meter						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	21.39	20.72	0.67	3.3%	20.73	0.67	3.2%
Dec	27.71	28.22	-0.51	-1.8%	28.21	-0.50	-1.8%
Jan	38.36	37.13	1.23	3.3%	36.20	2.16	6.0%
Feb	37.56	37.19	0.37	1.0%	35.99	1.57	4.4%
Mar	30.95	31.48	-0.53	-1.7%	32.02	-1.07	-3.3%
Apr	26.07	24.92	1.16	4.6%	24.86	1.21	4.9%
May	17.92	17.42	0.50	2.9%	17.68	0.23	1.3%
Jun	11.62	12.24	-0.62	-5.1%	12.03	-0.42	-3.5%
Jul	12.00	11.75	0.25	2.1%	12.10	-0.10	-0.8%
Aug	11.44	11.54	-0.11	-0.9%	11.38	0.06	0.5%
Sep	10.81	11.07	-0.26	-2.3%	11.04	-0.22	-2.0%
Oct	13.64	13.51	0.13	1.0%	13.13	0.51	3.9%
Winter	182.10	179.70	2.39	1.3%	178.08	4.04	2.3%
Summer	77.46	77.56	-0.11	-0.1%	77.36	0.06	0.1%
Annual	259.85	257.56	2.29	0.9%	255.54	4.10	1.6%

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

	Residential Non-Heat Metered Deliveries (Dth)										
	2018-2019	2018-2019 Compared to 2017-2018					2018-2019 Compared to 2016-2017				
	Forecast	2017-2018 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern	2016-2017 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern
Column	1	2	3	4	5	6	7	8	9	10	11
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(3-5)	Note 4.	(1-5)	(6/5)	Note 5.	(8-10)
Nov	2,083	2,049	34	1.7%	-73	107	1,686	396	23.5%	-48	444
Dec	2,860	3,064	-204	-6.7%	-109	-95	2,267	593	26.2%	-69	663
Jan	4,200	4,173	26	0.6%	-150	176	2,920	1,280	43.8%	-113	1,393
Feb	3,835	3,946	-111	-2.8%	-142	31	3,007	828	27.5%	-121	949
Mar	2,383	2,558	-175	-6.8%	-94	-80	2,533	-150	-5.9%	-158	8
Apr	2,209	2,154	54	2.5%	-78	133	2,276	-67	-2.9%	-153	87
May	1,794	1,783	11	0.6%	-63	73	1,814	-20	-1.1%	-107	87
Jun	1,465	1,672	-208	-12.4%	-59	-149	1,637	-172	-10.5%	-112	-60
Jul	1,395	1,339	56	4.2%	-47	103	1,481	-86	-5.8%	-101	15
Aug	1,368	1,438	-70	-4.9%	-50	-20	1,426	-58	-4.0%	-97	39
Sep	1,293	1,418	-125	-8.8%	-50	-74	1,491	-198	-13.3%	-102	-96
Oct	1,336	1,339	-3	-0.2%	-48	45	1,328	8	0.6%	-93	100
Winter	17,569	17,944	-375	-2.1%	-646	271	14,688	2,881	19.6%	-657	3,537
Summer	8,650	8,989	-339	-3.8%	-318	-21	9,176	-525	-5.7%	-613	88
Annual	26,219	26,933	-714	-2.7%	-964	250	23,864	2,355	9.9%	-1,337	3,692

Note 1	Company Forecast
Note 2	Actual, weather normalized data through May. Forecast data beginning June.
Note 3	Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4	Actual, weather normalized data through May. Forecast data beginning June.
Note 5	Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

	Total Division Meter Counts						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	1,289	1,337	-48	-3.6%	1,327	-38	-2.8%
Dec	1,284	1,332	-48	-3.6%	1,325	-41	-3.1%
Jan	1,278	1,326	-48	-3.6%	1,330	-52	-3.9%
Feb	1,276	1,324	-48	-3.6%	1,330	-54	-4.0%
Mar	1,244	1,292	-48	-3.7%	1,327	-83	-6.2%
Apr	1,266	1,314	-48	-3.6%	1,358	-92	-6.7%
May	1,302	1,350	-48	-3.5%	1,384	-82	-5.9%
Jun	1,300	1,347	-48	-3.5%	1,395	-95	-6.8%
Jul	1,306	1,353	-48	-3.5%	1,401	-95	-6.8%
Aug	1,311	1,358	-48	-3.5%	1,406	-95	-6.8%
Sep	1,295	1,342	-48	-3.5%	1,390	-95	-6.8%
Oct	1,270	1,317	-48	-3.6%	1,365	-95	-7.0%
Winter	1,273	1,321	-48	-3.6%	1,333	-60	-4.5%
Summer	1,297	1,345	-48	-3.5%	1,390	-93	-6.7%
Annual	1,285	1,333	-48	-3.6%	1,362	-76	-5.6%

Note 1	Company Forecast
Note 2	Actual data through May. Forecast data beginning June.
Note 3	Actual Data.

	Total Division Use Per Meter						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	1.62	1.53	0.08	5.4%	1.27	0.34	27.1%
Dec	2.23	2.30	-0.07	-3.2%	1.71	0.52	30.2%
Jan	3.28	3.15	0.14	4.4%	2.20	1.09	49.6%
Feb	3.00	2.98	0.02	0.8%	2.26	0.74	32.9%
Mar	1.92	1.98	-0.06	-3.3%	1.91	0.01	0.3%
Apr	1.74	1.64	0.10	6.4%	1.68	0.07	4.1%
May	1.38	1.32	0.06	4.3%	1.31	0.07	5.1%
Jun	1.13	1.24	-0.11	-9.2%	1.17	-0.05	-4.0%
Jul	1.07	0.99	0.08	8.0%	1.06	0.01	1.1%
Aug	1.04	1.06	-0.02	-1.4%	1.01	0.03	2.9%
Sep	1.00	1.06	-0.06	-5.4%	1.07	-0.07	-6.9%
Oct	1.05	1.02	0.04	3.5%	0.97	0.08	8.1%
Winter	13.80	13.59	0.21	1.6%	11.02	2.77	25.1%
Summer	6.67	6.68	-0.02	-0.2%	6.60	0.07	1.0%
Annual	20.40	20.21	0.19	1.0%	17.53	2.83	16.2%

Note 1	Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2	Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3	Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

	Residential Heat Metered Deliveries (Dth)										
	2018-2019	2018-2019 Compared to 2017-2018					2018-2019 Compared to 2016-2017				
	Forecast	2017-2018 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern	2016-2017 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern
Column	1	2	3	4	5	6	7	8	9	10	11
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(3-5)	Note 4.	(1-5)	(6/5)	Note 5.	(8-10)
Nov	148,865	137,804	11,061	8.0%	3,405	7,656	133,853	15,011	11.2%	7,817	7,194
Dec	234,557	236,335	-1,778	-0.8%	5,819	-7,598	227,758	6,799	3.0%	13,003	-6,203
Jan	359,766	336,192	23,574	7.0%	8,268	15,306	323,157	36,609	11.3%	18,184	18,425
Feb	366,277	354,307	11,971	3.4%	8,706	3,265	331,548	34,729	10.5%	18,421	16,309
Mar	270,992	273,405	-2,413	-0.9%	6,704	-9,118	268,019	2,972	1.1%	15,318	-12,346
Apr	221,103	202,942	18,161	8.9%	4,970	13,190	200,755	20,348	10.1%	11,468	8,880
May	115,859	108,610	7,249	6.7%	2,669	4,580	109,098	6,761	6.2%	6,340	421
Jun	67,930	72,975	-5,045	-6.9%	1,810	-6,854	67,241	689	1.0%	3,419	-2,730
Jul	41,201	37,204	3,997	10.7%	922	3,074	38,740	2,461	6.4%	1,970	491
Aug	36,501	36,116	385	1.1%	890	-505	33,718	2,783	8.3%	1,703	1,079
Sep	35,781	36,919	-1,138	-3.1%	904	-2,041	36,555	-774	-2.1%	1,834	-2,609
Oct	49,219	46,409	2,810	6.1%	1,130	1,680	43,327	5,892	13.6%	2,162	3,730
Winter	1,601,559	1,540,985	60,574	3.9%	37,872	22,702	1,485,090	116,469	7.8%	84,547	31,922
Summer	346,490	338,232	8,258	2.4%	8,324	-66	328,679	17,811	5.4%	17,001	809
Annual	1,948,050	1,879,218	68,832	3.7%	46,196	22,636	1,813,770	134,280	7.4%	98,529	35,750

Note 1 Company Forecast
Note 2 Actual, weather normalized data through May. Forecast data beginning June.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Actual, weather normalized data through May. Forecast data beginning June.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

	Total Division Meter Counts						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	25,302	24,692	610	2.5%	23,906	1,396	5.8%
Dec	25,388	24,778	610	2.5%	24,017	1,371	5.7%
Jan	25,419	24,809	610	2.5%	24,065	1,354	5.6%
Feb	25,441	24,831	610	2.5%	24,102	1,339	5.6%
Mar	25,491	24,881	610	2.5%	24,113	1,378	5.7%
Apr	25,521	24,911	610	2.4%	24,142	1,379	5.7%
May	25,438	24,828	610	2.5%	24,041	1,397	5.8%
Jun	25,215	24,605	610	2.5%	23,995	1,220	5.1%
Jul	25,218	24,608	610	2.5%	23,998	1,220	5.1%
Aug	25,373	24,763	610	2.5%	24,153	1,220	5.1%
Sep	25,536	24,926	610	2.4%	24,316	1,220	5.0%
Oct	25,677	25,067	610	2.4%	24,457	1,220	5.0%
Winter	25,427	24,817	610	2.5%	24,058	1,370	5.7%
Summer	25,410	24,800	610	2.5%	24,160	1,250	5.2%
Annual	25,418	24,808	610	2.5%	24,109	1,310	5.4%

Note 1 Company Forecast
Note 2 Actual data through May. Forecast data beginning June.
Note 3 Actual Data.

	Total Division Use Per Meter						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	5.88	5.58	0.30	5.4%	5.60	0.28	5.1%
Dec	9.24	9.54	-0.30	-3.1%	9.48	-0.24	-2.6%
Jan	14.15	13.55	0.60	4.4%	13.43	0.72	5.4%
Feb	14.40	14.27	0.13	0.9%	13.76	0.64	4.7%
Mar	10.63	10.99	-0.36	-3.3%	11.12	-0.48	-4.4%
Apr	8.66	8.15	0.52	6.3%	8.32	0.35	4.2%
May	4.55	4.37	0.18	4.1%	4.54	0.02	0.4%
Jun	2.69	2.97	-0.27	-9.2%	2.80	-0.11	-3.9%
Jul	1.63	1.51	0.12	8.1%	1.61	0.02	1.2%
Aug	1.44	1.46	-0.02	-1.4%	1.40	0.04	3.0%
Sep	1.40	1.48	-0.08	-5.4%	1.50	-0.10	-6.8%
Oct	1.92	1.85	0.07	3.5%	1.77	0.15	8.2%
Winter	62.99	62.09	0.89	1.4%	61.73	1.27	2.1%
Summer	13.64	13.64	0.00	0.0%	13.60	0.01	0.1%
Annual	76.64	75.75	0.89	1.2%	75.23	1.28	1.7%

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Billed Distribution Service Volumes and Meter Counts

	Total Division C&I Metered Deliveries (Dth)										
	2018-2019	2018-2019 Compared to 2017-2018					2018-2019 Compared to 2016-2017				
	Forecast	2017-2018 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern	2016-2017 Normal	Change	Percent Change	Change Due to Meter Count	Change Due to Load Pattern
Column	1	2	3	4	5	6	7	8	9	10	11
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(3-5)	Note 4.	(1-5)	(6/5)	Note 5.	(8-10)
Nov	566,756	541,964	24,792	4.6%	6,155	18,638	529,389	37,367	7.1%	8,357	29,010
Dec	695,827	693,061	2,766	0.4%	7,717	-4,951	680,207	15,620	2.3%	8,171	7,449
Jan	929,900	888,141	41,759	4.7%	9,853	31,906	843,477	86,423	10.2%	14,168	72,255
Feb	897,715	873,155	24,561	2.8%	9,806	14,754	829,609	68,106	8.2%	14,291	53,815
Mar	772,198	767,434	4,764	0.6%	8,599	-3,835	765,217	6,981	0.9%	15,403	-8,422
Apr	658,204	621,379	36,825	5.9%	6,902	29,923	600,746	57,458	9.6%	17,083	40,375
May	484,858	464,158	20,699	4.5%	5,256	15,443	457,625	27,233	6.0%	11,099	16,133
Jun	317,539	325,235	-7,696	-2.4%	3,734	-11,429	316,601	939	0.3%	7,402	-6,464
Jul	357,137	345,460	11,677	3.4%	3,973	7,704	347,284	9,854	2.8%	8,134	1,719
Aug	344,682	341,199	3,484	1.0%	3,936	-452	330,921	13,762	4.2%	7,775	5,987
Sep	326,427	326,772	-345	-0.1%	3,757	-4,102	318,798	7,629	2.4%	7,466	163
Oct	411,266	400,904	10,362	2.6%	4,586	5,776	383,070	28,196	7.4%	8,865	19,332
Winter	4,520,601	4,385,133	135,468	3.1%	49,033	86,435	4,248,647	271,955	6.4%	78,088	193,867
Summer	2,241,910	2,203,729	38,181	1.7%	25,241	12,940	2,154,297	87,613	4.1%	50,667	36,946
Annual	6,762,512	6,588,862	173,649	2.6%	74,275	99,375	6,402,944	359,568	5.6%	133,864	225,704

Note 1 Company Forecast
Note 2 Actual, weather normalized data through May. Forecast data beginning June.
Note 3 Column 3 of Meter Counts table times Column 2 of Use Per Meter table.
Note 4 Actual, weather normalized data through May. Forecast data beginning June.
Note 5 Column 6 of Meter Counts table times Column 5 of Use Per Meter table.

	Total Division Meter Counts						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	6,958	6,880	78	1.1%	6,850	108	1.6%
Dec	7,004	6,927	77	1.1%	6,921	83	1.2%
Jan	7,030	6,953	77	1.1%	6,914	116	1.7%
Feb	7,035	6,957	78	1.1%	6,916	119	1.7%
Mar	7,051	6,973	78	1.1%	6,912	139	2.0%
Apr	7,021	6,944	77	1.1%	6,827	194	2.8%
May	6,889	6,812	77	1.1%	6,726	163	2.4%
Jun	6,796	6,719	77	1.1%	6,641	155	2.3%
Jul	6,784	6,707	77	1.2%	6,629	155	2.3%
Aug	6,764	6,687	77	1.2%	6,609	155	2.3%
Sep	6,785	6,708	77	1.1%	6,630	155	2.3%
Oct	6,909	6,831	78	1.1%	6,753	156	2.3%
Winter	7,017	6,939	78	1.1%	6,890	127	1.8%
Summer	6,821	6,744	77	1.1%	6,665	157	2.4%
Annual	6,919	6,842	77	1.1%	6,777	142	2.1%

Note 1 Company Forecast
Note 2 Actual data through May. Forecast data beginning June.
Note 3 Actual Data.

	Total Division Use Per Meter						
	2018-2019	Compared to 2017-2018			Compared to 2016-2017		
	Forecast	Actual	Change	Percent Change	Actual	Change	Percent Change
Column	1	2	3	4	5	6	7
Reference	Note 1.	Note 2.	(1-2)	(3/2)	Note 3.	(1-5)	(6/5)
Nov	81.45	78.77	2.68	3.4%	77.28	4.17	5.4%
Dec	99.35	100.05	-0.71	-0.7%	98.28	1.06	1.1%
Jan	132.27	127.73	4.54	3.6%	122.00	10.28	8.4%
Feb	127.60	125.51	2.10	1.7%	119.96	7.65	6.4%
Mar	109.51	110.06	-0.54	-0.5%	110.71	-1.19	-1.1%
Apr	93.75	89.48	4.26	4.8%	88.00	5.75	6.5%
May	70.38	68.14	2.24	3.3%	68.04	2.34	3.4%
Jun	46.72	48.40	-1.68	-3.5%	47.67	-0.95	-2.0%
Jul	52.64	51.51	1.14	2.2%	52.39	0.25	0.5%
Aug	50.96	51.02	-0.07	-0.1%	50.07	0.89	1.8%
Sep	48.11	48.71	-0.60	-1.2%	48.08	0.02	0.1%
Oct	59.52	58.69	0.84	1.4%	56.73	2.80	4.9%
Winter	644.27	631.95	12.31	1.9%	616.64	27.72	4.5%
Summer	328.66	326.76	1.89	0.6%	323.24	5.35	1.7%
Annual	977.38	963.06	14.31	1.5%	944.76	33.07	3.5%

Note 1 Column 1 of Billed Deliveries table divided by Column 1 of Meter Counts table.
Note 2 Column 2 of Billed Deliveries table divided by Column 2 of Meter Counts table.
Note 3 Column 7 of Billed Deliveries table divided by Column 5 of Meter Counts table.

Northern Utilities, Inc.
New Hampshire Division
Sales Service Deliveries Forecast by Rate Class

Forecast Calendar Month Sales Service Deliveries (Dth)

	Res Non-Heat	Res Heat	G40	G50	G41	G51	G42	G52	Special Contracts	Total Division
Nov-18	2,131	194,296	101,052	9,525	77,693	17,057	17,926	3,508	0	423,189
Dec-18	3,337	304,230	158,228	14,914	121,653	26,707	28,069	5,493	0	662,632
Jan-19	4,039	368,196	191,497	18,050	147,231	32,323	33,971	6,647	0	801,953
Feb-19	3,407	310,566	161,524	15,225	124,186	27,264	28,654	5,607	0	676,432
Mar-19	3,010	274,415	142,722	13,452	109,730	24,090	25,318	4,954	0	597,693
Apr-19	1,644	149,855	77,939	7,346	59,923	13,155	13,826	2,705	0	326,393
May-19	1,868	74,826	24,183	14,467	25,625	22,929	7,336	3,724	0	174,959
Jun-19	1,271	50,920	16,457	9,845	17,438	15,604	4,992	2,534	0	119,061
Jul-19	1,064	42,621	13,775	8,240	14,596	13,061	4,179	2,121	0	99,656
Aug-19	1,076	43,114	13,934	8,336	14,765	13,212	4,227	2,146	0	100,810
Sep-19	1,125	45,071	14,567	8,714	15,435	13,811	4,419	2,243	0	105,386
Oct-19	2,245	89,938	29,067	17,388	30,800	27,560	8,818	4,476	0	210,293
Winter	17,569	1,601,559	832,962	78,512	640,416	140,596	147,763	28,914	0	3,488,292
Summer	8,650	346,490	111,983	66,990	118,660	106,177	33,972	17,245	0	810,166
Total	26,219	1,948,050	944,945	145,501	759,075	246,772	181,735	46,159	0	4,298,458

Forecast Calendar Month Distribution Service Deliveries (Dth)

	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Total Division
Nov-18	2,131	194,296	121,477	13,342	144,600	37,655	63,889	158,207	92,423	828,021
Dec-18	3,337	304,230	187,521	19,459	216,689	51,306	87,605	150,181	100,858	1,121,187
Jan-19	4,039	368,196	225,038	22,955	255,710	58,642	106,408	153,878	101,741	1,296,608
Feb-19	3,407	310,566	190,865	19,574	219,149	50,649	94,609	146,689	91,124	1,126,633
Mar-19	3,010	274,415	168,898	17,754	194,909	47,428	82,170	154,310	109,552	1,052,445
Apr-19	1,644	149,855	94,892	10,922	115,851	32,349	55,753	145,979	107,592	714,836
May-19	1,868	74,826	34,259	17,644	59,870	39,750	34,706	139,051	109,682	511,656
Jun-19	1,271	50,920	21,273	12,560	34,475	29,771	18,644	96,335	80,113	345,363
Jul-19	1,064	42,621	17,577	10,954	28,138	27,022	20,986	127,255	118,299	393,916
Aug-19	1,076	43,114	17,813	11,054	28,566	27,222	21,987	129,032	105,069	384,934
Sep-19	1,125	45,071	20,435	11,514	36,039	28,475	24,938	118,896	96,732	383,225
Oct-19	2,245	89,938	42,377	20,789	75,277	45,690	39,884	145,089	116,670	577,958
Winter	17,569	1,601,559	988,691	104,005	1,146,908	278,029	490,434	909,245	603,290	6,139,730
Summer	8,650	346,490	153,733	84,515	262,366	197,929	161,145	755,659	626,563	2,597,051
Total	26,219	1,948,050	1,142,425	188,520	1,409,273	475,957	651,579	1,664,904	1,229,854	8,736,780

Forecast Sales Service Percentage

	Res Non-Heat	Res Heat	G40	G50	G41	G51	G42	G52	Special Contracts	Total Division
Nov-18	100%	100%	83%	71%	54%	45%	28%	2%	0%	51%
Dec-18	100%	100%	84%	77%	56%	52%	32%	4%	0%	59%
Jan-19	100%	100%	85%	79%	58%	55%	32%	4%	0%	62%
Feb-19	100%	100%	85%	78%	57%	54%	30%	4%	0%	60%
Mar-19	100%	100%	85%	76%	56%	51%	31%	3%	0%	57%
Apr-19	100%	100%	82%	67%	52%	41%	25%	2%	0%	46%
May-19	100%	100%	71%	82%	43%	58%	21%	3%	0%	34%
Jun-19	100%	100%	77%	78%	51%	52%	27%	3%	0%	34%
Jul-19	100%	100%	78%	75%	52%	48%	20%	2%	0%	25%
Aug-19	100%	100%	78%	75%	52%	49%	19%	2%	0%	26%
Sep-19	100%	100%	71%	76%	43%	49%	18%	2%	0%	27%
Oct-19	100%	100%	69%	84%	41%	60%	22%	3%	0%	36%
Winter	100%	100%	84%	75%	56%	51%	30%	3%	0%	57%
Summer	100%	100%	73%	79%	45%	54%	21%	2%	0%	31%
Total	100%	100%	83%	77%	54%	52%	28%	3%	0%	49%

Northern Utilities, Inc.
New Hampshire Division
Sales Service Deliveries Forecast by Rate Class

Forecast Bill Month Sales Service Deliveries (Dth)

	Res Non-Heat	Res Heat	G40	G50	G41	G51	G42	G52	Special Contracts	Total Division
Nov-18	2,083	148,865	63,724	9,864	50,398	17,845	16,102	3,992	0	312,872
Dec-18	2,860	234,557	108,290	11,379	69,220	19,084	23,312	5,988	0	474,688
Jan-19	4,200	359,766	204,209	15,596	146,731	29,192	33,623	5,896	0	799,211
Feb-19	3,835	366,277	201,246	14,983	165,184	30,638	30,946	4,519	0	817,627
Mar-19	2,383	270,992	142,143	12,093	112,105	21,173	25,552	4,379	0	590,820
Apr-19	2,209	221,103	113,351	14,598	96,779	22,664	18,229	4,141	0	493,073
May-19	1,794	115,859	52,677	11,711	51,531	20,028	8,762	3,451	0	265,814
Jun-19	1,465	67,930	22,758	10,846	31,175	18,676	5,157	2,626	0	160,633
Jul-19	1,395	41,201	11,201	11,519	16,010	17,352	3,966	2,830	0	105,474
Aug-19	1,368	36,501	9,527	11,947	14,245	18,187	3,864	2,788	0	98,427
Sep-19	1,293	35,781	8,266	10,873	7,443	13,797	5,683	2,527	0	85,662
Oct-19	1,336	49,219	7,554	10,093	-1,744	18,136	6,540	3,022	0	94,155
Winter	17,569	1,601,559	832,962	78,512	640,416	140,596	147,763	28,914	0	3,488,292
Summer	8,650	346,490	111,983	66,990	118,660	106,177	33,972	17,245	0	810,166
Total	26,219	1,948,050	944,945	145,501	759,075	246,772	181,735	46,159	0	4,298,458

Forecast Bill Month Distribution Service Deliveries (Dth)

	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Total Division
Nov-18	2,083	148,865	84,148	13,682	117,304	38,443	62,065	158,692	92,423	717,704
Dec-18	2,860	234,557	137,582	15,923	164,256	43,683	82,848	150,676	100,858	933,244
Jan-19	4,200	359,766	237,751	20,501	255,210	55,511	106,060	153,127	101,741	1,293,866
Feb-19	3,835	366,277	230,587	19,332	260,146	54,024	96,901	145,600	91,124	1,267,828
Mar-19	2,383	270,992	168,319	16,394	197,283	44,511	82,404	153,735	109,552	1,045,573
Apr-19	2,209	221,103	130,304	18,173	152,708	41,858	60,156	147,415	107,592	881,516
May-19	1,794	115,859	62,752	14,888	85,777	36,849	36,132	138,778	109,682	602,510
Jun-19	1,465	67,930	27,574	13,562	48,212	32,843	18,809	96,427	80,113	386,934
Jul-19	1,395	41,201	15,003	14,233	29,552	31,313	20,773	127,964	118,299	399,733
Aug-19	1,368	36,501	13,406	14,665	28,047	32,197	21,624	129,674	105,069	382,551
Sep-19	1,293	35,781	14,134	13,673	28,046	28,461	26,201	119,180	96,732	363,501
Oct-19	1,336	49,219	20,864	13,494	42,732	36,266	37,606	143,635	116,670	461,821
Winter	17,569	1,601,559	988,691	104,005	1,146,908	278,029	490,434	909,245	603,290	6,139,730
Summer	8,650	346,490	153,733	84,515	262,366	197,929	161,145	755,659	626,563	2,597,051
Total	26,219	1,948,050	1,142,425	188,520	1,409,273	475,957	651,579	1,664,904	1,229,854	8,736,780

Forecast Sales Service Percentage

	Res Non-Heat	Res Heat	G40	G50	G41	G51	G42	G52	Special Contracts	Total Division
Nov-18	100%	100%	76%	72%	43%	46%	26%	3%	0%	44%
Dec-18	100%	100%	79%	71%	42%	44%	28%	4%	0%	51%
Jan-19	100%	100%	86%	76%	57%	53%	32%	4%	0%	62%
Feb-19	100%	100%	87%	78%	63%	57%	32%	3%	0%	64%
Mar-19	100%	100%	84%	74%	57%	48%	31%	3%	0%	57%
Apr-19	100%	100%	87%	80%	63%	54%	30%	3%	0%	56%
May-19	100%	100%	84%	79%	60%	54%	24%	2%	0%	44%
Jun-19	100%	100%	83%	80%	65%	57%	27%	3%	0%	42%
Jul-19	100%	100%	75%	81%	54%	55%	19%	2%	0%	26%
Aug-19	100%	100%	71%	81%	51%	56%	18%	2%	0%	26%
Sep-19	100%	100%	58%	80%	27%	48%	22%	2%	0%	24%
Oct-19	100%	100%	36%	75%	-4%	50%	17%	2%	0%	20%
Winter	100%	100%	84%	75%	56%	51%	30%	3%	0%	57%
Summer	100%	100%	73%	79%	45%	54%	21%	2%	0%	31%
Total	100%	100%	83%	77%	54%	52%	28%	3%	0%	49%

Northern Utilities, Inc.
New Hampshire Division
Estimation of Northern - New Hampshire City-Gate Sendout Requirement

Month	Sales Service Deliveries (Dth)	Estimated Company Use Factor	Estimated Company Use (Dth)	Sales Service plus Company Use (Dth)	Lost and Unaccounted For (Percent)	Lost and Unaccounted For (Dth)	Estimated Division Sales Service Sendout (Dth)	Estimated Company-Managed Sales	Total Estimated City-Gate Sendout Requirement
Nov-18	423,189	0.02%	85	423,274	1.46%	6,179	429,453	26,400	455,853
Dec-18	662,632	0.02%	133	662,765	1.46%	9,674	672,439	29,560	701,999
Jan-19	801,953	0.02%	160	802,113	1.46%	11,709	813,822	32,410	846,232
Feb-19	676,432	0.02%	135	676,567	1.46%	9,876	686,443	26,920	713,363
Mar-19	597,693	0.02%	120	597,813	1.46%	8,726	606,539	28,420	634,959
Apr-19	326,393	0.02%	65	326,458	1.46%	4,765	331,223	4,830	336,053
May-19	174,959	0.02%	35	174,994	1.46%	2,554	177,548	3,844	181,392
Jun-19	119,061	0.02%	24	119,085	1.46%	1,738	120,823	3,720	124,543
Jul-19	99,656	0.02%	20	99,676	1.46%	1,455	101,131	3,844	104,975
Aug-19	100,810	0.02%	20	100,830	1.46%	1,472	102,302	3,844	106,146
Sep-19	105,386	0.02%	21	105,407	1.46%	1,539	106,946	3,720	110,666
Oct-19	210,293	0.02%	42	210,335	1.46%	3,070	213,405	3,844	217,249
Winter	3,488,292	0.02%	698	3,488,990	1.46%	50,929	3,539,919	148,540	3,688,459
Summer	810,166	0.02%	162	810,328	1.46%	11,828	822,156	22,816	844,972
Annual	4,298,458	0.02%	860	4,299,318	1.46%	62,757	4,362,075	171,356	4,533,431

Northern Utilities, Inc.
New Hampshire Division
Lost and Unaccounted For, Company Use and Therm Factor Data

Month	GSGT - NH City-Gates (MCF)	Therm Factor	Total - NH City-Gate (Dth)	Total System Billed Sales (Dth)	Company Use (Dth)	Lost and Unaccounted For (Dth)	Company Gas Allowance (Dth)
Jun-14	362,967	1.0373	376,517	414,423	54	(37,960)	(37,906)
Jul-14	319,306	1.0337	330,057	333,540	110	(3,593)	(3,483)
Aug-14	325,691	1.0307	335,703	327,519	150	8,035	8,184
Sep-14	349,196	1.0256	358,136	339,140	108	18,888	18,996
Oct-14	460,496	1.0259	472,423	415,928	78	56,417	56,495
Nov-14	776,035	1.0279	797,664	611,351	112	186,201	186,313
Dec-14	961,855	1.0321	992,769	919,428	233	73,109	73,341
Jan-15	1,280,811	1.0380	1,329,443	1,177,406	349	151,689	152,037
Feb-15	1,266,593	1.0395	1,316,623	1,330,991	415	(14,783)	(14,368)
Mar-15	1,068,073	1.0330	1,103,331	1,193,833	373	(90,875)	(90,502)
Apr-15	647,595	1.0286	666,083	837,472	237	(171,626)	(171,389)
May-15	390,988	1.0285	402,147	463,370	98	(61,321)	(61,223)
Jun-15	374,117	1.0277	384,462	406,358	72	(21,968)	(21,896)
Jul-15	347,251	1.0271	356,669	377,555	58	(20,944)	(20,886)
Aug-15	344,262	1.0276	353,760	328,341	117	25,302	25,419
Sep-15	362,937	1.0268	372,653	363,264	136	9,254	9,390
Oct-15	554,889	1.0302	571,663	464,142	89	107,432	107,521
Nov-15	681,771	1.0292	701,706	594,707	117	106,882	106,999
Dec-15	812,026	1.0296	836,038	793,202	217	42,619	42,836
Jan-16	1,139,171	1.0367	1,181,001	1,044,531	305	136,165	136,470
Feb-16	1,009,991	1.0399	1,050,280	1,112,904	332	(62,956)	(62,624)
Mar-16	846,669	1.0307	872,654	966,540	226	(94,112)	(93,886)
Apr-16	679,627	1.0291	699,384	746,400	236	(47,252)	(47,016)
May-16	475,600	1.0254	487,675	546,425	83	(58,833)	(58,750)
Jun-16	357,643	1.0279	367,636	388,602	46	(21,012)	(20,966)
Jul-16	333,740	1.0234	341,546	330,291	48	11,207	11,255
Aug-16	351,745	1.0268	361,183	362,108	77	(1,002)	(925)
Sep-16	344,260	1.0275	353,710	362,479	85	(8,854)	(8,769)
Oct-16	534,187	1.0277	548,995	450,914	76	98,005	98,081
Nov-16	727,721	1.0255	746,307	632,412	109	113,787	113,896
Dec-16	1,070,154	1.0296	1,101,863	914,019	180	187,664	187,844
Jan-17	1,072,453	1.0310	1,105,656	1,096,068	219	9,369	9,588
Feb-17	933,805	1.0393	970,504	1,031,216	218	(60,930)	(60,712)
Mar-17	1,096,739	1.0314	1,131,198	1,031,817	211	99,170	99,381
Apr-17	608,829	1.0277	625,669	834,527	162	(209,020)	(208,858)
May-17	505,254	1.0276	519,184	568,537	74	(49,427)	(49,353)
Jun-17	367,334	1.0280	377,630	385,479	56	(7,905)	(7,849)
Jul-17	339,837	1.0256	348,547	387,504	59	(39,016)	(38,957)
Aug-17	361,673	1.0280	371,789	366,064	62	5,663	5,725
Sep-17	357,543	1.0278	367,472	356,844	56	10,572	10,628
Oct-17	446,927	1.0284	459,625	427,725	32	31,868	31,900
Nov-17	794,934	1.0307	819,307	581,080	71	238,156	238,227
Dec-17	1,205,148	1.0339	1,245,942	1,003,583	209	242,150	242,359
Jan-18	1,274,596	1.0394	1,324,764	1,403,452	373	(79,061)	(78,688)
Feb-18	936,704	1.0340	968,580	1,110,067	270	(141,757)	(141,487)
Mar-18	999,035	1.0334	1,032,433	998,242	239	33,952	34,191
Apr-18	766,729	1.0318	791,111	889,669	211	(98,769)	(98,558)
May-18	443,025	1.0283	455,580	574,552	108	(119,080)	(118,972)
Total	32,067,935	1.0317	33,085,072	32,596,016	7,555	481,500	489,056
48-Month Average					0.02%	1.46%	1.48%

Northern Utilities - NEW HAMPSHIRE DIVISION
Allocation of Commodity Costs to Customer Classes

Base Commodity Costs

1	**BASE SENDOUT BY CLASS**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
2	**Total Therms**															
3	Res Heat	420,986	435,019	435,019	392,921	435,019	420,986	435,019	420,986	432,517	435,019	420,986	435,019	5,119,499	2,539,952	2,579,548
4	Res General	10,510	10,860	10,860	9,809	10,860	10,510	10,860	10,510	10,798	10,860	10,510	10,860	127,811	63,411	64,400
5	G50 Low Annual-Low Winter	81,392	84,106	84,106	75,966	84,106	74,549	84,106	81,392	83,622	84,106	81,392	84,106	982,948	484,225	498,723
6	G40 Low Annual-High Winter	136,060	140,595	140,595	126,989	140,595	136,060	140,595	136,060	139,786	140,595	136,060	140,595	1,654,586	820,894	833,692
7	G51 Med Annual-Low Winter	129,005	133,305	133,305	120,404	133,305	129,005	133,305	129,005	132,538	133,305	129,005	133,305	1,568,792	778,329	790,463
8	G41 Med Annual-High Winter	144,172	148,977	148,977	134,560	148,977	144,172	148,977	144,172	148,120	148,977	144,172	148,977	1,753,231	869,836	883,396
9	G52 High Annual-Low Winter	20,952	21,651	21,651	19,555	21,651	20,952	21,651	20,952	21,526	21,651	20,952	21,651	254,794	126,412	128,382
10	G42 High Annual-High Winter	41,276	42,652	42,652	38,524	42,652	41,276	42,652	41,276	42,406	42,652	41,276	42,652	501,943	249,031	252,913
11	Total Firm Sales	984,353	1,017,165	1,017,165	918,730	1,017,165	977,510	1,017,165	984,353	1,011,313	1,017,165	984,353	1,017,165	11,963,605	5,932,089	6,031,516
12	**% of Total**															
13	Res Heat	42.77%	42.77%	42.77%	42.77%	42.77%	43.07%	42.77%	42.77%	42.77%	42.77%	42.77%	42.77%			
14	Res General	1.07%	1.07%	1.07%	1.07%	1.07%	1.08%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%			
15	G50 Low Annual-Low Winter	8.27%	8.27%	8.27%	8.27%	8.27%	7.63%	8.27%	8.27%	8.27%	8.27%	8.27%	8.27%			
16	G40 Low Annual-High Winter	13.82%	13.82%	13.82%	13.82%	13.82%	13.92%	13.82%	13.82%	13.82%	13.82%	13.82%	13.82%			
17	G51 Med Annual-Low Winter	13.11%	13.11%	13.11%	13.11%	13.11%	13.20%	13.11%	13.11%	13.11%	13.11%	13.11%	13.11%			
18	G41 Med Annual-High Winter	14.65%	14.65%	14.65%	14.65%	14.65%	14.75%	14.65%	14.65%	14.65%	14.65%	14.65%	14.65%			
19	G52 High Annual-Low Winter	2.13%	2.13%	2.13%	2.13%	2.13%	2.14%	2.13%	2.13%	2.13%	2.13%	2.13%	2.13%			
20	G42 High Annual-High Winter	4.19%	4.19%	4.19%	4.19%	4.19%	4.22%	4.19%	4.19%	4.19%	4.19%	4.19%	4.19%			
21	Total Firm Sales	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%			

22	**BASE COMMODITY COSTS**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
23	TOTAL BASE COMMODITY	$ 295,948	$ 356,570	$ 478,003	$ 427,500	$ 341,107	$ 244,402	$ 247,381	$ 241,937	$ 249,997	$ 249,524	$ 229,981	$ 241,120	$ 3,603,469	$ 2,143,530	$ 1,459,939
24	Res Heat	$ 126,570	$ 152,497	$ 204,431	$ 182,833	$ 145,884	$ 105,257	$ 105,799	$ 103,471	$ 106,918	$ 106,716	$ 98,358	$ 103,122	$ 1,541,857	$ 917,473	$ 624,384
25	Res General	$ 3,160	$ 3,807	$ 5,104	$ 4,565	$ 3,642	$ 2,628	$ 2,641	$ 2,583	$ 2,669	$ 2,664	$ 2,456	$ 2,574	$ 38,493	$ 22,905	$ 15,588
26	G50 Low Annual-Low Winter	$ 24,471	$ 29,483	$ 39,524	$ 35,348	$ 28,205	$ 18,639	$ 20,455	$ 20,005	$ 20,671	$ 20,632	$ 19,016	$ 19,937	$ 296,388	$ 175,671	$ 120,717
27	G40 Low Annual-High Winter	$ 40,907	$ 49,286	$ 66,071	$ 59,090	$ 47,149	$ 34,018	$ 34,194	$ 33,441	$ 34,555	$ 34,490	$ 31,789	$ 33,328	$ 498,317	$ 296,521	$ 201,797
28	G51 Med Annual-Low Winter	$ 38,786	$ 46,730	$ 62,645	$ 56,026	$ 44,704	$ 32,254	$ 32,421	$ 31,707	$ 32,763	$ 32,701	$ 30,140	$ 31,600	$ 472,478	$ 281,145	$ 191,333
29	G41 Med Annual-High Winter	$ 43,345	$ 52,224	$ 70,010	$ 62,613	$ 49,960	$ 36,047	$ 36,232	$ 35,435	$ 36,615	$ 36,546	$ 33,684	$ 35,315	$ 528,027	$ 314,199	$ 213,828
30	G52 High Annual-Low Winter	$ 6,299	$ 7,590	$ 10,174	$ 9,099	$ 7,261	$ 5,239	$ 5,266	$ 5,150	$ 5,321	$ 5,311	$ 4,895	$ 5,132	$ 76,737	$ 45,662	$ 31,075
31	G42 High Annual-High Winter	$ 12,410	$ 14,952	$ 20,044	$ 17,926	$ 14,303	$ 10,320	$ 10,373	$ 10,145	$ 10,483	$ 10,463	$ 9,644	$ 10,111	$ 151,172	$ 89,954	$ 61,218
32																
33	Residential	$ 129,730	$ 156,304	$ 209,535	$ 187,397	$ 149,526	$ 107,885	$ 108,441	$ 106,054	$ 109,587	$ 109,380	$ 100,814	$ 105,696	$ 1,580,350	$ 940,378	$ 639,972
34	SALES HLF CLASSES	$ 69,556	$ 83,803	$ 112,343	$ 100,474	$ 80,169	$ 56,132	$ 58,141	$ 56,862	$ 58,756	$ 58,645	$ 54,052	$ 56,670	$ 845,603	$ 502,478	$ 343,125
35	SALES LLF CLASSES	$ 96,662	$ 116,462	$ 156,124	$ 139,629	$ 111,412	$ 80,385	$ 80,799	$ 79,021	$ 81,653	$ 81,499	$ 75,116	$ 78,754	$ 1,177,516	$ 700,674	$ 476,842

Northern Utilities - NEW HAMPSHIRE DIVISION
Allocation of Commodity Costs to Customer Classes

Base Commodity Costs

1	**BASE SENDOUT BY CLASS**	
2	**Total Therms**	
3	Res Heat	Schedule 10B, LN 52
4	Res General	Schedule 10B, LN 53
5	G50 Low Annual-Low Winter	Schedule 10B, LN 54
6	G40 Low Annual-High Winter	Schedule 10B, LN 55
7	G51 Med Annual-Low Winter	Schedule 10B, LN 56
8	G41 Med Annual-High Winter	Schedule 10B, LN 57
9	G52 High Annual-Low Winter	Schedule 10B, LN 58
10	G42 High Annual-High Winter	Schedule 10B, LN 59
11	Total Firm Sales	Sum LN 3 : LN 10
12	**% of Total**	
13	Res Heat	LN 3 / LN 11
14	Res General	LN 4 / LN 11
15	G50 Low Annual-Low Winter	LN 5 / LN 11
16	G40 Low Annual-High Winter	LN 6 / LN 11
17	G51 Med Annual-Low Winter	LN 7 / LN 11
18	G41 Med Annual-High Winter	LN 8 / LN 11
19	G52 High Annual-Low Winter	LN 9 / LN 11
20	G42 High Annual-High Winter	LN 10 / LN 11
21	Total Firm Sales	Sum LN 13 : LN 20

22	**BASE COMMODITY COSTS**	
23	TOTAL BASE COMMODITY	Schedule 1B, LN 34
24	Res Heat	LN 23 * LN 13
25	Res General	LN 23 * LN 14
26	G50 Low Annual-Low Winter	LN 23 * LN 15
27	G40 Low Annual-High Winter	LN 23 * LN 16
28	G51 Med Annual-Low Winter	LN 23 * LN 17
29	G41 Med Annual-High Winter	LN 23 * LN 18
30	G52 High Annual-Low Winter	LN 23 * LN 19
31	G42 High Annual-High Winter	LN 23 * LN 20
32		
33	Residential	LN 24 + LN 25
34	SALES HLF CLASSES	LN 26 + LN 28 + LN 30
35	SALES LLF CLASSES	LN 27 + LN 29 + LN 31

Northern Utilities - NEW HAMPSHIRE DIVISION
Allocation of Commodity Costs to Customer Classes

Remaining Commodity Costs

36	REMAINING SENDOUT BY CLASS	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
37	**Total Therms**															
38	Res Heat	1,550,733	2,652,309	3,301,435	2,758,708	2,349,746	1,099,741	324,317	95,749	-	2,503	36,397	477,668	14,649,308	13,712,673	936,635
39	Res General	11,119	23,007	30,128	24,763	19,688	6,172	8,097	2,390	-	62	909	11,925	138,261	114,877	23,384
40	G50 Low Annual-Low Winter	15,266	67,242	99,064	78,533	52,410	-	62,703	18,512	-	484	7,037	92,351	493,601	312,515	181,087
41	G40 Low Annual-High Winter	889,421	1,465,107	1,802,714	1,512,155	1,307,746	654,862	104,817	30,945	-	809	11,763	154,379	7,934,721	7,632,007	302,714
42	G51 Med Annual-Low Winter	44,086	137,722	194,706	156,267	111,161	4,495	99,382	29,341	-	767	11,153	146,374	935,454	648,436	287,017
43	G41 Med Annual-High Winter	644,260	1,085,553	1,345,120	1,125,682	964,568	463,922	111,066	32,790	-	857	12,465	163,583	5,949,867	5,629,105	320,761
44	G52 High Annual-Low Winter	14,645	34,088	45,807	37,344	28,625	6,503	16,141	4,765	-	125	1,811	23,773	213,627	167,011	46,616
45	G42 High Annual-High Winter	140,639	242,192	302,082	252,252	214,277	99,030	31,798	9,388	-	245	3,569	46,833	1,342,305	1,250,472	91,833
46	Total Firm Sales	3,310,170	5,707,220	7,121,056	5,945,705	5,048,221	2,334,726	758,321	223,882	-	5,852	85,104	1,116,887	31,657,143	29,467,097	2,190,045
47	**% of Total**															
48	Res Heat	46.85%	46.47%	46.36%	46.40%	46.55%	47.10%	42.77%	42.77%	42.77%	42.77%	42.77%	42.77%			
49	Res General	0.34%	0.40%	0.42%	0.42%	0.39%	0.26%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%			
50	G50 Low Annual-Low Winter	0.46%	1.18%	1.39%	1.32%	1.04%	0.00%	8.27%	8.27%	8.27%	8.27%	8.27%	8.27%			
51	G40 Low Annual-High Winter	26.87%	25.67%	25.32%	25.43%	25.91%	28.05%	13.82%	13.82%	13.82%	13.82%	13.82%	13.82%			
52	G51 Med Annual-Low Winter	1.33%	2.41%	2.73%	2.63%	2.20%	0.19%	13.11%	13.11%	13.11%	13.11%	13.11%	13.11%			
53	G41 Med Annual-High Winter	19.46%	19.02%	18.89%	18.93%	19.11%	19.87%	14.65%	14.65%	14.65%	14.65%	14.65%	14.65%			
54	G52 High Annual-Low Winter	0.44%	0.60%	0.64%	0.63%	0.57%	0.28%	2.13%	2.13%	2.13%	2.13%	2.13%	2.13%			
55	G42 High Annual-High Winter	4.25%	4.24%	4.24%	4.24%	4.24%	4.24%	4.19%	4.19%	4.19%	4.19%	4.19%	4.19%			
56	Total Firm Sales	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%			

57	REMAINING COMMODITY COSTS	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
58	REMAINING COMMODITY	$ 1,426,213	$ 2,906,846	$ 3,449,279	$ 2,890,328	$ 1,980,921	$ 588,204	$ 189,737	$ 59,414	$ 4,792	$ 6,249	$ 18,478	$ 266,160	$ 13,786,621	$ 13,241,792	$ 544,830
59	Res Heat	$ 668,146	$ 1,350,895	$ 1,599,141	$ 1,341,064	$ 922,040	$ 277,066	$ 81,146	$ 25,410	$ 2,049	$ 2,673	$ 7,903	$ 113,831	$ 6,391,363	$ 6,158,351	$ 233,012
60	Res General	$ 4,791	$ 11,718	$ 14,593	$ 12,038	$ 7,726	$ 1,555	$ 2,026	$ 634	$ 51	$ 67	$ 197	$ 2,842	$ 58,238	$ 52,421	$ 5,817
61	G50 Low Annual-Low Winter	$ 6,577	$ 34,248	$ 47,984	$ 38,177	$ 20,566	$ -	$ 15,689	$ 4,913	$ 396	$ 517	$ 1,528	$ 22,008	$ 192,602	$ 147,552	$ 45,050
62	G40 Low Annual-High Winter	$ 383,214	$ 746,220	$ 873,194	$ 735,090	$ 513,159	$ 164,984	$ 26,226	$ 8,212	$ 662	$ 864	$ 2,554	$ 36,789	$ 3,491,169	$ 3,415,862	$ 75,308
63	G51 Med Annual-Low Winter	$ 18,995	$ 70,145	$ 94,311	$ 75,964	$ 43,619	$ 1,132	$ 24,866	$ 7,787	$ 628	$ 819	$ 2,422	$ 34,882	$ 375,571	$ 304,168	$ 71,403
64	G41 Med Annual-High Winter	$ 277,585	$ 552,903	$ 651,546	$ 547,217	$ 378,496	$ 116,879	$ 27,789	$ 8,702	$ 702	$ 915	$ 2,706	$ 38,983	$ 2,604,423	$ 2,524,625	$ 79,798
65	G52 High Annual-Low Winter	$ 6,310	$ 17,362	$ 22,188	$ 18,154	$ 11,233	$ 1,638	$ 4,039	$ 1,265	$ 102	$ 133	$ 393	$ 5,665	$ 88,481	$ 76,884	$ 11,597
66	G42 High Annual-High Winter	$ 60,596	$ 123,355	$ 146,322	$ 122,625	$ 84,082	$ 24,949	$ 7,956	$ 2,491	$ 201	$ 262	$ 775	$ 11,161	$ 584,775	$ 561,929	$ 22,846
67																
68	Residential	$ 672,937	$ 1,362,613	$ 1,613,734	$ 1,353,102	$ 929,766	$ 278,621	$ 83,172	$ 26,044	$ 2,100	$ 2,739	$ 8,100	$ 116,673	$ 6,449,601	$ 6,210,772	$ 238,829
69	SALES HLF CLASSES	$ 31,882	$ 121,755	$ 164,483	$ 132,295	$ 75,418	$ 2,771	$ 44,593	$ 13,964	$ 1,126	$ 1,469	$ 4,343	$ 62,555	$ 656,653	$ 528,604	$ 128,050
70	SALES LLF CLASSES	$ 721,394	$ 1,422,478	$ 1,671,062	$ 1,404,932	$ 975,738	$ 306,813	$ 61,971	$ 19,406	$ 1,565	$ 2,041	$ 6,035	$ 86,933	$ 6,680,367	$ 6,502,416	$ 177,951

Total Commodity Costs

71	TOTAL COMMODITY COSTS	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
72	TOTAL COMMODITY	$ 1,722,161	$ 3,263,416	$ 3,927,282	$ 3,317,829	$ 2,322,029	$ 832,606	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280	$ 17,390,091	$ 15,385,322	$ 2,004,769
73	Res Heat	$ 794,716	$ 1,503,392	$ 1,803,572	$ 1,523,897	$ 1,067,924	$ 382,323	$ 186,946	$ 128,881	$ 108,967	$ 109,389	$ 106,261	$ 216,953	$ 7,933,220	$ 7,075,824	$ 857,396
74	Res General	$ 7,951	$ 15,525	$ 19,697	$ 16,602	$ 11,368	$ 4,183	$ 4,667	$ 3,218	$ 2,720	$ 2,731	$ 2,653	$ 5,416	$ 96,731	$ 75,326	$ 21,405
75	G50 Low Annual-Low Winter	$ 31,048	$ 63,732	$ 87,508	$ 73,525	$ 48,770	$ 18,639	$ 36,144	$ 24,918	$ 21,067	$ 21,149	$ 20,544	$ 41,945	$ 488,990	$ 323,223	$ 165,767
76	G40 Low Annual-High Winter	$ 424,121	$ 795,506	$ 939,265	$ 794,180	$ 560,308	$ 199,003	$ 60,419	$ 41,653	$ 35,218	$ 35,354	$ 34,343	$ 70,118	$ 3,989,487	$ 3,712,382	$ 277,104
77	G51 Med Annual-Low Winter	$ 57,780	$ 116,876	$ 156,956	$ 131,991	$ 88,323	$ 33,387	$ 57,287	$ 39,494	$ 33,391	$ 33,520	$ 32,562	$ 66,482	$ 848,049	$ 585,313	$ 262,736
78	G41 Med Annual-High Winter	$ 320,930	$ 605,127	$ 721,555	$ 609,830	$ 428,456	$ 152,926	$ 64,022	$ 44,137	$ 37,317	$ 37,461	$ 36,390	$ 74,298	$ 3,132,450	$ 2,838,825	$ 293,625
79	G52 High Annual-Low Winter	$ 12,609	$ 24,951	$ 32,362	$ 27,253	$ 18,493	$ 6,877	$ 9,304	$ 6,414	$ 5,423	$ 5,444	$ 5,289	$ 10,798	$ 165,218	$ 122,546	$ 42,672
80	G42 High Annual-High Winter	$ 73,005	$ 138,307	$ 166,365	$ 140,551	$ 98,386	$ 35,269	$ 18,329	$ 12,636	$ 10,684	$ 10,725	$ 10,418	$ 21,271	$ 735,947	$ 651,883	$ 84,064
81																
82	Residential	$ 802,667	$ 1,518,917	$ 1,823,269	$ 1,540,499	$ 1,079,292	$ 386,506	$ 191,613	$ 132,099	$ 111,688	$ 112,119	$ 108,913	$ 222,369	$ 8,029,951	$ 7,151,150	$ 878,801
83	SALES HLF CLASSES	$ 101,438	$ 205,559	$ 276,827	$ 232,769	$ 155,587	$ 58,903	$ 102,734	$ 70,825	$ 59,882	$ 60,114	$ 58,395	$ 119,224	$ 1,502,257	$ 1,031,082	$ 471,174
84	SALES LLF CLASSES	$ 818,056	$ 1,538,940	$ 1,827,186	$ 1,544,561	$ 1,087,150	$ 387,198	$ 142,770	$ 98,426	$ 83,218	$ 83,540	$ 81,151	$ 165,687	$ 7,857,883	$ 7,203,090	$ 654,793
85																
86	% ALLOCATION BETWEEN HLF & LLF															
87	HLF CLASSES%														12.52%	41.85%
88	LLF CLASSES %														87.48%	58.15%

Northern Utilities - NEW HAMPSHIRE DIVISION
Allocation of Commodity Costs to Customer Classes

Remaining Commodity Costs

36	**REMAINING SENDOUT BY CLASS**	
37	**Total Therms**	
38	Res Heat	Schedule 10B, LN 68
39	Res General	Schedule 10B, LN 69
40	G50 Low Annual-Low Winter	Schedule 10B, LN 70
41	G40 Low Annual-High Winter	Schedule 10B, LN 71
42	G51 Med Annual-Low Winter	Schedule 10B, LN 72
43	G41 Med Annual-High Winter	Schedule 10B, LN 73
44	G52 High Annual-Low Winter	Schedule 10B, LN 74
45	G42 High Annual-High Winter	Schedule 10B, LN 75
46	Total Firm Sales	Sum LN 38 : LN 45
47	**% of Total**	
48	Res Heat	LN 38 / LN 46
49	Res General	LN 39 / LN 46
50	G50 Low Annual-Low Winter	LN 40 / LN 46
51	G40 Low Annual-High Winter	LN 41 / LN 46
52	G51 Med Annual-Low Winter	LN 42 / LN 46
53	G41 Med Annual-High Winter	LN 43 / LN 46
54	G52 High Annual-Low Winter	LN 44 / LN 46
55	G42 High Annual-High Winter	LN 45 / LN 46
56	Total Firm Sales	Sum LN 62 : LN 69

57	**REMAINING COMMODITY COSTS**	
58	REMAINING COMMODITY	Schedule 1B, LN 35
59	Res Heat	LN 58 * LN 48
60	Res General	LN 58 * LN 49
61	G50 Low Annual-Low Winter	LN 58 * LN 50
62	G40 Low Annual-High Winter	LN 58 * LN 51
63	G51 Med Annual-Low Winter	LN 58 * LN 52
64	G41 Med Annual-High Winter	LN 58 * LN 53
65	G52 High Annual-Low Winter	LN 58 * LN 54
66	G42 High Annual-High Winter	LN 58 * LN 55
67		
68	Residential	LN 59 + LN 60
69	SALES HLF CLASSES	LN 61 + LN 63 + LN 65
70	SALES LLF CLASSES	LN 62 + LN 64 + LN 66

Total Commodity Costs

71	**TOTAL COMMODITY COSTS**	
72	TOTAL COMMODITY	Schedule 1B, LN 36
73	Res Heat	LN 24 + LN 59
74	Res General	LN 25 + LN 60
75	G50 Low Annual-Low Winter	LN 26 + LN 61
76	G40 Low Annual-High Winter	LN 27 + LN 62
77	G51 Med Annual-Low Winter	LN 28 + LN 63
78	G41 Med Annual-High Winter	LN 29 + LN 64
79	G52 High Annual-Low Winter	LN 30 + LN 65
80	G42 High Annual-High Winter	LN 31 + LN 66
81		
82	Residential	LN 73 + LN 74
83	SALES HLF CLASSES	LN 75 + LN 77 + LN 79
84	SALES LLF CLASSES	LN 76 + LN 78 + LN 80

Northern Utilities, Inc.
New Hampshire Division
Schedule 11A
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Northern Utilities, Inc.
Normal Winter Weather - Sales Service and Company Managed Load
Commodity Volumes by Supply Source (Dth)
November 2018 through April 2019

Description	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Season
Pipeline Supplies							
Tennessee Long-Haul Path	149,476	154,459	154,459	139,511	154,459	149,475	901,838
Algonquin Receipts Path	37,530	38,781	38,781	35,028	38,781	37,530	226,431
Iroquois Receipts Path	151,226	194,804	194,804	176,000	194,857	12,389	924,081
Tennessee Niagara Path	56,612	58,499	58,499	52,838	58,499	3,922	288,868
PNGTS Delivered (Dec - Feb)	0	231,686	231,686	209,265	0	0	672,638
Maritimes Delivered	225,000	232,500	232,500	210,000	232,500	0	1,132,500
Incremental Delivered Supplies	0	0	0	0	0	0	0
Subtotal Pipeline	619,844	910,729	910,729	822,642	679,096	203,317	4,146,356
Underground Storage							
FS-MA Path (TGP Zone 4 300 Leg)	68,438	0	0	371	55,428	68,438	192,675
Tennessee Storage Path	0	70,719	70,719	63,505	15,291	0	220,233
Tennesse Storage Path	68,438	70,719	70,719	63,875	70,719	68,438	412,908
Union Dawn Path (Dawn)	145,569	150,421	0	0	79,143	647,635	1,022,767
Union Dawn Storage Path	285,832	540,762	797,168	810,227	705,703	0	3,139,692
W10 Storage Path	431,401	691,182	797,168	810,227	784,846	647,635	4,162,459
Subtotal Storage	499,838	761,901	867,887	874,102	855,565	716,073	4,575,367
Peaking Supplies							
Peaking Contract 1	0	47,545	248,171	60,060	52,060	0	407,836
LNG	2,145	2,217	38,895	2,002	2,217	2,145	49,620
Subtotal Peaking	2,145	49,762	287,066	62,062	54,276	2,145	457,456
Total Delivered (Dth)	1,121,827	1,722,392	2,065,682	1,758,806	1,588,937	921,534	9,179,179

Northern Utilities, Inc.
New Hampshire Division
Schedule 11B
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Northern Utilities, Inc.
Design Winter Weather - Planning Load
Commodity Volumes by Supply Source (Dth)
November 2018 through April 2019

Description	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Season
Pipeline Supplies							
Tennessee Long-Haul Path	23,024	128,485	255,267	257,464	139,403	31,037	834,681
Algonquin Receipts Path	37,530	38,781	38,781	35,028	38,781	31,336	220,237
Iroquois Receipts Path	193,801	199,732	199,732	180,451	199,785	23,740	997,242
Tennessee Niagara Path	69,805	72,132	72,132	65,151	72,132	8,213	359,564
PNGTS Delivered (Dec - Feb)	0	231,686	231,686	209,265	0	0	672,638
Maritimes Delivered	225,000	232,500	232,500	210,000	232,500	0	1,132,500
Incremental Delivered Supplies	0	0	291	0	0	0	291
Subtotal Pipeline	549,160	903,317	1,030,390	957,359	682,600	94,325	4,217,152
Underground Storage							
FS-MA Path (TGP Zone 4 300 Leg)	79,311	0	0	430	64,235	79,311	223,288
Tennessee Storage Path	0	81,955	81,955	73,594	17,720	0	255,225
Tennesse Storage Path	79,311	81,955	81,955	74,024	81,955	79,311	478,512
Union Dawn Path (Dawn)	809,826	1,801	2,882	101,177	524,200	928,972	2,368,857
Union Dawn Storage Path	0	1,104,105	1,190,977	986,811	576,643	0	3,858,536
W10 Storage Path	809,826	1,105,906	1,193,858	1,087,988	1,100,843	928,972	6,227,394
Subtotal Storage	889,138	1,187,862	1,275,813	1,162,012	1,182,798	1,008,283	6,705,906
Peaking Supplies							
Peaking Contract 1	0	74,210	221,970	101,772	32,917	0	430,869
LNG	2,145	2,217	95,089	2,002	8,523	2,145	112,120
Subtotal Peaking	2,145	76,426	317,059	103,774	41,439	2,145	542,989
Total Delivered (Dth)	1,440,443	2,167,604	2,623,262	2,223,145	1,906,838	1,104,754	11,466,046

Northern Utilities, Inc.
Normal Winter Weather - Sales Service and Company Managed Load
Capacity Utilization by Supply Source
November 2018 through April 2019

Description	Projected Volume (Dth)	Maximum Volume (Dth)	Capacity Utilization
Pipeline Supplies			
Tennessee Long-Haul Path	901,838	1,924,270	47%
Algonquin Receipts Path	226,431	226,431	100%
Iroquois Receipts Path	924,081	944,447	98%
Tennessee Niagara Path	288,868	341,580	85%
PNGTS Delivered (Dec - Feb)	672,638	672,638	100%
Maritimes Delivered	1,132,500	1,132,500	100%
Incremental Delivered Supplies	0	N/A	
Subtotal Pipeline	4,146,356	5,241,865	79%
Underground Storage			
FS-MA Path (TGP Zone 4 300 Leg)	192,675		
Tennessee Storage Path	220,233		
Tennesse Storage Path	412,908	412,938	100%
Union Dawn Path (Dawn)	1,022,767		
Union Dawn Storage Path	3,139,692		
Union Dawn Storage Path	4,162,459	6,225,780	67%
Subtotal Storage	4,575,367	6,638,718	69%
Peaking Supplies			
Peaking Contract 1	407,836	597,900	68%
LNG	49,620	125,000	40%
Subtotal Peaking	457,456	722,900	63%
Total Delivered (Dth)	9,179,179	12,603,483	73%

Northern Utilities, Inc.
Design Winter Weather - Planning Load
Capacity Utilization by Supply Source
November 2018 through April 2019

Description	Projected Volume (Dth)	Maximum Volume (Dth)	Capacity Utilization
Pipeline Supplies			
Tennessee Long-Haul Path	834,681	2,372,729	35%
Algonquin Receipts Path	220,237	226,431	97%
Iroquois Receipts Path	997,242	1,164,554	86%
Tennessee Niagara Path	359,564	421,187	85%
PNGTS Delivered (Dec - Feb)	672,638	672,638	100%
Maritimes Delivered	1,132,500	1,132,500	100%
Incremental Delivered Supplies	291	N/A	
Subtotal Pipeline	4,217,152	5,990,039	70%
Underground Storage			
FS-MA Path (TGP Zone 4 300 Leg)	223,288		
Tennessee Storage Path	255,225		
Tennesse Storage Path	478,512	478,564	100%
Union Dawn Path (Dawn)	2,368,857		
Union Dawn Storage Path	3,858,536		
Union Dawn Storage Path	6,227,394	7,215,203	86%
Subtotal Storage	6,705,906	7,693,767	87%
Peaking Supplies			
Peaking Contract 1	430,869	597,900	72%
LNG	112,120	125,000	90%
Subtotal Peaking	542,989	722,900	75%
Total Delivered (Dth)	11,466,046	14,406,706	80%

Northern Utilities Inc.
Forecast of Upcoming Winter Period Design Day Report
2018 / 2019 Winter Period
(Therms)

Demand	
NH Firm Sales	491,075
NH Non-Capacity Exempt Transportation	122,630
NH Capacity Exempt Transportation	74,415
NH Interruptible Sales	0
NH Interruptible Transportation	0
NH Design Day Demand	688,120
ME Firm Sales	597,819
ME Non-Capacity Exempt Transportation	64,547
ME Capacity Exempt Transportation	192,282
ME Interruptible Sales	0
ME Interruptible Transportation	0
ME Design Day Demand	854,648
Total Firm Sales	1,088,895
Total Non-Capacity Exempt Transportation	187,177
Total Capacity Exempt Transportation	266,697
Total Interruptible Sales	0
Total Interruptible Transportation	0
Total Design Day Demand	1,542,769
Supplies	
Capacity Exempt Transportation	266,697
Pipeline	231,210
Storage	425,070
On-System LNG	65,000
Off-System Peaking Contracts & Delivered Baseload	548,080
Granite Only Assigned to Non-Exempt	77,100
Total	1,613,157

Effective Degree Day	
New Hampshire	79.0
Maine	79.0
Probability	1 in 33

Report Prepared By	Francis X. Wells
Title	Manager, Energy Planning
Signature	Fran X Wells

Northern Utilities Inc.
New Hampshire 7 Day Cold Snap Analysis
Winter 2018-2019

Coldest 7 Consecutive Days

Based on historic Portsmouth weather data

Date	EDD
February 11, 1979	68
February 12, 1979	60
February 13, 1979	73
February 14, 1979	73
February 15, 1979	64
February 16, 1979	69
February 17, 1979	72
Total	479

Maximum Projected Design Week Demand (Dth)

Daily Baseload	5,507
Weekly Baseload	38,548
Heating Increment*	680
Effective Degree Days	479
Total Heat Load	325,886
Projected Cold Snap Demand	364,433

New Hampshire Allocation	**44.11%**

Based on the latest demand cost allocator in the Winter COG filing.

Maximum Supply Capability (Dth)

Amount to be Supplied by Natural Gas Pipelines

Tennessee Zone 0 and Zone L Pools	13,109
Tennessee Niagara	2,327
Iroquois Receipts	6,434
Leidy Hub Supply (Texas Eastern, Algonquin)	965
Transco Zone 6, non-NY Supply (Algonquin)	286
Tennessee Firm Storage	2,644
Union Dawn Storage	39,863
Maritimes Delivered Baseload	7,474
PNGTS Delivered Baseload (Dec-Feb)	7,474
Peaking Contract 1	39,860
Total Daily Pipeline	120,436
Pipeline for 7 days	843,052
New Hampshire Allocation	371,870

Available LNG Storage

Facility	Gallons	Dth
Lewiston LNG	145,134	12,140
Total	145,134	12,140
New Hampshire Allocation - 7 Days		5,355

LNG Delivery Contract

Northern Utilities plans to secure a contract for LNG Delivery for up to three loads of LNG per day.

The storage credit for LNG is calculated as follows:

Number of Days	7
Number of Loads	5
Delivery Reliability	70%
Assumed Number of LNG Deliveries	25
Dth Per Load	900
Total Storage Credit	22,050
NH Storage Credit - 7 Days	9,726

Summary

Maximum projected design week demand	364,433
Amount to be furnished by natural gas pipeline	371,870
Remaining Balance	-7,437
Storage available	5,355
Credit from LNG delivery supply contract	9,726
Total available storage and LNG deliveries	15,081
Net Surplus/(Deficiency)	**22,518**

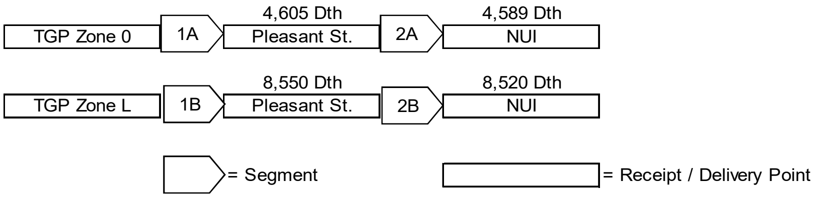
Report Prepared By	Francis X. Wells
Title	Manager, Energy Planning
Signature	Fran X Wells

Northern Capacity Summary (Dth/Day)

Pipeline Capacity Paths	
Tennessee Zone 0 and Zone L Pools	13,109
Tennessee Niagara	2,327
Iroquois Receipts	6,434
Leidy Hub Supply (Texas Eastern, Algonquin)	965
Transco Zone 6, non-NY Supply (Algonquin)	286
Total Pipeline Capacity	23,121
Storage Capacity Paths	
Tennessee Firm Storage	2,644
Union Dawn Storage	39,863
Total Storage Capacity	42,507
Peaking Capacity Paths	
LNG - On-System	6,500
Maritimes Delivered Baseload	7,474
PNGTS Delivered Baseload (Dec-Feb)	7,474
Peaking Contract 1	39,860
Additional Granite Capacity	1,408
Total Peaking Capacity	62,716
Total Design Day Capacity	128,344

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Tennessee Zone 0 100 Leg, Zone L 500 and 800 Leg Pools

Capacity Path Diagram



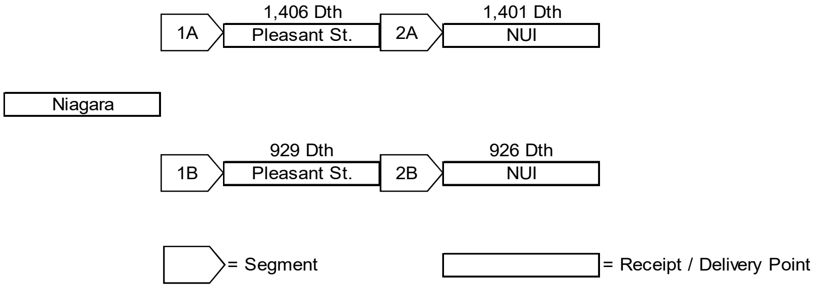
Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date[2]	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1A[1]	Transportation	Tennessee	5083	FT-A	10/31/2023	4,605	Dth	Year-Round	Zone 0, 100 Leg	Pleasant St.	Granite
2A	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	4,589	Dth	Year-Round	Granite	Northern City Gates	
1B[1]	Transportation	Tennessee	5083	FT-A	10/31/2023	8,550	Dth	Year-Round	Zone L, 500 & 800 Legs	Pleasant St.	Granite
2B	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	8,520	Dth	Year-Round	Granite	Northern City Gates	
Total Path Deliverable						13,109	Dth				

Note 1: Tennessee Contract No. 5083 also allows for firm delivery rights to Bay State Gas city gates. As such, Tennessee Production could also be delivered to Northern City Gates via the Bay State Exchange.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Niagara (Interconnection of TransCanada and Tennessee Pipelines)

Capacity Path Diagram

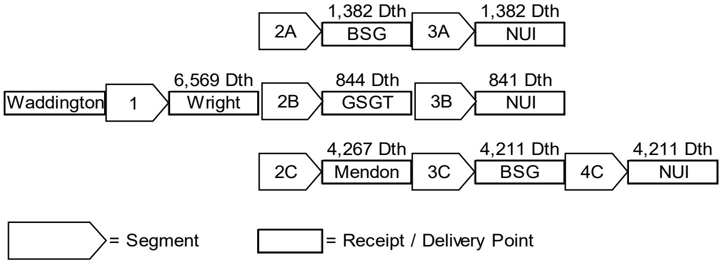


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1A	Transportation	Tennessee	5292	FT-A	3/31/2020	1,406	Dth	Year-Round	Niagara	Pleasant St.	Granite
2A	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	1,401	Dth	Year-Round	Granite	Northern City Gates	
1B	Transportation	Tennessee	39735	FT-A	3/31/2020	929	Dth	Year-Round	Niagara	Pleasant St.	Granite
2B	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	926	Dth	Year-Round	Granite	Northern City Gates	
Total Path Deliverable						2,327	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Iroquois Receipts

Capacity Path Diagram

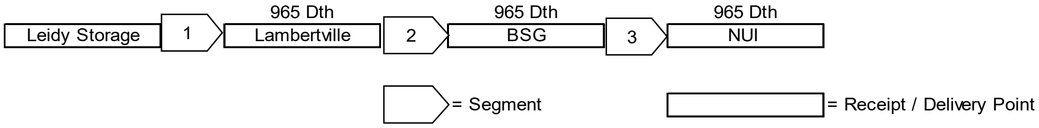


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date[1]	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1	Transportation	Iroquois	R181001	RTS-1	10/31/2023	6,569	Dth	Year-Round	Waddington	Wright	Tennessee
2A	Transportation	Tennessee	95196	FT-A	10/31/2022	1,382	Dth	Year-Round	Wright	Bay State City Gate	
3A	Exchange	Bay State Gas	NA	NA	Renewal Clause	1,382	Dth	Year-Round	Bay State City Gate	Northern City Gates	
2B	Transportation	Tennessee	95196	FT-A	10/31/2022	844	Dth	Year-Round	Wright	Pleasant St.	Granite
3B	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	841	Dth	Year-Round	Granite	Northern City Gates	
2C	Transportation	Tennessee	41099	FT-A	10/31/2022	4,267	Dth	Year-Round	Wright	Mendon	Algonquin
3C	Transportation	Algonquin	93200F	AFT-1	10/31/2019	4,211	Dth	Year-Round	Mendon	Bay State City Gate	
4C	Exchange	Bay State Gas	NA	NA	Renewal Clause	4,211	Dth	Year-Round	Bay State City Gate	Northern City Gates	
Total Path Deliverable						6,434	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Algonquin Receipt Points

Capacity Path Diagram

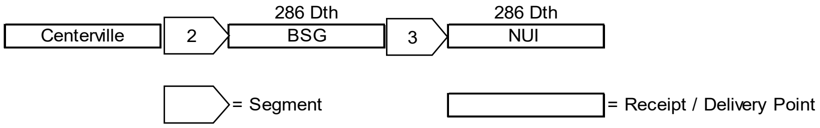


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date[1]	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1	Transportation	Texas Eastern	800384	FT-1	10/31/2019	965	Dth	Year-Round	Leidy Storage	Lambertville, NJ	Algonquin
2	Transportation	Algonquin	93201A1C	AFT-1 (F-2/F-3)	10/31/2019	965	Dth	Year-Round	Lambertville, NJ	Bay State City Gate	
3	Exchange	Bay State Gas	NA	NA	Renewal Clause	965	Dth	Year-Round	Bay State City Gate	Northern City Gates	
Total Path Deliverable						965	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Algonquin Receipt Points

Capacity Path Diagram

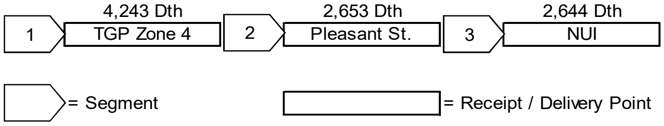


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1	Transportation	Algonquin	93201A1C	AFT-1 (F-2/F-3)	10/31/2019	286	Dth	Year-Round	Centerville, NJ	Bay State City Gate	
2	Exchange	Bay State Gas	NA	NA	Renewal Clause	286	Dth	Year-Round	Bay State City Gate	Northern City Gates	
Total Path Deliverable						286	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Tennessee Firm Storage - Market Area

Capacity Path Diagram



Capacity Path Detail

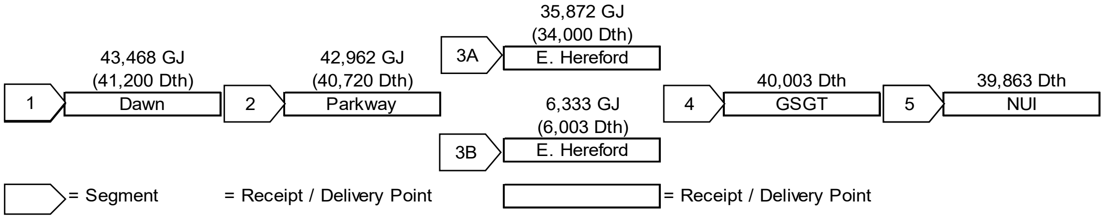
Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1[1]	Storage	Tennessee	5195	FS-MA	3/31/2020	4,243	Dth	Year-Round	NA	TGP Zone 4	Tennessee
2[2]	Transportation	Tennessee	5265	FT-A	3/31/2020	2,653	Dth	Year-Round	TGP Zone 4	Pleasant St.	Granite
3	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	2,644	Dth	Year-Round	Pleasant St.	Northern City Gates	
Total Path Deliverable						2,644	Dth				

Note 1: Tennessee Contract No. 5195 has a maximum storage quantity of 259,337 Dth.

Note 2: Tennessee Contract No. 5265 also allows for firm delivery rights to Bay State Gas city gates. As such, Tennessee Firm Storage could also be delivered to Northern City Gates via the Bay State Exchange.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Union Dawn Storage

Capacity Path Diagram

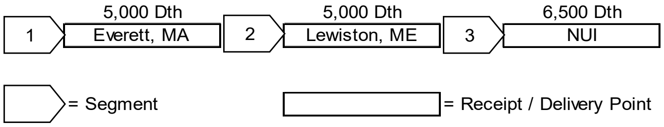


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1	Storage	Union	LST086	Firm Storage (MDWD)	3/31/2023	43,468	GJ	Year-Round	NA	Dawn	Union
1	Storage	Union	LST086	Firm Storage (MSB)	3/31/2023	4,220,224	GJ	Year-Round	NA	Dawn	
1	Storage	Union	LST086	Firm Storage (MDID)	3/31/2023	31,652	GJ	Year-Round	NA	Dawn	
2	Transportation	Union	M12256	M12	10/31/2033	42,962	GJ	Year-Round	Dawn	Parkway	TransCanada
3A	Transportation	TransCanada	57901	FT	3/31/2033	35,872	GJ	Year-Round	Parkway	East Hereford	PNGTS
3B	Transportation	TransCanada	57055	FT	10/31/2032	6,333	GJ	Year-Round	Parkway	East Hereford	PNGTS
4	Transportation	PNGTS	FTN-NUI-0001	FT	10/31/2033	40,003	Dth	Year-Round	Pittsburg, NH	Newington, NH	Granite
5	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	39,863	Dth	Year-Round	Newington, NH	Northern City Gates	
Total Path Deliverable						39,863	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Lewiston LNG Plant

Capacity Path Diagram



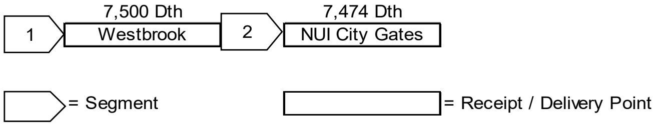
Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1[1]	LNG Contract	Confidential	NA	NA	10/31/2019	5,000	Dth	Year-Round	NA		NA
2	LNG Trucking Contract	Confidential			10/31/2019	5,000	Dth	Year-Round		Lewiston, ME	NA
3	Lewiston LNG Plant	N/A	NA	NA	N/A	6,500	Dth	Year-Round	Lewiston, ME	Northern Distribution System	
Total Path Deliverable						6,500	Dth				

Note 1: The LNG Contract allows Northern to nominate up to 5,000 Dth per day (5 trucks) with an annual maximum take equal to 125,000 Dth.

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Maritimes Delivered Baseload Supply

Capacity Path Diagram

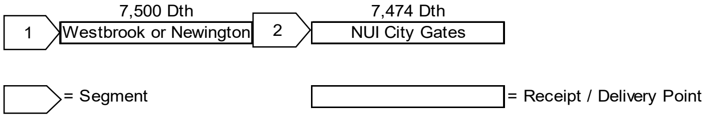


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1[1]	Baseload Supply	Confidential	NA	NA	3/31/2019	7,500	Dth	Winter Only (Nov - Mar)	NA	Westbrook	Granite
2	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	7,474	Dth	Year-Round	Granite	Northern City Gates	
Total Path Deliverable						7,474	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: PNGTS Delivered Baseload Supply

Capacity Path Diagram

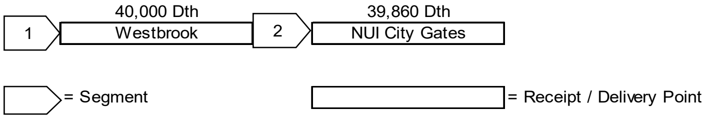


Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1	Baseload Supply	Confidential	NA	NA	2/28/2019	7,500	Dth	Winter Only (Dec - Feb)	NA	Newington or Westbrook	Granite
2	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	7,474	Dth	Year-Round	Newington or Westbrook	Northern City Gates	
Total Path Deliverable						7,474	Dth				

Northern Utilities, Inc.
Capacity Path Diagram and Detail
Source of Supply: Peaking Contract 1

Capacity Path Diagram



Capacity Path Detail

Segment	Product	Vendor	Contract ID	Rate Schedule	Contract Termination Date	Northern MDQ	Dth / GJ	Availability	Receipt Point	Delivery Point	Interconnecting Pipeline
1[1]	Peaking Supply	Confidential	NA	NA	3/31/2019	40,000	Dth	Winter Only (Nov - Mar)	NA	Westbrook or Lewiston	Granite or Northern City Gates
2	Transportation	Granite	16-100-FT-NN	FT-NN	10/31/2019	39,860	Dth	Year-Round	Westbrook or Lewiston	Northern City Gates	
Total Path Deliverable						39,860	Dth				

Note 1: Peaking Contract 1 allows Northern to nominate up to 40,000 Dth per Day and up to 600,000 Dth from November 2018 through March 2019. Contract volumes may also be delivered to NUI - Lewiston in which case no Granite capacity is utilized.

Northern Utilities, Inc.
New Hampshire Division
Migration to Transportation Only Service by Rate Class
November 2018 through October 2018

C&I Rate Class	Annual Sales Service Deliveries (Dth)	Percentage of Sales Service Total by Rate Class	Sales Service Percentage by Rate Class
G40	944,945	41%	83%
G50	145,501	6%	77%
G41	759,075	33%	54%
G51	246,772	11%	52%
G42	181,735	8%	28%
G52	46,159	2%	3%
Special Contracts	-	0%	0%
Total C&I	2,324,189	100%	34%

C&I Rate Class	Annual Transport-Only Deliveries (Dth)	Percentage of Transport Only Total by Rate Class	Transportation Service Percentage by Rate Class
T40	197,479	4%	17%
T50	43,018	1%	23%
T41	650,198	15%	46%
T51	229,185	5%	48%
T42	469,843	11%	72%
T52	1,618,745	36%	97%
Special Contracts	1,229,854	28%	100%
Total C&I	4,438,323	100%	66%

C&I Rate Class	Annual Total Deliveries (Dth)	Percentage of Total by Rate Class
G/T40	1,142,425	17%
G/T50	188,520	3%
G/T41	1,409,273	21%
G/T51	475,957	7%
G/T42	651,579	10%
G/T52	1,664,904	25%
Special Contracts	1,229,854	18%
Total C&I	6,762,512	100%

REDACTED

Northern Utilities, Inc.
New Hampshire Division
Schedule 14
Page 1 of 1

Northern Utilities, Inc.
Storage Inventory and Activity Costs

Denotes Confidential Information

Tennessee Storage

Month	Beginning Inventory Volume	Injections	Withdrawals	Ending Inventory Volume	Beginning Inventory Cost	Beginning Inventory Rate	Injection Rate	Injected Value	Withdrawal Rate	Withdrawn Value	Ending Inventory Value	Interest Rate	Carrying Costs	Ending Inventory Value Excluding	Withdrawn Value plus Charges
Nov-18	223,782	-	-	223,782	$ 508,432	$ 2.27	NA	$ -	$ 2.27	$ -	$ 508,432	2.72%	$ 1,152	$ 508,432	$ -
Dec-18	223,782	-	71,859	151,923	$ 508,432	$ 2.27	NA	$ -	$ 2.27	$ 163,263	$ 345,170	2.72%	$ 967	$ 345,170	$ 163,263
Jan-19	151,923	-	71,859	80,065	$ 345,170	$ 2.27	NA	$ -	$ 2.27	$ 163,263	$ 181,907	2.72%	$ 597	$ 181,907	$ 163,263
Feb-19	80,065	-	64,528	15,537	$ 181,907	$ 2.27	NA	$ -	$ 2.27	$ 146,607	$ 35,300	2.72%	$ 246	$ 35,300	$ 146,607
Mar-19	15,537	-	15,537	-	$ 35,300	$ 2.27	NA	$ -	$ 2.27	$ 35,300	$ -	2.72%	$ 40	$ -	$ 35,300
Apr-19	-	-	-	-	$ -	NA	NA	$ -	$ -	$ -	$ -	2.72%	$ -	$ -	$ -
May-19	-	-	-	-	$ -	NA	NA	$ -	$ -	$ -	$ -	2.72%	$ -	$ -	$ -
Jun-19	-	40,272	-	40,272	$ -	NA	$ 2.27	$ 91,285	$ 2.27	$ -	$ 91,285	2.72%	$ 103	$ 91,285	$ -
Jul-19	40,272	46,251	-	86,522	$ 91,285	$ 2.27	$ 2.27	$ 104,977	$ 2.27	$ -	$ 196,262	2.72%	$ 326	$ 196,262	$ -
Aug-19	86,522	46,251	-	132,773	$ 196,262	$ 2.27	$ 2.25	$ 104,229	$ 2.26	$ -	$ 300,491	2.72%	$ 563	$ 300,490	$ -
Sep-19	132,773	44,759	-	177,531	$ 300,491	$ 2.26	$ 2.12	$ 95,056	$ 2.23	$ -	$ 395,547	2.72%	$ 789	$ 395,546	$ -
Oct-19	177,531	46,251	-	223,782	$ 395,547	$ 2.23	$ 2.17	$ 100,387	$ 2.22	$ -	$ 495,934	2.72%	$ 1,010	$ 495,933	$ -

Union Storage

Month	Beginning Inventory Volume	Injections	Withdrawals	Ending Inventory Volume	Beginning Inventory Cost	Beginning Inventory Rate	Injection Rate	Injected Value	Withdrawal Rate	Withdrawn Value	Ending Inventory Value	Interest Rate	Carrying Costs	Ending Inventory Value Excluding	Withdrawn Value plus Charges
Nov-18	3,451,600	-	296,311	3,155,289	$ 9,467,739	$ 2.74	NA	$ -	$ 2.74	$ 812,782	$ 8,654,957	2.72%		$ 8,654,957	$ 812,782
Dec-18	3,155,289	-	560,587	2,594,701	$ 8,654,957	$ 2.74	NA	$ -	$ 2.74	$ 1,537,691	$ 7,117,266	2.72%		$ 7,117,266	$ 1,537,691
Jan-19	2,594,701	-	826,394	1,768,307	$ 7,117,266	$ 2.74	NA	$ -	$ 2.74	$ 2,266,799	$ 4,850,467	2.72%		$ 4,850,467	$ 2,266,799
Feb-19	1,768,307	-	839,932	928,375	$ 4,850,467	$ 2.74	NA	$ -	$ 2.74	$ 2,303,933	$ 2,546,534	2.72%		$ 2,546,534	$ 2,303,933
Mar-19	928,375	-	731,576	196,799	$ 2,546,534	$ 2.74	NA	$ -	$ 2.74	$ 2,006,713	$ 539,821	2.72%		$ 539,821	$ 2,006,713
Apr-19	196,799	24,586	-	221,386	$ 539,821		$ 2.42	$ 59,610	$ 2.71		$ 599,431			$ 599,431	$ -
May-19	221,386	797,682	-	1,019,068	$ 599,431	$ -	$ 2.35	$1,876,223	$ 2.43		$ 2,475,654			$ 2,475,654	$ -
Jun-19	1,019,068	771,950	-	1,791,018	$ 2,475,654	$ -	$ 2.37	$1,832,004	$ 2.41		$ 4,307,658			$ 4,307,658	$ -
Jul-19	1,791,018	797,682	-	2,588,700	$ 4,307,658	$ -	$ 2.36	$1,879,414	$ 2.39		$ 6,187,073			$ 6,187,073	$ -
Aug-19	2,588,700	531,788	-	3,120,488	$ 6,187,073	$ -	$ 2.33	$1,239,052	$ 2.38		$ 7,426,125			$ 7,426,125	$ -
Sep-19	3,120,488	331,112	-	3,451,600	$ 7,426,125	$ -	$ 2.32	$ 768,833	$ 2.37		$ 8,194,958			$ 8,194,958	$ -
Oct-19	3,451,600	-	-	3,451,600	$ 8,194,958	$ -	$ -		$ 2.37		$ 8,194,958			$ 8,194,958	$ -

LNG Storage

Month	Beginning Inventory Volume	Injections	Withdrawals	Ending Inventory Volume	Beginning Inventory Cost	Beginning Inventory Rate	Injection Rate	Injected Value	Withdrawal Rate	Withdrawn Value	Ending Inventory Value	Interest Rate	Carrying Costs	Ending Inventory Value Excluding	Withdrawn Value plus Charges
Nov-18	12,000	2,145	2,145	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Dec-18	12,000	1,016	2,217	10,800	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jan-19	10,800	40,095	38,895	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Feb-19	12,000	2,002	2,002	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mar-19	12,000	1,016	2,217	10,800	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Apr-19	10,800	2,145	2,145	10,800	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
May-19	10,800	3,370	2,170	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jun-19	12,000	2,100	2,100	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Jul-19	12,000	2,170	2,170	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Aug-19	12,000	970	2,170	10,800	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Sep-19	10,800	3,300	2,100	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Oct-19	12,000	2,170	2,170	12,000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
SCHEDULE 1: SUMMARY OF ANNUAL BALANCE
August 2017 - October 2018

	AMOUNT	
Annual Beginning Balance	$ (1,382,113)	FORM III SCHEDULE 2
Less: Reported Collections	$ (30,752,617)	FORM III SCHEDULE 3
Add: Cost of Firm Gas Allowable	$ 32,889,103	FORM III SCHEDULE 4
Add: Interest	$ (23,240)	FORM III SCHEDULE 2
Add: Transfer of Supplier Refund Balance	$ (51,125)	FORM III SCHEDULE 2
Annual Ending Balance	$ 680,009	

Allocation of Reconciliation Balance to 2018 / 2019 Winter Season and 2019 Summer Season

Winter Season Sales	3,488,292	SCHEDULE 10B
Summer Season Sales	810,166	SCHEDULE 10B
Winter Season Sales Percentage	81.15%	
Summer Season Sales Percentage	18.85%	
Reconciliation Allocated to Winter Season	$ 551,842	
Reconciliation Allocated to Summer Season	$ 128,167	

FORM III
Schedule 2

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
SCHEDULE 2: ADJUSTMENTS TO REPORTED SUMMER, WINTER AND ANNUAL ACCOUNTS
August 2017 - October 2018
Acct 191

												------------------Estimated--------------------			
	Aug-17	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
Inital Account Beginning Balance	$ (1,394,115)															
Adjustment (1)	$ 12,002															
Adjusted Beginning Balance	$ (1,382,113)	$ (825,278)	$ (326,640)	$ 361,174	$ 458,202	$ 82,559	$ 232,612	$ 143,847	$ (1,124,661)	$ (2,057,272)	$ (1,687,499)	$ (1,097,542)	$ (453,609)	$ (31,258)	$ 392,581	
Plus: Cost of Firm Gas (Schedule 4)	$ 891,681	$ 870,654	$ 1,170,991	$ 2,043,746	$ 4,732,078	$ 6,761,466	$ 4,775,109	$ 3,752,039	$ 2,094,110	$ 1,148,035	$ 920,533	$ 946,260	$ 811,910	$ 831,157	$ 1,139,334	$ 32,889,103
Less: Reported Collections (Schedule 3)	$ (331,173)	$ (370,100)	$ (483,237)	$ (1,948,166)	$ (5,108,678)	$ (6,611,970)	$ (4,864,539)	$ (5,018,814)	$ (2,969,737)	$ (771,254)	$ (325,364)	$ (299,263)	$ (388,601)	$ (407,919)	$ (853,802)	$ (30,752,617)
Annual Account Ending Balance	$ (821,605)	$ (324,724)	$ 361,113	$ 456,754	$ 81,603	$ 232,055	$ 143,182	$ (1,122,928)	$ (2,000,288)	$ (1,680,491)	$ (1,092,330)	$ (450,545)	$ (30,300)	$ 391,980	$ 678,113	
Month's Average Balance	$ (1,101,859)	$ (575,001)	$ 17,236	$ 408,964	$ 269,903	$ 157,307	$ 187,897	$ (489,540)	$ (1,562,475)	$ (1,868,882)	$ (1,389,915)	$ (774,044)	$ (241,955)	$ 180,361	$ 535,347	
Interest Rate (Prime Rate)	4.00%	4.00%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.50%	4.50%	4.50%	4.75%	4.75%	4.00%	4.25%	
Interest Applied	$ (3,673)	$ (1,917)	$ 61	$ 1,448	$ 956	$ 557	$ 665	$ (1,734)	$ (5,859)	$ (7,008)	$ (5,212)	$ (3,064)	$ (958)	$ 601	$ 1,896	$ (23,240)
Annual Account Ending Balance w/int	$ (825,278)	$ (326,640)	$ 361,174	$ 458,202	$ 82,559	$ 232,612	$ 143,847	$ (1,124,661)	$ (2,006,147)	$ (1,687,499)	$ (1,097,542)	$ (453,609)	$ (31,258)	$ 392,581	$ 680,009	
Adjustment (2)									$ (51,125)	$ -	$ -	$ -	$ -	$ -	$ -	
Adjusted Annual Account Ending Balance									$ (2,057,272)	$ (1,687,499)	$ (1,097,542)	$ (453,609)	$ (31,258)	$ 392,581	$ 680,009	

(1) Reflects ATV charges, plus interest, not included in 2016-2017 reconciliation.
(2) Reflects transfer of remaining supplier refund balance. See Attachment F

FORM III
Schedule 3

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
SCHEDULE 3: REVENUE BACKUP TO REPORTED COLLECTIONS
August 2017 - October 2018

													Estimated		
	Aug-17	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
Accrued Revenue	$ (3,660)	$ (1,568)	$ 46,337	$ 726,647	$ 1,211,815	$ 336,440	$ (361,113)	$ 241,650	$ (1,168,445)	$ (797,179)	$ (202,029)	$ (46,198)				
Billed Revenue	$ 334,833	$ 371,668	$ 436,900	$ 1,221,519	$ 3,896,862	$ 6,275,530	$ 5,225,652	$ 4,777,164	$ 4,138,182	$ 1,568,434	$ 527,393	$ 345,461				
Calendarized Revenue	$ 331,173	$ 370,100	$ 483,237	$ 1,948,166	$ 5,108,678	$ 6,611,970	$ 4,864,539	$ 5,018,814	$ 2,969,737	$ 771,254	$ 325,364	$ 299,263	$ 388,601	$ 407,919	$ 853,802	$ 30,752,617

FORM III
Schedule 4
Page 1 of 4

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
SCHEDULE 4: PURCHASED GAS COSTS
August 2017- October 2018

													---------------------------Estimated--------------------			
Commodity Costs	**Aug-17**	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
BP Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,253	$ -	$ -	$ -	$ -				
Consolidated Edison	$ -	$ -	$ -	$ -	$ 74,168	$ 116,075	$ 179,103	$ 120,848	$ 103,009	$ -	$ -	$ -				**$ 593,204**
DTE Energy Trading	$ 173,538	$ 92,581	$ 117,475	$ 5,986	$ 42,036	$ 50,551	$ 750,363	$ 97,386	$ 597,262	$ -	$ 13,705	$ 145,077				**$ 2,085,961**
Emera Energy Services	$ -	$ -	$ -	$ -	$ -	$ 1,196,176	$ 1,707,473	$ 1,272,157	$ 110,442	$ 914,098	$ 134,804	$ 122,736				**$ 5,457,887**
Freepoint	$ -	$ -	$ -	$ -	$ 193,477	$ 424,283	$ 466,532	$ 511,367	$ 238,752	$ -	$ -	$ -				**$ 1,834,411**
Repsol	$ 25,134	$ 25,229	$ 24,419	$ 210,314	$ -	$ 1,051,320	$ 1,861,080	$ 938,316	$ 1,003,238	$ -	$ -	$ -				**$ 5,139,049**
Sequent	$ -	$ -	$ -	$ -	$ -	$ 16,870	$ -	$ 4,710	$ -	$ -	$ -	$ -				**$ 21,580**
Shell	$ 42,554	$ 42,199	$ 40,799	$ 41,203	$ -	$ 118,521	$ 55,332	$ -	$ -	$ 155,005	$ 143,754	$ -				**$ 639,367**
Southwestern	$ -	$ -	$ -	$ 109,793	$ 121,948	$ 165,697	$ 154,396	$ 189,236	$ 139,436	$ 45,703	$ 49,535	$ 45,977				**$ 1,021,721**
Tenaska	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 26,181	$ -	$ -				**$ 26,181**
Twin Eagle	$ 18,429	$ 17,992	$ 19,291	$ 10,147	$ 129,559	$ 224,414	$ 321,669	$ 149,841	$ 32,867	$ -	$ -	$ -				**$ 924,209**
Subtotal - Commodity	$ 259,655	$ 178,001	$ 201,984	$ 377,443	$ 561,189	$ 3,363,906	$ 5,495,948	$ 3,285,115	$ 2,225,006	$ 1,140,987	$ 341,798	$ 313,790				**$ 17,744,822**
Transportation																
Granite	$ 58	$ 70	$ 62	$ 303	$ 666	$ 694	$ 436	$ 447	$ 366	$ 109	$ 108	$ 65				**$ 3,384**
Maritimes	$ -	$ -	$ -	$ -	$ 3,880	$ 14,738	$ 6,824	$ -	$ 19,560	$ 33,637	$ 4,561	$ -				**$ 83,199**
Portland	$ 12	$ 12	$ 12	$ 12	$ 28,520	$ 143,282	$ 256,448	$ 14,080	$ 5,016	$ 1,004	$ 3,558	$ -				**$ 451,955**
Tennessee	$ 6,513	$ 6,281	$ 6,821	$ 8,404	$ 8,357	$ 11,864	$ 11,651	$ 15,269	$ 10,724	$ 10,295	$ 10,230	$ 9,313				**$ 115,721**
Subtotal - Commodity Transportation	$ 6,582	$ 6,363	$ 6,895	$ 8,718	$ 41,423	$ 170,578	$ 275,359	$ 29,796	$ 35,666	$ 45,045	$ 18,457	$ 9,377				**$ 654,259**
Commodity Cost Estimates	$ 184,294	$ 209,528	$ 385,719	$ 899,134	$ 3,538,899	$ 5,769,472	$ 3,315,977	$ 2,240,827	$ 1,184,547	$ 360,147	$ 323,109	$ 231,726				**$ 18,643,379**
Commodity Cost Reversals	$ (266,180)	$ (184,294)	$ (209,528)	$ (385,719)	$ (899,134)	$ (3,538,899)	$ (5,769,472)	$ (3,315,977)	$ (2,240,827)	$ (1,184,547)	$ (360,147)	$ (323,109)				**$ (18,677,833)**
Subtotal - Estimates	$ (81,886)	$ 25,234	$ 176,191	$ 513,415	$ 2,639,765	$ 2,230,573	$ (2,453,495)	$ (1,075,150)	$ (1,056,280)	$ (824,400)	$ (37,038)	$ (91,383)				**$ 37,376,669**
Subtotal - Supply	$ 184,352	$ 209,598	$ 385,070	$ 899,576	$ 3,242,376	$ 5,765,058	$ 3,317,812	$ 2,239,760	$ 1,204,392	$ 361,632	$ 323,217	$ 231,784				**$ 18,364,626**
Withdrawal - Underground Storage	$ (2)	$ -	$ 213	$ 588,382	$ 1,240,282	$ 1,114,840	$ 913,762	$ 390,920	$ 77	$ 2,388	$ (2,162)	$ -				**$ 4,248,699**
ATV Reconciliation Charges	$ (1,016)	$ 1,506	$ 5,765	$ 5,213	$ (46,837)	$ (196,206)	$ (21,079)	$ 6,784	$ 20,954	$ -	$ -	$ -				**$ (224,916)**
Off System Sales	$ (10,723)	$ -	$ -	$ (17,541)	$ (15,601)	$ (576,745)	$ (731,075)	$ (427,983)	$ (354,781)	$ -	$ -	$ -				**$ (2,134,448)**
Net OBA Adjustment	$ (1,879)	$ (7,074)	$ 66	$ 2,792	$ 5,475	$ (2,536)	$ (12,767)	$ (14,453)	$ (1,427)	$ (9,308)	$ 1,804	$ (213)				**$ (39,519)**
Company Managed	$ -	$ -	$ -	$ -	$ (108,747)	$ (330,664)	$ (356,261)	$ (316,483)	$ (177,609)	$ (12,853)	$ (6,597)	$ (6,059)				**$ (1,315,272)**
LNG Boiloff	$ 6,094	$ 4,272	$ 2,619	$ 2,678	$ 46,751	$ 81,964	$ 6,271	$ 25,133	$ 6,342	$ 4,636	$ 3,145	$ 3,681				**$ 193,584**
Transportation Charges	$ (230)	$ -	$ 16,432	$ (33,310)	$ (67,611)	$ -	$ 69,305	$ 508,197	$ 50,870	$ 46,803	$ (123,350)	$ (28,661)				**$ 438,444**
Hedging Costs	$ (44)	$ (17)	$ (16)	$ (18)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -				**$ (95)**
Inventory Finance Charges	$ 255	$ 288	$ 333	$ 385	$ 449	$ 369	$ 219	$ 162	$ 155	$ 210	$ 257	$ 289				**$ 3,369**
Subtotal - Other Commodity	$ (7,544)	$ (1,024)	$ 25,411	$ 548,581	$ 1,054,160	$ 91,022	$ (131,626)	$ 172,276	$ (455,419)	$ 31,876	$ (126,903)	$ (30,964)				**$ 1,169,845**
Sales for Resale Estimates	$ -	$ -	$ (17,541)	$ (329,299)	$ (906,903)	$ (1,087,336)	$ (744,466)	$ (532,390)	$ (12,853)	$ (6,597)	$ (6,059)	$ (6,596)				**$ (3,650,040)**
Sales for Resale Reversals	$ 10,723	$ -	$ -	$ 17,541	$ 329,299	$ 906,903	$ 1,087,336	$ 744,466	$ 532,390	$ 12,853	$ 6,597	$ 6,059				**$ 3,654,167**
Subtotal - Estimates	$ 10,723	$ -	$ (17,541)	$ (311,758)	$ (577,604)	$ (180,433)	$ 342,870	$ 212,076	$ 519,537	$ 6,256	$ 538	$ (537)				**$ 4,127**
Total Annual Commodity Costs	$ 187,531	$ 208,574	$ 392,940	$ 1,136,399	$ 3,718,933	$ 5,675,647	$ 3,529,056	$ 2,624,112	$ 1,268,509	$ 399,763	$ 196,852	$ 200,283	$ 256,266	$ 276,459	$ 584,636	**$ 20,655,959**

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
SCHEDULE 4: PURCHASED GAS COSTS
August 2017- October 2018

													Estimated			
Demand Costs	**Aug-17**	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
Pipeline Reservation																
Alberta Northeast	$ 4,110	$ 5,407	$ 5,617	$ 6,534	$ 4,972	$ 5,330	$ 5,584	$ 4,662	$ 4,231	$ 3,900	$ 4,940	$ 4,615				**$ 59,901**
Algonquin	$ 14,854	$ 14,854	$ 14,723	$ 14,852	$ 15,148	$ 15,144	$ 15,115	$ 15,097	$ 15,134	$ 15,138	$ 15,152	$ 14,720				**$ 179,932**
DTE Energy	$ 413,567	$ 422,088	$ 409,843	$ 408,833	$ 417,159	$ 428,962	$ 363,549	$ 356,978	$ 359,510	$ -	$ -	$ -				**$ 3,580,489**
Emera	$ 42,572	$ 42,855	$ 43,979	$ 42,855	$ -	$ 133,561	$ 60,517	$ 60,469	$ 58,851	$ 397,516	$ 384,703	$ 390,298				**$ 1,658,176**
Granite State	$ 164,338	$ 164,338	$ 164,338	$ 226,814	$ 226,814	$ 226,814	$ 226,814	$ 226,814	$ 226,814	$ 167,645	$ 167,645	$ 167,645				**$ 2,356,836**
Iroquois	$ 17,790	$ 17,790	$ 17,231	$ 17,231	$ 17,577	$ 17,577	$ 17,577	$ 17,577	$ 17,577	$ 17,577	$ 17,577	$ 17,577				**$ 210,659**
Portland	$ 12,499	$ 12,499	$ 12,499	$ 12,499	$ 321,216	$ 325,677	$ 325,677	$ 325,677	$ 325,677	$ 325,677	$ 325,677	$ 325,677				**$ 2,650,955**
Tennessee	$ 160,887	$ 160,887	$ 160,887	$ 160,887	$ 164,131	$ 164,131	$ 164,131	$ 164,131	$ 164,131	$ 164,131	$ 164,131	$ 164,131				**$ 1,956,600**
Texas Eastern	$ 2,373	$ 2,366	$ 2,366	$ 2,824	$ 2,414	$ 2,419	$ 2,419	$ 2,408	$ 2,408	$ 2,408	$ 2,408	$ 2,408				**$ 29,222**
Vector	$ 57,102	$ 57,109	$ 57,102	$ 57,102	$ 93,034	$ 93,027	$ 93,027	$ 93,027	$ 93,027							**$ 693,558**
Total Pipeline Reservation	$ 890,093	$ 900,194	$ 888,585	$ 950,433	$ 1,262,466	$ 1,412,643	$ 1,274,410	$ 1,266,842	$ 1,267,361	$ 1,093,993	$ 1,082,235	$ 1,087,073				**$ 13,376,328**
Product Demand																
Engi	$ -	$ -	$ -	$ -	$ 44,498	$ 44,498	$ 148,588	$ 148,588	$ 148,588	$ -	$ -	$ -				**$ 534,762**
Repsol	$ -	$ -	$ -	$ -	$ 140,522	$ 145,206	$ 145,206	$ 131,153	$ 145,206	$ -	$ -	$ -				**$ 707,292**
Shell	$ -	$ -	$ -	$ -	$ 2,426	$ 2,426	$ 2,426	$ 2,426	$ 2,426	$ -	$ -	$ -				**$ 12,128**
Total Product Demand	$ -	$ -	$ -	$ -	$ 187,446	$ 192,130	$ 296,220	$ 282,168	$ 296,220	$ -	$ -	$ -				**$ 1,254,182**
Storage Pipeline Transportation and Demand Reservation																
Emera	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ 105,577	$ 105,577	$ 105,577				**$ 316,731**
Tennessee	$ 5,097	$ 5,097	$ 5,097	$ 5,097	$ 5,199	$ 5,199	$ 5,199	$ 5,199	$ 5,199	$ 5,199	$ 5,199	$ 5,199				**$ 61,979**
Texas Eastern	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -				**$ -**
Wash 10	$ 105,316	$ 105,316	$ 105,316	$ 105,316	$ 107,436	$ 107,436	$ 107,436	$ 107,436	$ 107,436	$ -	$ -	$ -				**$ 958,444**
Company Managed	$ (248,940)	$ (129,445)	$ -	$ (316,661)	$ (251,763)	$ (248,156)	$ (47,263)	$ (171,013)	$ (138,907)	$ (55,010)	$ (8,470)	$ (8,313)				**$ (1,623,942)**
Total Storage and Demand Reservation	$ (138,527)	$ (19,033)	$ 110,413	$ (206,248)	$ (139,128)	$ (135,522)	$ 65,372	$ (58,378)	$ (26,272)	$ 55,766	$ 102,306	$ 102,463				**$ (286,787)**
Demand Cost Estimates	$ 800,523	$ 800,067	$ 799,628	$ 1,392,709	$ 1,472,281	$ 1,453,289	$ 1,435,143	$ 1,449,153	$ 1,037,809	$ 1,037,979	$ 1,025,839	$ 1,029,887				**$ 13,734,307**
Demand Cost Reversals	$ (798,347)	$ (800,523)	$ (800,067)	$ (799,628)	$ (1,392,709)	$ (1,472,281)	$ (1,453,289)	$ (1,435,143)	$ (1,449,153)	$ (1,037,809)	$ (1,037,979)	$ (1,025,839)				**$ (13,502,767)**
Subtotal	$ 2,176	$ (456)	$ (439)	$ 593,081	$ 79,572	$ (18,992)	$ (18,146)	$ 14,010	$ (411,344)	$ 170	$ (12,140)	$ 4,048				**$ 231,540**
PNGTS Refund	$ (16,567)	$ (16,567)	$ (16,567)	$ (231,328)	$ (231,328)	$ (231,328)	$ (231,328)	$ (231,328)	$ (231,328)	$ -	$ -	$ -				**$ (1,437,671)**
Capacity Release*	$ (222,919)	$ (224,529)	$ (222,963)	$ (241,338)	$ (248,130)	$ (363,422)	$ (302,322)	$ (302,455)	$ (313,624)	$ (463,819)	$ (467,698)	$ (465,405)				**$ (3,838,624)**
Other A&G Allowance	$ 19,581	$ 19,581	$ 19,581	$ 78,928	$ 78,928	$ 78,928	$ 78,928	$ 78,928	$ 78,928	$ 17,815	$ 17,815	$ 17,815				**$ 585,753**
Local Production and Storage Allowance	$ -	$ -	$ -	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ -	$ -	$ -				**$ 476,106**
Conversion & Re-entry Fees	$ -	$ -	$ -	$ -	$ (206)	$ (909)	$ (904)	$ (806)	$ (643)	$ (70)	$ (224)	$ (16)				**$ (3,776)**
Off-system Peaking Allocation Adjustment	$ -	$ -	$ -	$ 8,599	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -				**$ 8,599**
Total Indirect Demand Costs	$ (219,905)	$ (221,515)	$ (219,950)	$ (305,788)	$ (321,385)	$ (437,380)	$ (376,276)	$ (376,311)	$ (387,316)	$ (446,074)	$ (450,107)	$ (447,606)				**$ (4,209,614)**
Estimates - Cap Release & Comp Managed	$ (352,355)	$ (349,465)	$ (350,024)	$ (474,154)	$ (529,979)	$ (457,038)	$ (452,565)	$ (452,968)	$ (366,016)	$ (321,599)	$ (320,213)	$ (320,214)				**$ (4,746,590)**
Reversals - Cap Release & Comp Managed	$ 522,668	$ 352,355	$ 349,465	$ 350,024	$ 474,154	$ 529,979	$ 457,038	$ 452,565	$ 452,968	$ 366,016	$ 321,599	$ 320,213				**$ 4,949,044**
Subtotal	**$ 170,313**	**$ 2,890**	**$ (559)**	**$ (124,130)**	**$ (55,825)**	**$ 72,941**	**$ 4,473**	**$ (403)**	**$ 86,952**	**$ 44,417**	**$ 1,386**	**$ (1)**				**$ 202,454**
Annual Demand Costs	**$ 704,150**	**$ 662,080**	**$ 778,051**	**$ 907,347**	**$ 1,013,146**	**$ 1,085,819**	**$ 1,246,053**	**$ 1,127,927**	**$ 825,601**	**$ 748,272**	**$ 723,681**	**$ 745,977**	**$ 555,644**	**$ 554,698**	**$ 554,698**	**$ 12,233,144**
Total Gas Costs	**$ 891,681**	**$ 870,654**	**$ 1,170,991**	**$ 2,043,746**	**$ 4,732,078**	**$ 6,761,466**	**$ 4,775,109**	**$ 3,752,039**	**$ 2,094,110**	**$ 1,148,035**	**$ 920,533**	**$ 946,260**	**$ 811,910**	**$ 831,157**	**$ 1,139,334**	**$ 32,889,103**

* Includes Asset Management Agreement Revenue

REDACTED

FORM III
Schedule 4
Page 3 of 4

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - UNITS
August 2017 - October 2018

Indicates Confidential Data

													Estimated			
Commodity Volumes:	**Aug-17**	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
BP Energy	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Consolidated Edison	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
DTE Energy Trading	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Emera Energy Services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Freepoint	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Repsol	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Sequent	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Shell	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Southwestern	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Tenaska	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Twin Eagle	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Commodity Supply	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Granite	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Portland	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Tennessee	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Commodity Transportation	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Commodity Volume Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Commodity Volume Reversals	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Supply	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Withdrawal - Underground Storage	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
ATV Reconciliation	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Off System Sales	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Net OBA Adjustment	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Company Managed	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
LNG Boiloff	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Transportation Charges	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Hedging Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Inventory Finance Charges	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Other Commodity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Sales for Resale Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Sales for Resale Reversals	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Total Commodity Volumes	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	101,175	112,635	241,758	**455,568**

REDACTED

FORM III
Schedule 4
Page 4 of 4

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
COST OF GAS ADJUSTMENT - FORM III, Schedule 4 - IN COST PER UNIT
August 2017 - October 2018

Indicates Confidential Data

													---------------------------Estimated--------------------			
Commodity Costs per Unit:	**Aug-17**	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
BP Energy	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Consolidated Edison	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
DTE Energy Trading	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Emera Energy Services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Freepoint	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Repsol	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Sequent	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Shell	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Southwestern	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Tenaska	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Twin Eagle	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Commodity Supply	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	$ 2.97	$ 2.96	$ 2.94	
Granite	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Portland	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Tennessee	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Commodity Transportation	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	
Commodity Volume Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Commodity Volume Reversals	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	
Subtotal - Supply	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Withdrawal - Underground Storage	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
ATV Reconciliation Charges	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Off System Sales	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Net OBA Adjustment	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Company Managed	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
LNG Boiloff	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Transportation Charges	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Hedging Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Inventory Finance Charge	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Other Commodity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	
Off System Sales Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Off System Sales Reversals	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Subtotal - Estimates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
Total Commodity Costs per unit	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	n/a	n/a	n/a	

*: NYMEX Closing Price
**: NYMEX Futures Price for September 30, 2017

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
2017-18 ANNUAL COG RECONCILIATION
SCHEDULE 5: PURCHASED AND MADE VOLUMES
August 2017 - July 2018

											Completed		
New Hampshire	**Aug-17**	**Sep-17**	**Oct-17**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Total**
Throughput IN													
BTU Factor	1.028	1.028	1.028	1.031	1.034	1.039	1.034	1.033	1.032	1.028	1.029	1.029	
GST Meter Throughput (MCF)	348,866	344,316	429,505	750,898	1,127,860	1,192,817	880,629	939,326	726,525	426,643	356,172	338,863	7,862,420
Salem Meter (MCF)	12,807	13,227	17,422	44,036	77,288	81,779	56,075	59,709	40,204	16,382	13,376	12,223	444,528
GST Meter Throughpurt (DTH)	358,634	353,957	441,531	774,176	1,166,207	1,239,337	910,570	970,324	749,774	438,589	366,501	348,690	8,118,290
Salem Meter (DTH)	13,166	13,597	17,910	45,401	79,916	84,968	57,982	61,679	41,491	16,841	13,764	12,577	459,292
LNG/Propane													-
Total Throughput	371,800	367,554	459,441	819,577	1,246,123	1,324,305	968,552	1,032,003	791,264	455,430	380,265	361,267	8,577,582
Throughput OUT													
Residential Gas													
Charged	35,143	38,046	44,655	97,232	263,956	412,383	313,180	256,005	228,427	110,393	54,636	36,402	1,890,458
Uncharged Current	21,574	20,864	28,870	74,761	169,112	193,040	159,293	132,622	91,737	64,127	31,384	24,906	1,012,290
Uncharged Prior	(21,311)	(21,574)	(20,864)	(28,870)	(74,761)	(169,112)	(193,040)	(159,293)	(132,622)	(91,737)	(64,127)	(31,384)	(1,008,694)
Total Residential Gas	**35,407**	**37,336**	**52,661**	**143,124**	**358,306**	**436,311**	**279,433**	**229,334**	**187,543**	**82,783**	**21,893**	**29,924**	1,894,053
Interruptible				-	-	-	-	-	-	-	-	-	-
Commercial/Industrial Gas													
Charged	50,515	55,512	64,539	122,469	290,041	477,656	362,468	300,988	254,499	130,489	76,911	51,987	2,238,074
Uncharged Current	36,057	30,442	41,725	95,223	231,940	231,033	148,299	165,613	112,978	75,800	44,179	35,570	1,248,859
Uncharged Prior	(29,885)	(36,057)	(30,442)	(41,725)	(95,223)	(231,940)	(231,033)	(148,299)	(165,613)	(112,978)	(75,800)	(44,179)	(1,243,174)
Total C/I Gas	**56,687**	**49,897**	**75,822**	**175,967**	**426,759**	**476,749**	**279,734**	**318,302**	**201,864**	**93,311**	**45,290**	**43,378**	2,243,759
Transportation													
Charged	280,405	263,285	318,531	361,378	449,586	513,413	434,418	441,249	406,742	333,670	277,805	264,373	4,344,855
Uncharged Current	188,657	144,382	205,932	261,895	258,274	209,298	240,846	223,645	155,724	130,744	100,249	113,758	2,233,403
Uncharged Prior	(157,150)	(188,657)	(144,382)	(205,932)	(261,895)	(258,274)	(209,298)	(240,846)	(223,645)	(155,724)	(130,744)	(100,249)	(2,276,794)
Total Transportation	**311,912**	**219,011**	**380,081**	**417,341**	**445,965**	**464,437**	**465,966**	**424,048**	**338,821**	**308,690**	**247,310**	**277,882**	**4,301,464**
Company Use	**62**	**56**	**32**	**71**	**209**	**373**	**270**	**239**	**211**	**108**	**40**	**92**	**1,763**
Total Throughput OUT	**404,068**	**306,300**	**508,595**	**736,502**	**1,231,239**	**1,377,870**	**1,025,403**	**971,923**	**728,439**	**484,892**	**314,533**	**351,276**	**8,441,039**
Total Throughput IN	**371,800**	**367,554**	**459,441**	**819,577**	**1,246,123**	**1,324,305**	**968,552**	**1,032,003**	**791,264**	**455,430**	**380,265**	**361,267**	**8,577,582**
Difference IN/OUT	(32,268)	61,255	(49,154)	83,075	14,884	(53,565)	(56,851)	60,080	62,826	(29,462)	65,732	9,991	136,543
%													1.59%

Attachment A

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
DEFERRED WORKING CAPITAL ALLOWANCE ON PURCHASED GAS COSTS
August 2017 - October 2018

ANNUAL BALANCE SEASON - Acct 182

	BEGINNING BALANCE	WORKING CAP ALLOWANCE (1)	WORKING CAP PERCENTAGE	WORKING CAP COLLECTIONS	WORKING CAP DEFERRED	ENDING BALANCE	AVE MONTHLY BALANCE	INTEREST RATE	INTEREST	ENDING BAL W/ INTEREST
	A	B	C	D	E = B + D	F = A + E	G = (A + F) / 2	H	I = G * (H / 12)	K = F + I + J
August 2017	$ 1,191									
Adjustment	$ 12									
August 2017	$ 1,202	979	0.1098%	(232)	747	1,949	1,575	4.00%	5	1,954
September	$ 1,954	956	0.1098%	(259)	697	2,651	2,302	4.00%	8	2,658
October	$ 2,658	1,367	0.1167%	(346)	1,021	3,679	3,169	4.25%	11	3,690
November	$ 3,690	2,385	0.1167%	(2,114)	271	3,961	3,826	4.25%	14	3,975
December	$ 3,975	5,522	0.1167%	(5,795)	(273)	3,702	3,839	4.25%	14	3,716
January 2018	$ 3,716	7,891	0.1167%	(7,502)	388	4,104	3,910	4.25%	14	4,118
February	$ 4,118	5,573	0.1167%	(4,556)	1,017	5,135	4,626	4.25%	16	5,151
March	$ 5,151	4,379	0.1167%	(4,676)	(297)	4,854	5,003	4.25%	18	4,872
April	$ 4,872	2,586	0.1235%	(2,779)	(193)	4,679	4,776	4.50%	18	4,697
May	$ 4,697	*1,418*	0.1235%	*(974)*	444	5,141	4,919	4.50%	18	5,160
June	$ 5,160	*1,137*	0.1235%	*(411)*	726	5,885	5,523	4.50%	21	5,906
July	$ 5,906	*1,234*	0.1304%	*(381)*	853	6,759	6,333	4.75%	25	6,784
Estimated August	$ 6,784	*824*	0.1014%		824	7,608	7,196	4.75%	28	7,637
Estimated September	$ 7,637	*833*	0.1014%		833	8,470	8,053	4.75%	32	8,502
Estimated October	$ 8,502	*1,244*	0.1077%		1,244	9,746	9,124	5.00%	38	9,784

(1) Working Capital Allowance calculated by taking monthly Total Gas Costs from Schedule 4, Page 2, and multiplying by (10.02/365)* prime interest rate.

Winter Season Sales Percentage	81.15%
Summer Season Sales Percentage	18.85%
Reconciliation Allocated to Winter Season	$ 7,940
Reconciliation Allocated to Summer Season	$ 1,844

Attachment B

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
BAD DEBT EXPENSE - CALCULATION OF COLLECTION ALLOWANCE
August 2017 - October 2018

ANNUAL BALANCE- Acct 182

	BEGINNING BALANCE	ACUTAL BAD DEBT	BAD DEBT COLLECTIONS	DEFERRED BALANCE	ENDING BALANCE	AVE MO BALANCE	INTEREST RATE	INTEREST	END BAL W/ INTEREST
	A	B	C	D = B + C	E = A + D	F = (A + E) / 2	G	H = (F *G) / 12	J = E + H + I
August 2017	($54,925)	(2,565)	(4,242)	(6,806)	(61,731)	(58,328)	4.00%	(194)	(61,925)
September	($61,925)	91,585	(4,663)	86,922	24,996	(18,465)	4.00%	(62)	24,935
October	$24,935	(5,791)	(6,040)	(11,830)	13,104	19,020	4.25%	67	13,172
November	$13,172	(12,902)	(15,491)	(28,393)	(15,221)	(1,025)	4.25%	(4)	(15,225)
December	($15,225)	(3,280)	(37,678)	(40,958)	(56,182)	(35,703)	4.25%	(126)	(56,309)
January 2018	($56,309)	(2,813)	(48,780)	(51,593)	(107,901)	(82,105)	4.25%	(291)	(108,192)
February	($108,192)	48,970	(29,657)	19,313	(88,879)	(98,536)	4.25%	(349)	(89,228)
March	($89,228)	(467)	(30,395)	(30,862)	(120,090)	(104,659)	4.25%	(371)	(120,461)
April	($120,461)	33,606	(18,084)	15,522	(104,939)	(112,700)	4.50%	(423)	(105,362)
May	($105,362)	7,351	(2,511)	4,840	(100,522)	(102,942)	4.50%	(386)	(100,908)
June	($100,908)	14,538	(1,228)	13,310	(87,598)	(94,253)	4.50%	(353)	(87,952)
July	($87,952)	19,415	(1,078)	18,338	(69,614)	(78,783)	4.75%	(312)	(69,926)
Estimated August	($69,926)	25,000	(850)	24,150	(45,776)	(57,851)	4.75%	(229)	(46,005)
Estimated September	($46,005)	25,000	(875)	24,125	(21,880)	(33,942)	4.75%	(134)	(22,014)
Estimated October	($22,014)	5,000	(2,000)	3,000	(19,014)	(20,514)	5.00%	(85)	(19,099)

Winter Season Sales Percentage		81.15%
Summer Season Sales Percentage		18.85%
Reconciliation Allocated to Winter Season	$	(15,500)
Reconciliation Allocated to Summer Season	$	(3,600)

Attachment B

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
BAD DEBT EXPENSE - CALCULATION OF COLLECTION ALLOWANCE
August 2017 - October 2018

ANNUAL BALANCE- Acct 182

	BEGINNING BALANCE	ACUTAL BAD DEBT	BAD DEBT COLLECTIONS	DEFERRED BALANCE	ENDING BALANCE	AVE MO BALANCE	INTEREST RATE	INTEREST	END BAL W/ INTEREST
	A	B	C	D = B + C	E = A + D	F = (A + E) / 2	G	H = (F *G) / 12	J = E + H + I
August 2017	($54,925)	(2,565)	(4,242)	(6,806)	(61,731)	(58,328)	4.00%	(194)	(61,925)
September	($61,925)	91,585	(4,663)	86,922	24,996	(18,465)	4.00%	(62)	24,935
October	$24,935	(5,791)	(6,040)	(11,830)	13,104	19,020	4.25%	67	13,172
November	$13,172	(12,902)	(15,491)	(28,393)	(15,221)	(1,025)	4.25%	(4)	(15,225)
December	($15,225)	(3,280)	(37,678)	(40,958)	(56,182)	(35,703)	4.25%	(126)	(56,309)
January 2018	($56,309)	(2,813)	(48,780)	(51,593)	(107,901)	(82,105)	4.25%	(291)	(108,192)
February	($108,192)	48,970	(29,657)	19,313	(88,879)	(98,536)	4.25%	(349)	(89,228)
March	($89,228)	(467)	(30,395)	(30,862)	(120,090)	(104,659)	4.25%	(371)	(120,461)
April	($120,461)	33,606	(18,084)	15,522	(104,939)	(112,700)	4.50%	(423)	(105,362)
May	($105,362)	7,351	(2,511)	4,840	(100,522)	(102,942)	4.50%	(386)	(100,908)
June	($100,908)	14,538	(1,228)	13,310	(87,598)	(94,253)	4.50%	(353)	(87,952)
July	($87,952)	19,415	(1,078)	18,338	(69,614)	(78,783)	4.75%	(312)	(69,926)
Estimated August	($69,926)	25,000	(850)	24,150	(45,776)	(57,851)	4.75%	(229)	(46,005)
Estimated September	($46,005)	25,000	(875)	24,125	(21,880)	(33,942)	4.75%	(134)	(22,014)
Estimated October	($22,014)	5,000	(2,000)	3,000	(19,014)	(20,514)	5.00%	(85)	(19,099)

Winter Season Sales Percentage		81.15%
Summer Season Sales Percentage		18.85%
Reconciliation Allocated to Winter Season	$	(15,500)
Reconciliation Allocated to Summer Season	$	(3,600)

Attachment C

Northern Utilities, Inc. - New Hampshire Division
Environmental Response Costs
May 2017 - October 2018

		Beginning Balance	Firm Sales and Transportation (therms)	ERC Rate Recoveries /Passback	Current ERC Recoveries/ Passbacks	Ending Balance
May 2017	(act)	$ 141,683	4,579,550	$ 0.0056	$ 25,646	$ 116,038
June 2017	(act)	$ 116,038	3,069,446	$ 0.0056	$ 17,192	$ 98,845
July 2017	(act)	$ 98,845	2,723,487	$ 0.0056	$ 15,226	$ 83,619
August 2017	(act)	$ 83,619	2,630,655	$ 0.0056	$ 14,534	$ 69,085
September 2017	(act)	$ 69,085	2,620,180	$ 0.0056	$ 14,676	$ 54,410
October 2017	(act)	$ 54,410	3,133,546	$ 0.0056	$ 17,551	$ 36,858
November 2017	(act)	$ 442,966 (1)	4,895,717	$ 0.0059 (2)	$ 28,793	$ 414,173
December 2017	(act)	$ 414,173	9,037,234	$ 0.0060	$ 54,224	$ 359,949
January 2018	(act)	$ 359,949	13,027,180	$ 0.0060	$ 78,164	$ 281,785
February 2018	(act)	$ 281,785	10,198,446	$ 0.0060	$ 61,187	$ 220,598
March 2018	(act)	$ 220,598	8,897,750	$ 0.0060	$ 53,386	$ 167,212
April 2018	(act)	$ 167,212	7,831,422	$ 0.0060	$ 46,966	$ 120,246
May 2018	(act)	$ 120,246	4,659,557	$ 0.0060	$ 27,979	$ 92,267
June 2018	(act)	$ 92,267	3,060,656	$ 0.0060	$ 18,366	$ 73,902
July 2018	(act)	$ 73,902	2,546,504	$ 0.0060	$ 15,286	$ 58,615
August 2018	(est)	$ 58,615	2,747,242	$ 0.0060	$ 16,483	$ 42,132
September 2018	(est)	$ 42,132	2,693,347	$ 0.0060	$ 16,160	$ 25,972
October 2018	(est)	$ 25,972	3,331,384	$ 0.0060	$ 19,988	$ 5,984

(1) November Beginning Balance includes $406,108 amortization from all prior years at 1/7 of annual costs. (See Section 4.7 of Tariff.)

(2) November Current ERC Recoveries/Passbacks reflect an Average ERC Rate based on actual Firm Sales and Transportation (therms) at $0.0056 and actual Firm Sales and Transportation (therms) at $0.0060.

Attachment D

NORTHERN UTILITIES
NEW HAMPSHIRE DIVISION
RLIARA Reconciliation
May 2017 - October 2018

		Beginning Balance A	Program Costs B	Regulatory Assessments C	RLIARA Recoveries D	Ending Balance E = A+B+C-D	Average Monthly Balance F = (A+E)/2	Interest Rate G	Interest H = F*(G/12)	Ending Balance w/Interest I = E+H
May 2017	Actual	$ (175,605)	$ 26,562	$ 22,743	$ 43,965	$ (170,265)	$ (172,935)	3.75%	$ (540)	$ (170,805)
June 2017	Actual	$ (170,805)	$ 15,174	$ 22,743	$ 29,498	$ (162,387)	$ (166,596)	3.75%	$ (521)	$ (162,907)
July 2017	Actual	$ (162,907)	$ 12,207	$ 22,743	$ 26,135	$ (154,093)	$ (158,500)	4.00%	$ (528)	$ (154,621)
August 2017	Actual	$ (154,621)	$ 11,160	$ (1,684) (1)	$ 24,949	$ (170,095)	$ (162,358)	4.00%	$ (541)	$ (170,636)
September 2017	Actual	$ (170,636)	$ 11,232	$ 10,664 (1)	$ 25,191	$ (173,931)	$ (172,283)	4.00%	$ (574)	$ (174,505)
October 2017	Actual	$ (174,505)	$ 11,842	$ 26,182	$ 30,124	$ (166,605)	$ (170,555)	4.25%	$ (604)	$ (167,209)
November 2017	Actual	$ (167,209)	$ 18,347	$ 25,912	$ 27,373	$ (150,324)	$ (158,766)	4.25%	$ (562)	$ (150,886)
December 2017	Actual	$ (150,886)	$ 31,651	$ 25,912	$ 35,270	$ (128,594)	$ (139,740)	4.25%	$ (495)	$ (129,089)
January 2018	Actual	$ (129,089)	$ 35,378	$ 4,869 (1)	$ 50,803	$ (139,645)	$ (134,367)	4.25%	$ (435)	$ (140,079)
February 2018	Actual	$ (140,079)	$ 38,374	$ 4,869	$ 39,848	$ (136,684)	$ (138,382)	4.25%	$ (367)	$ (137,051)
March 2018	Actual	$ (137,051)	$ 34,369	$ 4,869	$ 34,741	$ (132,555)	$ (134,803)	4.25%	$ (272)	$ (132,828)
April 2018	Actual	$ (132,828)	$ 35,267	$ 4,869	$ 30,915	$ (123,607)	$ (128,217)	4.50%	$ (177)	$ (123,783)
May 2018	Actual	$ (123,783)	$ 27,166	$ 4,869	$ 17,803	$ (109,552)	$ (116,668)	4.50%	$ (481)	$ (110,034)
June 2018	Actual	$ (110,034)	$ 14,005	$ 4,869	$ 11,926	$ (103,086)	$ (106,560)	4.50%	$ (835)	$ (103,921)
July 2018	Actual	$ (103,921)	$ 9,739	$ 7,108	$ 9,922	$ (96,996)	$ (100,458)	4.75%	$ (861)	$ (97,858)
August 2018	Est.	$ (97,858)	$ 10,000	$ 7,108	$ 10,714	$ (91,464)	$ (94,661)	4.75%	$ (375)	$ (91,839)
September 2018	Est.	$ (91,839)	$ 9,948	$ 7,108	$ 10,504	$ (85,287)	$ (88,563)	4.75%	$ (351)	$ (85,637)
October 2018	Est.	$ (85,637)	$ 10,780	$ 7,108	$ 12,992	$ (80,742)	$ (83,189)	5.00%	$ (347)	$ (81,088)

(1) Accounting true ups to Regulatory Assessment.

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
SALES VARIANCE ANALYSIS

	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	TOTAL
Forecast Bill Month Sales	100,721	111,265	218,365	423,393	645,024	797,918	700,400	600,815	319,047	162,789	111,713	97,247	4,288,698
Actual Sales	85,659	93,558	109,194	219,702	553,997	890,039	675,648	556,993	482,925	240,882	131,546	88,388	4,128,532
Difference	(15,062)	(17,707)	(109,171)	(203,691)	(91,027)	92,120	(24,752)	(43,823)	163,878	78,093	19,833	(8,859)	(160,166)
Normal Cal. Month Actual Sales	85,659	93,558	109,194	257,790	514,736	779,092	749,502	582,188	448,623	240,882	131,546	88,388	4,081,159
Actual Sales	85,659	93,558	109,194	219,702	553,997	890,039	675,648	556,993	482,925	240,882	131,546	88,388	4,128,532
Weather Variance	-	-	-	38,088	(39,262)	(110,946)	73,855	25,195	(34,302)	-	-	-	(47,373)
Total Variance Excluding Weather (excl weather effect)	(15,062)	(17,707)	(109,171)	(165,603)	(130,288)	(18,826)	49,103	(18,628)	129,576	78,093	19,833	(8,859)	(207,539)
Variance-difference due to meter count													(114,495)
-difference in load pattern													(45,670)
Total Sales Variance													(160,166)

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
SALES VARIANCE ANALYSIS
August 2017 - July 2018

	NORMAL MMBtu			METERS		
	2017-18 Forecast	2017-18 Actual	Difference	2017-18 Forecast	2017-18 Actual	Difference
Res Heat	1,944,626	1,863,775	(80,852)	294,556	291,846	(2,710)
Res General	23,581	26,684	3,104	15,395	16,166	771
Total Res	1,968,207	1,890,459	(77,748)	309,951	308,012	(1,939)
G-40	947,956	954,044	6,088	54,295	54,289	(6)
G-50	149,714	153,772	4,058	8,895	8,719	(176)
G-41	769,174	695,669	(73,505)	5,525	4,681	(844)
G-51	223,991	235,518	11,527	1,774	1,811	37
G-42	160,388	149,873	(10,515)	157	123	(34)
G-52	69,267	49,198	(20,070)	21	37	16
Total C & I	2,320,491	2,238,073	(82,418)	70,666	69,660	(1,006)
Total Company	4,288,698	4,128,532	(160,166)	380,617	377,672	(2,945)

	NORMAL AVERAGE USE			Change in Sales Due to Change In:			
	2017-18 Forecast	2017-18 Actual	Difference	Meter Count	Load Pattern	Total Chg MMBtu	% Difference
Res Heat	6.60	6.39	(0.22)	(17,892)	(62,960)	(80,852)	-4.16%
Res General	1.53	1.65	0.12	1,182	1,922	3,104	13.16%
Total Res	8.13	8.04	(0.10)	(16,710)	(61,038)	(77,748)	-3.95%
G-40	17.46	17.57	0.11	(98)	6,186	6,088	0.64%
G-50	16.83	17.64	0.81	(2,962)	7,020	4,058	2.71%
G-41	139.22	148.62	9.40	(117,488)	43,983	(73,505)	-9.56%
G-51	126.29	130.05	3.76	4,723	6,805	11,527	5.15%
G-42	1,021.58	1,218.48	196.90	(34,734)	24,218	(10,515)	-6.56%
G-52	3,298.45	1,329.67	(1,968.78)	52,775	(72,845)	(20,070)	-28.97%
Total C & I	32.84	32.13	(0.71)	(97,785)	15,367	(82,418)	-3.55%
Total Company	11.27	10.93	(0.34)	(114,495)	(45,670)	(160,166)	-3.73%

Attachment F

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE DIVISION
August 2017 - April 2018
SUPPLIER REFUNDS
Period Ending October 31, 2017
ANNUAL DEMAND - Acct 242

	BEGINNING BALANCE	REFUND COLLECTIONS[1]	ENDING BALANCE	AVE MONTHLY BALANCE	INTEREST RATE[2]	INTEREST	ENDING BAL W/ INTEREST
	A	B	C = A + B	D = (A + C) / 2	E	F = D * (E / 12)	G = C + F
August 2017	$ (1,776,536)	$ 16,567	(1,759,969)	(1,768,252)	2.48%	(3,656)	(1,763,625)
September	$ (1,763,625)	$ 16,567	(1,747,058)	(1,755,341)	2.49%	(3,635)	(1,750,693)
October	$ (1,750,693)	$ 16,567	(1,734,126)	(1,742,409)	2.49%	(3,613)	(1,737,738)
November	$ (1,737,738)	$ 295,201	(1,442,538)	(1,590,138)	2.53%	(3,346)	(1,445,884)
December	$ (1,445,884)	$ 293,949	(1,151,935)	(1,298,909)	2.72%	(2,944)	(1,154,879)
January 2018	$ (1,154,879)	$ 292,697	(862,183)	(1,008,531)	2.81%	(2,361)	(864,544)
February	$ (864,544)	$ 292,653	(571,891)	(718,217)	2.84%	(1,700)	(573,591)
March	$ (573,591)	$ 292,653	(280,939)	(427,265)	3.03%	(1,079)	(282,018)
April	$ (282,018)	$ 231,328	(50,689)	(166,353)	3.14%	(436)	(51,125)
May							
June							
July							
August							
Totals		1,748,180				(22,769)	

(1) Refund Collections reflect transfer of PNGTS Refund dollars to the Demand and Commodity Account in accordance with Order No. 26,836 in Docket No. DG 15-393.

(2) Interest charge on Supplier Refund resulting from PNGTS rate case is calculated at the Company's short term borrowing rate effective April 1, 2015 per Order No. 26,825 in Docket No. DG 15-393.

ANNUAL COMMODITY - Acct 242.90.01

	BEGINNING BALANCE	REFUND COLLECTIONS	ENDING BALANCE	AVE MONTHLY BALANCE	INTEREST RATE	INTEREST	ENDING BAL W/ INTEREST
	A	B	C = A + B	D = (A + C) / 2	E	F = D * (E / 12)	G = C + F
August 2017	$ -	-	0	0	3.25%	0	0
September	$ -	0	0	0	3.25%	0	0
October	$ -	0	0	0	3.25%	0	0
November	$ -	0	0	0	3.25%	0	0
December	$ -	0	0	0	3.25%	0	0
January 2018	$ -	0	0	0	3.25%	0	0
February	$ -	0	0	0	3.25%	0	0
March	$ -	0	0	0	3.25%	0	0
April	$ -	0	0	0	3.25%	0	0
May	$ -	0	0	0	3.25%	0	0
June	$ -	0	0	0	3.25%	0	0
July	$ -	0	0	0	3.25%	0	0
August							
#REF!		0				0	

NORTHERN UTILITIES, INC.- NEW HAMPSHIRE DIVISION
Residential Low Income Assistance and Regulatory Assessment Costs (RLIARA)

		Customer Charge	First Block	Last Block	Total
1	**Peak Period**				
2	R-5 Base Rates	$21.36	$0.6660	$0.6660	
3	R-10 Rate at 40% of R5	$8.54	$0.2664	$0.2664	
4	Program Subsidy	$12.82	$0.3996	$0.3996	
5	Average Annual Therms		204	413	617
6					
7	Peak Period Subsidy	$76.90	$81.36	$165.19	$323.45
8					
9	**Off Peak Period**				
10	R-5 Base Rates	$21.36	$0.5870	$0.5870	
11	R10 Rate at 40% of R5	$8.54	$0.2348	$0.2348	
12	Program Subsidy	$12.82	$0.3522	$0.3522	
13	Average Annual Therms		109	27	136
14					
15	Off Peak Period Subsidy	$76.90	$38.32	$9.58	$124.80
16					
17	Estimated Annual Subsidy				$448.24
18					
19	Number of Estimated 2018/19 Participants				731
20					
21	Annual Subsidy times Number of Participants (Ln 17 *Ln 19)				$327,569
22	Prior Year Ending Balance 10/31/2018 - RLIARA Page 2				($81,089)
23	Estimated Annual Administrative Costs				$0
24	Estimated Non-Distribution Regulatory Assessment (Based off of NHPUC invoice dated August 8, 2018)				$85,292
25	Total Program Costs				$331,773
26					
27	Estimated weather normalized firm therms billed for				
28	the twelve months ended 10/31/19 sales and transportation				75,069,265
29	(Attachment 2 to Schedule 10B, Page 2 of 3, "Total Division"				
30	subtract "Special Contracts").				
31	**Total Residential Low Income Assistance and Regulatory Assessment Costs Charge**				**$0.0044**

NORTHERN UTILITIES, INC., NEW HAMPSHIRE DIVISION
NOVEMBER 2017 THROUGH OCTOBER 2018
RESIDENTIAL LOW INCOME ASSISTANCE AND REGULATORY ASSESSMENT COSTS (RLIARA) RECONCILIATION

											Estimate	Estimate	Estimate	
1	**FOR THE MONTH OF:**	**Nov-17**	**Dec-17**	**Jan-18**	**Feb-18**	**Mar-18**	**Apr-18**	**May-18**	**Jun-18**	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Total**
2	**DAYS IN MONTH**	30	31	31	28	31	30	31	30	31	31	30	31	365
3														**Average**
4	RLIA Participant Count	690	740	622	791	775	844	905	720	699	665	658	661	731
5														**Total**
6	Beginning Balance	($167,209)	($150,886)	($129,089)	($140,079)	($137,051)	($132,828)	($123,783)	($110,034)	($103,921)	($97,858)	($91,839)	($85,637)	($167,209)
7														
8	Add: Actual Costs	$18,347	$31,651	$35,378	$38,374	$34,369	$35,267	$27,166	$14,005	$9,739	$10,000	$9,948	$10,780	$275,023
9														
10	Add: Regulatory Assessments	$25,912	$25,912	$4,869	$4,869	$4,869	$4,869	$4,869	$4,869	$7,108	$7,108	$7,108	$7,108	$109,468
11														
12	Less: Collected Revenue	$27,373	$35,270	$50,803	$39,848	$34,741	$30,915	$17,803	$11,926	$9,922	$10,714	$10,504	$12,992	($292,814)
13														
14	Add: Administrative and Start Up Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
15														
16	Ending Balance Pre-Interest	($150,324)	($128,594)	($139,645)	($136,684)	($132,555)	($123,607)	($109,552)	($103,086)	($96,996)	($91,464)	($85,287)	($80,742)	
17														
18	Month's Average Balance	($158,766)	($66,292)	($96,604)	($127,747)	($154,965)	($171,559)	($172,935)	($166,596)	($158,500)	($94,661)	($88,563)	($83,190)	
19														
20	Interest Rate	4.25%	4.25%	4.25%	4.25%	4.25%	4.50%	4.50%	4.50%	4.75%	4.75%	4.75%	5.00%	
21														
22	Interest Applied	($562)	($495)	($435)	($367)	($272)	($177)	($481)	($835)	($861)	($375)	($351)	($347)	
23														
24	Ending Balance	($150,886)	($129,089)	($140,079)	($137,051)	($132,828)	($123,783)	($110,034)	($103,921)	($97,858)	($91,839)	($85,637)	**($81,089)**	

() Over Collection

NORTHERN UTILITIES, INC., NEW HAMPSHIRE DIVISION

Calculation of Distribution and Non-Distribution Revenues of the NHPUC Annual Regulatory Assessment

NHPUC Assessment Invoice dated August 8, 2018

	July 2018	**August 2018**	**September 2018**	**October 2018**	**November 2018**	**December 2018**	**January 2019**	**February 2019**	**March 2019**	**April 2019**	**May 2019**	**June 2019**	**Total Fiscal Year**	
Distribution	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$30,747.00	$368,964.00	1
Non-Distribution	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$7,107.67	$85,292.00	2
Total	$113,564.00			$113,564.00			$113,564.00			$113,564.00			$454,256.00	

(1) The $368,964.00 for Distribution represents the amount established in Docket DG 17-070.
(2) Total Invoice amount minus Distribution amount.

Northern Utilities, Inc. -- New Hampshire Division

EEC Budget

	Residential	Low-Income	Gen Service	Total
July-18	$48,836	$32,944	$83,458	$165,238
August-18	$55,890	$37,702	$95,513	$189,105
September-18	$62,402	$42,094	$114,392	$218,888
October-18	$69,456	$46,853	$118,695	$235,004
November-18	$76,510	$51,612	$130,750	$258,872
December-18	$83,564	$56,370	$150,557	$290,491
January-19	$10,304	$4,862	$13,047	$28,213
February-19	$20,608	$9,725	$26,093	$56,426
March-19	$30,120	$14,213	$42,729	$87,061
April-19	$40,424	$19,075	$51,183	$110,682
May-19	$50,728	$23,938	$64,229	$138,895
June-19	$61,032	$28,800	$81,868	$171,701
July-19	$71,337	$33,662	$90,322	$195,321
August-19	$81,641	$38,525	$103,369	$223,534
September-19	$91,152	$43,013	$120,004	$254,170
October-19	$101,457	$47,875	$128,458	$277,790
Total	$955,462	$531,263	$1,414,667	$2,901,392

Budget with Low-Income Costs Allocated to Residential and General Service Classes

	Residential	Low-Income	Gen Service	Total
July-18	$53,594	0	$111,644	$165,238
August-18	$61,044	0	$128,061	$189,105
September-18	$68,394	0	$150,495	$218,888
October-18	$76,171	0	$158,833	$235,004
November-18	$88,970	0	$169,902	$258,872
December-18	$99,642	0	$190,849	$290,491
January-19	$11,789	0	$16,424	$28,213
February-19	$23,667	0	$32,759	$56,426
March-19	$34,271	0	$52,791	$87,061
April-19	$45,928	0	$64,754	$110,682
May-19	$56,443	0	$82,452	$138,895
June-19	$67,546	0	$104,155	$171,701
July-19	$76,431	0	$118,890	$195,321
August-19	$86,898	0	$136,636	$223,534
September-19	$97,130	0	$157,040	$254,170
October-19	$108,469	0	$169,321	$277,790
Total	$1,056,387	$0	$1,845,005	$2,901,392

EEC Charge Factor Calculation

EEC Charge Factors for Residential Customers

EEC Reconciliation Adjustment	$113,528	Schedule 16 - EEC Page 3 Nov '18 - Oct '19 Totals- November 2018 Beginning Balance before Adjustment
Funds Shift to On Bill Financing Mechanism - Residential	$30,000	Adjustment
Revised EEC Reconciliation Adjustment	$143,528	
EEC Costs	$718,878	Schedule 16 - EEC Page 3 Nov '18 - Oct '19 Totals- Column 2
EEC Performance Incentive	$43,623	Schedule 16 - EEC Page 3 Nov '18 - Oct '19 Totals- Column 3
EEC Low-Income Costs	$78,306	Schedule 16 - EEC Nov '18 - Oct '19 Totals- Column 4
EEC Allocated Low-Income Performance Incentive	$4,657	Schedule 16 - EEC Page 3 Nov '18 - Oct '19 Totals- Column 5
Total	$988,992	
Forecasted Annual Throughput Volumes for Residential Customers	19,742,687	Schedule 16 - EEC - EEC Page 3 Nov '18 - Oct '19 Totals- Column 6
Energy Efficiency Charge Factor for Residential Customers	**$0.0501**	

EEC Charge Factors for Commercial and Industrial Customers (C&I)

EEC Reconciliation Adjustment	$43,740	Schedule 16 - EEC Page 4 Nov '18 - Oct '19 Totals- November 2018 Beginning Balance Before Adjustment
Funds Shift to On Bill Financing Mechanism - C&I	$53,000	Adjustment
Revised EEC Reconciliation Adjustment	$96,740	
EEC Costs	$1,002,609	Schedule 16 - EEC Page 4 Nov '18 - Oct '19 Totals- Column 2
EEC Performance Incentive	$54,741	Schedule 16 - EEC Page 4 Nov '18 - Oct '19 Totals- Column 3
EEC Low-Income Costs	$293,364	Schedule 16 - EEC Page 4 Nov '18 - Oct '19 Totals- Column 4
EEC Allocated Low-Income Performance Incentive	$15,598	Schedule 16 - EEC Page 4 Nov '18 - Oct '19 Totals- Column 5
Total	$1,559,792	
Forecasted Annual Throughput Volumes for C&I Customers	55,326,578	Schedule 16 - EEC Page 4 Nov '18 - Oct '19 Totals- Column 6
Energy Efficiency Charge Factor for C&I Customers	**$0.0264**	

Northern Utilities, Inc.

New Hampshire Division

Calculation of the EEC Charge, a Component of the Local Distribution Adjustment Charge

To Be Effective November 1, 2018 through October 31, 2019

Residential Customers

		Beginning Balance (Over)/Under		EEC Rate per Therm	EEC Collections	EEC Costs	DSM PI	Allocated Low Income EEC Costs	Allocated Low Income DSM PI	Ending Balance (Over)/Under	Average Balance (Over)/Under	Interest Prime Rate	Interest @ Prime Rate	Ending Balance plus Interest (Over)/Under	Therm Sales	# of Days
August-17	Actual	($1,056)		$0.0331	$11,629	$28,218	$2,326	$920	$80	$18,858	$8,901	4.00%	$30	$18,888	351,435	31
September-17	Actual	$18,888		$0.0331	$12,576	$80,046	$2,326	$5,783	$503	$94,970	$56,929	4.00%	$187	$95,157	380,460	30
October-17	Actual	$95,157		$0.0331	$14,773	$49,801	$2,326	$7,887	$686	$141,084	$118,121	4.25%	$426	$141,510	446,553	31
November-17	Actual	$141,510		$0.0433	$36,818	$58,033	$2,326	$4,650	$404	$170,105	$155,808	4.25%	$544	$170,649	972,322	30
December-17	Actual	$170,649		$0.0433	$114,292	$7,578	$14,857	($1,742)	($151)	$76,900	$123,775	4.25%	$904	$77,804	2,639,565	31
January-18	Actual	$77,804		$0.0433	$178,562	$20,657	$3,647	$10,082	$587	($65,785)	$6,009	4.25%	$22	($65,763)	4,123,832	31
February-18	Actual	($65,763)		$0.0433	$135,594	$42,714	$3,647	$1,848	$108	($153,040)	($109,402)	4.25%	($357)	($153,397)	3,131,798	28
March-18	Actual	($153,397)		$0.0433	$110,848	$24,224	$3,647	$2,241	$130	($234,002)	($193,700)	4.25%	($699)	($234,701)	2,560,049	31
April-18	Actual	($234,701)		$0.0433	$98,906	$99,903	($13,276)	$6,723	$391	($239,867)	($237,284)	4.50%	($1,814)	($241,681)	2,284,269	30
May-18	Actual	($241,681)		$0.0433	$47,801	$54,894	$3,647	$1,480	$86	($229,375)	($235,528)	4.50%	($922)	($230,297)	1,103,933	31
June-18	Actual	($230,297)		$0.0433	$23,655	$156,648	$3,647	$3,085	$180	($90,392)	($160,345)	4.50%	($593)	($90,985)	688,778	30
July-18	Forecast	($90,985)		$0.0433	$16,689	$48,836	$3,647	$4,758	$225	($50,209)	($70,597)	4.75%	($285)	($50,493)	385,426	31
August-18	Forecast	($50,493)		$0.0433	$16,261	$55,890	$3,647	$5,154	$213	($1,850)	($26,172)	4.75%	($106)	($1,956)	375,540	31
September-18	Forecast	($1,956)		$0.0433	$16,600	$62,402	$3,647	$5,992	$222	$53,706	$25,875	4.75%	$101	$53,807	383,364	30
October-18	Forecast	$53,807		$0.0433	$20,675	$69,456	$3,647	$6,715	$223	$113,174	$83,491	5.00%	$355	$113,528	477,483	31
November-18	Forecast	**$143,528**	1	$0.0501	$75,625	$76,510	$3,647	$12,460	$376	$160,896	$152,212	5.00%	$626	$161,522	1,509,473	30
December-18	Forecast	$161,522		$0.0501	$118,946	$83,564	$3,647	$16,078	$444	$146,309	$153,915	5.00%	$654	$146,962	2,374,168	31
January-19	Forecast	$146,962		$0.0501	$182,347	$10,304	$3,633	$1,485	$523	($19,439)	$63,761	5.00%	$271	($19,169)	3,639,654	31
February-19	Forecast	($19,169)		$0.0501	$185,426	$20,608	$3,633	$3,059	$539	($176,756)	($97,962)	5.00%	($376)	($177,132)	3,701,124	28
March-19	Forecast	($177,132)		$0.0501	$136,961	$30,120	$3,633	$4,151	$501	($275,688)	($226,410)	5.00%	($961)	($276,649)	2,733,747	31
April-19	Forecast	($276,649)		$0.0501	$111,879	$40,424	$3,633	$5,504	$495	($338,473)	($307,561)	5.00%	($1,264)	($339,737)	2,233,117	30
May-19	Forecast	($339,737)		$0.0501	$58,944	$50,728	$3,633	$5,715	$409	($338,196)	($338,966)	5.00%	($1,439)	($339,635)	1,176,527	31
June-19	Forecast	($339,635)		$0.0501	$34,767	$61,032	$3,633	$6,514	$388	($302,835)	($321,235)	5.00%	($1,320)	($304,155)	693,947	30
July-19	Forecast	($304,155)		$0.0501	$21,340	$71,337	$3,633	$5,095	$259	($245,172)	($274,664)	5.00%	($1,166)	($246,338)	425,956	31
August-19	Forecast	($246,338)		$0.0501	$18,972	$81,641	$3,633	$5,257	$234	($174,546)	($210,442)	5.00%	($894)	($175,439)	378,689	31
September-19	Forecast	($175,439)		$0.0501	$18,574	$91,152	$3,633	$5,978	$238	($93,012)	($134,226)	5.00%	($552)	($93,564)	370,740	30
October-19	Forecast	($93,564)		$0.0501	$25,328	$101,457	$3,633	$7,012	$251	($6,539)	($50,052)	5.00%	($213)	($6,752)	505,546	31
Nov 18 thru Oct 19 Totals					$989,109	$718,878	$43,623	$78,306	$4,657						19,742,687	

Forecast therm Sales from Company Forecast as seen in Attachment 2 to Schedule 10 B, Page 2 of 3, filed on September 17, 2018 in this Cost of Gas Docket.
Actual Performance Incentives (PI) includes reconciliations from prior year(s).
(1) Includes $30,000 adjustment for Funds Shift for On Bill Financing Mechanism

Northern Utilities, Inc.

New Hampshire Division

Calculation of the EEC Charge, a Component of the Local Distribution Adjustment Charge

To Be Effective November 1, 2018 through October 31, 2019

General Service Customers

		Beginning Balance (Over)/Under		EEC Rate per Therm	EEC Collections	EEC Costs	DSM PI	Allocated Low Income EEC Costs	Allocated Low Income DSM PI	Ending Balance (Over)/Under	Average Balance (Over)/Under	Interest Prime Rate	Interest @ Prime Rate	Ending Balance plus Interest (Over)/Under	Therm Sales	# of Days
August-17	Actual	($257,774)		$0.0142	$31,855	$29,344	$3,069	$5,965	$519	($250,733)	($254,254)	4.00%	($864)	($251,596)	2,279,220	31
September-17	Actual	($251,596)		$0.0142	$31,802	$26,598	$3,069	$34,044	$2,960	($216,728)	($234,162)	4.00%	($770)	($217,497)	2,239,720	30
October-17	Actual	($217,497)		$0.0142	$38,153	$90,926	$3,069	$47,456	$4,127	($110,073)	($163,785)	4.25%	($591)	($110,664)	2,686,992	31
November-17	Actual	($110,664)		$0.0184	$68,258	$81,783	$3,069	$18,764	$1,632	($73,673)	($92,169)	4.25%	($322)	($73,995)	3,923,395	30
December-17	Actual	($73,995)		$0.0184	$117,670	$222,221	$803	($8,192)	($712)	$22,424	($25,786)	4.25%	($948)	$21,476	6,397,669	31
January-18	Actual	$21,476		$0.0184	$163,821	$13,805	$3,951	$21,767	$1,267	($101,555)	($40,039)	4.25%	($145)	($101,700)	8,903,348	31
February-18	Actual	($101,700)		$0.0184	$129,978	$34,638	$3,951	$4,171	$243	($188,675)	($145,188)	4.25%	($473)	($189,149)	7,066,647	28
March-18	Actual	($189,149)		$0.0184	$116,588	$45,632	$3,951	$5,547	$323	($250,284)	($219,717)	4.25%	($793)	($251,077)	6,337,701	31
April-18	Actual	($251,077)		$0.0184	$101,796	$17,914	$3,951	$20,440	$1,190	($309,379)	($280,228)	4.50%	($100)	($309,479)	5,547,153	30
May-18	Actual	($309,479)		$0.0184	$65,696	$16,294	$3,951	$4,766	$277	($349,887)	($329,683)	4.50%	($1,260)	($351,147)	3,555,624	31
June-18	Actual	($351,147)		$0.0184	$46,264	$40,361	$3,951	$10,664	$621	($341,815)	($346,481)	4.50%	($1,282)	($343,097)	2,380,668	30
July-18	Forecast	($343,097)		$0.0184	$42,013	$83,458	$3,951	$28,186	$1,331	($268,184)	($305,640)	4.75%	($1,233)	($269,417)	2,283,323	31
August-18	Forecast	($269,417)		$0.0184	$43,639	$95,513	$3,951	$32,548	$1,343	($179,700)	($224,559)	4.75%	($906)	($180,606)	2,371,702	31
September-18	Forecast	($180,606)		$0.0184	$42,504	$114,392	$3,951	$36,103	$1,335	($67,330)	($123,968)	4.75%	($484)	($67,814)	2,309,983	30
October-18	Forecast	($67,814)		$0.0184	$52,512	$118,695	$3,951	$40,138	$1,333	$43,791	($12,012)	5.00%	($51)	$43,740	2,853,901	31
November-18	Forecast	**$96,740**	1	$0.0264	$125,224	$130,750	$3,951	$39,152	$1,181	$146,550	$121,645	5.00%	$500	$147,050	4,743,334	30
December-18	Forecast	$147,050		$0.0264	$157,072	$150,557	$3,951	$40,292	$1,112	$185,890	$166,470	5.00%	$707	$186,597	5,949,685	31
January-19	Forecast	$186,597		$0.0264	$218,634	$13,047	$4,684	$3,378	$1,191	($9,738)	$88,429	5.00%	$376	($9,362)	8,281,593	31
February-19	Forecast	($9,362)		$0.0264	$212,940	$26,093	$4,684	$6,666	$1,175	($183,684)	($96,523)	5.00%	($370)	($184,054)	8,065,912	28
March-19	Forecast	($184,054)		$0.0264	$174,939	$42,729	$4,684	$10,062	$1,214	($300,305)	($242,179)	5.00%	($1,028)	($301,333)	6,626,460	31
April-19	Forecast	($301,333)		$0.0264	$145,362	$51,183	$4,684	$13,571	$1,220	($376,037)	($338,685)	5.00%	($1,392)	($377,429)	5,506,128	30
May-19	Forecast	($377,429)		$0.0264	$99,046	$64,229	$4,684	$18,223	$1,305	($388,034)	($382,732)	5.00%	($1,625)	($389,659)	3,751,759	31
June-19	Forecast	($389,659)		$0.0264	$62,681	$81,868	$4,684	$22,286	$1,327	($342,175)	($365,917)	5.00%	($1,504)	($343,679)	2,374,269	30
July-19	Forecast	($343,679)		$0.0264	$63,053	$90,322	$4,684	$28,568	$1,455	($281,703)	($312,691)	5.00%	($1,328)	($283,031)	2,388,382	31
August-19	Forecast	($283,031)		$0.0264	$63,258	$103,369	$4,684	$33,267	$1,480	($203,489)	($243,260)	5.00%	($1,033)	($204,522)	2,396,136	31
September-19	Forecast	($204,522)		$0.0264	$60,640	$120,004	$4,684	$37,035	$1,476	($101,962)	($153,242)	5.00%	($630)	($102,592)	2,296,955	30
October-19	Forecast	($102,592)		$0.0264	$77,774	$128,458	$4,684	$40,863	$1,463	($4,898)	($53,745)	5.00%	($228)	($5,126)	2,945,966	31
Nov 18 thru Oct 19 Totals					$1,460,623	$1,002,609	$54,741	$293,364	$15,598						55,326,577	

Forecast therm Sales from Company Forecast as seen in Attachment 2 to Schedule 10 B, Page 2 of 3, filed on September 17, 2018 in this Cost of Gas Docket. Does not include Special Contracts.

Actual Performance Incentives (PI) includes reconciliations from prior year(s).

(1) Includes $53,000 adjustment for Funds Shift for On Bill Financing Mechanism

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	$	120,535	Page 2, Ln 12, Total
3	Interest- November 2018 through October 2019	$	(436)	Page 2, Ln 25, Total
4	**Total to be recovered**	**$**	**126,330**	Line 1+ Line 2+Line 3
5	Sector Sales - Therms- November 2018 through October 2019		19,742,687	Page 2, Line 15
6	**Lost Revenue Rate ($ per therm)**		**$0.0064**	Line 4 / Line 5
	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	$	85,893	Page 2, Ln 40, Total
9	Interest- November 2018 through October 2019	**$**	**(713)**	Page 2, Ln 53, Total
10	**Total to be recovered**	**$**	**80,130**	Line 7+Line 8+Line 9
11	Sector Sales - Therms- November 2018 through October 2019		55,326,580	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	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	
			Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Total
1	**RESIDENTIAL**														
2	**Beginning Balance - (Over)/Under**	$'s	$ 6,231	$ 6,454	$ 1,957	$ (10,769)	$ (23,916)	$ (30,886)	$ (34,627)	$ (32,811)	$ (27,835)	$ (21,065)	$ (13,900)	$ (6,582)	
3	**COSTS**														
4	Incremental Annualized Savings	Therms	16,984	18,550	160	321	468	629	789	949	1,109	1,270	1,418	1,578	44,225
5	Incremental Monthly Savings	Therms	1,415	1,546	13	27	39	52	66	79	92	106	118	132	3,685
6															-
7	Cumulative Savings - Current	Therms	1,415	2,961	2,975	3,001	3,040	3,093	3,158	3,238	3,330	3,436	3,554	3,685	36,886
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	15,947	15,974	16,013	16,065	16,131	16,210	16,303	16,408	16,527	16,658	192,558
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	$ 10,613	$ 10,631	$ 10,657	$ 10,692	$ 9,485	$ 9,531	$ 9,585	$ 9,648	$ 9,717	$ 9,794	**$ 120,535**
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	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	$0.0064	
17	Revenue	**$'s**	$ 9,661	$ 15,195	$ 23,294	$ 23,687	$ 17,496	$ 14,292	$ 7,530	$ 4,441	$ 2,726	$ 2,424	$ 2,373	$ 3,235	**$ 126,353**
18															
19	(Over)/Under-Recovery (Exc interest)		$ 6,146	$ 1,864	$ (10,724)	$ (23,825)	$ (30,755)	$ (34,486)	$ (32,673)	$ (27,721)	$ (20,976)	$ (13,841)	$ (6,555)	$ (23)	
20															
21	**INTEREST**														
22	Average Monthly Balance		$ 6,189	$ 4,159	$ (4,383)	$ (17,297)	$ (27,336)	$ (32,686)	$ (33,650)	$ (30,266)	$ (24,406)	$ (17,453)	$ (10,228)	$ (3,303)	
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	$ 307	$ 93	$ (46)	$ (91)	$ (131)	$ (142)	$ (139)	$ (114)	$ (89)	$ (59)	$ (27)	$ (0)	$ (436)
26															
27	**Ending Balance**	**$'s**	$ 6,454	$ 1,957	$ (10,769)	$ (23,916)	$ (30,886)	$ (34,627)	$ (32,811)	$ (27,835)	$ (21,065)	$ (13,900)	$ (6,582)	$ (24)	
28	**COMMERCIAL & INDUSTRIAL**														
29	**Beginning Balance - (Over)/Under**	**$'s**	$ (5,050)	$ (4,337)	$ (4,725)	$ (8,136)	$ (11,152)	$ (12,011)	$ (11,095)	$ (10,884)	$ (8,545)	$ (5,998)	$ (3,200)	$ 30	
30															
31	**COSTS**														
32	Incremental Annualized Savings	Therms	34,773	37,979	3,206	6,412	9,371	12,578	15,784	18,990	22,196	25,402	28,361	31,567	246,619
33	Incremental Monthly Savings	Therms	2,898	3,165	267	534	781	1,048	1,315	1,583	1,850	2,117	2,363	2,631	20,552
34															-
35	Cumulative Savings - Current	Therms	2,898	6,063	6,330	6,864	7,645	8,693	10,009	11,591	13,441	15,558	17,921	20,552	127,563
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	42,950	43,484	44,265	45,313	46,629	48,211	50,061	52,178	54,541	57,172	**567,002**
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	$ 8,319	$ 8,469	$ 8,669	$ 5,510	$ 5,697	$ 5,916	$ 6,166	$ 6,445	$ 6,756	**$ 85,893**
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)	$ (8,102)	$ (11,109)	$ (11,960)	$ (11,050)	$ (10,837)	$ (8,510)	$ (5,973)	$ (3,187)	$ 30	$ 2,662	
48															
49	**INTEREST**														
50	Average Monthly Balance		$ (4,590)	$ (4,418)	$ (6,414)	$ (9,623)	$ (11,556)	$ (11,530)	$ (10,966)	$ (9,697)	$ (7,259)	$ (4,592)	$ (1,585)	$ 1,346	
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)	$ (25)	$ (14)	$ 0	$ 11	$ (713)
54															
55	**Ending Balance**	**$'s**	$ (4,337)	$ (4,725)	$ (8,136)	$ (11,152)	$ (12,011)	$ (11,095)	$ (10,884)	$ (8,545)	$ (5,998)	$ (3,200)	$ 30	$ 2,673	

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)	(2)	(3)=(1)X(2)	(4)		(5)		(6) = (4) X (5)	(7)		(8)		(9) = (7) X (8)
	Number of Customers	Customer Charge	Calculated Customer Charge Revenue	Billing Determinants - Winter First Therms	Excess Therms	Winter Distribution Rates First Therms $/thm	Excess Therms $/thm	Winter Distribution Revenue	Billing Determinants - Summer First Therms	Excess Therms	Summer Distribution Rates First Therms $/thm	Excess Therms $/thm	Summer Distribution 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.

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**

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

	(1)	(2)	(3)=(1)/(2)
	Total Volumetric Revenue	Total Winter therms	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)	(2)	(3)=(1)/(2)
	Total Volumetric Revenue	Total Summer therms	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**	

Northern Utilities, Inc.
Gas Savings for LRR Calculation

Planned Gas Savings - 2019	Annual Therms
1. Residential Programs	
2. Home Energy Assistance	1,947
3. EnergyStar® Homes	1,441
4. Home Perf w/ EnergyStar®	1,655
5. EnergyStar® Appliances	4,032
6. Home Energy Reports	3,252
7. Residential	12,327
8.	
9. Commercial & Industrial Programs	
10. Large Business Energy Solutions	16,150
11. Small Business Energy Solutions	8,229
12. Education (Gas)	-
13. Commercial & Industrial	24,379

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-17 to Oct-18 Total	Jan 18 to Dec-18 Total
14. Residential Programs		14.1%	15.4%	1.3%	2.6%	3.8%	5.1%	6.4%	7.7%	9.0%	10.3%	11.5%	12.8%	14.1%	15.4%	100.0%	100.0%
15. Annualized Therms	Therms	16,984	18,550	160	321	468	629	789	949	1,109	1,270	1,418	1,578	1,738	1,898	44,225	12,327
16.																	
17. Monthly Incremental	Therms	1,415	1,546	13	27	39	52	66	79	92	106	118	132	145	158		1,027
18. Monthly Cumulative	Therms	14,388	15,934	15,947	15,974	16,013	16,066	16,131	16,210	16,303	16,409	16,527	16,658	16,803	16,961	192,560	196,003
19.																	
20. Commercial & Industrial Programs		12%	25%	1.3%	2.6%	3.8%	5.1%	6.4%	7.7%	9.0%	10.3%	11.5%	12.8%	14.1%	15.4%		
21. Annualized Therms	Therms	34,773	37,979	3,206	6,412	9,371	12,578	15,784	18,990	22,196	25,402	28,361	31,567	34,773	37,979	246,619	246,619
22.																	
23. Monthly Incremental	Therms	2,898	3,165	267	534	781	1,048	1,315	1,583	1,850	2,117	2,363	2,631	2,898	3,165	20,552	20,552
24. Monthly Cumulative	Therms	39,518	42,683	42,950	43,484	44,265	45,313	46,629	48,211	50,061	52,178	54,541	57,172	60,069	63,234	567,004	608,106

Northern Utilities, Inc.
Lost Revenue Reconciliation
2018

Line	Sector / Description	Unit	Recast	Recast	Recast	Recast	Recast	Recast	Estimate	Estimate	Estimate	Estimate	
			Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	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 thorugh 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 based on a calendar year. Does not include prior cumulative savings.

	Annualized	"Installed" Savings												
	Therm Savings	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential														
Jan	160	13	13	13	13	13	13	13	13	13	13	13	13	160
Feb	321		27	27	27	27	27	27	27	27	27	27	27	294
Mar	468			39	39	39	39	39	39	39	39	39	39	390
Apr	629				52	52	52	52	52	52	52	52	52	472
May	789					66	66	66	66	66	66	66	66	526
Jun	949						79	79	79	79	79	79	79	554
Jul	1,109							92	92	92	92	92	92	555
Aug	1,270								106	106	106	106	106	529
Sep	1,418									118	118	118	118	473
Oct	1,578										131	131	131	394
Nov	1,738											145	145	290
Dec	1,898												158	158
Total	12,328	13	40	79	131	197	276	369	475	593	724	869	1,027	4,794
		13	53	133	264	461	738	1,106	1,581	2,174	2,898	3,767	4,794	
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		$ 9	$ 36	$ 88	$ 176	$ 271	$ 434	$ 651	$ 930	$ 1,278	$ 1,704	$ 2,507	$ 3,191	**$ 11,273**
C&I														
Jan	3,206	267	267	267	267	267	267	267	267	267	267	267	267	3,206
Feb	6,412		534	534	534	534	534	534	534	534	534	534	534	5,878
Mar	9,371			781	781	781	781	781	781	781	781	781	781	7,810
Apr	12,578				1,048	1,048	1,048	1,048	1,048	1,048	1,048	1,048	1,048	9,433
May	15,784					1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	10,522
Jun	18,990						1,582	1,582	1,582	1,582	1,582	1,582	1,582	11,077
Jul	22,196							1,850	1,850	1,850	1,850	1,850	1,850	11,098
Aug	25,402								2,117	2,117	2,117	2,117	2,117	10,584
Sep	28,361									2,363	2,363	2,363	2,363	9,454
Oct	31,567										2,631	2,631	2,631	7,892
Nov	34,773											2,898	2,898	5,796
Dec	37,979												3,165	3,165
Total	246,618	267	802	1,582	2,631	3,946	5,528	7,378	9,495	11,858	14,489	17,387	20,552	95,914
		267	1,069	2,651	5,282	9,228	14,756	22,134	31,629	43,487	57,976	75,362	95,914	
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	$ 204	$ 507	$ 1,011	$ 1,090	$ 1,744	$ 2,616	$ 3,738	$ 5,139	$ 6,851	$ 14,418	$ 18,350	**$ 55,721**
Total Lost Revenue														**$ 66,994**

CALCULATION OF ENVIRONMENTAL RESPONSE COST RATE

November 1, 2018 through October 31, 2019

Total ERC Costs for the Period	$429,241	(See 2018 ERC Filing)
Less Current (Over) Collection (Estimated)	$5,984	(See page 2 of 2)
Total ERC Cost to be Recovered	$435,225	
Forcasted Firm Sales & Firm Transportation Volumes (Attachment 2 to Schedule 10B, Page 2 of 3, "Total Division" subtract "Special Contracts").	75,069,265	
ERC Recovery Rate	**$0.0058**	

Northern Utilities, Inc. - New Hampshire Division
Environmental Response Cost 12 Month Reconciliation

Month	Actual or Forecast	Beginning Balance (Over)/Under	Revenue	Prior Period ERC Costs To be recovered	Ending Balance (Over)/Under
August	Actual	$83,619	$14,534		$69,085
September	Actual	$69,085	$14,675		$54,411
October	Actual	$54,411	$17,551		$36,859
November-'17	Actual	$36,859	$28,793	$406,108	$414,174
December	Actual	$414,174	$54,224		$359,950
January- '18	Actual	$359,950	$78,164		$281,786
February	Actual	$281,786	$61,187		$220,599
March	Actual	$220,599	$53,386		$167,213
April	Actual	$167,213	$46,966		$120,247
May	Actual	$120,247	$27,979		$92,268
June	Actual	$92,268	$18,366		$73,903
July	Actual	$73,903	$15,286		$58,615
August	Est.	$58,615	$16,483		$42,132
September	Est.	$42,132	$16,160		$25,972
October	Est.	$25,972	$19,988		$5,984

NORTHERN UTILITIES, INC.- NEW HAMPSHIRE DIVISION
REMEDIATION ADJUSTMENT CLAUSE COMPLIANCE FILING
2017-2018 ENVIORMENTAL RESPONSE COSTS
SITE SPECIFIC EXPENSES

Line	Description	Total	11/11 - 10/12	11/12 - 10/13	11/13 - 10/14	11/14-10/15	11/15-10/16	11/16-10/17	11/17-10/18	11/18-10/19	11/19-10/20	11/20-10/21	11/21-10/22	11/22-10/23	11/23-10/24
	ENVIRONMENTAL RESPONSE COST (ERC)														
1	July 10 - June 11 Expenses Amortization (1/7)	$ 121,209	$ 17,316	$ 17,316	$ 17,316	$ 17,316	$ 17,316	$ 17,316	$ 17,316						
2	July 11 - June 12 Expenses Amortization (1/7)	$ 159,020		$ 22,717	$ 22,717	$ 22,717	$ 22,717	$ 22,717	$ 22,717	$ 22,717					
3	July 12 - June 13 Expenses Amortization (1/7)	$ 175,406			$ 25,058	$ 25,058	$ 25,058	$ 25,058	$ 25,058	$ 25,058	$ 25,058				
4	July 13 - June 14 Expenses Amortization (1/7)	$ 40,881				$ 5,840	$ 5,840	$ 5,840	$ 5,840	$ 5,840	$ 5,840	$ 5,840			
5	July 14 - June 15 Expenses Amortization (1/7)	$ 112,198					$ 16,028	$ 16,028	$ 16,028	$ 16,028	$ 16,028	$ 16,028	$ 16,028		
6	July 15 - June 16 Expenses Amortization (1/7)	$ 2,179,885						$ 311,412	$ 311,412	$ 311,412	$ 311,412	$ 311,412	$ 311,412	$ 311,412	
7	July 16 - June 17 Expenses Amortization (1/7)	$ 54,154							$7,736	$7,736	$7,736	$7,736	$7,736	$7,736	$7,736
8	July 17 - June 18 Expenses Amortization (1/7)	$ 283,143								$40,449	$40,449	$40,449	$40,449	$40,449	$40,449
9	Subtotal (Line 1 through Line 7)	$ 3,125,897	$ 17,316	$ 40,033	$ 65,091	$ 70,931	$ 86,959	$ 398,371	$ 406,108	$ 429,241	$ 406,524	$ 381,466	$ 375,626	$ 359,597	$ 48,185
10	Add: Excess amortization from prior years (from schedule 5, Line 10)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Less: Excess amortization to be deferred (from schedule 5, Line 9)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Total Environmental Response cost to be recovered (ERC)	$ 3,125,897	$ 17,316	$ 40,033	$ 65,091	$ 70,931	$ 86,959	$ 398,371	$ 406,108	$ 429,241	$ 406,524	$ 381,466	$ 375,626	$ 359,597	$ 48,185
13	July 2010 - June 2011 Unamortized beginning balance		$ 121,209	$ 103,893	$ 86,578	$ 69,262	$ 51,947	$ 34,631	$ 17,316						
14	July 2011 - June 2012 Unamortized beginning balance			$ 159,020	$ 136,303	$ 113,586	$ 90,869	$ 68,151	$ 45,434	$ 22,717					
15	July 2012 - June 2013 Unamortized beginning balance				$ 175,406	$ 150,348	$ 125,290	$ 100,232	$ 75,174	$ 50,116	$ 25,058				
16	July 2013 - June 2014 Unamortized beginning balance					$ 40,881	$ 35,041	$ 29,201	$ 23,361	$ 17,521	$ 11,680	$ 5,840			
17	July 2014 - June 2015 Unamortized beginning balance						$ 112,198	$ 96,170	$ 80,141	$ 64,113	$ 48,085	$ 32,057	$ 16,028		
18	July 2015 - June 2016 Unamortized beginning balance							$ 2,179,885	$ 1,868,473	$ 1,557,061	$ 1,245,649	$ 934,236	$ 622,824	$ 311,412	
19	July 2016 - June 2017 Unamortized beginning balance								$ 54,154	$ 46,418	$ 38,681	$ 30,945	$ 23,209	$ 15,473	$ 7,736
20	July 2017 - June 2018 Unamortized beginning balance									$ 283,143	$ 242,694	$ 202,245	$ 161,796	$ 121,347	$ 80,898
21	Total Unamortized beginning balance		$ 121,209	$ 262,913	$ 398,287	$ 374,077	$ 415,344	$ 2,508,270	$ 2,164,053	$ 2,041,089	$ 1,611,848	$ 1,205,324	$ 823,858	$ 448,232	$ 88,634
22	INSURANCE/3RD PARTY EXPENSES (IE) Expenses (from schedule 2)														
23	INSURANCE/3RD PARTY RECOVERIES (IR)														
24	UNDER/OVER Recovery from previous year														
25	**Total of Lines 21 through 24**		$ 121,209	$ 262,913	$ 398,287	$ 374,077	$ 415,344	$ 2,508,270	$ 2,164,053	$ 2,041,089	$ 1,611,848	$ 1,205,324	$ 823,858	$ 448,232	$ 88,634

Northern Utilities, Inc.
New Hampshire Division
Schedule 18

Formula for Supplier Balancing Charge

Balancing Resources

Line	NU Storage Capacity Costs (Fixed)		NU Storage Space (Dth)	Reference
1	$ 139,855	TGP	259,337	Schedule 5A, Page 4
2	$ 2,840,000	Union	4,000,000	Schedule 5A, Page 4
3	$ 2,979,855	TOTAL	4,259,337	LN 1 + LN 2
4	Weighted Average Capacity Cost		$ 0.6996 per Dth	LN 3 Cost / LN3 Space
	NU Storage Commodity Costs (Variable)			
5	TGP FS-MA	Withdraw/Inject	$ 0.0174	Schedule 6B, PG 10, LN 10 * 2
6	Union	Withdraw/Inject	$ 0.0100	Schedule 6B, PG 11, LN 10 * 2
7	Weighted Average Commodity Cost		$ 0.0105 per Dth	LN 5, LN 6 (weighted)
8	Supplier Balancing Charge		$ 0.71 per Dth	LN 4 + LN 7

Northern Utilities - New Hampshire Division
Capacity Assignment Calculations 2018-2019
Derivation of Class Assignments and Weightings

Basic assumptions:

1 The MBA method allocates capacity costs based on design day demands in two pieces:
  - a The base use portion of the class design day demand based on base use
  - b The remaining portion of design day demand based on remaining design day demand

2 Base demand is composed solely of pipeline supplies

3 Remaining demand consists of a portion of pipeline and all storage and peaking supplies

		Design Day Demand, Dt	Adjusted Design Day Demand, Dt	Percent of Total	Avg Daily Base Use Load, Dt	Remaining Design Day Demand
1	RATE A-Resi Non-Htg	292	289	0.5%	35	254
2	RATE B-Resi Htg	26,619	26,316	43.4%	1,403	24,913
3	RATE G-40	10,105	9,990	16.5%	454	9,536
4	RATE G-50	674	667	1.1%	271	395
5	RATE G-41	8,117	8,025	13.2%	481	7,544
6	RATE G-51	1,143	1,130	1.9%	430	700
7	RATE G-42	1,943	1,921	3.2%	138	1,784
8	RATE G-52	214	211	0.3%	70	142
9	Special Contract	1,603	1,585	2.6%	1,595	-
10	RATE T-40	1,677	1,658	2.7%	74	1,584
11	RATE T-50	149	147	0.2%	-	147
12	RATE T-41	6,120	6,050	10.0%	403	5,647
13	RATE T-51	869	859	1.4%	439	420
14	RATE T-42	1,239	1,225	2.0%	85	1,140
15	RATE T-52	607	600	1.0%	403	197
16	Total	61,371	60,673	100.0%	6,280	54,403
17						-
18	Residential Total	26,911	26,605	43.8%	1,438	25,167
19	LLF Total	29,200	28,868	47.6%	1,633	27,235
20	HLF Total	5,259	5,200	8.6%	3,208	1,991
21	Total	61,371	60,673	100.0%	6,280	54,393
22						
23						

24		Resdential	Total C&I	LLF C&I	HLF C&I	Total
25	Residential Allocation	MDQ, Dt	MDQ, Dt	MDQ, Dt	MDQ, Dt	MDQ, Dt
26	Pipeline - Base	1,438	4,841	1,633	3,208	6,280
27	Pipeline - Remaining	3,355	1,296	1,208	88	4,651
28	Storage	8,811	11,283	10,514	769	20,095
29	Peaking	13,001	16,648	15,513	1,134	29,648
30	Total	26,605	34,068	28,868	5,200	60,673
31	Check - Should be 0	-	-	-	-	-
32						

33	Caapcity Allocations %s	**LLF C&I**	**HLF C&I**
34			
35	Pipeline	**9.84%**	**63.40%**
36	Storage	**36.42%**	**14.79%**
37	Peaking	**53.74%**	**21.81%**
38	Total	**100.00%**	**100.00%**

Northern Utilities, Inc.
New Hampshire Division
Design Day Forecast by Rate Class

2018-2019 Forecast Annual Sales (Dth)

	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division
Sales Service	26,219	1,948,050	944,945	145,501	759,075	246,772	181,735	46,159	0	1,974,269	1,885,756	438,433	4,298,458
Capacity Assigned Delivery Service			162,831	37,395	594,303	218,858	120,294	152,780	530,512		877,429	939,546	1,816,975
Capacity Exempt Delivery Service			34,648	5,624	55,894	10,327	349,549	1,465,964	699,341		440,092	2,181,256	2,621,348
Total System	26,219	1,948,050	1,142,425	188,520	1,409,273	475,957	651,579	1,664,904	1,229,854	1,974,269	3,203,277	3,559,235	8,736,780

2018-2019 Forecast Annual Sendout (Dth)

														Prior Year WN Act	
	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division	Total Division	Percent Change
Sales Service	26,607	1,976,881	958,931	147,655	770,310	250,425	184,425	46,842		2,003,488	1,913,665	444,921	4,362,075	4,095,462	6.5%
Capacity Assigned Delivery Service			165,242	37,948	603,100	222,097	122,075	155,042	538,365		890,416	953,452	1,843,868	1,885,747	-2.2%
Capacity Exempt Delivery Service			35,161	5,707	56,722	10,480	354,723	1,487,661	709,692		446,605	2,213,539	2,660,144	2,530,067	5.1%
Total System	26,607	1,976,881	1,159,333	191,310	1,430,131	483,002	661,222	1,689,544	1,248,056	2,003,488	3,250,686	3,611,912	8,866,086	8,511,276	4.2%

2018-2019 Forecast Load Factor (%)

														Prior Year Actual	
	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division	Total Division	Percent Change
Sales Service	25.0%	20.3%	26.0%	60.0%	26.0%	60.0%	26.0%	60.0%		20.4%	26.0%	60.0%	24.3%	24.0%	1.4%
Capacity Assigned Delivery Service			27.0%	70.0%	27.0%	70.0%	27.0%	70.0%	92.0%		27.0%	80.9%	41.2%	40.6%	1.5%
Capacity Exempt Delivery Service			67.0%	108.0%	67.0%	108.0%	67.0%	108.0%	108.0%		67.0%	108.0%	97.9%	97.8%	0.2%
Total System	25.0%	20.3%	26.6%	62.6%	27.1%	64.9%	39.1%	100.7%	100.5%	20.4%	28.7%	91.0%	35.3%	35.0%	0.7%

2018-2019 Design Day Sendout (Dth)

														Prior Year Design Day Actual	
	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division	Total Division	Percent Change
Sales Service	292	26,619	10,105	674	8,117	1,143	1,943	214		26,911	20,165	2,032	49,108	46,731	5.1%
Capacity Assigned Delivery Service			1,677	149	6,120	869	1,239	607	1,603		9,035	3,228	12,263	12,728	-3.7%
Capacity Exempt Delivery Service			144	14	232	27	1,451	3,774	1,800		1,826	5,615	7,442	7,089	5.0%
Total System	292	26,619	11,925	837	14,469	2,039	4,633	4,595	3,404	26,911	31,026	10,875	68,812	66,548	3.4%

2018-2019 Baseload Sendout (Dth)
(Average Daily July and August Sendout)

	Res Non-Heat	Res Heat	G/T40	63689.86	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division
Sales Service	35	1,403	454	271	481	430	138	70		1,438	1,072	771	3,281
Capacity Assigned Delivery Service			74	0	403	439	85	403	1,595		561	2,437	2,998
Capacity Exempt Delivery Service			52	0	44	19	481	3,722	2,061		578	5,802	6,379
Total System	35	1,403	579	271	928	888	703	4,195	3,656	1,438	2,211	9,010	12,659

2018-2019 Planning Load Design Day Sendout (Dth)

	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division
Sales Service	292	26,619	10,105	674	8,117	1,143	1,943	214		26,911	20,165	2,032	49,108
Capacity Assigned Delivery Service			1,677	149	6,120	869	1,239	607	1,603		9,035	3,228	12,263
Capacity Exempt Delivery Service			0	0	0	0	0	0	0		0	0	0
Total System	292	26,619	11,781	823	14,237	2,013	3,182	821	1,603	26,911	29,200	5,259	61,371

2018-2019 Planning Load Baseload Sendout (Dth)
(Average Daily July and August Sendout)

	Res Non-Heat	Res Heat	G/T40	G/T50	G/T41	G/T51	G/T42	G/T52	Special Contracts	Res	LLF	HLF	Total Division
Sales Service	35	1,403	454	271	481	430	138	70		1,438	1,072	771	3,281
Capacity Assigned Delivery Service			74	0	403	439	85	403	1,595		561	2,437	2,998
Capacity Exempt Delivery Service			0	0	0	0	0	0	0		0	0	0
Total System	35	1,403	527	271	884	869	222	473	1,595	1,438	1,633	3,208	6,280

Winter Period Re-Entry Surcharge Calculation
(Applicable to Capacity Assigned Customers Returning to Sales Service)

Line	Item	HLF (50, 51, 52)	LLF (40, 41, 42)	**Weighted Average**	Reference
1	Winter Demand Cost of Gas Rate	$0.2599	$0.3482	$0.3365	No Change from Page 3 of Summary
2	Winter Commodity Cost of Gas Rate	$0.4162	$0.4449	$0.4411	No Change from Page 3 of Summary
3	Winter Indirect Cost of Gas	$0.0493	$0.0493	$0.0493	No Change from Page 3 of Summary - No Prior Period Over-Collection or Supplier Refunds
4	Winter Cost of Gas Rate (Exclusive of Credits)	$0.7254	$0.8424	$0.8269	Sum Lines 1 through 3
5	Winter Cost of Gas Rate for Incumbent Sales Customers	$0.7254	$0.8424	$0.8269	Page 3 of Summary
6	**Winter Re-Entry Surcharge**	$0.0000	$0.0000	**$0.0000**	**Positive Difference between Line 4 and Line 5**
7	Projected Sales (therms)	2,480,220	16,211,416	18,691,636	Page 3 of Summary

Summer Period Re-Entry Surcharge & Conversion Surcharge Calculation
(Applicable to Capacity Assigned & Capacity Exempt Customers Returning to Sales Service)

Line	Item	HLF (50, 51, 52)	LLF (40, 41, 42)	**Weighted Average**	Reference
8	Summer Demand Cost of Gas Rate	$0.0533	$0.1222	$0.1131	No Change from Page 7 of Summary
9	Summer Commodity Cost of Gas Rate	$0.2474	$0.2474	$0.2474	No Change from Page 7 of Summary
10	Summer Indirect Cost of Gas	$0.0262	$0.0262	$0.0262	No Change from Page 7 of Summary - No Prior Period Over-Collection or Supplier Refunds
11	Summer Cost of Gas Rate (Exclusive of Credits)	$0.3269	$0.3958	$0.3867	Sum Lines 8 through 10
12	Summer Cost of Gas Rate for Incumbent Sales Customers	$0.3269	$0.3958	$0.3867	Page 7 of Summary
13	**Summer Re-Entry Surcharge**	$0.0000	$0.0000	**$0.0000**	**Positive Difference between Line 11 and Line 12**
14	Projected Sales (therms)	101,438	323,295	424,733	Page 7 of Summary

Winter Period Conversion Surcharge Calculation
(Applicable to Capacity Exempt Customers Returning to Sales Service)

Line	Item	HLF (50, 51, 52)	LLF (40, 41, 42)	Reference
1	LLF Winter Demand Cost of Gas Rate	$0.3482	$0.3482	No Change from Page 7 of Summary
2	LLF Winter Commodity Cost of Gas Rate	$0.4490	$0.4490	No Change from Page 7 of Summary
3	LLF Winter Indirect Cost of Gas	$0.0493	$0.0493	No Change from Page 7 of Summary - No Prior Period Over-Collection or Supplier Refunds
4	Floor Price (LLF Winter Cost of Gas Rate, Exclusive of Credits)	$0.8465	$0.8465	Sum Lines 1 through 3.
5	Total Incremental Cost	$0.7612	$0.7612	See Line 15 of Incremental Commodity Price Worksheet
6	Total Conversion Rate	$0.8465	$0.8465	Maximum of Line 4 and Line 5
7	Winter Gas Adjustment Factor for Incumbent Sales Customers	$0.7254	$0.8424	Page 3 of Summary
8	**Conversion Surcharge**	**$0.1211**	**$0.0041**	**Positive Difference between Line 6 and Line 7**

Incremental Commodity Price Worksheet

Line	Month	NYMEX	Projected PNGTS Delivered Basis AGT City-Gate FOM Basis plus ($0.50 per Dth)	Projected FOM Index	Projected Non-Capacity Assigned Delivery Service Loads	Comments
1	Nov-18	$ 2.890	$ 1.178	$ 4.068	252,543	
2	Dec-18	$ 2.979	$ 4.688	$ 7.667	244,320	
3	Jan-19	$ 3.066	$ 8.133	$ 11.199	255,822	
4	Feb-19	$ 3.030	$ 8.018	$ 11.048	241,261	
5	Mar-19	$ 2.926	$ 3.225	$ 6.151	256,574	
6	Apr-19	$ 2.635	$ 0.778	$ 3.413	237,543	
7	Winter Period Weigthed Average Baseload Price ($/Dth)			$ 7.271	1,488,063	Average, Weighted by Loads, Lines 1 through 6
8	Load Shape Price Factor			1.008		See Load Shape Price Factor Worksheet
9	Winter Period Incremental Load Shape Price ($/Dth)			$ 7.329		Line 7 times Line 8
10	Granite Fuel			0.35%		Granite Tariff
11	Granite Variable Transport ($/Dth)			$ 0.1466		Granite Tariff (IT Daily Rate plus ACA)
12	Northern City-Gate Price ($/Dth)			$ 7.501		Line 9 times (1 plus Line 10) plus Line 11
13	New Hampshire Division City-Gate Sendout to Sales Ratio			1.0148		See Att 2 to Sch 10B
14	Northern Retail Meter Price ($/Dth)			$ 7.612		Line 12 times Line 13
15	Northern Retail Meter Price ($/therm)			$ 0.7612		Line 14 divided by 10

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Nov-17	11/1/2017	4,765	8,488	13,253	-	8,488	8,488	$ 2.075	$ 17,613
Nov-17	11/2/2017	3,384	7,915	11,299	-	7,915	7,915	$ 1.185	$ 9,379
Nov-17	11/3/2017	3,908	7,154	11,062	-	7,154	7,154	$ 1.280	$ 9,157
Nov-17	11/4/2017	4,652	6,555	11,207	-	6,555	6,555	$ 1.040	$ 6,817
Nov-17	11/5/2017	3,683	6,603	10,286	-	6,603	6,603	$ 1.040	$ 6,867
Nov-17	11/6/2017	4,794	8,761	13,555	-	8,761	8,761	$ 1.040	$ 9,111
Nov-17	11/7/2017	6,046	10,048	16,094	-	10,048	10,048	$ 2.245	$ 22,558
Nov-17	11/8/2017	6,624	9,028	15,652	-	9,028	9,028	$ 3.010	$ 27,174
Nov-17	11/9/2017	5,616	7,951	13,567	-	7,951	7,951	$ 3.470	$ 27,590
Nov-17	11/10/2017	7,914	8,839	16,753	-	8,839	8,839	$ 8.190	$ 72,391
Nov-17	11/11/2017	6,867	7,548	14,415	-	7,548	7,548	$ 5.605	$ 42,307
Nov-17	11/12/2017	6,326	7,688	14,014	-	7,688	7,688	$ 5.605	$ 43,091
Nov-17	11/13/2017	5,793	7,899	13,692	-	7,899	7,899	$ 5.605	$ 44,274
Nov-17	11/14/2017	5,875	8,744	14,619	-	8,744	8,744	$ 4.275	$ 37,381
Nov-17	11/15/2017	5,812	8,495	14,307	-	8,495	8,495	$ 3.385	$ 28,756
Nov-17	11/16/2017	5,238	8,700	13,938	-	8,700	8,700	$ 3.395	$ 29,537
Nov-17	11/17/2017	6,349	8,522	14,871	-	8,522	8,522	$ 3.905	$ 33,278
Nov-17	11/18/2017	4,155	6,702	10,857	-	6,702	6,702	$ 3.270	$ 21,916
Nov-17	11/19/2017	5,619	7,625	13,244	-	7,625	7,625	$ 3.270	$ 24,934
Nov-17	11/20/2017	5,919	8,455	14,374	-	8,455	8,455	$ 3.270	$ 27,648
Nov-17	11/21/2017	4,316	7,928	12,244	-	7,928	7,928	$ 3.055	$ 24,220
Nov-17	11/22/2017	5,657	6,506	12,163	-	6,506	6,506	$ 3.255	$ 21,177
Nov-17	11/23/2017	5,882	4,700	10,582	-	4,700	4,700	$ 3.275	$ 15,393
Nov-17	11/24/2017	5,019	4,572	9,591	-	4,572	4,572	$ 3.275	$ 14,973
Nov-17	11/25/2017	3,693	6,064	9,757	-	6,064	6,064	$ 3.275	$ 19,860
Nov-17	11/26/2017	5,820	7,187	13,007	-	7,187	7,187	$ 3.275	$ 23,537
Nov-17	11/27/2017	7,077	8,866	15,943	-	8,866	8,866	$ 3.275	$ 29,036
Nov-17	11/28/2017	5,435	8,285	13,720	-	8,285	8,285	$ 3.040	$ 25,186
Nov-17	11/29/2017	5,583	8,789	14,372	-	8,789	8,789	$ 3.140	$ 27,597

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Nov-17	11/30/2017	5,096	8,133	13,229	-	8,133	8,133	$ 3.080	$ 25,050
Dec-17	12/1/2017	5,902	7,375	13,277	-	7,375	7,375	$ 2.940	$ 21,683
Dec-17	12/2/2017	5,767	7,131	12,898	-	7,131	7,131	$ 2.805	$ 20,002
Dec-17	12/3/2017	5,994	7,840	13,834	-	7,840	7,840	$ 2.805	$ 21,991
Dec-17	12/4/2017	6,136	8,128	14,264	-	8,128	8,128	$ 2.805	$ 22,799
Dec-17	12/5/2017	5,005	7,358	12,363	-	7,358	7,358	$ 2.910	$ 21,412
Dec-17	12/6/2017	6,837	8,236	15,073	-	8,236	8,236	$ 3.430	$ 28,249
Dec-17	12/7/2017	6,925	8,098	15,023	-	8,098	8,098	$ 4.150	$ 33,607
Dec-17	12/8/2017	6,876	7,089	13,965	-	7,089	7,089	$ 3.995	$ 28,321
Dec-17	12/9/2017	7,235	7,221	14,456	-	7,221	7,221	$ 6.620	$ 47,803
Dec-17	12/10/2017	7,361	5,979	13,340	-	5,979	5,979	$ 6.620	$ 39,581
Dec-17	12/11/2017	7,615	8,129	15,744	-	8,129	8,129	$ 6.620	$ 53,814
Dec-17	12/12/2017	7,757	8,648	16,405	-	8,648	8,648	$ 6.465	$ 55,909
Dec-17	12/13/2017	9,240	9,562	18,802	-	9,562	9,562	$ 9.320	$ 89,118
Dec-17	12/14/2017	9,532	9,554	19,086	-	9,554	9,554	$ 9.285	$ 88,709
Dec-17	12/15/2017	8,650	8,693	17,343	-	8,693	8,693	$ 7.430	$ 64,589
Dec-17	12/16/2017	8,590	8,090	16,680	-	8,090	8,090	$ 7.540	$ 60,999
Dec-17	12/17/2017	8,820	8,847	17,667	-	8,847	8,847	$ 7.540	$ 66,706
Dec-17	12/18/2017	8,262	8,614	16,876	-	8,614	8,614	$ 7.540	$ 64,950
Dec-17	12/19/2017	6,334	7,717	14,051	-	7,717	7,717	$ 4.800	$ 37,042
Dec-17	12/20/2017	7,923	7,851	15,774	-	7,851	7,851	$ 9.775	$ 76,744
Dec-17	12/21/2017	8,594	8,378	16,972	-	8,378	8,378	$ 10.870	$ 91,069
Dec-17	12/22/2017	8,745	7,971	16,716	-	7,971	7,971	$ 6.685	$ 53,286
Dec-17	12/23/2017	6,835	6,295	13,130	-	6,295	6,295	$ 10.875	$ 68,458
Dec-17	12/24/2017	7,759	5,006	12,765	-	5,006	5,006	$ 10.875	$ 54,440
Dec-17	12/25/2017	8,132	5,668	13,800	-	5,668	5,668	$ 10.875	$ 61,640
Dec-17	12/26/2017	9,692	8,037	17,729	-	8,037	8,037	$ 10.875	$ 87,402
Dec-17	12/27/2017	10,805	7,935	18,740	-	7,935	7,935	$ 33.780	$ 268,044
Dec-17	12/28/2017	11,774	8,071	19,845	-	8,071	8,071	$ 22.285	$ 179,862

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Dec-17	12/29/2017	11,240	7,917	19,157	-	7,917	7,917	$ 19.105	$ 151,254
Dec-17	12/30/2017	10,500	6,723	17,223	-	6,723	6,723	$ 19.105	$ 128,443
Dec-17	12/31/2017	11,582	5,443	17,025	-	5,443	5,443	$ 19.105	$ 103,989
Jan-18	1/1/2018	11,475	6,051	17,526	-	6,051	6,051	$ 24.700	$ 149,460
Jan-18	1/2/2018	10,324	8,316	18,640	-	8,316	8,316	$ 24.700	$ 205,405
Jan-18	1/3/2018	9,130	7,966	17,096	-	7,966	7,966	$ 20.575	$ 163,900
Jan-18	1/4/2018	9,107	5,435	14,542	-	5,435	5,435	$ 38.215	$ 207,699
Jan-18	1/5/2018	11,789	8,629	20,418	-	8,629	8,629	$ 78.880	$ 680,656
Jan-18	1/6/2018	12,320	7,834	20,154	-	7,834	7,834	$ 24.605	$ 192,756
Jan-18	1/7/2018	9,842	5,506	15,348	-	5,506	5,506	$ 24.605	$ 135,475
Jan-18	1/8/2018	7,912	9,851	17,763	-	9,851	9,851	$ 24.605	$ 242,384
Jan-18	1/9/2018	8,047	8,667	16,714	-	8,667	8,667	$ 15.135	$ 131,175
Jan-18	1/10/2018	7,226	7,759	14,985	-	7,759	7,759	$ 10.025	$ 77,784
Jan-18	1/11/2018	5,643	6,690	12,333	-	6,690	6,690	$ 4.480	$ 29,971
Jan-18	1/12/2018	4,183	6,099	10,282	-	6,099	6,099	$ 3.385	$ 20,645
Jan-18	1/13/2018	8,606	7,240	15,846	-	7,240	7,240	$ 15.140	$ 109,614
Jan-18	1/14/2018	9,634	6,986	16,620	-	6,986	6,986	$ 15.140	$ 105,768
Jan-18	1/15/2018	9,491	9,666	19,157	-	9,666	9,666	$ 15.140	$ 146,343
Jan-18	1/16/2018	7,623	8,464	16,087	-	8,464	8,464	$ 15.140	$ 128,145
Jan-18	1/17/2018	8,131	8,586	16,717	-	8,586	8,586	$ 13.750	$ 118,058
Jan-18	1/18/2018	8,539	8,451	16,990	-	8,451	8,451	$ 13.805	$ 116,666
Jan-18	1/19/2018	7,193	7,886	15,079	-	7,886	7,886	$ 7.200	$ 56,779
Jan-18	1/20/2018	6,149	6,739	12,888	-	6,739	6,739	$ 5.375	$ 36,222
Jan-18	1/21/2018	6,616	4,986	11,602	-	4,986	4,986	$ 5.375	$ 26,800
Jan-18	1/22/2018	8,060	8,800	16,860	-	8,800	8,800	$ 5.375	$ 47,300
Jan-18	1/23/2018	7,240	7,986	15,226	-	7,986	7,986	$ 3.110	$ 24,836
Jan-18	1/24/2018	8,870	8,623	17,493	-	8,623	8,623	$ 12.060	$ 103,993
Jan-18	1/25/2018	9,537	8,563	18,100	-	8,563	8,563	$ 14.990	$ 128,359
Jan-18	1/26/2018	8,094	7,716	15,810	-	7,716	7,716	$ 9.765	$ 75,347

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Jan-18	1/27/2018	5,327	6,640	11,967	-	6,640	6,640	$ 4.665	$ 30,976
Jan-18	1/28/2018	6,209	7,507	13,716	-	7,507	7,507	$ 4.665	$ 35,020
Jan-18	1/29/2018	8,423	8,556	16,979	-	8,556	8,556	$ 4.665	$ 39,914
Jan-18	1/30/2018	8,987	10,036	19,023	-	10,036	10,036	$ 14.485	$ 145,371
Jan-18	1/31/2018	7,867	9,278	17,145	-	9,278	9,278	$ 10.345	$ 95,981
Feb-18	2/1/2018	7,073	8,081	15,154	-	8,081	8,081	$ 6.450	$ 52,122
Feb-18	2/2/2018	10,320	9,277	19,597	-	9,277	9,277	$ 12.245	$ 113,597
Feb-18	2/3/2018	8,283	8,364	16,647	-	8,364	8,364	$ 7.415	$ 62,019
Feb-18	2/4/2018	6,251	5,689	11,940	-	5,689	5,689	$ 7.415	$ 42,184
Feb-18	2/5/2018	8,481	9,218	17,699	-	9,218	9,218	$ 7.415	$ 68,351
Feb-18	2/6/2018	8,422	9,057	17,479	-	9,057	9,057	$ 7.030	$ 63,671
Feb-18	2/7/2018	8,134	8,562	16,696	-	8,562	8,562	$ 8.980	$ 76,887
Feb-18	2/8/2018	9,234	9,119	18,353	-	9,119	9,119	$ 8.100	$ 73,864
Feb-18	2/9/2018	7,752	8,276	16,028	-	8,276	8,276	$ 6.285	$ 52,015
Feb-18	2/10/2018	6,014	7,187	13,201	-	7,187	7,187	$ 3.100	$ 22,280
Feb-18	2/11/2018	6,624	7,768	14,392	-	7,768	7,768	$ 3.100	$ 24,081
Feb-18	2/12/2018	8,062	8,819	16,881	-	8,819	8,819	$ 3.100	$ 27,339
Feb-18	2/13/2018	8,153	8,830	16,983	-	8,830	8,830	$ 4.820	$ 42,561
Feb-18	2/14/2018	6,542	7,710	14,252	-	7,710	7,710	$ 2.680	$ 20,663
Feb-18	2/15/2018	5,456	4,861	10,317	-	4,861	4,861	$ 2.425	$ 11,788
Feb-18	2/16/2018	6,649	6,813	13,462	-	6,813	6,813	$ 3.030	$ 20,643
Feb-18	2/17/2018	6,886	5,539	12,425	-	5,539	5,539	$ 2.630	$ 14,568
Feb-18	2/18/2018	7,346	7,971	15,317	-	7,971	7,971	$ 2.630	$ 20,964
Feb-18	2/19/2018	5,537	9,372	14,909	-	9,372	9,372	$ 2.630	$ 24,648
Feb-18	2/20/2018	5,680	9,357	15,037	-	9,357	9,357	$ 2.630	$ 24,609
Feb-18	2/21/2018	4,435	7,653	12,088	-	7,653	7,653	$ 2.300	$ 17,602
Feb-18	2/22/2018	7,141	8,016	15,157	-	8,016	8,016	$ 2.945	$ 23,607
Feb-18	2/23/2018	6,320	7,268	13,588	-	7,268	7,268	$ 2.505	$ 18,206
Feb-18	2/24/2018	5,825	6,720	12,545	-	6,720	6,720	$ 2.155	$ 14,482

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Feb-18	2/25/2018	6,421	7,429	13,850	-	7,429	7,429	$ 2.155	$ 16,009
Feb-18	2/26/2018	6,396	7,985	14,381	-	7,985	7,985	$ 2.155	$ 17,208
Feb-18	2/27/2018	5,722	7,812	13,534	-	7,812	7,812	$ 2.600	$ 20,311
Feb-18	2/28/2018	4,939	6,616	11,555	-	6,616	6,616	$ 2.310	$ 15,283
Mar-18	3/1/2018	5,758	7,262	13,020	-	7,262	7,262	$ 2.325	$ 16,884
Mar-18	3/2/2018	6,093	7,691	13,784	-	7,691	7,691	$ 2.825	$ 21,727
Mar-18	3/3/2018	5,826	7,544	13,370	-	7,544	7,544	$ 3.005	$ 22,670
Mar-18	3/4/2018	6,285	7,406	13,691	-	7,406	7,406	$ 3.005	$ 22,255
Mar-18	3/5/2018	6,752	8,335	15,087	-	8,335	8,335	$ 3.005	$ 25,047
Mar-18	3/6/2018	6,927	8,375	15,302	-	8,375	8,375	$ 3.285	$ 27,512
Mar-18	3/7/2018	7,207	8,960	16,167	-	8,960	8,960	$ 3.855	$ 34,541
Mar-18	3/8/2018	7,288	9,857	17,145	-	9,857	9,857	$ 4.200	$ 41,399
Mar-18	3/9/2018	6,905	8,591	15,496	-	8,591	8,591	$ 3.770	$ 32,388
Mar-18	3/10/2018	6,292	7,496	13,788	-	7,496	7,496	$ 3.320	$ 24,887
Mar-18	3/11/2018	6,623	7,379	14,002	-	7,379	7,379	$ 3.320	$ 24,498
Mar-18	3/12/2018	6,719	8,187	14,906	-	8,187	8,187	$ 3.320	$ 27,181
Mar-18	3/13/2018	7,395	6,031	13,426	-	6,031	6,031	$ 4.570	$ 27,562
Mar-18	3/14/2018	6,896	7,947	14,843	-	7,947	7,947	$ 5.135	$ 40,808
Mar-18	3/15/2018	6,739	8,304	15,043	-	8,304	8,304	$ 5.850	$ 48,578
Mar-18	3/16/2018	7,497	8,071	15,568	-	8,071	8,071	$ 7.370	$ 59,483
Mar-18	3/17/2018	8,282	8,181	16,463	-	8,181	8,181	$ 7.620	$ 62,339
Mar-18	3/18/2018	8,318	8,857	17,175	-	8,857	8,857	$ 7.620	$ 67,490
Mar-18	3/19/2018	8,014	9,057	17,071	-	9,057	9,057	$ 7.620	$ 69,014
Mar-18	3/20/2018	7,010	8,050	15,060	-	8,050	8,050	$ 4.535	$ 36,507
Mar-18	3/21/2018	6,813	8,293	15,106	-	8,293	8,293	$ 5.490	$ 45,529
Mar-18	3/22/2018	6,619	7,926	14,545	-	7,926	7,926	$ 3.870	$ 30,674
Mar-18	3/23/2018	6,091	7,266	13,357	-	7,266	7,266	$ 2.975	$ 21,616
Mar-18	3/24/2018	6,081	7,084	13,165	-	7,084	7,084	$ 2.995	$ 21,217
Mar-18	3/25/2018	6,799	8,158	14,957	-	8,158	8,158	$ 2.995	$ 24,433

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Mar-18	3/26/2018	6,994	8,518	15,512	-	8,518	8,518	$ 2.995	$ 25,511
Mar-18	3/27/2018	6,136	8,144	14,280	-	8,144	8,144	$ 2.630	$ 21,419
Mar-18	3/28/2018	5,986	7,219	13,205	-	7,219	7,219	$ 2.480	$ 17,903
Mar-18	3/29/2018	5,524	6,629	12,153	-	6,629	6,629	$ 2.350	$ 15,578
Mar-18	3/30/2018	4,972	6,211	11,183	-	6,211	6,211	$ 2.350	$ 14,596
Mar-18	3/31/2018	4,709	6,018	10,727	-	6,018	6,018	$ 2.350	$ 14,142
Apr-18	4/1/2018	5,392	6,803	12,195	-	6,803	6,803	$ 2.975	$ 20,239
Apr-18	4/2/2018	6,689	7,678	14,367	-	7,678	7,678	$ 2.975	$ 22,842
Apr-18	4/3/2018	6,104	7,324	13,428	-	7,324	7,324	$ 4.810	$ 35,228
Apr-18	4/4/2018	6,403	8,083	14,486	-	8,083	8,083	$ 7.225	$ 58,400
Apr-18	4/5/2018	7,022	8,360	15,382	-	8,360	8,360	$ 6.905	$ 57,726
Apr-18	4/6/2018	6,210	7,546	13,756	-	7,546	7,546	$ 9.605	$ 72,479
Apr-18	4/7/2018	5,856	7,101	12,957	-	7,101	7,101	$ 8.470	$ 60,145
Apr-18	4/8/2018	6,452	7,476	13,928	-	7,476	7,476	$ 8.470	$ 63,322
Apr-18	4/9/2018	6,408	7,713	14,121	-	7,713	7,713	$ 8.470	$ 65,329
Apr-18	4/10/2018	6,554	7,925	14,479	-	7,925	7,925	$ 8.340	$ 66,095
Apr-18	4/11/2018	6,140	7,757	13,897	-	7,757	7,757	$ 8.055	$ 62,483
Apr-18	4/12/2018	5,003	7,146	12,149	-	7,146	7,146	$ 4.225	$ 30,192
Apr-18	4/13/2018	4,257	6,615	10,872	-	6,615	6,615	$ 2.935	$ 19,415
Apr-18	4/14/2018	6,032	7,539	13,571	-	7,539	7,539	$ 3.800	$ 28,648
Apr-18	4/15/2018	6,729	8,246	14,975	-	8,246	8,246	$ 3.800	$ 31,335
Apr-18	4/16/2018	5,695	7,482	13,177	-	7,482	7,482	$ 3.800	$ 28,432
Apr-18	4/17/2018	5,836	8,457	14,293	-	8,457	8,457	$ 6.600	$ 55,816
Apr-18	4/18/2018	5,243	8,173	13,416	-	8,173	8,173	$ 6.950	$ 56,802
Apr-18	4/19/2018	5,802	8,247	14,049	-	8,247	8,247	$ 8.335	$ 68,739
Apr-18	4/20/2018	5,390	8,439	13,829	-	8,439	8,439	$ 4.880	$ 41,182
Apr-18	4/21/2018	4,626	7,553	12,179	-	7,553	7,553	$ 3.030	$ 22,886
Apr-18	4/22/2018	4,489	7,306	11,795	-	7,306	7,306	$ 3.030	$ 22,137
Apr-18	4/23/2018	4,526	7,636	12,162	-	7,636	7,636	$ 3.030	$ 23,137

Load Shape Price Factor Worksheet

		Historic Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment			2017-2018 Cost Analysis	
Month	Date	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total	AGT City-Gate Price	AGT City-Gate Cost
Apr-18	4/24/2018	3,722	6,739	10,461	-	6,739	6,739	$ 2.765	$ 18,633
Apr-18	4/25/2018	4,499	6,737	11,236	-	6,737	6,737	$ 2.800	$ 18,864
Apr-18	4/26/2018	4,005	7,056	11,061	-	7,056	7,056	$ 2.720	$ 19,192
Apr-18	4/27/2018	4,272	6,479	10,751	-	6,479	6,479	$ 2.585	$ 16,748
Apr-18	4/28/2018	3,862	7,538	11,400	-	7,538	7,538	$ 2.630	$ 19,825
Apr-18	4/29/2018	4,852	8,790	13,642	-	8,790	8,790	$ 2.630	$ 23,118
Apr-18	4/30/2018	5,273	9,640	14,913	-	9,640	9,640	$ 2.630	$ 25,353
Winter Period		1,235,921	1,403,866	2,639,787	-	1,403,866	1,403,866	$ 7.059	$ 9,910,214

Weighted Average Daily Price	$ 7.059
Straight Average Daily Price	$ 7.004
Load Shape Price Factor	1.008

Month	Projected Delivery Service Loads			Delivery Service Loads Not Subject to Capacity Assignment		
	Capacity Assigned	Capacity Exempt	Total	Capacity Assigned	Capacity Exempt	Total
Nov-18	158,280	252,543	410,823	-	252,543	252,543
Dec-18	221,023	244,320	465,343	-	244,320	244,320
Jan-19	246,154	255,822	501,975	-	255,822	255,822
Feb-19	215,602	241,261	456,863	-	241,261	241,261
Mar-19	204,909	256,574	461,483	-	256,574	256,574
Apr-19	156,650	237,543	394,193	-	237,543	237,543
Winter	1,202,617	1,488,063	2,690,680	-	1,488,063	1,488,063

Northern Utilities
Simplified Market Based Allocator (MBA) Calculations
ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

1 Total Fixed Capacity Costs To Be Allocated

2		**NUI Total**	
3	Pipeline Demand	$ 5,933,077	
4	Storage Demand	$ 24,748,560	
5	On-system Peaking Demand	$ 3,196,690	
6	Subtotal Demand	$ 33,878,327	
7			
8	Capacity Release (Credit)	$ -	
9	Asset Management (Credit)	$ (7,021,600)	
10	Total Net Demand Costs	$ 26,856,727	
11			
12	Off-System Peaking Demand	$ 8,878,800	PR Allocation on Page 5
13			
14	Total Demand Costs	$ 35,735,526	

15

16 Proportional Responsibility (PR) Allocators

17

18 Allocation of Product and Pipeline Demand Costs (including Injections) to Months

19		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Annual
20	Design Year Pipeline Sendout	1,213,298	440,931	568,794	639,701	1,038,535	1,102,609	644,659	469,896	397,395	399,855	418,755	668,509	8,002,937
21	Rank	1	9	7	6	3	2	5	8	12	11	10	4	
22	% Max Month	100.00%	36.34%	46.88%	52.72%	85.60%	90.88%	53.13%	38.73%	32.75%	32.96%	34.51%	55.10%	
23	PR	9.12%	0.20%	1.16%	0.97%	10.17%	2.64%	0.08%	0.30%	2.73%	0.02%	0.16%	0.49%	28.05%
24	CumPR	28.05%	3.11%	4.57%	5.54%	16.28%	18.92%	5.63%	3.41%	2.73%	2.75%	2.90%	6.12%	100.00%
25	Product and Pipeline Demand Costs	$ 1,663,996	$ 184,325	$ 271,117	$ 328,907	$ 966,061	$ 1,122,723	$ 333,757	$ 202,029	$ 161,940	$ 163,034	$ 172,276	$ 362,914	$ 5,933,077

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27 Allocation of Storage Injection Fees to Months

28		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Annual
29	Storage Injection Volume	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Design Year Pipeline Sendout	1,213,298	440,931	568,794	639,701	1,038,535	1,102,609	644,659	469,896	397,395	399,855	418,755	668,509	8,002,937
31	% of Deliveries Injected	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%
32	Injection Fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

33

34 Allocation of Storage Demand Costs to Months

35		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Annual
36	Design Year Storage	-	1,186,061	1,272,932	1,060,406	594,363	-	-	-	-	-	-	-	4,113,761
37	Rank	5	2	1	3	4	5	5	5	5	5	5	5	
38	% Max Month	0.00%	93.18%	100.00%	83.30%	46.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
39	PR	0.00%	4.94%	6.82%	12.20%	11.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.64%
40	CumPR	0.00%	28.81%	35.64%	23.88%	11.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
41	Storage Demand Costs	$ -	$ 7,130,724	$ 8,819,687	$ 5,909,221	$ 2,888,928	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,748,560
42	Plus Injection Fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
43	TOTAL	$ -	$ 7,130,724	$ 8,819,687	$ 5,909,221	$ 2,888,928	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,748,560

44

45 Allocation of All Peaking Demand Costs Excluding Off-System Peaking

46		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Annual
47	Design Year Peaking Volumes	227,146	466,403	559,567	421,267	241,023	2,145	2,170	2,100	2,170	2,170	2,100	2,170	1,930,430
48	Rank	5	2	1	3	4	10	9	12	8	7	11	6	
49	% Max Month	40.59%	83.35%	100.00%	75.28%	43.07%	0.38%	0.39%	0.38%	0.39%	0.39%	0.38%	0.39%	
50	PR	8.04%	4.03%	16.65%	10.74%	0.62%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	40.11%
51	CumPR	8.07%	23.46%	40.11%	19.43%	8.69%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	100.00%
52	Peaking Demand Costs	$ 258,090	$ 750,067	$ 1,282,294	$ 621,141	$ 277,908	$ 1,025	$ 1,041	$ 1,000	$ 1,041	$ 1,041	$ 1,000	$ 1,041	$ 3,196,690

Northern Utilities
Simplified Market Based Allocator (MBA) Calculations
ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

1		
2		`
3	Pipeline Demand	Schedule 5A, PG 1, LN 1
4	Storage Demand	Schedule 5A, PG 1, LN 2 & 3
5	On-system Peaking Demand	(Schedule 5A, PG 1, LN 4 + 5) - LN 12
6	Subtotal Demand	Sum LN 3 : LN 5
7		
8	Capacity Release (Credit)	Schedule 5A, PG 6
9	Asset Management (Credit)	Schedule 5A, PG 6
10	Total Net Demand Costs	Sum LN 6 : LN 9
11		
12	Off-System Peaking Demand	Schedule 5A, PG 5
13		
14	Total Demand Costs	LN 10 + LN 12
15		
16	**Proportional Responsibility (PR) Allocators**	
17		
18	**Allocation of Product and Pipeline Demand Costs (including Injections) to Months**	
19		
20	Design Year Pipeline Sendout	Company Analysis
21	Rank	LN 20 Ranking
22	% Max Month	LN 20 / LN 20 MAX
23	PR	The difference between LN 22 for the month and LN 22 for next highest rank
24	CumPR	Cumulative Values, LN 23
25	Product and Pipeline Demand Costs	LN 24 * LN 3
26		
27	**Allocation of Storage Injection Fees to Months**	
28		
29	Storage Injection Volume	Company Analysis
30	Design Year Pipeline Sendout	LN 20
31	% of Deliveries Injected	LN 29 / Sum (LN 29 : LN 30)
32	Injection Fees	LN 31 * LN 25
33		
34	**Allocation of Storage Demand Costs to Months**	
35		
36	Design Year Storage	Company Analysis
37	Rank	LN 36 Ranking
38	% Max Month	LN 36 / LN 36 MAX
39	PR	The difference between LN 38 for the month and LN 38 for next highest rank
40	CumPR	Cumulative Values, LN 39
41	Storage Demand Costs	LN 40 * LN 4
42	Plus Injection Fees	LN 32
43	TOTAL	LN 41 + LN 42
44		
45	**Allocation of All Peaking Demand Costs Excluding Off-System Peaking**	
46		
47	Design Year Peaking Volumes	Company Analysis
48	Rank	LN 47 Ranking
49	% Max Month	LN 47 / LN 47 MAX
50	PR	The difference between LN 49 for the month and LN 49 for next highest rank
51	CumPR	Cumulative Values, LN 50
52	Peaking Demand Costs	LN 51 * LN 5

Northern Utilities
Simplified Market Based Allocator (MBA) Calculations
ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

53		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual
54	Pipeline & Product Demand	$ 1,663,996	$ 184,325	$ 271,117	$ 328,907	$ 966,061	$ 1,122,723	$ 333,757	$ 202,029	$ 161,940	$ 163,034	$ 172,276	$ 362,914	$ 5,933,077
55	Storage Incld Inj Fees	$ -	$ 7,130,724	$ 8,819,687	$ 5,909,221	$ 2,888,928	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,748,560
56	On-system Peaking	$ 258,090	$ 750,067	$ 1,282,294	$ 621,141	$ 277,908	$ 1,025	$ 1,041	$ 1,000	$ 1,041	$ 1,041	$ 1,000	$ 1,041	$ 3,196,690
57	Less Injection Fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
58	Less: Capacity Release	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
59	Less: Asset Mgmt	$ (1,170,267)	$ (1,170,267)	$ (1,170,267)	$ (1,170,267)	$ (1,170,267)	$(1,170,267)	$ -	$ -	$ -	$ -	$ -	$ -	$ (7,021,600)
60	Total Demand	$ 751,819	$ 6,894,849	$ 9,202,831	$ 5,689,003	$ 2,962,630	$ (46,518)	$ 334,798	$ 203,029	$ 162,981	$ 164,075	$ 173,275	$ 363,955	$ 26,856,727

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62 **Capacity Cost Allocator based on Design Year Firm Sendout**

63		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual
64	**Therms**													
65	Maine	809,318	1,193,240	1,435,434	1,217,394	1,053,388	628,804	359,440	252,259	220,880	220,192	227,817	364,530	7,982,696
66	New Hampshire	631,124	974,364	1,187,828	1,005,751	853,450	475,950	287,389	219,736	178,685	181,834	193,038	306,150	6,495,300
67	Total	1,440,443	2,167,604	2,623,262	2,223,146	1,906,837	1,104,754	646,829	471,995	399,565	402,026	420,855	670,679	14,477,995

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69	**Percentage of Total**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual
70	Maine	56.19%	55.05%	54.72%	54.76%	55.24%	56.92%	55.57%	53.45%	55.28%	54.77%	54.13%	54.35%	54.90%
71	New Hampshire	43.81%	44.95%	45.28%	45.24%	44.76%	43.08%	44.43%	46.55%	44.72%	45.23%	45.87%	45.65%	45.10%
72	Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

73

74 **Allocation of Demand Costs by Division**

75	Maine	$422,412	$3,795,532	$5,035,736	$3,115,297	$1,636,636	($26,477)	$186,046	$108,509	$90,096	$89,865	$93,797	$197,818	$14,745,267
76	New Hampshire	$329,406	$3,099,317	$4,167,095	$2,573,706	$1,325,995	($20,041)	$148,752	$94,520	$72,885	$74,210	$79,478	$166,137	$12,111,460
77	Total	$ 751,819	$ 6,894,849	$ 9,202,831	$ 5,689,003	$ 2,962,630	$ (46,518)	$ 334,798	$ 203,029	$ 162,981	$ 164,075	$ 173,275	$ 363,955	$ 26,856,727

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79 **Detailed Allocation of Demand Costs by Division**

80	**Maine**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	
81	Pipeline & Product Demand	$ 934,923	$ 101,469	$ 148,354	$ 180,110	$ 533,678	$ 639,032	$ 185,467	$ 107,975	$ 89,520	$ 89,294	$ 93,256	$ 197,252	$ 3,300,329	55.63%
82	Storage Incld Injection Fees	$ -	$ 3,925,378	$ 4,826,082	$ 3,235,888	$ 1,595,921	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,583,269	54.89%
83	On-system Peaking	$ 145,009	$ 412,903	$ 701,664	$ 340,137	$ 153,524	$ 584	$ 579	$ 534	$ 576	$ 570	$ 541	$ 566	$ 1,757,186	54.97%
84	Less: Injection Fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0.00%
85	Capacity Release (Credit)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0.00%
86	Asset Management (Credit)	$ (657,519)	$ (644,218)	$ (640,363)	$ (640,838)	$ (646,486)	$ (666,093)	$ -	$ -	$ -	$ -	$ -	$ -	$ (3,895,517)	55.48%
87	**Total Allocated Demand**	$ 422,412	$ 3,795,532	$ 5,035,736	$ 3,115,297	$ 1,636,636	$ (26,477)	$ 186,046	$ 108,509	$ 90,096	$ 89,865	$ 93,797	$ 197,818	$ 14,745,267	54.90%

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89	**New Hampshire**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	
90	Pipeline & Product Demand	$ 729,073	$ 82,856	$ 122,764	$ 148,798	$ 432,383	$ 483,691	$ 148,290	$ 94,054	$ 72,419	$ 73,739	$ 79,019	$ 165,662	$ 2,632,748	44.37%
91	Storage Incld Injection Fees	$ -	$ 3,205,346	$ 3,993,605	$ 2,673,332	$ 1,293,007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,165,290	45.11%
92	On-system Peaking	$ 113,081	$ 337,164	$ 580,630	$ 281,004	$ 124,384	$ 442	$ 463	$ 465	$ 466	$ 471	$ 459	$ 475	$ 1,439,504	45.03%
93	Less: Injection Fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0.00%
94	Capacity Release	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0.00%
95	Asset Management	$ (512,748)	$ (526,049)	$ (529,903)	$ (529,429)	$ (523,780)	$ (504,174)	$ -	$ -	$ -	$ -	$ -	$ -	$ (3,126,083)	44.52%
96	**Total Allocated Demand**	$ 329,406	$ 3,099,317	$ 4,167,095	$ 2,573,706	$ 1,325,995	$ (20,041)	$ 148,752	$ 94,520	$ 72,885	$ 74,210	$ 79,478	$ 166,137	$ 12,111,460	45.10%

Northern Utilities
Simplified Market Based Allocator (MBA) Calculations
ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

53		
54	Pipeline & Product Demand	LN 25
55	Storage	LN 43
56	Peaking	LN 52
57	Less: Injection Fees	-(LN 32)
58	Less: Capacity Release	-(LN 8 / 5)
59	Less: Asset Management	-(LN 9 / 6)
60	Total Demand	Sum (LN 54 : LN 59)
61		
62	**Capacity Cost Allocator based on Design Year Firm Sendout**	
63		
64	**Therms**	
65	Maine	Company Analysis
66	New Hampshire	Company Analysis
67	Total	LN 65 + LN 66
68		
69	**Percentage of Total**	
70	Maine	LN 65 / LN 67
71	New Hampshire	LN 66 / LN 67
72	Total	LN 70 + LN 71
73		
74	**Allocation of Demand Costs by Division**	
75	Maine	LN 60 * LN 70
76	New Hampshire	LN 60 * LN 71
77	Total	LN 75 + LN 76
78		
79	**Detailed Allocation of Demand Costs by Division**	
80	**Maine**	
81	Pipeline & Product Demand	LN 54 * LN 70
82	Storage	LN 55 * LN 70
83	Peaking	LN 56 * LN 70
84	Injection Fees	LN 57 * LN 70
85	Capacity Release (Credit)	LN 58 * LN 70
86	Asset Management (Credit)	LN 59 * LN 70
87	**Total Allocated Demand**	Sum (LN 81 : LN 86)
88		
89	**New Hampshire**	
90	Pipeline & Product Demand	LN 54 * LN 71
91	Storage	LN 55 * LN 71
92	Peaking	LN 56 * LN 71
93	Injection Fees	LN 57 * LN 71
94	Capacity Release	LN 58 * LN 71
95	Asset Management (Credit)	LN 59 * LN 71
96	**Total Allocated Demand**	Sum (LN 90 : LN 95)

Northern Utilities
Simplified Market Based Allocator (MBA) Calculations
ALLOCATION OF NORTHERN FIXED CAPACITY COSTS BETWEEN ME & NH DIVISIONS

97 **Off-System Peaking Demand Costs** $ 8,878,800

99 **Allocation of Off-system Peaking Demand Costs to Months**

100		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Annual
101	Design Year Peaking Volumes	-	74,210	221,970	101,772	32,917	-	-	-	-	-	-	-	430,869
102	Rank	5	3	1	2	4	5	5	5	5	5	5	5	
103	% Max Month	0.00%	33.43%	100.00%	45.85%	14.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
104	PR	0.00%	6.20%	54.15%	6.21%	3.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	70.27%
105	CumPR	0.00%	9.91%	70.27%	16.12%	3.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
106	Peaking Demand Costs	$ -	$ 879,741	$ 6,238,906	$ 1,430,985	$ 329,168	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,878,800

108 **Capacity Cost Allocator based on Design Year Sales**

109		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual
110	**Therms**													
111	Maine	726,706	1,077,478	1,295,948	1,094,732	938,956	560,360	311,362	228,402	191,823	191,261	197,778	314,857	7,129,662
112	New Hampshire	459,736	728,003	910,956	761,912	636,712	327,790	165,016	123,619	86,551	90,193	95,462	168,795	4,554,745
113	Total	1,186,442	1,805,481	2,206,905	1,856,644	1,575,668	888,150	476,378	352,020	278,374	281,454	293,240	483,652	11,684,407

115	**Percentage of Total**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual
116	Maine	61.25%	59.68%	58.72%	58.96%	59.59%	63.09%	65.36%	64.88%	68.91%	67.95%	67.45%	65.10%	58.89%
117	New Hampshire	38.75%	40.32%	41.28%	41.04%	40.41%	36.91%	34.64%	35.12%	31.09%	32.05%	32.55%	34.90%	41.11%
118	Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

120 **Allocation of Off-System Peaking Demand Costs by Division**

121	Maine	$0	$525,013	$3,663,638	$843,751	$196,154	$0	$0	$0	$0	$0	$0	$0	$5,228,557
122	New Hampshire	$0	$354,728	$2,575,268	$587,234	$133,014	$0	$0	$0	$0	$0	$0	$0	$3,650,243
123	Total	$ -	$ 879,741	$ 6,238,906	$ 1,430,985	$ 329,168	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,878,800

Total Weighted Average MPR Factor

124	**Maine**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	
125	Total Pipeline, Storage & On-system	$ 422,412	$ 3,795,532	$ 5,035,736	$ 3,115,297	$ 1,636,636	$ (26,477)	$ 186,046	$ 108,509	$ 90,096	$ 89,865	$ 93,797	$ 197,818	$ 14,745,267	54.90%
126	Total Off-system Peaking	$0	$525,013	$3,663,638	$843,751	$196,154	$0	$0	$0	$0	$0	$0	$0	$ 5,228,557	58.89%
127	Total Demand Cost Allocation	$ 422,412	$ 4,320,546	$ 8,699,374	$ 3,959,048	$ 1,832,790	$ (26,477)	$ 186,046	$ 108,509	$ 90,096	$ 89,865	$ 93,797	$ 197,818	$ 19,973,824	**55.89%**

129	**New Hampshire**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	
130	Total Pipeline, Storage & On-system	$ 329,406	$ 3,099,317	$ 4,167,095	$ 2,573,706	$ 1,325,995	$ (20,041)	$ 148,752	$ 94,520	$ 72,885	$ 74,210	$ 79,478	$ 166,137	$ 12,111,460	45.10%
131	Total Off-system Peaking	$0	$354,728	$2,575,268	$587,234	$133,014	$0	$0	$0	$0	$0	$0	$0	$ 3,650,243	41.11%
132	Total Demand Cost Allocation	$ 329,406	$ 3,454,045	$ 6,742,363	$ 3,160,940	$ 1,459,008	$ (20,041)	$ 148,752	$ 94,520	$ 72,885	$ 74,210	$ 79,478	$ 166,137	$ 15,761,703	**44.11%**

134	**Total Northern**	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual
135	Total Pipeline, Storage & On-system	$ 751,819	$ 6,894,849	$ 9,202,831	$ 5,689,003	$ 2,962,630	$ (46,518)	$ 334,798	$ 203,029	$ 162,981	$ 164,075	$ 173,275	$ 363,955	$ 26,856,727
136	Total Off-system Peaking	$ -	$ 879,741	$ 6,238,906	$ 1,430,985	$ 329,168	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,878,800
137	Total Demand Cost Allocation	$ 751,819	$ 7,774,591	$ 15,441,737	$ 7,119,988	$ 3,291,798	$ (46,518)	$ 334,798	$ 203,029	$ 162,981	$ 164,075	$ 173,275	$ 363,955	$ 35,735,527

97
98
99 **Allocation of Off-system Peaking Demand Costs to Months**

100		
101	Design Year Peaking Volumes	Company Analysis
102	Rank	LN 101 Ranking
103	% Max Month	LN 101 / LN 101 MAX
104	PR	The difference between LN 103 for the month and LN 103 for next highest rank
105	CumPR	Cumulative Values, LN 104
106	Peaking Demand Costs	LN 105 * LN 97

107
108 **Capacity Cost Allocator based on Design Year Sales**

109		
110	**Therms**	
111	Maine	Company Analysis
112	New Hampshire	Company Analysis
113	Total	LN 111 + LN 112
114		
115	**Percentage of Total**	
116	Maine	LN 111 / LN 113
117	New Hampshire	LN 112 / LN 113
118	Total	LN 116 + LN 117

119
120 **Allocation of Off-System Peaking Demand Costs by Division**

121	Maine	LN 106 * LN 116
122	New Hampshire	LN 106 * LN 117
123	Total	LN 121 + LN 122

Total Weighted Average MPR Factor

124	**Maine**	
125	Total Pipeline, Storage & On-system	LN 87
126	Total Off-system Peaking	LN 121
127	Total Demand Cost Allocation	LN 125 + LN 126
128		
129	**New Hampshire**	
130	Total Pipeline, Storage & On-system	LN 96
131	Total Off-system Peaking	LN 122
132	Total Demand Cost Allocation	LN 130 + Ln 131
133		
134	**Total Northern**	
135	Total Pipeline, Storage & On-system	LN 125 + LN 130
136	Total Off-system Peaking	LN 126 + LN 131
137	Total Demand Cost Allocation	LN 127 + LN 132

Northern Utilities
ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Annual	Winter	Summer
1	**Supply Volumes - MMBtu**															
2	Total Pipeline	570,060	556,881	406,460	367,544	541,084	912,309	494,604	334,214	288,763	290,326	302,280	572,717	5,637,242	3,354,337	2,282,904
3	Total Storage	285,832	611,481	867,887	873,732	720,994	0	0	0	0	0	0	0	3,359,925	3,359,925	0
4	Total Peaking	227,145	510,384	743,233	477,763	284,994	2,145	2,170	2,100	2,170	2,170	2,100	2,170	2,258,544	2,245,664	12,880
5	Total Off-system Sales													0	0	
6	Subtotal	1,083,037	1,678,745	2,017,580	1,719,038	1,547,072	914,454	496,774	336,314	290,933	292,496	304,380	574,887	11,255,711	8,959,927	2,295,784
7	Less Interruptible - Maine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Less Interruptible - New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total Firm Supply	1,083,037	1,678,745	2,017,580	1,719,038	1,547,072	914,454	496,774	336,314	290,933	292,496	304,380	574,887	11,255,711	8,959,927	2,295,784
10	Total Firm Pipeline Sendout	570,060	556,881	406,460	367,544	541,084	912,309	494,604	334,214	288,763	290,326	302,280	572,717	5,637,242	3,354,337	2,282,904
11	**Variable Costs**															
12	Pipeline Costs Modeled in Sendout™	$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630	$ 16,896,179	$ 11,381,935	$ 5,514,245
13	NYMEX Price Used for Forecast	$2.890	$2.979	$3.066	$3.030	$2.926	$2.635	$2.603	$2.634	$2.667	$2.671	$2.653	$2.669			
14	NYMEX Price Used for Update	$2.890	$2.979	$3.066	$3.030	$2.926	$2.635	$2.603	$2.634	$2.667	$2.671	$2.653	$2.669			
15	Increase/(Decrease) NYMEX Price	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
16	Increase/(Decrease) in Pipeline Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	
17	Total Updated Pipeline Costs	$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630	$ 16,896,179	$ 11,381,935	$ 5,514,245
18																
19	Total Pipeline	$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630	$ 16,896,179	$ 11,381,935	$ 5,514,245
20	Total Storage	$ 816,436	$ 1,716,965	$ 2,449,351	$ 2,469,069	$ 2,053,003	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,504,825	$ 9,504,825	$ -
21	Total Peaking	$ 1,835,577	$ 4,526,660	$ 5,420,325	$ 4,161,751	$ 2,045,340	$ 15,195	$ 15,129	$ 14,540	$ 14,949	$ 14,918	$ 14,342	$ 14,778	$ 18,093,503	$ 18,004,848	$ 88,655
22	Total Off-sytem Sales	$ -				$ -								$ -	$ -	
23																
24	Subtotal	$ 4,365,909	$ 8,195,784	$ 9,779,779	$ 8,341,062	$ 5,912,874	$ 2,296,200	$ 1,218,036	$ 835,979	$ 728,772	$ 727,125	$ 720,581	$ 1,372,407	$ 44,494,507	$ 38,891,608	$ 5,602,900
25																
26	Interruptible Cost Estimate															
27	Variable Pipeline Costs	$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630	$ 16,896,179	$ 11,381,935	$ 5,514,245
28	Average Supply Cost ($/MMBtu)	$ 3.007	$ 3.506	$ 4.699	$ 4.653	$ 3.354	$ 2.500	$ 2.432	$ 2.458	$ 2.472	$ 2.453	$ 2.336	$ 2.371			
29	Interruptible Cost - Maine	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30	Interruptible Cost - New Hampshire	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
31																
32	Firm Sales Pipeline Commodity	$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630	$ 16,896,179	$ 11,381,935	$ 5,514,245
33	Total Storage	$ 816,436	$ 1,716,965	$ 2,449,351	$ 2,469,069	$ 2,053,003	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,504,825	$ 9,504,825	$ -
34	Total Peaking	$ 1,835,577	$ 4,526,660	$ 5,420,325	$ 4,161,751	$ 2,045,340	$ 15,195	$ 15,129	$ 14,540	$ 14,949	$ 14,918	$ 14,342	$ 14,778	$ 18,093,503	$ 18,004,848	$ 88,655
35	Off-system Sales	$ -	$ -	$ -	$ -	$ -	$ -							$ -	$ -	
36	Total Firm Sales Variable Costs	$ 4,365,909	$ 8,195,784	$ 9,779,779	$ 8,341,062	$ 5,912,874	$ 2,296,200	$ 1,218,036	$ 835,979	$ 728,772	$ 727,125	$ 720,581	$ 1,372,407	$ 44,494,507	$ 38,891,608	$ 5,602,900

Northern Utilities

ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

1	Supply Volumes - MMBtu	
2	Total Pipeline	Schedule 6A, page 2, Page 5
3	Total Storage	Schedule 6A, page 2, Page 5
4	Total Peaking	Schedule 6A, page 2, Page 5
5	Total Off-system Sales	
6	Subtotal	SUM LN 2: LN 4
7	Less Interruptible - Maine	Company Analysis
8	Less Interruptible - New Hampshire	Company Analysis
9	Total Firm Supply	LN 6 - LN 7 - LN 8
10	Total Firm Pipeline Sendout	LN 2 - LN 7 - LN 8
11	Variable Costs	
12	Pipeline Costs Modeled in Sendout™	Schedule 6A, Page 1, Page 4
13	NYMEX Price Used for Forecast	Attachment to Schedule 5A, PG 1, LN 17
14	NYMEX Price Used for Update	Attachment to Schedule 5A, PG 1, LN 17
15	Increase/(Decrease) NYMEX Price	LN 14 - LN 13
16	Increase/(Decrease) in Pipeline Costs	LN 2 * LN 15
17	Total Updated Pipeline Costs	LN 16 + LN 12
18		
19	Total Pipeline	LN 17
20	Total Storage	Schedule 6A, Page 1, Page 4
21	Total Peaking	Schedule 6A, Page 1, Page 4
22	Total Off-sytem Sales	
23		
24	Subtotal	Sum LN 19 : LN 22
25		
26	Interruptible Cost Estimate	Company Analysis
27	Variable Pipeline Costs Excld Hedges	LN 17
28	Average Supply Cost ($/MMBtu)	LN 27 / LN 2
29	Interruptible Cost - Maine	LN 28 * LN 7
30	Interruptible Cost - New Hampshire	LN 28 * LN 8
31		
32	Firm Sales Pipeline Commodity	LN 17 - LN 29 - LN 30
33	Total Storage	LN 20
34	Total Peaking	LN 21
35	Off-system Sales	LN 22
36	Firm Sales Variable Costs Excld Hedge	Sum LN 32 : LN35

Northern Utilities
ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

37 **Commodity Allocation Factors**
38 Firm Sales Sendout for Normal Winter, MMBtu

39		**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**Summer**
40	Maine	659,481	1,016,635	1,213,147	1,039,601	938,311	582,503	317,194	214,354	188,135	188,527	203,218	363,946	6,925,050	5,449,677	1,475,374
41	New Hampshire	429,452	672,438	813,822	686,443	606,539	331,224	177,549	120,823	101,131	102,302	106,946	213,405	4,362,075	3,539,919	822,156
42	Total	1,088,934	1,689,073	2,026,969	1,726,044	1,544,849	913,726	494,742	335,177	289,266	290,829	310,164	577,351	11,287,125	8,989,595	2,297,530
43																
44	**Percentage of Total**															
45	Maine	60.56%	60.19%	59.85%	60.23%	60.74%	63.75%	64.11%	63.95%	65.04%	64.82%	65.52%	63.04%	61.35%	60.62%	64.22%
46	New Hampshire	39.44%	39.81%	40.15%	39.77%	39.26%	36.25%	35.89%	36.05%	34.96%	35.18%	34.48%	36.96%	38.65%	39.38%	35.78%
47	Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
48																
49	**Commodity Allocation by Jurisdiction**															
50	**Maine**															
51	Firm Sales Pipeline Commodity	$ 1,037,972	$ 1,174,983	$ 1,143,202	$ 1,030,083	$ 1,102,110	$ 1,454,146	$ 771,219	$ 525,330	$ 464,261	$ 461,681	$ 462,725	$ 855,812	$ 10,483,523	$ 6,942,495	$ 3,541,028
52	Storage	$ 494,451	$ 1,033,423	$ 1,465,944	$ 1,487,126	$ 1,246,953	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,727,897	$ 5,727,897	$ -
53	Peaking	$ 1,111,664	$ 2,724,547	$ 3,244,081	$ 2,506,633	$ 1,242,299	$ 9,687	$ 9,699	$ 9,298	$ 9,722	$ 9,671	$ 9,397	$ 9,315	$ 10,896,014	$ 10,838,911	$ 57,103
54	Off-system Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
55	Total Maine Commodity Costs	$ 2,644,087	$ 4,932,953	$ 5,853,226	$ 5,023,842	$ 3,591,362	$ 1,463,833	$ 780,918	$ 534,629	$ 473,984	$ 471,352	$ 472,122	$ 865,127	$ 27,107,434	$ 23,509,303	$ 3,598,131
56	Maine Inventory Finance Costs	$ 551	$ 949	$ 1,175	$ 997	$ 860	$ 465	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,996	$ 4,996	$ -
57	Total Maine Variable Costs	$ 2,644,638	$ 4,933,902	$ 5,854,401	$ 5,024,839	$ 3,592,222	$ 1,464,298	$ 780,918	$ 534,629	$ 473,984	$ 471,352	$ 472,122	$ 865,127	$ 27,112,430	$ 23,514,299	$ 3,598,131
58	**New Hampshire**															
59	Firm Sales Pipeline Commodity	$ 675,924	$ 777,176	$ 766,900	$ 680,159	$ 712,421	$ 826,859	$ 431,688	$ 296,109	$ 249,562	$ 250,525	$ 243,514	$ 501,818	$ 6,412,656	$ 4,439,439	$ 1,973,217
60	Storage	$ 321,985	$ 683,543	$ 983,407	$ 981,943	$ 806,050	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,776,928	$ 3,776,928	$ -
61	Peaking	$ 723,913	$ 1,802,113	$ 2,176,245	$ 1,655,118	$ 803,041	$ 5,508	$ 5,429	$ 5,241	$ 5,226	$ 5,248	$ 4,945	$ 5,462	$ 7,197,490	$ 7,165,938	$ 31,552
62	Off-system Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
63	Total New Hampshire Commodity Costs	$ 1,721,822	$ 3,262,831	$ 3,926,553	$ 3,317,220	$ 2,321,512	$ 832,367	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280	$ 17,387,074	$ 15,382,305	$ 2,004,769
64	New Hampshire Inventory Finance Costs	$ 339	$ 584	$ 729	$ 609	$ 517	$ 239	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,017	$ 3,017	$ -
65	Total New Hampshire Variable Costs	$ 1,722,161	$ 3,263,416	$ 3,927,282	$ 3,317,829	$ 2,322,029	$ 832,606	$ 437,117	$ 301,351	$ 254,789	$ 255,773	$ 248,459	$ 507,280	$ 17,390,091	$ 15,385,322	$ 2,004,769
66	**Northern Utilities**															
67	Firm Sales Pipeline Commodity	$ 1,713,896	$ 1,952,159	$ 1,910,102	$ 1,710,242	$ 1,814,531	$ 2,281,006	$ 1,202,907	$ 821,440	$ 713,823	$ 712,207	$ 706,238	$ 1,357,630	$ 16,896,179	$ 11,381,935	$ 5,514,245
68	Storage	$ 816,436	$ 1,716,965	$ 2,449,351	$ 2,469,069	$ 2,053,003	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,504,825	$ 9,504,825	$ -
69	Peaking	$ 1,835,577	$ 4,526,660	$ 5,420,325	$ 4,161,751	$ 2,045,340	$ 15,195	$ 15,129	$ 14,540	$ 14,949	$ 14,918	$ 14,342	$ 14,778	$ 18,093,503	$ 18,004,848	$ 88,655
70	Off-system Sales	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
71	Total Northern Commodity Costs	$ 4,365,909	$ 8,195,784	$ 9,779,779	$ 8,341,062	$ 5,912,874	$ 2,296,200	$ 1,218,036	$ 835,979	$ 728,772	$ 727,125	$ 720,581	$ 1,372,407	$ 44,494,507	$ 38,891,608	$ 5,602,900
72	Northern Inventory Finance Costs	$ 890	$ 1,534	$ 1,904	$ 1,605	$ 1,377	$ 704	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,013	$ 8,013	$ -
73	Total Northern Variable Costs	$ 4,366,799	$ 8,197,318	$ 9,781,682	$ 8,342,668	$ 5,914,250	$ 2,296,904	$ 1,218,036	$ 835,979	$ 728,772	$ 727,125	$ 720,581	$ 1,372,407	$ 44,502,521	$ 38,899,621	$ 5,602,900
74																

Northern Utilities
ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

37	**Commodity Allocation Factors**	
38	Firm Sales Sendout for Normal Winter, MMBtu	
39		
40	Maine	Company Analysis
41	New Hampshire	Schedule 10B, LN 33 / 10
42	Total	LN 40 + LN 41
43		
44	**Percentage of Total**	
45	Maine	LN 40 / LN 42
46	New Hampshire	LN 41 / LN 42
47	Total	LN 45 + LN 46
48		
49	**Commodity Allocation by Jurisdiction**	
50	**Maine**	
51	Firm Sales Pipeline Commodity	LN 32 * LN 45
52	Storage	LN 33 * LN 45
53	Peaking	LN 34 * LN 45
54	Off-system Sales	LN 35 * LN 45
55	Total Maine Commodity Costs	Sum LN 51 : LN 54
56	Maine Inventory Finance Costs	LN 95
57	Total Maine Variable Costs	LN 55 + LN 56
58	**New Hampshire**	
59	Firm Sales Pipeline Commodity Excld Hedge	LN 32 * LN 46
60	Storage	LN 33 * LN 46
61	Peaking	LN 34 * LN 46
62	Off-system Sales	LN 35 * LN 46
63	Total New Hampshire Commodity Costs	Sum LN 59 : LN 62
64	New Hampshire Inventory Finance Costs	LN 100
65	Total New Hampshire Variable Costs	LN 63 + LN 64
66	**Northern Utilities**	
67	Firm Sales Pipeline Commodity Excld Hedge	LN 51 + LN 59
68	Storage	LN 52 + LN 60
69	Peaking	LN 53 + LN 61
70	Off-system Sales	LN 54 + LN 62
71	Total Northern Commodity Costs	LN 55 + LN 63
72	Northern Inventory Finance Costs	LN 56 + LN 64
73	Total Northern Variable Costs	LN 57 + LN 65
74		

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ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

75 Northern Utilities
76 Simplified Market Based Allocator (MBA) Calculations
77 ALLOCATION OF NORTHERN INVENTORY FINANCE CHARGE

78																
79	**Col A**	**Col B**	**Col C**	**Col D**	**Col E**	**Col F**	**Col G**	**Col H**	**Col I**	**Col J**	**Col K**	**Col L**	**Col M**	**Col N**	**Col O**	**Col P**
80																
81	**Inventory Finance Charge**	**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Annual**	**Winter**	**Summer**
82	Storage	$ 1,152	$ 967	$ 597	$ 246	$ 40	$ -	$ -	$ 103	$ 326	$ 563	$ 789	$ 1,010	$ 5,795		$ 2,792
83	Peaking	$ 195	$ 185	$ 185	$ 195	$ 185	$ 174	$ 182	$ 189	$ 188	$ 178	$ 177	$ 185	$ 2,219		$ 1,099
84	Total	$ 1,347	$ 1,152	$ 783	$ 442	$ 225	$ 174	$ 182	$ 292	$ 514	$ 741	$ 966	$ 1,196	$ 8,013		$ 3,890
85																
86	**Inventory Finance Charge Allocation by Jurisdiction**															
87	Maine	$ 816	$ 693	$ 468	$ 266	$ 137	$ 111	$ 116	$ 187	$ 334	$ 480	$ 633	$ 754	$ 4,996		$ 2,504
88	New Hampshire	$ 531	$ 459	$ 314	$ 176	$ 89	$ 63	$ 65	$ 105	$ 180	$ 261	$ 333	$ 442	$ 3,017		$ 1,386
89	Total	$ 1,347	$ 1,152	$ 783	$ 442	$ 225	$ 174	$ 182	$ 292	$ 514	$ 741	$ 966	$ 1,196	$ 8,013		$ 3,890
90																
91	**Inventory Finance Charge Allocation by Month**															
92	**Maine**															
93	Firm Sales Normal Remaining Sendout	480,579	828,304	1,024,816	869,495	749,980	405,528	0	0	0	0	0	0	0	4,358,702	0
94	Monthly % Sendout of Total Winter	11.03%	19.00%	23.51%	19.95%	17.21%	9.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
95	ME Allocated Inventory Finance Charge	$ 551	$ 949	$ 1,175	$ 997	$ 860	$ 465	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,996	$ -
96																
97	**New Hampshire**															
98	Firm Sales Normal Remaining Sendout	331,017	570,722	712,106	594,570	504,822	233,473	0	0	0	0	0	0	0	2,946,710	0
99	Monthly % Sendout of Total Winter	11.23%	19.37%	24.17%	20.18%	17.13%	7.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
100	NH Allocated Inventory Finance Charge	$ 339	$ 584	$ 729	$ 609	$ 517	$ 239	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,017	$ -

Northern Utilities
ALLOCATION OF COMMODITY COSTS BETWEEN ME & NH DIVISIONS

75 **Northern Utilities**
76 **Simplified Market Based Allocator (MBA) Calculations**
77 **ALLOCATION OF NORTHERN INVENTORY FINANCE CHARGE**

78		
79		
80		
81	**Inventory Finance Charge**	
82	Storage	"Schedule 14 - Carrying Costs"
83	Peaking	"Schedule 14 - Carrying Costs"
84	Total	Sum LN 82 : LN 83
85		
86	**Inventory Finance Charge Allocation by Jurisdiction**	
87	Maine	LN 84 * LN 45
88	New Hampshire	LN 84 * LN 46
89	Total	Sum LN 87 : LN 88
90		
91	**Inventory Finance Charge Allocation by Month**	
92	**Maine**	
93	Firm Sales Remaining Sendout	Company Analysis
94	Monthly % Sendout of Total Winter	LN 93 / LN 93 Col N
95	ME Allocated Inventory Finance Charge	LN 87 Col N * LN 94
96		
97	**New Hampshire**	
98	Firm Sales Remaining Sendout	NH Schedule 10B, LN 80 / 10
99	Monthly % Sendout of Total Winter	LN 98 / LN 98 Col N
100	NH Allocated Inventory Finance Charge	LN 88 Col N* LN 99

Northern Utilities, Inc.
New Hampshire Division
Revised Schedule 23
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Northern Utilities - NEW HAMPSHIRE DIVISION
Supporting Detail to Proposed Tariff Sheets
Average Cost of Gas Calculation

		Winter	Summer	Annual	
1	Demand	$ 11,737,382	$ 756,079	$ 12,493,460	Schedule 1A, LN 79
2	Commodity	$ 15,385,322	$ 2,004,769	$ 17,390,091	Schedule 1B, LN 36
3	Total	$ 27,122,704	$ 2,760,847	$ 29,883,551	LN 1 + LN 2
4					
5	Forecasted Firm Sales (Therms)	34,882,919	8,101,656	42,984,575	Schedule 10B, LN 11
6	Forecasted Residential Sales (Therms)	16,191,282	3,551,405	19,742,687	Schedule 10B, LN 3
7	Average Residential Rate:	**Winter**	**Summer**	**Annual**	
8	Average Demand Rate	$0.3365	$0.0933		LN 1 / LN 5
9	Average Commodity Rate	$0.4411	$0.2475		LN 2 / LN 5
10	Average Rate	$0.7775	$0.3408		LN 3 / LN 5
11					
12	**Residential Reallocation:**	**Winter**	**Summer**	**Annual**	
13	Demand Costs Allocated To Residential per SMBA	$ 5,289,029	$ 336,745	$ 5,625,774	Schedule 10A, LN 169
14	Demand Costs Allocated To Residential per Avg Res. Rate	$ 5,448,032	$ 331,346	$ 5,779,378	LN 8 * LN 6
15	**Demand Reallocation:**	$ (159,003)	$ 5,399	$ (153,604)	LN 13 - LN 14
16	**HLF Allocation**	$ (16,297)	$ 1,289	$ (15,007)	LN 15 * LN 20
17	**LLF Allocation**	$ (142,706)	$ 4,109	$ (138,597)	LN 15 * LN 21
18					
19	**SMBA Capacity Cost Allocation (%)**				
20	HLF	10.25%	23.88%		Schedule 10A, LN 174
21	LLF	89.75%	76.12%		Schedule 10A, LN 175
22					
23	Commodity Costs Allocated To Residential per SMBA	$ 7,151,150	$ 878,801	$ 8,029,951	Schedule 10C, LN 82
24	Commodity Costs Allocated To Residential per Avg Res. Rate	$ 7,141,263	$ 878,973	$ 8,020,236	LN 9 * LN 6
25	**Commodity Reallocation:**	$ 9,887	$ (171)	$ 9,716	LN 23 - LN 24
26	**HLF Allocation**	$ 1,238	$ (72)	$ 1,166	LN 25 * LN 30
27	**LLF Allocation**	$ 8,649	$ (100)	$ 8,549	LN 25 * LN 31
28					
29	**SMBA Commodity Cost Allocation (%)**				
30	HLF	12.52%	41.85%		Schedule 10C, LN 87
31	LLF	87.48%	58.15%		Schedule 10C, LN 88

Northern Utilities, Inc.
Short-Term Debt Limit
($ in thousands)

NU Short-Term Debt Limit Calculation (11/1/18 - 10/31/2019)			
Fuel Financing Purposes			
NU ME winter gas costs		42,331	
NU NH winter gas costs		28,842	
	Total	71,173	
30% of total winter gas costs		21,352	(a)
Non-Fuel Financing Purposes			
Estimated net utility plant @ 12/31/18 before plant acquisition adjustment		431,235	
15% of Net Utility Plant		64,685	(b)
Short-Term Debt Limit			
Short Term Debt Limit		**86,037**	(a) + (b)