

BEFORE THE  
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

UG-\_\_  
GENERAL RATE APPLICATION  
OF  
NORTHWEST NATURAL GAS COMPANY

December 31, 2018

**Direct Exhibit of Kevin S. McVay**

**REVENUE REQUIREMENT**

**Exh. KSM-3**

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

<u>Line No.</u>	<u>System Test Year Results</u> (a)	<u>Washington Test Year Results</u> (b)
<b>Operating Revenues</b>		
1	\$665,326,649	\$67,314,413
2	19,869,300	2,370,981
3	<u>2,191,735</u>	<u>(2,048,364)</u>
4	687,387,683	67,637,030
<b>Operating Revenue Deductions</b>		
5	277,028,949	25,772,083
6	525,404	58,166
7	<u>166,944,399</u>	<u>17,639,305</u>
8	444,498,752	43,469,553
9	16,459,355	1,360,922
10	6,482,574	0
11	21,280,809	1,268,490
12	27,628,043	3,687,322
13	<u>82,584,431</u>	<u>9,434,311</u>
14	<u>598,933,963</u>	<u>59,220,599</u>
15	<u>\$88,453,720</u>	<u>\$8,416,431</u>
16	<u>\$1,300,658,040</u>	<u>\$162,928,776</u>
17	<u>6.80%</u>	<u>5.17%</u>
18	<u>8.63%</u>	<u>5.33%</u>

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

	System	Washington	Oregon
<b>Natural Gas Storage</b>			
<b>Underground Storage Expense</b>			
<b>Operation</b>			
816 Wells Expense	291,774	30,403	261,371
818 Compressor Station Expense	73,078	7,615	65,463
820 Measuring and Regulator Station Expense	2,626,828	272,282	2,354,546
821 Purification Expense	20,987	2,138	18,849
<b>Maintenance</b>			
832 Wells Expense	237,434	24,741	212,693
834 Storage Maint. Expense of Compressor Equip	232,439	24,220	208,219
<b>Total Underground Storage Expense</b>	<b>3,482,540</b>	<b>361,399</b>	<b>3,121,142</b>
<b>Other Storage Expense</b>			
<b>Operation</b>			
840 Supervision and Engineering	172,057	17,928	154,129
<b>Total Other Storage Expense</b>	<b>172,057</b>	<b>17,928</b>	<b>154,129</b>
<b>Liquified Natural Gas Expense</b>			
<b>Operation</b>			
844 Supervision and Engineering	1,892,077	197,154	1,694,922
845 LNG Fuel Expense - Credit Liquef Costs	(100,562)	(10,479)	(90,083)
<b>Maintenance</b>			
847 Supervision and Engineering	1,117,824	116,477	1,001,347
<b>Total Liquified Natural Gas Expense</b>	<b>2,909,339</b>	<b>303,153</b>	<b>2,606,186</b>
<b>Total Natural Gas Storage</b>	<b>6,563,936</b>	<b>682,480</b>	<b>5,881,456</b>
<b>Transmission Expense</b>			
<b>Operation</b>			
856 Mains Expense	1,998,785	136,387	1,862,398
<b>Maintenance</b>			
863 Maintenance of Mains	166,376	18,635	147,741
<b>Total Transmission Expense</b>	<b>2,165,161</b>	<b>155,022</b>	<b>2,010,139</b>
<b>Distribution Expense</b>			
<b>Operation</b>			
870 Supervision and Engineering	3,497,212	302,733	3,194,479
874 Mains and Services Expense	12,875,979	1,505,786	11,370,192
875 Measuring and Regulator Station Expense - General	199,446	20,985	178,461
877 Measuring and Regulator Station Expense - City Gate	504,447	43,949	460,498
878 Meter and House Regulator Expense	6,022,667	670,318	5,352,349
879 Customer Installation Expense	11,036,726	1,229,188	9,807,538
880 Other Expense	1,778,614	182,681	1,595,933
881 Rents	224,751	31,096	193,654
<b>Maintenance</b>			
885 Supervision and Engineering	7,357,254	345,666	7,011,588
887 Mains	3,229,685	167,431	3,062,254
889 Measuring and Regulator Station Expense - General	1,499,234	136,348	1,362,886
891 Measuring and Regulator Station Expense - City Gate	201,538	14,444	187,093
892 Services	689,871	51,255	638,616
893 Meters and House Regulators	2,834,505	282,484	2,552,021

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

	System	Washington	Oregon
894 Other Equipment	70,468	2,286	68,182
Total Distribution Expense	52,022,395	4,986,651	47,035,744
<b>Customer Accounts Expense</b>			
Operation			
901 Supervision	1,718,146	191,745	1,526,401
902 Meter Reading Expenses	890,734	99,320	791,413
903 Customer Records and Collection Expense	18,222,749	2,023,144	16,199,606
904 Uncollectible Accounts	525,404	58,166	467,238
Total Customer Accounts Expense	21,357,033	2,372,375	18,984,658
<b>Customer Service and Informational</b>			
Operation			
907 Supervision	2,697	304	2,393
908 Customer Assistance Expense	2,330,246	278,562	2,051,684
909 Customer Information Expense	3,040,743	339,347	2,701,396
910 Miscellaneous Customer Service Expense	247,276	27,867	219,409
Total Customer Service and Informational	5,620,961	646,080	4,974,881
<b>Sales Expense</b>			
Operation			
911 Supervision	162,705	18,158	144,547
912 Demonstration and Selling Expense	3,675,850	407,174	3,268,676
913 Advertising	452,073	50,451	401,622
916 Miscellaneous Sales Expense	0	0	0
Total Sales Expense	4,290,629	475,783	3,814,845
<b>Administrative and General Expense</b>			
Operation			
921 Office Supplies and Expense	62,735,083	7,368,438	55,366,644
922 Administrative Expenses Transferred - Credit	(20,271,976)	(2,526,442)	(17,745,534)
924 Property Insurance Premium	3,182,476	356,756	2,825,721
925 Injuries and Damages	267,745	30,014	237,731
926 Employee Pensions and Benefits	4,898,086	1,826,246	3,071,841
928 Regulatory Commission Expense	0	0	0
930 Miscellaneous General Expense	3,226,983	361,745	2,865,238
931 Rents	4,775,372	529,184	4,246,188
Maintenance			
935 Maintenance of General Plant	3,990,022	433,138	3,556,884
Total Administrative and General Expense	62,803,791	8,379,079	54,424,712
Total Operations and Maintenance Expense	154,823,906	17,697,471	137,126,436
Percent of Total		11.43%	88.57%

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.

<b>Allocation Factors - All in Washington %'s</b>	<b>Oregon</b>	<b>Washington</b>
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	84.710%	15.290%
Customers Portland/Vancouver 80%	87.770%	12.230%
Customers Portland/Vancouver Commercial	84.990%	15.010%
Payroll	89.257%	10.743%
Admin Transfer	86.974%	13.026%
Employee Cost	88.792%	11.208%
Regulatory	70.000%	30.000%
Telemetry	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%	1.140%
Depreciation	88.378%	11.622%
Rate Base	87.481%	12.519%

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

**Washington**

<u>Line No.</u>	<u>Amount (a)</u>
1 Utility Income before Interest and Taxes	\$9,777,353
2 Interest on Historic Average Rate Base	<u>4,122,098</u>
3 Pre-Tax Net Income	5,655,255
4 Permanent Differences	874,268
5 Pre Tax Income Adjusted for Permanents	6,529,523
6 Tax Rate	<u>21.00%</u>
7 Federal Income Tax Before Credits	\$1,371,200
8 Federal Tax Credits	(10,277)
9 Federal Income Tax	<u><u>\$1,360,922</u></u>

NW Natural  
Washington Rate Case  
Test Year Based on Twelve Months Ended September 30, 2018  
Rate 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 Month AMA
<b>System</b>														
<b>Gross Plant</b>														
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	105,547,543
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	84,795
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	675,198
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	167,315,219
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	2,180,332,713
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	135,095,469
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	10,767,907
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	60,340,042
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	317,665,184
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	3,790,768
<b>Total Gross Plant</b>	<b>2,919,358,638</b>	<b>2,927,195,682</b>	<b>2,940,639,990</b>	<b>2,955,758,707</b>	<b>2,963,495,374</b>	<b>2,971,338,124</b>	<b>2,984,508,953</b>	<b>2,988,594,399</b>	<b>2,996,888,423</b>	<b>3,015,095,615</b>	<b>3,022,598,900</b>	<b>3,030,522,375</b>	<b>3,046,124,415</b>	<b>2,981,614,839</b>
<b>Reserve</b>														
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)	(63,980,905)
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)	(691,036)
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)	(37,700,642)
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)	(1,011,583,947)
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)	(54,642,890)
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)	(437,351)
Structures	(10,343,507)	(10,441,221)	(10,538,947)	(10,636,914)	(10,735,124)	(10,833,342)	(10,931,563)	(11,029,786)	(11,128,004)	(11,226,261)	(11,324,566)	(11,422,883)	(11,521,248)	(10,931,749)
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)	(137,621,081)
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)	(2,139,671)
<b>Total Reserve</b>	<b>(1,292,316,311)</b>	<b>(1,294,009,829)</b>	<b>(1,300,006,941)</b>	<b>(1,302,494,942)</b>	<b>(1,308,000,282)</b>	<b>(1,313,405,130)</b>	<b>(1,318,881,623)</b>	<b>(1,324,629,001)</b>	<b>(1,330,290,357)</b>	<b>(1,335,646,120)</b>	<b>(1,340,792,586)</b>	<b>(1,346,280,073)</b>	<b>(1,352,312,413)</b>	<b>(1,319,729,271)</b>
<b>Storage Gas</b>	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	17,581,722
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)	(4,207,252)
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	210,462
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	58,395,728
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)	(432,077,658)
<b>Subtotal Rate Base</b>	<b>1,270,722,497</b>	<b>1,275,711,926</b>	<b>1,282,219,679</b>	<b>1,298,029,344</b>	<b>1,298,876,079</b>	<b>1,300,083,694</b>	<b>1,306,553,993</b>	<b>1,303,653,312</b>	<b>1,304,990,460</b>	<b>1,316,641,000</b>	<b>1,317,510,030</b>	<b>1,318,484,311</b>	<b>1,326,695,548</b>	<b>1,301,788,571</b>
<b>Average Rate Base</b>														1,301,788,571
<b>Average Deferred Taxes</b>														432,077,658
<b>Ending Deferred Taxes</b>														(433,208,189)
<b>Total Rate Base</b>														<u>\$1,300,658,040</u>

NW Natural  
Washington Rate Case  
Test Year Based on Twelve Months Ended September 30, 2018  
Rate 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 Month AMA
<b>Washington</b>														
<b>Gross Plant</b>														
Intangible Software	11,421,565	11,471,971	11,595,351	11,737,594	11,741,580	11,827,003	11,822,342	11,825,044	11,825,014	11,867,501	11,868,613	11,867,247	12,378,453	11,779,106
Intangible Other	447	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	1,114,906
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	271,426,282
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	15,144,202
Land	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164	1,971,164
Structures	5,469,156	5,469,573	5,470,574	5,496,552	5,497,218	5,497,386	5,497,553	5,497,715	5,496,838	5,502,136	5,502,221	5,503,347	5,507,610	5,493,291
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	29,662,112
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	424,945
<b>Total Gross Plant</b>	<b>324,555,656</b>	<b>326,030,090</b>	<b>329,325,462</b>	<b>332,565,382</b>	<b>333,680,407</b>	<b>334,520,960</b>	<b>337,206,076</b>	<b>338,259,222</b>	<b>340,196,414</b>	<b>344,457,360</b>	<b>344,706,475</b>	<b>346,639,637</b>	<b>348,664,317</b>	<b>337,016,456</b>
<b>Reserve</b>														
Intangible Software	(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)	(7,140,269)
Intangible Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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)	(153,770)
Distribution	(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)	(108,934,541)
General	(6,074,167)	(5,700,716)	(5,786,815)	(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)	(6,125,468)
Land	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)	(80,061)
Structures	(941,662)	(950,557)	(959,454)	(968,373)	(977,314)	(986,256)	(995,197)	(1,004,140)	(1,013,081)	(1,022,026)	(1,030,976)	(1,039,927)	(1,048,882)	(995,214)
Storage and storage transmission	(13,152,931)	(13,210,765)	(13,268,710)	(12,985,613)	(13,043,371)	(13,101,619)	(13,160,102)	(13,218,633)	(13,277,126)	(13,335,859)	(13,394,749)	(13,453,639)	(13,512,643)	(13,231,914)
CNG and LNG Refueling	(238,078)	(238,375)	(238,671)	(238,968)	(239,264)	(239,561)	(239,857)	(240,154)	(240,450)	(240,746)	(241,043)	(241,339)	(241,636)	(239,857)
<b>Total Reserve</b>	<b>(133,561,999)</b>	<b>(133,703,010)</b>	<b>(134,378,578)</b>	<b>(134,757,363)</b>	<b>(135,467,183)</b>	<b>(136,172,150)</b>	<b>(136,894,341)</b>	<b>(137,620,273)</b>	<b>(138,266,366)</b>	<b>(138,968,410)</b>	<b>(139,322,761)</b>	<b>(140,063,716)</b>	<b>(140,835,974)</b>	<b>(136,901,095)</b>
<b>Storage Gas</b>	<b>1,473,586</b>	<b>1,473,370</b>	<b>1,473,152</b>	<b>1,926,511</b>	<b>1,926,342</b>	<b>1,926,102</b>	<b>1,925,911</b>	<b>1,925,675</b>	<b>1,925,494</b>	<b>1,925,444</b>	<b>1,927,888</b>	<b>1,927,723</b>	<b>1,927,561</b>	<b>1,832,015</b>
<b>Customer Advances</b>	<b>(621,337)</b>	<b>(653,473)</b>	<b>(657,716)</b>	<b>(668,837)</b>	<b>(683,153)</b>	<b>(696,246)</b>	<b>(698,518)</b>	<b>(713,866)</b>	<b>(735,487)</b>	<b>(765,624)</b>	<b>(795,604)</b>	<b>(818,449)</b>	<b>(847,226)</b>	<b>(718,437)</b>
<b>Leasehold Improvements</b>	<b>34,866</b>	<b>32,508</b>	<b>30,636</b>	<b>31,428</b>	<b>28,814</b>	<b>26,142</b>	<b>23,471</b>	<b>22,551</b>	<b>19,889</b>	<b>17,553</b>	<b>15,105</b>	<b>12,570</b>	<b>10,025</b>	<b>23,593</b>
<b>Gas Reserves</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Deferred Taxes</b>	<b>(39,553,664)</b>	<b>(39,451,172)</b>	<b>(39,348,679)</b>	<b>(39,246,187)</b>	<b>(39,143,695)</b>	<b>(39,041,202)</b>	<b>(38,938,710)</b>	<b>(38,836,217)</b>	<b>(38,733,725)</b>	<b>(38,631,233)</b>	<b>(38,528,740)</b>	<b>(38,426,248)</b>	<b>(38,323,756)</b>	<b>(38,938,710)</b>
<b>Subtotal Rate Base</b>	<b>152,327,109</b>	<b>153,728,313</b>	<b>156,444,277</b>	<b>159,850,934</b>	<b>160,341,533</b>	<b>160,563,607</b>	<b>162,623,889</b>	<b>163,037,092</b>	<b>164,406,219</b>	<b>168,035,091</b>	<b>168,002,364</b>	<b>169,271,519</b>	<b>170,594,947</b>	<b>162,313,822</b>
<b>Average Rate Base</b>														<b>162,313,822</b>
<b>Average Deferred Taxes</b>														<b>38,938,710</b>
<b>Ending Deferred Taxes</b>														<b>(38,323,756)</b>
<b>Total Rate Base</b>														<b>\$162,928,776</b>



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

Line No.		Percent of Total Capital	Average Cost	Weighted Cost
		(a)	(b)	(c)
<u>Cost of Capital</u>				
1	Long Term Debt	49.50%	5.066%	2.508%
2	Short Term Debt	1.00%	2.186%	0.022%
3	Common Stock	49.50%	10.300%	<u>5.099%</u>
4	Total	<u>100.00%</u>		<u>7.629%</u>
<u>Revenue Sensitive Costs</u>				
5	Gas Sales	96.079%		
6	Transportation	3.560%		
7	Other	<u>0.361%</u>		
8	Subtotal	100.000%		
9	O & M - Uncollectible	0.106%		
10	WA Utility Tax	3.852%		
11	WUTC Fee	<u>0.200%</u>		
12	Total Rev Sensitive Costs Incl Tax	4.158%		
13	Federal Taxable Income	95.842%		
14	Federal Income Tax	<u>20.127%</u>		
15	Total Income Taxes	20.127%		
16	Total Rev Sensitive Costs Incl Tax	<u>24.284%</u>		
17	Utility Operating Income	<u>75.716%</u>		
18	Net-to-gross factor	<u>132.073%</u>		
19	Interest Coordination Factor	2.530%		
20	Federal tax rate	21.000%		
21	Uncollectible Accounts	0.106%		