

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. 19-06 / UG-_____

September 12, 2019

NW NATURAL

EXHIBIT A

Supporting Materials

Annual Purchased Gas Cost and Deferred Gas Cost Amortization Adjustments

NWN WUTC ADVICE NO. 19-06 / UG-_____

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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	Total	
		Current	PGA Current	WACOG	Demand	Demand	Proposed	Net Effect of
		Temporaries	Temporaries	Deferral	Deferral	INTERR	PGA	PGA Temps
		E = B+C+D						F = E-A
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

Washington		WACOG Deferral			Demand Deferral - FIRM			Demand Deferral - INTERRUPTIBLE			
PGA		Proposed Amount: 2,800,514 Temporary Increment			(2,262,005) Temporary Increment			(12,361) Temporary Increment			
Volumes page,		Revenue Sensitive Multiplier 4.158% add revenue sensitive factor			4.158% add revenue sensitive factor			4.158% add revenue sensitive factor			
Column F		Amount to Amortize: 2,922,011 to all sales schedules			(2,360,140) to all firm sales			(12,897) to all interruptible sales			
Schedule	Block	A	Multiplier B	Volumes C	Increment D	Multiplier E	Volumes F	Increment G	Multiplier H	Volumes I	Increment J
1R		196,916	1.0	196,916	\$0.03550	1.0	196,916	(\$0.02912)	0.0	0	\$0.00000
1C		41,009	1.0	41,009	\$0.03550	1.0	41,009	(\$0.02912)	0.0	0	\$0.00000
2R		53,306,699	1.0	53,306,699	\$0.03550	1.0	53,306,699	(\$0.02912)	0.0	0	\$0.00000
3 CFS		18,528,181	1.0	18,528,181	\$0.03550	1.0	18,528,181	(\$0.02912)	0.0	0	\$0.00000
3 IFS		363,801	1.0	363,801	\$0.03550	1.0	363,801	(\$0.02912)	0.0	0	\$0.00000
27		575,777	1.0	575,777	\$0.03550	1.0	575,777	(\$0.02912)	0.0	0	\$0.00000
41C Firm Sales	Block 1	1,970,232	1.0	1,970,232	\$0.03550	1.0	1,970,232	(\$0.02912)	0.0	0	\$0.00000
	Block 2	2,123,870	1.0	2,123,870	\$0.03550	1.0	2,123,870	(\$0.02912)	0.0	0	\$0.00000
41C Interr Sales	Block 1	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
	Block 2	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
41 Firm Trans	Block 1	303,749	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 2	484,375	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
41I Firm Sales	Block 1	360,236	1.0	360,236	\$0.03550	1.0	360,236	(\$0.02912)	0.0	0	\$0.00000
	Block 2	542,040	1.0	542,040	\$0.03550	1.0	542,040	(\$0.02912)	0.0	0	\$0.00000
41I Interr Sales	Block 1	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
	Block 2	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
42C Firm Sales	Block 1	561,182	1.0	561,182	\$0.03550	1.0	561,182	(\$0.02912)	0.0	0	\$0.00000
	Block 2	481,861	1.0	481,861	\$0.03550	1.0	481,861	(\$0.02912)	0.0	0	\$0.00000
	Block 3	131,375	1.0	131,375	\$0.03550	1.0	131,375	(\$0.02912)	0.0	0	\$0.00000
	Block 4	20,969	1.0	20,969	\$0.03550	1.0	20,969	(\$0.02912)	0.0	0	\$0.00000
	Block 5	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000
	Block 6	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000
42I Firm Sales	Block 1	1,060,773	1.0	1,060,773	\$0.03550	1.0	1,060,773	(\$0.02912)	0.0	0	\$0.00000
	Block 2	650,234	1.0	650,234	\$0.03550	1.0	650,234	(\$0.02912)	0.0	0	\$0.00000
	Block 3	112,053	1.0	112,053	\$0.03550	1.0	112,053	(\$0.02912)	0.0	0	\$0.00000
	Block 4	9,427	1.0	9,427	\$0.03550	1.0	9,427	(\$0.02912)	0.0	0	\$0.00000
	Block 5	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000
	Block 6	0	1.0	0	\$0.03550	1.0	0	(\$0.02912)	0.0	0	\$0.00000
42 Firm Trans	Block 1	1,336,403	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 2	1,682,938	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 3	1,387,648	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 4	2,195,748	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 5	901,810	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 6	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
42C Interr Sales	Block 1	237,919	1.0	237,919	\$0.03550	0.0	0	\$0.00000	1.0	237,919	(\$0.01017)
	Block 2	464,853	1.0	464,853	\$0.03550	0.0	0	\$0.00000	1.0	464,853	(\$0.01017)
	Block 3	214,908	1.0	214,908	\$0.03550	0.0	0	\$0.00000	1.0	214,908	(\$0.01017)
	Block 4	39,494	1.0	39,494	\$0.03550	0.0	0	\$0.00000	1.0	39,494	(\$0.01017)
	Block 5	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
	Block 6	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
42I Interr Sales	Block 1	159,428	1.0	159,428	\$0.03550	0.0	0	\$0.00000	1.0	159,428	(\$0.01017)
	Block 2	151,104	1.0	151,104	\$0.03550	0.0	0	\$0.00000	1.0	151,104	(\$0.01017)
	Block 3	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
	Block 4	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
	Block 5	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
	Block 6	0	1.0	0	\$0.03550	0.0	0	\$0.00000	1.0	0	(\$0.01017)
42 Inter Trans	Block 1	881,572	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 2	1,495,748	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 3	1,185,204	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 4	4,013,728	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 5	2,332,547	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
	Block 6	0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
43 Firm Trans		0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
43 Interr Trans		0	0.0	0	\$0.00000	0.0	0	\$0.00000	0.0	0	\$0.00000
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Totals		100,505,811		82,304,341	\$0.03550		81,036,635	(\$0.02912)		1,267,706	(\$0.01017)
		0									

Sources for line 2 above:

Inputs page	Line 31	Line 33	Line 35
Tariff Schedules:			
Schedule #	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	\$1.06480	\$23.70	3.0%
1C		41,009	N/A	95.0	\$3.47	\$1.01873	\$100.25	\$1.05435	\$103.63	3.4%
2R		53,306,699	N/A	57.0	\$7.00	\$0.73546	\$48.92	\$0.77108	\$50.95	4.1%
3 CFS		18,528,181	N/A	248.0	\$15.00	\$0.73534	\$197.36	\$0.77096	\$206.20	4.5%
3 IFS		363,801	N/A	1,213.0	\$15.00	\$0.70458	\$869.66	\$0.74020	\$912.86	5.0%
27		575,777	N/A	54.0	\$6.00	\$0.56222	\$36.36	\$0.59784	\$38.28	5.3%
41C Firm Sales	Block 1	1,970,232	2,000	3,554.0	\$250.00	\$0.49926		\$0.53528		
	Block 2	2,123,870	all additional			\$0.46018		\$0.49620		
TOTAL							\$1,963.64		\$2,091.65	6.5%
41C Interr Sales	Block 1	0	2,000	0.0	\$250.00	\$0.51519		\$0.55269		
	Block 2	0	all additional			\$0.47626		\$0.51376		
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		\$0.51194		
	Block 2	542,040	all additional			\$0.43960		\$0.47562		
TOTAL							\$2,158.85		\$2,309.30	7.0%
41I Interr Sales	Block 1	0	2,000	0.0	\$250.00	\$0.49300		\$0.53050		
	Block 2	0	all additional			\$0.45671		\$0.49421		
TOTAL							\$250.00		\$250.00	0.0%
42C Firm Sales	Block 1	561,182	10,000	16,603.0	\$1,300.00	\$0.30434		\$0.34036		
	Block 2	481,861	20,000			\$0.29030		\$0.32632		
	Block 3	131,375	20,000			\$0.26237		\$0.29839		
	Block 4	20,969	100,000			\$0.24398		\$0.28000		
	Block 5	0	600,000			\$0.21945		\$0.25547		
	Block 6	0	all additional			\$0.18881		\$0.22483		
TOTAL							\$6,260.25		\$6,858.29	9.6%
42I Firm Sales	Block 1	1,060,773	10,000	12,726.0	\$1,300.00	\$0.29140		\$0.32742		
	Block 2	650,234	20,000			\$0.27872		\$0.31474		
	Block 3	112,053	20,000			\$0.25347		\$0.28949		
	Block 4	9,427	100,000			\$0.23686		\$0.27288		
	Block 5	0	600,000			\$0.21473		\$0.25075		
	Block 6	0	all additional			\$0.18704		\$0.22306		
TOTAL							\$4,973.79		\$5,432.18	9.2%
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		\$0.35648		
	Block 2	464,853	20,000			\$0.30523		\$0.34273		
	Block 3	214,908	20,000			\$0.27787		\$0.31537		
	Block 4	39,494	100,000			\$0.25988		\$0.29738		
	Block 5	0	600,000			\$0.23588		\$0.27338		
	Block 6	0	all additional			\$0.20590		\$0.24340		
TOTAL							\$13,340.31		\$14,835.89	11.2%
42I Interr Sales	Block 1	159,428	10,000	8,626.0	\$1,300.00	\$0.30887		\$0.34637		
	Block 2	151,104	20,000			\$0.29618		\$0.33368		
	Block 3	0	20,000			\$0.27094		\$0.30844		
	Block 4	0	100,000			\$0.25433		\$0.29183		
	Block 5	0	600,000			\$0.23218		\$0.26968		
	Block 6	0	all additional			\$0.20452		\$0.24202		
TOTAL							\$3,964.31		\$4,287.79	8.2%
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%
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.

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	
	Balance	Sep-Oct	Sep-Oct	Sep-Oct	Estimated	Estimated	Total	Amounts	Amounts	
	8/31/2019	Estimated	Estimated	Interest	Balance	Interest	Estimated	Excluded from	Included in	
		Activity	Activity	Interest	10/31/2019	During	Amount for	PGA Filing	PGA Filing	
						Amortization	(Refund) or			
							Collection			
					E = sum B thru D	F = 5.42%	G = E + F			
							Excl. Rev Sens			
2	Gas Cost Deferrals and Amortizations									
3	191420 WACOG - ACCRUAL WA	2,704,362	0	24,666	2,729,028					
4	191421 AMORT OF WACOG - WA	(201,210)	193,286	(1,104)	(9,028)					
5	Subtotal	2,503,152	193,286	23,562	2,720,000	80,514	2,800,514		2,800,514	
6	191430 DEMAND ACCRUAL - WA	(208,979)	0	(1,906)	(210,885)					
8	191431 AMORT OF DEMAND WA	(1,019,093)	194,267	(8,561)	(833,387)					
9	254302 MARGIN SHARING - WA	(1,164,706)	0	0	(1,164,706)					
10	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

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Debit	Month/Year	Note	Accumulation	Transfers	Interest Rate	Interest	Activity	Balance					
(Credit)	(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	165	166	167	168	169	170	171	172	173	174	175	176	177
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	19	20
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	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)	(e)	(f)	(g)	(h)																		
	Nov-18	new (1)	60,620.57	(522,600.12)	4.96%	(2,034.80)	(464,014.35)	(837,729.24)																		
	Dec-18		275,157.60		4.96%	(2,893.96)	272,263.64	(565,465.60)																		
	Jan-19	2	319,970.46	(1,864,076.80)	5.18%	(9,796.92)	(1,553,903.26)	(2,119,368.86)																		
	Feb-19		316,056.19		5.18%	(8,466.45)	307,589.74	(1,811,779.12)																		
	Mar-19		342,332.13		5.18%	(7,081.98)	335,250.15	(1,476,528.97)																		
	Apr-19		167,782.40		5.45%	(6,324.90)	161,457.50	(1,315,071.47)																		
	May-19		115,806.21		5.45%	(5,709.64)	110,096.57	(1,204,974.90)																		
	Jun-19		77,782.98		5.45%	(5,295.96)	72,487.02	(1,132,487.88)																		
	Jul-19		67,529.68		5.50%	(5,035.81)	62,493.87	(1,069,994.01)																		
	Aug-19		55,677.11		5.50%	(4,776.55)	50,900.56	(1,019,093.45)																		
	Sep-19	<i>Forecasted</i>	64,673.40		5.50%	(4,522.64)	60,150.76	(958,942.69)																		
	Oct-19	<i>Forecasted</i>	129,593.79		5.42%	(4,038.56)	125,555.23	(833,387.46)																		

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

History truncated for ease of viewing

Notes

1 - Transfer December balance to account 191431 for amortization.

NW Natural
 2019-2020 PCA - 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)
	November	December	January	February	March	April	May	June	July	August	September	October	TOTAL		
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	\$13,417,999		
Tab commodity cost from gas reserve, column c4, lines 93-104 plus gas input line 80; and															
Tab commodity cost from gas reserve, column c4, lines 93-104 plus gas input line 80; and															
Volume 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	\$82,376		
Tab commodity cost from vol pipe, column e, line 78-89															
Commodity Cost from Storage	\$54,628	\$922,104	\$425,469	\$792,873	\$243,727	\$7,032	\$7,286	\$7,051	\$7,286	\$7,286	\$7,051	\$25,624	\$2,505,407		
Tab Commodity Cost from Storage, column k, line 61-72															
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	\$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	4,224,768	2,938,608	2,479,159	2,493,278	2,664,191	5,375,122	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	138,137	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	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	11,351,283		
Pipeline Fuel Use for Off-site Storage	0	0	0	2,007	4,819	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	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	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	467,662		
Lead Served	9,372,644	12,977,347	12,962,729	11,080,010	9,407,052	6,653,156	4,127,598	2,889,399	2,443,721	2,457,422	2,622,077	5,312,185	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

	(a)	(b)	Without Revenue Sensitive (c)	WITH Revenue Sensitive (d)
1				
2				
3	System Demand		\$78,733,875	
4	Washington Allocation Factor 1/		11.00%	
5	Washington Demand		\$8,660,726	
6				
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				\$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			
26			
WA	Washington Annual WACOG	Without Rev <u>Sensitive</u> \$0.19447	WITH Rev <u>Sensitive</u> \$0.20007
WA	Washington Winter WACOG	\$0.23750	\$0.24434

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%