

**Exh. MCC-5
Docket UG-170929
Witness: Melissa Cheesman**

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**CASCADE NATURAL GAS
CORPORATION,**

Respondent.

DOCKET UG-170929

**EXHIBIT TO
TESTIMONY OF**

Melissa Cheesman

**ON BEHALF OF STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

Estimated Monthly Billing Impacts

February 15, 2018

Estimated Monthly Bill Impacts

Residential - 503

Line No.	(a)	(b)	(c)	(d)	(e)
		Present Rates	Proposed Rates		
1	Basic Service Charge	\$4.00	\$4.00		
2	Delivery Charge w/ CRM	\$0.30276	\$0.27335		
3	PGA Rate	\$0.46035	\$0.46035		
	Monthly Consumption (therms)	Revenue at Present Rates	Revenue at Proposed Rates	Revenue Change	
				Amount	Percent
4	0	\$4.00	\$4.00	\$0.00	0.00%
5	25	\$23.08	\$22.34	-\$0.74	-3.19%
6	30	\$26.89	\$26.01	-\$0.88	-3.28%
7	35	\$30.71	\$29.68	-\$1.03	-3.35%
8	40	\$34.52	\$33.35	-\$1.18	-3.41%
9	45	\$38.34	\$37.02	-\$1.32	-3.45%
10	50	\$42.16	\$40.69	-\$1.47	-3.49%
11	60	\$49.79	\$48.02	-\$1.76	-3.54%
12	70	\$57.42	\$55.36	-\$2.06	-3.59%
13	80	\$65.05	\$62.70	-\$2.35	-3.62%
14	90	\$72.68	\$70.03	-\$2.65	-3.64%
15	100	\$80.31	\$77.37	-\$2.94	-3.66%
16	110	\$87.94	\$84.71	-\$3.24	-3.68%
17	120	\$95.57	\$92.04	-\$3.53	-3.69%
18	130	\$103.20	\$99.38	-\$3.82	-3.70%
19	140	\$110.84	\$106.72	-\$4.12	-3.71%
20	150	\$118.47	\$114.06	-\$4.41	-3.72%
21	160	\$126.10	\$121.39	-\$4.71	-3.73%
22	170	\$133.73	\$128.73	-\$5.00	-3.74%
23	180	\$141.36	\$136.07	-\$5.29	-3.74%
24	190	\$148.99	\$143.40	-\$5.59	-3.75%
25	200	\$156.62	\$150.74	-\$5.88	-3.76%
26	210	\$164.25	\$158.08	-\$6.18	-3.76%
27	220	\$171.88	\$165.41	-\$6.47	-3.76%
28	230	\$179.52	\$172.75	-\$6.76	-3.77%
29	240	\$187.15	\$180.09	-\$7.06	-3.77%
30	250	\$194.78	\$187.43	-\$7.35	-3.77%

Note: All hardcoded values provided by Cascade in Mr. Amen's workpapers.

Estimated Monthly Bill Impacts

Commercial - 504

Line No.	(a)	(b)	(d)	(e)	(f)
		Present Rates	Proposed Rates		
1	Basic Service Charge	\$10.00	\$10.00		
2	Delivery Charge w/ CRM	\$0.25201	\$0.22936		
3	PGA Rate	\$0.45772	\$0.45772		
	Monthly Consumption (therms)	Revenue at Present Rates	Revenue at Proposed Rates	Revenue Change	
				Amount	Percent
4	0	\$10.00	\$10.00	\$0.00	0.00%
5	50	\$45.49	\$44.35	-\$1.13	-2.49%
6	60	\$52.58	\$51.22	-\$1.36	-2.58%
7	70	\$59.68	\$58.10	-\$1.59	-2.66%
8	80	\$66.78	\$64.97	-\$1.81	-2.71%
9	90	\$73.88	\$71.84	-\$2.04	-2.76%
10	100	\$80.97	\$78.71	-\$2.27	-2.80%
11	110	\$88.07	\$85.58	-\$2.49	-2.83%
12	120	\$95.17	\$92.45	-\$2.72	-2.86%
13	130	\$102.26	\$99.32	-\$2.94	-2.88%
14	140	\$109.36	\$106.19	-\$3.17	-2.90%
15	150	\$116.46	\$113.06	-\$3.40	-2.92%
16	160	\$123.56	\$119.93	-\$3.62	-2.93%
17	170	\$130.65	\$126.80	-\$3.85	-2.95%
18	180	\$137.75	\$133.67	-\$4.08	-2.96%
19	190	\$144.85	\$140.55	-\$4.30	-2.97%
20	200	\$151.95	\$147.42	-\$4.53	-2.98%
21	250	\$187.43	\$181.77	-\$5.66	-3.02%
22	300	\$222.92	\$216.12	-\$6.79	-3.05%
23	350	\$258.41	\$250.48	-\$7.93	-3.07%
24	400	\$293.89	\$284.83	-\$9.06	-3.08%
25	450	\$329.38	\$319.19	-\$10.19	-3.09%
26	500	\$364.87	\$353.54	-\$11.33	-3.10%
27	600	\$435.84	\$422.25	-\$13.59	-3.12%
28	700	\$506.81	\$490.96	-\$15.86	-3.13%
29	800	\$577.78	\$559.66	-\$18.12	-3.14%
30	1,000	\$719.73	\$697.08	-\$22.65	-3.15%
31	1,250	\$897.16	\$868.85	-\$28.31	-3.16%
32	1,500	\$1,074.60	\$1,040.62	-\$33.97	-3.16%
33	1,750	\$1,252.03	\$1,212.39	-\$39.64	-3.17%
34	2,000	\$1,429.46	\$1,384.16	-\$45.30	-3.17%
35	2,500	\$1,784.33	\$1,727.70	-\$56.62	-3.17%
36	3,000	\$2,139.19	\$2,071.24	-\$67.95	-3.18%
37	3,500	\$2,494.06	\$2,414.78	-\$79.27	-3.18%
38	4,000	\$2,848.92	\$2,758.32	-\$90.60	-3.18%

Note: All hardcoded values provided by Cascade in Mr. Amen's workpapers.

Rate Design

Cascade Natural Gas Corporation
Washington Jurisdiction

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Estimated Monthly Bill Impacts

Industrial - 505

Line No.	(a)	(b)		(d)		(e)	(f)
		Present Rates	Proposed Rates	Present Rates	Proposed Rates		
1	Basic Service Charge		\$48.00		\$48.00		
2	Delivery Charge w/ CRM						
3	First 500 therms		\$0.19295		\$0.17576		
4	Next 3,500 therms		\$0.15627		\$0.14235		
5	Over 4,000 therms		\$0.15072		\$0.13729		
6	PGA Rate		\$0.44467		\$0.44467		
		Monthly Consumption (therms)	Revenue at Present Rates	Revenue at Proposed Rates	Revenue Change		
					Amount	Percent	
7		0	\$48.00	\$48.00	\$0.00	0.00%	
8		100	\$111.76	\$110.04	-\$1.72	-1.54%	
9		200	\$175.52	\$172.09	-\$3.44	-1.96%	
10		300	\$239.29	\$234.13	-\$5.16	-2.16%	
11		400	\$303.05	\$296.17	-\$6.88	-2.27%	
12		500	\$366.81	\$358.22	-\$8.59	-2.34%	
13		600	\$426.90	\$416.92	-\$9.99	-2.34%	
14		700	\$487.00	\$475.62	-\$11.38	-2.34%	
15		800	\$547.09	\$534.32	-\$12.77	-2.33%	
16		900	\$607.19	\$593.02	-\$14.16	-2.33%	
17		1,000	\$667.28	\$651.73	-\$15.56	-2.33%	
18		1,100	\$727.37	\$710.43	-\$16.95	-2.33%	
19		1,200	\$787.47	\$769.13	-\$18.34	-2.33%	
20		1,300	\$847.56	\$827.83	-\$19.73	-2.33%	
21		1,400	\$907.66	\$886.53	-\$21.12	-2.33%	
22		1,500	\$967.75	\$945.24	-\$22.52	-2.33%	
23		2,000	\$1,268.22	\$1,238.75	-\$29.48	-2.32%	
24		2,500	\$1,568.69	\$1,532.26	-\$36.43	-2.32%	
25		3,000	\$1,869.16	\$1,825.77	-\$43.40	-2.32%	
26		3,500	\$2,169.63	\$2,119.28	-\$50.36	-2.32%	
27		4,000	\$2,470.10	\$2,412.79	-\$57.31	-2.32%	
28		5,000	\$3,065.49	\$2,994.75	-\$70.74	-2.31%	
29		6,000	\$3,660.88	\$3,576.71	-\$84.18	-2.30%	
30		7,000	\$4,256.27	\$4,158.67	-\$97.60	-2.29%	
31		8,000	\$4,851.66	\$4,740.63	-\$111.03	-2.29%	
32		9,000	\$5,447.05	\$5,322.59	-\$124.46	-2.28%	
33		10,000	\$6,042.44	\$5,904.55	-\$137.90	-2.28%	
34		12,500	\$7,530.92	\$7,359.45	-\$171.47	-2.28%	
35		15,000	\$9,019.39	\$8,814.35	-\$205.05	-2.27%	
36		17,500	\$10,507.87	\$10,269.25	-\$238.62	-2.27%	
37		20,000	\$11,996.34	\$11,724.15	-\$272.20	-2.27%	
38		25,000	\$14,973.29	\$14,633.95	-\$339.34	-2.27%	
39		30,000	\$17,950.24	\$17,543.75	-\$406.49	-2.26%	
40		35,000	\$20,927.19	\$20,453.55	-\$473.64	-2.26%	
41		40,000	\$23,904.14	\$23,363.35	-\$540.80	-2.26%	
42		45,000	\$26,881.09	\$26,273.15	-\$607.95	-2.26%	
43		50,000	\$29,858.04	\$29,182.95	-\$675.09	-2.26%	
44		60,000	\$35,811.94	\$35,002.55	-\$809.40	-2.26%	
45		70,000	\$41,765.84	\$40,822.15	-\$943.70	-2.26%	
46		80,000	\$47,719.74	\$46,641.75	-\$1,078.00	-2.26%	
47		90,000	\$53,673.64	\$52,461.35	-\$1,212.30	-2.26%	
48		100,000	\$59,627.54	\$58,280.95	-\$1,346.60	-2.26%	

Note: All hardcoded values provided by Cascade in Mr. Amen's workpapers.
Electronic Workbook Name: 170929-Staff-Cheesman-Exh-MCC-2-MCC-5.xlsx
Electronic Tab Name: MCC-5 Bill Impact, Page 3 of 6

Rate Design

Cascade Natural Gas Corporation
Washington Jurisdiction

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Estimated Monthly Bill Impacts

Large Volume - 511

Line No.	(a)	(b)	(d)	(e)	(f)
		Present Rates	Proposed Rates		
1	Basic Service Charge	\$100.00	\$100.00		
2	Delivery Charge w/ CRM				
3	First 20,000 therms	\$0.15159	\$0.13886		
4	Next 80,000 therms	\$0.11620	\$0.10644		
5	Over 100,000 therms	\$0.02866	\$0.02625		
6	PGA Rate	\$0.44467	\$0.44467		
	Monthly Consumption (therms)	Revenue at Present Rates	Revenue at Proposed Rates	Revenue Change	
				Amount	Percent
7	0	\$100.00	\$100.00	\$0.00	0.00%
8	1,000	\$696.26	\$683.53	-\$12.73	-1.83%
9	2,000	\$1,292.52	\$1,267.06	-\$25.46	-1.97%
10	3,000	\$1,888.78	\$1,850.59	-\$38.19	-2.02%
11	4,000	\$2,485.04	\$2,434.12	-\$50.92	-2.05%
12	5,000	\$3,081.30	\$3,017.65	-\$63.65	-2.07%
13	8,000	\$4,870.08	\$4,768.24	-\$101.84	-2.09%
14	11,000	\$6,658.86	\$6,518.83	-\$140.03	-2.10%
15	14,000	\$8,447.64	\$8,269.42	-\$178.22	-2.11%
16	17,000	\$10,236.42	\$10,020.01	-\$216.41	-2.11%
17	20,000	\$12,025.20	\$11,770.60	-\$254.60	-2.12%
18	23,000	\$13,707.81	\$13,423.93	-\$283.88	-2.07%
19	26,000	\$15,390.42	\$15,077.26	-\$313.16	-2.03%
20	29,000	\$17,073.03	\$16,730.59	-\$342.44	-2.01%
21	32,000	\$18,755.64	\$18,383.92	-\$371.72	-1.98%
22	35,000	\$20,438.25	\$20,037.25	-\$401.00	-1.96%
23	40,000	\$23,242.60	\$22,792.80	-\$449.80	-1.94%
24	45,000	\$26,046.95	\$25,548.35	-\$498.60	-1.91%
25	50,000	\$28,851.30	\$28,303.90	-\$547.40	-1.90%
26	55,000	\$31,655.65	\$31,059.45	-\$596.20	-1.88%
27	60,000	\$34,460.00	\$33,815.00	-\$645.00	-1.87%
28	67,500	\$38,666.53	\$37,948.33	-\$718.20	-1.86%
29	75,000	\$42,873.05	\$42,081.65	-\$791.40	-1.85%
30	82,500	\$47,079.58	\$46,214.98	-\$864.60	-1.84%
31	90,000	\$51,286.10	\$50,348.30	-\$937.80	-1.83%
32	100,000	\$56,894.80	\$55,859.40	-\$1,035.40	-1.82%
33	110,000	\$61,628.10	\$60,568.60	-\$1,059.50	-1.72%
34	120,000	\$66,361.40	\$65,277.80	-\$1,083.60	-1.63%
35	130,000	\$71,094.70	\$69,987.00	-\$1,107.70	-1.56%
36	140,000	\$75,828.00	\$74,696.20	-\$1,131.80	-1.49%
37	150,000	\$80,561.30	\$79,405.40	-\$1,155.90	-1.43%
38	165,000	\$87,661.25	\$86,469.20	-\$1,192.05	-1.36%
39	180,000	\$94,761.20	\$93,533.00	-\$1,228.20	-1.30%
40	195,000	\$101,861.15	\$100,596.80	-\$1,264.35	-1.24%
41	210,000	\$108,961.10	\$107,660.60	-\$1,300.50	-1.19%
42	225,000	\$116,061.05	\$114,724.40	-\$1,336.65	-1.15%
43	250,000	\$127,894.30	\$126,497.40	-\$1,396.90	-1.09%
44	275,000	\$139,727.55	\$138,270.40	-\$1,457.15	-1.04%
45	300,000	\$151,560.80	\$150,043.40	-\$1,517.40	-1.00%
46	325,000	\$163,394.05	\$161,816.40	-\$1,577.65	-0.97%
47	350,000	\$175,227.30	\$173,589.40	-\$1,637.90	-0.93%
48	375,000	\$187,060.55	\$185,362.40	-\$1,698.15	-0.91%

Note: All hardcoded values provided by Cascade in Mr. Amen's workpapers.

Rate Design

Cascade Natural Gas Corporation
 Washington Jurisdiction
 Estimated Monthly Bill Impacts

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Interruptible - 570

Line No.	(a)	(b)		(d)		(e)	(f)
		Present Rates	Proposed Rates	Present Rates	Proposed Rates		
1	Basic Service Charge		\$130.00		\$130.00		
2	Delivery Charge w/ CRM						
3	First 30,000 therms		\$0.08363		\$0.07657		
4	Over 30,000 therms		\$0.02381		\$0.02180		
5	PGA Rate		\$0.43167		\$0.43167		
		Monthly Consumption (therms)	Revenue at Present Rates	Revenue at Proposed Rates	Revenue Change		
					Amount	Percent	
6		0	\$130.00	\$130.00	\$0.00	0.00%	
7		5,000	\$2,706.50	\$2,671.20	-\$35.30	-1.30%	
8		5,500	\$2,964.15	\$2,925.32	-\$38.83	-1.31%	
9		6,000	\$3,221.80	\$3,179.44	-\$42.36	-1.31%	
10		6,500	\$3,479.45	\$3,433.56	-\$45.89	-1.32%	
11		7,000	\$3,737.10	\$3,687.68	-\$49.42	-1.32%	
12		7,500	\$3,994.75	\$3,941.80	-\$52.95	-1.33%	
13		8,000	\$4,252.40	\$4,195.92	-\$56.48	-1.33%	
14		8,500	\$4,510.05	\$4,450.04	-\$60.01	-1.33%	
15		9,000	\$4,767.70	\$4,704.16	-\$63.54	-1.33%	
16		9,500	\$5,025.35	\$4,958.28	-\$67.07	-1.33%	
17		10,500	\$5,540.65	\$5,466.52	-\$74.13	-1.34%	
18		11,500	\$6,055.95	\$5,974.76	-\$81.19	-1.34%	
19		12,500	\$6,571.25	\$6,483.00	-\$88.25	-1.34%	
20		13,500	\$7,086.55	\$6,991.24	-\$95.31	-1.34%	
21		14,500	\$7,601.85	\$7,499.48	-\$102.37	-1.35%	
22		16,000	\$8,374.80	\$8,261.84	-\$112.96	-1.35%	
23		17,000	\$8,890.10	\$8,770.08	-\$120.02	-1.35%	
24		18,000	\$9,405.40	\$9,278.32	-\$127.08	-1.35%	
25		19,000	\$9,920.70	\$9,786.56	-\$134.14	-1.35%	
26		20,000	\$10,436.00	\$10,294.80	-\$141.20	-1.35%	
27		22,000	\$11,466.60	\$11,311.28	-\$155.32	-1.35%	
28		24,000	\$12,497.20	\$12,327.76	-\$169.44	-1.36%	
29		26,000	\$13,527.80	\$13,344.24	-\$183.56	-1.36%	
30		28,000	\$14,558.40	\$14,360.72	-\$197.68	-1.36%	
31		30,000	\$15,589.00	\$15,377.20	-\$211.80	-1.36%	
32		35,000	\$17,866.40	\$17,644.55	-\$221.85	-1.24%	
33		40,000	\$20,143.80	\$19,911.90	-\$231.90	-1.15%	
34		45,000	\$22,421.20	\$22,179.25	-\$241.95	-1.08%	
35		50,000	\$24,698.60	\$24,446.60	-\$252.00	-1.02%	
36		55,000	\$26,976.00	\$26,713.95	-\$262.05	-0.97%	
37		65,000	\$31,530.80	\$31,248.65	-\$282.15	-0.89%	
38		75,000	\$36,085.60	\$35,783.35	-\$302.25	-0.84%	
39		85,000	\$40,640.40	\$40,318.05	-\$322.35	-0.79%	
40		95,000	\$45,195.20	\$44,852.75	-\$342.45	-0.76%	
41		105,000	\$49,750.00	\$49,387.45	-\$362.55	-0.73%	
42		120,000	\$56,582.20	\$56,189.50	-\$392.70	-0.69%	
43		135,000	\$63,414.40	\$62,991.55	-\$422.85	-0.67%	
44		150,000	\$70,246.60	\$69,793.60	-\$453.00	-0.64%	
45		165,000	\$77,078.80	\$76,595.65	-\$483.15	-0.63%	
46		180,000	\$83,911.00	\$83,397.70	-\$513.30	-0.61%	
47		195,000	\$90,743.20	\$90,199.75	-\$543.45	-0.60%	

Note: All hardcoded values provided by Cascade in Mr. Amen's workpapers.

Rate Design

Cascade Natural Gas Corporation
 Washington Jurisdiction
 Estimated Monthly Bill Impacts

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Transport - 663

Line No.	(a)	(b)	(d)	(e)	(f)
		Present Rates	Proposed Rates		
1	Contract Demand	\$0.20	\$0.20		
2	Dispatch Service Charge	\$500.00	\$500.00		
3	System Balancing Charge	\$0.00040	\$0.00040		
4	First 100,000 therms w/CRM	\$0.05837	\$0.05086		
5	Next 200,000 therms w/CRM	\$0.02130	\$0.01856		
6	Next 200,000 therms w/CRM	\$0.01294	\$0.01128		
7	Over 500,000 therms w/CRM	\$0.00615	\$0.00536		
8	PGA Rate	\$0.00000	\$0.00000		

	Monthly Consumption (therms)	Revenue at Present Rates	Revenue at Proposed Rates	Revenue Change	
				Amount	Percent
9	0	\$500.00	\$500.00	\$0.00	0.00%
10	10,000	\$1,087.70	\$1,012.60	-\$75.10	-6.90%
11	20,000	\$1,675.40	\$1,525.20	-\$150.20	-8.97%
12	30,000	\$2,263.10	\$2,037.80	-\$225.30	-9.96%
13	40,000	\$2,850.80	\$2,550.40	-\$300.40	-10.54%
14	50,000	\$3,438.50	\$3,063.00	-\$375.50	-10.92%
15	60,000	\$4,026.20	\$3,575.60	-\$450.60	-11.19%
16	70,000	\$4,613.90	\$4,088.20	-\$525.70	-11.39%
17	80,000	\$5,201.60	\$4,600.80	-\$600.80	-11.55%
18	90,000	\$5,789.30	\$5,113.40	-\$675.90	-11.67%
19	100,000	\$6,377.00	\$5,626.00	-\$751.00	-11.78%
20	120,000	\$6,811.00	\$6,005.20	-\$805.80	-11.83%
21	140,000	\$7,245.00	\$6,384.40	-\$860.60	-11.88%
22	160,000	\$7,679.00	\$6,763.60	-\$915.40	-11.92%
23	180,000	\$8,113.00	\$7,142.80	-\$970.20	-11.96%
24	200,000	\$8,547.00	\$7,522.00	-\$1,025.00	-11.99%
25	220,000	\$8,981.00	\$7,901.20	-\$1,079.80	-12.02%
26	240,000	\$9,415.00	\$8,280.40	-\$1,134.60	-12.05%
27	260,000	\$9,849.00	\$8,659.60	-\$1,189.40	-12.08%
28	280,000	\$10,283.00	\$9,038.80	-\$1,244.20	-12.10%
29	300,000	\$10,717.00	\$9,418.00	-\$1,299.00	-12.12%
30	350,000	\$11,384.00	\$10,002.00	-\$1,382.00	-12.14%
31	400,000	\$12,051.00	\$10,586.00	-\$1,465.00	-12.16%
32	450,000	\$12,718.00	\$11,170.00	-\$1,548.00	-12.17%
33	500,000	\$13,385.00	\$11,754.00	-\$1,631.00	-12.19%
34	600,000	\$14,040.00	\$12,330.00	-\$1,710.00	-12.18%
35	700,000	\$14,695.00	\$12,906.00	-\$1,789.00	-12.17%
36	800,000	\$15,350.00	\$13,482.00	-\$1,868.00	-12.17%
37	900,000	\$16,005.00	\$14,058.00	-\$1,947.00	-12.16%
38	1,000,000	\$16,660.00	\$14,634.00	-\$2,026.00	-12.16%
39	1,100,000	\$17,315.00	\$15,210.00	-\$2,105.00	-12.16%
40	1,200,000	\$17,970.00	\$15,786.00	-\$2,184.00	-12.15%
41	1,300,000	\$18,625.00	\$16,362.00	-\$2,263.00	-12.15%
42	1,400,000	\$19,280.00	\$16,938.00	-\$2,342.00	-12.15%
43	1,500,000	\$19,935.00	\$17,514.00	-\$2,421.00	-12.14%

Note: All hardcoded values provided by Cascade in Mr. Amen's workpapers.