

EXHIBIT A

BEFORE THE  
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

NW NATURAL SUPPORTING MATERIALS

Multi-Story Multi-Family Program

NWN WUTC Advice No. 17-12

October 24, 2017

# NW NATURAL

## EXHIBIT A

### Supporting Materials

NWN WUTC ADVICE NO. 17-12

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## NW Natural Determination of Cost of Service - Multifamily Rate Tariff Proposal SUMMARY TABLE

Input Capital Costs and Rates		
	% of Capital Cost	Weighted Cost
Cost of Capital		
Short-Term Debt	50.00%	2.76%
Long-Term Debt		
Common Equity	9.50%	4.75%
	100.00%	7.51%
State Tax Rate		0.00%
Federal Tax Rate		35.00%
Revenue Sensitive Rate (held to franchise rate/reg com fee)		4.37%
Depreciation Rate		4.00%
Property Tax Rate		0.00%
Incremental O&M		\$ 28.09
Inflation Rate		2%
Bonus Tax Depreciation toggled (1 = yes, 2 = no)		2
<b>Investment</b>		<b>\$ 790</b>

**Cost of Service and Payment**

Payback Period (years)	25
Total COS	\$1,384.04
Annual CO	\$124.22
Monthly CO	\$10.35

**Costs Table**

Piping Allowance	\$ 750
Shut off Valve	\$ 40
<b>Total Capital Cost</b>	<b>\$ 790</b>
O&M	\$ 28.09

**Rate Table**

Payback Period	10.35
10	\$ 14.59
15	\$ 12.15
20	\$ 10.97
25	\$ 10.35
30	\$ 10.00

[1] No property tax assigned given that the asset is not tangible.

NW Natural  
 Determination of Cost of Service - Multifamily Rate Tariff Proposal

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	
1 Depreciation	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
2 O&M	28	29	29	30	30	31	32	32	33	34	34	35	36	36	37	38	39	39	39
3 Property Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxes on Equity Return	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 State	34	32	30	28	27	25	23	21	20	18	16	14	13	11	9	8	7	7	6
5 Federal	34	32	30	28	27	25	23	21	20	18	16	14	13	11	9	8	7	7	6
6 Total Taxes	68	64	60	56	54	50	46	42	40	36	32	28	26	22	17	16	14	14	12
Return on Rate Base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Debt	21	20	19	18	17	16	15	13	12	11	10	9	8	7	6	5	4	4	4
8 Preferred Equity	37	35	33	31	29	27	25	23	21	19	18	16	14	12	10	9	8	8	8
9 Common Equity	58	55	52	49	46	43	40	37	34	31	28	25	22	19	16	14	12	11	11
10 Total Return	151	147	143	139	134	130	126	122	118	114	110	106	102	98	94	91	89	88	88
11 Subtotal Cost of Service	7	7	7	6	6	6	6	6	5	5	5	5	5	4	4	4	4	4	4
12 Revenue Sensitive Items	158	154	149	145	141	136	132	128	123	119	115	111	106	102	98	95	93	92	92
13 Total Cost of Service	20.01%	19.45%	18.90%	18.35%	17.80%	17.25%	16.70%	16.16%	15.61%	15.07%	14.53%	13.99%	13.46%	12.92%	12.39%	12.02%	11.82%	11.63%	11.63%
14 Annual Cost of Service as % of Investment																			

Rate Base - net of deprec. & def. tax	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18
Income Taxes	\$770	\$730	\$690	\$650	\$610	\$570	\$530	\$490	\$450	\$410	\$370	\$330	\$290	\$250	\$210	\$180	\$161	\$142
Gross up of Equity Return	96	91	86	81	76	71	66	61	56	51	46	41	36	31	26	23	20	18
Less: State tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Taxable Income	96	91	86	81	76	71	66	61	56	51	46	41	36	31	26	23	20	18
Less: Federal Tax	34	30	30	28	27	25	23	21	20	18	16	14	13	11	9	8	7	6
Return	63	59	56	53	50	46	43	40	37	33	30	27	24	20	17	15	13	12
Deferred Taxes	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Book Depreciation	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Tax Depreciation	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Book-Tax Difference	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Tax Effect	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%

[1] No MACRS applied. Tax is a fixed 15 year tax depreciation period based on the asset type and the manner of recovery of the asset (recovery of costs from "3rd party tenant").

MACRS Depreciation - 20	3.76%	7.22%	6.69%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%
Property Tax Base	778	747	715	684	652	620	589	557	526	494	462	431	399	368	336	304	273	241
Tax Calculation Check	(5)	(5)	(4)	(4)	(4)	(4)	(3)	(3)	(3)	(3)	(2)	(2)	(2)	(2)	(1)	(1)	(1)	(1)
MACRS Depreciation - 20	3.76%	7.22%	6.69%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%
MACRS Depreciation - 20 - Bonus	52.50%	47.5%	4.28%	3.85%	3.47%	3.12%	2.95%	2.95%	2.96%	2.95%	2.96%	2.95%	2.96%	2.95%	2.96%	1.48%	0	0
0.3954																		
0.6006																		

MACRS Depreciation - 3	33.33%	44.45%	14.81%	7.41%														
MACRS Depreciation - 5	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%												
MACRS Depreciation - 7	14.29%	24.49%	17.49%	12.49%	8.93%	8.93%	4.46%											
MACRS Depreciation - 10	10.00%	18.00%	14.40%	11.52%	9.22%	7.37%	6.55%	6.55%	6.56%	6.55%	3.28%							
MACRS Depreciation - 15	5.00%	9.50%	6.55%	7.70%	6.93%	6.23%	5.90%	5.90%	5.91%	5.90%	5.91%	5.90%	5.91%	5.90%	5.91%	5.91%	5.91%	5.91%
MACRS Depreciation - 20	3.750%	7.215%	6.677%	6.177%	5.713%	5.285%	4.888%	4.522%	4.462%	4.461%	4.462%	4.461%	4.462%	4.461%	4.462%	4.461%	4.462%	4.461%

