

### **Attachment WJC/MRS-1**

In Docket No. DG 19-161, the Secretarial Letter on September 28, 2020, stated that consistent with Order No. 26,122,<sup>1</sup> Liberty must also include in its next initial rate case filing “an analysis of Liberty’s investment in its iNATGAS facility similar to Exhibit 46 in DG 17-048, in sufficient detail, to allow the Commission to evaluate the investment and its impacts on firm customers.”

This attachment provides the updated analysis in a format similar to Exhibit 46 in Docket No. DG 17-048. Specifically, this attachment contains the following documentation:

- a) **Attachment WJC/MRS-1(a)**: Exhibit 46 part (a) required the Company to provide “a REVISED Attachment to Staff 1-1.e in DG 14-091 (Hall Testimony, Attachment SRH-1) that includes projected AFUDC based on the cost estimates, anticipated construction schedule and Concord property tax rate at that time. Provide supporting work papers in both hard copy and electronic (Microsoft Excel) formats, with all data and formulas intact.”

Attachment WJC/MRS-1(a) provides a copy of the Company’s original response to Exhibit 46 part (a), as this is an historical document that is unchanged in the updated analysis.

- b) **Attachment WJC/MRS-1(b)**: Exhibit 46 part (b) required the Company to provide “an updated REVISED Attachment to Staff 1-1.e in DG 14-091 (Hall Testimony, Attachment SRH-1) using the actual investment amounts (including AFUDC), calendar years corresponding to the in-service date and current Concord property tax rate. Provide supporting work papers in both hard copy and electronic (Microsoft Excel) formats, with all data and formulas intact.”

Attachment WJC/MRS-1(b) provides an updated analysis of the project using the actual investment amounts (including AFUDC), calendar years corresponding to the in-service date and current Concord property tax rate.

- c) **Attachment WJC/MRS-1(c)**: Exhibit 46 part (c) required the Company to “update Attachment 5-4.3 to include actual monthly consumption and gross margin since May 2017.”

Attachment WJC/MRS-1(c) provides an update to Attachment 5-4.3 to include actual monthly consumption and gross margin through June 2020.

Attachment WJC/MRS-1(c) contains confidential customer usage information and confidential pricing can be calculated from the “consumption” and “gross margin” figures.

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<sup>1</sup> Order No. 26,122 (Apr. 27, 2018) stated the following with respect to the special contract with iNATGAS: “Nevertheless, the plant has been built and, for purposes of the base rates set in this case, we will allow recovery of the plant up to the level of costs presented in DG 14-091 (\$2,245,000) plus related O&M expense. *We will re-evaluate this investment in Liberty’s next rate case and may consider putting more of the investment in rate base at that time.* The remedy fashioned here will put ratepayers in the position they were in when this project was approved.” *Id.* at 31-32 (emphasis added).

The customer information is confidential pursuant to RSA 363:38, and the Commission orally granted confidential treatment of the pricing information in the underlying docket that approved the iNATGAS contract. See Transcript of 4/23/2014 prehearing conference in Docket No. DG 14-091, at page 12. A motion for confidential treatment will be filed to protect the information in this docket.



**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Request for Approval of Special Contract and Lease Agreement with Innovative Natural Gas, LLC d/b/a iNATGAS**  
**Computation of Revenue Requirement**

1		<u>(a)</u>	<u>(b)</u>	<u>(c)</u>	<u>(d)</u>	<u>(e)</u>	
2	Year	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
3		Year 1	Year 2	Year 3	Year 4	Year 5	
4		Year 1 began on 12/1/2016					
5	<b><u>Investment</u></b>						
6	Compressors	1,100,000	-	-	-	-	
7	Piping, meter set, survey, etc	3,080,084	-	-	-	-	
8	Land (pro-rated)	200,000	-	-	-	-	
9	Contingency	-	-	-	-	-	
10	AFUDC - Actual	435,510	-	-	-	-	
11	Total Amount	4,815,594	-	-	-	-	
12	Cumulative Program Spend	4,815,594	4,815,594	4,815,594	4,815,594	4,815,594	
13		Does not include Burdens					
14	<b><u>Deferred Tax Calculation</u></b>						
15	Annual Tax Depreciation (bonus in 2016)	MACRS 15 year	2,194,544	198,554	178,699	160,933	144,840
16	Cumulative Tax Depreciation		2,194,544	2,393,098	2,571,797	2,732,730	2,877,570
17							
18	Annual Book Depreciation (30-yr prop)	2.86%	119,550	119,550	119,550	119,550	119,550
19	Cumulative Book Depreciation		119,550	239,101	358,651	478,202	597,752
20							
21	Annual Book/Tax Timer		2,074,994	79,004	59,148	41,383	25,290
22	Cumulative Book/Tax Timer		2,074,994	2,153,997	2,213,145	2,254,528	2,279,818
23	Effective Tax Rate		39.41%	39.41%	27.24%	27.08%	27.08%
24							
25	Deferred Tax Reserve		817,706	848,890	602,861	610,526	617,375
26							
27	<b><u>Rate Base Calculation</u></b>						
28	Plant In Service		4,815,594	4,815,594	4,815,594	4,815,594	4,815,594
29	Accumulated Depreciation		(119,550)	(239,101)	(358,651)	(478,202)	(597,752)
30	Net Plant in Service		4,696,044	4,576,493	4,456,943	4,337,392	4,217,842
31	Deferred Tax Reserve		(817,706)	(848,890)	(602,861)	(610,526)	(617,375)
32	Year End Rate Base		3,878,338	3,727,603	3,854,082	3,726,866	3,600,467
33							
34	<b><u>Revenue Requirement Calculation</u></b>						
35	Year End Rate Base		3,878,338	3,727,603	3,854,082	3,726,866	3,600,467
36	Pre-Tax ROR		8.50%	8.50%	8.50%	8.50%	8.50%
37	Return and Income Taxes		329,659	316,846	327,597	316,784	306,040
38	Book Depreciation - annual		119,550	119,550	119,550	119,550	119,550
39	Property Taxes - annual (2.7% inflation adj)		129,060	129,162	129,171	129,082	128,910
40	<b>Annual Revenue Requirement</b>		578,270	565,558	576,318	565,416	554,500
41							
42	Prior Year Cumulative Revenue Requirement		-	578,270	1,143,828	1,720,146	2,285,563
43							
44	Cumulative Revenue Requirement		578,270	1,143,828	1,720,146	2,285,563	2,840,063
45							

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1		<u>(a)</u>	<u>(b)</u>	<u>(c)</u>	<u>(d)</u>	<u>(e)</u>	
2	Year	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
3		Year 1	Year 2	Year 3	Year 4	Year 5	
4		Year 1 began on 12/1/2016					
46	<b><u>Minimum Take-or-Pay Assumption Level</u></b>						
47	Cumulative estimated revenue at minimum take-or-pay level	192,600	385,200	699,800	1,014,400	1,817,000	
48	Cumulative revenue requirement (line 39)	578,270	1,143,828	1,720,146	2,285,563	2,840,063	
49	Excess revenue (deficiency)	(385,670)	(758,628)	(1,020,346)	(1,271,163)	(1,023,063)	
50	NPV	\$212,274					
51	<b><u>Baseline Assumption Level</u></b>						
52	Cumulative estimated revenue at baseline level	314,600	781,700	1,401,300	2,325,900	3,403,000	
53	Cumulative revenue requirement (line 39)	578,270	1,143,828	1,720,146	2,285,563	2,840,063	
54	Excess revenue (deficiency)	(263,670)	(362,128)	(318,846)	40,337	562,937	
55	NPV	\$3,339,664					
56	<b><u>Accelerated Sales Assumption Level</u></b>						
57	Cumulative estimated revenue at accelerated sales level	467,100	1,025,700	1,828,300	3,057,900	4,287,500	
58	Cumulative revenue requirement (line 39)	578,270	1,143,828	1,720,146	2,285,563	2,840,063	
59	Excess revenue (deficiency)	(111,170)	(118,128)	108,154	772,337	1,447,437	
60	NPV	\$4,170,805					

61	<b><u>Imputed Capital Structure/ROR</u></b>				
62					(current federal tax
63					rate of 21% plus
64					NH rate of 7.7%)
65		<u>Ratio</u>	<u>Rate</u>	<u>Weighted</u>	<u>Pre Tax</u>
66					
67	Long Term Debt	49.85%	4.42%	2.20%	2.200%
68	Short Term Debt	0.95%	2.49%	0.02%	0.02%
69	Common Equity	49.21%	9.30%	4.58%	6.280%
70		<u>100.01%</u>		<u>6.80%</u>	<u>8.50%</u>

this rate is for  
informational  
purposes only

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**Computation of Revenue Requirement**

1	2	3	4	5	6	7	8	9	10
Year				(f)	(g)	(h)	(i)	(j)	
				6	7	8	9	10	
				Year 6	Year 7	Year 8	Year 9	Year 10	
4									
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11									
12									
13									
144,840	144,840		144,840	144,840	130,210	123,312	123,312	123,521	123,312
16					3,007,779	3,131,092	3,254,404	3,377,926	3,501,238
17									
18				3.33%	119,550	119,550	119,550	119,550	119,550
19					717,302	836,853	956,403	1,075,954	1,195,504
20									
21					10,659	3,762	3,762	3,971	3,762
22					2,290,477	2,294,239	2,298,001	2,301,972	2,305,734
27.08%	27.08%		27.08%	27.08%	27.08%	27.08%	27.08%	27.08%	27.08%
24									
25					620,261	621,280	622,299	623,374	624,393
26									
27									
28					4,815,594	4,815,594	4,815,594	4,815,594	4,815,594
29					(717,302)	(836,853)	(956,403)	(1,075,954)	(1,195,504)
30					4,098,292	3,978,741	3,859,191	3,739,640	3,620,090
31					(620,261)	(621,280)	(622,299)	(623,374)	(624,393)
32					3,478,030	3,357,461	3,236,892	3,116,266	2,995,697
33									
34									
35					3,478,030	3,357,461	3,236,892	3,116,266	2,995,697
36					8.50%	8.50%	8.50%	8.50%	8.50%
37					295,633	285,384	275,136	264,883	254,634
38					119,550	119,550	119,550	119,550	119,550
39					128,609	128,214	127,700	127,080	126,307
40					<b>543,792</b>	<b>533,149</b>	<b>522,386</b>	<b>511,513</b>	<b>500,491</b>
41									
42					2,840,063	3,383,855	3,917,004	4,439,390	4,950,903
43									
44					3,383,855	3,917,004	4,439,390	4,950,903	5,451,395
45									
46									
47					2,619,600	3,422,200	4,224,800	5,027,400	5,830,000
48					3,383,855	3,917,004	4,439,390	4,950,903	5,451,395
49					(764,255)	(494,804)	(214,590)	76,497	378,605
50									
51									
52					4,632,600	5,862,200	7,274,800	8,687,400	10,100,000
53					3,383,855	3,917,004	4,439,390	4,950,903	5,451,395
54					1,248,745	1,945,196	2,835,410	3,736,497	4,648,605
55									

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Year	<u>(f)</u> <b>6</b>	<u>(g)</u> <b>7</b>	<u>(h)</u> <b>8</b>	<u>(i)</u> <b>9</b>	<u>(j)</u> <b>10</b>
	Year 6	Year 7	Year 8	Year 9	Year 10
<b><u>Accelerated Sales Assumption Level</u></b>					
Cumulative estimated revenue at accelerated sales level	5,700,100	7,112,700	8,525,300	9,937,900	11,350,500
Cumulative revenue requirement (line 39)	3,383,855	3,917,004	4,439,390	4,950,903	5,451,395
Excess revenue (deficiency)	2,316,245	3,195,696	4,085,910	4,986,997	5,899,105

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Year				<u>(k)</u>	<u>(l)</u>	<u>(m)</u>	<u>(n)</u>	<u>(o)</u>						
				11	12	13	14	15						
				Year 11	Year 12	Year 13	Year 14	Year 15						
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**Computation of Revenue Requirement**

Year	<u>(k)</u> <b>11</b>	<u>(l)</u> <b>12</b>	<u>(m)</u> <b>13</b>	<u>(n)</u> <b>14</b>	<u>(o)</u> <b>15</b>
	Year 11	Year 12	Year 13	Year 14	Year 15
<b><u>Accelerated Sales Assumption Level</u></b>					
Cumulative estimated revenue at accelerated sales level	12,763,100	14,175,700	15,588,300	17,000,900	18,413,500
Cumulative revenue requirement (line 39)	5,940,746	6,418,808	6,885,451	7,340,496	7,766,793
Excess revenue (deficiency)	6,822,354	7,756,892	8,702,849	9,660,404	10,646,707

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Annual revenue requirement	578,270	565,558	576,318	565,416	554,500	543,792	533,149	522,386	511,513	500,491	489,352	478,062	466,643	455,045	426,297
<b><u>Minimum Take-or-Pay Assumption Level</u></b>															
Annual estimated revenue at minimum take-or-pay level	192,600	192,600	314,600	314,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600
Annual revenue requirement (line 6)	578,270	565,558	576,318	565,416	554,500	543,792	533,149	522,386	511,513	500,491	489,352	478,062	466,643	455,045	426,297
Excess revenue (deficiency)	(385,670)	(372,958)	(261,718)	(250,816)	248,100	258,808	269,451	280,214	291,087	302,109	313,248	324,538	335,957	347,555	376,303
NPV	\$212,274														
<b><u>Baseline Assumption Level</u></b>															
Annual estimated revenue at baseline level	314,600	467,100	619,600	924,600	1,077,100	1,229,600	1,229,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600
Annual revenue requirement (line 6)	578,270	565,558	576,318	565,416	554,500	543,792	533,149	522,386	511,513	500,491	489,352	478,062	466,643	455,045	426,297
Excess revenue (deficiency)	(263,670)	(98,458)	43,282	359,184	522,600	685,808	696,451	890,214	901,087	912,109	923,248	934,538	945,957	957,555	986,303
NPV	\$3,339,664														
<b><u>Accelerated Sales Assumption Level</u></b>															
Annual estimated revenue at accelerated level	467,100	558,600	802,600	1,229,600	1,229,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600
Annual revenue requirement (line 6)	578,270	565,558	576,318	565,416	554,500	543,792	533,149	522,386	511,513	500,491	489,352	478,062	466,643	455,045	426,297
Excess revenue (deficiency)	(111,170)	(6,958)	226,282	664,184	675,100	868,808	879,451	890,214	901,087	912,109	923,248	934,538	945,957	957,555	986,303
NPV	\$4,170,805														

Usage Month	Consumption	Gross Margin	Rent
16-Dec			
17-Jan			
17-Feb			
17-Mar			
17-Apr			
17-May			
17-Jun			
17-Jul			
17-Aug			
17-Sep			
17-Oct			
17-Nov			
17-Dec			
18-Jan			
18-Feb			
18-Mar			
18-Apr			
18-May			
18-Jun			
18-Jul			
18-Aug			
18-Sep			
18-Oct			
18-Nov			
18-Dec			
19-Jan			
19-Feb			
19-Mar			
19-Apr			
19-May			
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19-Jul			
19-Aug			
19-Sep			
19-Oct			
19-Nov			
19-Dec			
20-Jan			
20-Feb			
20-Mar			
20-Apr			
20-May			

Totals  
Combined Total

Rate Base model

Capital Cost	\$926,500
Required Return (pre tax)	8.50%
Depreciation	61,767
OpEx	
10-year Net Present Value	\$875,710
Up-front Payment	\$1,900,000
5-year amort	(\$482,202)
DAS Recovery	\$1,047,589

CapEx

Capital Cost	\$926,500
Required Return (pre tax)	8.50%
Depreciation	61,767
OpEx	
10-year Net Present Value	\$875,710
Up-front Payment	\$1,900,000
5-year amort	(\$482,202)
DAS Recovery	\$1,047,589

(current federal tax rate of 21% plus NH rate of 7.7%)

Weighted Rate	Rate	Pre Tax
2.20%	4.42%	2.20%
0.02%	2.49%	0.02%
4.58%	9.30%	6.28%
6.80%	100%	8.50%

Long Term Debt	49.85%
Short Term Debt	0.95%
Common Equity	49.21%

Ratio	Rate
49.85%	4.42%
0.95%	2.49%
49.21%	9.30%

Weighted Rate	Rate	Pre Tax
2.20%	4.42%	2.20%
0.02%	2.49%	0.02%
4.58%	9.30%	6.28%
6.80%	100%	8.50%

	MACRS Rates (%)	MACRS Table	Book Depr	Delta	Tax Rate	DIT	ADIT	Rate Base	Return Required	Property Tax	Insurance	O&M	Amortization of Initial Payment	Revenue Requirement	Actual Revenues	Delta	
1	5	\$ 46,325	\$ 23,163	\$(23,163)	27.08%	\$( 6,272)	\$( 6,272)	\$926,500	\$897,065	\$77,535	\$27,795	\$2,761	\$4,470	\$482,202	\$967,121.66	\$816,221.00	(\$150,900.66)
2	9.5	\$ 88,018	\$ 23,163	\$(64,855)	27.08%	\$(17,563)	\$(23,835)	\$856,340	\$74,552	\$26,912	\$2,761	\$4,582	\$482,202	\$963,367.26	\$602,276.00	(\$361,091.26)	
3	8.55	\$ 79,216	\$ 23,163	\$(56,053)	27.08%	\$(15,179)	\$(39,014)	\$817,998	\$71,190	\$25,690	\$2,761	\$4,696	\$482,202	\$958,898.24	\$617,332.90	(\$341,565.34)	
4	7.7	\$ 71,341	\$ 23,163	\$(48,178)	27.08%	\$(13,047)	\$(52,061)	\$781,789	\$68,021	\$24,540	\$2,761	\$4,814	\$482,202	\$605,499.44	\$632,766.22	\$27,266.79	
5	6.93	\$ 64,206	\$ 23,163	\$(41,044)	27.08%	\$(11,115)	\$(63,176)	\$747,512	\$65,024	\$23,454	\$2,761	\$4,934	\$482,202	\$601,536.53	\$648,585.38	\$47,048.84	
6	6.23	\$ 57,721	\$ 23,163	\$(34,558)	27.08%	\$(9,358)	\$(72,534)	\$714,991	\$62,183	\$22,425	\$2,761	\$5,057	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
7	5.9	\$ 54,664	\$ 23,163	\$(31,501)	27.08%	\$(8,530)	\$(81,065)	\$683,298	\$59,453	\$21,450	\$2,761	\$5,184	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
8	5.9	\$ 54,664	\$ 23,163	\$(31,501)	27.08%	\$(8,530)	\$(89,595)	\$651,605	\$56,758	\$20,499	\$2,761	\$5,313	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
9	5.91	\$ 54,756	\$ 23,163	\$(31,594)	27.08%	\$(8,556)	\$(98,151)	\$619,887	\$54,062	\$19,548	\$2,761	\$5,446	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
10	5.9	\$ 54,664	\$ 23,163	\$(31,501)	27.08%	\$(8,530)	\$(106,681)	\$588,194	\$51,366	\$18,597	\$2,761	\$5,582	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
11	5.91	\$ 54,756	\$ 23,163	\$(31,594)	27.08%	\$(8,556)	\$(115,237)	\$556,476	\$48,670	\$17,646	\$2,761	\$5,722	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
12	5.9	\$ 54,664	\$ 23,163	\$(31,501)	27.08%	\$(8,530)	\$(123,767)	\$524,783	\$45,974	\$16,694	\$2,761	\$5,865	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
13	5.91	\$ 54,756	\$ 23,163	\$(31,594)	27.08%	\$(8,556)	\$(132,323)	\$493,065	\$43,277	\$15,743	\$2,761	\$6,012	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
14	5.9	\$ 54,664	\$ 23,163	\$(31,501)	27.08%	\$(8,530)	\$(140,853)	\$461,372	\$40,581	\$14,792	\$2,761	\$6,162	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
15	5.91	\$ 54,756	\$ 23,163	\$(31,594)	27.08%	\$(8,556)	\$(149,409)	\$429,654	\$37,885	\$13,841	\$2,761	\$6,316	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
16	2.95	\$ 27,332	\$ 23,163	\$( 4,169)	27.08%	\$( 1,129)	\$(150,538)	\$405,362	\$35,504	\$12,890	\$2,761	\$6,474	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
17			\$ 23,163	\$ 23,163	27.08%	\$ 6,272	\$(144,265)	\$388,472	\$33,753	\$12,161	\$2,761	\$6,636	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
18			\$ 23,163	\$ 23,163	27.08%	\$ 6,272	\$(137,993)	\$371,582	\$32,316	\$11,654	\$2,761	\$6,802	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
19			\$ 23,163	\$ 23,163	27.08%	\$ 6,272	\$(131,720)	\$354,692	\$30,880	\$11,147	\$2,761	\$6,972	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	
20			\$ 23,163	\$ 23,163	27.08%	\$ 6,272	\$(125,448)	\$337,802	\$29,444	\$10,641	\$2,761	\$7,146	\$601,536.53	\$601,536.53	\$648,585.38	\$47,048.84	