



# COST OF SERVICE TARIFF RATE MODEL

GAS PIPELINES

PORTLAND NATURAL GAS TRANSMISSION SYSTEM

## Portland Natural Gas Transmission System

### DATA INPUT

Line No.		
1	<b>Remaining Life for Depreciation</b>	50
2	<b>Ad Valorem</b>	-
3	O & M (Escalator)	164
<b>Capital Structure:</b>		
4	Equity	47.76%
5	Debt	52.24%
6	Equity Rate	14.75%
7	Debt Rate	6.046%
8	Overall Return	10.20%
9	<b>State Income Tax Rate (%)</b>	8.6879%
10	<b>Federal Income Tax Rate (%)</b>	35.00%
11	<b>Composite Tax Rate</b>	40.6471%
12	<b>Pretax Return</b>	15.03%
<b>End of Test Balances:</b>		
13	<b>Accumulated DD&amp;A from Rate Model, Schedule D</b>	118,099
14	<b>Accumulated ADIT, Rate Model Schedule B-1</b>	(127,770)
15	<b>Regulatory Asset, PNGTS Books</b>	97,092
<b>Plant Investment</b>		
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

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)
		\$384,513		\$384,513

2008	63,154	54,701
2009	60,849	54,701
2010	58,553	54,701
2011	56,271	54,701
2012	53,994	54,701
2013	51,730	54,701
2014	50,929	54,701
2015	50,326	54,701
2016	49,718	54,701
2017	49,120	54,701
2018	48,532	54,701
2019	47,953	54,701
2020	46,760	54,701

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	Year 21th 2019	Year 22th 2020
1	Operation & Maintenance Expense	\$ -	\$ 164	\$ 336	\$ 512	\$ 693	\$ 877	\$ 1,067	\$ 1,261	\$ 1,459	\$ 1,663	\$ 1,872	\$ 2,085	\$ 2,304	
2	Depreciation and Amortization Expense	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	\$ 11,657	
3	Other Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
4	Pretax Return	\$ 51,352	\$ 48,821	\$ 46,286	\$ 43,754	\$ 41,219	\$ 38,687	\$ 37,618	\$ 36,759	\$ 35,899	\$ 35,040	\$ 34,181	\$ 33,321	\$ 32,462	
5	Income Tax Allowance for Equity AFUDC	\$ 144	\$ 207	\$ 274	\$ 347	\$ 425	\$ 508	\$ 587	\$ 649	\$ 702	\$ 760	\$ 822	\$ 889	\$ 337	
6	Other Adjustments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7	Total Cost of Service	\$ 63,154	\$ 60,849	\$ 58,553	\$ 56,271	\$ 53,994	\$ 51,730	\$ 50,929	\$ 50,326	\$ 49,718	\$ 49,120	\$ 48,532	\$ 47,953	\$ 46,760	
8	Deferred Regulatory Asset Balance	\$ 97,092	\$ 98,870	\$ 100,532	\$ 100,161	\$ 97,607	\$ 92,710	\$ 85,297	\$ 75,525	\$ 63,912	\$ 50,677	\$ 35,701	\$ 18,857	\$ 10,018	\$ -

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	Year 21th 2019	Year 22th 2020
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	490,517	490,517
2	Accumulated D, D & A (net of Reg Asset)	<u>21,007</u>	<u>31,103</u>	<u>41,199</u>	<u>51,294</u>	<u>61,390</u>	<u>71,486</u>	<u>81,582</u>	<u>91,677</u>	<u>101,773</u>	<u>111,869</u>	<u>121,965</u>	<u>132,060</u>	<u>142,156</u>
3	Net Plant	469,510	459,414	449,318	439,223	429,127	419,031	408,935	398,840	388,744	378,648	368,553	358,457	348,361
4	Working Capital	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Accumulated Deferred Taxes	<u>(127,770)</u>	<u>(134,523)</u>	<u>(141,295)</u>	<u>(148,049)</u>	<u>(154,821)</u>	<u>(161,574)</u>	<u>(158,594)</u>	<u>(154,217)</u>	<u>(149,841)</u>	<u>(145,464)</u>	<u>(141,088)</u>	<u>(136,711)</u>	<u>(132,335)</u>
6	Total Rate Base	341,740	324,891	308,023	291,174	274,306	257,457	250,342	244,622	238,903	233,184	227,465	221,745	216,026
7	Pretax Return Rate	<u>15.03%</u>												
8	Pretax Return	51,352	48,821	46,286	43,754	41,219	38,687	37,618	36,759	35,899	35,040	34,181	33,321	32,462



**Protland Natural Gas Transmission System**  
 Depreciation Expense

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	Year 21th 2019	Year 22th 2020	
1	Gross Initial Plant (Transmission Plant)		488,024	488,024	488,024	488,024	488,024	488,024	488,024	488,024	488,024	488,024	488,024	488,024	488,024	
2	<b>Intangible Plant</b>		433	433	433	433	433	433	433	433	433	433	433	433	433	
3	Depreciable Plant		488,457	488,457	488,457	488,457	488,457	488,457	488,457	488,457	488,457	488,457	488,457	488,457	488,457	
4	Depreciation Rate (%)		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
5	Current Period Depreciation Expense		9,769	9,769	9,769	9,769	9,769	9,769	9,769	9,769	9,769	9,769	9,769	9,769	9,769	
6	<b>General Plant</b>		1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	
7	<b>Depreciation Rate - General Plant</b>		20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	
8	<b>Depreciation Expense on General Plant</b>		327	327	327	327	327	327	327	327	327	327	327	327	327	
9	<b>Total Depreciation Expense</b>		10,096	10,096	10,096	10,096	10,096	10,096	10,096	10,096	10,096	10,096	10,096	10,096	10,096	
10	<b>Negative Salvage</b>	0.320%	1,562	1,562	1,562	1,562	1,562	1,562	1,562	1,562	1,562	1,562	1,562	1,562	1,562	
11	<b>Depreciation Expense Including Negative Salvage</b>		11,657	11,657	11,657	11,657	11,657	11,657	11,657	11,657	11,657	11,657	11,657	11,657	11,657	
12	<b>Accumulated DD&amp;A Net of Regulatory Asset</b>		21,007	31,103	41,199	51,294	61,390	71,486	81,582	91,677	101,773	111,869	121,965	132,060	142,156	
13	<b>Computation of Test Period Starting DD&amp;A</b>															
14	DD&A @ 09/30/08	\$	118,099													
15	Regulatory Asset, per books and RP02-13 Settlement	\$	97,092													
16	Year 2008 Starting Balance	\$	21,007													

**Portland Natural Gas Transmission System  
Computation of Deferred Income Taxes**

Line No.	Description	Starting Balance	Year												
			10th 2008	11th 2009	12th 2010	13th 2011	14th 2012	15th 2013	16th 2014	17th 2015	18th 2016	19th 2017	20th 2018	21th 2019	22th 2020
1	Tax Depreciable Rates		5.91%	5.90%	5.91%	5.90%	5.91%	5.90%	0.74%	0%	0%	0%	0%	0%	0%
2	Book Depreciable Rates		2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32
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	464,095	464,095
4	Book Depreciable Plant (net of 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	464,095	464,095
5	Tax Depreciation		27,428	27,382	27,428	27,382	27,428	27,382	3,434	-	-	-	-	-	-
6	Book Depreciation		10,767	10,767	10,767	10,767	10,767	10,767	10,767	10,767	10,767	10,767	10,767	10,767	10,767
7	Book/Tax Timing Difference		(16,661)	(16,615)	(16,661)	(16,615)	(16,661)	(16,615)	7,333	10,767	10,767	10,767	10,767	10,767	10,767
8	Annual Provision for ADIT		(6,772)	(6,753)	(6,772)	(6,753)	(6,772)	(6,753)	2,981	4,376	4,376	4,376	4,376	4,376	4,376
9	<b>Accumulated Provision for ADIT</b>	-	<u>(127,770)</u>	<u>(134,523)</u>	<u>(141,295)</u>	<u>(148,049)</u>	<u>(154,821)</u>	<u>(161,574)</u>	<u>(158,594)</u>	<u>(154,217)</u>	<u>(149,841)</u>	<u>(145,464)</u>	<u>(141,088)</u>	<u>(136,711)</u>	<u>(132,335)</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>
1999	0	8.75%	6.25%	3.75%	1.25%
2000	1	9.13%	9.38%	9.63%	9.88%
2001	2	8.21%	8.44%	8.66%	8.89%
2002	3	7.39%	7.59%	7.80%	8.00%
2003	4	6.65%	6.83%	7.02%	7.20%
2004	5	5.99%	6.15%	6.31%	6.48%
2005	6	5.90%	5.91%	5.90%	5.90%
2006	7	5.91%	5.90%	5.90%	5.90%
2007	8	5.90%	5.91%	5.91%	5.90%
2008	9	5.91%	5.90%	5.90%	5.91%
2009	10	5.90%	5.91%	5.91%	5.90%
2010	11	5.91%	5.90%	5.90%	5.91%
2011	12	5.90%	5.91%	5.91%	5.90%
2012	13	5.91%	5.90%	5.90%	5.91%
2013	14	5.90%	5.91%	5.91%	5.90%
2014	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%