

NW Natural's ECRM Annual Tariff Adjustment Filing
and 2019 Annual Report

Exhibit C

Rates Calculation Schedules and Deferral Workpapers

July 15, 2020

NW Natural
Rates & Regulatory Affairs
2020-2021 PGA Filing - Washington: September Filing
PGA Effects on Average Bill by Rate Schedule
Calculation of Effect on Customer Average Bill by Rate Schedule [1]

		Washington PGA Normalized Volumes page, Column D	Therms in Block	Normal Therms Monthly Average use	Minimum Monthly Charge	Current 11/1/2019 Billing Rates	11/1/2019 Current Average Bill	Proposed 11/1/2020 ECRM Rates	Proposed 11/1/2020 ECRM Average Bill	Proposed 11/1/2020 ECRM % Bill Change
		A	B	C	D	E	F = D + (C * E)	G	H = D + (C * G)	I
6	Schedule									
7	1R	217,239	N/A	20.0	\$5.50	\$1.04886	\$26.48	\$1.05344	\$26.57	0.3%
8	1C	37,543	N/A	89.0	\$7.00	\$1.09471	\$104.43	\$1.09860	\$104.78	0.3%
9	2R	54,672,678	N/A	57.0	\$8.00	\$0.81021	\$54.18	\$0.81309	\$54.35	0.3%
10	3 CFS	17,824,337	N/A	235.0	\$22.00	\$0.79219	\$208.16	\$0.79477	\$208.77	0.3%
11	3 IFS	264,770	N/A	919.0	\$22.00	\$0.76295	\$723.15	\$0.76529	\$725.30	0.3%
12	27	573,831	N/A	63.0	\$9.00	\$0.58291	\$45.72	\$0.58475	\$45.84	0.3%
13	41C Firm Sales	1,931,387	2,000	3,630.0	\$250.00	\$0.57634		\$0.57835		
14	Block 2	2,076,642	all additional			\$0.53271		\$0.53448		
15	TOTAL						\$2,271.00		\$2,277.90	0.3%
16	41C Interr Sales	0	2,000	0.0	\$250.00	\$0.59162		\$0.59327		
17	Block 2	0	all additional			\$0.54840		\$0.54985		
18	TOTAL						\$250.00		\$250.00	0.0%
19	41 Firm Trans	0	2,000	0.0	\$500.00	\$0.54840		\$0.54985		
20	Block 2	260,994	all additional			\$0.28625		\$0.28823		
21	TOTAL						\$500.00		\$500.00	0.0%
22	41I Firm Sales	401,374	2,000	4,787.0	\$250.00	\$0.53622		\$0.53814		
23	Block 2	632,579	all additional			\$0.49736		\$0.49906		
24	TOTAL						\$2,708.58		\$2,717.16	0.3%
25	41I Interr Sales	0	2,000	0.0	\$250.00	\$0.55420		\$0.55585		
26	Block 2	0	all additional			\$0.51543		\$0.51688		
27	TOTAL						\$250.00		\$250.00	0.0%
28	42C Firm Sales	526,391	10,000	18,115.0	\$1,300.00	\$0.37151		\$0.37262		
29	Block 2	459,684	20,000			\$0.35450		\$0.35549		
30	Block 3	94,901	20,000			\$0.32067		\$0.32143		
31	Block 4	5,908	100,000			\$0.29838		\$0.29899		
32	Block 5	0	600,000			\$0.26868		\$0.26908		
33	Block 6	0	all additional			\$0.23154		\$0.23169		
34	TOTAL						\$7,891.87		\$7,911.00	0.2%
35	42I Firm Sales	1,090,175	10,000	13,640.0	\$1,300.00	\$0.34641		\$0.34760		
36	Block 2	641,202	20,000			\$0.33204		\$0.33310		
37	Block 3	69,166	20,000			\$0.30341		\$0.30423		
38	Block 4	0	100,000			\$0.28459		\$0.28524		
39	Block 5	0	600,000			\$0.25951		\$0.25995		
40	Block 6	0	all additional			\$0.22810		\$0.22826		
41	TOTAL						\$5,972.73		\$5,988.48	0.3%
42	42C Firm Trans	479,847	10,000	48,994.0	\$1,550.00	\$0.12884		\$0.12970		
43	Block 2	792,463	20,000			\$0.11534		\$0.11611		
44	Block 3	542,281	20,000			\$0.08844		\$0.08903		
45	Block 4	537,117	100,000			\$0.07077		\$0.07124		
46	Block 5	0	600,000			\$0.04718		\$0.04749		
47	Block 6	0	all additional			\$0.01768		\$0.01780		
48	TOTAL						\$6,825.03		\$6,860.24	0.5%
49	42I Firm Trans	901,597	10,000	63,120.0	\$1,550.00	\$0.13275		\$0.13360		
50	Block 2	1,041,722	20,000			\$0.11883		\$0.11959		
51	Block 3	957,215	20,000			\$0.09112		\$0.09171		
52	Block 4	2,490,044	100,000			\$0.07291		\$0.07338		
53	Block 5	1,426,372	600,000			\$0.04860		\$0.04891		
54	Block 6	0	all additional			\$0.01823		\$0.01835		
55	TOTAL						\$8,033.08		\$8,074.75	0.5%
56	42C Interr Sales	241,386	10,000	39,870.0	\$1,300.00	\$0.37347		\$0.37431		
57	Block 2	456,774	20,000			\$0.35825		\$0.35900		
58	Block 3	231,616	20,000			\$0.32792		\$0.32850		
59	Block 4	27,098	100,000			\$0.30799		\$0.30845		
60	Block 5	0	600,000			\$0.28141		\$0.28172		
61	Block 6	0	all additional			\$0.24819		\$0.24831		
62	TOTAL						\$15,436.27		\$15,465.40	0.2%
63	42I Interr Sales	161,895	10,000	8,569.0	\$1,300.00	\$0.36417		\$0.36564		
64	Block 2	146,582	20,000			\$0.34993		\$0.35124		
65	Block 3	0	20,000			\$0.32155		\$0.32256		
66	Block 4	0	100,000			\$0.30289		\$0.30370		
67	Block 5	0	600,000			\$0.27800		\$0.27854		
68	Block 6	0	all additional			\$0.24690		\$0.24710		
69	TOTAL						\$4,420.57		\$4,433.17	0.3%
70	42 Inter Trans	861,932	10,000	63,670.0	\$1,550.00	\$0.12574		\$0.12656		
71	Block 2	1,453,508	20,000			\$0.11256		\$0.11330		
72	Block 3	976,710	20,000			\$0.08631		\$0.08687		
73	Block 4	3,078,834	100,000			\$0.06906		\$0.06951		
74	Block 5	1,269,411	600,000			\$0.04605		\$0.04635		
75	Block 6	0	all additional			\$0.01725		\$0.01736		
76	TOTAL						\$7,728.85		\$7,769.20	0.5%
77	43 Firm Trans	0	N/A	0.0	\$38,000.00	\$0.00456	\$38,000.00	\$0.00458	\$38,000.00	0.0%
78	43 Interr Trans	0	N/A	0.0	\$38,000.00	\$0.00456	\$38,000.00	\$0.00458	\$38,000.00	0.0%
79	Intentionally blank									

[1] Rate Schedule 41 and 42 customers may choose demand charges at a volumetric rate or based on MDDV. For convenience of presentation, demand charges are not included in the calculations for those schedules.

Northwest Natural Gas Company

**Summary of Deferred Environmental Costs and Insurance Application
 For the period of December 1, 2018 through December 31, 2019**

	<u>12/1/18 - 6/30/19</u>	<u>7/1/19 - 12/31/19</u>	<u>Total</u>
Deferred costs allocated to Washington	260,540	307,627	568,167
Application of insurance to fully offset costs	(260,540)	n/a	(260,540)
Amortization of insurance proceeds		(86,926)	(86,926)
Remaining deferred costs for amortization	\$ -	\$ 220,701	<u><u>\$ 220,701</u></u>

**System and Washington Allocated Environmental Remediation Payments and Insurance
 Beginning with the ECRM on 12/1/19 (Docket Docket UG-181053, Order 06)**

SYSTEM										
Month/Year	Note	Gasco Remediation	Litigation	TOTAL GASCO	HARBOR	SILTRONIC	TAR DEPOSIT	CENTRAL	TOTAL SPEND	INSURANCE RECOVERY
(a)	(b)	(c)	(d)	(e)	(f)			(g)		(h)
Dec-18		1,191,360.86	396.90	1,191,757.76	59,633.87	-	-	7,301.50	1,258,693.13	(376.69)
Jan-19		1,237,760.78	-	1,237,760.78	119,291.25	-	-	-	1,357,052.03	-
Feb-19		382,043.00	-	382,043.00	78,053.25	-	-	-	460,096.25	-
Mar-19		1,512,174.06	-	1,512,174.06	102,788.85	-	-	-	1,614,962.91	(4,029.60)
Apr-19		822,396.84	4,372.25	826,769.09	113,525.75	-	-	-	940,294.84	-
May-19		1,578,374.62	31.50	1,578,406.12	125,492.37	-	-	-	1,703,898.49	-
Jun-19		552,361.11	-	552,361.11	(13,060.54)	-	-	-	539,300.57	(7,782.18)
Jul-19		1,085,403.20	-	1,085,403.20	101,558.00	-	-	-	1,186,961.20	-
Aug-19		567,342.96	-	567,342.96	181,245.00	-	-	-	748,587.96	22.25
Sep-19		1,625,099.59	-	1,625,099.59	133,158.75	-	-	-	1,758,258.34	(17,386.45)
Oct-19		1,211,191.52	-	1,211,191.52	123,628.25	-	-	-	1,334,819.77	130.50
Nov-19		1,749,980.81	-	1,749,980.81	29,518.75	-	-	2,075.00	1,781,574.56	-
Dec-19		2,356,280.61	207.90	2,356,488.51	128,859.25	-	-	512.50	2,485,860.26	(12,202.06)

WASHINGTON Allocated								
GASCO	Litigation	TOTAL GASCO	HARBOR	SILTRONIC	TAR DEPOSIT	CENTRAL	TOTAL SPEND	INSURANCE RECOVERY COSTS
(p)			(q)	(r)	(s)	(u)	(v)	(y)
39,553.18	13.18	39,566.36	1,979.84	-	-	242.41	41,788.61	(12.51)
41,093.66	-	41,093.66	3,960.47	-	-	-	45,054.13	-
12,683.83	-	12,683.83	2,591.37	-	-	-	15,275.20	-
50,204.18	-	50,204.18	3,412.59	-	-	-	53,616.77	(133.78)
27,303.58	145.16	27,448.73	3,769.05	-	-	-	31,217.79	-
52,402.04	1.05	52,403.08	4,166.35	-	-	-	56,569.43	-
18,338.39	-	18,338.39	(433.61)	-	-	-	17,904.78	(258.37)
36,035.39	-	36,035.39	3,371.73	-	-	-	39,407.11	-
18,835.79	-	18,835.79	6,017.33	-	-	-	24,853.12	0.74
53,953.31	-	53,953.31	4,420.87	-	-	-	58,374.18	(577.23)
40,211.56	-	40,211.56	4,104.46	-	-	-	44,316.02	4.33
58,099.36	-	58,099.36	980.02	-	-	68.89	59,148.28	-
78,228.52	6.90	78,235.42	4,278.13	-	-	17.02	82,530.56	(405.11)

Company: Northwest Natural Gas Company
 State: Washington
 Description: Gasco & Litigation Deferral
 Account Number: 186175
 Other Info:

Debit (Credit)

Month/Year	Note	Deferral	Transfers	Adjustments	TOTAL Activity	TOTAL Balance	
1	Beginning Balance					2,603,422.24	
1	Dec-18	1, 2	39,566.36	(2,603,422.24)	(886.35)	(2,564,742.23)	38,680.01
1	Jan-19		41,093.66			41,093.66	79,773.67
1	Feb-19		12,683.83			12,683.83	92,457.49
1	Mar-19		50,204.18			50,204.18	142,661.67
1	Apr-19		27,448.73			27,448.73	170,110.41
1	May-19		52,403.08			52,403.08	222,513.49
1	Jun-19		18,338.39			18,338.39	240,851.88
1	Jul-19		36,035.39			36,035.39	276,887.26
1	Aug-19		18,835.79			18,835.79	295,723.05
1	Sep-19		53,953.31			53,953.31	349,676.36
1	Oct-19		40,211.56			40,211.56	389,887.92
2	Nov-19		58,099.36			58,099.36	447,987.28
3	Dec-19	2	78,235.42		(1,002.20)	77,233.22	525,220.50

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Notes:

101 **1** - Application of \$2.6M insurance proceeds to deferred costs from Feb. 2011 - Nov. 2018 per Order No. 6 in Docket UG-181053
 102 **2** - December adjustments represent the reversal of any employee expenses recorded during the year. Per Docket UG-110199
 103 these costs are not recoverable through the environmental deferrals.

104

Company: Northwest Natural Gas Company
 State: Washington
 Description: Central Deferral
 Account Number: 186176
 Other Info:

Debit (Credit)

Month/Year	Note	Deferral	Transfers	Adjustments	TOTAL Activity	TOTAL Balance
1	Beginning Balance					22,906.41
1	Dec-18	1				
		242.41	(22,906.41)		(22,664.00)	242.41
1	Jan-19	0.00			0.00	242.41
1	Feb-19	0.00			0.00	242.41
1	Mar-19	0.00			0.00	242.41
1	Apr-19	0.00			0.00	242.41
1	May-19	0.00			0.00	242.41
1	Jun-19	0.00			0.00	242.41
1	Jul-19	0.00			0.00	242.41
1	Aug-19	0.00			0.00	242.41
1	Sep-19	0.00			0.00	242.41
1	Oct-19	0.00			0.00	242.41
2	Nov-19	68.89			68.89	311.30
3	Dec-19	17.02			17.02	328.31

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Notes:

101 **1** - Application of \$23K of insurance proceeds to deferred costs from Feb. 2011 - Nov. 2018 per Order No. 6 in Docket UG-181053

102

Company: Northwest Natural Gas Company
 State: Washington
 Description: Tar Deferral
 Account Number: 186177
 Other Info:

Debit (Credit)

Month/Year	Note	Deferral	Transfers	Adjustments	TOTAL Activity	TOTAL Balance
1	Beginning Balance					18,093.28
2	Dec-18	1	0.00	(18,093.28)	(18,093.28)	0.00
3	Jan-19		0.00		0.00	0.00
4	Feb-19		0.00		0.00	0.00
5	Mar-19		0.00		0.00	0.00
6	Apr-19		0.00		0.00	0.00
7	May-19		0.00		0.00	0.00
8	Jun-19		0.00		0.00	0.00
9	Jul-19		0.00		0.00	0.00
10	Aug-19		0.00		0.00	0.00
11	Sep-19		0.00		0.00	0.00
12	Oct-19		0.00		0.00	0.00
13	Nov-19		0.00		0.00	0.00
14	Dec-19		0.00		0.00	0.00

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Notes:

112 **1** - Application of \$18K of insurance proceeds to deferred costs from Feb. 2011 - Nov. 2018 per Order No. 6 in Docket UG-181053

113

Company: Northwest Natural Gas Company
 State: Washington
 Description: Harbor Deferral
 Account Number: 186178
 Other Info:

Debit (Credit)

Month/Year	Note	Deferral	Transfers	Adjustments	TOTAL Activity	TOTAL Balance
1	Beginning Balance					318,130.54
2	Dec-18	1				
		1,979.84	(318,130.54)		(316,150.70)	1,979.84
3	Jan-19	3,960.47			3,960.47	5,940.31
4	Feb-19	2,591.37			2,591.37	8,531.68
5	Mar-19	3,412.59			3,412.59	11,944.27
6	Apr-19	3,769.05			3,769.05	15,713.33
7	May-19	4,166.35			4,166.35	19,879.67
8	Jun-19	(433.61)			(433.61)	19,446.06
9	Jul-19	3,371.73			3,371.73	22,817.79
10	Aug-19	6,017.33			6,017.33	28,835.12
11	Sep-19	4,420.87			4,420.87	33,255.99
12	Oct-19	4,104.46			4,104.46	37,360.45
13	Nov-19	980.02			980.02	38,340.47
14	Dec-19	4,278.13			4,278.13	42,618.60

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Notes:

1 - Application of \$0.3M of insurance proceeds to deferred costs from Feb. 2011 - Nov. 2018 per Order No. 6 in Docket UG-181053

113

Company: Northwest Natural Gas Company
 State: Washington
 Description: Siltronic Deferral
 Account Number: 186179
 Other Info:

Debit (Credit)

Month/Year	Note	Deferral	Transfers	Adjustments	TOTAL Activity	TOTAL Balance
1	Beginning Balance					54,275.52
2	Dec-18	1	0.00	(54,275.52)	(54,275.52)	0.00
3	Jan-19		0.00		0.00	0.00
4	Feb-19		0.00		0.00	0.00
5	Mar-19		0.00		0.00	0.00
6	Apr-19		0.00		0.00	0.00
7	May-19		0.00		0.00	0.00
8	Jun-19		0.00		0.00	0.00
9	Jul-19		0.00		0.00	0.00
10	Aug-19		0.00		0.00	0.00
11	Sep-19		0.00		0.00	0.00
12	Oct-19		0.00		0.00	0.00
13	Nov-19		0.00		0.00	0.00
14	Dec-19		0.00		0.00	0.00

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Notes:

112 **1** - Application of \$54K of insurance proceeds to deferred costs from Feb. 2011 - Nov. 2018 per Order No. 6 in Docket UG-181053

113

Company: Northwest Natural Gas Company
 State: Washington
 Description: Insurance Recovery Deferral
 Account Number: 186180
 Other Info:

Debit (Credit)

Month/Year	Note	Deferral	Transfers	Adjustments	TOTAL Activity	TOTAL Balance
1	Beginning Balance					(3,613,554.43)
2	Dec-18 1, 2	(12.51)	3,016,827.99	(1,487,630.95)	1,529,184.53	(2,084,369.90)
3	Jan-19	0.00			0.00	(2,084,369.90)
4	Feb-19	0.00			0.00	(2,084,369.90)
5	Mar-19	(133.78)			(133.78)	(2,084,503.68)
6	Apr-19	0.00			0.00	(2,084,503.68)
7	May-19	0.00			0.00	(2,084,503.68)
8	Jun-19	(258.37)			(258.37)	(2,084,762.05)
9	Jul-19	0.00			0.00	(2,084,762.05)
10	Aug-19	0.74			0.74	(2,084,761.31)
11	Sep-19	(577.23)			(577.23)	(2,085,338.54)
12	Oct-19	4.33			4.33	(2,085,334.21)
13	Nov-19	0.00			0.00	(2,085,334.21)
14	Dec-19	(405.11)			(405.11)	(2,085,739.31)

Proceeds Running Balance:

Proceeds at 11/30/2018	(3,613,554)
Less Insurance Applied to Feb 2011 - Nov 2018 costs	3,016,828
Add back prior reduction for application to pre-2011 costs	(1,487,631)
Total remaining Washington allocated proceeds	(2,084,357)
Dec 2018 - Dec 2019 additional proceeds received	(1,382)
3 Appl. to Dec 2018 - Jun 2019 costs once deemed prudent	260,298
4 Remaining balance to be amort. over 10.5 years	(1,825,441)
5 Amort. for Jul 2019 to Dec 2019 (0.5 year)	86,926
Remaining balance to be amortized over 10 years	(1,738,516)

Notes:

- 1 - Transfer represents application of \$3M of insurance proceeds against costs deferred from Feb. 2011 - Nov. 2018 per Order No. 6 in Docket UG-181053
- 2 - Adjustment is to add back the previous application of insurance to pre-2011 costs. Per Order No. 6 in Docket UG-181053 these costs were disallowed.
- 3 - Per Order No. 6 in Docket UG-181053 the costs incurred between Dec. 2018 and Jun. 2019 are to be fully offset once deemed prudent.
- 4 - Per Order No. 6 in Docket UG-181053 the remaining insurance proceeds balance is to be amortized over a 10.5 year period.
- 5 - This is calculated based on 21 half-year periods (10.5 years)