	Issue	Tab	Settlement Action	Revenue Requirement Impact
1	Original Filing			\$8,312,044
2	Allocation Factor Revision - Submitted with Bench Request 1	see files submitted with	Bench Request 1 Response	(\$123,042)
3	Revenue Requirement after Revision			\$8,189,002
4	Cost of Capital	KSM-3 p8 - Cost of Cap	Adjusted ROE and Cap Structure %'s	(\$1,166,217)
5	Revenue and Gas Cost - UPC added Revenue	KSM-4 p2 &p3 - Adjust Issues	Added Column u	(\$113,035)
6 7	Bonus/LTIP reduction	KSM-4 p2 &p3 - Adjust Issues KSM-4 p8 - Bonuses	Added Column r Changed Bonus calc to 5-yr average	(\$271,144)
8	Payroll/Payroll Overhead reduction	KSM-4 p2 &p3 - Adjust Issues	Added Column s	(\$87,414)
9	Miscellaneous O&M Reduction	KSM-4 p2 &p3 - Adjust Issues	Added Column t	(\$260,844)
10	Working Capital	KSM-4 p2 &p3 - Adjust Issues	Revised Working Capital - column f	(\$1,027,567)
11	Removal of Post Test Year Projects	KSM-4 p20 - Post TY Capital	Adjusted supporting tab	(\$107,326)
12 13	Non-Plant Excess Deferred Tax	KSM-4 p21 - EDIT Amort WP - Deferred Tax	Removed Non-Plant Amount Removed Non-Plant Amount	(\$16,924)
14	Settlement - Revenue Requirement		=	\$5,138,531

# Washington Rate Case

Test Year Based on Twelve Months Ended September 30, 2018

		Washington Allocated Results												
Line		Test Year	0 diverse entre	Test Year	Proposed Rate	Test Year at 9.40%								
No.		Results (a)	Adjustments (b)	Adjusted (c)	Increase (d)	Equity Return (e)								
		(-)	(-)	(-)	(-)									
	Operating Revenues													
1	Sale of Gas	\$67,314,413	(\$3,389,642)	\$63,924,771	\$5,138,531	\$69,063,302								
2	Transportation	2,370,981	(9,877)	2,361,104	0	2,361,104								
3	Miscellaneous Revenues	(2,048,364)	2,287,568	239,204	0	239,204								
4	Total Operating Revenues	67,637,030	(1,111,951)	66,525,079	5,138,531	71,663,610								
	Operating Revenue Deductions													
5	Gas Purchased	25,772,083	(1,240,143)	24,531,940	0	24,531,940								
6	Uncollectible Accrual for Gas Sales	58,166	17,692	75,858	5,424	81,282								
7	Other Operating & Maintenance Expenses	17,640,139	(166,730)	17,473,408	0	17,473,408								
8	Total Operating & Maintenance Expense	43,470,387	(1,389,181)	42,081,206	5,424	42,086,630								
9	Federal Income Tax	1,370,297	(64,376)	1,305,921	1,034,228	2,340,149								
10	Property Taxes	1,268,490	228,144	1,496,634	0	1,496,634								
11	Other Taxes	3,688,228	(3,790)	3,684,438	208,213	3,892,651								
12	Depreciation & Amortization	9,325,935	79,408	9,405,344	0	9,405,344								
13	Total Operating Revenue Deductions	59,123,338	(1,149,794)	57,973,543	1,247,865	59,221,408								
14	Net Operating Revenues	\$8,513,692	\$37,843	\$8,551,535	\$3,890,666	\$12,442,202								
15	Total Rate Base	\$162,789,768	\$10,959,853	\$173,749,621	\$0	\$173,749,621								
16	Rate of Return	5.23%	-	4.92%		7.16%								
17	Return on Common Equity	5.46%	-	4.83%		9.40%								

Washington Rate Case

Test Year Based on Twelve Months Ended September 30, 2018

Line No.		System Test Year Results	Washington Test Year Results
		(a)	(b)
	Operating Revenues		
1	Sale of Gas	\$665,326,649	\$67,314,413
2	Transportation	19,869,300	2,370,981
3	Miscellaneous Revenues	2,191,735	(2,048,364)
4	Total Operating Revenues	687,387,683	67,637,030
	Operating Revenue Deductions		
5	Gas Purchased	277,028,949	25,772,083
6	Uncollectible Accrual for Gas Sales	525,404	58,166
7	Other Operating & Maintenance Expenses	166,944,399	17,640,139
8	Total Operating & Maintenance Expense	444,498,752	43,470,387
9	Federal Income Tax	16,396,260	1,370,297
10	Oregon Excise Tax	6,457,861	0
11	Property Taxes	21,280,809	1,268,490
12	Other Taxes	27,628,043	3,688,228
13	Depreciation & Amortization	82,584,431	9,325,935
14	Total Operating Revenue Deductions	598,846,155	59,123,338
15	Net Operating Revenues	\$88,541,528	\$8,513,692
16	Total Rate Base	\$1,300,658,040	\$162,789,768
17	Rate of Return	6.81%	5.23%
18	Return on Common Equity	8.68%	5.46%

NW Natural Washington Quarterly Results of Operations Report Operations and Maintenance Expense: Allocation of System Amounts Twelve Months Ended September 30, 2018

Undergrou	ge	System	Washington	Oregon
One	nd Storage Expense			
816	eration Wells Expense	291,774	30,403	261,37
816		291,774 73,078	30,403	261,37
820	Measuring and Regulator Station Expense	2,626,828	272,282	2,354,54
821	Purification Expense	20,987	2,138	18,849
	intenance			
832 834		237,434	24,741 24,220	212,693
034	Storage Maint. Expense of Compressor Equp Total Underground Storage Expense	232,439 3,482,540	361,399	3,121,14
	age Expense eration			
840	Supervision and Engineering	172,057	17,928	154,12
	Total Other Storage Expense	172,057	17,928	154,129
Liquified N	atural Gas Expense			
Ope	ration			
844 845	Supervision and Engineering LNG Fuel Expense - Credit Liquef Costs	1,892,077 (100,562)	197,154 (10,479)	1,694,922 (90,083
045		(100,502)	(10,475)	(50,00.
	intenance			
847	Supervision and Engineering Total Liquified Natural Gas Expense	2,909,339	116,477 303,153	1,001,34
	Total Equilieu Natural Gas Expense	2,505,555	505,155	2,000,100
	Total Natural Gas Storage	6,563,936	682,480	5,881,456
Transmission Evo	0050			
Transmission Exp Ope	eration			
856	Mains Expense	1,998,785	136,823	1,861,962
Mai	intenance			
863	Maintenance of Mains	166,376	18,635	147,74:
	Total Transmission Expense	2,165,161	155,458	2,009,703
Distribution Expe	nse			
	eration			
870		3,497,212	302,733	3,194,479
874 875	Mains and Services Expense Moscuring and Regulator Station Expense. General	12,875,979 199,446	1,505,881 20,982	11,370,09 178.46
875	Measuring and Regulator Station Expense - General Measuring and Regulator Station Expense - City Gate	199,446	43,950	460.49
878		6,022,667	670,319	5,352,34
879		11,036,726	1,229,188	9,807,53
880 881		1,778,614 224,751	182,701 31,096	1,595,912 193,654
001	Reits	224,731	51,050	155,05
Mai 885	intenance Supervision and Engineering	7,357,254	345,761	7,011,493
887	Mains	3,229,685	167,524	3,062,16
889		1,499,234	136,355	1,362,879
891 892		201,538 689,871	14,445 51,311	187,09 638,56
893	Meters and House Regulators	2,834,505	282,506	2,551,99
894	Other Equipment	70,468	2,289	68,17
	Total Distribution Expense	52,022,395	4,987,042	47,035,35
Customer Accoun	ts Expense			
Ope	ration			
901 902		1,718,146 890,734	191,745 99.320	1,526,40 791.41
		18,222,749	2,023,144	
903				16.199.60
		525,404	58,166	16,199,60 467,23
903	Uncollectible Accounts Total Customer Accounts Expense	21,357,033	58,166 2,372,375	
903 904	Total Customer Accounts Expense			467,23
903 904 Customer Service				467,23
903 904 Customer Service Ope 907	Total Customer Accounts Expense and Informational ration Supervision	21,357,033	2,372,375	467,231 18,984,651 2,393
903 904 Customer Service Ope 907 908	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense	21,357,033 2,697 2,330,246	2,372,375 304 278,562	467,231 18,984,654 2,393 2,051,684
903 904 Customer Service Ope 907	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense	21,357,033 2,697 2,330,246 3,040,743 247,276	2,372,375 304 278,562 339,347 27,867	467,238 18,984,658 2,399 2,051,684 2,701,390 219,409
903 904 Customer Service Ope 907 908 909	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense	21,357,033 2,697 2,330,246 3,040,743	2,372,375 304 278,562 339,347	467,23 18,984,65 2,39 2,051,68 2,701,39
903 904 Customer Service Ope 907 908 909 910	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense	21,357,033 2,697 2,330,246 3,040,743 247,276	2,372,375 304 278,562 339,347 27,867	467,238 18,984,658 2,399 2,051,684 2,701,390 219,409
903 904 Customer Service Ope 907 908 909 910 Sales Expense Ope	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961	2,372,375 304 278,562 339,347 27,867 646,080	467,231 18,984,654 2,395 2,051,684 2,701,394 219,405 4,974,885
903 904 Customer Service Opp 907 908 909 910 Sales Expense Ope 911	Total Customer Accounts Expense and Informational ration Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational varion Supervision	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705	2,372,375 304 278,562 339,347 27,867 646,080 18,158	467,233 18,984,654 2,393 2,051,684 2,701,394 219,403 4,974,883
903 904 Customer Service Ope 907 908 909 910 Sales Expense Ope	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational ration Supervision Demonstration and Selling Expense	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174	467,233 18,984,654 2,393 2,051,68 2,701,394 219,400 4,974,883 144,544 3,268,670
903 904 Customer Service Ope 907 908 909 910 Sales Expense Ope 911 912	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational ration Supervision Demonstration and Selling Expense	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705	2,372,375 304 278,562 339,347 27,867 646,080 18,158	467,233 18,984,654 2,393 2,051,684 2,701,394 219,403 4,974,883
903 904 Customer Service Opr 907 908 909 910 Sales Expense Opr 911 912 913	Total Customer Accounts Expense and Informational rration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational vertion Supervision Demonstration and Selling Expense Advertising	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451	467,234 18,984,654 2,395 2,051,68 2,701,39 219,405 4,974,88 144,545 3,268,677 401,622
903 904 Customer Service Opr 907 908 909 910 Sales Expense Opr 911 911 911 911 911 913 916	Total Customer Accounts Expense and Informational ration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational ration Supervision Demonstration and Selling Expense Advertsing Miscellaneous Sales Expense Total Sales Expense	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 452,073	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0	467,23 18,984,65 2,39 2,051,68 2,701,39 219,40 4,974,88 144,54 3,268,67 401,62
903 904 Opt 907 908 909 910 Sales Expense 0pt 911 913 913 915 Administrative an 0pt	Total Customer Accounts Expense and Informational rration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational Varition Supervision Demonstration and Selling Expense Advertising Miscellaneous Sales Expense Total Sales Expense rotal Sepense ration	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 0 0 4,290,629	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783	467,23 18,984,65 2,39 2,051,68 2,701,39 219,40 4,974,88 144,54 3,268,67 401,62 3,814,84
903 904 Opt 907 905 909 909 910 Sales Expense 0pt 911 912 913 913 916 914 914 912 913 916 916 917 917 917 917 917 917 917 917 917 917	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Miscellaneous Customer Service Expense Total Customer Service and Informational supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Sust Expense et General Expense ration Office Supplies and Expense	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 0 4,290,629 62,735,083	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783	467,23 18,984,651 2,39 2,051,68 2,701,39 219,402 4,974,88 144,54 3,268,67 401,522 (3,814,842 55,366,644
903 904 Opt 907 908 909 909 910 Sales Expense 010 911 912 913 915 915 915 915 915 915 915 915 915 915	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Customer Anamation Expense Miscellaneous Customer Service Expense Total Customer Service and Informational Version Supervision Demonstration and Selling Expense Advertising Miscellaneous Sales Expense Total Sales Expense Total Sales Expense and General Expense additional Expense Administrative Expenses	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 452,073 452,073 (20,271,976)	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 50,451 7,368,438 (2,526,442)	467,23 18,984,651 2,051,68 2,701,39 219,403 4,974,88 144,544 3,268,67 401,622 ( 3,814,844 55,366,644 (17,745,53)
903 904 Customer Service 906 909 909 910 Sales Expense 0pt 911 912 913 915 916 912 913 916 912 913 916 917 912 914 914 915 915 915 915 915 915 915 915 915 915	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Miscellaneous Customer Service Expense Total Customer Service and Informational supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Sust Expense et General Expense ration Office Supplies and Expense	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 0 4,290,629 62,735,083	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783	467,23 18,984,651 2,392 2,051,68 2,701,39 219,401 4,974,88 144,54 3,268,677 401,622 (1) (1) 55,366,644 (1),745,53 2,857,527 (2),857,856 (1),745,53 (2),857,856 (2),745,53 (2),857,856 (2),745,53 (2),857,856 (2),745,537 (2),857,856 (2),745,537 (2),857,856 (2),745,537 (2),857,856 (2),745,537 (2),745,537 (2),857,856 (2),745,537 (2),857,856 (2),745,537 (2),745,537 (2),857,856 (2),745,537 (2),745,537 (2),857,856 (2),745,537 (2),745,537 (2),857,856 (2),745,537 (2),745,537 (2),745,537 (2),857,856 (2),745,537 (2),857,856 (2),745,537 (2),745,557 (2),745,577 (2),745,577 (2),745,577 (2),745,577 (2),745,577 (2),745,577
903 904 Opt 907 908 909 909 910 Sales Expense 0pt 911 912 913 916 Administrative ar 0pt 922 924 925 926	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Miscellaneous Customer Service Expense Total Customer Service and Informational supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Subserse Adverting Office Supplies and Expense Total Subsers Transferred - Credit Property Insurance Premium Injuries and Damages Employce Pensions and Benefits	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 1,62,705 3,675,880 4,290,629 4,290,629 4,290,629 62,735,083 (20,271,976) 3,182,476 267,745 4,898,086	2,372,375 304 278,562 339,347 77,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 3356,763 30,014 1,826,251	467,23 18,984,651 2,39: 2,051,68 2,701,39 2,974,88 144,54 3,268,67 4,974,88 144,54 3,268,67 4,974,88 (1,72,45,53 2,825,72 2,37,73 3,071,83 (1,72,45,53 2,825,72 2,37,73 3,071,83 (1,72,45,53 2,825,72 2,37,73 3,071,83 (1,72,45,53 2,825,72 2,37,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,53 2,825,72 2,77,73 3,071,83 (1,72,45,55 2,825,72 2,77,73 3,071,83 (1,72,45,55 2,825,72 2,77,73 3,071,83 (1,72,45,55 2,825,72 2,77,73 3,071,83 (1,72,45,55 2,825,72 2,77,73 3,071,83 (1,72,45,55 2,825,72 2,77,73 3,071,83 (1,72,45,55 3,071,83 (1,72,45,55 3,071,83 (1,72,45,55 3,071,83 (1,72,45,55 3,071,83 (1,72,45,55 3,071,83 (1,72,45,55 (1,72,45) (1,72,45,55 (1,72,45) (1,72,45,55 (1,72,45)
903 904 Opt 907 908 909 909 910 Sales Expense 0pt 911 912 913 916 917 912 913 916 917 912 913 916 917 917 917 917 917 917 917 917 917 917	Total Customer Accounts Expense and Informational tration Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational Total Customer Service and Informational Supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Sales Expense di General Expense di General Expense Administrative Expenses Administrative Expenses Administrative Expenses Administrative Expenses Employes Pensions and Benefits Employes Pensions and Benefits	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 0 4,290,629 62,735,083 (20,271,876) 3,182,476 267,745 4,898,086 0	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 356,756 30,014 1,826,251 0	467,23 18,984,65 2,39 2,051,68 2,701,39 219,40 4,974,88 144,54 3,268,67 401,62 3,814,84 55,366,64 (17,745,53 2,825,72 2,37,73 3,071,83
903 904 0pt 907 908 9090 910 Sales Expense 0pt 911 912 913 915 916 944 917 912 922 924 925 926 925 926 928 928	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service Expense Adverting Miscellaneous Sales Expense Total Subset Expense Adverting Office Supplies and Expense Adverting Office Supplies and Expense Example Adverting Inguires and Damages Employee Pensions and Benefits Regulatory Commission Expense	21,357,033 2,697 2,330,246 3,040,743 2,47,75 5,620,961 162,705 3,675,850 4,220,73 0 4,290,629 4,290,629 4,290,620 3,182,476 2,67,745 4,888,086 0 3,226,983	2,372,375 304 278,562 339,347 77,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 3356,763 30,014 1,826,251	467,23 18,984,65 2,39 2,051,66 2,701,39 219,40 4,974,88 144,54 3,268,67 401,62 3,814,84 55,366,64 (17,745,53 2,825,72 2,37,73 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 3,071,83 2,77,23 3,071,83 3,071,83 3,071,83 3,071,85 3,071,85 3,071,85 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 4,071,97 4
903 904 0pt 907 908 909 910 Sales Expense 0pt 911 912 913 916 4 Administrative ar 922 922 924 925 926 928 928 928 928 928	Total Customer Accounts Expense and Informational ration Supervision Customer Ansistance Expense Customer Annalian Expense Miscellaneous Customer Service Expense Total Customer Service and Informational Supervision Demonstration and Selling Expense Advertsting Miscelaneous Sales Expense Total Sales Expense Total Sales Expense ration Office Supplies and Expense Administrative Expenses Indoministrative Expenses Regulatory Commission Expense Miscelaneous General Expense Rents	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 0 4,290,629 62,735,083 (20,271,876) 3,182,476 267,745 4,898,086 0	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 3356,763 30,014 1,826,251 0 316,745	467,23 18,984,65 2,39 2,051,66 2,701,39 219,40 4,974,88 144,54 3,268,67 401,62 3,814,84 55,366,64 (17,745,53 2,825,72 2,37,73 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 2,77,23 3,071,83 3,071,83 2,77,23 3,071,83 3,071,83 3,071,83 3,071,85 3,071,85 3,071,85 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 3,071,95 4,071,97 4
903 904 0p4 907 906 909 909 910 Sales Expense 0p4 913 913 915 Administrative ar 0p7 921 923 914 925 926 928 926 928 928 926 928 928 928 928 928 928 928 929 928 929 928 929 928 929 928 929 928 929 928 929 930 931	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational reation Supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Sales Expense Total Sales Expense etation Office Supplies and Expense Administrative Expenses Transe Presense Figures Pensions and Benefits Regulatory Commission Expense Miscellaneous General Expense Employee Pensions and Benefits Regulatory Commission Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense	21,357,033 2,697 2,330,246 3,040,743 2,47,276 5,620,961 162,705 3,675,850 4,220,73 0 4,290,629 62,735,083 (20,271,976) 3,182,476 2,67,745 4,888,086 0 3,226,983 4,775,372	2,372,375 304 278,562 333,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 366,756 30,014 1,826,251 0 341,745 529,184	467,23 18,984,65 2,39 2,051,68 2,701,39 219,40 4,974,88 144,54 3,268,67 401,62 3,814,84 55,366,64 (17,745,53 2,857,72 2,877,73 3,071,83 4,246,18
903 904 0pt 907 908 909 910 Sales Expense 0pt 911 912 913 916 4 Administrative ar 922 922 924 925 926 928 928 928 928 928	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational reation Supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Sales Expense de General Expense ration Office Supplies and Expense Administrative Expenses Transferred - Credit Property Insurance Premium Injuries and Damges Employee Pensions and Benefits Regulatory Commission Expense Miscellaneous General Expense Employee Pensions and Benefits Regulatory Commission Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense	21,357,033 2,697 2,330,246 3,040,743 2,47,75 5,620,961 162,705 3,675,850 4,220,73 0 4,290,629 4,290,629 4,290,620 3,182,476 2,67,745 4,888,086 0 3,226,983	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 3356,763 30,014 1,826,251 0 316,745	467,234 18,984,654 2,393 2,051,684 2,701,399 219,409 4,974,883 144,543 3,268,677 401,622
903 904 0p4 907 906 909 909 910 Sales Expense 0p4 913 913 915 Administrative ar 0p7 921 923 914 925 926 928 926 928 928 926 928 928 928 928 928 928 928 929 928 929 928 929 928 929 928 929 928 929 928 929 930 931	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Customer Information Expense Miscellaneous Customer Service Expense Total Customer Service and Informational reation Supervision Demonstration and Selling Expense Adverting Miscellaneous Sales Expense Total Sales Expense Total Sales Expense etation Office Supplies and Expense Administrative Expenses Transe Presense Figures Pensions and Benefits Regulatory Commission Expense Miscellaneous General Expense Employee Pensions and Benefits Regulatory Commission Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Expense	21,357,033 2,697 2,330,246 3,040,743 2,47,276 5,620,961 162,705 3,675,850 4,220,73 0 4,290,629 62,735,083 (20,271,976) 3,182,476 2,67,745 4,888,086 0 3,226,983 4,775,372	2,372,375 304 278,562 333,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 366,756 30,014 1,826,251 0 341,745 529,184	467,23 18,984,651 2,393 2,051,68 2,701,39 219,40 4,974,88 144,54 3,266,74 401,62 (17,745,53 2,855,72 2,877,73 3,071,83 2,2855,231 4,246,181 4,246,181 (12,745,53) (12,855,231 4,246,181 (12,855,231 4,246,181 (12,855,231 4,246,181 (12,855,231 4,246,181 (12,855,231 4,246,181 (12,855,231 (14,854) (12,855,231 (12,855,235,235) (12,855,235,235) (12,855,235,235) (12,855,235,235) (12,855,235,235) (12,855,235) (12,855,235) (12,855,235,235) (12,855,235) (12,855,235) (12,855,235) (12,855,235
903 904 0p4 907 906 909 909 910 Sales Expense 0p4 913 913 915 Administrative ar 0p7 921 923 914 925 926 928 926 928 928 926 928 928 928 928 928 928 928 929 928 929 928 929 928 929 928 929 928 929 928 929 930 931	Total Customer Accounts Expense and Informational reason Supervision Customer Assistance Expense Customer Information Expense Total Customer Service Expense Total Customer Service Expense Total Customer Service Expense Total Customer Service Expense Adventising Miscellaneous Sales Expense Total Subset Expense Total Sales Expense Total Sales Expense Totific Supplies and Expense Administrative Expenses Transferred - Credit Administrative Expenses Tanployee Pensons and Benefis Regulatory Commission Expense Miscellaneous General Expense Miscellaneous General Expense Miscellaneous General Plant Total Administrative and General Expense	21,357,033 2,697 2,330,246 3,040,743 247,276 5,620,961 162,705 3,675,850 452,073 0 4,290,629 62,735,083 (20,271,976) 3,182,476 267,745 4,898,086 4,898,086 4,898,086 3,226,983 4,775,572 3,990,022 62,803,791	2,372,375 304 278,562 339,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,422) 356,756 30,014 1,826,251 0 361,745 529,184 433,140 8,379,086	467,23 18,984,651 2,392 2,051,68 2,701,39 219,400 4,974,88 144,54 3,268,57 401,622 401,622 401,622 401,622 401,622 401,622 401,622 4,974,88 55,366,644 (17,745,53 2,855,72 23,733 3,071,88 (2,265,88) 3,556,888 54,424,700
903 904 0p4 907 906 909 909 910 Sales Expense 0p4 913 913 915 Administrative ar 0p7 921 923 914 925 926 928 926 928 928 926 928 928 928 928 928 928 928 929 928 929 928 929 928 929 928 929 928 929 928 929 930 931	Total Customer Accounts Expense and Informational reation Supervision Customer Assistance Expense Customer Information Expense Total Customer Service Expense Total Customer Service Expense Total Customer Service Expense Total Customer Service Expense Micellaneous Sales Expense Advertising Micellaneous Sales Expense Total Sales Expense d General Expense ration Office Supplies and Expense Administrative Expenses Transferred - Credit Poperty In travance Premium Injuries and Damages Employee Pensions and Benefits Regulatory Commission Expense Micellaneous General Expense Micellaneous General Expense Micellaneous General Expense Micellaneous General Expense	21,357,033 2,697 2,330,246 3,040,743 2,47,276 5,620,961 162,705 3,675,850 452,073 0 4,290,629 62,735,083 (20,271,976) 3,182,476 267,745 4,888,086 0 3,226,983 4,775,372 3,990,022	2,372,375 304 278,562 333,347 27,867 646,080 18,158 407,174 50,451 0 475,783 7,368,438 (2,526,442) 366,756 30,014 1,826,251 0 361,745 529,184 433,140	467,233 18,984,651 2,397 2,051,68 2,701,398 2,701,398 144,545 3,268,671 401,622 401,622 401,622 401,623 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,625 401,

Note: O&M above excludes amounts that are not intended to be recoverable in ratemaking. O&M based on Regulatory application of Pension related costs in O&M (costs map to Non-Operating for GAAP). O&M above varies from Test Year Result for System due to exclusions above and SRRM environmental offset.

Allocation Factors - All in Washington %'s	Oregon	Washington
Customers-all	88.840%	11.160%
Customers-Residential	88.730%	11.270%
Customers-Commercial	89.880%	10.120%
Customers-Industrial	91.610%	8.390%
Customers-The Dalles	74.850%	25.150%
3-factor	88.790%	11.210%
firm volumes	89.580%	10.420%
sales volumes	90.120%	9.880%
sendout volumes	91.640%	8.360%
sales/sendout volumes	90.880%	9.120%
Customers Portland/Vancouver	90.880 <i>%</i> 84.710%	15.290%
Customers Portland/Vancouver 80%	87.770%	12.230%
Customers Portland/Vancouver Commercial	84.990%	15.010%
Payroll	89.243%	10.758%
Admin Transfer		
	86.974%	13.026%
Employee Cost	88.792%	11.208%
Regulatory	70.000%	30.000%
Telemetering	87.234%	12.766%
Direct-Wa	0.000%	100.000%
Direct-Or	100.000%	0.000%
Gross plant direct assign	88.420%	11.580%
Transmission	98.860%	1.200%
Depreciation	88.707%	11.293%
Rate Base	87.988%	12.012%

NW Natural Test Year Based on Twelve Months Ended September 30, 2018 Test Period Actuals Tax Adjustment

	Washington	
Line No.	-	Amount (a)
1	Utility Income before Interest and Taxes	\$9,883,990
2	Interest on Historic Average Rate Base	4,159,279
3	Pre-Tax Net Income	5,724,711
4	Permanent Differences	849,455
5	Pre Tax Income Adjusted for Permanents	6,574,166
6	Tax Rate	21.00%
7	Federal Income Tax Before Credits	\$1,380,575
8	Federal Tax Credits	(10,277)
9	Federal Income Tax	\$1,370,297

NW Natural Washington Rate Case Test Year Based on Twelve Months Ended September 30, 2018 Rate Base – System & Washington

ate Base - System & Washington														
	September 2017	October 2017	November 2017	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	13 Mont AMA
System	_													
ross Plant														
Intangible Software	102,343,776	102,795,439	103,900,996	105,175,574	105,211,287	105,976,732	105,934,961	105,959,178	105,958,907	106,339,619	106,349,582	106,337,338	110,918,040	105,547
Intangible Other	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84,795	84
Production	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675,198	675
Transmission	165,102,348	165,326,950	165,348,542	166,587,143	166,646,960	166,671,736	167,823,514	167,860,782	168,195,225	168,592,916	168,666,086	168,694,327	169,634,549	167,315
Distribution	2,132,874,662	2,140,000,757	2,148,386,972	2,161,775,493	2,168,079,145	2,171,328,431	2,183,114,102	2,187,035,912	2,194,049,822	2,203,962,401	2,209,442,463	2,217,186,171	2,226,387,112	2,180,332
General	130,867,940	127,364,704	130,898,990	132,305,812	133,613,204	133,598,610	133,842,412	133,918,068	134,888,661	140,035,829	141,966,472	142,119,016	142,319,755	135,095
Land	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,767,907	10,76
Structures	60,074,932	60,079,512	60,090,509	60,375,857	60,383,178	60,385,021	60,386,850	60,388,633	60,379,001	60,437,191	60,438,125	60,450,494	60,497,322	60,34
Storage and storage transmission	312,776,312	316,309,651	316,695,313	314,220,159	314,242,931	318,058,925	318,088,443	318,113,158	318,098,137	320,408,990	320,417,502	320,416,360	321,048,969	317,665
CNG and LNG Refueling	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790,768	3,790
Total Gross Plant	2,919,358,638	2,927,195,682	2,940,639,990	2,955,758,707	2,963,495,374	2,971,338,124	2,984,508,953	2,988,594,399	2,996,888,423	3,015,095,615	3,022,598,900	3,030,522,375	3,046,124,415	2.981.614
	2,515,556,056	2,327,133,082	2,940,033,530	2,333,738,707	2,503,453,374	2,571,550,124	2,904,908,993	2,300,334,333	2,330,000,423	3,013,033,013	3,022,336,500	3,030,322,373	3,040,124,413	2,561,01
erve														
Intangible Software	(62,524,338)	(62,759,202)	(62,996,864)	(63,238,775)	(63,483,064)	(63,728,791)	(63,975,818)	(64,222,814)	(64,469,852)	(64,717,574)	(64,965,998)	(65,214,417)	(65,471,040)	(63,98
Intangible Other	-	-	-	-	-	-	-	-	-	-	-	-	-	
Production	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(691,036)	(69
Transmission	(35,198,591)	(35,611,864)	(36,025,882)	(36,441,032)	(36,857,901)	(37,276,169)	(37,694,607)	(38,115,049)	(38,535,522)	(38,957,364)	(39,379,388)	(39,801,543)	(40,224,172)	(37,70
Distribution	(990,378,350)	(994,028,245)	(997,877,669)	(1,001,460,546)	(1,004,738,482)	(1,008,257,483)	(1,011,729,124)	(1,015,259,308)	(1,019,060,727)	(1,022,176,197)	(1,025,018,669)	(1,028,199,175)	(1,032,025,125)	(1,011,5
General	(54.185.255)	(50,853,849)	(51,621,897)	(52.414.707)	(53,254,300)	(53,744,783)	(54,350,554)	(55.166.223)	(55,624,931)	(56,459,606)	(57,355,537)	(58,254,319)	(59.042.689)	(54.6
Land	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(437,351)	(34,6
Structures	(437,351) (10.343.507)	(10,441,221)	(437,351) (10.538.947)	(437,351) (10.636.914)	(437,351) (10.735.124)	(437,351) (10.833.342)	(437,351) (10.931.563)	(437,351) (11,029,786)	(437,351) (11.128.004)	(437,351) (11,226,261)	(11.324.566)	(437,351) (11.422.883)	(437,351) (11.521.248)	(4 (10.9
Storage and storage transmission	(136,434,080)	(137,060,613)	(137,688,204)	(135,042,844)	(135,668,643)	(136,299,148)	(136,931,900)	(137,565,119)	(138,197,975)	(138,833,128)	(139,469,792)	(140,106,458)	(140,744,215)	(137,6
CNG and LNG Refueling	(2,123,804)	(2,126,448)	(2,129,093)	(2,131,737)	(2,134,382)	(2,137,026)	(2,139,671)	(2,142,315)	(2,144,959)	(2,147,604)	(2,150,248)	(2,152,893)	(2,155,537)	(2,1
Total Reserve	(1,292,316,311)	(1,294,009,829)	(1,300,006,941)	(1,302,494,942)	(1,308,000,282)	(1,313,405,130)	(1,318,881,623)	(1,324,629,001)	(1,330,290,357)	(1,335,646,120)	(1,340,792,586)	(1,346,280,073)	(1,352,312,413)	(1,319,7
Storage Gas	14,141,902	14,139,824	14,137,732	18,488,587	18,486,971	18,484,666	18,482,827	18,480,562	18,478,826	18,478,349	18,501,807	18,500,225	18,498,669	17,5
Customer Advances	(4,053,177)	(4,111,811)	(3,901,898)	(3,965,149)	(4,041,490)	(4,107,884)	(4,087,078)	(4,163,334)	(4,268,622)	(4,367,025)	(4,494,194)	(4,608,550)	(4,686,796)	(4,2
Leasehold Improvements	311,030	289,990	273,289	280,355	257,040	233,207	209,374	201,172	177,426	156,587	134,747	112,135	89,428	
Gas Reserves	64,227,541	63,343,617	62,401,478	61,474,178	60,379,281	59,429,948	58,399,198	57,435,595	56,459,266	55,566,517	54,392,699	53,257,966	52,190,434	58,3
Deferred Taxes	(430,947,126)	(431,135,548)	(431,323,970)	(431,512,392)	(431,700,814)	(431,889,236)	(432,077,658)	(432,266,079)	(432,454,501)	(432,642,923)	(432,831,345)	(433,019,767)	(433,208,189)	(432,0
Subtotal Rate Base	1.270.722.497	1,275,711,926	1,282,219,679	1,298,029,344	1,298,876,079	1,300,083,694	1.306.553.993	1,303,653,312	1.304.990.460	1.316.641.000	1,317,510,030	1,318,484,311	1.326.695.548	1,301,7
			-,,,	2,200,020,0	2/200/010/010		2,200,000,000	2/000/000/000	2,00 ,000,000	-,,	-/0/0-0/000	-,,	2/020/000/010	
Average Rate Base														1,301,78
Average Deferred Taxes														432,0
Ending Deferred Taxes														(433,20
Total Rate Base													_	\$1,300,65
													=	
Washington												0.103748884		
oss Plant												0.203740004		
	11,421,565	11,471,971	44 505 354	11,737,594	11,741,580	** 033 003	11,822,342	11,825,044	11,825,014	11,867,501	11,868,613	44.057.047	12,378,453	11,7
Intangible Software			11,595,351			11,827,003						11,867,247		11,7
Intangible Other	447	447	447	447	447	447	447	447	447	447	447	447	447	
Production		-	-	-	-	-	-	-	-	-	-	-	-	
Transmission	1,114,674	1,114,674	1,114,674	1,114,674	1,115,001	1,115,001	1,115,001	1,115,001	1,115,001	1,115,001	1,115,001	1,115,001	1,115,001	1,1
Distribution	260,330,717	261,778,867	264,513,478	267,685,383	268,646,497	269,005,469	271,664,674	272,703,899	274,534,759	277,930,132	277,960,738	279,877,160	281,297,949	271,4
General	14,670,296	14,277,583	14.673.777	14,831,481	14,978,040	14,976,404	15,003,734	15.012.215	15.121.019	15,698,016	15,914,442	15,931,542	15,954,044	15.1
Land		1.994.682						1.994.682						1.9
	1,994,682		1,994,682	1,994,682	1,994,682	1,994,682	1,994,682		1,994,682	1,994,682	1,994,682	1,994,682	1,994,682	
Structures	5,570,215	5,570,639	5,571,659	5,598,117	5,598,795	5,598,966	5,599,136	5,599,301	5,598,408	5,603,804	5,603,890	5,605,037	5,609,379	5,5
Storage and storage transmission	29,152,692	29,520,866	29,561,052	29,303,141	29,305,513	29,703,140	29,706,216	29,708,791	29,707,226	29,948,017	29,948,904	29,948,785	30,014,703	29,
CNG and LNG Refueling	424,945	424,945	424,945	424,945	424,945	424,945	424,945	424,945	424,945	424,945	424,945	424,945	424,945	
Total Gross Plant	324.680.232	326,154,674	329,450,064	332.690.464	333,805,501	334,646,057	337,331,176	338.384.325	340,321,501	344,582,545	344,831,662	346,764,845	348,789,603	337,:
Total Gloss Plant	524,080,252	320,134,074	529,450,064	552,090,404	333,803,301	334,646,037	557,551,176	330,304,323	540,521,501	344,382,343	344,631,002	340,704,643	346,769,003	337,.
rve														
Intangible Software Intangible Other	(6,977,716)	(7,003,927)	(7,030,450)	(7,057,447)	(7,084,710)	(7,112,133)	(7,139,701)	(7,167,266)	(7,194,836)	(7,222,481)	(7,250,205)	(7,277,929)	(7,306,568)	(7,:
Production	-	-	-	-	-	-	-	-	-	-	-		-	
Transmission	(142,343)	(144,247)	(146,152)	(148,056)	(149,960)	(151,865)	(153,770)	(155,675)	(157,580)	(159,484)	(161,389)	(163,294)	(165,199)	(:
	(105,955,041)	(106,374,361)	(106,868,265)	(107,403,156)	(107,922,696)	(108,475,865)	(109,032,956)	(109,570,211)	(110,067,678)	(110,578,630)	(110,734,782)	(111,277,218)	(111,862,300)	(108,9
Distribution		(===,0, -,001)		(5,875,689)	(5,969,807)	(6,024,790)	(6,092,697)	(6,184,134)	(6,235,555)	(6,329,122)	(6,429,556)	(6,530,309)	(6,618,685)	(106,1
		(5 700 710)				(6,024,790) (81,016)								
General	(6,074,167)	(5,700,716)	(5,786,815)				(81,016)	(81,016)	(81,016)	(81,016)	(81,016)	(81,016)	(81,016)	
General Land	(6,074,167) (81,016)	(81,016)	(81,016)	(81,016)	(81,016)									(1,0
General Land Structures	(6,074,167) (81,016) (959,061)	(81,016) (968,122)	(81,016) (977,183)	(81,016) (986,267)	(995,373)	(1,004,480)	(1,013,587)	(1,022,694)	(1,031,801)	(1,040,911)	(1,050,026)	(1,059,142)	(1,068,263)	
General Land	(6,074,167) (81,016)	(81,016) (968,122) (13,210,765)	(81,016) (977,183) (13,268,710)	(81,016) (986,267) (12,985,613)	(995,373) (13,043,371)		(1,013,587) (13,160,102)	(1,022,694) (13,218,633)	(13,277,126)	(13,335,859)	(1,050,026) (13,394,749)	(1,059,142) (13,453,639)	(13,512,643)	(13,2
General Land Structures	(6,074,167) (81,016) (959,061)	(81,016) (968,122)	(81,016) (977,183)	(81,016) (986,267)	(995,373)	(1,004,480)								
General Land Structures Storage and storage transmission	(6,074,167) (81,016) (959,061) (13,152,931)	(81,016) (968,122) (13,210,765)	(81,016) (977,183) (13,268,710)	(81,016) (986,267) (12,985,613)	(995,373) (13,043,371)	(1,004,480) (13,101,619)	(13,160,102)	(13,218,633)	(13,277,126)	(13,335,859)	(13,394,749)	(13,453,639)	(13,512,643)	(2
General Land Structures Storage and storage transmission CNG and LNG Refueling Total Reserve	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354)	(81,016) (968,122) (13,210,765) (238,375) (133,721,530)	(81,016) (977,183) (13,268,710) (238,671) (134,397,261)	(81,016) (986,267) (12,985,613) (238,968) (134,776,211)	(995,373) (13,043,371) (239,264) (135,486,197)	(1,004,480) (13,101,619) (239,561) (136,191,329)	(13,160,102) (239,857) (136,913,686)	(13,218,633) (240,154) (137,639,782)	(13,277,126) (240,450) (138,286,041)	(13,335,859) (240,746) (138,988,251)	(13,394,749) (241,043) (139,342,766)	(13,453,639) (241,339) (140,083,887)	(13,512,643) (241,636) (140,856,310)	(136,9
General Land Structures Storage and storage transmission CNG and LNG Refueling Total Reserve Storage Gas	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354) 1,473,586	(81,016) (968,122) (13,210,765) (238,375) (133,721,530) 1,473,370	(81,016) (977,183) (13,268,710) (238,671) (134,397,261) 1,473,152	(81,016) (986,267) (12,985,613) (238,968) (134,776,211) 1,926,511	(995,373) (13,043,371) (239,264) (135,486,197) 1,926,342	(1,004,480) (13,101,619) (239,561) (136,191,329) 1,926,102	(13,160,102) (239,857) (136,913,686) 1,925,911	(13,218,633) (240,154) (137,639,782) 1,925,675	(13,277,126) (240,450) (138,286,041) 1,925,494	(13,335,859) (240,746) (138,988,251) 1,925,444	(13,394,749) (241,043) (139,342,766) 1,927,888	(13,453,639) (241,339) (140,083,887) 1,927,723	(13,512,643) (241,636) (140,856,310) 1,927,561	(13,2 (2 (136,9 1,8
General Land Structures Storage and storage transmission CNG and LNG Refueling Total Reserve Storage Gas Customer Advances	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354) 1,473,586 (621,337)	(81,016) (968,122) (13,210,765) (238,375) (133,721,530) 1,473,370 (653,473)	(81,016) (977,183) (13,268,710) (238,671) (134,397,261) 1,473,152 (657,716)	(81,016) (986,267) (12,985,613) (238,968) (134,776,211) 1,926,511 (668,837)	(995,373) (13,043,371) (239,264) (135,486,197) 1,926,342 (683,153)	(1,004,480) (13,101,619) (239,561) (136,191,329) 1,926,102 (696,246)	(13,160,102) (239,857) (136,913,686) 1,925,911 (698,518)	(13,218,633) (240,154) (137,639,782) 1,925,675 (713,866)	(13,277,126) (240,450) (138,286,041) 1,925,494 (735,487)	(13,335,859) (240,746) (138,988,251) 1,925,444 (765,624)	(13,394,749) (241,043) (139,342,766) 1,927,888 (795,604)	(13,453,639) (241,339) (140,083,887) 1,927,723 (818,449)	(13,512,643) (241,636) (140,856,310) 1,927,561 (847,226)	(2 (136,9 1,8 (7
General Land Structures Storage and storage transmission CNG and LNG Refueling Total Reserve Storage Gas	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354) 1,473,586	(81,016) (968,122) (13,210,765) (238,375) (133,721,530) 1,473,370	(81,016) (977,183) (13,268,710) (238,671) (134,397,261) 1,473,152	(81,016) (986,267) (12,985,613) (238,968) (134,776,211) 1,926,511	(995,373) (13,043,371) (239,264) (135,486,197) 1,926,342	(1,004,480) (13,101,619) (239,561) (136,191,329) 1,926,102	(13,160,102) (239,857) (136,913,686) 1,925,911	(13,218,633) (240,154) (137,639,782) 1,925,675	(13,277,126) (240,450) (138,286,041) 1,925,494	(13,335,859) (240,746) (138,988,251) 1,925,444	(13,394,749) (241,043) (139,342,766) 1,927,888	(13,453,639) (241,339) (140,083,887) 1,927,723	(13,512,643) (241,636) (140,856,310) 1,927,561	(2 (136,9 1,8
General Land Structures Storage and diorage transmission CMS and LNG Refueling Total Reserve Storage Gas Customer Advances Lasschold Improvements Gas Reserves	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354) 1,473,586 (621,337) 34,866 - 11,21%	(81,016) (968,122) (13,210,765) (238,375) (133,721,530) 1,473,370 (653,473) 32,508 -	(81,016) (977,183) (13,268,710) (238,671) (134,397,261) 1,473,152 (657,716) 30,636 -	(81,016) (986,267) (12,985,613) (238,968) (134,776,211) 1,926,511 (668,837) 31,428 -	(995,373) (13,043,371) (239,264) (135,486,197) 1,926,342 (683,153) 28,814 -	(1,004,480) (13,101,619) (239,561) (136,191,329) 1,926,102 (696,246) 26,142	(13,160,102) (239,857) (136,913,686) 1,925,911 (698,518) 23,471	(13,218,633) (240,154) (137,639,782) 1,925,675 (713,866) 22,551	(13,277,126) (240,450) (138,286,041) 1,925,494 (735,487) 19,889 -	(13,335,859) (240,746) (138,988,251) 1,925,444 (765,624) 17,553 -	(13,394,749) (241,043) (139,342,766) 1,927,888 (795,604) 15,105	(13,453,639) (241,339) (140,083,887) 1,927,723 (818,449) 12,570 -	(13,512,643) (241,636) (140,856,310) 1,927,561 (847,226) 10,025	(; (136,; 1,; (;
General Land Structures Storage and dronge transmission CWG and LNG Refueling Total Reserve Storage Gas Customer Advances Leasehold Improvements Gas Reserves Deferred Taxes	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354) 1,473,586 (621,337) 34,866 - 11,21% (39,563,413)	(81,016) (966,122) (13,210,765) (238,375) (133,721,530) 1,473,370 (653,473) 32,508 - (39,480,498)	(81,016) (977,183) (13,268,710) (238,671) (134,397,261) 1,473,152 (657,716) 30,636 - (39,397,584)	(81,016) (986,267) (12,985,613) (238,968) (134,776,211) 1,926,511 (668,837) 31,428 - (39,314,670)	(995,373) (13,043,371) (239,264) (135,486,197) 1,926,342 (683,153) 28,814 - (39,231,756)	(1,004,480) (13,101,619) (239,561) (136,191,329) (136,191,329) (1926,102 (696,246) 26,142 - (39,148,841)	(13,160,102) (239,857) (136,913,686) 1,925,911 (698,518) 23,471 - (39,065,927)	(13,218,633) (240,154) (137,639,782) 1,925,675 (713,866) 22,551 - (38,983,013)	(13,277,126) (240,450) (138,286,041) 1,925,494 (735,487) 19,889 - (38,900,098)	(13,335,859) (240,746) (138,988,251) 1,925,444 (765,624) 17,553 - (38,817,184)	(13,394,749) (241,043) (139,342,766) 1,927,888 (795,604) 15,105 - (38,734,270)	(13,453,639) (241,339) (140,083,887) 1,927,723 (818,449) 12,570 - (38,651,355)	(13,512,643) (241,636) (140,856,310) 1,927,561 (847,226) 10,025 - (38,568,441)	(136,
General Land Structures Storage and storage transmission CNG and LNG Refueling Total Reserve Storage Gas Customer Advances Leasehold Improvements Gas Reserves	(6,074,167) (81,016) (959,061) (13,152,931) (238,078) (133,580,354) 1,473,586 (621,337) 34,866 - 11,21%	(81,016) (968,122) (13,210,765) (238,375) (133,721,530) 1,473,370 (653,473) 32,508 -	(81,016) (977,183) (13,268,710) (238,671) (134,397,261) 1,473,152 (657,716) 30,636 -	(81,016) (986,267) (12,985,613) (238,968) (134,776,211) 1,926,511 (668,837) 31,428	(995,373) (13,043,371) (239,264) (135,486,197) 1,926,342 (683,153) 28,814 -	(1,004,480) (13,101,619) (239,561) (136,191,329) 1,926,102 (696,246) 26,142	(13,160,102) (239,857) (136,913,686) 1,925,911 (698,518) 23,471	(13,218,633) (240,154) (137,639,782) 1,925,675 (713,866) 22,551	(13,277,126) (240,450) (138,286,041) 1,925,494 (735,487) 19,889 -	(13,335,859) (240,746) (138,988,251) 1,925,444 (765,624) 17,553 -	(13,394,749) (241,043) (139,342,766) 1,927,888 (795,604) 15,105	(13,453,639) (241,339) (140,083,887) 1,927,723 (818,449) 12,570 -	(13,512,643) (241,636) (140,856,310) 1,927,561 (847,226) 10,025	(136

Average Deferred Taxes Ending Deferred Taxes Total Rate Base

162,292,282 39,065,927 (38,568,441) \$162,789,768

Test Year Based on Twelve Months Ended September 30, 2018 Cost of Capital and Revenue Sensitive Calculations

Line		Percent of		Weighted
No.		Total Capital	Average Cost	Cost
	-	(a)	(b)	(c)
	Cost of Capital			
1	Long Term Debt	50.00%	5.07%	2 5 2 2 0/
2	Short Term Debt	1.00%	2.19%	2.533% 0.022%
2	Common Stock	49.00%	9.40%	
3	Common Stock	49.00%	5.40%	4.000%
4	Total	100.00%	=	7.161%
	Revenue Sensitive Costs	_		
5	Gas Sales	96.091%		0.0400214
6	Transportation	3.549%		
7	Other	0.360%		
8	Subtotal	100.000%		
9	O & M - Uncollectible	0.106%		
10	WA Utility Tax	3.852%		
11	WUTC Fee	0.200%		
12	Total Rev Sensitive Costs Incl Tax	4.158%		
13	Federal Taxable Income	95.842%		
14	Federal Income Tax	20.127%		
15	Total Income Taxes	20.127%		
16	Total Rev Sensitive Costs Incl Tax	24.284%		
17	Utility Operating Income	75.716%		
18	Net-to-gross factor	132.073%		
19	Interest Coordination Factor	2.555%		
20	Federal tax rate	21.000%		
21	Uncollectible Accounts	0.106%		
		0.10070		

#### NW Natural Washington Rate Case Test Year Based on Twelve Months Ended September 30, 2018

			Washir	ngton Allocated R	esults	
Line No.		Test Year Results	Adjustments	Test Year Adjusted	Proposed Rate Increase	Test Year at 9.40% Equity Return
NO.		(a)	(b)	(c)	(d)	(e)
	Operating Revenues					
1	Sale of Gas	\$67,314,413	(\$3,389,642)	\$63,924,771	\$5,138,531	\$69,063,302
2	Transportation	2,370,981	(9,877)	2,361,104	0	2,361,104
3	Miscellaneous Revenues	(2,048,364)	2,287,568	239,204	0	239,204
4	Total Operating Revenues	67,637,030	(1,111,951)	66,525,079	5,138,531	71,663,610
	Operating Revenue Deductions					
5	Gas Purchased	25,772,083	(1,240,143)	24,531,940	0	24,531,940
6	Uncollectible Accrual for Gas Sales	58,166	17,692	75,858	5,424	81,282
7	Other Operating & Maintenance Expenses	17,640,139	(166,730)	17,473,408	0	17,473,408
8	Total Operating & Maintenance Expense	43,470,387	(1,389,181)	42,081,206	5,424	42,086,630
9	Federal Income Tax	1,370,297	(64,376)	1,305,921	1,034,228	2,340,149
10	Property Taxes	1,268,490	228,144	1,496,634	0	1,496,634
11	Other Taxes	3,688,228	(3,790)	3,684,438	208,213	3,892,651
12	Depreciation & Amortization	9,325,935	79,408	9,405,344	0	9,405,344
13	Total Operating Revenue Deductions	59,123,338	(1,149,794)	57,973,543	1,247,865	59,221,408
14	Net Operating Revenues	\$8,513,692	\$37,843	\$8,551,535	\$3,890,666	\$12,442,202
15	Total Rate Base	\$162,789,768	\$10,959,853	\$173,749,621	\$0	\$173,749,621
16	Rate of Return	5.23%		4.92%		7.16%
17	Return on Common Equity	5.46%		4.83%		9.40%

page is duplicate of "KSM-2 p1 - Rev Req" tab

UG-181053-NWN-AllParty-B	BRR-2
--------------------------	-------

tments to Test Period fear Based on Twelve Months Ended September 3	0, 2018																-		Settleme	int Issues				
	Restating	Restating	Restating	Restating	Restating	Settled Restating	Restating	Restating	Restating	Restating	Total Restating	Pro Forma	Pro Forma	Pro Forma	Pro Forma	Pro Forma	Pro Forma	Settlement	Settlement	Settlement	Settlement	Pro Forma	Total Pro Forma	
	Weather Normalized Gas Sales & Purchases (a)	Misc Revenues Adjustment (b)	Bonus Adjustment (c)	Property Tax Adjustment (d)	Uncollectible Accounts Adjustment (e)	Working Capital Adjustment (f)	Marketing and Cust. Comm. Adjustment (g)	Claims Adjustment (h)	Rate Case Adjustment (i)	Clearing Adjustment (j)	Total Restating Adjustments (k)	Payroll Adjustment (I)	Payroll Overhead Adjustment (m)	Depreciation Adjustment (n)	Post Test Year Capital Adjustment (o)	EDIT Amortization Adjustment (p)	Holdco Adjustment (q)	Bonus Adjustment (r)	Payroll Adjustment (s)	Misc Expense Adjustment (t)	UPC Adjustment (u)	Director Adjustment (v)	Total Pro Forma Adjustments (w)	Total Adjustme (x)
Operating Revenues Sale of Gas Transportation Miscellaneous Revenues	(3,593,725) (9,877)	2.287.568									(3,593,725) (9,877) 2.287.568										204,083		204,083 0 0	(3,38) (1 2.28)
Total Operating Revenues	(3,603,602)	2,287,568	0	0	0	0	0	0	0	0	(1,316,034)	0	0	0	0	0	0	0	0	0	204,083	0	204,083	(1,11
Operating Revenue Deductions Gas Purchased Uncollectible Accrual Other Operating & Maintenance Expenses	(1,327,405) (3,804)		(288,191)		21,280		(287,523)	35,323	137,833	16,385	(1,327,405) 17,476 (386,174)	539,431	159,872				(37,467)	(127,772)	(83,780)	(250,000)	87,262 215 0	19,160	87,262 215 219,443	(1,240 17 (166
Total Operating & Maintenance Expense	(1,331,208)	0	(288,191)	0	21,280	0	(287,523)	35,323	137,833	16,385	(1,696,102)	539,431	159,872	0	0	0	(37,467)	(127,772)	(83,780)	(250,000)	87,477	19,160	306,921	(1,38
Federal Income Tax Property Taxes Other Taxes Depreciation & Amortization	(446,539) (146,018)	460,924 92,692	61,640	(47,910) 228,144	(4,469)	(5,219)	60,380	(7,402)	(28,945)	(4,795)	37,665 228,144 (53,326) 0	(113,280)	(42,239) 41,266	39,293	(106,117) 266.518	(3,219)	7,868	26,832	17,594	52,500	22,751 8,269	(4,024)	(102,041) 0 49,536 79,408	(6 22 ( 7
Total Operating Revenue Deductions	(1,923,765)	553,616	(226,551)	180,234	16,811	(5,219)	(227,143)	27,921	108,888	11,590	(1,483,618)	426,151	158,899	(147,817)	160,401	(3,219)	(29,599)	(100,940)	(66,186)	(197,500)	118,498	15,136	333,824	(1,14
Net Operating Revenues	(1,679,837)	1,733,952	226,551	(180,234)	(16,811)	5,219	227,143	(27,921)	(108,888)	(11,590)	167,584	(426,151)	(158,899)	147,817	(160,401)	3,219	29,599	100,940	66,186	197,500	85,585	(15,136)	(129,741)	
verage Rate Base Utility Plant in Service Accumulated Depreciation			(208,765)			972,715		(2,895)		252,310	1,013,364				9,346,489	0							9,346,489 0	10,3
Net Utility Plant	0	0	(208,765)	0	0	972,715	0	(2,895)	0	252,310	1,013,364	0	0	0	9,346,489	0	0	0	0	0	0	0	9,346,489	10,3
Storage Gas Aid in Advance of Construction Leasehold Improvements Accumulated Deferred Income Taxes											0 0 0					600,000							0 0 600,000	
Total Rate Base	0	0	(208,765)	0	0	972,715	0	(2,895)	0	252,310	1,013,364	0	0	0	9,346,489	600,000	0	0	0	0	0	0	9,946,489	10,9
Interest Coordination		0	(5.334)	0	0	24.853	0	(74)	0	6.447	25.891	0	0		238.803	15.330	0	0	0		0	0	254.133	

Northwest Natural Gas Company Adjustments to Test Period Test Year Based on Twelve Months Ended September 30, 2018 (5000)

(\$000)																									
		Weather																							
		Normalized	Misc		Property	Uncollectible	Working	Marketing and				Total		Payroll		Post Test Year	EDIT				Misc			Total	
Line		Gas Sales	Revenues	Bonus	Tax	Accounts	Capital	Cust. Comm.	Claims	Rate Case	Clearing	Restating	Payroll	Overhead	Depreciation	Capital	Amortization	Holdco	Bonus	Payroll	Expense	UPC	Director	Pro Forma	Total
No.	Income Tax Calculations	& Purchases	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustments	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustment	Adjustments	Adjustments
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(i)	(k)	(1)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)
1	Book Revenues	(3,603,602)	2,287,568	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	204,083	0		
2	Book Expenses before Deprec. & Interest	(1,477,226)	92,692	(288,191)	228,144	21,280	0	(287,523)	35,323	137,833	16,385		539,431	201,138	0	0	0	(37,467)	(127,772)	(83,780)	(250,000)	95,747	19,160		
3	State Tax Depreciation	0	0	0	0	0	0	0	0	0	0		0	0	(187,110)	266,518	0	0	0	0	0	0	0		
4	Interest Expense (Income)	0	0	(5,334)	0	0	24,853	0	(74)	0	6,447		0	0	0	238,803	15,330	0	0	0	0	0	0		
5	Book/Tax Differences (Sched. M)	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0		
6	Federal Taxable Income	(2,126,376)	2,194,876	293,525	(228,144)	(21,280)	(24,853)	287,523	(35,249)	(137,833)	(22,832)		(539,431)	(201,138)	187,110	(505,321)	(15,330)	37,467	127,772	83,780	250,000	108,336	(19,160)		
7	Federal Income Tax [1]	(446,539)	460,924	61,640	(47,910)	(4,469)	(5,219)	60,380	(7,402)	(28,945)	(4,795)		(113,280)	(42,239)	39,293	(106,117)	(3,219)	7,868	26,832	17,594	52,500	22,751	(4,024)		
8	пс	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0		
9	Current Federal Tax	(446,539)	460,924	61,640	(47,910)	(4,469)	(5,219)	60,380	(7,402)	(28,945)	(4,795)		(113,280)	(42,239)	39,293	(106,117)	(3,219)	7,868	26,832	17,594	52,500	22,751	(4,024)		
10	Deferred Income Tax - Federal	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0		
11	Deferred Income Tax - State	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0		
12	ITC Restored (Deferred)	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0		
13	Total Federal Tax	(446,539)	460,924	61,640	(47,910)	(4,469)	(5,219)	60,380	(7,402)	(28,945)	(4,795)		(113,280)	(42,239)	39,293	(106,117)	(3,219)	7,868	26,832	17,594	52,500	22,751	(4,024)		

#### UG-181053-NWN-AllParty-BRR-2

Worksheet a

#### NW Natural

Test Year Based on Twelve Months Ended September 30, 2018 Weather Normalized Gas Sales and Purchases Adjustment

			Actual		Normalized			
		Therm	Average Class	Revenues	Therm	Average Class	Revenues	
Reve	nues	Deliveries	Price Per Therm	and Margin	Deliveries	Price Per Therm	and Margin	Adjustment
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Sales Volumes and Revenues							
1	Residential	50,068,986	0.93166	\$46,647,052	50,368,669	0.87489	\$44,067,223	
2	Commercial	21,738,480	0.83207	\$18,087,986	21,869,677	0.78588	\$17,187,046	
3	Industrial Firm	3,052,386	0.64441	\$1,966,975	3,064,902	0.62388	\$1,912,138	
4	Interruptible	1,319,198	0.41212	\$543,668	1,319,198	0.42016	\$554,280	
5	Total Sales of Gas Revenues	76,179,050		\$67,245,682	76,622,447		\$63,720,688	(\$3,524,994)
6	Unbilled amounts	117,158		\$68,731				(\$68,731)
7	Unaccounted For Gas	228,702						
	Transportation Volumes and Revenues							
8	Firm	7,065,720	0.16811	\$1,187,790	7,065,720	0.16734	\$1,182,353	
9	Interruptible	10,909,907	0.08649	\$943,569	10,908,382	0.08609	\$939,123	
10	Special Contracts - Firm	2,813,155	0.08518	\$239,621	2,813,155	0.08518	\$239,628	
11	Total Transportation	20,788,782	-	\$2,370,981	20,787,257	-	\$2,361,104	(\$9,877)
12	Total Deliveries and Revenues	97,313,692	=	\$69,685,394	97,409,704	-	\$66,081,791	(\$3,603,602)
Gas C	osts							
13	Demand Charges (Net of Deferral)			\$8,770,697			\$8,063,564	
14	Commodity Charges (Net of Deferral)			19,856,051			16,381,114	
15	Commodity and Demand Amortizations		-	(2,854,665)		-	0	
16	Total Cost of Gas		=	\$25,772,083		-	\$24,444,678	(\$1,327,405)
17	Total Margin		=	\$43,913,311		=	\$41,637,113	

#### Worksheet b

**NW Natural** 

Line

14

Total

Washington Rate Case Test Year Based on Twelve Months Ended September 30, 2018 Adjustments to Miscellaneous Revenues

Normalized No. Actual Adjustment (a) (b) (c) **Revenue & Technical Adjustments** (\$2,032,720) \$0 \$2,032,720 1 **DSM** - Amortization 2 WA GREAT, WA-LIEE (\$304,443) \$O \$304,443 3 Subtotal (\$2,337,162) \$0 \$2,337,162 **Other Miscellaneous Revenues** 4 FORFEITED DISCOUNTS-LATE PAYMENT CHARGE \$89,244 \$90,177 \$933 5 \$5,723 \$5,951 \$228 **MISC SERVICE REVENUES-AUTOMATED PAYMENT** 6 \$1,500 \$1,500 \$0 MISC SERVICE REVENUES-DELINQ RECONN FEE \$0 7 MISC SERVICE REVENUES-FIELD COLLECTION C \$33,220 \$33,220 \$0 8 \$1,383 \$1,383 MISC SERVICE REVENUES-GAS DIVERSIONS 9 \$34,700 MISC SERVICE REVENUES-RECONN CHG-CR-AFTE \$34,433 (\$267) \$0 10 MISC SERVICE REVENUES-RECONN CHG-CR-DURI \$15,900 \$15,900 11 MISC SERVICE REVENUES-RECONN CHG-SEAS-AF \$1,200 \$1,717 \$517 \$550 \$0 12 MISC SERVICE REVENUES-RECONN CHG-SEAS-DU \$550 \$0 \$11,658 \$11,658 13 MISC SERVICE REVENUES-RETURNED CHECK CHA \$300 \$300 \$0 14 **MISC SERVICE REVENUES-SEAS RECONN FEE** (\$8) (\$8) \$0 MISC SERVICE REVENUES-SUMMARY BILL SVCS 15 **OTHER GAS REVENUES-METER RENTALS** \$18,356 \$19,365 \$1,008 16 \$770 17 \$600 \$1,370 **OTHER GAS REV-LNG SALES & OTHER MISC REV** 18 **RENT FROM GAS PROPERTY-RENT - UTILITY PR** \$74,465 \$21,689 (\$52,776) 13 Subtotal \$288,798 \$239,204 (\$49,594)

(\$2,048,364)

\$239,204

\$2,287,568

Worksheet c

#### Northwest Natural Gas Company

Test Year Based on Twelve Months Ended September 30, 2018 Bonus Adjustment

Line No.	_	2013 paid in 2014	2014 paid in 2015	2015 paid in 2016 1/	2016 paid in 2017 1/	2017 paid in 2018	Three Year Average	Test Year Accrual	Adjustment
	Officers/Exempt	_		(a)	(b)	(c)	(d)	(e)	(f)=(d)-(e)
1	Performance Bonus - O & M	\$4,330,699	\$2,986,058	\$6,213,593	\$5,597,391	\$6,107,412	\$5,047,031	\$6,572,483	(\$1,525,453)
2	Performance Bonus - Construction	2,187,716	1,502,230	2,580,181	2,594,415	2,952,686	\$2,363,446	3,587,548	(1,224,102)
	Clerical/Hourly	_							
3	Key Goals Bonus - O & M	0	69,528	0	597,200	1,105,922	\$354,530	1,400,378	(1,045,848)
4	Key Goals Bonus - Construction	0	34,842	0	358,883	534,668	\$185,679	764,387	(578,709)
5	Total	6,518,415	4,592,658	8,793,774	9,147,889	10,700,688	7,950,685	12,324,796	(4,374,111)
6 7 8	Total Adjusted O & M (line 3 + line 9) Washington Allocation Factor Adjustment to Washington - O&M						Employee Cost	-	(\$2,571,301) 11.21% (\$288,191)
9 10 11	Total Adjusted Construction (line 6 + line 12) Washington Allocation Factor Adjustment to Washington - Rate Base						Gross Plant	-	(\$1,802,811) 11.58% (\$208,765)

Adjustment takes expense from test period accrual to 3 year paid average - Settlement uses 5 year average

Test Year Based on Twelve Months Ended September 30, 2018 Property Tax Adjustment

Line No.	Expense (a)	Source
1 Property Taxes - Test Period Expense	\$1,268,490	'WP - Other Rev & Tax'!E21
2 Property Taxes - Paid During 2018	1,509,613	per Tax Dept
3 Property Taxes - Capitalized	12,979	Uses 2017 Calendar as proxy
4 Adjustment	\$228,144	

Worksheet d

#### Worksheet e

#### NW Natural

#### Test Year Based on Twelve Months Ended September 30, 2018 Uncollectible Accounts Adjustments

			12 Mo	nths Ended Septer	nber
Line		2016 - 2018	2018	2017	2016
No.		Total	Actual	Actual	Actual
	-	(a)	(b)	(c)	(d)
	Gas Revenues				
1	Residential	\$1,279,892,130	\$422,699,759	\$454,168,194	\$403,024,176
2	Commercial	636,944,211	208,617,626	227,807,903	200,518,682
3	Industrial	65,643,595	21,527,710	22,807,945	21,307,940
4	Interruptible	62,809,074	20,395,258	22,239,876	20,173,941
5	Total	2,045,289,010	673,240,352	727,023,918	645,024,739
	Net Write-Offs				
6	Residential	1,732,214	430,995	694,701	606,517
7	Commercial	275,086	86,089	95,298	93,699
8	Industrial	151,544	2,307	27,123	122,114
9	Interruptible	0	0	0	0
10	Total	2,158,844	519,392	817,122	822,330
	Write-Off % - 3-Year Average				
11	Residential	0.135%	0.102%	0.153%	0.150%
12	Commercial	0.043%	0.041%	0.042%	0.047%
13	Industrial	0.231%	0.011%	0.119%	0.573%
14	Interruptible	0.000%	0.000%	0.000%	0.000%
15	Weighted Total [1]	0.106%	0.077%	0.112%	0.127%
	Normalized Uncollectible				
16	Residential	\$572,084			
17	Commercial	90,099			
18	Industrial	49,699			
19	Interruptible	0			
20	Total	\$711,882			
21	Allocation Factor (Customers - All)	11.16%			
22	Washington Normalized Amount	\$79,446			
23	Washington Allocation of Accrued Amount	\$58,166			
24	Adjustment (Normalized less Accrued)	\$21,280			

[1] Weighted uncollectible rate of

Worksheet f

# NW Natural Washington Rate Case Working Capital Calculation

## This tab superceded by settlement amount on adjustments tab

	This tab superceded by settlement amount on adjustmen	AMA
	Average Invested Capital	
1	Common Equity	776,767,236
2	Preferred Stock	-
3	Miscellaneous Debt	813,733,020
4	Deferred ITC	322
5	Deferred Liabilities	16,505,113
6	Total Invested Capital	1,607,005,690
	Average Investments	
	Utility Operating Investments	
7	Plant in Service	2,981,614,839
8	Accumulated Depreciation	(1,327,857,300)
9	Deferred Income Taxes	(362,148,977)
10	Gas Stored Underground - Cushion Gas	18,056,545
11	Property Held for Future Use	960,295
12	Customer Advances	(5,072,451)
13	Contributions in Aid of Construction	(4,207,252)
14	Investment in Gas Reserves	114,848,596
15	Total Operating Investments	1,416,194,296
	Other Investments	
16	Construction Work In Process	186,480,461
17	Non-Utility Property	52,659,384
18	Accumulated Depreciation - non utility	(19,054,381)
19	Deferred Income Tax - non-utility & Oregon	(130,058,467)
20	Investments in Subsidiary Companies	58,304,491
21	Temporary Cash Investments	3,298,275
22	Deferred Gas Costs	(21,270,245)
23	Other Deferred Debits	113,293,024
24	Total Other Investments	243,652,542
25	Total Average Investments (in 15 + in 24)	1,659,846,838
26	Less CWIP (In 16)	(186,480,461)
27	Less Deferred Gas Costs (In 22)	21,270,245
28	Total Base Investment - System	1,494,636,622
29	Investor Supplied Working Capital (In 6 - In 28)	\$ 112,369,069
30	Less Working Gas Inventory	34,231,890
31	Allowable Working Capital - System	\$ 78,137,179
32	Working Capital Percentage Allowable (In 31 / In 28)	5.27%
33	Washington Rate Base (excludes WC - includes adjustments)	\$173,761,403
34	Allowable Investor Supplied Working Capital (In 33 X In 32)	\$ 9,150,577
35	Working Gas Inventory	\$ 34,231,890
36	Inventory allocation % - firm delivered	10.42%
37	Washington Gas Inventory (In 35 X In 36)	\$ 3,566,963
38	Total Working Capital Allowance (In 37 + In 34)	\$ 12,717,540

Washington Rate Base (excludes WC - includes adjustments) \$172,776,906

Worksheet g

# Test Year Based on Twelve Months Ended September 30, 2018 Marketing and Customer Communications Adjustment

Line		Washington Allocated	Disallowance	Disallowed	
No.	Marketing	Amount	Percent	Amount	
		(a)	(b)	(c)	Source
1	Marketing Expenses - Account 912	\$236,575	100%	(\$236,575)	181053-NWN-KSM-xlsx-WP15-1-4-2019

			Allocation	Disallowed	
		System	Factor	Washington	
		Expensed	(Residential	Allocated	
	Advertising	Amount	Customers)	Amount	
		(a)	(b)	(c)	
2	Expenses not qualifying under 480-90-223	\$452,073	11.27%	(\$50,949)	181053-NWN-KSM-xlsx-WP15-1-4-2019

Total Marketing and Advertising

3 Total Adjustment for Marketing & Communications

(\$287,523)

# Worksheet h

# NW Natural Test Year Based on Twelve Months Ended September 30, 2018 Claims Expense Adjustment

Line		ORM Expanse	Construction
No.	-	O&M Expense (a)	(b)
1	Expensed during Test period	\$112,509	\$145,967
	Normalized Expenses		
2	Actual Claims - Ordinary (Paid)	186,612	120,967
3	3-Year Average Claims - Extraordinary 1/	240,998	0
4	Subtotal	427,610	120,967
5	Adjustment - System (line 4 - line 1)	315,101	(25,000)
6	Allocation to Washington		
	(O&M on 3-factor, const on gross plant)	11.21%	11.58%
7	Adjustment	\$35,323	(\$2,895)

1/	Extraordinary Claims	TME December
	TME 9/30/16	298,383
	TME 9/30/17	358,715
	TME 9/30/18	65,897
	3-Year Average	240,998

Worksheet i

NW Natural Test Year Based on Twelve Months Ended September 30, 2018 Rate Case Expense Adjustment

Line No.	O&M Expense (a)
1 Outside Services - Washington Rate Case	\$413,500
2 3-Year Average for rate case frequency	\$137,833

Return on Equity Consultant	83,500
Cost of Service / Rate Design Consultant	130,000
Outside Legal	200,000
Total	413,500

Worksheet j

NW Natural Test Year Based on Twelve Months Ended September 30, 2018 Elimination of Clearing Account Balances

Line No.	Amount
1 Adjustment to O&M	\$16,385
2 Adjustment to Construction	\$252,310

Worksheet I (1)

## Northwest Natural Gas Company Test Year Based on Twelve Months Ended September 30, 2018 Payroll Adjustment - Excluding Bonuses

|--|

No.		Total 1/	Officers 2/	NBU	BU
	_	(a)	(b)	(c)	(d)
1	12 Months Payroll - 9/30/2018	103,089,048	3,681,313	51,335,877	48,071,858
2	Payroll - Annualized 3/	104,449,105	3,620,846	51,757,006	49,071,253
3	Annualized 2018 Wage Increases (5 months) NBU	791,392		791,392	
4	Annualized 2019 Wage Increases (12 months) NBU	2,101,936		2,101,936	
5	Annualized 2017 Wage Increases (2 months) BU	278,137			278,137
6	Adjust 2018 Wage Increases (12 months) BU	1,727,229			1,727,229
7	Adjust 2019 Wage Increases (12 months) BU	1,787,682			1,787,682
8	Payroll - Normalized	111,135,479	3,620,846	54,650,334	52,864,300
9	O&M Payroll Factor	63.1%	72.5%	64.7%	60.8%
10	O&M Payroll - Normalized	70,125,373	2,625,113	35,358,766	32,141,494
11	O&M Payroll - Actual	65,110,954	2,668,952	33,214,312	29,227,690
12	Adjustment to O & M Payroll - System	5,014,419	(43,839)	2,144,454	2,913,804
13	Washington Allocation for O&M Payroll	10.76%			
14	Adjustment to O & M Payroll - Washington	\$539,431			

#### Notes:

2017 BU Salary Adjustment December 1, 2017	3.50%
2018 NBU Adjustment March 1, 2018	3.75%
2018 BU Salary Adjustment December 1, 2018	3.50%
2019 NBU Adjustment March 1, 2019	4.00%
2019 BU Salary Adjustment December 1, 2019	3.50%

1/ Total and Officer columns included to determine company O&M % for some adjustments

2/ Normalized to test year average pay per executive times ending 12 Officers

3/ Amounts reflect average salaries at end of period count.

Worksheet I (2)

Northwest Natural Gas Company Test Year Based on Twelve Months Ended September 30, 2018 Payroll Adjustment - Excluding Bonuses Annualized Wages and Salaries

Line

\_

No.		Officers	NBU	BU
	-	(a)	(b)	(c)
1	Adjusted Employee Count - Year-end 1/	12.0	508.3	630.2
2	Average Employee Count - Test Period	12.2	504.2	617.4
3	Test Year Payroll	\$3,681,313	\$51,335,877	\$48,071,858
4	Average Payroll per Employee (line 3 / line 2)	\$301,737	\$101,816	\$77,865
5	Payroll Based on Year-end Employees (line 4 * line 1)	\$3,620,846	\$51,757,006	\$49,071,253

	Officers	NBU	BU
2017 October	12.0	489.5	596.4
2017 November	12.0	494.6	604.4
2017 December	11.9	499.7	612.3
2018 January	12.0	501.3	617.6
2018 February	12.0	505.5	611.8
2018 March	12.5	506.0	619.2
2018 April	12.0	507.5	620.5
2018 May	12.0	510.0	619.4
2018 June	12.0	510.2	622.2
2018 July	12.0	508.7	621.4
2018 August	13.0	509.1	633.0
2018 September	13.0	508.3	630.2
Average	12.2	504.2	617.4

1/ Reflects expected retirement of HR executive

Worksheet m

#### NW Natural

Test Year Based on Twelve Months Ended September 30, 2018 Payroll Overhead Adjustment

Line		System Adjustment Amount	Washington Allocation Factor 1/	Washington Adjustment Amount
No.	-	(a)	(b)	(c)
	Health and Life Insurance Adjustment	-		
1	Health and Life O&M Costs - Actual Test Period O&M	11,830,300		
2	Health and Life O&M Costs - Current Cost	12,199,939		
3	Total Adjustment	\$369,639	10.76%	39,764
	Pension Adjustment - Washington Allocated Costs	_		
4	Pension Costs - Test Period Actual O&M	1,844,666		
5	Pension Costs - Current Cost (Calendar 2018)	1,964,773		
6	Total Adjustment	\$120,108	100.00%	120,108
7	Total O&M Adjustment			159,872
	Note: Pension administrative costs and Western States not n	ormalized		
	Payroll Tax Adjustment	_		
8	Adjusted Payroll - O&M	70,125,373		
9	Test Period Payroll - O&M	65,110,954		
10	Incremental Payroll	5,014,419		

 11
 FICA Tax Rate
 7.65%

 12
 Incremental Payroll Taxes
 \$383,603
 10.76%
 41,266

1/ Payroll Cost Allocation Factor

Worksheet n

NW Natural Test Year Based on Twelve Months Ended September 30, 2018 Depreciation Adjustment

# Line No. Expense (a) 1 Depreciation Expense - Test Year Actual 9,325,935 2 Depreciation Expense - New Rates 9,138,825 3 Depreciation Expense Adjustment (187,110)

Worksheet o

Test Year Based on Twelve Months Ended September 30, 2018 Washington Post Test-Year Capital Projects

Line No.	Amount (a)	Source	Filed	Settlement
1 Addition to Rate Base	9,346,489	181053-NWN-KSM-xlsx-WP17-1-4-2019	10,189,608	9,346,489
2 Addition to Depreciation Expense	266,518	181053-NWN-KSM-xlsx-WP17-1-4-2021	298,684	266,518

# NW Natural Test Year Based on Twelve Months Ended September 30, 2018 Excess Deferred Tax Amortization

#### Line No. Expense Source (a) **Plant Related Excess Deferred Taxes** 400,000 Tax Exh. SRB-5, Pg. 1 1 Non-Plant Related Excess Deferred Taxes Tax Exh. SRB-5, Pg. 1 2 **Riders external to Rate Case Revenue Requirement** 400,000 3 Reduction of Deferred Taxes - Rate Base (3-Year Ave) 4 600,000

Worksheet p

NWN	latural	Worksheet q			Washington	Source
Test \	ear Based on Twelve Months Ended September 30, 2018					
Holdo	o Adjustment		42014	SEC REPORTING	13	181053-NWN-KSM-xlsx-WP14-1-4-2021
			42014	SEC REPORTING	303	select cost centers
			42014	SEC REPORTING	72,806	
Line			44010	FIN PLANNING & BUDGE	113,861	
No.	_	O&M Expense	46010	CORP SECRETARY	-	
		(a)	46010	CORP SECRETARY	(433)	
			46010	CORP SECRETARY	42	
			46010	CORP SECRETARY	19,763	
1	Washington Allocated amounts from Departments	425,738	46020	SHAREHOLDER SVCS	1,276	
2	Amount Allocable to Affiliates (3.4%) 1/	(14,475)	46020	SHAREHOLDER SVCS	2,466	
			46020	SHAREHOLDER SVCS	16,594	
3	Washington Allocated amounts from Departments	229,915	46020	SHAREHOLDER SVCS	23,300	
4	Amount Allocable to Affiliates (10%) 1/	(22,991)	46030	CORP ETHICS & COMPL	18,380	
			48010	INVESTOR RELATIONS	45,293	
5	Total Adjustment	(37,467)	72500	INTERNAL AUDITING	105,976	
			73600	VP & CORPORATE SECTY	6,100	
1/	Percentage allocations per Accounting study			Subject to Allocation (3.4)	425,738	
			46010	CORP SECRETARY	229,915	
				Subject to Allocation (10.0)	229,915	

# UG-181053-NWN-AllParty-BRR-2

Test Y	atural 'ear Based on Twelve Months Ended September 30, 2018 tor Adjustment	Worksheet r
Line No.	-	O&M Expense (a)
1	Washington Allocated Director Expense	229,915
2	Cost per Director (12 Directors)	19,160
3	Adjustment for Additional Director	19,160

# Deferred Tax- Washington Allocated

		Other	Depreciation	Total
September 2017		171,510	(39,734,923)	(39,563,413)
September 2018		220,909	(38,789,350)	(38,568,441)
Deferred Tax- System				
		Other	Depreciation	Total
September 2017			(430,947,126)	(430,947,126)
September 2018			(433,208,189)	(433,208,189)
Accum Deprec Factor			10.37%	
September 2017				
DEF INC TAX-UTIL-DEP	fed	283061	(357,168,974)	
DEF INC TAX-UTIL-DEP	state	283062	(73,778,152)	
			(430,947,126)	
		Fed Grossed Up	(382,991,328)	
		WA Alloc	(39,734,923)	

2018 September Balances:	Federal	State	SYS Total	Washington Allocation	
Accumulated Deferred Income Tax - Depreciation Tax Reform Reg. Liability - Plant (254100)	(217,460,814) (191,300,509)	(75,091,273)	(292,552,087) (191,300,509)	(24,197,350) (18,470,886)	10.37% < Allocation < Actual
Tax Reform DTA - Plant (283012)	37,389,597		50,644,407	3,878,886.08	< Calc'd
Net Plant Related Balance	(371,371,726)	(61,836,462)	(433,208,189)	(38,789,350)	

Washington Rate Case

Test Year Based on Twelve Months Ended September 30, 2018

Detail of Other Revenues, Other Taxes and Depreciation

Line		Washington	Oregon	System	allocation
No.	_				
	Other Operating Revenues				
1	Reconnect Charges	54,150	555,056	609,206	Direct
2	Late Payment Charges	89,244	1,952,953	2,042,198	Direct
3	Automated Payment Charge	5,723	34,640	40,363	Direct
4	Return Check	11,658	106,545	118,203	Direct
5	Field Collection	33,220	346,530	379,750	Direct
6	Meter Rentals	18,356	169,005	187,362	Direct
7	Utility Property Rental	74,465	715,230	789,695	Direct & Gross Plant
8	Miscellaneous	1,983	377,812	379,795	Direct
9	Rate Adjustments (Rev Def & Amort)	(2,337,162)	(17,673)	(2,354,835)	Direct
10	Total Other Op Revenues	(2,048,364)	4,240,099	2,191,735	
	Other Taxes				
11	Property	1,268,490	20,012,319	21,280,809	Direct
12	Franchise	2,759,453	14,839,281	17,598,735	Direct
13	Payroll	667,912	5,540,837	6,208,749	Payroll
14	Regulatory Fee	147,230	1,790,395	1,937,625	Direct
15	Department of Energy	0	854,967	854,967	Direct
16	North Mist Property Tax	0	752,183	752,183	Direct
17	Other	113,633	162,151	275,784	Direct & 3-Factor
18	Other Taxes	4,956,718	43,952,133	48,908,851	
	Depreciation Expense				
19	Intangible Software	328,852	2,617,851	2,946,703	Customers All
20	Intangible Other	0	_,,	0	Direct
21	Production	0	0	0	Direct
22	Transmission	22,856	5,002,726	5,025,581	Direct
23	Distribution	7,311,855	50,917,777	58,229,632	Direct
24	General	850,936	6,739,927	7,590,863	3-Factor
25	Land & Structures	107,220	1,070,521	1,177,741	Per Alloc History
26	Storage and storage transmission	700,659	6,881,518	7,582,177	Firm Volumes
27	CNG and LNG Refueling	3,557	28,176	31,733	3-Factor
28	Total Depreciation	9,325,935	73,258,496	82,584,431	
	Cost of Gas				
29	WACOG Incurred	17,934,917	176,291,228	194,226,144	
30	WACOG Deferred	1,921,134	14,110,568	16,031,702	
31	Demand Incurred	8,258,452	70,495,465	78,753,917	
31	Demand Deferred	512,245	4,362,863	4,875,108	
32	Amortizations	(2,854,665)	(14,665,139)	(17,519,804)	
34	Mist ISS Fuel-in-kind	(2,007,000)	(17,000,100)	661,882	
34	Total Cost of Gas	25,772,083	250,594,985	277,028,949	
55		23,772,003		277,020,343	