

Northwest Natural - 2007 Gas Cost of Service Study
Proposed Test Year Without Gas
Summary

Line No.	Description	Total Company	General Sales Service	Residential Sales Service	Basic Firm Sales Service	Hi Load Factor Firm Sales	Residential Heating Dry Out	Non-Residential Sales & Transport	Lrg. Vol. Non-Res. Firm Sales & Transp.	Hi Vol. Non-Res. Firm & Inter. Transp.
	(a)	(b)	(c)	(d)	(e)	(g)	(h)	(i)	(j)	(j)
Rate Base										
1	Plant in Service	\$ 202,909,773	\$ 795,402	\$ 128,244,397	\$ 47,214,972	\$ -	\$ 3,591,866	\$ 8,657,652	\$ 14,405,485	\$ -
2	Accumulated Reserve	(67,976,328)	(263,067)	(42,467,026)	(16,125,688)	-	(1,094,846)	(3,104,774)	(4,920,926)	-
3	Other Rate Base Items	(6,486,714)	(40,843)	(4,086,329)	(1,664,432)	-	(120,554)	(285,657)	(288,899)	-
4	TOTAL RATE BASE	\$ 128,446,732	\$ 491,491	\$ 81,691,042	\$ 29,424,852	\$ -	\$ 2,376,465	\$ 5,267,221	\$ 9,195,660	\$ -
Revenue at Current Rates										
5	Gas Revenues	-	-	-	-	-	-	-	-	-
6	Base Rate Revenues	30,873,293	76,913	19,701,096	7,227,794	-	286,898	1,301,748	2,278,844	-
7	Other Revenues	647,245	2,701	399,694	136,528	-	6,173	20,201	81,947	-
8	TOTAL REVENUE	\$ 31,520,538	\$ 79,614	\$ 20,100,789	\$ 7,364,322	\$ -	\$ 293,071	\$ 1,321,949	\$ 2,360,792	\$ -
Expenses at Current Rates										
9	Operation and Maintenance	11,185,131	75,139	8,591,306	1,709,506	-	270,629	192,208	346,342	-
10	Depreciation Expense	6,576,882	26,510	4,173,851	1,519,635	-	120,818	275,097	460,971	-
11	Taxes Other Than Income	2,876,169	11,131	1,895,460	629,580	-	45,702	108,217	186,079	-
12	Income Taxes	2,437,282	(16,848)	1,031,341	913,143	-	(75,887)	205,181	380,352	-
13	TOTAL EXPENSES - Current	\$ 23,075,465	\$ 95,932	\$ 15,691,958	\$ 4,771,864	\$ -	\$ 361,262	\$ 780,703	\$ 1,373,745	\$ -
14	Operating Income - Current	\$ 8,445,073	\$ (16,318)	\$ 4,408,832	\$ 2,592,458	\$ -	\$ (68,191)	\$ 541,247	\$ 987,046	\$ -
15	Current Rate of Return	6.5748%	-3.3201%	5.3970%	8.8104%	0.0000%	-2.8694%	10.2758%	10.7338%	0.0000%
Calculation of Rate Schedule Revenue Requirement at Equal Rates of Return										
16	Required Return	8.6760%	8.6760%	8.6760%	8.6760%	8.6760%	8.6760%	8.6760%	8.6760%	8.6760%
17	Required Operating Income	\$ 11,144,038	\$ 42,642	\$ 7,087,515	\$ 2,552,900	\$ -	\$ 206,182	\$ 456,984	\$ 797,815	\$ -
18	Operating Income (Deficiency)/Surplus	(2,698,965)	(58,960)	(2,678,683)	39,558	-	(274,373)	84,263	189,231	-
19										
20	Revenue (Deficiency) / Surplus	\$ (4,342,066)	\$ (91,263)	\$ (4,246,142)	\$ 18,974	\$ -	\$ (424,103)	\$ 122,377	\$ 278,089	\$ -
21	Revenue Requirement	\$ 35,862,604	\$ 170,877	\$ 24,346,931	\$ 7,345,348	\$ -	\$ 717,174	\$ 1,199,572	\$ 2,082,702	\$ -
22	Revenues Other Than Rate Sch. Rev.	647,245	2,701	399,694	136,528	-	6,173	20,201	81,947	-
23	Rate Schedule Revenue Requirement	35,215,359	168,176	23,947,237	7,208,820	-	711,001	1,179,371	2,000,755	-
24	Deficiency / (Surplus) as % of Sales & Trans Rev	14.06%	118.66%	21.55%	-0.26%	0.00%	147.82%	-9.40%	-12.20%	0.00%
Expenses at Required Return										
25	Operation and Maintenance	\$ 11,199,007	\$ 75,265	\$ 8,603,682	\$ 1,710,592	\$ -	\$ 270,898	\$ 192,227	\$ 346,342	\$ -
26	Depreciation Expense	6,576,882	26,510	4,173,851	1,519,635	-	120,818	275,097	460,971	-
27	Taxes Other Than Income	3,052,109	11,569	2,007,732	670,770	-	47,337	115,636	199,066	-
28	Income Taxes	3,890,568	14,891	2,474,151	891,450	-	71,939	159,628	278,507	-
29	TOTAL EXPENSES - Required	\$ 24,718,566	\$ 128,235	\$ 17,259,416	\$ 4,792,448	\$ -	\$ 510,992	\$ 742,588	\$ 1,284,887	\$ -
30	Rate Schedule Revenue as Proposed	\$ 35,215,356	\$ 93,134	\$ 23,163,369	\$ 7,782,889	\$ -	\$ 355,472	\$ 1,388,965	\$ 2,431,527	\$ -
31	Other Revenue	647,245	2,701	399,694	136,528	-	6,173	20,201	81,947	-
32	Revenue as Proposed	\$ 35,862,601	\$ 95,835	\$ 23,563,063	\$ 7,919,417	\$ -	\$ 361,645	\$ 1,409,166	\$ 2,513,474	\$ -
33	Proposed Revenue Increase	\$ 4,342,063	\$ 16,221	\$ 3,462,273	\$ 555,095	\$ -	\$ 68,574	\$ 87,217	\$ 152,683	\$ -
34	Proposed Revenue Requirement	\$ 35,862,601	\$ 95,835	\$ 23,563,063	\$ 7,919,417	\$ -	\$ 361,645	\$ 1,409,166	\$ 2,513,474	\$ -
35	Current Revenue to Cost Ratio	0.88	0.46	0.82	1.00	-	0.40	1.10	1.14	-
36	Parity Ratio	1.00	0.52	0.94	1.14	-	0.46	1.26	1.30	-
37	Proposed Revenue to Cost Ratio	1.00	0.56	0.97	1.08	-	0.50	1.17	1.21	-

Northwest Natural - 2007 Gas Cost of Service Study
Proposed Test Year Without Gas
Functional Rate Base

Line No.		System Total	General Sales Service	Residential Sales Service	Basic Firm Sales Service	Hi Load Factor Firm Sales	Residential Heating Dry Out	Non-Residential Sales & Transport	Lrg. Vol. Non-Res. Firm Sales & Transp.	Hi Vol. Non-Res. Firm & Inter. Transp.
Storage										
1	Demand	\$ 16,631,692	\$ 18,538	\$ 11,092,489	\$ 3,789,422	\$ -	\$ 328,939	\$ 560,123	\$ 842,181	\$ -
2	Commodity	\$ 5,750,386	\$ 7,081	\$ 3,504,861	\$ 1,293,975	\$ -	\$ 90,096	\$ 264,695	\$ 589,677	\$ -
3	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Sub-total	\$ 22,382,078	\$ 25,620	\$ 14,597,350	\$ 5,083,397	\$ -	\$ 419,036	\$ 824,818	\$ 1,431,858	\$ -
Distribution										
5	Demand	\$ 61,924,892	\$ 186,097	\$ 38,138,566	\$ 14,713,692	\$ -	\$ 861,636	\$ 2,931,809	\$ 5,093,090	\$ -
6	Commodity	\$ (1,151)	\$ (1)	\$ (597)	\$ (232)	\$ -	\$ (14)	\$ (55)	\$ (252)	\$ -
7	Customer	\$ 44,140,912	\$ 279,775	\$ 28,955,723	\$ 9,627,994	\$ -	\$ 1,095,807	\$ 1,510,649	\$ 2,670,964	\$ -
8	Sub-total	\$ 106,064,654	\$ 465,871	\$ 67,093,693	\$ 24,341,455	\$ -	\$ 1,957,430	\$ 4,442,403	\$ 7,763,803	\$ -
Gas Costs										
9	Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL										
13	Demand	\$ 78,556,584	\$ 204,635	\$ 49,231,055	\$ 18,503,114	\$ -	\$ 1,190,576	\$ 3,491,932	\$ 5,935,271	\$ -
14	Commodity	\$ 5,749,235	\$ 7,080	\$ 3,504,264	\$ 1,293,744	\$ -	\$ 90,083	\$ 264,640	\$ 589,425	\$ -
15	Customer	\$ 44,140,912	\$ 279,775	\$ 28,955,723	\$ 9,627,994	\$ -	\$ 1,095,807	\$ 1,510,649	\$ 2,670,964	\$ -
16	TOTAL RATE BASE	\$ 128,446,732	\$ 491,491	\$ 81,691,042	\$ 29,424,852	\$ -	\$ 2,376,465	\$ 5,267,221	\$ 9,195,660	\$ -

Northwest Natural - 2007 Gas Cost of Service Study
Proposed Test Year Without Gas
Functional Revenue Requirement

Line No.		System Total	General Sales Service	Residential Sales Service	Basic Firm Sales Service	Hi Load Factor Firm Sales	Residential Heating Dry Out	Non-Residential Sales & Transport	Lrg. Vol. Non-Res. Firm Sales & Transp.	Hi Vol. Non-Res. Firm & Inter. Transp.
Storage										
1	Demand	\$ 2,967,202	\$ 5,398	\$ 1,979,422	\$ 685,172	\$ -	\$ 56,865	\$ 95,944	\$ 144,400	\$ -
2	Commodity	\$ 558,144	\$ 687	\$ 340,189	\$ 125,596	\$ -	\$ 8,745	\$ 25,692	\$ 57,235	\$ -
3	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Sub-total	\$ 3,525,345	\$ 6,086	\$ 2,319,611	\$ 810,768	\$ -	\$ 65,610	\$ 121,636	\$ 201,635	\$ -
Distribution										
5	Demand	\$ 12,003,574	\$ 36,179	\$ 7,414,579	\$ 2,860,512	\$ -	\$ 167,512	\$ 569,978	\$ 954,814	\$ -
6	Commodity	\$ 1,321,164	\$ 3,285	\$ 842,693	\$ 309,227	\$ -	\$ 12,296	\$ 55,752	\$ 97,911	\$ -
7	Customer	\$ 15,364,502	\$ 111,384	\$ 11,449,106	\$ 2,529,877	\$ -	\$ 404,100	\$ 302,948	\$ 567,086	\$ -
8	Sub-total	\$ 28,689,240	\$ 150,849	\$ 19,706,378	\$ 5,699,617	\$ -	\$ 583,908	\$ 928,679	\$ 1,619,810	\$ -
Gas Costs										
9	Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL										
13	Demand	\$ 14,970,775	\$ 41,578	\$ 9,394,001	\$ 3,545,684	\$ -	\$ 224,377	\$ 665,922	\$ 1,099,214	\$ -
14	Commodity	\$ 1,879,308	\$ 3,973	\$ 1,182,882	\$ 434,823	\$ -	\$ 21,041	\$ 81,444	\$ 155,146	\$ -
15	Customer	\$ 15,364,502	\$ 111,384	\$ 11,449,106	\$ 2,529,877	\$ -	\$ 404,100	\$ 302,948	\$ 567,086	\$ -
16	TOTAL REVENUE REQUIREMENT	\$ 32,214,586	\$ 156,935	\$ 22,025,989	\$ 6,510,385	\$ -	\$ 649,518	\$ 1,050,314	\$ 1,821,445	\$ -
17	TOTAL FIXED COSTS	\$ 30,335,278	\$ 152,962	\$ 20,843,107	\$ 6,075,562	\$ -	\$ 628,477	\$ 968,870	\$ 1,666,299	\$ -

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Unit Costs

Line No.		System Total	General Sales Service	Residential Sales Service	Basic Firm Sales Service	Hi Load Factor Firm Sales	Residential Heating Dry Out	Non-Residential Sales & Transport	Lrg. Vol. Non-Res. Firm Sales & Transp.	Hi Vol. Non-Res. Firm & Inter. Transp.
Storage										
1	Demand (per Peak Day therm per month)	\$ 0.2768	\$ 0.0723	\$ 0.2840	\$ 0.2585	\$ -	\$ 0.3755	\$ 0.3323	\$ 0.2477	\$ -
2	Commodity (per therm)	\$ 0.0070	\$ 0.0073	\$ 0.0082	\$ 0.0078	\$ -	\$ 0.0092	\$ 0.0067	\$ 0.0033	\$ -
3	Customer (per customer per month)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Distribution										
4	Demand (per Peak Day therm per month)	\$ 1.1200	\$ 0.4847	\$ 1.0639	\$ 1.0791	\$ -	\$ 1.1063	\$ 1.9739	\$ 1.6381	\$ -
5	Commodity (per therm)	\$ 0.0166	\$ 0.0350	\$ 0.0204	\$ 0.0193	\$ -	\$ 0.0130	\$ 0.0146	\$ 0.0056	\$ -
6	Customer (per customer per month)	\$ 19.9437	\$ 16.8153	\$ 16.6416	\$ 42.7373	\$ -	\$ 27.0337	\$ 274.4099	\$ 1,054.0626	\$ -
Gas Costs										
7	Demand (per Peak Day therm per month)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Commodity (per therm)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Customer (per customer per month)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL										
10	Demand (per Peak Day therm per month)	\$ 1.3968	\$ 0.5570	\$ 1.3479	\$ 1.3375	\$ -	\$ 1.4818	\$ 2.3062	\$ 1.8859	\$ -
11	Commodity (per therm)	\$ 0.0236	\$ 0.0423	\$ 0.0287	\$ 0.0271	\$ -	\$ 0.0222	\$ 0.0213	\$ 0.0089	\$ -
12	Customer (per customer per month)	\$ 19.9437	\$ 16.8153	\$ 16.6416	\$ 42.7373	\$ -	\$ 27.0337	\$ 274.4099	\$ 1,054.0626	\$ -
13	PDAY	10,717,876	74,646	6,969,258	2,650,932	0	151,423	288,756	582,861	0
14	THRUPUT	79,596,416	93,947	41,267,842	16,020,807	0	948,267	3,825,219	17,440,334	0
15	CUST	770,392	6,624	687,982	59,196	0	14,948	1,104	538	0