

Tab 10

Philadelphia Gas Works

Pennsylvania Public Utility Commission

52 Pa. Code §53.61, et seq.

Item 53.64(c) Thirty days prior to the filing of a tariff reflecting an increase or decrease in natural gas costs, each Section 1307(f) gas utility seeking recovery of purchased gas costs under that section shall provide notice to the public, under § 53.68 (relating to notice requirements), and shall file the following supporting information with the Commission, with a copy to the Consumer Advocate, Small Business Advocate and to intervenors upon request:

- (11) If any rate structure or rate allocation changes are to be proposed, a detailed explanation of each proposal, reasons therefore, number of customers affected, net effect on each customer class, and how the change relates to or is justified by changes in gas costs proposed in the Section 1307(f) tariff filing. Explain how gas supply, transportation and storage capacity costs are allocated to customers which are primarily nonheating, interruptible or transportation customers.

Response:

PGW is not proposing any rate structure or rate allocation changes in the instant proceeding, therefore, no testimony or schedules have been provided in this pre-filing to support such changes.

PGW will provide testimony regarding gas procurement policies, strategies and the GCR calculation in its 1307f March 1 filing.

Tab 11

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(12) A schedule depicting the most recent 5-year consecutive 3-day peak data by customer class (or other historic peak day data used for system planning), daily volumetric throughput by customer class (including end-user transportation throughput), gas interruptions and high, low and average temperature during each day.

Response:

Schedule 1 – Three-day peak for FY 05-06 through FY 09-10.

There were not any gas interruptions during the period of FY 05-06 through FY 09-10.

3 DAY PEAK ANALYSIS

Winter Peak Season	Date	Average Temperature	Hi Temperature	Low Temperature	Total Sendout (mcfs)	Firm Sendout (mcfs)	Cogen Sendout (mcfs)	LBS Sendout (mcfs)	BPS Sendout (mcfs)	GTS Sendout (mcfs)	IT Sendout (mcfs)
2005 - 2006	Dec 12	30	40	18	390,077	373,832	55	1,222	1,266	159	13,543
2005 - 2006	Dec 13	22	30	15	463,325	442,636	56	2,086	2,161	206	16,180
2005 - 2006	Dec 14	21	25	18	490,906	470,977	57	1,534	1,590	210	16,538
2006 - 2007	Feb 5	14	18	11	589,588	546,382	39	2,361	12,330	460	28,016
2006 - 2007	Feb 6	18	22	13	554,591	507,463	39	2,262	11,822	447	32,558
2006 - 2007	Feb 7	22	28	18	537,293	495,549	39	2,293	11,423	441	27,548
2007 - 2008	Feb 10	26	49	13	440,385	383,392	24	2,227	6,470	10,844	37,428
2007 - 2008	Feb 11	23	26	18	533,349	467,873	55	2,655	8,610	9,532	44,624
2007 - 2008	Feb 12	33	48	24	454,077	394,446	57	2,340	6,784	9,841	40,609
2008 - 2009	Jan 15	21	28	15	516,111	460,730	54	854	8,570	4,480	41,423
2008 - 2009	Jan 16	15	22	10	574,126	516,475	31	858	9,197	4,556	43,009
2008 - 2009	Jan 17	24	34	16	534,063	481,924	5	696	8,263	4,767	38,408
2009 - 2010	Jan 29	23	27	19	516,629	449,555	27	711	4,966	11,524	49,846
2009 - 2010	Jan 30	20	22	17	543,835	478,094	0	613	5,092	11,846	48,189
2009 - 2010	Jan 31	29	36	22	478,187	413,488	12	645	4,920	11,806	47,315

Tab 12

Docket No. R-11XXX

Item 53.64 (c)(13)

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(13) Identification and support for any peak day methodology used to project future gas demands and studies supporting the validity of the methodology.

Response:

Please see the attached Peak Day analysis. Additionally, ICF International has previously prepared a *Natural Gas Supply Study* which supports PGW's peak day methodology.

Peak Day Analysis

PGW performs a peak day analysis on an annual basis to determine its projected sendout requirements during peak conditions. Essentially this process is completed by collecting sendout and average temperature data for all days where the temperature is at or below 32 degrees Fahrenheit, excluding holidays and weekends. All interruptible transportation volumes are removed from total sendout to arrive at firm sendout on a daily basis.

Common statistical practices warrant that no less than thirty (30) data points be utilized in the analysis to ensure its integrity. For this analysis, PGW has utilized data from the period winter of FY 06-07 through FY 09-10 which would reflect the most current consumption behaviors of its customers. This period yielded 71 data points where the average temperature was at or below 32 degrees Fahrenheit.

Degree days are calculated by subtracting the average daily temperature from sixty-five (65).

A standard linear regression was performed on the data using the calculated degree-days and the actual firm daily sendout information. Additionally, in order to confirm the accuracy of the analysis, and to smooth the charting of the data, a quadratic and a cubic regression analysis were also completed.

A resulting R^2 (Correlation Coefficient) indicates a 78.7 % correlation between firm sendout and degree-days. The multiple regression correlation coefficient, R^2 , is a measure of the proportion of variability explained by, or due to the regression (linear relationship) in a sample of paired data. It is a number between zero and one and a value close to zero suggests a poor model.

To verify the level of confidence we can ascribe to the model, we developed the attached Linear Regression Confidence Level Table. Essentially, this table compares the actual versus projected sendout to determine the level of variance expressed as a standard deviation. A standard deviation represents the positive square root of the variance where the variance simply represents the dispersion about the mean. In this analysis the sample standard deviation is 24,209 MCF.

To determine the level where the relationship between consumption and degree-days is “significant” it is necessary to incorporate Degrees of Freedom and the Student’s T Statistic. Degrees of freedom refer to how many cases in the sample are free to vary.

The sample loses one degree of freedom for each estimated parameter. Thus, with a sample of 100 paired values and two estimated parameters (one for the constant and one for the coefficient of “degree days”), there are $100-2=98$ degrees of freedom. In this analysis we had 68 data points and there were 66 Degrees of Freedom.

The critical value is the value the Student's T statistic must equal or exceed to conclude that there is a 97.5% chance that the relationship between consumption and degree days is not 0. A Student's T statistic of 2.04 is required for a sample with 66 Degrees of Freedom.

The Student's T statistic is the distribution of the (mean/standard deviation) of a sample of normal distributed values with unknown variance. In this case, it is a measure of the likelihood that the estimated coefficient for "degree days" is actually zero. The farther the statistic is from 0, the greater the likelihood that the sample pairs are related. The Student-T distribution varies with the number of independent values (Degrees of Freedom) from which the variance is calculated. For this example, the T-statistic is calculated as $\text{SQRT}(R^2 * (\text{degrees of freedom}) / (1 - R^2)) = 16.61459$. The calculated Student's T statistic of 16.61459 exceeds the critical value of 2.04. Thus, we can conclude that the relationship between consumption and degree-days is "significant" at the 97.5% level.

Finally, based upon the models developed, it can be determined that the company's projected peak day sendout should be set at 681,182 MCF per day at 0 degrees Fahrenheit. This calculation is performed using the X Coefficient (i.e. slope) multiplied by the number of degree days and adding the Constant (Y Intercept).

Winter 07-10 Data for Daily Temperatures <= 32 Degrees Fahrenheit
W/O Holidays, Weekends

Day	Date	Daily Temp	Degree Days X	X^2	X^3	Firm Sendout			Cubic Projected Firm Sendout (Mcf)	
						Actual Firm Sendout (Mcf)	Par DD (Mcf)	Linear Projected Firm Sendout (Mcf)		
Friday	12/08/2006	30	35	1,225	42,875	379,705	10,849	380,965	380,988	379,610
Wednesday	01/17/2007	30	35	1,225	42,875	370,772	10,593	380,965	380,988	379,610
Thursday	01/25/2007	25	40	1,600	64,000	406,749	10,169	431,001	432,147	431,978
Friday	01/26/2007	23	42	1,764	74,088	446,122	10,622	451,015	451,929	453,745
Monday	01/29/2007	26	39	1,521	59,319	404,015	10,359	420,994	422,110	421,059
Tuesday	01/30/2007	32	33	1,089	35,937	363,931	11,028	360,950	359,843	361,699
Wednesday	01/31/2007	28	37	1,369	50,653	370,862	10,023	400,979	401,744	399,678
Monday	02/05/2007	14	51	2,601	132,651	546,382	10,713	541,081	536,127	529,647
Tuesday	02/06/2007	18	47	2,209	103,823	507,463	10,797	501,052	499,680	502,830
Wednesday	02/07/2007	22	43	1,849	79,504	495,549	11,524	461,023	461,674	464,383
Thursday	02/08/2007	25	40	1,600	64,000	482,566	12,064	431,001	432,147	431,978
Friday	02/09/2007	29	36	1,296	46,656	434,461	12,068	390,972	391,415	389,427
Tuesday	02/13/2007	28	37	1,369	50,653	423,203	11,438	400,979	401,744	399,678
Wednesday	02/14/2007	24	41	1,681	68,921	474,230	11,567	441,008	442,087	442,909
Thursday	02/15/2007	21	44	1,936	85,184	500,200	11,368	471,030	471,321	474,716
Friday	02/16/2007	26	39	1,521	59,319	466,898	11,972	420,994	422,110	421,059
Tuesday	02/23/2007	31	34	1,156	39,304	379,220	11,154	370,957	370,464	370,332
Wednesday	03/06/2007	23	42	1,764	74,088	469,214	11,172	451,015	451,929	453,745
Thursday	03/07/2007	24	41	1,681	68,921	453,835	11,069	441,008	442,087	442,909
Friday	03/08/2007	30	35	1,225	42,875	407,781	11,651	380,965	380,988	379,610
Thursday	03/16/2007	31	34	1,156	39,304	347,933	10,233	370,957	370,464	370,332
Wednesday	12/05/2007	30	35	1,225	42,875	361,414	10,326	380,965	380,988	379,610
Thursday	12/06/2007	31	34	1,156	39,304	369,844	10,878	370,957	370,464	370,332
Wednesday	01/02/2008	26	39	1,521	59,319	413,844	10,611	420,994	422,110	421,059
Thursday	01/03/2008	25	40	1,600	64,000	440,624	11,016	431,001	432,147	431,978
Wednesday	01/23/2008	32	33	1,089	35,937	325,432	9,862	360,950	359,843	361,699
Thursday	01/24/2008	28	37	1,369	50,653	379,113	10,246	400,979	401,744	399,678
Friday	01/25/2008	28	37	1,369	50,653	378,207	10,222	400,979	401,744	399,678
Monday	02/11/2008	23	42	1,764	74,088	467,873	11,140	451,015	451,929	453,745
Wednesday	02/20/2008	29	36	1,296	46,656	378,525	10,515	390,972	391,415	389,427
Thursday	02/21/2008	32	33	1,089	35,937	355,857	10,784	360,950	359,843	361,699
Thursday	02/28/2008	28	37	1,369	50,653	454,604	12,287	400,979	401,744	399,678
Monday	12/08/2008	31	34	1,156	39,304	371,137	11,092	370,957	370,464	370,332
Monday	12/22/2008	25	40	1,600	64,000	447,137	11,178	431,001	432,147	431,978
Wednesday	12/31/2008	29	36	1,296	46,656	374,949	10,415	390,972	391,415	389,427
Wednesday	01/14/2009	27	38	1,444	54,872	396,582	10,489	410,986	411,976	410,257
Thursday	01/15/2009	21	44	1,936	85,184	460,730	10,471	471,030	471,321	474,716
Friday	01/16/2009	15	50	2,500	125,000	516,475	10,330	531,073	527,162	524,403
Tuesday	01/20/2009	26	39	1,521	59,319	416,473	10,679	420,994	422,110	421,059
Wednesday	01/21/2009	27	38	1,444	54,872	438,203	11,532	410,986	411,976	410,257
Monday	01/26/2009	31	34	1,156	39,304	388,449	11,425	370,957	370,464	370,332
Tuesday	01/27/2009	31	34	1,156	39,304	375,153	11,034	370,957	370,464	370,332

Day	Date	Daily Temp	Degree Days X	Actual Firm Sendout (Mcf)			Linear Projected Firm Sendout (Mcf)	Quadratic Projected Firm Sendout (Mcf)	Cubic Projected Firm Sendout (Mcf)
				Firm Sendout	Per DD	Per DD			
Thursday	01/29/2009	32	33	358,115	10,852	360,950	359,843	361,699	
Friday	01/30/2009	32	33	377,076	11,427	360,950	359,843	361,699	
Wednesday	02/04/2009	26	39	395,771	10,148	420,994	422,110	421,059	
Thursday	02/05/2009	22	43	454,626	10,573	461,023	461,674	464,383	
Friday	02/06/2009	31	34	384,803	11,318	370,957	370,464	370,332	
Monday	02/20/2009	29	36	366,505	10,181	390,972	391,415	389,427	
Monday	02/23/2009	29	36	377,612	10,489	390,972	391,415	389,427	
Tuesday	02/24/2009	30	35	349,346	9,981	380,965	380,988	379,610	
Monday	03/02/2009	19	46	440,702	9,580	491,044	490,324	494,045	
Tuesday	03/03/2009	22	43	432,303	10,054	461,023	461,674	464,383	
Wednesday	03/04/2009	27	38	361,842	9,522	410,986	411,976	410,257	
Friday	12/11/2009	32	33	363,428	11,013	360,950	359,843	361,699	
Thursday	12/17/2009	30	35	356,688	10,191	380,965	380,988	379,610	
Friday	12/18/2009	31	34	354,884	10,438	370,957	370,464	370,332	
Wednesday	12/23/2009	30	35	367,047	10,487	380,965	380,988	379,610	
Tuesday	12/29/2009	25	40	420,824	10,521	431,001	432,147	431,978	
Monday	01/04/2010	30	35	395,770	11,308	380,965	380,988	379,610	
Tuesday	01/05/2010	32	33	375,718	11,385	360,950	359,843	361,699	
Friday	01/08/2010	29	36	385,545	10,710	390,972	391,415	389,427	
Monday	01/11/2010	32	33	380,493	11,530	360,950	359,843	361,699	
Tuesday	01/12/2010	32	33	378,607	11,473	360,950	359,843	361,699	
Thursday	01/28/2010	32	33	371,065	11,244	360,950	359,843	361,699	
Friday	01/29/2010	23	42	449,243	10,696	451,015	451,929	453,745	
Monday	02/08/2010	32	33	375,766	11,387	360,950	359,843	361,699	
Friday	02/12/2010	32	33	345,617	10,473	360,950	359,843	361,699	
Thursday	02/25/2010	32	33	357,730	10,840	360,950	359,843	361,699	
			65	406277.1121	10835.07122	681,182	651,426	434,435	
				274625					
			Count	68					

Count 68

**Firm Sendout Projection Based Data From 07-10
Data for Daily Temperatures <= 32 Degrees Fahrenheit**

<u>R Squared</u>	<u>Change</u>	<u>Student's T</u>	<u>Degrees of Freedom</u>	<u>Critical Value</u>	<u>@ 97.5% Significant</u>
0.786970	0.786970	15.614590	66	2.04	Yes
0.787517	0.000547	0.409027	65	2.04	No
0.789104	0.001587	0.694032	64	2.04	No

Degrees of Freedom
97.5% Significance Level
95.0% Significance Level

<u>66</u>	<u>65</u>	<u>64</u>
<u>2.04</u>	<u>2.04</u>	<u>2.04</u>
<u>1.65</u>	<u>1.65</u>	<u>1.65</u>

Linear Projection at Zero Degrees Fahrenheit
Linear Projection at 15 Degrees Fahrenheit

681,182 Mcf
531,073 Mcf

Student's T = Square Root[(Increase * Degrees of Freedom)/(1 - R Squared)]

Linear SO = Constant + (X * X Coefficient)

Quadratic SO = Constant + (X * X Coeff) + (X 1u2 * X 1u2 Coeff)

Cubic SO = Constant + (X * X Coeff) + (X 1u2 * X 1u2 Coeff) + (X 1u3 * X 1u3 Coeff)

Linear Regression Confidence Level Table

Count	Degree Days X	Projected		Difference		Actual		t's dyc	s dyc	Upper Acc Y dc + t's dy d	".-1 SD" Lower		"+.1 SD" Y dc + s dy d		".-2 SD" Lower		"+.2 SD" Y dc + 2s dy dc	
		Firm Soudout (Mcf) Y dc	Firm Soudout (Mcf) Y dc	Actual Versus Projected (Y - Yc)	Actual Versus Projected (Y - Yc)	(Degree Days - Xm) X - Xm	(Degree Days - Xm) Squared (X - Xm) ²				Actual Versus Projected (Y - Yc)	Actual Versus Projected (Y - Yc)	Y dc + t's dy d	Y dc + s dy d	Y dc + s dy d	Y dc + 2s dy dc	Y dc + 2s dy dc	
1	33	363,931	360,950	2,981	2,981	8,886,194	8,886,194	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
2	33	325,432	360,950	(35,518)	(35,518)	1,261,510,218	1,261,510,218	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
3	33	355,857	360,950	(5,094)	(5,094)	25,944,090	25,944,090	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
4	33	358,115	360,950	(2,835)	(2,835)	8,038,346	8,038,346	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
5	33	377,076	360,950	16,126	16,126	260,041,498	260,041,498	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
6	33	363,428	360,950	2,478	2,478	6,139,504	6,139,504	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
7	33	375,718	360,950	14,768	14,768	218,087,983	218,087,983	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
8	33	380,493	360,950	19,543	19,543	381,921,119	381,921,119	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
9	33	378,607	360,950	17,657	17,657	311,762,665	311,762,665	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
10	33	371,065	360,950	10,115	10,115	102,309,224	102,309,224	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
11	33	375,766	360,950	14,816	14,816	219,507,996	219,507,996	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
12	33	345,617	360,950	(15,333)	(15,333)	235,106,954	235,106,954	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
13	33	357,730	360,950	(3,220)	(3,220)	10,369,674	10,369,674	8,143	3,998	369,094	352,807	338,619	383,282	316,287	405,613			
14	34	379,220	370,957	8,263	8,263	68,276,182	68,276,182	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
15	34	347,933	370,957	(23,025)	(23,025)	530,128,156	530,128,156	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
16	34	369,844	370,957	(1,114)	(1,114)	1,240,326	1,240,326	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
17	34	377,137	370,957	6,180	6,180	38,186,979	38,186,979	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
18	34	388,449	370,957	17,492	17,492	305,954,720	305,954,720	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
19	34	375,153	370,957	4,196	4,196	17,602,735	17,602,735	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
20	34	384,803	370,957	13,846	13,846	191,699,571	191,699,571	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
21	34	354,884	370,957	(16,073)	(16,073)	258,355,428	258,355,428	7,251	3,560	378,209	363,706	348,626	393,289	326,294	415,621			
22	35	379,705	380,965	(1,259)	(1,259)	1,585,799	1,585,799	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
23	35	370,772	380,965	(10,193)	(10,193)	103,893,980	103,893,980	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
24	35	407,781	380,965	26,817	26,817	719,131,449	719,131,449	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
25	35	361,414	380,965	(19,550)	(19,550)	382,218,822	382,218,822	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
26	35	349,346	380,965	(31,619)	(31,619)	999,740,889	999,740,889	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
27	35	356,688	380,965	(24,277)	(24,277)	589,357,164	589,357,164	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
28	35	367,047	380,965	(13,918)	(13,918)	193,701,801	193,701,801	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
29	35	395,770	380,965	14,805	14,805	219,197,517	219,197,517	6,500	3,191	387,465	374,464	358,633	403,296	336,301	425,628			
30	36	434,461	390,972	43,489	43,489	1,891,306,501	1,891,306,501	5,944	2,918	396,916	385,027	368,640	413,304	346,309	435,635			
31	36	378,525	390,972	(12,447)	(12,447)	154,935,148	154,935,148	5,944	2,918	396,916	385,027	368,640	413,304	346,309	435,635			
32	36	374,949	390,972	(16,023)	(16,023)	256,733,974	256,733,974	5,944	2,918	396,916	385,027	368,640	413,304	346,309	435,635			
33	36	366,505	390,972	(24,467)	(24,467)	598,630,188	598,630,188	5,944	2,918	396,916	385,027	368,640	413,304	346,309	435,635			
34	36	377,612	390,972	(13,360)	(13,360)	178,487,470	178,487,470	5,944	2,918	396,916	385,027	368,640	413,304	346,309	435,635			
35	36	385,545	390,972	(5,427)	(5,427)	29,451,464	29,451,464	5,842	2,770	406,621	395,337	378,648	423,311	356,316	445,642			
36	37	370,862	400,979	(30,117)	(30,117)	907,036,825	907,036,825	5,842	2,770	406,621	395,337	378,648	423,311	356,316	445,642			
37	37	423,203	400,979	22,224	22,224	493,918,362	493,918,362	5,842	2,770	406,621	395,337	378,648	423,311	356,316	445,642			
38	37	378,207	400,979	(21,866)	(21,866)	478,122,839	478,122,839	5,842	2,770	406,621	395,337	378,648	423,311	356,316	445,642			
39	37	454,604	400,979	53,625	53,625	2,875,623,346	2,875,623,346	5,842	2,770	406,621	395,337	378,648	423,311	356,316	445,642			
40	37	398,582	410,986	(12,404)	(12,404)	153,869,188	153,869,188	5,633	2,765	416,619	405,354	388,655	433,318	366,323	455,650			
41	38	438,203	410,986	27,217	27,217	740,743,209	740,743,209	5,633	2,765	416,619	405,354	388,655	433,318	366,323	455,650			
42	38	361,842	410,986	(49,144)	(49,144)	2,415,172,243	2,415,172,243	5,919	2,906	426,913	415,074	398,662	443,325	376,330	465,657			
43	38	404,015	420,994	(16,978)	(16,978)	288,260,931	288,260,931	5,919	2,906	426,913	415,074	398,662	443,325	376,330	465,657			
44	39	466,898	420,994	45,905	45,905	2,107,253,517	2,107,253,517	5,919	2,906	426,913	415,074	398,662	443,325	376,330	465,657			
45	39	413,844	420,994	(7,150)	(7,150)	51,122,571	51,122,571	5,919	2,906	426,913	415,074	398,662	443,325	376,330	465,657			

Count	Degree Days X	Firm Sendout (Mcf) Y	Firm Sendout (Mcf) Y dc	Projected Linear Firm Sendout (Mcf) Y dc		Difference Actual Versus Projected Y - Yc	Actual Projected Squared (V - Yc) ²	(Degree Days - X _m) Squared (X - X _m) ²	s dyc	t*s dyc	Lower Acc Y dc + t*s dyc		Upper Acc Y dc + t*s dyc		"-1 SD" Y dc + s dyc		"+1 SD" Y dc + s dyc		"-2 SD" Y dc + 2s dyc		"+2 SD" Y dc + 2s dyc	
				Lower	Upper						Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper				
47	39	416,473	420,994	420,994	(4,521)	20,436,211	2	2,906	5,919	415,074	426,913	398,662	443,325	376,330	465,657							
48	39	395,771	420,994	420,994	(25,223)	636,181,709	2	2,906	5,919	415,074	426,913	398,662	443,325	376,330	465,657							
49	40	406,749	431,001	431,001	(24,252)	586,175,562	2	3,172	6,462	424,539	437,463	408,669	453,332	386,338	475,664							
50	40	482,566	431,001	431,001	51,565	2,658,972,750	6	3,172	6,462	424,539	437,463	408,669	453,332	386,338	475,664							
51	40	440,624	431,001	431,001	9,623	92,605,628	2	3,172	6,462	424,539	437,463	408,669	453,332	386,338	475,664							
52	40	447,137	431,001	431,001	16,136	260,374,252	2	3,172	6,462	424,539	437,463	408,669	453,332	386,338	475,664							
53	40	474,230	431,001	431,001	(10,177)	103,968,960	2	3,172	6,462	424,539	437,463	408,669	453,332	386,338	475,664							
54	41	474,230	441,008	441,008	33,222	1,103,670,638	3	3,536	7,203	433,805	448,211	418,677	463,340	396,345	485,671							
55	41	453,835	441,008	441,008	12,827	164,537,328	3	3,536	7,203	433,805	448,211	418,677	463,340	396,345	485,671							
56	42	446,122	451,015	451,015	(4,894)	23,947,574	4	3,971	8,088	442,928	459,103	428,684	473,347	406,352	495,679							
57	42	469,214	451,015	451,015	18,199	331,185,889	4	3,971	8,088	442,928	459,103	428,684	473,347	406,352	495,679							
58	42	467,873	451,015	451,015	16,858	284,179,997	4	3,971	8,088	442,928	459,103	428,684	473,347	406,352	495,679							
59	42	449,243	451,015	451,015	(1,772)	3,141,279	4	3,971	8,088	442,928	459,103	428,684	473,347	406,352	495,679							
60	43	495,549	461,023	461,023	34,527	1,192,105,890	5	4,455	9,075	451,948	470,097	438,691	483,354	416,359	505,686							
61	43	454,626	461,023	461,023	(6,397)	40,916,570	5	4,455	9,075	451,948	470,097	438,691	483,354	416,359	505,686							
62	43	432,303	461,023	461,023	(28,720)	824,815,777	5	4,455	9,075	451,948	470,097	438,691	483,354	416,359	505,686							
63	44	500,200	471,030	471,030	29,170	850,883,016	6	4,975	10,134	460,896	481,164	448,698	493,361	426,367	515,693							
64	44	460,730	471,030	471,030	(10,300)	106,086,848	6	4,975	10,134	460,896	481,164	448,698	493,361	426,367	515,693							
65	46	440,702	491,044	491,044	(50,342)	2,534,350,054	8	6,085	12,395	478,650	503,439	468,713	513,376	446,381	535,708							
66	47	507,463	501,052	501,052	6,412	41,107,815	9	6,663	13,572	487,479	514,624	478,720	523,383	456,388	545,715							
67	50	516,475	531,073	531,073	(14,598)	213,110,129	12	8,452	17,216	513,858	548,289	508,742	563,405	486,410	575,736							
68	51	546,382	541,081	541,081	5,302	28,106,834	13	9,060	18,455	522,625	559,536	518,749	563,412	496,417	585,744							
Total/Avg	38	406,277	373,336	373,336		33,911,606,561	1,251															
Xm =	38																					
Population Variance =						498,700,096																
Population Standard Deviation of Regression						22,332	1s	428,609	Lower Range	383,946												
						22,667	2s	450,940	Upper Range	361,614												
Standard error of sendout projection																						
T-factor						2.04																
(T factor) * (Std error of projection)						46,172																

t = 2.04

1,251

373,336

38

38

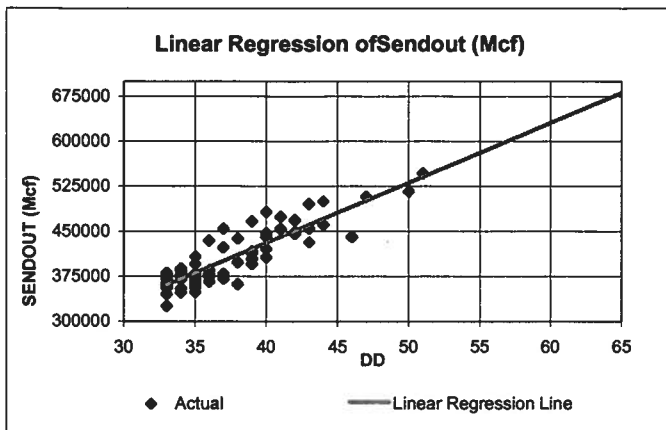
Count	Degree Days X	Firm Sendout (Mcf) Y	Firm Sendout (Mcf) Y dc	Difference Actual Versus Projected Y - Yc	Actual Projected Squared (V - Yc) ²	(Degree Days - X _m) Squared (X - X _m) ²	s dyc	t*s dyc	Lower Acc Y dc + t*s dyc	Upper Acc Y dc + t*s dyc	"-1 SD" Y dc + s dyc	"+1 SD" Y dc + s dyc	"-2 SD" Y dc + 2s dyc	"+2 SD" Y dc + 2s dyc
65	65	681,182	681,182	(681,182)	464,008,787,101	27	755	17,819	644,886	717,478	658,850	703,513	636,519	725,845
66	66	406,277	373,336		33,911,606,561									
67	67	38	38											
68	68	38	38											

Regression Results Winter 07-10

Based On Data for Daily Temperatures ≤ 32 Degrees Fahrenheit

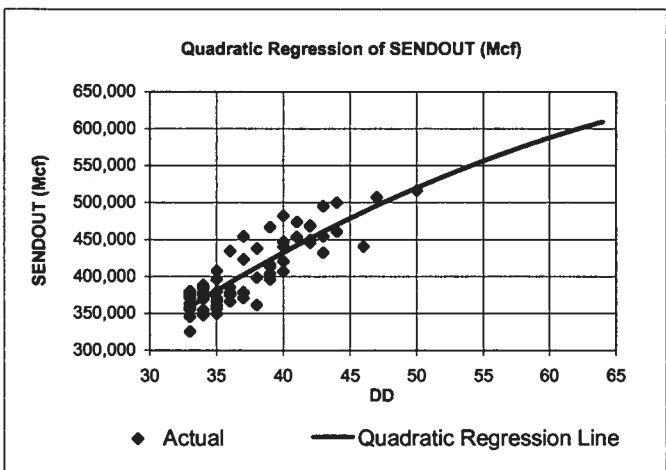
Regression Output:		Quadratic		Cubic	
Regression Output:		Regression Output:		Regression Output:	
Constant	30,711.3	Constant	(45,285.0)	Constant	1,129,065.9
Std Err of Y Est	24,208.8	Std Err of Y Est	187,388.1	Std Err of Y Est	1,702,498.2
R Squared	0.7870	R Squared	0.7875	R Squared	0.7891
No. of Observations	68	No. of Observations	68	No. of Observations	68
Degrees of Freedom	66	Degrees of Freedom	65	Degrees of Freedom	64
X Coefficient(s)	10,007.2	X	X	X	X ²
Std Err of Coef.	640.8904	X Coefficient(s)	-48.6868	X Coefficient(s)	2116.015
		Std Err of Coef.	119.0309	Std Err of Coef.	3121.313
					X ³
					-17.585
					25.337
Zero Degree Temp Sendout	681,182		651,426		434,435
DD	65				

Regression Chart Analysis
Based Upon Data For Temperatures Of <=32 Degrees F.
Winters 07-10



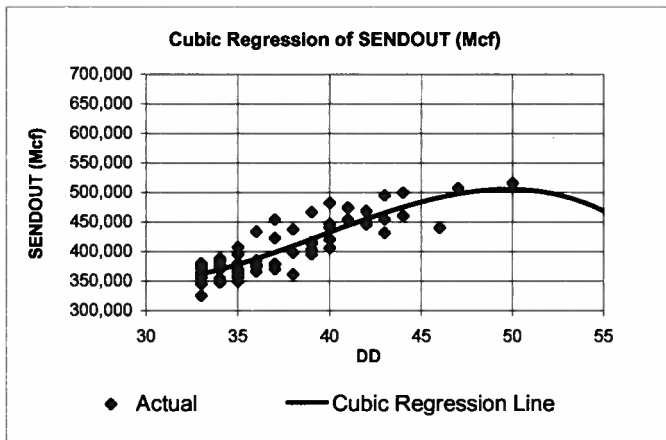
Linear Regression Output

Constant		30,711
Std. Error of Y Estimate		24,209
R Squared		0.787
Number of Observations		68
Degrees of Freedom		66
X Coefficient	X	10007
Std. Err. Of Coefficient		641



Quadratic Regression Output

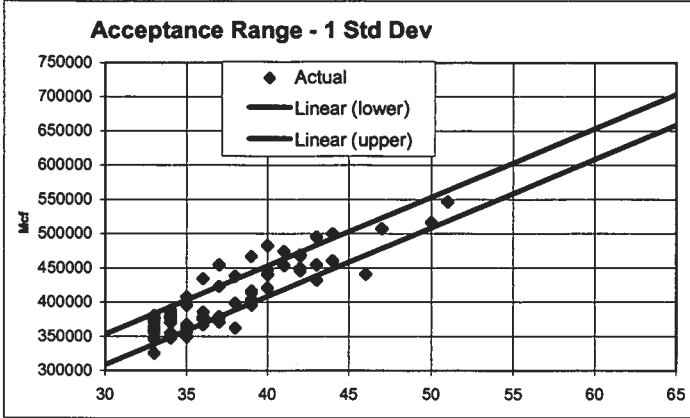
Constant		(45,285)
Std. Error of Y Estimate		187,388
R Squared		0.788
Number of Observations		68
Degrees of Freedom		65
X Coefficient	X	13,883
Std. Err. Of Coefficient		9,498
	X ^ 2	-49
		119



Cubic Regression Output

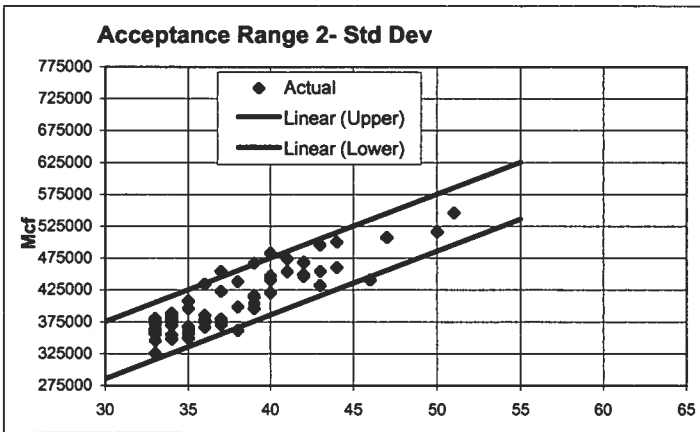
Constant		1,129,066
Std. Error of Y Estimate		1,702,498
R Squared		0.789
Number of Observations		68
Degrees of Freedom		64
X Coefficient	X	-73932
Std. Err. Of Coefficient		126888
	X ^ 2	2116
		3121
	X ^ 3	-18
		25

Regression Chart Analysis
Based Upon Data For Temperatures Of <=32 Degrees F.
Winters 07-10



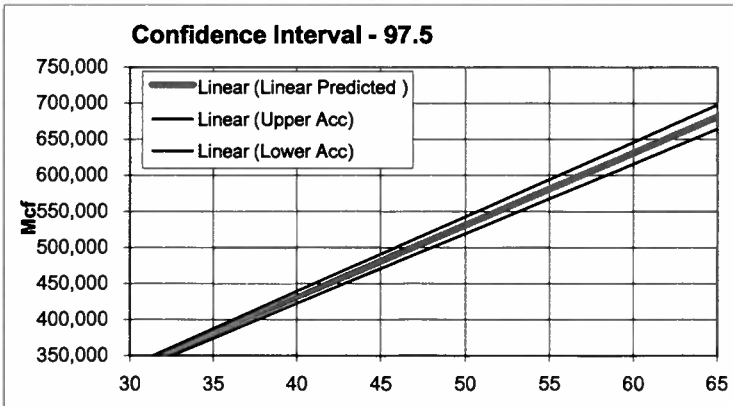
Acceptance Range @ 1 Standard Deviation

Regression Squared	498,700,096
Regression	22,332
Upper Range 1sd	428,609
Lower Range 1sd	383,946



Acceptance Range @ 2 Standard Deviation

Regression Squared	498,700,096
Regression	22,332
Upper Range 2sd	450,940
Lower Range 2sd	361,614



Confidence Interval: 97.5%

Regression Squared	498,700,096
Standard error of sendout projection	22,667
X Mean	38
T Distribution	2.04

Tab 13

Philadelphia Gas Works

Pennsylvania Public Utility Commission
52 Pa. Code §53.61, et seq.

Item 53.64(c) Thirty days prior to the filing of a tariff reflecting an increase or decrease in natural gas costs, each Section 1307(f) gas utility seeking recovery of purchased gas costs under that section shall provide notice to the public, under § 53.68 (relating to notice requirements), and shall file the following supporting information with the Commission, with a copy to the Consumer Advocate, Small Business Advocate and to intervenors upon request:

- (14) Analysis and data demonstrating, on an historic and projected future basis, the minimum gas entitlements needed to provide reliable and uninterrupted service to priority one customers during peak periods.

Response:

In the settlement of Philadelphia Gas Works' 2010-2011 GCR Proceeding (Docket No. R-2010-2157062), PGW agreed to and will provide the results of a capacity resource review in the March 1, 2011 GCR Filing.

Tab 14

Docket No. R-11XXX

Item 53.64(i)(1)

Philadelphia Gas Works

Pennsylvania Public Utility Commission
52 PA Code 53.61, et seq.

Item 53.64(i) Utilities shall comply with the following:

- (1) Thirty days prior to the filing of a tariff reflecting increases or decreases in purchased gas expenses, gas utilities under 66 Pa.C.S. § 1307 (f) recovering expenses under that section shall file a statement for the 12-month period ending 2 months prior to the filing date under 66 Pa.C.S. § 1307(f) as published in accordance with subsection (b) which shall specify:
 - (i) The total revenues received under 66 Pa.C.S. § 1307(a), (b) or (f), including fuel revenues received, whether shown on the bill as 66 Pa.C.S. § 1307(f) as published in accordance with subsection (b) which shall specify:
 - (ii) The total gas expenses incurred.
 - (iii) The difference between the amounts in sub paragraphs (i) and (ii).
 - (iv) Evidence explaining how actual costs incurred differ from the costs allowed under subparagraph (ii).
 - (v) How these costs are consistent with a least cost fuel procurement policy, as required by 66 Pa.C.S. § 1318 (relating to determination of just and reasonable natural gas rates).

Response: Please see attached schedule. Additionally, please refer to Item 53.64(c)(6) for a detailed discussion regarding the company's least cost fuel procurement policy.

**GCR
STATEMENT OF RECONCILIATION
January through December 2009**

	NET COST OF FUEL	FIRM SALES	IRC FACTOR APPLIED	INTERRUPT. REVENUE CREDIT	APPLICABLE EXPENSES	GCR FACTOR APPLIED	GCR REVENUE BILLED	SSPC & MIGRATION REVENUE	MONTHLY OVER/(UNDER) RECOVERY	NATURAL GAS REFUNDS	CUMULATIVE OVER/(UNDER) RECOVERY
	1	2	3	4=(2*3)	5=(1-4)	6	7	8	9=(7+8-5)	10	11
	\$	MCF	\$	\$	\$	\$	\$	\$	\$	\$	\$
PRIOR YEAR'S CARRYOVER:											
JANUARY 2009	122,281,446	9,221,074	0.2113	1,947,952	120,333,494	11.8767	106,465,137	(11,417)	(13,879,774)	0	11,248,928
FEBRUARY	78,414,407	8,874,697	0.2059	1,827,300	76,587,107	10.7007	94,946,381	22,064	18,383,339	0	(2,630,846)
MARCH	70,228,784	6,690,089	0.2091	1,398,563	68,828,221	9.5600	63,294,692	44,372	(5,489,157)	0	15,752,493
APRIL	24,894,113	4,373,233	0.2122	928,000	23,966,113	8.4192	36,908,123	(37,181)	12,905,830	0	10,263,336
MAY	13,981,288	2,186,285	0.2122	463,930	13,517,358	8.4192	18,441,508	(15,429)	4,908,721	0	23,169,165
JUNE	10,301,953	1,380,535	0.2141	295,504	10,006,449	7.8004	10,761,684	9,612	764,846	0	28,842,732
JULY	10,075,761	1,162,540	0.2159	250,992	9,824,769	7.1815	8,449,439	(19,546)	(1,394,878)	6,275	27,454,129
AUGUST	10,575,549	1,017,205	0.2159	219,615	10,355,934	7.1815	7,388,777	14,398	(2,952,760)	136,343	24,637,712
SUBTOTAL JAN. TO AUG. 08	340,751,301	34,905,657		7,331,855	333,419,446		346,658,742	6,870	13,246,166	142,618	24,637,712

**2008-2009 FINALIZED OVERCOLLECTION
2008-2009 INTEREST CREDIT ON COMMODITY
TOTAL "E" FACTOR**

2008-2009 FINALIZED OVERCOLLECTION	24,637,712
2008-2009 INTEREST CREDIT ON COMMODITY	973,740
TOTAL "E" FACTOR	25,611,453

**SEPTEMBER 2009
OCTOBER
NOVEMBER
DECEMBER
SUBTOTAL SEPT. TO DEC. 08
TOTAL 2009**

SEPTEMBER 2009	10,815,702	1,074,087	0.1650	177,171	10,638,531	7.1358	7,715,994	13,920	(2,908,617)	0	22,702,835
OCTOBER	18,114,638	1,670,689	0.1140	190,459	17,924,179	7.0900	11,879,385	12,844	(6,031,951)	0	16,670,885
NOVEMBER	26,440,822	3,081,608	0.1140	351,303	26,089,519	7.0900	22,136,103	36,034	(3,917,382)	0	12,753,503
DECEMBER	54,256,451	5,671,027	0.1140	646,497	53,609,954	7.1699	41,026,407	42,880	(12,540,657)	0	212,836
SUBTOTAL SEPT. TO DEC. 08	109,627,613	11,497,411		1,365,430	108,262,183		62,757,889	105,677	(25,398,617)	0	212,836
TOTAL 2009	450,378,914	46,403,068		8,697,285	441,681,629		429,416,631	112,548	(12,152,451)	142,618	212,836

Tab 15

Docket No. R-11XXX

Item 53.65 (1)

Philadelphia Gas Works

Pennsylvania Public Utility Commission
52 Pa. Code §53.61, et seq.

Item 53.65 (1)

The costs of the affiliated gas, transportation or storage as compared to the average market price of other gas, transportation or storage and the price of other sources of gas, transportation and storage.

Response:

PGW has no affiliates, see response to 53.64(c)(1) for price of gas, transportation and storage.