



COST OF SERVICE TARIFF RATE MODEL

GAS PIPELINES

PORTLAND NATURAL GAS TRANSMISSION SYSTEM

Portland Natural Gas Transmission System

DATA INPUT

Line No.		Page 1
1	Remianing Life for Depreciation	0
2	Ad Valorem	-
3	O & M	164
	Capital Structure:	
4	Equity	47.76%
5	Debt	52.24%
6	Equity Rate	14.75%
7	Debt Rate	6.05%
8	Overall Return	10.20%
9	State Income Tax Rate (%)	8.6879%
10	Federal Income Tax Rate (%)	35.00%
11	Composite Tax Rate	40.6471%
12	Pretax Return	15.03%
	<u>Balances End of Test Period:</u>	
13	Accumulated DD&A from Rate Model, Schedule D	118,099
14	Accumulated ADIT, Rate Model Schedule B-1	(127,770)
15	Regulatory Asset, PNGTS Books	97,092
	<u>Plant Investment</u>	
16	Organization, Rate Model Schedule C-1	621
17	Transmission Plant, Schedule C	488,024
18	General Plant, Schedule C	1,633
19	Land Rights, Schedule H-2(1)	239
20	Working Capital	-
21	Equity AFUDC	23,929

490,517

DETERMINATION OF COST OF SERVICE TARIFF RATE

Portland Natural Gas Transmission System

LEVELIZED COST OF SERVICE

Year	Cost of Service	NPV for Rev Stream over 13 Years	Levelized Cost of Service Over 13 Years	NPV for Levelized Rev Stream
	(a)	(b)	(c)	(d)
		\$414,394		\$414,394

2008	70,627	58,952
2009	67,633	58,952
2010	64,648	58,952
2011	61,676	58,952
2012	58,710	58,952
2013	55,757	58,952
2014	54,267	58,952
2015	52,974	58,952
2016	51,677	58,952
2017	50,390	58,952
2018	49,112	58,952
2019	47,844	58,952
2020	45,962	58,952

Portland Natural Gas Transmission System

COST OF SERVICE

All figures in thousands

Line No.	Description	Starting Balance	Year 10th 2008	Year 11th 2009	Year 12th 2010	Year 13th 2011	Year 14th 2012	Year 15th 2013	Year 16th 2014	Year 17th 2015	Year 18th 2016	Year 19th 2017	Year 20th 2018
1	Operation & Maintenance Expense		\$ -	\$ 164	\$ 336	\$ 512	\$ 693	\$ 877	\$ 1,067	\$ 1,261	\$ 1,459	\$ 1,663	\$ 1,872
2	Depreciation and Amortization Expense		\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131	\$ 19,131
3	Other Taxes		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Pretax Return		\$ 51,352	\$ 48,131	\$ 44,907	\$ 41,686	\$ 38,462	\$ 35,241	\$ 33,482	\$ 31,934	\$ 30,385	\$ 28,836	\$ 27,288
5	Income Tax Allowance for Equity AFUDC		\$ 144	\$ 207	\$ 274	\$ 347	\$ 425	\$ 508	\$ 587	\$ 649	\$ 702	\$ 760	\$ 822
7	Other Adjustments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Total Cost of Service		\$ 70,627	\$ 67,633	\$ 64,648	\$ 61,676	\$ 58,710	\$ 55,757	\$ 54,267	\$ 52,974	\$ 51,677	\$ 50,390	\$ 49,112

Portland Natural Gas Transmission System

RATE BASE and RETURN

All figures in thousands

Line No.	Description	Year 10th 2008	Year 11th 2009	Year 12th 2010	Year 13th 2011	Year 14th 2012	Year 15th 2013	Year 16th 2014	Year 17th 2015	Year 18th 2016	Year 19th 2017	Year 20th 2018
1	Gross Plant	490,517	490,517	490,517	490,517	490,517	490,517	490,517	490,517	490,517	490,517	490,517
2	Accumulated D, D & A (net of Reg Asset)	<u>21,007</u>	<u>38,576</u>	<u>56,145</u>	<u>73,715</u>	<u>91,284</u>	<u>108,853</u>	<u>126,422</u>	<u>143,991</u>	<u>161,560</u>	<u>179,129</u>	<u>196,698</u>
3	Net Plant	469,510	451,941	434,372	416,803	399,233	381,664	364,095	346,526	328,957	311,388	293,819
4	Working Capital	-	-	-	-	-	-	-	-	-	-	-
5	Accumulated Deferred Taxes	<u>(127,770)</u>	<u>(131,637)</u>	<u>(135,523)</u>	<u>(139,390)</u>	<u>(143,276)</u>	<u>(147,143)</u>	<u>(141,276)</u>	<u>(134,014)</u>	<u>(126,751)</u>	<u>(119,488)</u>	<u>(112,226)</u>
6	Total Rate Base	341,740	320,304	298,849	277,412	255,957	234,521	222,819	212,512	202,206	191,899	181,593
7	Pretax Return Rate	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>	<u>15.03%</u>
8	Pretax Return	51,352	48,131	44,907	41,686	38,462	35,241	33,482	31,934	30,385	28,836	27,288

Portland Natural Gas Transmission System

Gross Plant

All figures in thousands

[illegible]

Protland Natural Gas Transmission System Depreciation Expense

All figures in thousands

[illegible]

Portland Natural Gas Transmission System
Computation of Deferred Income Taxes

Line No.	Description	Source	Starting Balance	Year 10th 2008	Year 11th 2009	Year 12th 2010	Year 13th 2011	Year 14th 2012	Year 15th 2013	Year 16th 2014	Year 17th 2015	Year 18th 2016	Year 19th 2017	Year 20th 2018
1	Tax Depreciable Rates			5.91%	5.90%	5.91%	5.90%	5.91%	5.90%	0.74%	0%	0%	0%	0%
2	Book Depreciable Rates			3.85%	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%
3	Tax Depreciable Initial Plant		464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095
6	Book Depreciable Plant less Equity AFUDC		464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095	464,095
7	Tax Depreciation			27,428	27,382	27,428	27,382	27,428	27,382	3,434	-	-	-	-
8	Book Depreciation			17,868	17,868	17,868	17,868	17,868	17,868	17,868	17,868	17,868	17,868	17,868
9	Book/Tax Timing Difference			(9,560)	(9,514)	(9,560)	(9,514)	(9,560)	(9,514)	14,433	17,868	17,868	17,868	17,868
10	Annual Provision for ADIT			(3,886)	(3,867)	(3,886)	(3,867)	(3,886)	(3,867)	5,867	7,263	7,263	7,263	7,263
11	Accumulated Provision for ADIT			<u>(127,770)</u>	<u>(131,637)</u>	<u>(135,523)</u>	<u>(139,390)</u>	<u>(143,276)</u>	<u>(147,143)</u>	<u>(141,276)</u>	<u>(134,014)</u>	<u>(126,751)</u>	<u>(119,488)</u>	<u>(112,226)</u>

Portland Natural Gas Transmission System
FIT Depreciation Rate Table

	15 Yr - 1st Qtr	15 Yr - 2nd Qtr	15 Yr - 3rd Qtr	15 Yr - 4th Qtr
	<u>Installation</u>	<u>Installation</u>	<u>Installation</u>	<u>Installation</u>
0	8.75%	6.25%	3.75%	1.25%
1	9.13%	9.38%	9.63%	9.88%
2	8.21%	8.44%	8.66%	8.89%
3	7.39%	7.59%	7.80%	8.00%
4	6.65%	6.83%	7.02%	7.20%
5	5.99%	6.15%	6.31%	6.48%
6	5.90%	5.91%	5.90%	5.90%
7	5.91%	5.90%	5.90%	5.90%
8	5.90%	5.91%	5.91%	5.90%
9	5.91%	5.90%	5.90%	5.91%
10	5.90%	5.91%	5.91%	5.90%
11	5.91%	5.90%	5.90%	5.91%
12	5.90%	5.91%	5.91%	5.90%
13	5.91%	5.90%	5.90%	5.91%
14	5.90%	5.91%	5.91%	5.90%
15	<u>0.74%</u>	<u>2.21%</u>	<u>3.69%</u>	<u>5.17%</u>
	100.00%	100.00%	100.00%	100.00%

Portland Natural Gas Transmission System
Proforma Cost of Service
Docket No. RP08-000

Line No.	Description (a)	Statement or Schedule Reference (b)	Base Case		
			Base Period (c)	Test Period Adjustments (d)	Test Period (e)
1	Operation & Maintenance Exp.	Schedule H-1	\$ 22,616,817	\$ (14,344,592)	\$ 8,272,225
2	Depreciation Expense	Statement H-2	\$ 109,617	\$ (25,850)	\$ 83,766
3	Return Allowance	Statement B	\$ 234,802	\$ (9,487)	\$ 225,315
4	Federal and State Income Tax Allowance	Statement H-3	\$ 111,015	\$ (4,486)	\$ 106,529
5	Taxes Other Than Income	Statement H-4	\$ 5,711,536	\$ 227,826	\$ 5,939,362
6	Levelized 2002 Plant Investment	Exhibit No. PNG-20	\$ 54,701,248	\$ -	\$ 54,701,248
7	Total Cost of Service		<u>\$ 83,485,035</u>	<u>\$ (14,156,589)</u>	<u>\$ 69,328,446</u>

Post RP02-13 Transmission Plant

Plant		2,163,944
Depreciation Rate Used in Base Case	2.00%	
Depreciation Rate Used in Proforma	<u>3.53%</u>	
Increase in Depreciation Rate	1.53%	
Increase in Depreciation Expense Post 2002		<u>33,108</u>

Proforma Case

Differences	ProForma COS
\$ -	\$ 8,272,225
\$ 33,108	\$ 116,875
\$ -	\$ 225,315
\$ -	\$ 106,529
\$ -	\$ 5,939,362
<u>\$ 4,250,956</u>	<u>\$ 58,952,204</u>
<u><u>\$ 4,284,064</u></u>	<u><u>\$ 73,612,510</u></u>