

Exhibit No. KTW-7  
Docket UG-181053  
Witness: Kyle T. Walker

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION  
Complainant,

v.

NORTHWEST NATURAL GAS  
COMPANY,  
Respondent.

DOCKET UG-181053

**NORTHWEST NATURAL GAS COMPANY  
EXHIBIT OF KYLE T. WALKER**

**NW Natural's Response to Data Request 202**

**July 18, 2019**



**Rates & Regulatory Affairs**  
UG-181053  
2018 WA General Rate Revision  
**Data Request Response**

DR Request: May 21, 2019  
Date of Amended Response: July 12, 2019  
Responder: Kyle T. Walker  
Telephone: (503) 226-4211 ext. 5858  
Email: kyle.walker@nwnatural.com  
Witness: Kyle Walker

**Request No.:** UG-181053 WUTC DR 202

Does the Company have any internal cost estimates for serving new residential or commercial customers, including capital expenditures and annualized expenses? If so, please provide the cost estimate and any relevant analyses. The cost estimate can include but is not limited to general budget guidelines, recent business case analyses associated with serving a particular new development, or cost information based on historical records. To the extent that the Company analyzed the future revenue associated with such new customers, please provide revenue projection, as well.

**Response:**

Please see "UG-181053 WUTC DR 202 Attachment 1 - Amended.xlsx" for the Company's most up to date analysis related to new residential meter sets in Washington. We have been able to isolate the residential data and remove commercial capital costs for a more precise estimate. This analysis focuses on the capital expenditures needed to add new residential customers onto our system. The final costs are net of customer contributions received. Our current internal analysis combines industrial and commercial new customers. Under the Company's initial filing and the Partial Multi-Party Settlement Agreement on Decoupling, industrial customers are not subject to Decoupling. Therefore, for the purpose of this data request relating to Decoupling, we have removed those figures from the analysis.

See "UG-181053 WUTC DR 202 Attachment 2 - Amended.xlsx" for the cost of service for a new residential customer which includes the average capital investment from 2018 found in Attachment 1. The cost of service for a newly added residential customer in year one is \$508<sup>1</sup>.

Last, see previously submitted "UG-181053 WUTC DR 202 Attachment 3.xlsx" for a per customer revenue projection for newly added customers. The revenue per year

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<sup>1</sup> This analysis uses the capital structure and cost of capital from the all-party settlement in UG-181053

amounts to \$225.93 and \$411.55 for rate schedule 1 and 2, respectively, per newly added residential customer.

**Number of Meter Sets - Washington**

	2013	2014	2015	2016	2017	2018
Total Residential Meter Sets (Washington Only)	1,809	1,527	1,869	2,141	2,487	2,660

**Number of Orders - Washington**

	2013	2014	2015	2016	2017	2018
Washington SM01	62	84	110	116	156	159
Washington SM01	14	11	14	8	30	20
Washington SM02	1,252	1,296	1,527	1,885	2,181	2,355
Washington SM03	87	19	26	22	33	43
Washington SM02	142	131	138	154	176	144
Washington SM03	9	9	82	3	15	9
Total SM01	76	95	124	124	186	179
Total SM02	1,394	1,427	1,665	2,039	2,357	2,499
Total SM03	96	28	108	25	48	52
Addsets Meter Sets - (Total SM02+SM03)	319	72	96	77	82	109

**Total Cost of Service Line, Meter, Permit, Indirect Materials (Including Add Sets Only) - Washington**

	2013	2014	2015	2016	2017	2018
Washington SM01	\$563,396	\$664,396	\$1,024,378	\$1,463,417	\$1,728,780	\$2,191,880
Washington SM01	\$116,522	\$163,181	\$228,429	\$209,634	\$638,111	\$1,203,996
Washington SM02	\$1,362,392	\$1,529,851	\$1,762,505	\$2,228,036	\$2,619,402	\$2,856,288
Washington SM03	\$171,610	\$35,237	\$40,046	\$28,623	\$66,046	\$70,364
Washington SM02	\$373,446	\$353,405	\$398,991	\$390,985	\$513,658	\$535,323
Washington SM03	\$25,813	\$19,312	\$139,681	\$7,216	\$40,081	\$53,041
Total SM01	\$679,918	\$827,577	\$1,252,807	\$1,673,051	\$2,366,891	\$3,395,876
Total SM02	\$1,735,838	\$1,883,256	\$2,161,496	\$2,619,021	\$3,133,060	\$3,391,611
Total SM03	\$197,424	\$54,549	\$179,727	\$35,839	\$106,128	\$123,405
Total Addset Costs	\$72,094	\$16,272	\$21,696	\$17,402	\$18,532	\$24,634

Meter Add Set Costs \$226

**Total Customer Contribution - Washington**

	2013	2014	2015	2016	2017	2018
Washington SM01	\$0	\$0	\$0	\$0	\$0	\$0
Washington SM01	\$0	\$0	\$0	\$0	\$0	\$0
Washington SM02	\$1,343	\$9,696	\$7,228	\$16,259	\$14,037	\$25,212
Washington SM03	\$11,492	\$1,355	\$1,380	\$0	\$5,378	\$21,049
Washington SM02	\$51,558	\$51,241	\$78,904	\$93,007	\$110,961	\$130,051
Washington SM03	\$16,192	\$4,061	\$5,042	\$2,434	\$2,830	\$0
Total SM01	\$0	\$0	\$0	\$0	\$0	\$0
Total SM02	\$52,901	\$60,937	\$86,132	\$109,266	\$124,998	\$155,263
Total SM03	\$27,684	\$5,416	\$6,422	\$2,434	\$8,208	\$21,049

**Total Cost Net of Contribution - Washington**

	2013	2014	2015	2016	2017	2018
Washington SM01	\$563,396	\$664,396	\$1,024,378	\$1,463,417	\$1,728,780	\$2,191,880
Washington SM01	\$116,522	\$163,181	\$228,429	\$209,634	\$638,111	\$1,203,996
Washington SM02	\$1,361,049	\$1,520,155	\$1,755,277	\$2,211,777	\$2,605,365	\$2,831,076
Washington SM03	\$160,118	\$33,882	\$38,666	\$28,623	\$60,668	\$49,315
Washington SM02	\$321,888	\$302,164	\$320,087	\$297,978	\$402,697	\$405,272
Washington SM03	\$9,621	\$15,251	\$134,639	\$4,782	\$37,251	\$53,041
Total SM01	\$679,918	\$827,577	\$1,252,807	\$1,673,051	\$2,366,891	\$3,395,876
Total SM02	\$1,682,937	\$1,822,319	\$2,075,364	\$2,509,755	\$3,008,062	\$3,236,348
Total SM03	\$169,740	\$49,133	\$173,305	\$33,405	\$97,920	\$102,356
Total	\$2,532,595	\$2,699,029	\$3,501,477	\$4,216,211	\$5,472,873	\$6,734,579
Addsets	\$72,094	\$16,272	\$21,696	\$17,402	\$18,532	\$24,634
Total Costs (Washington)	\$2,604,689	\$2,715,301	\$3,523,173	\$4,233,613	\$5,491,405	\$6,759,213
Total Meter Sets - Washington	1,809	1,527	1,869	2,141	2,487	2,660
Total Construction Cost/Customer	\$1,440	\$1,778	\$1,885	\$1,977	\$2,208	\$2,541
Overhead Rate Est.	38%	38%	38%	38%	38%	38%
<b>Total Cost per New Meter Set</b>	<b>\$1,987</b>	<b>\$2,454</b>	<b>\$2,601</b>	<b>\$2,729</b>	<b>\$3,047</b>	<b>\$3,507</b>

**NW Natural**  
**Determination of Cost of Service**

Input Capital Costs and Rates			
Cost of Capital	% of Capital	Cost	Weighted Cost
Debt	50.00%	5.066%	2.533%
Short Term Debt	1.00%	2.186%	0.022%
Common Equity	49.00%	9.400%	4.606%
	<u>100.00%</u>		<u>7.161%</u>
State Tax Rate			0.00%
Federal Tax Rate			21.00%
Revenue Sensitive Rate (held to franchise rate/reg com fee)			4.05%
Depreciation Rate			2.60%
Property Tax Rate			1.50%
Incremental O&M		\$	54.05
Inflation Rate			2.50%
Bonus Tax Depreciation toggled (1 = yes, 2 = no)			2
Investment		\$	3,507

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1 Depreciation	91	91	91	91	91	91	91	91	91	91
2 O&M	54	55	57	58	60	61	63	64	66	68
3 Property Taxes	52	51	49	48	46	45	44	42	41	40
<b>Taxes on Equity Return</b>										
4 State	0	0	0	0	0	0	0	0	0	0
5 Federal	43	41	40	38	37	35	34	33	31	30
6 Total Taxes	43	41	40	38	37	35	34	33	31	30
<b>Return on Rate Base</b>										
7 Debt	88	85	82	79	76	73	70	67	65	62
8 Short Term Debt	1	1	1	1	1	1	1	1	1	1
9 Common Equity	159	154	148	143	138	132	127	122	118	113
10 Total Return	248	240	231	222	214	206	198	190	183	175
11 Subtotal Cost of Service	487	478	467	458	448	439	430	421	412	404
12 Revenue Sensitive Items	21	20	20	19	19	19	18	18	17	17
13 Total Cost of Service	\$508	\$498	\$487	\$477	\$467	\$457	\$448	\$439	\$430	\$421
14 Annual Cost of Service as % of Investment	14.48%	14.20%	13.89%	13.60%	13.31%	13.03%	12.77%	12.51%	12.25%	12.00%
Rate Base - net of deprec. & def. tax	\$3,457	\$3,345	\$3,222	\$3,102	\$2,986	\$2,874	\$2,764	\$2,658	\$2,553	\$2,448

**UG-181053 WUTC DR 202 Attachment 3 Amended**  
**New Residential Customer Revenue per Settlement in UG 181053**

	<u>RS 1</u>	<u>RS 2</u>
Monthly Charge	\$5.50	\$8.00
Base Rate	\$0.68791	\$0.46523
Annual UPC	229.5	678.3
<b>Total Annual Marg</b>	<b>\$223.88</b>	<b>\$411.57</b>