DG 18-140
Excess Capacity With Granite Bridge Project
Source: OCA DR 2-41 in DG 17-198

Split-Year (Nov-Oct)	Design Day Demand*	Current Design Day Resources, including Propane	Granite Bridge* *	Reserve / (Deficiency) including Propane + Granite Bridge
2017/18	157,848	162,033		4,185
2018/19	164,571	155,033		(9,538)
2019/20	167,643	155,033		(12,610)
2020/21	168,942	155,033		(13,909)
2021/22	174,618	155,033	150,000	130,415
2022/23	184,000	155,033	150,000	121,033
2023/24	188,352	155,033	150,000	116,681
2024/25	192,033	155,033	150,000	113,000
2025/26	195,542	155,033	150,000	109,491
2026/27	198,777	155,033	150,000	106,256
2027/28	201,364	155,033	150,000	103,669
2028/29	204,235	155,033	150,000	100,798
2029/30	206,906	155,033	150,000	98,127
2030/31	209,593	155,033	150,000	95,440
2031/32	212,031	155,033	150,000	93,002
2032/33	214,448	155,033	150,000	90,585
2033/34	216,822	155,033	150,000	88,211
2034/35	218,944	155,033	150,000	86,089
2035/36	220,704	155,033	150,000	84,329
2036/37	222,599	155,033	150,000	82,434
2037/38	224,511	155,033	150,000	80,522

DG 18-140
Results of Liberty DCF Analysis
Source: Staff DR TS 1-4

PROJECT WITHOUT TREC's			PROJECT WITH TREC's		
Concord	Keene	Delta	Concord	Keene	Delta
$ (763.481)	$35,482	$ (727,999)	$483,388	$125,482	$608,870
$ (711,329)	$84,441	$ (626,888)	$598,513	$264,441	$862,954
$ (601,460)	$120,225	$ (481,235)	$439,026	$390,225	$829,251
$ (568.698)	$189,790	$ (378,908)	$565,194	$549,790	$1,114,984
$ (408.505)	$202,725	$ (205,781)	$280,976	$652,725	$933,700
$ (262.946)	$238,917	$ (24,029)	$154,586	$801,417	$956,003
$ (164,602)	$232,865	$ 68,264	$81,769	$817,865	$899,634
$ (76,233)	$216,733	$ 140,500	$31,519	$801,733	$833,252
$ (13,065)	$212,199	$ 199,134	$4,930	$797,199	$802,129
$ (12.555)	$233,717	$ 221,161	$5,440	$818,717	$824,157
$ (352.000)	$283,204	$ (68,796)	$73,151	$1,273,204	$1,346,355
$ (258.504)	$261,611	$ 3,106	$39,382	$1,274,111	$1,313,493
$ (183,283)	$236,114	$ 52,831	$19,217	$1,248,614	$1,267,831
$ (174,824)	$286,604	$ 111,780	$27,676	$1,299,104	$1,326,780
$ (166,427)	$336,896	$ 170,469	$36,073	$1,349,396	$1,385,469
$ (158,093)	$386,986	$ 228,892	$44,407	$1,399,486	$1,443,892
$ (149.823)	$436,866	$ 287,043	$52,677	$1,449,366	$1,502,043
$ (141.619)	$486,532	$ 344,914	$60,881	$1,499,032	$1,559,914
$ (133,481)	$535,979	$ 402,498	$69,019	$1,548,479	$1,617,498
$ (125,412)	$585,199	$ 459,787	$77,088	$1,597,699	$1,674,787
10 Yr NPV		($1.699.232.10)	10 Yr NPV		$5,634,007.49
Project NPV		($1,237.089.95)	Project NPV		$9,715,708.01

DG 18-140
Supply Cost as Percentage of Total Gas Costs
Source: Liberty 2018-2019 COG Filing

Peak 2018 - 2019 Winter Cost of Gas
Source: DG 18-137 Bates Page 50

Demand Cost of Gas Rate	$11,230,946	$0.1299 per therm	17.53%
Commodity Cost of Gas Rate	***$49,116,221***	***$0.5681 per therm***	***76.66%***
Adjustment Cost of Gas Rate	$656,690	$0.0076 per therm	1.03%
Total Direct Cost of Gas Rate	$61,003,856	$0.7056 per therm	95.21%
Total Anticipated Indirect Cost of Gas	$3,070,244		
Projected Prorated Sales	86,451,254		
Indirect Cost of Gas		$0.0355 per therm	4.79%
WINTER AVERAGE COST OF GAS		$0.7411 per therm	100.00%

Off Peak 2019 Summer Cost of Gas
Source: DG 18-137 Bates Page 200

Demand Cost of Gas Rate	$4,372,669	$0.2198 per therm	49.45%
Commodity Cost of Gas Rate	***$3,630,034***	***$0.1825 per therm***	***41.06%***
Adjustment Cost of Gas Rate	$658,480	$0.0331 per therm	7.45%
Total Direct Cost of Gas Rate	$8,661,183	$0.4354 per therm	97.95%
Total Anticipated Indirect Cost of Gas	$181,903		
Projected Prorated Sales	19,890,267		
Indirect Cost of Gas		$0.0091 per therm	2.05%
SUMMER AVERAGE COST OF		$0.4445 per therm	100.00%

Annual Cost of Gas (11/1/18 - 10/31/19)
Combined Winter/Summer

Demand Cost of Gas Rate	$15,603,615	$0.1467 per therm	21.40%
Commodity Cost of Gas Rate	***$52,746,254***	***$0.4960 per therm***	***72.34%***
Adjustment Cost of Gas Rate	$1,315,170	$0.0124 per therm	1.80%
Total Direct Cost of Gas Rate	$69,665,039	$0.6551 per therm	95.54%
Total Anticipated Indirect Cost of Gas	$3,252,147		
Projected Prorated Sales	106,341,521		
Indirect Cost of Gas		$0.0306 per therm	4.46%
ANNUAL AVERAGE COST OF GAS		$0.6857 per therm	100.00%

Cost of Gas Rate Used in Liberty DCF Analysis		
Average COG Rate for 2011 thru 2018	$7.17	per Dth
Supply Cost as Percentage to Total Gas Costs	72.34%	
COG Rate - Supply Only	$5.19	per Dth

DG 18-140
NET PRESENT VALUES
for
Concord, Keene and Combined

Year	PROJECT WITHOUT TREC's			PROJECT WITH TREC's		
	Concord	Keene	Delta	Concord	Keene	Delta
1	($1,854,741)	($29,477)	($1,884,218)	($607,872)	$60,523	($547,349)
2	($1,727,854)	($7,528)	($1,735,382)	($418,012)	$172,472	($245,540)
3	($1,424,464)	($19,756)	($1,444,221)	($989,773)	$93,044	($896,729)
4	($1,473,269)	$1,535	($1,471,734)	($999,554)	$151,935	($847,619)
5	($950,902)	($28,460)	($979,362)	($662,852)	$159,540	($503,312)
6	($590,003)	($55,422)	($645,425)	($415,568)	$179,578	($235,989)
7	($359,251)	($91,010)	($450,260)	($256,323)	$153,390	($102,932)
8	($161,973)	($123,966)	($285,939)	($116,957)	$120,434	$3,477
9	($27,478)	($144,149)	($171,627)	($19,960)	$100,251	$80,292
10	($27,054)	($136,363)	($163,418)	($19,536)	$108,037	$88,500
11	($697,972)	($355,113)	($1,053,085)	($520,353)	$58,487	($461,866)
12	($503,337)	($398,785)	($902,122)	($378,887)	$24,215	($354,672)
13	($351,382)	($431,758)	($783,139)	($266,782)	($8,758)	($275,539)
14	($344,604)	($384,619)	($729,223)	($260,004)	$38,381	($221,623)
15	($337,905)	($337,739)	($675,644)	($253,305)	$85,261	($168,044)
16	($331,286)	($291,124)	($622,410)	($246,686)	$131,876	($114,810)
17	($324,748)	($244,781)	($569,529)	($240,148)	$178,219	($61,929)
10 Year NPV	($6,653,090)	($345,162)	($6,998,252)	($3,325,668)	$844,318	($2,481,350)
17 Year NPV	($7,623,016)	($1,146,610)	($8,769,626)	($4,052,610)	$990,853	($3,061,756)

DG 18-140
STAFF DCF ANALYSIS - CONCORD

Row		
1	Concord 10-year NPV - no TRECs (col w, rows 48-57)	($6,653,090)
2	Concord 17-year NPV - no TRECs (col w, rows 48-64)	($7,623,016)
3		
4	Concord 10-year NPV - TRECs (col ab, rows 48-57)	($3,325,668)
5	Concord 17-year NPV - no TRECs (col w, rows 48-64)	($4,052,610)

Row	Rate Base model	CapEx
5	Rate Base model	CapEx
6		
7	Purchase Price	$ 14,500,000
8	Decompression (Broken Bridge)	$ 804,368
9	Total Cost	$ 15,304,368
10	Required Return (pre tax)	8.55%
11	Depreciation	$ 765,218
12	OpEx	$ 10,000
13	CPI (10 year average)	1.7%

	Ratio	Rate	Weighted Rate	PreTax
Long Term Det	49 85%	4.42%	2.20%	2.20%
Short Term Det	0 95%	2.49%	0.02%	0.02%
CommonEquity	49 21%	9.30%	4 58%	6.32%
			6 80%	8.55%

Decompression Bid	[redacted]
contingency	
Sub-Total	
Internal Labor	
Eng Review	
Total	$ 804,368

Row	(a) Year	(b) MACRS Rates	(c) (Row9*(b)) MACRS Table	(d) (Row 11) Book Depreciation	(e) (d-c) Delta	(f) Tax Rate	(g) (e*f) DIT	(h) (cummulative) ADIT	(i) (j+g-d) Rate Base	(j) (RB/2*row 13) Return Required	(k) O&M - Ins 1 7% escalator	(l) (j+k+d) Revenue Requirement	(m) Dth Projections (1)	(n) (l/m) $/Dth	(o) Rudarpa Fee 1 7% escalator
19									$15,304,368						
20	1	3.75%	$ 573,914	$ 765,218	$ 191,305	27 48%	$ 52,571	$ 52,571	$14,591,720	$1,277,802	$ 10,000 00	$2,053,020	538 083	$3.82	$6.11
21	2	7.22%	$ 1,104,822	$ 765,218	$ (339,604)	27 48%	$ (93,323)	$ (40,753)	$13,733,178	$1,210,647	$ 10,170 00	$1,986,035	572,077	$3.47	$6.21
22	3	6.68%	$ 1,021,873	$ 765,218	$ (256,654)	27 48%	$ (70,529)	$ (111,281)	$12,897,431	$1,138,231	$ 10 342 89	$1,913,792	532,220	$3.60	$6 32
23	4	6.18%	$ 945,351	$ 765,218	$ (180,132)	27 48%	$ (49,500)	$ (160,782)	$12,082,713	$1,067,687	$ 10 518 72	$1,843,425	572,977	$3.22	$6 43
24	5	5.71%	$ 874,339	$ 765,218	$ (109,120)	27.48%	$ (29,986)	$ (190,768)	$11,287,508	$998 877	$ 10,697 54	$1,774,793	494,219	$3.59	$6.54
25	6	5.29%	$ 808,836	$ 765,218	$ (43,617)	27 48%	$ (11,986)	$ (202,754)	$10,510,304	$931 670	$ 10,879.40	$1,707,768	458,786	$3 72	$6.65
26	7	4.89%	$ 748,077	$ 765,218	$ 17 141	27 48%	$ 4,710	$ (198,044)	$9,749,795	$865 946	$ 11,064 35	$1,642,229	425,750	$3 86	$6.76
27	8	4.52%	$ 692,064	$ 765,218	$ 73,155	27 48%	$ 20 103	$ (177,941)	$9 004,680	$801,593	$ 11,252 44	$1,578,064	394,946	$4 00	$6 88
28	9	4.46%	$ 682,881	$ 765,218	$ 82,337	27 48%	$ 22,626	$ (155,314)	$8,262,088	$738 007	$ 11,443 73	$1,514,669	375,000	$4 04	$6 99
29	10	4.46%	$ 682,728	$ 765,218	$ 82,491	27 48%	$ 22,668	$ (132,646)	$7,519,538	$674 530	$ 11,638 27	$1 451,386	375,000	$3 87	$7 11
30	11	4.46%	$ 682,881	$ 765,218	$ 82,337	27 48%	$ 22 626	$ (110,020)	$6,776,946	$611 052	$ 11,836 12	$1,388,107	314,478	$4 41	$7.23
31	12	4.46%	$ 682,728	$ 765,218	$ 82 491	27.48%	$ 22,668	$ (87,351)	$6,034,396	$547 575	$ 12,037 34	$1,324,831	291,197	$4 55	$7.35
32	13	4.46%	$ 682,881	$ 765,218	$ 82 337	27 48%	$ 22 626	$ (64 725)	$5,291,804	$464 098	$ 12.241 97	$1,261,559	270,000	$4.67	$7 48
33	14	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ (42,056)	$4,549,254	$420 621	$ 12 450 09	$1,198,290	270,000	$4 44	$7 61
34	15	4 46%	$ 682,881	$ 765,218	$ 82,337	27.48%	$ 22,626	$ (19,430)	$3,806,662	$357,144	$ 12 661 74	$1,135 024	270,000	$4.20	$7.74
35	16	4.46%	$ 682,728	$ 765,218	$ 82,491	27 48%	$ 22 668	$ 3 238	$3,064,112	$293 667	$ 12 876 99	$1,071,762	270 000	$3 87	$7.87
36	17	4 46%	$ 682,881	$ 765,218	$ 82,337	27 48%	$ 22,626	$ 25 865	$2,321,520	$230 190	$ 13,095.90	$1,008,504	270 000	$3 74	$8 00
37	18	4 46%	$ 682,728	$ 765,218	$ 82,491	27 48%	$ 22 668	$ 48,533	$1,578,970	$166,713	$ 13 318 53	$945,249	270,000	$3.50	$8 14
38	19	4 46%	$ 682,881	$ 765,218	$ 82,337	27 48%	$ 22 626	$ 71,159	$836,378	$103,235	$ 13 544 94	$881,999	270,000	$3.27	$8.28
39	20	4 46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ 93 828	$93,828	$39,758	$ 13 775 21	$818,752	270,000	$3 03	$8 42
40	21	2.23%	$ 341,440												
41															
42															

Row	Year	(p) (n+o) Delivered RNG COG	(q) LOI Volumes	(r) Keene Volumes	(s) (m-q-r) Concord Volumes	(t) (p*s) RNG COG Revenue	(u) Dracut Futures(*)	(v) (s*u) COG Revenue	(w) (v-t) Delta	(x) TREC Estimate	(y) (p-x) COG W/TREC	(z) (s*y) COG W/TREC Revenue	(aa) Dracut Futures	(ab) (v-aa) Delta
47														
48	1	$9.93	241,001	20,000	277,082	$ 2,750,159	$3.23	$895,418	($1,854,741)	$ 4.50	$5 43	$1,503,290	$3 23	($607,872)
49	2	$9.69	241,001	40,000	291,076	$ 2 819,214	$3 75	$1,091,360	($1,727,854)	$ 4.50	$5 19	$1,509,372	$3 75	($418,012)
50	3	$9.92	241,001	60,000	231,219	$ 2,292,622	$3 75	$868,158	($1,424,464)	$ 1.88	$8 04	$1,857 931	$3.75	($989,773)
51	4	$9.64	241,001	80,000	251,976	$ 2,430,110	$3 80	$956,841	($1,473,269)	$ 1 88	$7 76	$1,956,395	$3.80	($999 554)
52	5	$10.13	241,001	100,000	153,218	$ 1,551,685	$3.92	$600,783	($950,902)	$ 1 88	$8 25	$1,263,635	$3 92	($662,852)
53	6	$10.37	241 001	125,000	92,785	$ 962,150	$4.01	$372,147	($590,003)	$ 1.88	$8 49	$787,714	$4 01	($415,568)
54	7	$10 62	241 001	130,000	54,749	$ 581,302	$4 06	$222,051	($359,251)	$ 1 88	$8 74	$478,374	$4 06	($256,323)
55	8	$10 87	241,001	130,000	23,945	$ 260,303	$4 11	$98,330	($161,073)	$ 1 88	$8 99	$215,287	$4 11	($116,957)
56	9	$11 03	241,001	130,000	3,999	$ 44,114	$4 16	$16,636	($27,478)	$ 1 88	$9 15	$36,596	$4 16	($19,960)
57	10	$10 98	241,001	130,000	3,999	$ 43,914	$4 22	$16,860	($27,054)	$ 1 88	$9 10	$36,396	$4 22	($19,536)
58	11	$11.65	-	220,000	94,478	$ 1,100,279	$4.26	$402,307	($697,972)	$ 1 88	$9 77	$922,660	$4 26	($520,353)
59	12	$11.90	-	225,000	66,197	$ 788,037	$4 30	$284,700	($503,337)	$ 1.88	$10 02	$663,586	$4 30	($378,887)
60	13	$12.15	-	225,000	45,000	$ 546,853	$4 34	$195,471	($351,382)	$ 1 88	$10 27	$462,253	$4 34	($266,782)
61	14	$12 05	-	225,000	45,000	$ 542,030	$4 39	$197,426	($344,604)	$ 1 88	$10 17	$457 430	$4 39	($260,004)
62	15	$11.94	-	225,000	45,000	$ 537,305	$4 43	$199,400	($337,905)	$ 1 88	$10 06	$452 705	$4 43	($253,305)
63	16	$11 84	-	225 000	45,000	$ 532,680	$4.48	$201,394	($331,286)	$ 1 88	$9 96	$448,080	$4 48	($246,686)
64	17	$11 74	-	225 000	45,000	$ 528,156	$4.52	$203,408	($324,748)	$ 1 88	$9 86	$443,556	$4 52	($240,148)
65	18	$11.64	-	225 000	45,000	$ 523,734	$4.57	$205 442	($318,292)	$ 1.88	$9 76	$439 134	$4 57	($233,692)
66	19	$11.54	-	225,000	45,000	$ 519,418	$4 61	$207 496	($311,922)	$ 1 88	$9.66	$434 818	$4 61	($227,322)
67	20	$11.45	-	225,000	45,000	$ 515,208	$4 66	$209,571	($305,637)	$ 1 88	$9 57	$430 608	$4 66	($221,037)
68														
69														

70 (*) Dracut Annual Futures Prices years 1-10, year 10 rate with 1% inflation for years 11-20

REDACTED

DG 18-140
STAFF DCF ANALYSIS - KEENE

REDACTED

Row				
1			Keene 10-year NPV - no TRECs (col w, rows 48-57)	($345,162)
2			Keene 17-year NPV - no TRECs (col w, rows 18-37)	($1,146,610)
3				
4	Rate Base model	CapEx	Keene 10-year NPV - TRECs (col ab, rows 48-57)	$844,318
5			Keene 17-year NPV - no TRECs (col w, rows 18-37)	$990,853
6	Purchase Price	$ 14,500,000		
7	Decompression (Broken Bridge)	$ 804,368		
8	Total Cost	$ 15,304,368		
9	Required Return (pre tax)	8.55%		
10	Depreciation (20 years)	$ 765,216		
11	OpEx	$ 10,000		
12	CPI (10 year average)	1.7%		
13				
14				

	Ratio	Rate	Weighted Rate	PreTax
Long Term Det	49.85%	4.42%	2.20%	2.20%
Short Term Det	0.95%	2.49%	0.02%	0.02%
CommonEquity	49.21%	9.30%	4.58%	6.32%
			6.80%	8.55%

Decompression Bid contingency	[redacted]
Sub-Total	
Internal Labor	
Eng Review	
Total	$ 804,368

Row	(a) Year	(b) MACRS Rates	(c) (row 8*(b)) MACRS Table	(d) (row 10) Book Depreciation	(e) (d-c) Delta	(f) Tax Rate	(g) (e*f) DIT	(h) (cummulative) ADIT	(i) (j+g-d) Rate Base	(j) (RB/2*row 9) Return Required	(k) O&M - Ins 1.7% escalator	( ) (j+k+d) Revenue Requirement	(m) Dth Projections	(n) (l/m) $/Dth	(o) Rudarpa Fee 1.7% escalator
19									$15,304,368						
20	1	3.75%	$ 573,914	$ 765,216	$ 191,305	27.48%	$ 52,571	$ 52,571	$14,591,720	$1,277,802	$ 10,000.00	$2,053,020	538,083	$3.82	$6.11
21	2	7.22%	$ 1,104,822	$ 765,218	$ (339,604)	27.48%	$ (93,323)	$ (40,753)	$13,733,178	$1,210,647	$ 10,170.00	$1,986,035	572,077	$3.47	$6.21
22	3	6.68%	$ 1,021,873	$ 765,218	$ (256,654)	27.48%	$ (70,529)	$ (111,281)	$12,897,431	$1,138,231	$ 10,342.89	$1,913,792	532,220	$3.60	$6.32
23	4	6.18%	$ 945,351	$ 765,218	$ (180,132)	27.48%	$ (49,500)	$ (160,782)	$12,082,713	$1,067,687	$ 10,518.72	$1,843,425	572,977	$3.22	$6.43
24	5	5.71%	$ 874,339	$ 765,218	$ (109,120)	27.48%	$ (29,986)	$ (190,768)	$11,287,508	$998,877	$ 10,697.54	$1,774,793	494,219	$3.59	$6.54
25	6	5.29%	$ 808,836	$ 765,218	$ (43,617)	27.48%	$ (11,986)	$ (202,754)	$10,510,304	$931,670	$ 10,879.40	$1,707,768	458,786	$3.72	$6.65
26	7	4.89%	$ 748,077	$ 765,218	$ 17,141	27.48%	$ 4,710	$ (198,044)	$9,749,795	$865,946	$ 11,064.35	$1,642,229	425,750	$3.86	$6.76
27	8	4.52%	$ 692,064	$ 765,218	$ 73,155	27.48%	$ 20,103	$ (177,941)	$9,004,680	$801,593	$ 11,252.44	$1,578,064	394,946	$4.00	$6.88
28	9	4.46%	$ 682,881	$ 765,218	$ 82,337	27.48%	$ 22,626	$ (155,314)	$8,262,088	$736,007	$ 11,443.73	$1,514,669	375,000	$4.04	$6.99
29	10	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ (132,646)	$7,519,538	$674,530	$ 11,638.27	$1,451,386	375,000	$3.87	$7.11
30	11	4.46%	$ 682,881	$ 765,218	$ 82,337	27.49%	$ 22,626	$ (110,020)	$6,776,946	$611,052	$ 11,836.12	$1,388,107	314,478	$4.41	$7.23
31	12	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ (87,351)	$6,034,396	$547,575	$ 12,037.34	$1,324,831	291,197	$4.55	$7.35
32	13	4.46%	$ 682,881	$ 765,218	$ 82,337	27.46%	$ 22,626	$ (64,725)	$5,291,804	$484,098	$ 12,241.97	$1,261,559	270,000	$4.67	$7.48
33	14	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ (42,056)	$4,549,254	$420,621	$ 12,450.09	$1,198,290	270,000	$4.44	$7.61
34	15	4.46%	$ 682,881	$ 765,218	$ 82,337	27.48%	$ 22,626	$ (19,430)	$3,806,662	$357,144	$ 12,661.74	$1,135,024	270,000	$4.20	$7.74
35	16	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ 3,238	$3,064,112	$293,667	$ 12,876.99	$1,071,762	270,000	$3.97	$7.87
36	17	4.46%	$ 682,881	$ 765,218	$ 82,337	27.48%	$ 22,828	$ 25,865	$2,321,520	$230,190	$ 13,095.90	$1,008,504	270,000	$3.74	$8.00
37	18	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ 48,533	$1,578,970	$166,713	$ 13,318.53	$945,249	270,000	$3.50	$8.14
38	19	4.46%	$ 682,681	$ 765,218	$ 82,337	27.48%	$ 22,626	$ 71,159	$836,378	$103,235	$ 13,544.94	$881,999	270,000	$3.27	$8.28
39	20	4.46%	$ 682,728	$ 765,218	$ 82,491	27.48%	$ 22,668	$ 93,828	$93,828	$39,758	$ 13,775.21	$818,752	270,000	$3.03	$8.42
40	21	2.23%	$ 341,440												
41															
42															

Row	Year	(p) (n+o) Delivered RNG COG	(q) Keene RNG Volumes*	(r) (p*q) RNG COG Revenue	(s) CNG COG AGT**	(t) (q*s) CNG COG Revenue	(u) (t-r) Delta	(v) TREC Estimate	(w) (p-v) RNG COG W/TREC	(x) (q*w) COG W/TREC Revenue	(y) (t-x) Delta
47											
48	1	$9.93	20,000	$ 198,509	$8.45	$169,032	($29,477)	$ 4.50	$5.43	$108,509	$60,523
49	2	$9.69	40,000	$ 387,420	$9.50	$379,892	($7,528)	$ 4.50	$5.19	$207,420	$172,472
50	3	$9.92	60,000	$ 594,922	$9.59	$575,166	($19,756)	$ 1.88	$8.04	$482,122	$93,044
51	4	$9.64	80,000	$ 771,537	$9.66	$773,072	$1,535	$ 1.88	$7.76	$621,137	$151,935
52	5	$10.13	100,000	$ 1,012,730	$9.84	$984,270	($28,460)	$ 1.88	$8.25	$824,730	$159,540
53	6	$10.37	125,000	$ 1,296,209	$9.93	$1,240,788	($55,422)	$ 1.88	$8.49	$1,061,209	$179,578
54	7	$10.62	130,000	$ 1,380,285	$9.92	$1,289,275	($91,010)	$ 1.89	$8.74	$1,135,885	$153,390
55	8	$10.87	130,000	$ 1,413,215	$9.92	$1,289,249	($123,966)	$ 1.88	$8.99	$1,168,815	$120,434
56	9	$11.03	130,000	$ 1,434,061	$9.92	$1,289,912	($144,149)	$ 1.88	$9.15	$1,189,661	$100,251
57	10	$10.98	130,000	$ 1,427,575	$9.93	$1,291,212	($136,363)	$ 1.88	$9.10	$1,183,175	$108,037
58	11	$11.65	220,000	$ 2,562,093	$10.03	$2,206,979	($355,113)	$ 1.88	$9.77	$2,148,493	$58,487
59	12	$11.90	225,000	$ 2,678,494	$10.13	$2,279,709	($398,785)	$ 1.88	$10.02	$2,255,494	$24,215
60	13	$12.15	225,000	$ 2,734,264	$10.23	$2,302,506	($431,758)	$ 1.88	$10.27	$2,311,264	($8,758)
61	14	$12.05	225,000	$ 2,710,150	$10.34	$2,325,531	($384,619)	$ 1.88	$10.17	$2,287,150	$38,381
62	15	$11.94	225,000	$ 2,686,526	$10.44	$2,348,787	($337,739)	$ 1.88	$10.06	$2,263,526	$85,261
63	16	$11.84	225,000	$ 2,663,399	$10.54	$2,372,275	($291,124)	$ 1.88	$9.96	$2,240,399	$131,876
64	17	$11.74	225,000	$ 2,640,778	$10.65	$2,395,997	($244,781)	$ 1.88	$9.86	$2,217,778	$178,219
65	18	$11.64	225,000	$ 2,618,672	$10.76	$2,419,957	($198,715)	$ 1.88	$9.76	$2,195,672	$224,285
66	19	$11.54	225,000	$ 2,597,090	$10.86	$2,444,157	($152,933)	$ 1.88	$9.66	$2,174,090	$270,067
67	20	$11.45	225,000	$ 2,576,040	$10.97	$2,468,598	($107,441)	$ 1.88	$9.57	$2,153,040	$315,559
68											

69 (*) Not including LOI customer, 90% RNG load and growth

70 (**) AGT Annual Futures Prices + CNG Adder years 1-10, year 10 rate with 1% inflation for years 11-20

DG 18-140
Natural Gas Forwards & Futures

Source: S&P Global Market Intelligence
Price Type: Full Value Future/Forward
Forward Term: Annual

As Of : 2/14/2019

Term	[redacted]	TGP Dracut	Henry Hub	HH & Dracut Average	Wagoner
Jan 2019	[redacted]	3.7291	2.734	3.2316	2.3935
Jan 2020		4.7661	2.733	3.7494	2.8302
Jan 2021		4.8548	2.655	3.7547	2.7193
Jan 2022		4.9321	2.663	3.7974	2.6386
Jan 2023		5.1114	2.731	3.9211	2.6992
Jan 2024		5.1950	2.827	4.0109	2.7941
Jan 2025		5.1863	2.925	4.0558	2.8851
Jan 2026		5.1860	3.027	4.1065	3.0067
Jan 2027		5.1911	3.129	4.1601	3.1151
Jan 2028		5.2011	3.231	4.2161	3.2102