BEFORE THE

WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

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GENERAL RATE APPLICATION

OF

NORTHWEST NATURAL GAS COMPANY

December 18, 2020

Direct Exhibit of Robert J. Wyman

WEATHER NORMALIZED LOAD COST OF SERVICE STUDY RATE SPREAD & RATE DESIGN

Exh. RJW-2

The native version of this exhibit will be provided in the work papers.

NW Natural Washington Jurisdictional Rate Case Test Year Twelve Months Ended September 30, 2020 Cost of Service Study (EmCOSS) Summary Results

Summary of Cost of Service Determinants and Allocators

Summary of Cost of Service Determinants and Allocato	rs		1	2	3	4	5	6	7	8	q	10	11	12	13	14	15	16
					-		-				ŭ				13			16
		STOMER CLASS SERVICE TYPE	Residential Sales	Residential Sales	Commercial Sales	Commercial Sales	Commercial Sales	Industrial Sales	Commercial Sales	Commercial Sales	Commercial Sales	Industrial Sales	Industrial Sales	Industrial Sales	Transportation	Commercial	Industrial Transportation	Transportation
		SERVICE ITPE	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Interruptible	Firm	Firm	Interruptible	Firm	Firm	Firm	Interruptible
Line No.	R	ATE SCHEDULE	R01	R02	R27	C01	C03	103	C41SF	C42SF	C42SI	I41SF	I42SF	I42SI	C41TF/I41TF	C42TF	I42TF	C42TI/I42TI
STATISTICS		Totals				***										***		
	_																	
1 TY AVG CUSTOMERS - END OF PERIOD		89,343	911	81,119	776 776	34 34	6,318 6,318	23	91 91	5	2	18	12 12	3	8	0	9	10
1a Avg Sales Customers 1b Avg Transportation Customers		89,312 31	911 0	81,119 0	776	34 0	6,318	23 0	91	0	0	18 0	0	0	8	4	9	10
1c Avg Firm Customers		89,328	911	81,119	776	34	6,318	23	91	5	0	18	12	0	8	4	9	0
1d Avg Interruptible Customers		15	0	0	0	0	0	0	0	0	2	0	0	3	0	0	0	10
1e Avg Residential Customers		82,030	911	81,119	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1f Avg Commercial Customers (excl. interrupt/transport)		7,224 89	0	0	776 0	34 0	6,318 0	0 23	91 0	5	0 2	0 18	0 12	0	0	0	0	0 10
1g Avg Industrial Customers	<u> </u>	89	U	0	U	Ü	0	25	0	U	2	10	12	3	٥	4	9	10
2 TY ANNUAL THERM DELIVERIES		100,136,942	214,704	54,953,516	461,372	46,539	17,867,211	283,652	3,751,722	716,915	943,723	1,014,540	1,840,225	316,430	441,587	2,470,558	6,780,981	8,033,267
3 AVERAGE ANNUAL THERM DELIVERIES PER CUSTOMER		1,121	236	677	595	1,369	2,828	12,333	41,228	143,383	471,862	56,363	153,352	105,477	55,198	617,640	753,442	803,327
3a TY SALES Throughput 3b TY SALES FIRM Throughput		82,410,549 81,150,396	214,704 214,704	54,953,516 54,953,516	461,372 461,372	46,539 46,539	17,867,211 17,867,211	283,652 283,652	3,751,722 3,751,722	716,915 716,915	943,723	1,014,540 1,014,540	1,840,225 1,840,225	316,430 0	0	0	0	0
3c TY SALES INTERRUPTIBLE Throughput		1,260,153	214,704	0 0	461,572	40,559	17,867,211	203,032	3,731,722	710,913	943,723	1,014,540	1,840,223	316,430	0	0	0	0
3d TY TRANSPORTATION Throughput		17,726,393	0	0	0	0	0	0	0	0	0	0	0	0	441,587	2,470,558	6,780,981	8,033,267
4 AVERAGE WINTER SALES		12,710,929	28,123	7,647,867	67,911	5,879	2,367,769	34,917	453,122	87,028	91,768	123,246	194,738	31,529	56,968	220,420	588,861	710,785
5 AVERAGE SUMMER SALES		3,928,148	7,595	1,546,626	8,630	1,941	634,086	11,173	165,879	29,982	62,780	46,543	113,353	21,662	14,013	184,350	513,834	565,701
5 ESTIMATED DESIGN DAY LOAD FACTOR		26.5%	27.4%	22.4%	22.3%	26.3%	23.6%	51.8%	31.3%	35.1%	47.2%	31.1%	38.1%	33.2%	48.6%	57.1%	49.4%	61.6%
5a Average Daily Deliveries		274,348	588	150,558	1,264	128	48,951	777	10,279	1,964	2,586	2,780	5,042	867	1,210	6,769	18,578	22,009
5b Peak Day Deliveries		1,044,893	2,150	671,468	5,676	484	207,245	1,499	32,848	5,592	5,474	8,923	13,226	2,612	2,487	11,856	37,605	35,748
5c Average Firm Daily Deliveries		248,886	588	150,558	1,264	128	48,951	777	10,279	1,964	0	2,780	5,042	0	1,210	6,769	18,578	0
5d Peak Firm Day Deliveries		1,001,060	2,150	671,468	5,676	484	207,245	1,499	32,848	5,592	0	8,923	13,226	0	2,487	11,856	37,605	0
5e Design Day Firm Load Factor		24.9%																
6 TY ANNUAL REVENUES																		
6a TY Actual Sales Revenues	\$. =,===, .== +			,					,,		\$ 680,298						\$ 0
6b TY Actual Transportation Revenues 6c TY Actual Cost of Gas	\$ \$	-,, +		\$ 0 \$ \$ 17,014,196 \$														\$ 751,953 \$ 0
6d TY Normalized Total Cost of Gas	ş Ś						, . ,	. ,						\$ 90,601				\$ 0
6e TY Normalized Total Margin Revenues	\$					\$ 37,604				\$ 219,575		1		\$ 81,130				
6f TY Normalized Total Revenues	\$	78,333,455 \$	283,691	\$ 53,008,198 \$	363,218	\$ 53,871	\$ 16,112,007	\$ 241,044	\$ 2,853,836	\$ 470,189	\$ 430,729	\$ 747,266 \$	1,154,958	\$ 171,731	\$ 189,841	\$ 360,785	\$ 823,616	\$ 825,480
7 INCREMENTAL INVESTMENT & O&M COSTS																		
7a Avg Service Line Cost per Customer		\$	2,505			,,,,,								\$ 10,225				
7b Avg Mains Cost per Customer		\$ \$	3,337 287	ý 5,55, ý		,	\$ 11,208	17,515		\$ 20,251		2 27,7 10 ,		\$ 18,892 \$ 13,455				
7c Avg Meter Cost per Customer 7d Avg Account Services Cost per Customer		\$ \$	287 29									,, ,		7,		,		
		•				,	, ,	,				,		,	,	,	,	,
ALLOCATORS																		
8 DISTRIBUTION MAINS																		
8a Average Throughput Contribution - Schedule Basis 8b Peak Contribution - Schedule Basis		26.26% 73.74%	27.35% 72.65%	22.42% 77.58%	22.27% 77.73%	26.34% 73.66%	23.62% 76.38%	51.83% 48.17%	31.29% 68.71%	35.12% 64.88%	47.23% 52.77%	31.15% 68.85%	38.12% 61.88%	33.20% 66.80%		57.09% 42.91%	49.40% 50.60%	
8c Design Day Peak and Average Allocator	Dist-1	100.00%	0.21%	61.80%	0.52%	0.05%	19.31%	0.18%	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%		1.48%	4.43%	
8d Mains <4" Direct Allocator	Dist-2	100.00%	0.91%	80.92%	0.22%	0.09%	17.18%	0.07%	0.38%	0.01%	0.00%	0.07%	0.05%	0.01%	0.02%	0.01%	0.03%	0.03%
8e Mains >= 4" Direct Allocator	Dist-3	100.00%	0.00%	0.00%	0.00%	0.47%	87.48%	1.08%	5.38%	0.37%	0.21%	1.74%	0.70%	0.18%		0.28%	0.86%	
8f Distribution Mains Allocation - Allocated Plant Basis	Dist-4	100.00%	0.46%	63.69%	0.36%	0.10%	24.44%	0.22%	2.37%	0.35%	0.36%	0.65%	0.83%	0.16%	0.19%	0.82%	2.44%	2.56%
9 TRANSMISSION MAINS	_																	
Transmission Mains Allocation (Design Day Peak and Average Allocator)	Trm-1	100.00%	0.21%	61.80%	0.52%	0.05%	19.31%	0.18%	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%	0.29%	1.48%	4.43%	4.63%
10 DISTRIBUTION ASSETS Distribution Assets Allocation	Diet 5	100.00%	0.21%	£1 000/	0.52%	0.05%	10 210/	0.100/	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%	0.30%	1.48%	4.43%	4.63%
Distribution Assets Allocation (Design Day Peak and Average Allocator)	Dist-5	100.00%	0.21%	61.80%	0.52%	0.05%	19.31%	0.18%	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%	0.29%	1.48%	4.43%	4.63%
11 STORAGE Winter Sales / Summer Sales Excess (Sales Only)		8,483,646	20,528	6,101,240	59,281	3,938	1,733,684	23,744	287,243	57,046	28,989	76,703	81,384	9,867	0	0	0	0
Winter Sales / Summer Sales Excess Ratio	Stor-1	100.00%	0.24%	71.92%	0.70%	0.05%	20.44%	0.28%	3.39%	0.67%	0.34%	0.90%	0.96%	0.12%	-	0.00%	0.00%	-
Allocator Adjustment for Balancing (All Customers)	Stor-2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	

NW Natural Washington Jurisdictional Rate Case
Test Year Twelve Months Ended September 30, 2020
Cost of Service Study (EmCOSS) Summary Results
Summary of Cost of Service Determinants and Allocators

				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		CUSTO	OMER CLASS	Residential	Residential	Commercial	Commercial	Commercial	Industrial	Commercial	Commercial	Commercial	Industrial	Industrial	Industrial		Commercial	Industrial	
		SI	ERVICE TYPE	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Transportation	Transportation	Transportation	Transportation
				Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Interruptible	Firm	Firm	Interruptible	Firm	Firm	Firm	Interruptible
Line N	lo.	RAT	E SCHEDULE	R01	R02	R27	C01	C03	103	C41SF	C42SF	C42SI	I41SF	I42SF	142SI	C41TF/I41TF	C42TF	I42TF	C42TI/I42TI
12	SERVICE LINES																		
	Avg Service Installed Cost - Indirect Allocation	Line-1	100.00%	1.18%	82.60%	0.32%	0.08%	15.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Large Customer Services - Direct Allocation	Line-2 \$	574,080 \$					\$ 0 5		\$ 259,915			49,296 \$	41,293					\$ 40,071
13	METERS																		
	13a Average Installed Cost	Meter-1	100.00%	0.89%	77.59%	1.07%	0.09%	16.58%	0.35%	1.36%	0.15%	0.06%	0.30%	0.32%	0.14%	0.13%	0.20%	0.33%	0.47%
	13b Direct-Com	Meter-2	100.00%	0.00%	0.00%	5.54%	0.45%	86.19%	0.00%	7.07%	0.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	13c Direct-Ind	Meter-3	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.19%	0.00%		2.48%	13.25%	14.01%			8.57%	14.55%	20.40%
	13d Direct-Res	Meter-4	100.00%	1.13%	98.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
14	CUSTOMER SERVICE / BILLING																		
	14a Gas Management / Operations - Direct Allocation	CSrv-1 \$	906,018 \$	7,351	\$ 654,547	\$ 10,932	\$ 479	\$ 89,007	\$ 324	\$ 58,796	\$ 3,231	\$ 1,690 \$	11,630 \$	7,753	\$ 2,535	\$ 14,902	\$ 7,451	\$ 16,764	\$ 18,627
	14b Major Accounts - Direct Allocation	CSrv-2 \$	103,059 \$	0	\$ 0	\$ 0	\$ 0	\$ 0 5	\$ 11,544	\$ 45,674	\$ 2,510	\$ 1,004 \$	9,034 \$	6,023	\$ 1,506	\$ 6,649	\$ 3,324	\$ 7,480	\$ 8,311
	14c Avg Weighted Cost per Customer - Indirect Allocation	CSrv-3	100.00%	1.00%	89.32%	0.85%	0.04%	7.49%	0.03%	0.71%	0.04%	0.02%	0.14%	0.09%	0.02%	0.06%	0.03%	0.07%	0.08%
	14d Direct-Com	CSrv-4	100.00%	0.00%	0.00%	10.74%	0.47%	87.46%	0.00%	1.26%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	14e Direct-Ind	CSrv-5	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.84%	0.00%	0.00%	2.25%	20.22%	13.48%	3.37%	8.99%	4.49%	10.11%	11.24%
	14f Direct-Res	CSrv-6	100.00%	1.11%	98.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	14g Direct-Lrg Com/Ind	CSrv-7	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.43%	49.19%	2.70%	1.08%	9.73%	6.49%	1.62%	4.32%	2.16%	4.86%	5.41%
15	ADMINISTRATIVE & GENERAL AND GENERAL PLANT																		
	15a Allocated Plant	Gnrl-1	100.00%	0.62%	69.58%	0.47%	0.09%	21.15%	0.21%	1.99%	0.30%	0.27%	0.54%	0.66%	0.13%	0.15%	0.55%	1.61%	1.70%
	15b Salary and Wages		40.00%	> percent of all O&	M expenses that a	re wages/salary													
	15c Total Throughput	Gnrl-2	100.00%	0.21%	54.88%	0.46%	0.05%	17.84%	0.28%	3.75%	0.72%	0.94%	1.01%	1.84%	0.32%	0.44%	2.47%	6.77%	8.02%
	15d Total Revenue	Gnrl-3	100.00%	0.36%	67.88%	0.47%	0.07%	20.63%	0.31%	3.65%	0.60%	0.55%	0.96%	1.48%	0.22%	0.24%	0.46%	1.05%	1.06%
	15e Common - Net Stor/Dist/Trnm Plant, Customers, O&M	Cmn-1	100.00%	0.81%	79.49%	0.68%	0.06%	13.75%	0.22%	1.35%	0.17%	0.15%	0.40%	0.43%	0.09%	0.15%	0.33%	0.93%	0.99%
	15f Net Stor/Dist/Trnm Plant		100.00%	0.60%	68.63%	0.45%	0.09%	21.85%	0.21%	2.05%	0.31%	0.28%	0.55%	0.68%	0.13%	0.15%	0.57%	1.68%	1.77%
	15g Total O&M		100.00%	0.80%	79.04%	0.71%	0.05%	12.34%	0.41%	1.89%	0.21%	0.18%	0.62%	0.59%	0.14%	0.31%	0.41%	1.11%	1.19%
	15h Customers		100.00%	1.02%	90.80%	0.87%	0.04%	7.07%	0.03%	0.10%	0.01%	0.00%	0.02%	0.01%	0.00%	0.01%	0.00%	0.01%	0.01%

NW Natural
Washington Jurisdictional Rate Case
Test Year Twelve Months Ended September 30, 2020
Cost of Service Study (EmCOSS) Summary Results
GCOST: A RR Cross-Reference

A	В		с											
Line No		FERC Acct #	Total Washington CBR/ROO	Weather Normalized Gas Sales & Purchases	Misc. Revenues Adjustments	Bonus Adjustment	Property Tax Adjustment	Uncollectible Accounts Adjustment	Working Capital Adjustment	Marketing & Customer Communication Adjustment	Claims Adjustment	Rate Case Adjustment	Clearing Accounts Adjustment	HoldCo Adjustment
1		Adjustment number		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	Aujustinent (i)	(k)
7		Total sales to ultimate customers Total sales of gas	\$71,678,740	\$4,211,998 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
11	Natural Gas operating revenues	Total revenues net of provision for rate refunds	\$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0
25 26		Total other operating revenues Total natural gas operating revenues	(\$2,096,029) \$71,875,561	\$0 \$4,361,865	\$2,363,457 \$2,363,457	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
57 77	Production expenses	Total manufactured gas production expenses	\$0 \$24,325,147	\$0 \$4,403,405	\$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 \$0
78		Total other gas supply expenses Production expenses	\$24,325,147	\$4,403,405 \$4,403,405	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0	\$0 \$0	\$0 \$0	\$0
92	Natural Gas Storage, Terminaling and	Total underground storage expenses - operation Total underground storage expenses - maintenance	\$338,060 \$90,209	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0
101 108	Processing Expenses	Total other storage expenses - operation	\$11,468	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	SO
118 119		Total other storage expenses - maintenance Natural Gas Storage, Terminaling and Processing Expenses	\$319,807 \$759,545	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
131 140	Transmission expenses	Total transmission expenses - operation Total transmission expenses - maintenance	\$159,628 \$277.595	\$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0	\$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0
141		Transmission Expenses	\$437,223	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
153 164	Distribution expenses	Total distribution expenses - operation Total distribution expenses - maintenance	\$3,788,168 \$1,199,579	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
165 166		Distribution Expenses	\$4,987,747 \$4,987,747	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
171	Customer account expenses	Total distribution expenses Miscellaneous customer accounts expenses 905												
172 176		Total customer account expenses Miscellaneous customer service and informational expenses 910	\$2,329,499 \$52,145	\$4,574	\$0	\$0	\$0	(\$26,273)	\$0	\$0	\$0	\$0	\$0	\$0
177		Total customer service and informational expenses	\$768,388	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
191 192	Administrative and general expenses	Total administrative and general expenses	\$551,383 \$9,577,520	\$0	\$0	\$42,097	\$0	\$0	\$0	(\$284,213)	\$4,066	\$110,000	(\$30,851)	\$14,028
193 199	Depreciation expenses	Depreciation expense production 403, 403.1 Total depreciation expenses	\$10.935,860	\$0	\$0	\$0	\$0	\$0	so	\$0	\$0	\$0	\$0	\$0
200	Amortization expenses	Intangible plant 404, 405												
208 209	Regulatory debits and credits	Total amortization expenses Regulatory debits and credits 407.3, 407.4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
210 216		Total regulatory debits and credits	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
217		Total taxes	\$6,891,452	\$129,943	\$571,982	(\$8,565)	(\$39,859)	\$5,517	(\$17,085)	\$59,685	(\$846	(\$23,100)	\$6,863	(\$2,946)
222 223	Various utility operating income items	Other utility operating income 414 Total various utility operating income items	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
224		Natural gas operating expenses	\$61,012,380	\$4,537,922	\$571,982	\$33,532	(\$39,859)		(\$17,085)	(\$224,528)	\$3,220		(\$23,988)	\$11,082
225		Net Operating Income = natural gas operating revenues - natural gas operating expenses	\$10,863,181	(\$176,057)	\$1,791,475	(\$33,532)	\$39,859	\$20,756	\$17,085	\$224,528	(\$3,220	(\$86,900)	\$23,988	(\$11,082)
231		Intangible plant	\$15,290,954	so.	\$0	\$n	so.	so.	so.	\$0	\$0	so.	\$0	\$0
244 253	Natural gas plant in service	Underground storage plant Transmission plant	\$11,199,691 \$23,442,810	\$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0	\$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0
268	ivatural gas plant in service	Distribution plant	\$307,667,618	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
280 281		General plant Natural gas plant in service	\$26,532,808 \$384,133,882	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
286	Property under capital leases	General plant 101.1	\$2,910,412											SO SO
287 288	Gas plant purchased or sold	Total property under capital leases Gas plant purchased or sold 102	\$2,910,412	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
289 294		Total gas plant purchased or sold General plant 104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
295		Total gas plant leased to others	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
300 301	Gas plant held for future use	General plant 105 Total natural gas plant for future use	\$0	SO.	\$0	\$0	\$0	\$0	so	\$0	\$0	\$0	so	\$0
302 303	Completed construction not classified	Completed construction not classified 106	\$0	sn.	\$0	\$0	so.	sn.	\$0	so.	\$0	\$0	so.	\$0
308	Construction work in progress	Total completed construction not classified General plant 107		50	**	-	**	**	50	**	\$0	**	**	**
309 314	Accumulated provision for depreciation	Total construction work in progress	\$0 (\$7,142,243)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
315		Total accumulated provision for depreciation of natural gas utility plant	(\$153,345,015)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
320 321	Accumulated provision for amortization	Total accumulated provision for depreciation of natural gas utility plant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
322	Natural gas plant acquisition adjustments	Natural gas plant acquisition adjustments 114 Total patural gas plant acquisition adjustments												
323		Total natural gas plant acquisition adjustments Total natural gas plant acquisition adjustments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
324	Accumulated provision for asset acquisition adjustments	Accumulated provision for asset acquisition adjustments 115												
325 329		Total accumulated provision for asset acquisition adjustments Gas owed to system gas 117.4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
330	reaculal das	Total natural gas	\$2,455,282	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
331 332	Prepayments	Prepayments 165	\$236,154,561	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
333 334		Total Prepayments	\$0 \$236.154.561	\$0	\$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 \$0	\$0 \$0
337	Deferred debits	Accumulated deferred income taxes Current and accrued assets Accumulated deferred income taxes 190		\$0		\$0	\$0	\$0	\$0	\$0	\$0	**		
338 343	Other non current liabilities	Accumulated provision for rate refunds 229	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
344		Other non current liabilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
345 346		Customer deposits 235 Current and accrued liabilities	\$236,154,561	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
353 354	Deferred credits	Other regulatory liabilities 254 Total deferred credits	(\$14,319,095) (\$41,488,002)	\$0	\$0	(\$56,750)	\$0	\$0	***	\$0	(\$1,556) \$0	(\$79,301)	so
355	Working capital allowance	Working capital allowance N/A							\$3,526,472					
356 357		Total working capital allowance Rate base	\$0 \$194,666,559	\$0 \$0	\$0 \$0	\$0 (\$56,750)	\$0 \$0	\$0 \$0	\$3,526,472 \$3,526,472	\$0 \$0	\$0 (\$1,556	\$0 \$0	\$0 (\$79,301)	\$0 \$0
		Revenue Requirement Impact	\$3,426,113	\$232,523	(\$2,366,043)	\$39.105	(\$52,643)		\$299,408	(\$296,539)	\$4.111		(\$38,921)	\$14,636
		Change in rate base	\$194,666,559	\$0	\$0	(\$56,750)	\$0	\$0	\$3,526,472	\$0	(\$1,556	\$0	(\$79,301)	\$0
		ROR	5.58%	-0.09%	0.92%	-0.02%	0.02%	0.01%	-0.09%	0.12%	0.009	-0.04%	0.01%	-0.01%
		REVENUE REQUIREMENT:	\$3,426,113											
		Net Operating Revenues at allowable ROR	\$15,614,168											
		Incremental Net Operating Revenue Grossed up for Revenue Sensitive	\$4,736,666 \$6.255.810											
		ROR	6.9130%											
		Utility Operating Income Net-to-Gross Factor	75.7161% 132.0720%											

NW Natural Washington Jurisdictional Rate Case Test Year Twelve Months Ended September 30, 2020 Cost of Service Study (EmCOSS) Summary Results GCOST: A RR Cross-Reference

А	B		c	D									E
Line No		FERC Acct #	Total Washington CBR/ROO	Total Restating Adjustments	Payroll Adjustment	Payroll Overhead	250 Taylor Lease Expense	Post-Test Year 1 Capital	EDIT Rate Base Adjustment	End of Period Rate Depreciation Exp	End of Period Rate Base	Plant EDIT Amortization	Total Proforma Adjustments
			• /		,	Adjustment	Adjustment	Adjustment	,	Adjustment	Adjustment	Adjustment	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
7	Total sales t	Adjustment number o ultimate customers	\$71.678.740	Sum of restating adjustments \$4,211.998	(m) \$0	(n) S0	(o) \$0	(p)	(q)) \$0	(r) \$0	(s) S0	(t) S0	Sum of proforma adjustments \$0
9	Natural Gas operating revenues Total revenues net of prov	Total sales of gas	\$0 \$0	\$0 \$0	\$0	\$0	\$0	şı	\$0	\$0	\$0	\$0	\$0 \$0
11 25	Total other	er operating revenues	(\$2,096,029)	\$2,363,457	\$0	\$0	\$0	\$	\$0	\$0	\$0	\$0	\$0
26 57	Total natural ga	s operating revenues	\$71,875,561 \$0	\$6,725,322 \$0	\$0	\$0 \$0	\$0 \$0			\$0	\$0	\$0 \$0	\$0 \$0
57 77	Production expenses Total other	gas supply expenses	\$24,325,147	\$4,403,405	\$0	\$0 \$0	\$0 \$0		\$0 \$0	\$0	\$0	\$0	\$0
78 92	Total underground storage	Production expenses expenses - operation	\$338,060	\$4,403,405 \$0	\$0	\$0 \$0	\$0 \$0	\$I SI	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0 \$0
101 108	Natural Gas Storage, Terminaling and Total underground storage exp	enses - maintenance expenses - operation	\$90,209 \$11,468	\$0 \$0	\$0	\$0 \$0	\$0 \$0	şı şı	\$0	\$0	\$0	\$0	\$0 \$0
118	Total other storage ex	enses - maintenance	\$319.807	\$0 \$0	\$0	\$0 \$0	\$0 \$0	ş	\$0 \$0	\$0	\$0	\$0	\$0 \$0
119 131	Natural Gas Storage, Terminaling and Transmission expenses Total transmission	expenses - operation	\$159,628	\$0	\$0	\$0	\$0	şi	\$0	\$0	\$0	\$0	\$0
140	Total transmission ex	enses - maintenance ransmission Expenses	\$277,595	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0		\$0 \$0	\$0 \$0	\$0	\$0	\$0 \$0 \$0
153 164	Total distribution	expenses - operation	\$3,788,168	\$0 \$0	\$0	\$0	\$0	Si	\$0	\$0	\$0	\$0	\$0 \$0
165	Total distribution ex	Distribution Expenses	\$4,987,747	\$0	\$0	\$0	\$0	\$1		\$0	\$0	\$0	\$0
166 171	Customer account expenses Miscellaneous customer accounts expenses	distribution expenses	\$4,987,747	\$0 \$0	\$0	\$0	\$0	\$I	\$0	\$0	\$0	\$0	\$0 \$0
172	Total custom	ner account expenses	\$2,329,499	(\$21,698)	\$0	\$0	\$0	Şi	\$0	\$0	\$0	\$0	\$0
176 177	Customer service and informational Miscellaneous customer service and informational expenses Total customer service and informational expenses	910 formational expenses		\$0 \$0	\$0	\$0	\$0	SI	\$0	\$0	\$0	\$0	\$0 \$0
191 192	Administrative and general expenses Maintenance of general plant Total administrative:	932 and general expenses	\$551,383 \$9,577,520	\$0 (\$144,872)	\$404,649	\$129,530	\$307,157	\$I	50	\$0		\$0	\$0 \$841,336
193	Depreciation expenses Depreciation expense production	403, 403.1		\$0									\$0
199 200	Amortization expenses Intangible plant	epreciation expenses 404, 405	\$10,935,860	\$0 \$0	\$0	\$0	\$0			\$629,635		\$0	\$1,535,701 \$0
208 209	Regulatory debits and credits Regulatory debits and credits	mortization expenses 407.3, 407.4	\$0	\$0 \$0	\$0	\$0	\$0	SI	\$0	\$0	\$0	\$0	\$0 \$0
210	Total regulate	ory debits and credits	\$0	\$0	\$0	\$0	\$0	SI	\$0	\$0	\$0	\$0	\$0
216 217	Taxes Investment Tax credit Adj.	411.4 Total taxes	\$6,891,452	\$0 \$681,589	(\$84,976)	(\$2,746)	(\$64,503) (\$295,57	7) (\$2,725)	(\$132,223) (\$26,709)	\$25,000	\$0 (\$584,459)
222 223	Various utility operating income items Other utility operating income Total various utility op	414	so.	\$0 \$n	\$0	50	so.			\$0		so.	\$0 \$0
224	Natural ga	s operating expenses	\$61,012,380	\$4,918,423	\$319,673	\$126,783	\$242,654	\$610,48	(\$2,725)	\$497,412	(\$26,709)	\$25,000	\$1,792,578
225	Net Operating Income = natural gas operating revenues - natural ga	s operating expenses	\$10,863,181	\$1,806,899	(\$319,673)	(\$126,783)	(\$242,654	(\$610,48	9) \$2,725	(\$497,412	\$26,709	(\$25,000)	(\$1,792,578)
231			\$15,290,954	\$0	\$0	\$0	\$0	\$1,690,02	2 \$0	\$0	\$1,782,938	\$0	\$3,472,961
244	Under	Intangible plant ground storage plant	\$11,199,691	\$0	\$0	50	50	\$4,239,88	9 50	\$0	\$244,386	\$0	\$4,484,275
253 268	Natural gas plant in service	Transmission plant Distribution plant	\$23,442,810 \$307.667.618	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0			\$0 \$0		\$0 \$0	\$777,422 \$8.161.315
280 281		General plant al gas plant in service	\$26,532,808 \$384.133.882	\$0	\$0	\$0	\$0 \$0			\$0		\$0 \$0	\$14,778,700 \$31,674,673
286	Property under capital leases General plant	101.1	\$2,910,412	\$0 \$0	\$0	\$0				\$0	\$383,390		\$383,390
287 288	Gas plant purchased or sold Gas plant purchased or sold	y under capital leases 102	\$2,910,412	\$0 \$0	\$0	\$0	\$0	ş	\$0	\$0	\$383,390	\$0	\$383,390 \$0
289	Total gas pla	ant purchased or sold	\$0	\$0 \$0	\$0	\$0	\$0	şı	\$0	\$0	\$0	\$0	\$0
294 295	Gas plant leased to others General plant Total gas p	olant leased to others	\$0	\$0	\$0	\$0	\$0	s	\$0	\$0	\$0	\$0	\$0 \$0
300 301	Gas plant held for future use General plant	105 is plant for future use	so so	\$0 \$0	\$n	\$0	so	s	50	\$0	so.	so.	\$0 \$0
302	Completed construction not classified Completed construction not classified	106		\$0									\$0
303 308	Construction work in progress General plant	truction not classified 107	\$0	\$0 \$0	\$0	\$0	\$0	Si	\$0	\$0		\$0	\$0 \$0
309 314	Accumulated provision for depreciation General plant	tion work in progress	\$0 (\$7,142,243)	\$0 \$0	\$0	\$0	\$0	S	\$0	\$0	\$0 \$ (506.384.61)	\$0	\$0 (\$506,385)
315	Total accumulated provision for depreciation of na	tural gas utility plant	(\$153,345,015)	\$0	\$0	\$0	\$0	s	\$0	\$0		\$0	(\$4,418,353)
320 321	Accumulated provision for amortization General plant Total accumulated provision for depreciation of na	111 stural gas utility plant	\$0	\$0 \$0	\$0	\$0	\$0	şı	\$0	\$0	\$0	\$0	\$0 \$0
322	Natural gas plant acquisition adjustments Natural gas plant acquisition adjustments	114		\$0									\$0
323	Total natural gas plant acc		\$0	\$0	\$0	\$0	\$0	s	\$0	\$0	\$0	\$0	\$0
324	Accumulated provision for asset acquisition adjustments Accumulated provision for asset acquisition adjustments	115		\$0									\$0
325 329	Total accumulated provision for asset acc	quisition adjustments 117.4	\$0	\$0 \$0	\$0	\$0	\$0	şı	\$0	\$0	\$0	\$0	\$0 \$0
330	Sees acces to abstract Date	Total natural gas	\$2,455,282	\$0	\$0	\$0	\$0			\$0		\$0	(\$1,145)
331 332	Prepayments Prepayments	Net Plant 165		\$0 \$0	\$0	\$0	\$0			\$0		\$0	\$27,638,564 \$0
333 334		Total Prepayments nt and accrued assets	\$0 \$236,154,561	\$0 \$0	\$0 en	\$0 \$0	\$0 \$0		\$0 \$0	\$0 \$0		\$0 \$0	\$0 \$27,638,564
337	Deferred debits Accumulated deferred income taxes	190		\$0									\$0
338 343	Other non current liabilities Accumulated provision for rate refunds	Total Deferred debits 229	\$0	\$0 \$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0 \$0
344 345	Customer deposits Customer deposits	non current liabilities 235	\$0	\$0 \$0	\$0	\$0	\$0	şı	\$0	\$0	\$0	\$0	\$0 \$0
346	Current:	and accrued liabilities	\$236,154,561	\$0	\$0	\$0	\$0	\$21,735,76	\$0	\$0	\$5,902,799	\$0	\$27,638,564
353 354	Deferred credits Other regulatory liabilities	254 Total deferred credits	(\$14,319,095) (\$41,488,002)	\$0 (\$137,607)	\$0	\$0	\$0	şı	\$562,500	\$0	(\$389,746)	\$0	\$0 \$172,754
355 356	Working capital allowance Working capital allowance	N/A ing capital allowance	so.	\$3,526,472 \$3.526,472	\$n	so	\$0		50	\$0	**	\$0	\$0 \$0
357	Total work	Rate base		\$3,388,865	\$0	\$0	\$0			\$0	\$5,513,053	\$0	\$27,811,319
		Requirement Impact		(\$2,077,005)	\$422,200	\$167,446	\$320,479			\$656,944		\$33,018	\$4,906,718
		Change in rate base ROR	\$194,666,559 5.58%	\$3,388,865 0.83%	\$0 -0.16%	\$0 -0.07%	\$0 -0.12%			\$0 -0.269		\$0 -0.01%	\$27,811,319 -1.6%
		NON	3.36%	0.63%	-0.10%	-0.07%	-0.12%	-0.04		-0.267	0.14%	-0.01%	-1.0%
		ENUE REQUIREMENT:											
		enues at allowable ROR Net Operating Revenue											
		for Revenue Sensitive	\$6,255,810										
		ROR ity Operating Income	75.7161%										
		Net-to-Gross Factor	132.0720%										

NW Natural Washington Jurisdictional Rate Case Test Year Twelve Months Ended September 30, 2020 Cost of Service Study (EmCOSS) Summary Results GCOST: A RR Cross-Reference

А	В			c	F	G	н	
Line No.			FERC Acct #	Total Washington CBR/ROO	Total Adjustments	Adjusted ROO	Revenue Change to Base Rates	ROO after Rate
				· · · · · · · · · · · · · · · · · · ·		,		Change
1 7		Total sales t	Adjustment number to ultimate customers	\$71,678,740	D+E \$4,211,998	C+F \$75,890,738	RR Input and revenue sensitive items \$6,255,810	G+H \$82,146,548
9	Natural Gas operating revenues		Total sales of gas	\$0	\$0	\$0	\$0	\$0
11 25	, , , , , , , , , , , , , , , , , , , ,	Total revenues net of prov Total othe	vision for rate refunds er operating revenues	\$0 (\$2,096,029)	\$0 \$2,363,457	\$0 \$267.428	\$0 \$0	\$0 \$267.428
26 57		Total natural ga Total manufactured gas	s operating revenues	\$71,875,561 \$0	\$6,725,322 \$0	\$78,600,883 \$0	\$6,255,810 \$0	\$84,856,693 \$0
77	Production expenses	Total other	r gas supply expenses	\$24,325,147	\$4,403,405	\$28,728,552	\$0	\$28,728,552
78 92		Total underground storage	Production expenses	\$24,325,147 \$338.060	\$4,403,405 \$0	\$28,728,552 \$338.060	\$0 \$0	\$28,728,552 \$338,060
101	Natural Gas Storage, Terminaling and	Total underground storage exp	penses - maintenance	\$90,209	\$0	\$90,209	\$0 \$0	\$90,209
108 118	Processing Expenses	Total other storage Total other storage exp	expenses - operation penses - maintenance	\$11,468 \$319,807	\$0 \$0	\$11,468 \$319,807	\$0 \$0	\$11,468 \$319,807
119 131		Natural Gas Storage, Terminaling and	Processing Expenses expenses - operation	\$759,545 \$159.628	\$0 \$0	\$759,545 \$159,628	\$0 \$0 \$0	\$759,545 \$159,628
140	Transmission expenses	Total transmission exp		\$277,595	\$0	\$277,595	\$0	\$277,595
141 153		Total distribution	ransmission Expenses expenses - operation	\$437,223 \$3,788,168	\$0 \$0	\$437,223 \$3,788,168	\$0 \$0	\$437,223 \$3,788,168
164	Distribution expenses	Total distribution ex	penses - maintenance	\$1,199,579	\$0	\$1,199,579	\$0 \$0	\$1,199,579
165 166			Distribution Expenses distribution expenses	\$4,987,747 \$4,987,747	\$0 \$0	\$4,987,747 \$4,987,747	\$0 \$0	\$4,987,747 \$4,987,747
171 172	Customer account expenses	Miscellaneous customer accounts expenses	905	44 444 444	\$0 (\$21,698)	\$0 \$2,307,801	\$6,560	\$0
176	Customer service and informational	Miscellaneous customer service and informational expenses	ner account expenses 910	\$2,329,499 \$52,145	\$0	\$52,145		\$2,314,361 \$52,145
177	Administrative and assess assesses	Total customer service and in	formational expenses	\$768,388 \$551.383	\$0 \$0	\$768,388 \$551.383	\$0	\$768,388 \$551.383
192	Administrative and general expenses	Total administrative:		\$9,577,520	\$696,464	\$10,273,983	\$0	\$10,273,983
193 199	Depreciation expenses	Depreciation expense production	403, 403.1 lepreciation expenses	\$10,935,860	\$0 \$1,535,701	\$0 \$12,471,561	\$0	\$0 \$12,471,561
200	Amortization expenses	Intangible plant	404, 405		\$0	\$0		\$0
208	Regulatory debits and credits	Total a Regulatory debits and credits	mortization expenses 407 3 407 4	\$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0
210		Total regulate	ory debits and credits	\$0	\$0	\$0	\$0	\$0
216 217	Taxes	Investment Tax credit Adj.	411.4 Total taxes	\$6,891,452	\$0 \$97,130	\$0 \$6,988,582	\$1,512,596	\$0 \$8,501,177
222	Various utility operating income items	Other utility operating income	414	i	\$0	\$0		\$0
223 224		Total various utility op Natural sa	erating income items as operating expenses	\$0 \$61,012,380	\$0 \$6,711,001	\$0 \$67,723,381	\$0 \$1,519,156	\$0 \$69,242,537
225		Net Operating Income = natural gas operating revenues - natural ga	s operating expenses	\$10,863,181	\$14,321	\$10,877,502	\$4,736,653	\$15,614,155
231 244			Intangible plant	\$15,290,954 \$11,199,691	\$3,472,961 \$4,484,275	\$18,763,915 \$15,683,966	\$0 \$0	\$18,763,915 \$15,683,966
253	Natural gas plant in service	Under	ground storage plant Transmission plant	\$23,442,810	\$777,422	\$24,220,232	\$0	\$24,220,232
268 280			Distribution plant General plant	\$307,667,618	\$8,161,315 \$14,778,700	\$315,828,933 \$41 311 508	\$0 \$0	\$315,828,933 \$41 311 508
281		Natur	al gas plant in service	\$384,133,882	\$31,674,673	\$415,808,555	\$0	\$415,808,555
286	Property under capital leases	General plant	101.1	\$2,910,412	\$383,390	\$3,293,802		\$3,293,802
287 288	Gas plant purchased or sold	Gas plant purchased or sold	y under capital leases 102	\$2,910,412	\$383,390 \$0	\$3,293,802 \$0	\$0	\$3,293,802
289		Total gas pl	ant purchased or sold	\$0	\$0	\$0		\$0
294 295	Gas plant leased to others	General plant Total gas a	104 plant leased to others	\$0	\$0 \$0	\$0 \$0		\$0 \$0 \$0 \$0
300	Gas plant held for future use	General plant	105		\$0	\$0		\$0 \$0
301 302	Completed construction not classified		s plant for future use 106	\$0	\$0 \$0	\$0 \$0		\$0 \$0
303		Total completed const	truction not classified	\$0	\$0	\$0		\$0
308 309	Construction work in progress	General plant Total construc	107 tion work in progress	SO SO	\$0 \$0	\$0 \$0		\$0 \$0
314	Accumulated provision for depreciation	General plant	108	(\$7,142,243)	(\$506,385)	(\$7,648,628)		(\$7,648,628)
315 320	Accumulated provision for amortization	Total accumulated provision for depreciation of na General plant	atural gas utility plant 111	(\$153,345,015)	(\$4,418,353) \$0	(\$157,763,368) \$0	\$0	(\$157,763,368) \$0
321		Total accumulated provision for depreciation of na		\$0	\$0	\$0		\$0
322	Natural gas plant acquisition adjustments	Natural gas plant acquisition adjustments	114		\$0	\$0		so
323		Total natural gas plant acc	quisition adjustments	\$0	\$0	\$0		\$0
324	Accumulated provision for asset acquisition adjustments	Accumulated provision for asset acquisition adjustments	115		\$0	\$0		\$0
325	Natural Gas	Total accumulated provision for asset acc Gas owed to system gas	quisition adjustments 117.4	\$0	\$0 \$0	\$0 \$0		\$0 \$0
329 330	Natural Gas	Date of the System (803)	Total natural gas	\$2,455,282	(\$1,145)	\$2,454,137	\$0	\$2,454,137
331			Net Plant	\$236,154,561	\$27,638,564	\$263,793,125	\$0	\$263,793,125
332 333	Prepayments	Prepayments	165 Total Prepayments	\$0	\$0 \$0	\$0 \$0		\$0 \$0
334 337	0.6	Curre	nt and accrued assets	\$236,154,561	\$27,638,564	\$263,793,125	\$0	\$263,793,125
338	Deferred debits	Accumulated deferred income taxes	190 Total Deferred debits	\$0	\$0	\$0		\$0 \$0
343 344	Other non current liabilities	Accumulated provision for rate refunds	229 non current liabilities	\$0	\$0 \$0	\$0 \$0		\$0 \$0
345	Customer deposits	Customer deposits Other	235		\$0	\$0		\$0
346 353	Deferreddit-	Other regulatory lish litter	and accrued liabilities 254	\$236,154,561 (\$14.319.095)	\$27,638,564	\$263,793,125 (\$14.319.095)	\$0	\$263,793,125 (\$14.319.095)
354	Deferred credits		Total deferred credits	(\$14,319,095) (\$41,488,002)	\$35,148	(\$41,452,855)	\$0	(\$41,452,855)
355 356	Working capital allowance	Working capital allowance	N/A king capital allowance	\$0	\$3,526,472 \$3,526,472	\$3,526,472 \$3,526,472	\$0	\$3,526,472 \$3,526,472
356 357		Total work	Rate base	\$194,666,559	\$3,526,472 \$31,200,184	\$3,526,472 \$225,866,743	\$0 \$0	\$3,526,472 \$225,866,743
		Pavanua	Requirement Impact	\$3,426,113	\$2.829.696	\$6,255,809		\$6,255,809
		Revenue	Change in rate base	\$194,666,559	\$31,200,184	\$225,866,743	\$0	\$225,866,743
			ROR	5.58%	-0.79%	4.82%		6.913%
		REV Not Conception Resu	ENUE REQUIREMENT: enues at allowable ROR	\$3,426,113 \$15,614,168				
		Incremental	Net Operating Revenue	\$4,736,666				
		Grossed up	p for Revenue Sensitive ROR	\$6,255,810 6.9130%				
		Util	lity Operating Income	75.7161%				
			Net-to-Gross Factor	132.0720%				

NW Natural Washington Jurisdictional Rate Case Test Year Twelve Months Ended September 30, 2020 Cost of Service Study (EmCOSS) Summary Results GCOST: B COS Results

OST: B (Service Study (EmCOSS) Summary COS Results		CUSTOMER CLASS SERVICE TYPE		Residential Sales	Commercial Sales	Commercial Sales	Commercial Sales	Industrial Sales	Commercial Sales	Commercial Sales
e No. 1		FERC Acct #	TOTAL	Firm R01	Firm R02	Firm R27	Firm C01	Firm C03	Firm IO3	Firm C41SF	Firm C42SF
,		Total sales to ultimate customers	\$ 78,333,455			\$ 363,218					\$ 470,189
9 11 25	Natural Gas operating revenues	Total sales of gas Total revenues net of provision for rate refunds	\$ 0		\$ 0	\$ 0	\$ 0 5	0	\$ 0	\$ 0	\$ 0
		Total Other operating revenues Total natural gas operating revenues	\$ 267,428 \$ 78,600,883		\$ 53,176,352	\$ 364,959			\$ 241,893	\$ 2,865,347	
	Production expenses	Total manufactured gas production expenses Total other gas supply expenses	\$ 0 \$ 28,728,552	\$ 0 \$ 75,056		\$ 0 \$ 161,280		6,245,839	\$ 0 \$ 99,155		\$ 250,614
H		Production expenses Total underground storage expenses - operation	\$ 28,728,552 \$ 338,060			\$ 161,280 \$ 2,362	\$ 16,267 \$ \$ 157 \$	6,245,839		\$ 1,311,488 \$ 11,446	\$ 250,614 \$ 2,273
	Natural Gas Storage, Terminaling and Processing Expenses	Total underground storage expenses - maintenance Total other storage expenses - operation	\$ 90,209 \$ 11,468	\$ 218 \$ 28		\$ 630 \$ 0	\$ 42 5 \$ 11,468 5	18,435		\$ 3,054 \$ 0	\$ 607 \$ 0
ŀ		Total other storage expenses - maintenance Natural Gas Storage, Terminaling and Processing Expenses	\$ 319,807 \$ 759,545	\$ 774 \$ 1.838		\$ 2,235 \$ 5,227	\$ 148 S	65,355 152.874		\$ 10,828 \$ 25,329	\$ 2,150 \$ 5,030
Ī	Transmission expenses	Total Transmission expenses - operation Total transmission expenses - maintenance	\$ 159,628 \$ 277,595	\$ 332 \$ 578	\$ 98,647	\$ 833 \$ 1,448	\$ 74 S	30,826 53,607	\$ 288 \$ 500	\$ 5,271 \$ 9,166	\$ 930
þ		Transmission Expenses Total distribution expenses - operation	\$ 437,223 \$ 3,788,168				\$ 203 \$	84,433 667,628			\$ 2,547
L	Distribution expenses	Total distribution expenses - maintenance	\$ 1,199,579	\$ 7,414	\$ 844,405	\$ 7,180	\$ 887 \$	222,646	\$ 3,675	\$ 23,974	\$ 3,626
L	Customer account expenses	Miscellaneous customer accounts expenses 905	\$ 4,987,747 \$ 0	\$ 0	\$ 0				\$ 0	\$ 0	\$ 0
		Miscellaneous customer service and informational expenses 910	\$ 2,307,801 \$ 52,145	\$ 579	\$ 51,565	\$ 0	\$ 0 5	1	\$ 0	\$ 0	\$ 0
	Customer service and informational expenses	Supervision 911 Demonstration and Selling Expense 912	\$ 12,194 \$ 227,069			\$ 104 \$ 1,890	\$ 5 \$ \$ 89 \$				\$ 5 \$ 87
		Advertising 913 Total customer service and informational expenses	\$ 56,603 \$ 1,052,059	\$ 568 \$ 9,690	\$ 50,559 \$ 862,857	\$ 484 \$ 7,489	\$ 23 S \$ 353 S	4,237 65,623	\$ 15 \$ 24,712	\$ 403 \$ 6,240	\$ 22 \$ 343
	Administrative and general expenses	Maintenance of general plant 932 Maintenance of General Plant 935	\$ 0 \$ 551.383			\$ 0 \$ 2.592	\$ 0 \$	0 116.630			\$ 0
	Depreciation expenses	Total administrative and general expenses Depreciation expense production 403, 403.1	\$ 9,293,848 \$ 0	\$ 80,982		\$ 73,567	\$ 4,650 \$	989,766	\$ 25,540	\$ 205,267	\$ 16,061
		Total depreciation expenses	\$ 12,471,561	\$ 85,609	\$ 9,034,504	\$ 62,488	\$ 10,076	2,402,577	\$ 25,165	\$ 218,316	\$ 31,906
		Intangible plant 404, 405 Total amortization expenses	\$ 0 \$ 0	\$ 0	\$ 0	\$ 0	\$ 0 5	0	\$ 0	\$ 0	\$ 0
	Regulatory debits and credits	Regulatory debits and credits 407.3, 407.4 Total regulatory debits and credits	\$ 0 \$ 0		\$ 0			0			
_	Taxes	Investment Tax credit Adj. 411.4 Total taxes	\$ 0		\$ 0 \$ 4,845,823						\$ 0 \$ 40,334
	Various utility operating income items	Other utility operating income 414 Total various utility operating income items	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0						\$ 0
		Test Year O&M Adjustment Natural gas operating expenses	\$ 696,464 \$ 67,723,381	\$ 5,575	\$ 550,862	\$ 4,927	\$ 360 \$	85,591	\$ 2,856	\$ 13,107	\$ 1,428 \$ 363,185
		Net Operating Income = natural gas operating revenues - natural gas operating expenses	\$ 10,877,502			\$ (33,131)				\$ 746,660	\$ 109,417
	Note: Plant balances at the FERC Acct level may	not tie exactly to "A-RR Cross Reference" tab; these balances do not include the EOP Adjustment, which is included below.									
		Intangible plant Underground storage plant	\$ 17,118,547 \$ 15,521,949	\$ 134,315 \$ 37,558	\$ 13,227,484 \$ 11,163,024	\$ 112,415 \$ 108,462	\$ 9,945 \$ \$ 7,206 \$	2,288,463 3,172,003	\$ 95,230 \$ 43,443	\$ 459,426 \$ 525,549	\$ 41,986 \$ 104,373
		Structures / Gas Holders / Liquefaction Equip 360 Structures / Gas Holders / Liquefaction Equip 361	\$ 78,570 \$ 2,464,234	\$ 190 \$ 5,963	\$ 56,506 \$ 1,772,220	\$ 549 \$ 17,219	\$ 36 \$ \$ 1,144 \$	16,056 503,581	\$ 220 \$ 6,897	\$ 2,660 \$ 83,435	\$ 528 \$ 16,570
	Natural gas plant in service	Structures / Gas Holders / Liquefaction Equip 362 Structures / Gas Holders / Liquefaction Equip 363	\$ 1,133,403 \$ 5,648,001	\$ 2,742 \$ 16,015	\$ 815,117 \$ 4,093,372		\$ 526 S	231,618 1,126,436			\$ 7,621 \$ 35,910
		Transmission plant Distribution plant	\$ 24,236,624 \$ 310,336,888	\$ 60,450			\$ 11,306 \$ \$ 286,507 \$	4,907,128 66,228,722		\$ 810,803 \$ 5,460,284	\$ 159,467 \$ 774,320
		General plant	\$ 39,518,859	\$ 286,354	\$ 29,581,823	\$ 222,232	\$ 28,978 \$	6,869,261	\$ 81,765	\$ 641,868	\$ 91,299
		EOP Gross Plant Rate Base Adjustment Natural gas plant in service	\$ 9,938,907 \$ 416,671,773	\$ 2,688,906		\$ 46,730 \$ 1,941,609	\$ 8,646 \$ \$ 352,586 \$	2,102,295 85,567,872	\$ 20,892 \$ 896,047	\$ 197,339 \$ 8,095,269	\$ 29,622 \$ 1,201,067
		General plant 101.1 Total property under capital leases	\$ 3,293,802 \$ 3,293,802		\$ 2,618,249		\$ 1,968 \$ \$ 1,968 \$	452,979 452,979			\$ 5,753 \$ 5,753
	Gas plant purchased or sold	Gas plant purchased or sold 102 Total natural gas plant purchased or sold	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0 5 \$ 0 5	0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0
	Gas plant leased to others	General plant 104 Total natural gas plant leased to others	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 5 5 0 5	0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0
	Gas plant held for future use	General plant 105 Total natural plant for future use	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0		0	\$ 0 \$ 0		\$ 0
	Completed construction not classified	Completed construction not classified 106 Total completed construction not classified	\$ 0 \$ 0	\$ 0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 S	0			\$ 0
	Construction work in progress	General plant 107 Total construction work in progress	\$ 0 \$ 0	\$ 0		\$ 0	\$ 0.5	0	\$ 0	\$ 0	\$ 0
	Accumulated provision for depreciation	General plant 108	\$ (7,718,327)	\$ (60,536)	\$ (6,023,993)	\$ (48,525)	\$ (4,982) \$	(1,157,527)	\$ (16,095)	\$ (109,524)	\$ (14,766
		Total accumulated provision for depreciation of natural gas utility plant Accumulated Depreciation - Year One Adjustment	\$ (154,208,234) \$ (4,418,353)	\$ (27,464)		\$ (20,774)	\$ (3,843) \$	(934,578)	\$ (9,287)	\$ (87,727)	
	Accumulated provision for amortization	General plant 111 Total accumulated provision for depreciation of natural gas utility plant	\$ 0 \$ 0		\$ 0 \$ 0						
	latural gas plant acquisition adjustments	Natural gas plant acquisition adjustments 114 Total natural gas plant acquisition adjustments	\$ 0 \$ 0	\$ 0 \$ 0	\$ 0 \$ 0			0			\$ 0 \$ 0
	ated provision for asset acquisition adjust	Accumulated provision for asset acquisition adjustments 115 Total accumulated provision for asset acquisition adjustments	\$ 0 \$ 0	\$ 0		\$ 0	\$ 0 9	0	\$ 0	\$ 0	\$ 0
	Natural Gas	Gas owed to system gas 117.4 Total natural gas		\$ 0	\$ 0		\$ 0 5	0	\$ 0	\$ 0	\$ 0
		Net Plant	\$ 263,793,125	\$ 1,620,955	\$ 184,207,488	\$ 1,264,468	\$ 224,973 \$	55,332,600	\$ 558,246	\$ 5,302,877	\$ 806,377
	Prepayments	Prepayments 165 Total prepayments	\$ 0 \$ 0	\$ 0	\$ 0	\$ 0	\$ 0 5	0	\$ 0	\$ 0	\$ 0
	Deferred debits	Accumulated deferred income taxes Current and accrued assets	\$ 263,793,125 \$ 0		\$ 184,207,488 \$ 0						
		Accumulated provision for rate refunds 229	\$ 0 \$ 0		\$ 0 \$ 0						
		Other non current liabilities Customer deposits 235	\$ 0	\$ 0	\$ 0 \$ 0	\$ 0	\$ 0 5	0	\$ 0	\$ 0	\$ 0
		Current and acrued liabilities Other regulatory liabilities 254	\$ 263,793,125 \$ (14,319,095)	\$ 1,620,955	\$ 184,207,488 \$ (9,962,553)	\$ 1,264,468	\$ 224,973	55,332,600	\$ 558,246	\$ 5,302,877	\$ 806,377
		Total deferred credits	\$ (41,452,852)	\$ (259,066)	\$ (28,867,977)	\$ (194,032)	\$ (36,091) \$	(8,758,205)	\$ (86,652)	\$ (817,620)	\$ (122,540
	Working capital allowance	Working capital allowance N/A Total working capital allowance	\$ 3,526,472 \$ 3,526,472	\$ 28,464	\$ 2,803,199	\$ 23,823	\$ 2,107 \$	484,976	\$ 7,584	\$ 47,520	\$ 6,159
		Rate base			\$ 158,142,710			47,059,371			
		Special Contract revenue credit Net Operating Revenues at allowable ROR	\$ 242,989 \$ 15,614,168								
		Revenue Requirement Impact Change in Rate Base	\$ 6,255,810 \$ 31,200,187	\$ 210,856	\$ 8,070,509 \$ 22,380,911	\$ 142,109	\$ 15,209	(700,232)	\$ 34,374	\$ (578,720)	\$ (82,492
		Change in nache abse ROR- At Current Rates ROR - Test Year at Parity	4.82%	-4.68%	2.94%	-3.03%	0.78%	7.93% 6.91%	1.37%	16.47%	15.86%
			6.91%	6.91%	6.91%	6.91%	6.91%	6.91%	6.91%	6.91%	6.91%
		REVENUE REQUIREMENT: Net Operating Revenues at allowable ROR \$ 15,614,168 Incremental Net Operating Revenue \$ 4,736,666 Grossed up for Revenue Sensitive \$ 6,255,810									
l		RETURN ON RATEBASE									
		Rate of Return at 9.4% ROE: 6.913%									
		Source: KTW-3 p8 - Cost of Cap									
		INCREMENTAL NET OPERATING REVENUE DEFICIENCY (Less: Net Operating Revenues)									
l		Net-to-Gross Revenue Sensitive Factor: 132.1% Source: KTW-3 p8 - Cost of Cap									
		states, it is a por cost of cap									

NW Natural
Washington Jurisdictional Rate Case
Test Year Twelve Months Ended September 30, 2020
Cost of Service Study (EmCOSS) Summary Results

	Service Study (EmCOSS) Summar COS Results	y Results	cu	STOMER CLASS	9 Commercial	10 Industrial	11 Industrial	12 Industrial	13	14 Commercial	15 Industrial	16
Line No.		FERC Acct #		SERVICE TYPE	Sales Interruptible	Sales Firm	Sales Firm	Interruptible	Firm	Firm	Firm	Transportation Interruptible
1			_	TOTAL	C42SI	I41SF	I42SF	142SI	C41TF/I41TF	C42TF	I42TF	C42TI/I42TI
7 9	Natural Gas operating revenues	Total sales to ultimate customers Total sales of gas	\$	78,333,455 0								\$ 825,480 \$ 0
11 25	Natural das operating revenues	Total revenues net of provision for rate refunds Total Other operating revenues	\$	0 267,428			\$ 0 \$ 4,134			5 0 \$ 5 1,397 \$		
26 57		Total natural gas operating revenues Total manufactured gas production expenses	\$ S	78,600,883	+, +		\$ 1,159,092 \$ 0			\$ 362,181 \$		\$ 828,716 \$ 0
77 78	Production expenses	Total other gas supply expenses Production expenses	\$	28,728,552 28,728,552	\$ 270,216 \$	354,652	\$ 643,286	\$ 90,601	\$ 0	0 9	0	\$ 0
92 101	Natural Gas Storage, Terminaling and	Total underground storage expenses - operation Total underground storage expenses - maintenance	\$	338,060 90,209	\$ 1,155 \$	3,056	\$ 3,243	\$ 393	\$ 0	5 0 \$. 0	\$ 0
108 121	Processing Expenses	Total other storage expenses - operation Total other storage expenses - maintenance	\$	11,468 319,807	\$ 0 \$	0 :	\$ 0	\$ 0	\$ 11,468	28 \$	8,248	\$ 80
122 134		Natural Gas Storage, Terminaling and Processing Expenses Total Transmission expenses - operation	\$	759,545 159,628		6,764			\$ 11,468		8,248	\$ 80
143 144	Transmission expenses	Total transmission expenses - uperation Total transmission expenses - maintenance Transmission Expenses	\$	277,595		2,487	\$ 3,931		\$ 809	4,121 \$	12,303	\$ 12,851
156 167	Distribution expenses	Total distribution expenses - operation	\$	3,788,168	\$ 10,975 \$	18,156	\$ 26,486	\$ 5,756	\$ 6,275	26,065 \$	75,326	\$ 79,776
168		Total distribution expenses - maintenance Distribution Expenses Miscellaneous customer accounts expenses	\$	1,199,579 4,987,747	\$ 14,627 \$	25,316	\$ 36,059	\$ 8,088	\$ 8,745	\$ 34,971 \$	100,210	\$ 106,570
173 174	Customer account expenses	Total customer account expenses	\$	2,307,801	\$ 1,255 \$	12,302	\$ 8,126	\$ 2,067	\$ 5,543	2,772 \$	6,236	\$ 6,929
178 179	Customer service and informational	Miscellaneous customer service and informational expenses 910 Supervision 911	\$ \$	52,145 12,194	\$ 2 \$	17	\$ 11	\$ 3	\$ 8	5 4 5	9	\$ 10
180 181	expenses	Demonstration and Selling Expense 912 Advertising 913	\$ \$	227,069 56,603								
182 196	Administrative and general expenses	Total customer service and informational expenses Maintenance of general plant 932	\$	1,052,059 0								
197 198		Maintenance of General Plant 935 Total administrative and general expenses	\$	551,383 9,293,848			,			, ,		
199 205	Depreciation expenses	Depreciation expense production 403, 403.1 Total depreciation expenses	\$	0 12,471,561	\$ 0 \$	0 :	\$ 0	\$ 0	\$ 0	5 0 \$	0	\$ 0
206 214	Amortization expenses	Intangible plant 404, 405 Total amortization expenses	\$	0	\$ 0 \$	0 :	\$ 0	\$ 0	\$ 0	5 0 \$	0	\$ 0
215	Regulatory debits and credits	Regulatory debits and credits 407.3, 407.4	\$	0	s 0 s	0 :	\$ 0	\$ 0	\$ 0	5 0 5	. 0	\$ 0
216 222	Taxes	Total regulatory debits and credits Investment Tax credit Adj. 411.4 Taxabana	\$		\$ 0 \$	0 :	\$ 0	\$ 0	\$ 0	5 0 \$	0	\$ 0
223 228	Various utility operating income items	Other utility operating income 414	\$	6,988,582 0	s 0 s	0 :	\$ 0	\$ 0	\$ 0	0 9	0	\$ 0
229 230		Total various utility operating income items Test Year O&M Adjustment	\$		\$ 1,264 \$	4,318	\$ 4,084	\$ 939	\$ 2,158	2,875 \$	7,781	\$ 8,339
231 232		Natural gas operating expenses Net Operating Income = natural gas operating revenues - natural gas operating expenses	\$	67,723,381 10,877,502		,	\$ 910,403 \$ 248,689	\$ 143,604 \$ 28,704				
233 234	Note: Plant balances at the FERC Acct level may	not tie exactly to "A-RR Cross Reference" tab; these balances do not include the EOP Adjustment, which is included below.										
238 251		Intangible plant Underground storage plant	\$	17,118,547 15,521,949	\$ 30,888 \$ \$ 53,039 \$,	\$ 102,235 \$ 148,903					
252 253		Structures / Gas Holders / Liquefaction Equip 360 Structures / Gas Holders / Liquefaction Equip 361	\$ \$	78,570 2,464,234								
254 255	Natural gas plant in service	Structures / Gas Holders / Liquefaction Equip 362 Structures / Gas Holders / Liquefaction Equip 363	\$	1,133,403 5,648,001								
264 279		Transmission plant Distribution plant	\$	24,236,624		216,893	\$ 237,608		\$ 5,306	25,138 \$	74,844	
291 292		General plant EOP Gross Plant Rate Base Adjustment	\$		\$ 80,357 \$ \$ 26,520 \$						478,494	
293	D	Natural gas plant in service	\$	416,671,773	\$ 1,038,883 \$	2,166,395	\$ 2,600,859	\$ 507,129	\$ 578,680	\$ 2,070,812 \$	6,053,192	\$ 6,376,601
298 299	Property under capital leases	General plant 101.1 Total property under capital leases	\$	3,293,802		13,109	\$ 14,097		\$ 5,083		30,747	
300 301	Gas plant purchased or sold	Gas plant purchased or sold 102 Total natural gas plant purchased or sold	\$	0		0 :	\$ 0 \$ 0	\$ 0	\$ 0	0 9	0	
306 307	Gas plant leased to others	General plant 104 Total natural gas plant leased to others	\$	0	\$ 0 \$	0 :	\$ 0	\$ 0	\$ 0	5 0 \$	0	\$ 0
312 313	Gas plant held for future use	General plant 105 Total natural plant for future use	\$	0			\$ 0 \$ 0			0 9	. 0	\$ 0
314 315	Completed construction not classified	Completed construction not classified 106 Total completed construction not classified	\$	0			\$ 0 \$ 0					
320 321	Construction work in progress	General plant 107 Total construction work in progress	\$	0								
326 327	Accumulated provision for depreciation	General plant 108 Total accumulated provision for depreciation of natural gas utility plant	\$	(7,718,327) (154,208,234)								\$ (81,095) \$ (1,993,150)
328 333	Accumulated provision for amortization	Accumulated Depreciation - Year One Adjustment	\$	(4,418,353) 0	\$ (11,789) \$		\$ (29,036) \$ 0			\$ (24,321) \$	(71,280)	\$ (75,043) \$ 0
334		Total accumulated provision for depreciation of natural gas utility plant Natural gas plant acquisition adjustments 114	\$	0	\$ 0 \$	0 :		\$ 0	\$ 0	0 9	0	
336		Total natural gas plant acquisition adjustments Accumulated provision for asset acquisition adjustments 115	\$	0	\$ 0 \$	0 :		\$ 0	\$ 0	0 9	0	
338		Total accumulated provision for asset acquisition adjustments	\$	0	\$ 0 \$	0 :	\$ 0	\$ 0	\$ 0	0 9	0	\$ 0
342 343	Natural Gas	Gas owed to system gas 117.4 Total natural gas	\$	2,454,137		22,188		\$ 2,854	\$ 0		0	
344 345	Prepayments	Prepayments 165	\$	263,793,125 0	\$ 0 S	0 :	\$ 0	\$ 0	\$ 0	5 0 \$	0	\$ 0
346 347		Total prepayments Current and accrued assets	\$	0 263,793,125	\$ 704,804 \$	1,437,951	\$ 1,745,276	\$ 338,519	\$ 376,976	1,407,159 \$	4,123,448	\$ 4,341,008
350 351	Deferred debits	Accumulated deferred income taxes 190 Total deferred debits	\$	0								
356 357	Other non current liabilities	Accumulated provision for rate refunds 229 Other non current liabilities	\$	0	s 0 s	0 :	\$ 0	\$ 0	\$ 0	5 0 \$	0	\$ 0
358 359	Customer deposits	Customer deposits 235 Current and accrued liabilities	\$	0 263,793,125	\$ 0 \$	0 :	\$ 0	\$ 0	\$ 0	\$ 0 \$	0	\$ 0
366 367	Deferred credits	Other regulatory liabilities 254 Total deferred credits	\$	(14,319,095) (41,452,852)	\$ (38,207) \$	(77,056)	\$ (94,100)	\$ (18,517)	\$ (20,965)	(78,821) \$	(231,006)	\$ (243,200)
368 369	Working capital allowance	Working capital allowance N/A Total working capital allowance	\$	3,526,472 3,526,472	\$ 5,450 \$	14,035	\$ 15,093	\$ 3,194	\$ 5,442	\$ 11,603 \$	32,919	\$ 34,903
370		Rate base	\$	225,866,746		1,230,511	\$ 1,489,753	\$ 288,394				\$ 3,674,536
371 372		Special Contract revenue credit	\$	242,989 15.614.168								
373 374		Net Operating Revenues at allowable ROR Revenue Requirement Impact	\$	6,255,810	\$ (33,689) \$	(97,621)	\$ (194,549)	\$ (11,989)	\$ (83,889)	(143,633) \$	(142,846)	\$ (106,213)
375 376		Change in Rate Base ROR- At Current Rates	\$	31,200,187 4.82%	11.05%	12.81%	16.69%	9.95%	26.53%	15.93%	9.90%	8.99%
377 378		ROR - Test Year at Parity		6.91%	6.91%	6.91%	6.91%	6.91%	6.91%	6.91%	6.91%	6.91%
379 380		REVENUE REQUIREMENT: Net Operating Revenues at allowable ROR \$ 15,614,168										
381 382		Incremental Net Operating Revenue \$ 4,736,666 Grossed up for Revenue Sensitive \$ 6,255,810										
383 384		RETURN ON RATEBASE										
385 386		Rate of Return at 9.4% ROE: 6.913% Source: KTW-3 p8 - Cost of Cap										
387 388		INCREMENTAL NET OPERATING REVENUE DEFICIENCY										
389 390		(Less: Net Operating Revenues) Net-to-Gross Revenue Sensitive Factor: 132.1%										
391		Source: KTW-3 p8 - Cost of Cap										

NW Natural Washington Jurisdictional Rate Case Test Year Twelve Months Ended September 30, 2020 Cost of Service Study (EmCOSS) Summary Results GCOST: B COS Results

GCOST: E	B COS Results		CUSTOMER CLASS SERVICE TYPE	Transportation
Line No.		FERC Acct #		Firm
1			TOTAL	SPECIAL
7		Total sales to ultimate customers Total sales of gas	\$ 78,333,455 \$ 0	\$ 242,995 \$ 0
11	Natural Gas operating revenues	Total revenues net of provision for rate refunds		\$ 0
25		Total Other operating revenues		\$ 0
26 57	Production expenses	Total natural gas operating revenues Total manufactured gas production expenses	\$ 78,600,883 \$ 0	\$ 242,995 \$ 0
77 78	Production expenses	Total other gas supply expenses	\$ 28,728,552	\$ 0
78 92		Production expenses Total underground storage expenses - operation	\$ 28,728,552 \$ 338,060	\$ 0 \$ 0
101 108	Natural Gas Storage, Terminaling and	Total underground storage expenses - maintenance	\$ 90,209 \$ 11,468	\$ 0 \$ 5
121	Processing Expenses	Total other storage expenses - operation Total other storage expenses - maintenance	\$ 11,468 \$ 319,807	\$ 5 \$ 0
122 134		Natural Gas Storage, Terminaling and Processing Expenses Total Transmission expenses - operation	\$ 759,545 \$ 159,628	\$ 5 \$ 0
143	Transmission expenses	Total transmission expenses - maintenance	\$ 277,595	\$ 0
144 156		Transmission Expenses Total distribution expenses - operation	\$ 437,223 \$ 3,788,168	\$ 0 \$ 0
167	Distribution expenses	Total distribution expenses - maintenance	\$ 1,199,579	\$ 0
168 173	Customer account expenses	Distribution Expenses Miscellaneous customer accounts expenses 905	\$ 4,987,747 \$ 0	\$ 0 \$ 0
174	customer account expenses	Total customer account expenses	\$ 2,307,801	\$ 0
178 179	Customer service and informational	Miscellaneous customer service and informational expenses 910 Supervision 911	\$ 52,145 \$ 12,194	\$ 0 \$ 0
180	expenses	Demonstration and Selling Expense 912	\$ 227,069	\$ 0
181 182		Advertising 913	\$ 56,603	\$ 0
196	Administrative and general expenses	Total customer service and informational expenses Maintenance of general plant 932	\$ 1,052,059 \$ 0	\$ 0
197		Maintenance of General Plant 935	\$ 551,383	\$ 0
198 199	Depreciation expenses	Total administrative and general expenses Depreciation expense production 403, 403.1	\$ 9,293,848 \$ 0	\$ 0
205		Total depreciation expenses	\$ 12,471,561	\$ 0
206 214	Amortization expenses	Intangible plant 404, 405 Total amortization expenses	\$ 0	\$ 0
215	Regulatory debits and credits	Regulatory debits and credits 407.3, 407.4	\$ 0	\$ 0
216 222	Taxes	Investment Tax credit Adj. Total regulatory debits and credits 411.4	\$ 0 \$ 0	\$ 0
223		Total taxes	\$ 6,988,582	\$ 0
228 229	Various utility operating income items	Other utility operating income 414 Total various utility operating income items	\$ 0 \$ 0	\$ 0 \$ 0
230		Test Year O&M Adjustment	\$ 696,464	\$ 0
231 232		Natural gas operating expenses Net Operating Income = natural gas operating revenues - natural gas operating expenses	\$ 67,723,381 \$ 10,877,502	
233		Net Operating moonie = matural gas operating revenues - matural gas operating expenses	3 10,677,302	\$ 242,505
234 238	Note: Plant balances at the FERC Acct level may	not tie exactly to "A-RR Cross Reference" tab; these balances do not include the EOP Adjustment, which is included below. Intangible plant	\$ 17,118,547	\$ 0
251		Underground storage plant		\$ 0
252		Structures / Gas Holders / Liquefaction Equip 360	\$ 78,570	\$ 0
253 254	Natural gas plant in service	Structures / Gas Holders / Liquefaction Equip 361 Structures / Gas Holders / Liquefaction Equip 362	\$ 2,464,234 \$ 1,133,403	\$ 0 \$ 0
255		Structures / Gas Holders / Liquefaction Equip 363	\$ 5,648,001	\$ 0
264 279		Transmission plant Distribution plant	\$ 24,236,624 \$ 310,336,888	\$ 0 \$ 0
291		General plant	\$ 39,518,859	\$ 0
292 293		EOP Gross Plant Rate Base Adjustment Natural gas plant in service		\$ 0
298	Property under capital leases	General plant 101.1	\$ 3,293,802	\$ 0
299 300	Gas plant purchased or sold	Total property under capital leases Gas plant purchased or sold 102	\$ 3,293,802 \$ 0	\$ 0
301		Total natural gas plant purchased or sold	\$ 0	\$ 0
306 307	Gas plant leased to others	General plant 104 Total natural gas plant leased to others	\$ 0 \$ 0	\$ 0 \$ 0
312	Gas plant held for future use	General plant 105	\$ 0	\$ 0
313 314	Completed construction not classified	Total natural plant for future use Completed construction not classified 106	\$ 0 \$ 0	\$ 0 \$ 0
315	completed construction not classified	Total completed construction not classified	\$ 0	\$ 0
320 321	Construction work in progress	General plant 107 Total construction work in progress	\$ 0 \$ 0	\$ 0 \$ 0
326	Accumulated provision for depreciation	General plant 108	\$ (7,718,327)	\$ 0
327		Total accumulated provision for depreciation of natural gas utility plant	\$ (154,208,234) \$ (4,418,353)	
328 333	Accumulated provision for amortization	Accumulated Depreciation - Year One Adjustment General plant 111	\$ (4,418,353) \$ 0	\$ 0
334		Total accumulated provision for depreciation of natural gas utility plant		\$ 0
335 336	Natural gas plant acquisition adjustment	Natural gas plant acquisition adjustments 114 Total natural gas plant acquisition adjustments	\$ 0	\$ 0
337	llated provision for asset acquisition adju	Accumulated provision for asset acquisition adjustments 115		\$ 0
338 342	Natural Gas	Total accumulated provision for asset acquisition adjustments Gas owed to system gas 117.4	\$ 0 \$ 0	\$ 0
343		Total natural gas	\$ 2,454,137	\$ 0
344 345	Prepayments	Prepayments Net Plant 165	\$ 263,793,125 \$ 0	\$ 0 \$ 0
346	.,	Total prepayments	\$ 0	\$ 0
347 350	Deferred debits	Accumulated deferred income taxes Current and accrued assets		\$ 0 \$ 0
351		Total deferred debits	\$ 0	\$ 0
356 357	Other non current liabilities	Accumulated provision for rate refunds 229 Other non current liabilities	\$ 0	\$ 0 \$ 0
358	Customer deposits	Customer deposits 235	\$ 0	\$ 0
359 366	Deferred credits	Current and accrued liabilities Other regulatory liabilities 254	\$ 263,793,125 \$ (14,319,095)	
367		Total deferred credits	\$ (41,452,852)	\$ 0
368 369	Working capital allowance	Working capital allowance N/A Total working capital allowance	\$ 3,526,472 \$ 3,526,472	
370		Rate base	\$ 225,866,746	
371 372		Special Contract revenue credit	\$ 242,989	\$ 0
373		Net Operating Revenues at allowable ROR	\$ 15,614,168	\$ 242,989
374 375		Revenue Requirement Impact Change in Rate Base	\$ 6,255,810 \$ 31,200,187	
376		ROR- At Current Rates	4.82%	, 0
377 378		ROR - Test Year at Parity	6.91%	
379		REVENUE REQUIREMENT:		
380 381		Net Operating Revenues at allowable ROR \$ 15,614,168 Incremental Net Operating Revenue \$ 4,736,666		
381		Incremental Net Operating Revenue \$ 4,736,666 Grossed up for Revenue Sensitive \$ 6,255,810		
383				
384 385		RETURN ON RATEBASE Rate of Return at 9.4% ROE: 6.913%		
386		Source: KTW-3 p8 - Cost of Cap		
387 388		INCREMENTAL NET OPERATING REVENUE DEFICIENCY		
389		(Less: Net Operating Revenues)		
390 391		Net-to-Gross Revenue Sensitive Factor: 132.1% Source: KTW-3 p8 - Cost of Cap		
	L			

CUSTOMER CLASS

NW Natural Washington Jurisdictional Rate Case Test Year Twelve Months Ended September 30, 2020 Cost of Service Study (EmCOSS) Summary Results

ost of Service Study	(EmCOSS) Summary Results					CUSTOMER CLASS	Residential	Residential	Commercial	Commercial	Commercial	Industrial	Commercial	Commercial	Commercial	Industrial	Industrial	Industrial		Commercial	Industrial	
COST: C COS Allocation F	actors					SERVICE TYPE	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Transportation	Transportation	Transportation	Transportation
							Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Interruptible	Firm		Interruptible	Firm	Firm	Firm	Interruptible
Costs	Description	Acronym	Functionalization	Classification	Allocation	TOTAL	R01	R02	R27	C01	C03	103	C41SF	C42SF	C42SI	I41SF	I42SF	I42SI	C41TF/I41TF	C42TF	I42TF (C42TI/I42TI
Distribution Mains	Design Day Peak and Average Allocator	Dist-1	Distribution	Demand	All	100.00%	0.21%	61.80%	0.52%	0.05%	19.31%	0.18%	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%	0.29%	1.48%	4.43%	4.63%
Distribution Mains	Mains <4" Direct Allocator	Dist-2	Distribution	Demand	All	100.00%	0.91%	80.92%	0.22%	0.09%	17.18%	0.07%	0.38%	0.01%	0.00%	0.07%	0.05%	0.01%	0.02%	0.01%	0.03%	0.03%
Distribution Mains	Mains >= 4" Direct Allocator	Dist-3	Distribution	Demand	Non-Res	100.00%	0.00%	0.00%	0.00%	0.47%	87.48%	1.08%	5.38%	0.37%	0.21%	1.74%	0.70%	0.18%	0.34%	0.28%	0.86%	0.91%
Distribution Mains	Distribution Mains Allocation - Allocated Plant Basis	Dist-4	Distribution	Demand	All	100.00%	0.46%	63.69%	0.36%	0.10%	24.44%	0.22%	2.37%	0.35%	0.36%	0.65%	0.83%	0.16%	0.19%	0.82%	2.44%	2.56%
Transmission Mains	Transmission Mains Allocation	Trm-1	Transmission	Demand	All	100.00%	0.21%	61.80%	0.52%	0.05%	19.31%	0.18%	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%	0.29%	1.48%	4.43%	4.63%
Distribution Assets	Distribution Assets Allocation	Dist-5	Distribution	Demand	All	100.00%	0.21%	61.80%	0.52%	0.05%	19.31%	0.18%	3.30%	0.58%	0.63%	0.90%	1.42%	0.27%	0.29%	1.48%	4.43%	4.63%
Storage	Winter Sales / Summer Sales Excess Ratio	Stor-1	Storage	Demand	Sales	100.00%	0.24%	71.92%	0.70%	0.05%	20.44%	0.28%	3.39%	0.67%	0.34%	0.90%	0.96%	0.12%	0.00%	0.00%	0.00%	0.00%
Storage	Allocator Adjustment for Balancing (All Customers)	Stor-2	Storage	Demand	None	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Service Lines	Avg Service Installed Cost - Indirect Allocation	Line-1	Distribution	Demand	RS 2R, 3C	100.00%	1.18%	82.60%	0.32%	0.08%	15.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Service Lines	Large Customer Services - Direct Allocation	Line-2	Distribution	Demand	RS 41, 42, 03I	\$ 574,080	\$ 0	\$ 0 5	\$ 0	\$ 0	\$ 0 5	5 59,970	\$ 259,915 \$	20,967 \$	11,998 \$	49,296 \$	41,293 \$	12,870	\$ 24,865	\$ 17,529	\$ 35,305	\$ 40,071
Meters	Average Installed Cost	Meter-1	Distribution	Customer	All	100.00%	0.89%	77.59%	1.07%	0.09%	16.58%	0.35%	1.36%	0.15%	0.06%	0.30%	0.32%	0.14%	0.13%	0.20%	0.33%	0.47%
Meters	Direct-Com	Meter-2	Distribution	Customer	Commercial	100.00%	0.00%	0.00%	5.54%	0.45%	86.19%	0.00%	7.07%	0.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Meters	Direct-Ind	Meter-3	Distribution	Customer	Industrial	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.19%	0.00%	0.00%	2.48%	13.25%	14.01%	5.99%	5.55%	8.57%	14.55%	20.40%
Meters	Direct-Res	Meter-4	Distribution	Customer	Residential	100.00%	1.13%	98.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Customer Service	Gas Management / Operations - Direct Allocation	CSrv-1	Customer	Customer	All	\$ 906,018	\$ 7,351	\$ 654,547	\$ 10,932	\$ 479	\$ 89,007 5	324 !	\$ 58,796 \$	3,231 \$	1,690 \$	11,630 \$	7,753 \$	2,535	\$ 14,902	\$ 7,451	\$ 16,764	\$ 18,627
Customer Service	Major Accounts - Direct Allocation	CSrv-2	Customer	Customer	RS 41, 42, 03I	\$ 103,059	\$ 0	\$ 0 5	\$ 0	\$ 0	\$ 0 5	11,544	\$ 45,674 \$	2,510 \$	1,004 \$	9,034 \$	6,023 \$	1,506	\$ 6,649	\$ 3,324	\$ 7,480 5	\$ 8,311
Customer Service	Avg Weighted Cost per Customer - Indirect Allocation	CSrv-3	Customer & Trm/Dist/Stor/Cmn	Customer	All	100.00%	1.00%	89.32%	0.85%	0.04%	7.49%	0.03%	0.71%	0.04%	0.02%	0.14%	0.09%	0.02%	0.06%	0.03%	0.07%	0.08%
Customer Service	Direct-Com	CSrv-4	Customer	Customer	Commercial	100.00%	0.00%	0.00%	10.74%	0.47%	87.46%	0.00%	1.26%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Customer Service	Direct-Ind	CSrv-5	Customer	Customer	Industrial	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.84%	0.00%	0.00%	2.25%	20.22%	13.48%	3.37%	8.99%	4.49%	10.11%	11.24%
Customer Service	Direct-Res	CSrv-6	Customer	Customer	Residential	100.00%	1.11%	98.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Customer Service	Direct-Lrg Com/Ind	CSrv-7	Customer	Customer	RS 41, 42, 03I	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.43%	49.19%	2.70%	1.08%	9.73%	6.49%	1.62%	4.32%	2.16%	4.86%	5.41%
Admin / General Plant	Allocated Plant	Gnrl-1	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.62%	69.58%	0.47%	0.09%	21.15%	0.21%	1.99%	0.30%	0.27%	0.54%	0.66%	0.13%	0.15%	0.55%	1.61%	1.70%
Admin / General Plant	Total Throughput	Gnrl-2	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.21%	54.88%	0.46%	0.05%	17.84%	0.28%	3.75%	0.72%	0.94%	1.01%	1.84%	0.32%	0.44%	2.47%	6.77%	8.02%
Admin / General Plant	Total Revenue	Gnrl-3	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.36%	67.88%	0.47%	0.07%	20.63%	0.31%	3.65%	0.60%	0.55%	0.96%	1.48%	0.22%	0.24%	0.46%	1.05%	1.06%
Admin / General Plant	Common - Net Stor/Dist/Trnm Plant, Customers, O&M	Cmn-1	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.81%	79.49%	0.68%	0.06%	13.75%	0.22%	1.35%	0.17%	0.15%	0.40%	0.43%	0.09%	0.15%	0.33%	0.93%	0.99%
Internally Determined	Allocators:																					
Admin / General Plant	Operating Revenues (excl. misc revenues)	OpRev-1	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.38%	68.00%	0.54%	0.06%	20.39%	0.27%	3.76%	0.80%	0.56%	0.92%	1.36%	0.19%	0.24%	0.45%	1.08%	1.02%
Admin / General Plant	Sales Revenues	SalesRev-	1 Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.40%	69.94%	0.56%	0.06%	20.97%	0.28%	3.87%	0.82%	0.57%	0.95%	1.39%	0.19%	0.00%	0.00%	0.00%	0.00%
Admin / General Plant	Total Revenues	TotlRev-1	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.38%	67.93%	0.54%	0.06%	20.38%	0.27%	3.76%	0.80%	0.56%	0.92%	1.35%	0.19%	0.25%	0.46%	1.11%	1.05%
Admin / General Plant	Salary and Wages	SalWg-1	Common & Trm/Dist/Stor/Cmn	Depends on Function	All	100.00%	0.98%	86.88%	0.70%	0.03%	6.14%	1.12%	0.55%	0.03%	0.11%	0.97%	0.65%	0.16%	0.43%	0.22%	0.49%	0.54%

NW Natural

Summary of Adjustments Service territory : Washington Service: Natural Gas

Time period : Twelve Months ended September 30, 2020 GCOST: D Summary of Adjustments

Restating Adjustments

		nestating / tajusti	 				
		_		Washington Na	tural	Gas	
Column	Work paper reference	Description of Adjustment	NOI	Rate Base	Revenue	enue Requirement	ROR
E	WA-ROO	WA-ROO	\$ 10,863,181	\$ 194,666,559	\$	3,426,113	5.58%
F	RR Adj (a)	Weather Normalized Gas Sales & Purchases	\$ (176,057)	\$ -	\$	232,523	-0.09%
G	RR Adj (b)	Misc. Revenues Adjustments	\$ 1,791,475	\$ -	\$	(2,366,060)	0.94%
Н	RR Adj (c)	Bonus Adjustment	\$ (33,532)	\$ (56,750)	\$	39,105	-0.02%
1	RR Adj (d)	Property Tax Adjustment	\$ 39,859	\$ -	\$	(52,643)	0.02%
J	RR Adj (e)	Uncollectible Accounts Adjustment	\$ 20,756	\$ -	\$	(27,413)	0.01%
K	RR Adj (f)	Working Capital Adjustment	\$ 17,085	\$ 3,526,472	\$	299,408	-0.09%
L	RR Adj (g)	Marketing & Customer Communication Adju	\$ 224,528	\$ -	\$	(296,539)	0.12%
M	RR Adj (h)	Claims Adjustment	\$ (3,220)	\$ (1,556)	\$	4,111	0.00%
N	RR Adj (i)	Rate Case Adjustment	\$ (86,900)	\$ -	\$	114,771	-0.04%
0	RR Adj (j)	Clearing Accounts Adjustment	\$ 23,988	\$ (79,301)	\$	(38,921)	0.01%
Р	RR Adj (k)	HoldCo Adjustment	\$ (11,082)	\$ -	\$	14,636	-0.01%
		Restated Total	\$ 12,670,079	\$ 198,055,424	\$	1,349,092	6.43%

Proforma Adjustments

		Fibibilia Aujustii	ieii	L3					
	Work paper reference Description of Adjustment NOI Rate Base Reven RR Adj (m) Payroll Adjustment \$ (319,673) \$ - \$ \$ RR Adj (n) Payroll Overhead Adjustment \$ (126,783) \$ - \$ \$ RR Adj (n) Payroll Overhead Adjustment \$ (242,654) \$ - \$ \$ RR Adj (n) Post-Test Year 1 Capital Adjustment \$ (610,489) \$ 21,735,766 \$ RR Adj (n) EDIT Rate Base Adjustment \$ 2,725 \$ 562,500 \$ RR Adj (r) End of Period Rate Depreciation Exp Adjustment \$ (497,412) \$ 5.513,053 \$ RR Adj (s) End of Period Rate Base Adjustment \$ 26,709 \$ 5,513,053 \$ RR Adj (t) Plant EDIT Amortization Adjustment \$ (25,000) \$ 5.513,053 \$								
Column	Work paper reference	Description of Adjustment		NOI		Rate Base	Reve	enue Requirement	ROR
R	RR Adj (m)	Payroll Adjustment	\$	(319,673)	\$	-	\$	422,200	-0.16%
S	RR Adj (n)	Payroll Overhead Adjustment	\$	(126,783)	\$	-	\$	167,446	-0.07%
T	RR Adj (o)	250 Taylor Lease Expense Adjustment	\$	(242,654)	\$	-	\$	320,479	-0.12%
U	RR Adj (p)	Post-Test Year 1 Capital Adjustment	\$	(610,489)	\$	21,735,766	\$	2,790,798	-0.84%
V	RR Adj (q)	EDIT Rate Base Adjustment	\$	2,725	\$	562,500	\$	47,758	-0.01%
W	RR Adj (r)	End of Period Rate Depreciation Exp Adjustm	\$	(497,412)	\$	-	\$	656,944	-0.26%
Χ	RR Adj (s)	End of Period Rate Base Adjustment	\$	26,709	\$	5,513,053	\$	468,075	-0.14%
Υ	RR Adj (t)	Plant EDIT Amortization Adjustment	\$	(25,000)	\$	-	\$	33,018	-0.01%
		Pro Forma Total	\$	(1,792,578)	\$	27,811,319	\$	4,906,718	-1.62%
		Total Adjustments		\$10,877,502		\$225,866,743		\$6,255,809	4.82%

NW Natural

Summary of Adjustments Service territory : Washington Service: Natural Gas

Time period: Twelve Months ended September 30, 2020

GCOST: E Summary of Results	-		1	2	3	4	5	6	7	8	9	10	11
			Residential	Residential	Commercial	Commercial	Commercial	Industrial	Commercial	Commercial	Commercial	Industrial	Industrial
			Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales
			Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Interruptible	Firm	Firm
Results at Year One of Multi-Year Plan	Note	TOTAL	R01	R02	R27	C01	C03	103	C41SF	C42SF	C42SI	I41SF	I42SF
Rate Base	ç	225,866,746	\$ 1,390,353 \$	158,142,710	\$ 1,094,258 \$	\$ 190,989	47,059,371 \$	479,178 \$	4,532,777	\$ 689,996	\$ 600,354 \$	1,230,511 \$	1,489,753
Proposed Rate of Return		6.913%	6.913%	6.913%	6.913%	6.913%	6.913%	6.913%	6.913%	6.913%	6.913%	6.913%	6.913%
Return Requirement	5	15,614,168	94,619 \$	10,762,274	5 74,469 \$	\$ 12,998 \$	3,202,587 \$	32,610	308,474	46,957	\$ 40,857 \$	83,741 \$	101,384
Total Operating Expenses (net of non-rate revenues)	5	67,455,953	348,724 \$	48,356,612	\$ 396,349	5 52,389	12,379,230 \$	234,460 \$	2,107,176	\$ 360,772	\$ 364,364 \$	589,610 \$	906,269
Present Revenue from Rates	5	78,333,455	283,691 \$	53,008,198	\$ 363,218 \$	5 53,871	\$ 16,112,007 \$	241,044 \$	2,853,836	\$ 470,189	\$ 430,729 \$	747,266 \$	1,154,958
Net Income From Present Rates	5	10,877,502	\$ (65,033) \$	4,651,586	\$ (33,131) \$	\$ 1,482 \$	3,732,777 \$	6,584	746,660	\$ 109,417	\$ 66,365 \$	157,657 \$	248,689
Net Income Deficiency (Sufficiency)	(1) \$	4,736,653	159,651 \$	6,110,672	\$ 107,599	\$ 11,516 \$	(530,188) \$	26,026 \$	(438,184)	\$ (62,459)	\$ (25,508) \$	(73,915) \$	(147,305)
Incremental Revenue Related Expenses	(2)	260,046	\$ 8,765 \$	335,481	\$ 5,907	\$ 632 \$	\$ (29,108) \$	1,429	(24,057)	(3,429)	\$ (1,400) \$	(4,058) \$	(8,087)
Incremental Income Taxes	(2)	1,259,110	42,439 \$	1,635,244	\$ 28,708 \$	\$ (12,078) \$	(137,842) \$	(8,186) \$	(115,967)	\$ (16,501)	\$ (6,729) \$	(19,511) \$	(39,012)
Total Net Income Deficiency (Sufficiency)	\$	6,255,809	210,855 \$	8,081,397	\$ 142,215	\$ 70 \$	(697,138) \$	19,270 \$	(578,207)	\$ (82,390)	\$ (33,638) \$	(97,484) \$	(194,404)
Total Cost/Revenue Requirement at Unity	\$	84,589,264	494,547 \$	61,089,594	\$ 505,433 \$	5 53,941 \$	15,414,869 \$	260,313 \$	2,275,629	\$ 387,799	\$ 397,091 \$	649,782 \$	960,554
Revenue-to-Cost Ratio at Present Rates		0.93	0.57	0.87	0.72	1.00	1.05	0.93	1.25	1.21	1.08	1.15	1.20
Parity Ratio at Present Rates		1.00	0.62	0.94	0.78	1.08	1.13	1.00	1.35	1.31	1.17	1.24	1.30
Proposed Rate Revenue Increase (Also, see: Exh. RJW-3)	(3) \$	6,255,478	\$ 26,441 \$	4,283,077	\$ 25,592 \$	\$ 4,766 \$	\$ 1,250,347 \$	17,981 \$	195,450 \$	27,828	\$ 20,343 \$	49,759 \$	64,848
Proposed Revenue from Rates	5	84,588,933		57,291,275			,, +		3,049,287				1,219,807
Variance from Unity	\$	(331)	(184,415) \$	(3,798,320)	\$ (116,622) \$	\$ 4,697 \$	1,947,486 \$	(1,289)	773,658	\$ 110,218	\$ 53,981 \$	147,243 \$	259,252
Revenue-to Cost Ratio at Proposed Rates		1.00	0.63	0.94	0.77	1.09	1.13	1.00	1.34	1.28	1.14	1.23	1.27
Parity Ratio at Proposed Rates		1.00	0.63	0.94	0.77	1.09	1.13	1.00	1.34	1.28	1.14	1.23	1.27

^{*} Note (1): This line contains small adjustment to correct for rounding.

* Note (2): Please refer to the Company's Revenue Requirement model for derivation of this value.

^{*} Note (3): The Proposed Rate Revenue Increase increment is based on volumetric billing rates rounded to the fifth decimal as necessitated by the Company's tariff. Therefore, there may be a small discrepancy with the total indicated Net Income Deficiency.

NW Natural

Summary of Adjustments Service territory : Washington Service: Natural Gas

Time period : Twelve Months ended September 30, 2020

GCOST: E Summary of Results			12		13		14		15		16	17	
•			Industrial				Commercial		Industrial				
			Sales	Т	Fransportation	T	ransportation	Т	ransportation	T	ransportation	Transportation	
			nterruptible		Firm		Firm		Firm		Interruptible	Firm	
Results at Year One of Multi-Year Plan	Note	TOTAL	142SI		C41TF/I41TF		C42TF		I42TF	- (C42TI/I42TI	SPECIAL	
Rate Base		\$ 225,866,746	\$ 288,394	\$	321,954	\$	1,191,436	\$	3,490,176	\$	3,674,536		_
Proposed Rate of Return		6.913%	6.913%		6.913%		6.913%		6.913%		6.913%		
Return Requirement		\$ 15,614,168	\$ 19,626	\$	21,910	\$	81,082	\$	237,521	\$	250,068	\$ 242,989	9
Total Operating Expenses (net of non-rate revenues)		\$ 67,455,953	\$ 143,027	\$	104,413	\$	170,949	\$	477,937	\$	494,992		
Present Revenue from Rates		\$ 78,333,455	\$ 171,731	\$	189,841	\$	360,785	\$	823,616	\$	825,480	\$ 242,995	5
Net Income From Present Rates		\$ 10,877,502	\$ 28,704	\$	85,428	\$	189,836	\$	345,679	\$	330,488	\$ 242,989	9
Net Income Deficiency (Sufficiency)	(1)	\$ 4,736,653	\$ (9,078)	\$	(63,518)	\$	(108,753)	\$	(108,157)	\$	(80,420)	\$ (0
Incremental Revenue Related Expenses	(2)	\$ 260,046	\$ (498)	\$	(3,487)	\$	(5,971)	\$	(5,938)	\$	(4,415)	\$ (0
Incremental Income Taxes	(2)	\$ 1,259,110	\$ (2,395)	\$	(32,031)	\$	(28,946)	\$	(39,644)	\$	(21,483)	\$ (0
Total Net Income Deficiency (Sufficiency)		\$ 6,255,809	\$ (11,972)	\$	(99,036)	\$	(143,670)	\$	(153,739)	\$	(106,319)	\$ (0
Total Cost/Revenue Requirement at Unity		\$ 84,589,264	\$ 159,759	\$	90,806	\$	217,115	\$	669,877	\$	719,161	\$ 242,989	9
Revenue-to-Cost Ratio at Present Rates		0.93	1.07		2.09		1.66		1.23		1.15		
Parity Ratio at Present Rates		1.00	1.16		2.26		1.79		1.33		1.24		
Proposed Rate Revenue Increase (Also, see: Exh. RJW-3)	(3)	\$ 6,255,478	\$ 10,280	\$	24,058	\$	45,715	\$	104,382	\$	104,610	\$ (0
Proposed Revenue from Rates		\$ 84,588,933	\$ 182,011	\$	213,899	\$	406,499	\$	927,998	\$	930,090	\$ 242,995	5
Variance from Unity		\$ (331)	\$ 22,252	\$	123,094	\$	189,384	\$	258,121	\$	210,929	\$ 5	5
Revenue-to Cost Ratio at Proposed Rates Parity Ratio at Proposed Rates		1.00 1.00	1.14 1.14		2.36 2.36		1.87 1.87		1.39 1.39		1.29 1.29		
Revenue-to Cost Ratio at Proposed Rates		\$ 1.00	1.14		2.36		1.87	\$	1.39	\$	1.29	Ş	

^{*} Note (1): This line contains small adjustment to correct for rounding.

^{*} Note (2): Please refer to the Company's Revenue Requirement model for derivation of this value.

^{*} Note (3): The Proposed Rate Revenue Increase increment is based on volumetric billing rates rounded to the fifth decimal as necessitated by the Company's tariff. Therefore, there may be a small discrepancy with the total indicated Net Income Deficiency.