

EXHIBIT A

BEFORE THE
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

NW NATURAL
SUPPORTING MATERIALS

Annual Purchased Gas Cost and
Deferred Gas Cost Amortization Adjustments

NWN WUTC Advice No. 19-06A / UG-190765

September 27, 2019

NW NATURAL

EXHIBIT A

Supporting Materials

Annual Purchased Gas Cost and Deferred Gas Cost Amortization Adjustments

NWN WUTC ADVICE NO. 19-06A / UG-190765

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NW Natural
Rates & Regulatory Affairs
2019-2020 PGA Filing - Washington: September Filing
Summary of TEMPORARY Increments

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		REMOVE	REMOVE	ADD	ADD	ADD		
		Current	PGA Current	WACOG	Demand	Demand	Total	Net Effect of
		Temporaries	Temporaries	Deferral	Deferral	Deferral	Proposed PGA	PGA Temps
					FIRM	INTERR	Temporaries	Temporaries
							E = B+C+D	F = E-A
							E	F
Schedule	Block	A	B	C	D	E	F	
1R		0.00984	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
1C		(0.00020)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
2R		(0.01394)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
3 CFS		(0.01810)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
3 IFS		(0.04873)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
27		(0.02684)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
41C Firm Sales	Block 1	(0.02594)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 2	(0.02917)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
41C Interr Sales	Block 1	(0.00978)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 2	(0.01286)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
41 Firm Trans	Block 1	(0.00058)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 2	(0.00051)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41I Firm Sales	Block 1	(0.04932)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 2	(0.04978)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
41I Interr Sales	Block 1	(0.03197)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 2	(0.03241)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
42C Firm Sales	Block 1	(0.03799)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 2	(0.03958)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 3	(0.04273)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 4	(0.04481)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 5	(0.04759)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 6	(0.05105)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
42I Firm Sales	Block 1	(0.05087)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 2	(0.05110)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 3	(0.05158)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 4	(0.05189)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 5	(0.05230)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
	Block 6	(0.05281)	(0.05313)	0.03550	(0.02912)	0.00000	0.00638	0.05951
42 Firm Trans	Block 1	(0.00023)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 2	(0.00021)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 3	(0.00016)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 4	(0.00013)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 5	(0.00009)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 6	(0.00003)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42C Interr Sales	Block 1	(0.02314)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 2	(0.02445)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 3	(0.02707)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 4	(0.02878)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 5	(0.03108)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 6	(0.03394)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
42I Interr Sales	Block 1	(0.03339)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 2	(0.03363)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 3	(0.03410)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 4	(0.03441)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 5	(0.03483)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
	Block 6	(0.03534)	(0.03566)	0.03550	0.00000	(0.01017)	0.02533	0.06099
42 Inter Trans	Block 1	(0.00021)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 2	(0.00019)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 3	(0.00014)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 4	(0.00011)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 5	(0.00008)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Block 6	(0.00003)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
43 Firm Trans		(0.00001)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
43 Interr Trans		(0.00001)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
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Sources:

Direct Inputs [18-19 PGA](#)

Equal ¢ per therm Column D Column G Column J

Equal % of margin

Tariff Schedules:

Schedule # Sched 201 Sched 201 Sched 201

NW Natural
Rates & Regulatory Affairs
2019-2020 PGA Filing - Washington: September Filing
Calculation of Increments Allocated on the EQUAL CENT PER THERM BASIS

Line	Schedule	Block	Washington	WACOG Deferral				Demand Deferral - FIRM				Demand Deferral - INTERRUPTIBLE			
				Proposed Amount: Revenue Sensitive Multiplier Amount to Amortize:	2,800,514 4.158% add revenue sensitive factor 2,922,011 to all sales schedules	Temporary Increment	Multiplier	Volumes	Increment	(2,262,005) Temporary Increment 4.158% add revenue sensitive factor (2,360,140) to all firm sales	Multiplier	Volumes	Increment	(12,361) Temporary Increment 4.158% add revenue sensitive factor (12,897) to all interruptible sales	Multiplier
	Column F	A	B	C	D	E	F	G	H	I	J				
1															
2	1R	196,916	1.0	196,916	\$0.03550	1.0	196,916	(\$0.02912)	0.0	0	\$0.00000				
3	1C	41,009	1.0	41,009	\$0.03550	1.0	41,009	(\$0.02912)	0.0	0	\$0.00000				
4	2R	53,306,699	1.0	53,306,699	\$0.03550	1.0	53,306,699	(\$0.02912)	0.0	0	\$0.00000				
5	3 CFS	18,528,181	1.0	18,528,181	\$0.03550	1.0	18,528,181	(\$0.02912)	0.0	0	\$0.00000				
6	3 IFS	363,801	1.0	363,801	\$0.03550	1.0	363,801	(\$0.02912)	0.0	0	\$0.00000				
7	27	575,777	1.0	575,777	\$0.03550	1.0	575,777	(\$0.02912)	0.0	0	\$0.00000				
8	41C Firm Sales	1,970,232	1.0	1,970,232	\$0.03550	1.0	1,970,232	(\$0.02912)	0.0	0	\$0.00000				
9	Block 1	2,123,870	1.0	2,123,870	\$0.03550	1.0	2,123,870	(\$0.02912)	0.0	0	\$0.00000				
10	Block 2	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)				
11	41C Interr Sales	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)				
12	Block 1	303,749	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
13	Block 2	464,375	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
14	41I Firm Sales	360,236	1.0	360,236	\$0.03550	1.0	360,236	(\$0.02912)	0.0	0	\$0.00000				
15	Block 1	542,040	1.0	542,040	\$0.03550	1.0	542,040	(\$0.02912)	0.0	0	\$0.00000				
16	Block 2	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)				
17	42C Firm Sales	561,182	1.0	561,182	\$0.03550	1.0	561,182	(\$0.02912)	0.0	0	\$0.00000				
18	Block 1	481,861	1.0	481,861	\$0.03550	1.0	481,861	(\$0.02912)	0.0	0	\$0.00000				
19	Block 2	131,375	1.0	131,375	\$0.03550	1.0	131,375	(\$0.02912)	0.0	0	\$0.00000				
20	Block 3	20,969	1.0	20,969	\$0.03550	1.0	20,969	(\$0.02912)	0.0	0	\$0.00000				
21	Block 4	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
22	Block 5	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
23	Block 6	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
24	42I Firm Sales	1,060,773	1.0	1,060,773	\$0.03550	1.0	1,060,773	(\$0.02912)	0.0	0	\$0.00000				
25	Block 1	650,234	1.0	650,234	\$0.03550	1.0	650,234	(\$0.02912)	0.0	0	\$0.00000				
26	Block 2	112,053	1.0	112,053	\$0.03550	1.0	112,053	(\$0.02912)	0.0	0	\$0.00000				
27	Block 3	9,427	1.0	9,427	\$0.03550	1.0	9,427	(\$0.02912)	0.0	0	\$0.00000				
28	Block 4	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
29	Block 5	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
30	Block 6	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
31	42 Firm Trans	1,336,403	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
32	Block 1	1,682,938	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
33	Block 2	1,387,648	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
34	Block 3	2,195,748	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
35	Block 4	901,810	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
36	Block 5	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
37	Block 6	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
38	42C Interr Sales	237,919	1.0	237,919	\$0.03550	1.0	237,919	(\$0.02912)	1.0	237,919	(\$0.01017)				
39	Block 1	464,853	1.0	464,853	\$0.03550	1.0	464,853	(\$0.02912)	1.0	464,853	(\$0.01017)				
40	Block 2	214,908	1.0	214,908	\$0.03550	1.0	214,908	(\$0.02912)	1.0	214,908	(\$0.01017)				
41	Block 3	39,494	1.0	39,494	\$0.03550	1.0	39,494	(\$0.02912)	1.0	39,494	(\$0.01017)				
42	Block 4	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
43	Block 5	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
44	Block 6	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
45	42I Interr Sales	159,428	1.0	159,428	\$0.03550	1.0	159,428	(\$0.02912)	1.0	159,428	(\$0.01017)				
46	Block 1	151,104	1.0	151,104	\$0.03550	1.0	151,104	(\$0.02912)	1.0	151,104	(\$0.01017)				
47	Block 2	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
48	Block 3	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
49	Block 4	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
50	Block 5	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
51	Block 6	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000				
52	42 Inter Trans	881,572	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
53	Block 1	1,495,748	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
54	Block 2	1,185,204	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
55	Block 3	4,013,728	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
56	Block 4	2,332,547	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
57	Block 5	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
58	Block 6	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
59	43 Firm Trans	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
60	43 Interr Trans	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000				
61	Intentionally blank														
62	Totals			82,304,341	\$0.03550		81,036,635	(\$0.02912)		1,267,706	(\$0.01017)				
63															
64															
65															
66	Inputs page														
67	Tariff Schedules:														
68	Schedule #														

Sources for line 2 above:

Line 31 Line 33 Line 35

Sched 201 Sched 201 Sched 201

NW Natural
Rates & Regulatory Affairs
2019-2020 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 11/1/2018 Billing Rates	11/1/2018 Current Average Bill	Proposed 11/1/2019 PGA Effects Rates	Proposed 11/1/2019 PGA Effects Average Bill	Proposed 11/1/2019 PGA Effects % Bill Change
					F=D+(C * E)			Q=D+(C*P)		
Schedule	Block	A	B	C	D	E	F	P	Q	R
1R		196,916	N/A	19.0	\$3.47	\$1.02918	\$23.02	\$1.06764	\$23.76	3.2%
1C		41,009	N/A	95.0	\$3.47	\$1.01873	\$100.25	\$1.05719	\$103.90	3.6%
2R		53,306,699	N/A	57.0	\$7.00	\$0.73546	\$48.92	\$0.77392	\$51.11	4.5%
3 CFS		18,528,181	N/A	248.0	\$15.00	\$0.73534	\$197.36	\$0.77380	\$206.90	4.8%
3 IFS		363,801	N/A	1,213.0	\$15.00	\$0.70458	\$869.66	\$0.74304	\$916.31	5.4%
27		575,777	N/A	54.0	\$6.00	\$0.56222	\$36.36	\$0.60068	\$38.44	5.7%
41C Firm Sales	Block 1	1,970,232	2,000	3,554.0	\$250.00	\$0.49926	\$0.49926	\$0.53812		
	Block 2	2,123,870	all additional			\$0.46018		\$0.49904		
	TOTAL						\$1,963.64		\$2,101.75	7.0%
41C Interr Sales	Block 1	0	2,000	0.0	\$250.00	\$0.51519		\$0.55553		
	Block 2	0	all additional			\$0.47626		\$0.51660		
	TOTAL						\$250.00		\$250.00	0.0%
41 Firm Trans	Block 1	303,749	2,000	8,210.0	\$500.00	\$0.30019		\$0.30019		
	Block 2	484,375	all additional			\$0.26449		\$0.26449		
	TOTAL						\$2,742.86		\$2,742.86	0.0%
41I Firm Sales	Block 1	360,236	2,000	4,177.0	\$250.00	\$0.47592		\$0.51478		
	Block 2	542,040	all additional			\$0.43960		\$0.47846		
	TOTAL						\$2,158.85		\$2,321.17	7.5%
41I Interr Sales	Block 1	0	2,000	0.0	\$250.00	\$0.49300		\$0.53334		
	Block 2	0	all additional			\$0.45671		\$0.49705		
	TOTAL						\$250.00		\$250.00	0.0%
42C Firm Sales	Block 1	561,182	10,000	16,603.0	\$1,300.00	\$0.30434		\$0.34320		
	Block 2	481,861	20,000			\$0.29030		\$0.32916		
	Block 3	131,375	20,000			\$0.26237		\$0.30123		
	Block 4	20,969	100,000			\$0.24398		\$0.28284		
	Block 5	0	600,000			\$0.21945		\$0.25831		
	Block 6	0	all additional			\$0.18881		\$0.22767		
	TOTAL						\$6,260.25		\$6,905.44	10.3%
42I Firm Sales	Block 1	1,060,773	10,000	12,726.0	\$1,300.00	\$0.29140		\$0.33026		
	Block 2	650,234	20,000			\$0.27872		\$0.31758		
	Block 3	112,053	20,000			\$0.25347		\$0.29233		
	Block 4	9,427	100,000			\$0.23686		\$0.27572		
	Block 5	0	600,000			\$0.21473		\$0.25359		
	Block 6	0	all additional			\$0.18704		\$0.22590		
	TOTAL						\$4,973.79		\$5,468.32	9.9%
42 Firm Trans	Block 1	1,336,403	10,000	48,106.0	\$1,550.00	\$0.11795		\$0.11795		
	Block 2	1,682,938	20,000			\$0.10558		\$0.10558		
	Block 3	1,387,648	20,000			\$0.08096		\$0.08096		
	Block 4	2,195,748	100,000			\$0.06477		\$0.06477		
	Block 5	901,810	600,000			\$0.04318		\$0.04318		
	Block 6	0	all additional			\$0.01619		\$0.01619		
	TOTAL						\$6,306.96		\$6,306.96	0.0%
42C Interr Sales	Block 1	237,919	10,000	39,882.0	\$1,300.00	\$0.31898		\$0.35932		
	Block 2	464,853	20,000			\$0.30523		\$0.34557		
	Block 3	214,908	20,000			\$0.27787		\$0.31821		
	Block 4	39,494	100,000			\$0.25988		\$0.30022		
	Block 5	0	600,000			\$0.23588		\$0.27622		
	Block 6	0	all additional			\$0.20590		\$0.24624		
	TOTAL						\$13,340.31		\$14,949.15	12.1%
42I Interr Sales	Block 1	159,428	10,000	8,626.0	\$1,300.00	\$0.30887		\$0.34921		
	Block 2	151,104	20,000			\$0.29618		\$0.33652		
	Block 3	0	20,000			\$0.27094		\$0.31128		
	Block 4	0	100,000			\$0.25433		\$0.29467		
	Block 5	0	600,000			\$0.23218		\$0.27252		
	Block 6	0	all additional			\$0.20452		\$0.24486		
	TOTAL						\$3,964.31		\$4,312.29	8.8%
42 Inter Trans	Block 1	881,572	10,000	82,573.0	\$1,550.00	\$0.11797		\$0.11797		
	Block 2	1,495,748	20,000			\$0.10560		\$0.10560		
	Block 3	1,185,204	20,000			\$0.08098		\$0.08098		
	Block 4	4,013,728	100,000			\$0.06479		\$0.06479		
	Block 5	2,332,547	600,000			\$0.04319		\$0.04319		
	Block 6	0	all additional			\$0.01619		\$0.01619		
	TOTAL						\$8,571.70		\$8,571.70	0.0%
43 Firm Trans		0	N/A	0.0	\$38,000.00	\$0.00498	\$38,000.00	\$0.00498	\$38,000.00	0.0%
43 Interr Trans		0	N/A	0.0	\$38,000.00	\$0.00498	\$38,000.00	\$0.00498	\$38,000.00	0.0%

[1] Rate Schedule 41 and 42 customers may choose demand charges at a volumetric rate or based on MDDV. For convenience of present for those schedules.

[2] Proposed rates include the effect of removing the current Schedule 215 adjustment and applying the proposed Schedule 215 adjustment assumes no other changes to rates occur November 1.

Sources:

Direct Inputs	per Tariff	per Tariff
Rates in summary	Column A	

**NW Natural
 Rates & Regulatory Affairs
 2019-2020 PGA Filing - Washington: September Filing
 Summary of Deferred Accounts**

Account	A	B	C	D	E	F	G	H	I
		8/31/2019 Balance	Sep-Oct Estimated Activity	Sep-Oct Interest	10/31/2019 Balance	Estimated Interest During Amortization	Total Estimated Amount for (Refund) or Collection	Amounts Excluded from PGA Filing	Amounts Included in PGA Filing
E = sum B thru D G = E + F Excl. Rev Sens									
Gas Cost Deferrals and Amortizations									
191420 WACOG - ACCRUAL WA		2,704,362	0	24,666	2,729,028				
191421 AMORT OF WACOG - WA		(201,210)	193,286	(1,104)	(9,028)				
Subtotal		2,503,152	193,286	23,562	2,720,000	80,514	2,800,514		2,800,514
191430 DEMAND ACCRUAL - WA		(208,979)	0	(1,906)	(210,885)				
191431 AMORT OF DEMAND WA		(1,019,093)	194,267	(8,561)	(833,387)				
254302 MARGIN SHARING - WA		(1,164,706)	0	0	(1,164,706)				
Subtotal		(2,392,778)	194,267	(10,467)	(2,208,978)	(65,388)	(2,274,366)		(2,274,366)

15 Notes

16 Please refer to NWN workpapers or electronic file "NWN 2019-20 Washington PGA rate development file September filing.xls" for application of revenue sensitive effect and calculation of rate increments.

Company: Northwest Natural Gas Company
 State: Washington
 Description: Washington WACOG Deferral
 Account Number: 191420
 Program under Schedule P
 Temp Increment under Schedule 203

	Debit (Credit)											
1	2	3	4	5	6	7	8	9	10	11	12	13
Month/Year	Note	Accumulation	Transfers	Interest Rate	Interest	Activity	Balance					
(a)	(b)	(c)	(d)	(e1)	(e2)	(f)	(g)					
Nov-18	1	950,778.21	1,991,639.61	4.96%	687.02	2,943,104.84	642,290.19					
Dec-18		701,599.81		4.96%	4,104.77	705,704.58	1,347,994.77					
Jan-19		388,675.62		5.18%	6,657.74	395,333.36	1,743,328.12					
Feb-19		1,216,886.12		5.18%	10,151.81	1,227,037.93	2,970,366.05					
Mar-19		561,925.95		5.18%	14,034.90	575,960.85	3,546,326.90					
Apr-19		(251,479.44)		5.45%	15,535.17	(235,944.27)	3,310,382.63					
May-19		(240,347.45)		5.45%	14,488.87	(225,858.58)	3,084,524.05					
Jun-19		(199,222.30)		5.45%	13,556.48	(185,665.82)	2,898,858.23					
Jul-19		(115,634.95)		5.50%	13,021.44	(102,613.51)	2,796,244.72					
Aug-19		(104,459.37)		5.50%	12,576.74	(91,882.63)	2,704,362.10					
Sep-19				5.50%	12,394.99	12,394.99	2,716,757.09					
Oct-19				5.42%	12,270.69	12,270.69	2,729,027.78					

History truncated for ease of viewing

Notes

1 - Transferred authorized balance to account 191421 for amortization.

Company: Northwest Natural Gas Company
 State: Washington
 Description: Washington Amortization of WACOG
 Account Number: 191421
 Program under Schedule P
 Temp Increment under Schedule 203

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183
Debit	(Credit)	Month/Year	Note	Amortization	Transfers	Interest Rate	Interest	Activity	Balance	(a)	(b)	(c)	(d)	(e1)	(e2)	(f)	(g)																																																																																																																																																																					
		Nov-18	new (1)	61,337.17	(1,991,639.61)	4.96%	(8,105.35)	(1,938,407.79)	(1,888,247.43)																																																																																																																																																																													
		Dec-18		271,734.82		4.96%	(7,243.17)	264,491.65	(1,623,755.78)																																																																																																																																																																													
		Jan-19		315,752.82		5.18%	(6,327.71)	309,425.11	(1,314,330.67)																																																																																																																																																																													
		Feb-19		311,561.39		5.18%	(5,001.07)	306,560.32	(1,007,770.35)																																																																																																																																																																													
		Mar-19		337,027.90		5.18%	(3,622.79)	333,405.11	(674,365.24)																																																																																																																																																																													
		Apr-19		165,956.05		5.45%	(2,685.88)	163,270.17	(511,095.07)																																																																																																																																																																													
		May-19		114,947.74		5.45%	(2,060.20)	112,887.54	(398,207.53)																																																																																																																																																																													
		Jun-19		77,541.46		5.45%	(1,632.44)	75,909.02	(322,298.51)																																																																																																																																																																													
		Jul-19		67,515.93		5.50%	(1,322.48)	66,193.45	(256,105.06)																																																																																																																																																																													
		Aug-19		55,940.85		5.50%	(1,045.62)	54,895.23	(201,209.83)																																																																																																																																																																													
		Sep-19	<i>Forecasted</i>	64,652.54		5.50%	(774.05)	63,878.49	(137,331.34)																																																																																																																																																																													
		Oct-19	<i>Forecasted</i>	128,633.46		5.42%	(329.78)	128,303.68	(9,027.66)																																																																																																																																																																													

History truncated for ease of viewing

Notes

1 - Transfer in amounts from account 191420 approved for amortization.

2 - Transfer amount is for true-up to GL.

Company: Northwest Natural Gas Company
 State: Washington
 Description: Washington Demand Accrual
 Account Number: 191430
 Program under Schedule P
 Temp Increment under Schedule 203

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Debit	(Credit)	Month/Year	Note	Accumulation	Transfers	Interest Rate	Interest	Activity	Balance								
(a)	(b)	(c)	(d)	(e1)	(e2)	(f)	(g)										
		Nov-18	1	(223,556.97)	522,600.12	4.96%	1,654.61	300,697.77	290,183.83								
		Dec-18		(535,335.17)		4.96%	93.07	(535,242.10)	(245,058.26)								
		Jan-19		(573,096.42)		5.18%	(2,294.77)	(575,391.19)	(820,449.45)								
		Feb-19		(755,010.22)		5.18%	(5,171.17)	(760,181.39)	(1,580,630.84)								
		Mar-19		(332,337.91)		5.18%	(7,540.35)	(339,878.26)	(1,920,509.10)								
		Apr-19		108,325.54		5.45%	(8,476.32)	99,849.22	(1,820,659.88)								
		May-19		329,950.17		5.45%	(7,519.57)	322,430.60	(1,498,229.28)								
		Jun-19		393,903.75		5.45%	(5,909.97)	387,993.78	(1,110,235.51)								
		Jul-19		463,678.40		5.50%	(4,025.98)	459,652.42	(650,583.09)								
		Aug-19		443,569.73		5.50%	(1,965.33)	441,604.40	(208,978.69)								
		Sep-19				5.50%	(957.82)	(957.82)	(209,936.51)								
		Oct-19				5.42%	(948.21)	(948.21)	(210,884.72)								

History truncated for ease of viewing

Notes

- 1 - Transferred authorized balance to account 191431 for amortization.
- 2 - Transfer amount is for true-up to GL.

Company: Northwest Natural Gas Company
 State: Washington
 Description: Washington Amortization of Demand
 Account Number: 191431
 Program under Schedule P
 Temp Increment under Schedule 203

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Debit	(Credit)	Month/Year	Note	Amortization	Transfers	Interest Rate	Interest	Activity	Balance					
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)					
165		Nov-18	new (1)	60,620.57	(522,600.12)	4.96%	(2,034.80)	(464,014.35)	(837,729.24)					
166		Dec-18		275,157.60		4.96%	(2,893.96)	272,263.64	(565,465.60)					
167		Jan-19	2	319,970.46	(1,864,076.80)	5.18%	(9,796.92)	(1,553,903.26)	(2,119,368.86)					
168		Feb-19		316,056.19		5.18%	(8,466.45)	307,589.74	(1,811,779.12)					
169		Mar-19		342,332.13		5.18%	(7,081.98)	335,250.15	(1,476,528.97)					
170		Apr-19		167,782.40		5.45%	(6,324.90)	161,457.50	(1,315,071.47)					
171		May-19		115,806.21		5.45%	(5,709.64)	110,096.57	(1,204,974.90)					
172		Jun-19		77,782.98		5.45%	(5,295.96)	72,487.02	(1,132,487.88)					
173		Jul-19		67,529.68		5.50%	(5,035.81)	62,493.87	(1,069,994.01)					
174		Aug-19		55,677.11		5.50%	(4,776.55)	50,900.56	(1,019,093.45)					
175		Sep-19	<i>Forecasted</i>	64,673.40		5.50%	(4,522.64)	60,150.76	(958,942.69)					
176		Oct-19	<i>Forecasted</i>	129,593.79		5.42%	(4,038.56)	125,555.23	(833,387.46)					
177														

History truncated for ease of viewing

Notes

- 1** - Transfer in amounts from account 191430 approved for amortization.
- 2** - Transfer in from account 254302 (storage and optimization revenue sharing).

Company: Northwest Natural Gas Company
 State: Washington
 Description: Washington Storage Sharing
 Account Number: 254302
 Temp Increment under Schedule 220

1	2	3	4	5	6	7	8	9	10	11	12	
Debit	(Credit)	Month/Year	Note	Accumulation	Transfers	Activity	Balance					
(a)	(b)	(c)	(d)	(e)	(f)							
Beginning Balance												
141		Aug-05		(95,615.84)		(95,615.84)	(1,360,340.43)					
142		Sep-05		(101,370.55)		(101,370.55)	(1,461,710.98)					
143		Oct-05	1	(14,681.84)	1,461,710.98	1,447,029.14	(14,681.84)					
144		Nov-05		(53,128.97)		(53,128.97)	(67,810.81)					
145		Dec-05		(126,286.12)		(126,286.12)	(194,096.93)					
146		Jan-06		(127,937.31)		(127,937.31)	(322,034.24)					
147		Feb-06		(162,656.77)		(162,656.77)	(484,691.01)					
148		Mar-06		(173,423.23)		(173,423.23)	(658,114.24)					
149		Apr-06		(190,293.18)		(190,293.18)	(848,407.42)					
150		May-06		(185,700.67)		(185,700.67)	(1,034,108.09)					
151		Sep-18		(169,584.61)		(169,584.61)	(1,203,692.70)					
152		Oct-18		(243,304.19)		(243,304.19)	(1,446,996.89)					
153		Nov-18		(269,853.25)		(269,853.25)	(1,716,850.14)					
154		Dec-18		(147,226.66)		(147,226.66)	(1,864,076.80)					
155		Jan-19	1	0.00	1,864,076.80	1,864,076.80	0.00					
156		Feb-19		(111,838.75)		(111,838.75)	(111,838.75)					
157		Mar-19		(238,085.76)		(238,085.76)	(349,924.51)					
158		Apr-19		(171,982.36)		(171,982.36)	(521,906.87)					
159		May-19		(186,244.52)		(186,244.52)	(708,151.39)					
160		Jun-19		(161,919.73)		(161,919.73)	(870,071.12)					
161		Jul-19		(153,500.01)		(153,500.01)	(1,023,571.13)					
162		Aug-19		(141,134.82)		(141,134.82)	(1,164,705.95)					
163		Sep-19					0.00					
164		Oct-19					0.00					
165												

History truncated for ease of viewing

Notes

1 - Transfer December balance to account 191431 for amortization.

NW Natural
 2019-2020 PGA - SYSTEM: September Filing
 Summary of Total Commodity Cost
 ALL VOLUMES IN THERMS

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January
WASHINGTON COSTS															
COSTS															
Commodity Cost from Supply	\$1,765,996	\$1,975,667	\$2,595,512	\$1,685,232	\$1,529,328	\$872,987	\$534,264	\$409,587	\$418,201	\$424,273	\$418,930	\$788,021	\$424,273	\$418,930	\$1,317,999
tab commodity cost from supply, column c, lines 93-104 plus gen input line 80; and															
tab commodity cost from gas reserves, column g, lines 59-70															
Volumetric Pipeline Chgs	\$9,798	\$10,891	\$13,519	\$8,849	\$9,772	\$7,808	\$4,686	\$3,028	\$2,604	\$2,618	\$2,770	\$6,033	\$2,618	\$2,770	\$62,376
tab commodity cost from vol pipe, column e, line 78-89															
Commodity Cost from Storage	\$54,628	\$922,104	\$425,459	\$792,873	\$243,727	\$7,032	\$7,286	\$7,051	\$7,286	\$7,286	\$7,051	\$23,624	\$7,286	\$7,051	\$2,505,407
tab Commodity Cost from Storage, column k, line 61-72															
Other Costs & Miscellaneous Changes															
Total Commodity Cost	\$1,830,422	\$2,908,662	\$3,034,490	\$2,486,954	\$1,782,827	\$887,827	\$546,236	\$419,666	\$428,091	\$434,177	\$428,751	\$817,678	\$434,177	\$428,751	\$16,005,782
VOLUMES															
Commodity Volumes at Receipt Points	9,398,972	9,121,117	11,410,964	7,746,016	8,508,737	6,843,184	4,224,268	2,938,608	2,479,159	2,493,278	2,664,191	5,375,122	2,493,278	2,664,191	73,203,618
Pipeline Fuel Use	212,315	236,149	290,061	185,315	205,155	178,204	102,658	63,292	52,523	52,850	56,953	135,137	52,850	56,953	1,770,611
Gas Arriving at City Gate	9,186,657	8,884,968	11,120,903	7,560,701	8,303,582	6,664,980	4,121,610	2,875,316	2,426,637	2,440,429	2,607,239	5,239,986	2,440,429	2,607,239	71,433,007
Storage Gas Withdrawals	246,131	4,150,548	1,920,094	3,570,816	1,162,651	31,811	32,971	31,907	32,971	32,971	31,907	106,505	32,971	31,907	11,351,283
Pipeline Fuel Use for Off-site Storage	0	0	5,461	2,007	4,819	0	0	0	0	0	0	0	0	0	12,288
Storage Gas Deliveries at City Gate	246,131	4,150,548	1,914,633	3,568,808	1,157,832	31,811	32,971	31,907	32,971	32,971	31,907	106,505	32,971	31,907	11,338,996
Total Gas At City Gate (Storage and Commodity)	9,432,788	13,035,515	13,035,536	11,129,509	9,461,414	6,696,791	4,154,581	2,907,224	2,459,608	2,473,400	2,639,146	5,346,491	2,473,400	2,639,146	82,772,003
Unaccounted for Gas	60,144	58,169	72,807	49,499	54,362	43,635	26,984	18,824	15,887	15,977	17,069	34,305	15,977	17,069	467,662
Load Served	9,372,644	12,977,347	12,962,729	11,080,010	9,407,052	6,653,156	4,127,598	2,886,399	2,443,721	2,457,422	2,622,077	5,312,185	2,457,422	2,622,077	82,304,341

NW Natural
 2019-2020 PGA - SYSTEM: September Filing
 Derivation of Washington per therm Non-Commodity Charges
 ALL VOLUMES IN THERMS

Washington Derivation of Demand Increments

		Without Revenue Sensitive	WITH Revenue Sensitive
	(a)	(c)	(d)
1			
2			
3			
4	System Demand	\$78,733,875	
5	Washington Allocation Factor 1/	11.00%	
6	Washington Demand	\$8,660,726	
7			
8	Washington Firm Sales Forecasted Normal Volumes	81,036,635	
9	Washington Interruptible Sales Forecasted Normal Volumes	1,267,706	
10			
11			
12	Proposed Firm Demand Per Therm 2/	\$0.10629	\$0.11090
13	Proposed Interruptible Demand 2/	\$0.03713	\$0.03874
14	Proposed MDDV Demand Charge	\$1.59	\$1.66
15			
16	Current Firm Demand Per Therm	\$0.10643	\$0.11130
17	Current Interruptible Demand	\$0.03718	\$0.03888
18	Current MDDV Demand Charge	\$1.59	\$1.66
19			
20	Percent Change in Firm Demand	-0.13%	
21			
22			
23	1/Allocation Factor: 2019-20 PGA forecast firm sales volumes:		
24		<u>Washington</u>	<u>Oregon</u> <u>System</u>
25	Firm Sales	81,036,635	655,866,287 736,902,922
26		11.00%	89.00% 100.00%
27			
28	2/Calculation of Proposed Demand Rates:		
29			
30	Demand change factor	0.999	
31			
32	Firm Demand (line 16 * line 30)	\$0.10629	\$8,613,654
33	Interruptible Demand (line 17 * line 30)	\$0.03713	\$47,072
34			<hr/> \$8,660,726
35			\$0

NW Natural
 2019-2020 PGA - SYSTEM: September Filing
 Calculation of Winter WACOG
 Prices are per therm

1	Forecast price for AECO gas:		
2			
3		<u>AECO/NIT</u>	
4			
5	November	\$0.13461	
6	December	\$0.16307	
7	January	\$0.17215	
8	February	\$0.16830	
9	March	\$0.13653	
10	April	\$0.10972	
11	May	\$0.10175	
12	June	\$0.10004	
13	July	\$0.10284	
14	August	\$0.10314	
15	September	\$0.10608	
16	October	\$0.12405	
17			
18			
19	Average price, November-March	\$0.15493	average lines 5-9
20			
21	Annual average price, November-October	\$0.12686	average lines 5-16
22			
23	Ratio of winter to annual	1.22127	line 19 ÷ line 21
24			
25		Without Rev	WITH Rev
26		<u>Sensitive</u>	<u>Sensitive</u>
WA	Washington Annual WACOG	\$0.19447	\$0.20291
WA	Washington Winter WACOG	\$0.23750	\$0.24780
		line 23 * \$0.19447	

**NW Natural
Rates & Regulatory Affairs
2019-20 Washington: September Filing Updating Energy Efficiency Schedules 201 & 203
Tariff Advice 19-06: Schedules 201 & 203 Effects on Revenue**

1		<u>Amount</u>
2		
3	<u>Temporary Increments</u>	
4		
5	<u>Removal of Current Temporary Increments</u>	
6	Amortization of Annual PGA and Deferred Gas Costs	4,199,193
7		
8	<u>Addition of Proposed Temporary Increments</u>	
9	Amortization of Annual PGA and Deferred Gas Costs	548,974
10		
11	<u>Permanent Rate Adjustments</u>	
12		
13	N/A	0
14		
15	TOTAL OF ALL COMPONENTS OF RATE CHANGES	\$4,748,167
16		
17		
18	2018 Washington CBR Normalized Total Revenue	\$66,182,522
19		
20	Effect of this filing, as a percentage change	7.17%