A-125042

ARP 2006

Philadelphia Gas Works
Gregory J. Stunder
Senior Attorney

PGW

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ORIGINAL

February 28, 2006

VIA EXPRESS MAIL

James McNulty, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
2nd Floor, 1 North
400 North Street
Harrisburg, PA 17120

RE: Philadelphia Gas Works Annual Resource Planning Report

ARP-125042

Dear Secretary McNulty,

Enclosed for filing is an original and seven (7) copies of Philadelphia Gas Works Annual Resource Planning Report, Forms 1 and 2.

Please contact me if you have any questions regarding this filing at 215-684-6878.

Respectfully submitted,

Gregory J. Stunder
Senior Attorney

Enclosures

cc: Calvin Birge, Conservation, Economics and Energy Planning (w/enc.)

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ANNUAL RESOURCE PLANNING REPORT

Philadelphia Gas Works

Philadelphia, Pennsylvania

March 2006

Forms 1 & 2

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Philadelphia Gas Works
800 West Montgomery Avenue
Philadelphia, Pennsylvania 19122

ANNUAL RESOURCE PLANNING REPORT
MARCH 2006

Forms 1 & 2

Information Submitted in Compliance with and Pursuant to Title 52
Pennsylvania Code Section 59.81

PHILADELPHIA GAS WORKS

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EXHIBIT NO.	REGULATION	DESCRIPTION
1	59.81	General
2	59.81	Forms IRP-Gas 1A, and 1B Annual and Peak Day Energy Demand
3	59.81	Forms IRP-Gas 2A, 2B, and 2C Annual and Peak Day Energy Resources, And transmission and storage contracts

Section 59.81: **General**

Pursuant to Section 59.81 (a), each major jurisdictional gas utility must file an annual resource planning report (ARPR) on or before June 1, 1996 and June 1 of each succeeding year, except Form 1A/2A which filing date is March 1. One (1) original and seven (7) copies of the report must be submitted to:

Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

One copy should be submitted unbound for ease of duplication.

One courtesy copy should also be submitted to:

Pennsylvania Public Utility Commission
Conservation, Economics and Energy Planning
P.O. Box 3265
Harrisburg, PA 17105-3265
Attn. Calvin Birge

Also submit one (1) copy to the following:

Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101-1921

Office of Small Business Advocate
Suite 1102, Commerce Building
300 N. Second Street
Harrisburg, PA 17101

Be sure to indicate the name and telephone number of at least one individual at the company who is familiar with the filing and will be available to answer any questions the Commission staff may have. You may also wish to list those individuals who are directly involved in the preparation of the various document components.

Information contained in annual resource planning reports must be utility-specific. The report should follow an outline similar to that which is contained herein, with narrative accompanying the required data. Forms may be modified to accommodate wide columns of numbers and enhance readability, but the general format should be used to maintain consistency.

This information is not generally considered confidential. Utilities are obligated to provide complete information. However, we will treat as confidential those portions of the report designated by the utility as proprietary. If a utility's proprietary claim is challenged, the Commission will direct the utility to file a petition for protective order pursuant to 52 PA Code 5.423.

All questions concerning the reporting requirements for Forms IRP Gas 1A through 9 should be addressed to Pennsylvania Public Utility Commission Bureau of Conservation, Economics and Energy Planning.

Response:

An original, seven (7) copies, and one unbound copy of Forms 1A, 1B, 2A, 2b, and 2C along with a general discussion of the methodologies, data sources, and assumptions are being submitted to meet the requirements of the March 1 filing.

All questions concerning the ARPR should be directed to Mr. Kenneth Dybalski, Manager - Gas Planning at (215) 684-6317. The following individual is available to answer questions concerning Forms 1 and 2:
Ms. Maria Hogan, Administrator – Gas Planning at (215) 684-6618.

Section 59.81 **Forms 1RP-Gas 1A, and 1B – Annual and Peak Day Demand**

The load growth projections shall reflect the effects of price elasticity, market induced conservation, building and appliance efficiency standards, and the effects of the utility's existing and planned conservation and load management activities.

Response: Please see the attached documentation and forms.

FORM-IRP-GAS-1A: ANNUAL GAS REQUIREMENTS
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(VOLUMES IN MMcf)

	Historical Data		Current Year	Three Year Forecast		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Firm Requirements:						
Retail Residential	42,433	41,467	38,733	43,869	43,828	43,641
Retail Commercial	12,166	11,919	11,580	12,890	13,027	13,150
Retail Industrial	1,119	1,050	1,023	1,517	1,674	1,830
Electric Power Generation	-	-	-	-	-	-
Exchanges with Other Utilities	-	-	-	-	-	-
Unaccounted For Gas	2,540	1,902	1,625	2,432	2,443	2,447
Company Use	99	95	98	104	104	104
Other - Prior Period Adjustment	-	(463)	-	-	-	-
Subtotal Firm	58,356	55,970	53,060	60,811	61,077	61,171
Interruptible Requirements:						
Retail	4,006	4,464	2,783	3,134	3,124	3,149
Electric Power Generation	98	47	20	7	10	13
Company's Own Plant	61	65	67	71	71	70.65
Unaccounted For Gas	183	185	98	126	125	127
Subtotal Interruptible	4,347	4,760	2,968	3,338	3,330	3,360
SUBTOTAL FIRM AND INTERRUPTIBLE	62,703	60,730	56,028	64,150	64,406	64,532
Transportation:						
Firm Residential	-	-	-	-	-	-
Firm Commercial	-	-	-	-	-	-
Firm Industrial	-	-	-	-	-	-
Interruptible Residential	-	-	-	-	-	-
Interruptible Commercial	302	1,508	1,952	2,851	2,821	2,931
Interruptible Industrial	918	1,912	2,226	3,021	3,068	3,086
Other - Non-Utility Power Producers	7,762	8,307	7,442	8,340	8,340	8,340
Subtotal Transportation	8,981	11,727	11,620	14,212	14,229	14,356
TOTAL GAS REQUIREMENTS	71,684	72,457	67,649	78,362	78,636	78,888
Increase (Decrease)	na	772	(4,808)	10,713	274	252
Percent Change (%)	na	1.08%	-6.64%	15.84%	0.35%	0.32%

FORM-IRP-GAS-1B:PEAK DAY REQUIREMENTS
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(VOLUMES IN MMcf)

	Historical Data		Current Year [2]	Three Year Forecast [1]		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Firm Requirements:						
Retail Residential	438	405	489	538	536	535
Retail Commercial	125	116	128	141	142	144
Retail Industrial	12	10	11	16	17	19
Electric Power Generation	0	0	0	0	0	0
Exchanges with Other Utilities	0	0	0	0	0	0
Unaccounted For Gas	26	19	0	0	0	0
Company Use	1	1	1	1	1	1
Other	0	0	0	0	0	0
Subtotal Firm	602	552	630	695	697	698.4
Interruptible Requirements:						
Retail	18.1	28.2	26.5	25.1	25.3	25.7
Electric Power Generation	0.0	0.1	0.0	0.0	0.0	0.0
Company's Own Plant	0.4	0.6	0.6	0.0	0.0	0.0
Unaccounted For Gas	0.0	0.0	0.0	1.0	1.0	1.0
Subtotal Interruptible	18.5	28.9	27.1	26.1	26.2	26.7
SUBTOTAL FIRM AND INTERRUPTIBLE	620	580	657	721	723	725
Transportation:						
Firm Residential	0	0	0	0	0	0
Firm Commercial	0	0	0	0	0	0
Firm Industrial	0	0	0	0	0	0
Interruptible Residential	0	0	0	0	0	0
Interruptible Commercial	0	6	0	0	0	0
Interruptible Industrial	2	5	0	0	0	0
Other - Non-Utility Power Producers	2	35	0	0	0	0
Subtotal Transportation	4	46	0	0	0	0
TOTAL GAS REQUIREMENTS	624	627	657	721	723	725
Increase (Decrease)	na	3	30	64	2	2
Percent Change (%)	na	0.49%	4.82%	9.78%	0.24%	0.27%

[1] Peak Day is forecasted at a 2 degree temperature.

[2] Current Year Peak Day is forecasted at a 5 degree temperature.

Section 59.81 **Forms IRP-Gas 2A, 2B and 2C - Annual and Peak Day Energy Resources, Transmission and Storage Contracts**

The forecast of energy sources shall indicate sources of all presently available and new supplies which the utility estimates will become available, displayed by component parts.

Response: Please see the attached documentation and forms.

FORM-IRP-GAS-2A: ANNUAL/PEAK SUPPLY
TABLE 1: ANNUAL/PEAK SUPPLY
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(Volumes in MMcf)

	Historical Data				Current Year [2]		Three Year Forecast [1]					
Index Year	-2		-1		0		1		2		3	
Actual Year	2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		2008-2009	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Gas Supply for Sales Service												
TETCO	-	-	-	-	-	-	-	-	-	-	-	-
TRANSCO	9,841	53	4,557	53	-	-	-	-	-	-	-	-
Spot Purchases	57,160	295	59,837	235	58,813	249	65,826	259	67,082	255	64,684	253
Storage Withdrawals	14,082	86	11,116	160	16,071	167	16,970	167	14,188	205	14,490	206
LNG Withdrawal	2,609	188	1,817	135	1,541	245	2,067	301	1,822	270	1,656	272
Company Production	-	-	-	-	-	-	-	-	-	-	-	-
LNG Purchases	-	-	382	-	-	-	-	-	-	-	-	-
Exchanges with other LDCs	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Gas Supply	83,692	622	77,709	583.1	76,426	661	84,863	727	83,092	730	80,830	732
Total Transportation Services	8,981	4	11,727	46	11,620	-	14,212	-	14,229	-	14,356	-
TOTAL GAS SUPPLY AND TRANSPORTATION SERVICE	92,673	625	89,436	630	88,046	661	99,075	727	97,321	730	95,186	732
Deductions												
Underground Storage Injections & Fuels	18,290	-	13,939	-	18,076	4	17,765	4	16,818	4	14,579	4
LNG Liquefactions & Fuels	2,699	1	2,571	3	2,321	0	2,949	2	1,867	2	1,719	2
Sales to other LDC's	-	-	470	-	-	-	-	-	-	-	-	-
Total Deductions	20,989	1	16,979	3	20,397	4	20,713	6	18,685	6	16,298	7
NET GAS SUPPLY	71,684	624	72,457	627	67,649	657	78,362	721	78,636	723	78,888	725
BTU	1.038											

[1] Peak Day is forecasted at a 2 degree temperature.

[2] Current Year Peak Day is forecasted at a 5 degree temperature.

FORM-IRP-GAS-2B: NATURAL GAS TRANSPORTATION
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(volumes in MMcf)

	Historical Data				Current Year		Three Year Forecast					
Index Year	-2		-1		0		1		2		3	
Actual year	2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		2008-2009	
City Gate Transportation Contracts:	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Transcontinental Transmission Corp.	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60
Texas Eastern Transmission Corp.	2,570	43	2,570	43	2,570	43	2,570	43	2,570	43	2,570	43
Texas Eastern Transmission Corp.	2,390	20	2,390	20	2,390	20	2,390	20	2,390	20	2,390	20
Transcontinental Transmission Corp.	453	5	453	5	453	5	453	5	453	5	453	5
Total	9,137	128	9,137	128	9,137	128	9,137	128	9,137	128	9,137	128
Upstream Transportation Contracts:												
Transcontinental Transmission Corp.	58,546	160	58,546	160	58,546	160	58,546	160	58,546	160	58,546	160
Texas Eastern Transmission Corp.	26,578	73	26,578	73	26,578	73	26,578	73	26,578	73	26,578	73
Texas Eastern Transmission Corp.	8,442	23	8,442	23	8,442	23	8,442	23	8,442	23	8,442	23
Texas Eastern Transmission Corp.	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17
Texas Eastern Transmission Corp.	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17
Transcontinental Transmission Corp.	172	2	172	2	172	2	172	2	172	2	172	2
Total	98,456	293	98,456	293	98,456	293	98,456	293	98,456	293	98,456	293
Storage-Related Transportation Contracts:												
Dominion Transmission Inc.	9,110	25	9,110	25	9,110	25	9,110	25	9,110	25	9,110	25
Dominion Transmission Inc.	2,760	8	2,760	8	2,760	8	2,760	8	2,760	8	2,760	8
Equitrans	1,911	5	1,911	5	1,911	5	1,911	5	1,911	5	1,911	5
Total	13,782	38	13,782	38	13,782	38	13,782	38	13,782	38	13,782	38

FORM-IRP-GAS-2C: NATURAL GAS STORAGE [1]
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(volumes in MMcf)

	Historical Data				Current Year		Three Year Forecast					
Index Year	-2		-1		0		1		2		3	
Actual year	2004		2005		2006		2007		2008		2009	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Transcontinental Transmission Corp.	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60
Dominion Transmission Inc.	3,481	32	3,481	32	3,481	32	3,481	32	3,481	32	3,481	32
Transcontinental Transmission Corp.	3,086	36	3,086	36	3,086	36	3,086	36	3,086	36	3,086	36
Texas Eastern Transmission Corp.	2,467	43	2,467	43	2,467	43	2,467	43	2,467	43	2,467	43
Texas Eastern Transmission Corp.	2,219	20	2,219	20	2,219	20	2,219	20	2,219	20	2,219	20
Transcontinental Transmission Corp. [3]	802	80	802	80	1,106	110	1,106	110	1,106	110	1,106	110
Equitrans	507	5	507	5	507	5	507	5	507	5	507	5
Transcontinental Transmission Corp.	453	5	453	5	453	5	453	5	453	5	453	5
Total	16,738	281	16,738	281	17,042	311	17,042	311	17,042	311	17,042	311

[1] Rank contracts in order of magnitude for the current year, noting the transportation provided and termination date for each contract reported Reporting should proceed along rank ordering until 75% of total is accounted for, or until ten contracts have been listed, whichever occurs first.

Conversions at 1030 Btu

	Contract Expiration Date [2]
Transcontinental Transmission Corp.	03/31/2013
Dominion Transmission Inc.	03/31/2006
Transcontinental Transmission Corp.	Evergreen
Texas Eastern Transmission Corp.	04/30/2012
Texas Eastern Transmission Corp.	04/30/2012
Transcontinental Transmission Corp.	10/31/2013
Equitrans	03/31/2006
Transcontinental Transmission Corp.	04/15/2006

[2] For purposes of this report, all contracts due to expire are assumed renewed for the forecast years.

[3] Storage withdrawal increase in 2006 is due to the termination of the Firm Service (FS) Contract.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

PHILADELPHIA GAS WORKS
800 WEST MONTGOMERY AVENUE
PHILADELPHIA, PENNSYLVANIA

Annual Resource Planning Summary Report

Filed: March 2006

Information Submitted in Compliance with and Pursuant to Title 52 Pennsylvania Code Sections 59.81-59.84

PHILADELPHIA GAS WORKS

2006 Annual Resource Planning Summary Report

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INTRODUCTION

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SECTION V -- PGW Corporate Modeling System

Introduction

By Order entered January 11, 1996, the Pennsylvania Public Utility Commission (PUC) adopted final regulations (52 PA Code §§ 59.81 - 59.84) which set forth revised requirements for filing an Annual Resource Planning Report (the Plan). The Plan submitted represents Philadelphia Gas Works' (PGW or the Company) belief that integrated resource planning (IRP) is a workable approach to utility planning.

This plan summary contains historical data and projections for annual, winter and peak day supply to meet projected customer requirements in a least cost manner, while ensuring adequate and reliable service. It is organized into the following 5 sections:

I. PGW's Overall Approach to Integrated Resource Planning

II. Supply Forecasting Methodology and Assumptions

III. Demand Forecasting Methodology and Assumptions

IV Design Day Forecasting Methodology and Assumptions

V. PGW Corporate Modeling System

I. PGW's Overall Approach to Integrated Resource Planning

PGW Optimization Standard for Purchasing and Utilizing Gas Supplies

As reasonably anticipated PGW intends on meeting its contractual obligations to supply all of its current firm customers in its service territory on the coldest day, throughout the heating season and throughout the year. Projected customer requirements for design day and design winter conditions form the basis for capacity commitments for pipeline supply, storage, and transportation contracting.

Natural gas supplies are purchased under a portfolio approach with PGW intending to secure the lowest overall price consistent with the corporate goals of reliability and security of supply. In addition, consideration is given to maintaining a diversity of sources and types of supply, coupled with contractual and operational flexibility on both a daily and seasonal basis. Short term purchases from spot market sources are utilized to the maximum degree that they are more economical, available, and transportable.

Natural gas supplies are utilized so as to minimize gas costs subject to reliability constraints. Supply contract obligations are honored and prudent Gas Control operational requirements are assumed. Storage gas is drawn down so as to always maintain an inventory level sufficient for the remaining winter in the event that design temperature conditions should occur in the remaining segment of the winter season. Within the above parameters, priority is given to utilizing the most economical sources of supply first within the context of preserving the capability of meeting seasonal and annual demands rather than the momentary daily requirements. All facilities and sources of supply - flowing, storage and LNG are available to achieve the intended end, namely, minimizing gas costs subject to reliability constraints.

II. Supply Forecasting Methodology and Assumptions
Basic Assumptions

The PGW Gas Supply Policy Committee comprised of senior corporate management as well as Gas Planning, Gas Control, Gas Supply, and Regulatory departmental management, approved the aforementioned Optimization Standard for Purchasing and Utilizing Gas Supplies (Section I). All natural gas purchases continue to be made in accordance with this standard. Projected sales, revenues and natural gas expenses in this report result from this agreement, particularly in the areas of inventory valuation, priorities of gas selection and interruptible supply availability.

Incorporated into our projections are additional implementation steps involved with developing a cohesive gas supply/demand strategy for the near term and the longer range. These include developing a cost relationship comparison for current resources and a review of current contract terms and alternatives for continuing, extending, modifying or eliminating contracts.
In order to achieve this while maintaining a balance between economics and security of supply, the company uses a portfolio strategy approach. This approach incorporates a menu driven selection of services which allows the company to choose only those specific services necessary to meet its requirements. This is achieved by first securing transportation capacity rights and then sources of supply are contracted to cover the firm transport rights taking into consideration differing seasonal obligations.

Operating flexibility is sustained by variations in contract stipulations to permit the system to swing on the most economical gas supplies available while maintaining the ability to supply rapidly fluctuating temperature requirements. Storage facilities are substituted wherever opportunity affords to reduce annual expense for flowing 365 day pipeline service without reducing design day and design winter season delivery capability. Direct control of all storage is paramount to permit PGW to minimize winter costs by injecting lower priced summer purchases and to cycle storage to balance daily take fluctuations to avoid overrun/balancing charges.

II. Supply Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

PGW's supply strategy incorporates maintaining full current winter day deliverabilty with regard to transportation capacity but to convert, where possible, to storage rather than winter flowing contracts to enhance financial and operational flexibility. A variety of longer term supply contracts are necessary to support pipeline transportation capacity because reliance upon best effort spot suppliers to fill wintertime supply requirements to meet firm customers' demands has proven to be an unreliable alternative. As a result longer-term contracts are utilized to support firm transportation capacity. To accomplish this end, the Company purchases winter supply contracts with daily deliverabilty equal to approximately 64% of the contractual daily transportation entitlements on its two interstate pipelines with direct connections to PGW's service territory. Additionally, these supply contracts match the contractual entitlements of the two pipelines by sourcing supply in a manner consistent with the pipeline's upstream contractual requirements. In this way, PGW not only helps ensure the security of supply by sourcing the gas from geographically diverse supply regions but this diversity also allows PGW to take advantage of the pricing basis differential inherent in these supply locations.

These contracts all contain the ability to fix the price for upcoming months as well as to allow the pricing to default to an agreed upon market index when there is no market advantage in fixing a price before the month begins. PGW uses this fixed price option in conjunction with its Gas Cost Rate (GCR) filing (GCR filing includes pricing based upon the NYMEX and Global Insight) by always attempting to buy under the GCR forecasted prices. Through the matching of the duration supply contracts to a seasonal demand, such as the winter operating season, the firm ratepayers benefit from not paying demand charges year-round.

A second component of PGW's supply portfolio or a volume equal to 32% of pipeline capacity, is purchased gas based on a first-of-the-month index pricing methodology with contracts that allow for daily change in volumetric take. This allows the Company to effectively shut-off higher priced supply replacing such supply with daily cheaper spot priced gases. Under assumed normal winter conditions, PGW utilizes certain storage fields (Eminence and Washington) in a manner similar to third party supply. Specifically, these storage contracts do not contain

II. Supply Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

transportation to the PGW city gate. Therefore, these storages must flow within PGW's contractual upstream capacity rights on TETCO and TGPL. Typical daily delivery from these fields utilizes approximately 4% of the daily TETCO and TGPL capacity rights to the Philadelphia city gates. These storage fields also act as a physical fixed price to counter winter price conditions since the WACOG usually reflects a winter/summer pricing differential. PGW's summer purchasing strategy also incorporates a portfolio approach to the purchase of system supply and storage refill. The GCR filing is again used as a yardstick in purchasing supply for both system supply and storage refill. PGW attempts to always purchase a portion of its supply needs below the projected GCR cost estimate with a portion of the portfolio purchased at default, first-of-the-month pricing. These first of the month pricing option contracts, in most instances, allow PGW to evaluate daily spot prices and provide for a turn-off of first-of-the-month index priced supply in favor of the purchase of more advantageous daily spot purchases.

Operating conditions permitting, the Company enters into the FERC approved capacity release market to offset demand charges it pays for its firm transportation and/or the incremental off-systems sales market when it is economically advantageous for the firm ratepayer. In both instances, these opportunities are sought only when firm customer needs are satisfied. Additionally, PGW's bundled storages and LNG can be utilized as a substitute for higher price gas supply based on market pricing conditions and the results of PGW's status report. Effectively, the Gas Supply Group is at all times studying the market for any economic advantage it can bring to the firm ratepayer.

III. Demand Forecasting Methodology and Assumptions

Basic Assumptions

PGW uses a combination of four basic methods to develop demand projections. They are:

1) Historical Data -- data showing long-term demand trends, conservation and utilization patterns by the various classes of customers -- Residential, Commercial, Industrial and Interruptible.
2) Customer Survey -- Information as gathered by PGW's Marketing Department and used for annual projections by month and year.
3) Relative End Use -- Projections via Marketing methods of customer load sizing by appliance type, maximum input, maximum summer and winter full load hour (FLH) calculations which are used to develop yearly and monthly demand requirements.
4) Judgment -- Experienced opinion as applied to the evaluation of the combination of all data to develop the basic demand requirements.

Customer Demand

The total system-wide demand is a function of the projected gas demand per customer and the anticipated number of customers in each class. In determining customer demand, consideration is given to projecting current customer usage, augmented by significant gains or losses in each of 43 homogeneous groups for the period being projected. The Gas Planning Department attempts to determine for each customer class, the level of demand relating to experienced temperatures and the component of demand that is apparently not affected by changes in temperature. Within each class the most recent summer and winter usage patterns are established from historical records. Summer data provides an insight into each class of customers non-temperature sensitive load requirements or baseload which can be expressed in terms of thousands of cubic feet (Mcf) per day, per customer. Similarly, winter data after removal of the daily baseload level provides the temperature sensitive load requirements for each class of customer.

This usage primarily reflects space heating but also includes such other temperature sensitive needs as water heating attributable to colder ground water inlet temperatures and similar process variations. This overall heating requirement can be expressed in terms of the cubic feet of gas

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

utilized per degree of temperature change on a per customer basis for each separate customer classification.

In addition, consideration must be given to the variation of customer utilization patterns for space heating over the year, recognizing the transitional fall start-up of heaters, the deep winter period needs and the tapering off and shut-down which occurs in the spring. These usage patterns taken in conjunction with anticipated customer counts and appropriate temperature patterns form the basis of determining class and total system demands. Due to the inconsistencies of weather and weather forecasting techniques, no attempt is made to predict the specific daily temperatures of the projection period. Instead PGW has developed a normal monthly temperature pattern by analyzing statistical records of actual temperature patterns over a 30-year period. This pattern reflects 4555 degree-days annually distributed in a stylized pattern preserving the monthly range of colder to warmer daily temperatures experienced in the January to May period and warmer to colder daily temperatures in the September to December period.

The term "degree days" quantifies the number of degrees of temperature below a base level of 65 degrees Fahrenheit and is used as a tool to measure space heating requirements, i.e. on a day experiencing an average temperature of 40 degrees F. there would be 25 degree days. The annual 4555 degree days which is composed of the PGW normal monthly temperature patterns, form the basis of the calculation of the temperature sensitive component of demand. The application of the above described baseload, space heating factors and customer counts, when applied to a calendar based daily temperature pattern, produce a daily calculation of total customer requirements identified as sendout. It should be noted that there is a difference between sendout volume and sales volume. Sendout represents those volumes metered at the city gate to supply customers' requirements while sales are those volumes registered on customer meters. The variation between sendout and sales, after adjustments, is that portion which is lost and unaccounted for in the PGW distribution system.

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

Sales and sendout differ on a monthly basis in the degree day distribution pattern. For efficiency, meter reading and billing efforts are distributed uniformly over the available number of working days in a month and the majority of PGW customers are divided into 20 individual groups or cycles containing residential, commercial and industrial accounts within a specific geographic area. When these cycle customers are billed each month they reflect meter reading usage not for the calendar month being billed, but for the number of days and temperature pattern of degree-days experienced during their specific interval between meter readings. For example, assume the month of January contained 900 calendar degree-days. The customers in cycle 10 being billed for the month of January might have had meter readings taken on December 15 and again on January 17. Sales billed and reported in the company records for these customers would reflect the number of days and degree days between these reading dates rather than the 900 degree days of the month. Similarly, cycle 1 customers that might have had meter readings taken on December 1 and January 2 would reflect principally the month of December temperature experience, whereas, cycle 20 customers with meter readings taken possibly December 28 and January 29 would reflect principally the month of January temperature experience.

An average of the 20 cycles (Average Cycle Degree-Days) is used as the temperature pattern upon which to project the volume of sales in the forecast period. Both projections of sales and sendouts represent the full demand for that period from both firm and interruptible customers.

Methodology Used to Develop Monthly Estimates

A trial domestic factor is developed by classes of customers from sales reported for the summer months in the previous year. This average factor is then utilized in the sendout formula with the customer counts for the months of July, August and September. A comparison between what the formula calculates and the actual experienced for those three months is ascertained and the trial

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

domestic (baseload) factors are finalized to replicate the total sendout experienced. The finalized domestic factors (DOMs) are then utilized in conjunction with the actual sales and customer counts for the months of December, January and February to determine the average Mcf per degree day for each of the individual months for the remaining temperature sensitive load. The results are weighted by degree-days to give an average value which is utilized as a trial value for the heating factor.

The finalized domestic factor and the trial heating factor developed, as such, are then applied in the sendout calculations together with customer counts for the months of December, January and February (the peak winter heating period) to project an estimated sendout for each of these months. The projected sendout is then compared with the actual sendout experienced. Any variation between the projected and actual is adjusted to force the replication of the actual sendout experience thus resulting in the determination of a finalized heating factor.

To project the number of customers for each individual rate class, each rate class of customers are reviewed and accumulated individually. Current customers are ascertained from the number of billings data available from sales and revenue actually experienced immediately prior to the commencement of a model run. Declines are projected for anticipated losses to electric and other fuels, demolitions and transfers to other rates. Direct transfers from a non-heating to a heating account, as a result of a current customer's conversion to gas heat, moves the domestic load to the new category. Projected additional customers are developed by the Marketing Department where staff dealing with individual classes of customers and having the most direct knowledge of conditions within their sphere, project annual load additions which are translated into customer counts based upon typical customer usage for that individual customer class. The approximate month of turn-on is also developed to permit reflection of the effective portion of the load addition within the fiscal period under study. Interruptible class customers as well as other large special accounts are detailed individually incorporating expected gains and losses as direct contact and experience has indicated.

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

The base revenue projections for both firm and interruptible customer groups are derived as the product of the projected sales volumes and the present tariff rate for each individual customer class within each group. The GCR revenue projections are derived as the product of the GCR factor and the projected sales volumes to the firm customers.

IV. Design Day and Design Hour Forecasting Methodology and Assumptions

Each year a six year estimate of Design Day and Design Hour requirements anticipated under design day and design hour operating conditions is prepared to ensure that adequate resources are under contract and to further ensure that PGW can fulfill its supply obligation for its firm customer requirements on a design day and design hour.

The projected demands for design day are developed utilizing previous winter periods data for all weekdays where the temperature average for the day is 32 degrees Fahrenheit or below. The total sendout for these days as recorded under actual conditions and is reduced to firm sendout by removal of the interruptible load. A computer generated linear regression procedure is utilized to develop a sendout model from actual daily sendouts and degree days, and the process is repeated in a quadratic regression and a cubic regression procedure. From the predicted sendouts in the regression, which are within a reasonable percent of error to the actual sendout, factors are derived to replicate the actual sendouts. The factors derived from this are used to determine the current load requirements for a 0 degrees F day and from this data, the load for a -5 degrees F hour is calculated. PGW's Marketing Department's load projections for present and future years are then applied to these requirements to develop design day and design hour present and future load requirements. This is achieved by the addition of the projected marketing load growth on an annual basis (by day) to the derived base-year design day requirements.

V. PGW Corporate Modeling System

General Description

The corporate modeling system is a tool used by PGW management to project sales, revenues and expenses, as well as to examine key planning strategies and evaluate their effects on company operations. The system provides the ability to determine the results of alternate plans and scenarios, while at the same time allowing for responses to "what if" type situations quantifying revenue and expenses. The system is totally interactive in that it combines the power of the computer with the experience of management to develop both short and long range projections based upon experienced historical data for sales and sendout volumes, raw material expenses and sale revenues. The corporate model system is composed of five separate models. Each model operates independently but requires substantial external data inputs as well as data output results from one or more of the other models in the system.

Gas Demand Model

The gas demand model is used to forecast total requirements for gas based upon current customer usage experience with adjustments for projected gains and losses. Input data includes domestic and space heating usage factors, customer counts by rate classifications, temperature patterns and results in projections of sales and sendout volumes. Detail and summary reports include average usage per customer and demands by rate classification. This data is transferred to the supply model.

Gas Supply Model

The supply model is used to dispatch the various supply sources in accordance with contract availability limitations. It develops the necessary balance between supply and demand which reflects plant fuel and storage injection requirements as well as customer demands by identifying the availability of interruptible load balancing sales. Detail and summary reports include daily and monthly load requirements, the volumes taken from each source by pipeline contract, storage balances, LNG requirements, etc. Data is transferred to both the cost model and the revenue model downstream.

V. PGW Corporate Modeling System (Continued)

Gas Cost Model

The gas cost model is used to determine natural gas and other raw material costs dispatched. The model tracks the various cost components of each contract - the demand, capacity, commodity, injection and withdrawal charges - providing monthly and annual details and summary information including inventory valuations and expenses for supplemental LNG supplies. It transfers these expenses to the Gas Cost Rate Model.

Gas Cost Rate Model

The gas cost rate model is used to develop the net natural gas expenses, net applicable GCR expenses and the GCR. It ascribes responsibility for the raw material costs to firm and interruptible classes in accordance with PGW's tariff requirements, assigning cost on an as-used basis to customer classes applicable to such charges, and compensates for natural gas refunds and previous over or under billing of fuel expenses. Detail summary reports include specifics of raw material adjustment, statements of reconciliation, and determination of applicable sales and expenses. It transfers the results to the revenue model.

Revenue Model

The revenue model is used to project billed revenue by rate classification in accordance with PGW's rate tariffs. It prepares the net billed revenue, GCR revenues, senior citizen discounts, and cycle billing information all detailed by rate classification. The detail and summary reports provided by this model are directed to the accounting and financial departments for inclusion in various financial reviews.

Summary

The corporate modeling system allows PGW management to effectively address supply/demand balancing, supply facilities planning, projected sales, cost, revenues, and sendout volumes in a timely manner. Results assist in the development of PGW's annual Operating Budget, setting of the GCR and planning of supply resources.

V. PGW Corporate Modeling System (Continued)

The model also provides a Status Report for the evaluation of remaining winter period requirements on both normal and design temperature patterns and the extrapolation of the current year based upon the experience to date and an assumption of temperatures anticipated for the remaining period of the year, this latter acting as a guide for both financial cash flow planning and winter operations.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below in accordance with the requirements of § 1.54 (relating to service by a participant).

VIA FIRST CLASS MAIL

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Gregory J. Stunder, Esq.

Date: February 28, 2006

Philadelphia Gas Works
Gregory J. Stunder
Senior Attorney

800 W. Montgomery Avenue, Philadelphia, PA 19122
Telephone: (215) 684-6878 – Fax (215) 684-6798
Email: greg.stunder@pgworks.com

May 31, 2006

VIA OVERNIGHT MAIL

ORIGINAL

James J. McNulty
Secretary
PA Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

Re: Philadelphia Gas Works - Annual Resource Planning Report

ARP-125042

Dear Secretary McNulty:

Enclosed for filing please find an original and seven (7) Philadelphia Gas Works' Annual Resource Planning Report, that includes Forms 3-9 and the Summary Report.

If you have any questions regarding this matter, please contact me. Thank you for your assistance with this matter.

Respectfully submitted,

Gregory J. Stunder

cc: Calvin Birge, Bureau of Conservation, Economics, and Energy Planning

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ORIGINAL

ARP-125042

ANNUAL RESOURCE PLANNING REPORT

Forms 3 - 9

Philadelphia Gas Works
Philadelphia, Pennsylvania

June 2006

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Philadelphia Gas Works
800 West Montgomery Avenue
Philadelphia, Pennsylvania 19122

ANNUAL RESOURCE PLANNING REPORT

June 2006

Information Submitted in Compliance with and Pursuant to Title 52 Pennsylvania Code Section 59.81

PHILADELPHIA GAS WORKS
ANNUAL RESOURCE PLANNING REPORT

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Section 59.81: **General**

Pursuant to Section 59.81 (a), each major jurisdictional gas utility must file an annual resource planning report (ARPR) on or before June 1, 1996 and June 1 of each succeeding year, except Form 1A/2A which filing date is March 1. One (1) original and seven (7) copies of the report must be submitted to:

Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

One copy should be submitted unbound for ease of duplication.

One courtesy copy should also be submitted to:

Pennsylvania Public Utility Commission
Conservation, Economics and Energy Planning
P.O. Box 3265
Harrisburg, PA 17105-3265
Attn. Calvin Birge

Also submit one (1) copy to the following:

Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101-1921

Office of Small Business Advocate
Suite 1102, Commerce Building
300 N. Second Street
Harrisburg, PA 17101

Be sure to indicate the name and telephone number of at least one individual at the company who is familiar with the filing and will be available to answer any questions the Commission staff may have. You may also wish to list those individuals who are directly involved in the preparation of the various document components.

Information contained in annual resource planning reports must be utility-specific. The report should follow an outline similar to that which is contained herein, with narrative accompanying the required data. Forms may be modified to accommodate wide columns of numbers and enhance readability, but the general format should be used to maintain consistency.

This information is not generally considered confidential. Utilities are obligated to provide complete information. However, we will treat as confidential those portions of the report designated by the utility as proprietary. If a utility's proprietary claim is challenged, the Commission will direct the utility to file a petition for protective order pursuant to 52 PA Code 5.423.

All questions concerning the reporting requirements for Forms IRP Gas 1A through 9 should be addressed to Pennsylvania Public Utility Commission Bureau of Conservation, Economics and Energy Planning.

Response:

An original, seven (7) copies, and one unbound copy of Forms 1A, 1B, 2A, 2B, 2C, 3, 4A, 4b, 5, 6, 7, 8 and 9 along with a general discussion of the methodologies, data sources, and assumptions are being submitted to meet the requirements of the June 1 filing. Please note that Forms 1A, 1B, 2A, 2B, 2C were already filed in the company's March 1 filing and included herein, without modification, for completeness.

All questions concerning the ARPR should be directed to Mr. Kenneth Dybalski, Manager – Gas Planning (215) 684-6317. The following individuals will be available to answer questions concerning specific forms:

Ms. Maria Hogan - Forms 3,4 and 6 at (215) 684-6618
Ms. Cristina Coltro – Forms 5,7,8, and 9 at (215) 684-6785

Section 59.81 **Forms IRP-Gas 3 - Historical, Current and Forecast Number of Customers**

Provide the number of year end customers displayed by component parts.

Response: Please see the attached form.

FORM-IRP-GAS-3: NUMBER OF CUSTOMERS [1]
REPORTING UTILUTY: PHILADELPHIA GAS WORKS

	Historical Data		Current Year	Three Year Forcast		
Index Year	-2	-1	0	1	2	3
Fiscal Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Firm Customers						-
Retail Residential	487,300	486,144	479,395	477,169	475,607	474,051
Retail Commercial	26919	26769	26512	30275	30,512	30,746
Retail Industrial	952	896	862	1307	1,481	1,655
Other	-	-	-	-	-	-
Subtotal Sales Service	515,171	513,809	506,769	508,751	507,600	506,452
Electric Power Generation	9	4	8	2	3	4
Interruptible Customers	485	407	340	301	302	308
Transportation Service [2]	24	76	127	195	206	211
CUSTOMER TOTAL	515,689	514,296	507,244	509,249	508,111	506,975
Increase (Decrease)	na	(1,393)	(7,052)	2,005	(1,138)	(1,136)
Percent Change (%)	na	-0.3%	-1.4%	0.4%	-0.2%	-0.2%

[1] Customer Count is based on the average number of billings over the course of the year.

[2] The increase in Transportation customers is due to Interruptible customers switching to transportation.

Section 59.81 **Forms IRP-Gas 4A and 4B - Annual and Peak Day Energy Supply and Demand**

Response: Please see the attached forms.

FORM-IRP-GAS-4A: ANNUAL SUPPLY AND REQUIREMENTS SUMMARY
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(Volumes in MMcf)

	Historical Data		Current Year	Three Year Forcast		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Gas Supply:						
Supply Contracts	67,000	64,394	58,813	65,826	67,082	64,684
Storage Withdraws	14,082	11,116	16,071	16,970	14,188	14,490
LNG	2,609	2,199	1,541	2,067	1,822	1,656
Subtotal Gas Supply	83,692	77,709	76,426	84,863	83,092	80,830
Transportation	8,981	11,727	11,620	14,212	14,229	14,356
TOTAL GAS SUPPLY	92,673	89,436	88,046	99,075	97,321	95,186
Requirements:						
Firm Requirements	58,356	55,970	53,060	60,811	61,077	61,171
Liqufaction	2,699	2,571	2,321	2,949	1,867	1,719
Interruptible Requirements	4,347	4,760	2,968	3,338	3,330	3,360
Storage Injections	18,290	13,939	18,076	17,765	16,818	14,579
Sales to other LDC's	-	470	-	-	-	-
Subtotal Firm & Interruptible	83,693	77,709	76,426	84,863	83,091	80,830
Transportation	8,981	11,727	11,620	14,212	14,229	14,356
Load Reductions						
TOTAL GAS REQUIREMENTS	92,674	89,436	88,046	99,075	97,321	95,186
Surplus (Deficiency)	0	0	0	0	0	0

FORM-IRP-GAS-4B: PEAK DAY SUPPLY AND REQUIREMENTS SUMMARY [1]
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(Volumes in MMcf)

	Historical Data		Current Year	Three Year Forcast		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Gas Supply:						
Supply Contracts	348	288	249	259	255	253
Storage Withdraws	86	160	167	167	205	206
LNG	188	135	245	301	270	272
Subtotal Gas Supply	622	583	661	727	730	732
Transportation	4	46	-	-	-	-
TOTAL GAS SUPPLY	625	630	661	727	730	732
Requirements:						
Firm Requirements [2]	601	552	630	695	697	698
Interruptible Requirements	19	29	27	26	26	27
Storage & LNG Fuels	1	3	4	6	6	7
Subtotal Firm & Interruptible	621	583	661	727	730	732
Transportation	4	46	-	-	-	-
Load Reductions	-	-	-	-	-	-
TOTAL GAS REQUIREMENTS	625	630	661	727	730	732
Surplus (Deficiency)	0	0	0	0	0	0

[1] Peak Day is forecasted at a 2 degree temperature.
[2] Firm requirements for the forecast years include plant use.

Section 59.82 **Forms IRP-Gas 5 - Energy Conservation Report-Program Description**

Response: Please see the attached forms.

FORM-IRP-GAS-5 PROGRAM DESCRIPTION

Company: Philadelphia Gas Works (PGW)

Program: Conservation Works Program (CWP)

Existing [X] Proposed [ ]

Contact Person: Cristina Coltro
(215) 684-6785

Objective: To reduce energy usage, therefore, making bills more affordable for low-income customers whose usage is average or above average and who are participants in the Customer Responsibility Program.

Details of Activity and Implementation Schedule:

Eligible customers are targeted for program participation. For each participating household, PGW's contractors will perform an energy diagnostic audit, energy education, and conservation treatments such as home repairs, automatic clock thermostat, insulation, etc.

Actual and/or Anticipated Results:

	Energy Savings				
Year	Peak Load Reduction Mcf	Electic Mwh	Gas Mcf	Oil Gallons	Other Results
2002 (1)			13		3180 Homes w/ Treatment
2003 (1)			13		3417 Homes w/ Treatment
2004 (2)			16		2985 Homes w/ Treatment

Monetary and Personal Resources:

	Categorized program Expenses			
Year	Personnel Est. Hrs. (3)	Outside Services	Admin. (PGW Internal)	Total
2002 (1)	34,980	$1,922,540	$60,000	$1,982,540
2003 (1)	37,587	$1,975,962	$60,000	$2,035,962
2004 (1)	32,835	$2,008,697	$50,000	$2,058,697

(1) Actual
(2) Actual number of participants, actual expenditure, estimated energy savings
(3) Personnel hours were estimated by multiplying the number of homes by 11, the average number of hours spent per home.

C. Coltro
05/24/06

Section 59.82 **Forms IRP-Gas 6 - Energy Users**

Response: Please see the attached forms.

FORM-IRP-GAS-6
ENERGY USERS
COMPANY: PHILADELPHIA GAS WORKS

Fiscal Year Ending August 31, 2005

	Number of Customers	Sales (Mcf)
Firm:		
Residential:		
Heating	425,820	39,033,374
Non-heating	60,324	1,955,424
Commercial	26,769	11,781,190
Industrial	896	1,037,757
Sub-total Firm	513,809	53,807,745
Interruptible		
Commercial & Industrial	411	4,510,476
Total Gas Sold	514,220	58,318,221
Unbilled Adjustment	-	(91,345)
Transportation	76	11,624,395
Utility Use	-	94,731
Total	514,296	69,946,002

Section 59.82 **Forms IRP-Gas 7 - Conservation and Load Management Program Cost Benefit Analysis Inputs**

Response: Please see the attached forms.

FORM-IRP-GAS-7 PROGRAM SUMMARY

Company: Philadelphia Gas Works (PGW)

Program Name	Peak Load Reduction (Mcf)	Energy Use Change (Mcf)	Personnel Est. Hrs (3)	Categorized Program Expenses		
				Outside Services	Adm.	Total
Conservation Works Program (CWP) - 2001 (1)	NA	13	46,475	$2,352,533	$60,000	$2,412,533
Conservation Works Program (CWP) - 2002 (1)	NA	13	34,980	$1,922,540	$60,000	$1;982,540
Conservation Works Program (CWP) - 2003 (1)	NA	13	37,587	$1,975,962	$60,000	$2,035,962
Conservation Works Program (CWP) - 2004 (2)	NA	16	32,835	$2,008,697	$50,000	$2,058,697

(1) Actual
(2) Actual figures except for Energy Savings
(3) Personnel hours were estimated by multiplying the number of homes by 11, the average number of hours spent per home

Section 59.82 **Forms IRP-Gas 8 - Conservation and Load Management Program Cost Benefit Analysis Results**

Response: Please see the attached forms.

Company Name:
FORM-IRP-GAS-8

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis Input

PROGRAM: Conservation Works Program

t	Year	Energy Savings (E) Mcf	Average Energy Cost (ACE) $ per Mcf	Avoided Enegy Cost (MCE) $ per Mcf	Participant Demand Savings (D) Mcf	Utility Capacity Savings (G) Mcf	Average Demand Costs (ACD) $/Mcf	Avoided Demand Costs (MCD) $/Mcf	Participant Costs (PC) $
1	2004	44,500	$ 13.40	$ 7.78220	N/A	N/A	N/A		$ -
2	2005	44,500	$ 14.10	$ 9.08130	N/A	N/A	N/A		$ -
3	2006	44,500	$ 19.23	$ 12.56320	N/A	N/A	N/A		$ -
4	2007	44,500	$ 18.87	$ 12.37460	N/A	N/A	N/A		$ -
5	2008	44,500	$ 17.15	$ 10.64753	N/A	N/A	N/A		$ -
6	2009	44,500	$ 16.60	$ 10.10652	N/A	N/A	N/A		$ -
7	2010	44,500	$ 15.60	$ 9.10319	N/A	N/A	N/A		$ -
8	2011	44,500	$ 14.77	$ 8.27081	N/A	N/A	N/A		$ -
9	2012	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
10	2013	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
11	2014	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
12	2015	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
13	2016	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
14	2017	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
15	2018	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
16	2019	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
17	2020	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
18	2021	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
19	2022	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
20	2023	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
21	2024	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
22	2025	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
23	2026	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
24	2027	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
25	2028	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -

Company Name:
FORM-IRP-GAS-8

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis Input

PROGRAM: Conservation Works Program

t	Year	Incentive Cost (I) $	Utility Costs (UC) $	Discount Rates: Participant (d) %	Non-Participant (d) %	Utility (1) (d) %	Escalation Rate (e) %	System Sales or Demand (S) Mcf	Sales or Demand Ratio (f) %
1	2004	$ -	$2,058,697	5.9	5.9	5.9	$ -	60,272,032	0.0066
2	2005	$ -	$ -	5.9	5.9	5.9	$ -	58,318,221	0.0068
3	2006	$ -	$ -	5.9	5.9	5.9	$ -	50,675,592	0.0071
4	2007	$ -	$ -	5.9	5.9	5.9	$ -	55,650,293	0.0074
5	2008	$ -	$ -	5.9	5.9	5.9	$ -	55,937,140	0.0074
6	2009	$ -	$ -	5.9	5.9	5.9	$ -	56,095,485	0.0074
7	2010	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
8	2011	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
9	2012	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
10	2013	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
11	2014	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
12	2015	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
13	2016	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
14	2017	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
15	2018	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
16	2019	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
17	2020	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
18	2021	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
19	2022	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
20	2023	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
21	2024	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
22	2025	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
23	2026	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
24	2027	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
25	2028	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078

(1) The Participant, Non-Participant and Utility discount rates are based on PGW's long-term debt and AFUDC (Allowance for Funds Used During Construction).

Section 59.81 **Forms IRP-Gas 9 - 2000 Annual Resource Summary Planning Report**

Response: The Summary Report is included as a separate document.

Company Name:
FORM-IRP-GAS-9

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis Input

Program:

Conservation Works Program (CWP)

Period of Analysis		Total Utility Benefits (Bu) $	Total Utility Costs (Cu) $	Revenue Reduction Cost (Cr) $	Participant Revenue Requirement (Rp) $	Total participant Benefits (Bp) $	Total Participant Costs (Cp) $
Beginning Year	Ending Year						
2004	2028	$ 4,803,337	$ 2,058,697	$ 8,129,595	$ 27,198	$ 8,129,595	$ 27,198

	NET PRESENT VALUE			BENEFIT COST RATE			
Discounted Payback Period Yrs.	Participant (NPVp) $	Non-Part (NPVnp) $	Utility (NPVu) $	Participant (BCRp)	Non-Part (BCRnp)	Utility (BCRu)	Rate Impact Non-Part (RIMnp) $/Mcf
25	$ 8,102,397	(5,343,806.66)	$2,744,639.58	298.91	0.47	2.33	0.038

ANNUAL RESOURCE PLANNING REPORT

Summary Report

Philadelphia Gas Works
Philadelphia, Pennsylvania

June 2006

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Philadelphia Gas Works
800 West Montgomery Avenue
Philadelphia, Pennsylvania 19122

ANNUAL RESOURCE PLANNING REPORT

June 2006

Information Submitted in Compliance with and Pursuant to Title 52
Pennsylvania Code Section 59.81

PHILADELPHIA GAS WORKS
ANNUAL RESOURCE PLANNING REPORT

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Section V PGW Corporate Modeling System

Section VI Summary Tables

Exhibit No.	Regulation	Description
1	59.81	Forms IRP-Gas 1A, and 1B Annual and Peak Day Energy Demand (Originally Submitted March 1)
2	59.81	Forms IRP-Gas 2A, 2B, and 2C Annual and Peak Day Energy Resources, And transmission and storage contracts (Originally Submitted March 1)
3	59.81	Form IRP-Gas 3 Historical, Current and Forecast Number Of Customers
4	59.81	Forms IRP-Gas 4A and 4B Annual and Peak Day Energy Supply and Demand

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5	59.82	Form IRP-Gas 5 Energy Conservation Report-Program Description
6	59.82	Form IRP-Gas 6 Energy Users 6
7	59.82	Form IRP-GAS 7 Conservation and Load Management Program Summary
8	59.82	*Form IRP-Gas 8* Conservation and Load Management Program Cost Benefit Analysis Inputs
9	59.82	Form IRP-Gas 9 Conservation and Load Management Program Cost Benefit Analysis Results

Section 59.81: **General**

Pursuant to Section 59.81 (a), each major jurisdictional gas utility must file an annual resource planning report (ARPR) on or before June 1, 1996 and June 1 of each succeeding year, except Form 1A/2A which filing date is March 1. One (1) original and seven (7) copies of the report must be submitted to:

Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

One copy should be submitted unbound for ease of duplication.

One courtesy copy should also be submitted to:

Pennsylvania Public Utility Commission
Conservation, Economics and Energy Planning
P.O. Box 3265
Harrisburg, PA 17105-3265
Attn. Calvin Birge

Also submit one (1) copy to the following:

Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101-1921

Office of Small Business Advocate
Suite 1102, Commerce Building
300 N. Second Street
Harrisburg, PA 17101

Be sure to indicate the name and telephone number of at least one individual at the company who is familiar with the filing and will be available to answer any questions the Commission staff may have. You may also wish to list those individuals who are directly involved in the preparation of the various document components.

Information contained in annual resource planning reports must be utility-specific. The report should follow an outline similar to that which is contained herein, with narrative accompanying the required data. Forms may be modified to accommodate wide columns of numbers and enhance readability, but the general format should be used to maintain consistency.

This information is not generally considered confidential. Utilities are obligated to provide complete information. However, we will treat as confidential those portions of the report designated by the utility as proprietary. If a utility's proprietary claim is challenged, the Commission will direct the utility to file a petition for protective order pursuant to 52 PA Code 5.423.

All questions concerning the reporting requirements for Forms IRP Gas 1A through 9 should be addressed to Pennsylvania Public Utility Commission Bureau of Conservation, Economics and Energy Planning.

Response:

An original, seven (7) copies, and one unbound copy of Forms 1A, 1B, 2A, 2B, 2C, 3, 4A, 4b, 5, 6, 7, 8 and 9 along with a general discussion of the methodologies, data sources, and assumptions are being submitted to meet the requirements of the June 1 filing. Please note that Forms 1A, 1B, 2A, 2B, 2C were already filed in the company's March 1 filing and included herein, without modification, for completeness.

All questions concerning the ARPR should be directed to Mr. Kenneth Dybalski, Manager – Gas Planning (215) 684-6317. The following individuals will be available to answer questions concerning specific forms:

Ms. Maria Hogan - Forms 1,2,3,4 and 6 at (215) 684-6618
Ms. Cristina Coltro – Forms 5,7,8, and 9 at (215) 684-6785

Introduction

By Order entered January 11, 1996, the Pennsylvania Public Utility Commission (PUC) adopted final regulations (52 PA Code §§ 59.81 - 59.84) which set forth revised requirements for filing an Annual Resource Planning Report (the Plan). The Plan submitted represents Philadelphia Gas Works' (PGW or the Company) belief that integrated resource planning (IRP) is a workable approach to utility planning.

This plan summary contains historical data and projections for annual, winter and peak day supply to meet projected customer requirements in a least cost manner, while ensuring adequate and reliable service. It is organized into the following 5 sections:

I. PGW's Overall Approach to Integrated Resource Planning

II. Supply Forecasting Methodology and Assumptions

III. Demand Forecasting Methodology and Assumptions

IV Design Day Forecasting Methodology and Assumptions

V. PGW Corporate Modeling System

I. PGW's Overall Approach to Integrated Resource Planning

PGW Optimization Standard for Purchasing and Utilizing Gas Supplies

As reasonably anticipated PGW intends on meeting its contractual obligations to supply all of its current firm customers in its service territory on the coldest day, throughout the heating season and throughout the year. Projected customer requirements for design day and design winter conditions form the basis for capacity commitments for pipeline supply, storage, and transportation contracting.

Natural gas supplies are purchased under a portfolio approach with PGW intending to secure the lowest overall price consistent with the corporate goals of reliability and security of supply. In addition, consideration is given to maintaining a diversity of sources and types of supply, coupled with contractual and operational flexibility on both a daily and seasonal basis. Short term purchases from spot market sources are utilized to the maximum degree that they are more economical, available, and transportable.

Natural gas supplies are utilized so as to minimize gas costs subject to reliability constraints. Supply contract obligations are honored and prudent Gas Control operational requirements are assumed. Storage gas is drawn down so as to always maintain an inventory level sufficient for the remaining winter in the event that design temperature conditions should occur in the remaining segment of the winter season. Within the above parameters, priority is given to utilizing the most economical sources of supply first within the context of preserving the capability of meeting seasonal and annual demands rather than the momentary daily requirements. All facilities and sources of supply - flowing, storage and LNG are available to achieve the intended end, namely, minimizing gas costs subject to reliability constraints.

II. Supply Forecasting Methodology and Assumptions
Basic Assumptions

The PGW Gas Supply Policy Committee comprised of senior corporate management as well as Gas Planning, Gas Control, Gas Supply, and Regulatory departmental management, approved the aforementioned Optimization Standard for Purchasing and Utilizing Gas Supplies (Section I). All natural gas purchases continue to be made in accordance with this standard. Projected sales, revenues and natural gas expenses in this report result from this agreement, particularly in the areas of inventory valuation, priorities of gas selection and interruptible supply availability.

Incorporated into our projections are additional implementation steps involved with developing a cohesive gas supply/demand strategy for the near term and the longer range. These include developing a cost relationship comparison for current resources and a review of current contract terms and alternatives for continuing, extending, modifying or eliminating contracts.
In order to achieve this while maintaining a balance between economics and security of supply, the company uses a portfolio strategy approach. This approach incorporates a menu driven selection of services which allows the company to choose only those specific services necessary to meet its requirements. This is achieved by first securing transportation capacity rights and then sources of supply are contracted to cover the firm transport rights taking into consideration differing seasonal obligations.

Operating flexibility is sustained by variations in contract stipulations to permit the system to swing on the most economical gas supplies available while maintaining the ability to supply rapidly fluctuating temperature requirements. Storage facilities are substituted wherever opportunity affords to reduce annual expense for flowing 365 day pipeline service without reducing design day and design winter season delivery capability. Direct control of all storage is paramount to permit PGW to minimize winter costs by injecting lower priced summer purchases and to cycle storage to balance daily take fluctuations to avoid overrun/balancing charges.

II. Supply Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

PGW's supply strategy incorporates maintaining full current winter day deliverabilty with regard to transportation capacity but to convert, where possible, to storage rather than winter flowing contracts to enhance financial and operational flexibility. A variety of longer term supply contracts are necessary to support pipeline transportation capacity because reliance upon best effort spot suppliers to fill wintertime supply requirements to meet firm customers' demands has proven to be an unreliable alternative. As a result longer-term contracts are utilized to support firm transportation capacity. To accomplish this end, the Company purchases winter supply contracts with daily deliverabilty equal to approximately 64% of the contractual daily transportation entitlements on its two interstate pipelines with direct connections to PGW's service territory. Additionally, these supply contracts match the contractual entitlements of the two pipelines by sourcing supply in a manner consistent with the pipeline's upstream contractual requirements. In this way, PGW not only helps ensure the security of supply by sourcing the gas from geographically diverse supply regions but this diversity also allows PGW to take advantage of the pricing basis differential inherent in these supply locations.

These contracts all contain the ability to fix the price for upcoming months as well as to allow the pricing to default to an agreed upon market index when there is no market advantage in fixing a price before the month begins. PGW uses this fixed price option in conjunction with its Gas Cost Rate (GCR) filing (GCR filing includes pricing based upon the NYMEX and Global Insight) by always attempting to buy under the GCR forecasted prices. Through the matching of the duration supply contracts to a seasonal demand, such as the winter operating season, the firm ratepayers benefit from not paying demand charges year-round.

A second component of PGW's supply portfolio or a volume equal to 32% of pipeline capacity, is purchased gas based on a first-of-the-month index pricing methodology with contracts that allow for daily change in volumetric take. This allows the Company to effectively shut-off higher priced supply replacing such supply with daily cheaper spot priced gases. Under assumed normal winter conditions, PGW utilizes certain storage fields (Eminence and Washington) in a manner similar to third party supply. Specifically, these storage contracts do not contain

II. Supply Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

transportation to the PGW city gate. Therefore, these storages must flow within PGW's contractual upstream capacity rights on TETCO and TGPL. Typical daily delivery from these fields utilizes approximately 4% of the daily TETCO and TGPL capacity rights to the Philadelphia city gates. These storage fields also act as a physical fixed price to counter winter price conditions since the WACOG usually reflects a winter/summer pricing differential. PGW's summer purchasing strategy also incorporates a portfolio approach to the purchase of system supply and storage refill. The GCR filing is again used as a yardstick in purchasing supply for both system supply and storage refill. PGW attempts to always purchase a portion of its supply needs below the projected GCR cost estimate with a portion of the portfolio purchased at default, first-of-the-month pricing. These first of the month pricing option contracts, in most instances, allow PGW to evaluate daily spot prices and provide for a turn-off of first-of-the-month index priced supply in favor of the purchase of more advantageous daily spot purchases.

Operating conditions permitting, the Company enters into the FERC approved capacity release market to offset demand charges it pays for its firm transportation and/or the incremental off-systems sales market when it is economically advantageous for the firm ratepayer. In both instances, these opportunities are sought only when firm customer needs are satisfied. Additionally, PGW's bundled storages and LNG can be utilized as a substitute for higher price gas supply based on market pricing conditions and the results of PGW's status report. Effectively, the Gas Supply Group is at all times studying the market for any economic advantage it can bring to the firm ratepayer.

III. Demand Forecasting Methodology and Assumptions

Basic Assumptions

PGW uses a combination of four basic methods to develop demand projections. They are:

1) Historical Data -- data showing long-term demand trends, conservation and utilization patterns by the various classes of customers -- Residential, Commercial, Industrial and Interruptible.
2) Customer Survey -- Information as gathered by PGW's Marketing Department and used for annual projections by month and year.
3) Relative End Use -- Projections via Marketing methods of customer load sizing by appliance type, maximum input, maximum summer and winter full load hour (FLH) calculations which are used to develop yearly and monthly demand requirements.
4) Judgment -- Experienced opinion as applied to the evaluation of the combination of all data to develop the basic demand requirements.

Customer Demand

The total system-wide demand is a function of the projected gas demand per customer and the anticipated number of customers in each class. In determining customer demand, consideration is given to projecting current customer usage, augmented by significant gains or losses in each of 43 homogeneous groups for the period being projected. The Gas Planning Department attempts to determine for each customer class, the level of demand relating to experienced temperatures and the component of demand that is apparently not affected by changes in temperature. Within each class the most recent summer and winter usage patterns are established from historical records. Summer data provides an insight into each class of customers non-temperature sensitive load requirements or baseload which can be expressed in terms of thousands of cubic feet (Mcf) per day, per customer. Similarly, winter data after removal of the daily baseload level provides the temperature sensitive load requirements for each class of customer.

This usage primarily reflects space heating but also includes such other temperature sensitive needs as water heating attributable to colder ground water inlet temperatures and similar process variations. This overall heating requirement can be expressed in terms of the cubic feet of gas

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

utilized per degree of temperature change on a per customer basis for each separate customer classification.

In addition, consideration must be given to the variation of customer utilization patterns for space heating over the year, recognizing the transitional fall start-up of heaters, the deep winter period needs and the tapering off and shut-down which occurs in the spring. These usage patterns taken in conjunction with anticipated customer counts and appropriate temperature patterns form the basis of determining class and total system demands. Due to the inconsistencies of weather and weather forecasting techniques, no attempt is made to predict the specific daily temperatures of the projection period. Instead PGW has developed a normal monthly temperature pattern by analyzing statistical records of actual temperature patterns over a 30-year period. This pattern reflects 4555 degree-days annually distributed in a stylized pattern preserving the monthly range of colder to warmer daily temperatures experienced in the January to May period and warmer to colder daily temperatures in the September to December period.

The term "degree days" quantifies the number of degrees of temperature below a base level of 65 degrees Fahrenheit and is used as a tool to measure space heating requirements, i.e. on a day experiencing an average temperature of 40 degrees F. there would be 25 degree days. The annual 4555 degree days which is composed of the PGW normal monthly temperature patterns, form the basis of the calculation of the temperature sensitive component of demand. The application of the above described baseload, space heating factors and customer counts, when applied to a calendar based daily temperature pattern, produce a daily calculation of total customer requirements identified as sendout. It should be noted that there is a difference between sendout volume and sales volume. Sendout represents those volumes metered at the city gate to supply customers' requirements while sales are those volumes registered on customer meters. The variation between sendout and sales, after adjustments, is that portion which is lost and unaccounted for in the PGW distribution system.

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

Sales and sendout differ on a monthly basis in the degree day distribution pattern. For efficiency, meter reading and billing efforts are distributed uniformly over the available number of working days in a month and the majority of PGW customers are divided into 20 individual groups or cycles containing residential, commercial and industrial accounts within a specific geographic area. When these cycle customers are billed each month they reflect meter reading usage not for the calendar month being billed, but for the number of days and temperature pattern of degree-days experienced during their specific interval between meter readings. For example, assume the month of January contained 900 calendar degree-days. The customers in cycle 10 being billed for the month of January might have had meter readings taken on December 15 and again on January 17. Sales billed and reported in the company records for these customers would reflect the number of days and degree days between these reading dates rather than the 900 degree days of the month. Similarly, cycle 1 customers that might have had meter readings taken on December 1 and January 2 would reflect principally the month of December temperature experience, whereas, cycle 20 customers with meter readings taken possibly December 28 and January 29 would reflect principally the month of January temperature experience.

An average of the 20 cycles (Average Cycle Degree-Days) is used as the temperature pattern upon which to project the volume of sales in the forecast period. Both projections of sales and sendouts represent the full demand for that period from both firm and interruptible customers.

Methodology Used to Develop Monthly Estimates

A trial domestic factor is developed by classes of customers from sales reported for the summer months in the previous year. This average factor is then utilized in the sendout formula with the customer counts for the months of July, August and September. A comparison between what the formula calculates and the actual experienced for those three months is ascertained and the trial

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

domestic (baseload) factors are finalized to replicate the total sendout experienced. The finalized domestic factors (DOMs) are then utilized in conjunction with the actual sales and customer counts for the months of December, January and February to determine the average Mcf per degree day for each of the individual months for the remaining temperature sensitive load. The results are weighted by degree-days to give an average value which is utilized as a trial value for the heating factor.

The finalized domestic factor and the trial heating factor developed, as such, are then applied in the sendout calculations together with customer counts for the months of December, January and February (the peak winter heating period) to project an estimated sendout for each of these months. The projected sendout is then compared with the actual sendout experienced. Any variation between the projected and actual is adjusted to force the replication of the actual sendout experience thus resulting in the determination of a finalized heating factor.

To project the number of customers for each individual rate class, each rate class of customers are reviewed and accumulated individually. Current customers are ascertained from the number of billings data available from sales and revenue actually experienced immediately prior to the commencement of a model run. Declines are projected for anticipated losses to electric and other fuels, demolitions and transfers to other rates. Direct transfers from a non-heating to a heating account, as a result of a current customer's conversion to gas heat, moves the domestic load to the new category. Projected additional customers are developed by the Marketing Department where staff dealing with individual classes of customers and having the most direct knowledge of conditions within their sphere, project annual load additions which are translated into customer counts based upon typical customer usage for that individual customer class. The approximate month of turn-on is also developed to permit reflection of the effective portion of the load addition within the fiscal period under study. Interruptible class customers as well as other large special accounts are detailed individually incorporating expected gains and losses as direct contact and experience has indicated.

III. Demand Forecasting Methodology and Assumptions
Basic Assumptions (Continued)

The base revenue projections for both firm and interruptible customer groups are derived as the product of the projected sales volumes and the present tariff rate for each individual customer class within each group. The GCR revenue projections are derived as the product of the GCR factor and the projected sales volumes to the firm customers.

IV. Design Day and Design Hour Forecasting Methodology and Assumptions

Each year a six year estimate of Design Day and Design Hour requirements anticipated under design day and design hour operating conditions is prepared to ensure that adequate resources are under contract and to further ensure that PGW can fulfill its supply obligation for its firm customer requirements on a design day and design hour.

The projected demands for design day are developed utilizing previous winter periods data for all weekdays where the temperature average for the day is 32 degrees Fahrenheit or below. The total sendout for these days as recorded under actual conditions and is reduced to firm sendout by removal of the interruptible load. A computer generated linear regression procedure is utilized to develop a sendout model from actual daily sendouts and degree days, and the process is repeated in a quadratic regression and a cubic regression procedure. From the predicted sendouts in the regression, which are within a reasonable percent of error to the actual sendout, factors are derived to replicate the actual sendouts. The factors derived from this are used to determine the current load requirements for a 0 degrees F day and from this data, the load for a -5 degrees F hour is calculated. PGW's Marketing Department's load projections for present and future years are then applied to these requirements to develop design day and design hour present and future load requirements. This is achieved by the addition of the projected marketing load growth on an annual basis (by day) to the derived base-year design day requirements.

V. PGW Corporate Modeling System

General Description

The corporate modeling system is a tool used by PGW management to project sales, revenues and expenses, as well as to examine key planning strategies and evaluate their effects on company operations. The system provides the ability to determine the results of alternate plans and scenarios, while at the same time allowing for responses to "what if" type situations quantifying revenue and expenses. The system is totally interactive in that it combines the power of the computer with the experience of management to develop both short and long range projections based upon experienced historical data for sales and sendout volumes, raw material expenses and sale revenues. The corporate model system is composed of five separate models. Each model operates independently but requires substantial external data inputs as well as data output results from one or more of the other models in the system.

Gas Demand Model

The gas demand model is used to forecast total requirements for gas based upon current customer usage experience with adjustments for projected gains and losses. Input data includes domestic and space heating usage factors, customer counts by rate classifications, temperature patterns and results in projections of sales and sendout volumes. Detail and summary reports include average usage per customer and demands by rate classification. This data is transferred to the supply model.

Gas Supply Model

The supply model is used to dispatch the various supply sources in accordance with contract availability limitations. It develops the necessary balance between supply and demand which reflects plant fuel and storage injection requirements as well as customer demands by identifying the availability of interruptible load balancing sales. Detail and summary reports include daily and monthly load requirements, the volumes taken from each source by pipeline contract, storage balances, LNG requirements, etc. Data is transferred to both the cost model and the revenue model downstream.

V. PGW Corporate Modeling System (Continued)

Gas Cost Model

The gas cost model is used to determine natural gas and other raw material costs dispatched. The model tracks the various cost components of each contract - the demand, capacity, commodity, injection and withdrawal charges - providing monthly and annual details and summary information including inventory valuations and expenses for supplemental LNG supplies. It transfers these expenses to the Gas Cost Rate Model.

Gas Cost Rate Model

The gas cost rate model is used to develop the net natural gas expenses, net applicable GCR expenses and the GCR. It ascribes responsibility for the raw material costs to firm and interruptible classes in accordance with PGW's tariff requirements, assigning cost on an as-used basis to customer classes applicable to such charges, and compensates for natural gas refunds and previous over or under billing of fuel expenses. Detail summary reports include specifics of raw material adjustment, statements of reconciliation, and determination of applicable sales and expenses. It transfers the results to the revenue model.

Revenue Model

The revenue model is used to project billed revenue by rate classification in accordance with PGW's rate tariffs. It prepares the net billed revenue, GCR revenues, senior citizen discounts, and cycle billing information all detailed by rate classification. The detail and summary reports provided by this model are directed to the accounting and financial departments for inclusion in various financial reviews.

Summary

The corporate modeling system allows PGW management to effectively address supply/demand balancing, supply facilities planning, projected sales, cost, revenues, and sendout volumes in a timely manner. Results assist in the development of PGW's annual Operating Budget, setting of the GCR and planning of supply resources.

V. PGW Corporate Modeling System (Continued)

The model also provides a Status Report for the evaluation of remaining winter period requirements on both normal and design temperature patterns and the extrapolation of the current year based upon the experience to date and an assumption of temperatures anticipated for the remaining period of the year, this latter acting as a guide for both financial cash flow planning and winter operations.

Section 59.81 **Forms IRP-Gas 1A, and 1B – Annual and Peak Day Demand**

The load growth projections shall reflect the effects of price elasticity, market induced conservation, building and appliance efficiency standards, and the effects of the utility's existing and planned conservation and load management activities.

Response: Please see the attached documentation and forms.

FORM-IRP-GAS-1A: ANNUAL GAS REQUIREMENTS
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(VOLUMES IN MMcf)

	Historical Data		Current Year	Three Year Forecast		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Firm Requirements:						
Retail Residential	42,433	41,467	38,733	43,869	43,828	43,641
Retail Commercial	12,166	11,919	11,580	12,890	13,027	13,150
Retail Industrial	1,119	1,050	1,023	1,517	1,674	1,830
Electric Power Generation	-	-	-	-	-	-
Exchanges with Other Utilities	-	-	-	-	-	-
Unaccounted For Gas	2,540	1,902	1,625	2,432	2,443	2,447
Company Use	99	95	98	104	104	104
Other - Prior Period Adjustment	-	(463)	-	-	-	-
Subtotal Firm	58,356	55,970	53,060	60,811	61,077	61,171
Interruptible Requirements:						
Retail	4,006	4,464	2,783	3,134	3,124	3,149
Electric Power Generation	98	47	20	7	10	13
Company's Own Plant	61	65	67	71	71	70.65
Unaccounted For Gas	183	185	98	126	125	127
Subtotal Interruptible	4,347	4,760	2,968	3,338	3,330	3,360
SUBTOTAL FIRM AND INTERRUPTIBLE	62,703	60,730	56,028	64,150	64,406	64,532
Transportation:						
Firm Residential	-	-	-	-	-	-
Firm Commercial	-	-	-	-	-	-
Firm Industrial	-	-	-	-	-	-
Interruptible Residential	-	-	-	-	-	-
Interruptible Commercial	302	1,508	1,952	2,851	2,821	2,931
Interruptible Industrial	918	1,912	2,226	3,021	3,068	3,086
Other - Non-Utility Power Producers	7,762	8,307	7,442	8,340	8,340	8,340
Subtotal Transportation	8,981	11,727	11,620	14,212	14,229	14,356
TOTAL GAS REQUIREMENTS	71,684	72,457	67,649	78,362	78,636	78,888
Increase (Decrease)	na	772	(4,808)	10,713	274	252
Percent Change (%)	na	1.08%	-6.64%	15.84%	0.35%	0.32%

FORM-IRP-GAS-1B:PEAK DAY REQUIREMENTS
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(VOLUMES IN MMcf)

	Historical Data		Current Year [2]	Three Year Forecast [1]		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Firm Requirements:						
Retail Residential	438	405	489	538	536	535
Retail Commercial	125	116	128	141	142	144
Retail Industrial	12	10	11	16	17	19
Electric Power Generation	0	0	0	0	0	0
Exchanges with Other Utilities	0	0	0	0	0	0
Unaccounted For Gas	*26*	19	0	0	0	0
Company Use	1	1	1	1	1	1
Other	0	0	0	0	0	0
Subtotal Firm	602	552	630	695	697	698.4
Interruptible Requirements:						
Retail	18.1	28.2	26.5	25.1	25.3	25.7
Electric Power Generation	0.0	0.1	0.0	0.0	0.0	0.0
Company's Own Plant	0.4	0.6	0.6	0.0	0.0	0.0
Unaccounted For Gas	0.0	0.0	0.0	1.0	1.0	1.0
Subtotal Interruptible	18.5	28.9	27.1	26.1	26.2	26.7
SUBTOTAL FIRM AND INTERRUPTIBLE	620	580	657	721	723	725
Transportation:						
Firm Residential	0	0	0	0	0	0
Firm Commercial	0	0	0	0	0	0
Firm Industrial	0	0	0	0	0	0
Interruptible Residential	0	0	0	0	0	0
Interruptible Commercial	0	6	0	0	0	0
Interruptible Industrial	2	5	0	0	0	0
Other - Non-Utility Power Producers	2	35	0	0	0	0
Subtotal Transportation	*4*	*46*	0	0	0	0
TOTAL GAS REQUIREMENTS	624	627	657	721	723	725
Increase (Decrease)	*na*	3	*30*	*64*	*2*	2
Percent Change (%)	na	0.49%	4.82%	9.78%	0.24%	0.27%

[1] Peak Day is forecasted at a 2 degree temperature.

[2] Current Year Peak Day is forecasted at a 5 degree temperature.

Section 59.81 **Forms IRP-Gas 2A, 2B and 2C - Annual and Peak Day Energy Resources, Transmission and Storage Contracts**

The forecast of energy sources shall indicate sources of all presently available and new supplies which the utility estimates will become available, displayed by component parts.

Response: Please see the attached documentation and forms.

FORM-IRP-GAS-2A: ANNUAL/PEAK SUPPLY
TABLE 1: ANNUAL/PEAK SUPPLY
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(Volumes in MMcf)

	Historical Data				Current Year [2]		Three Year Forecast [1]					
Index Year	-2		-1		0		1		2		3	
Actual Year	2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		2008-2009	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Gas Supply for Sales Service												
TETCO	-	-	-	-	-	-	-	-	-	-	-	-
TRANSCO	9,841	53	4,557	53	-	-	-	-	-	-	-	-
Spot Purchases	57,160	295	59,837	235	58,813	249	65,826	259	67,082	255	64,684	253
Storage Withdrawals	14,082	86	11,116	160	16,071	167	16,970	167	14,188	205	14,490	206
LNG Withdrawal	2,609	188	1,817	135	1,541	245	2,067	301	1,822	270	1,656	272
Company Production	-	-	-	-	-	-	-	-	-	-	-	-
LNG Purchases	-	-	382	-	-	-	-	-	-	-	-	-
Exchanges with other LDCs	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Gas Supply	83,692	622	77,709	583.1	76,426	661	84,863	727	83,092	730	80,830	732
Total Transportation Services	8,981	4	11,727	46	11,620	-	14,212	-	14,229	-	14,356	-
TOTAL GAS SUPPLY AND TRANSPORTATION SERVICE	92,673	625	89,436	630	88,046	661	99,075	727	97,321	730	95,186	732
Deductions												
Underground Storage Injections & Fuels	18,290	-	13,939	-	18,076	4	17,765	4	16,818	4	14,579	4
LNG Liquefactions & Fuels	2,699	1	2,571	3	2,321	0	2,949	2	1,867	2	1,719	2
Sales to other LDC's	-	-	470	-	-	-	-	-	-	-	-	-
Total Deductions	20,989	1	16,979	3	20,397	4	20,713	6	18,685	6	16,298	7
NET GAS SUPPLY	71,684	624	72,457	627	67,649	657	78,362	721	78,636	723	78,888	725
BTU	1.038											

[1] Peak Day is forecasted at a 2 degree temperature.

[2] Current Year Peak Day is forecasted at a 5 degree temperature.

FORM-IRP-GAS-2B: NATURAL GAS TRANSPORTATION
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(volumes in MMcf)

	Historical Data				*Current Year*		*Three Year Forecast*					
Index Year	-2		-1		0		1		2		3	
Actual year	2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		2008-2009	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
City Gate Transportation Contracts:												
Transcontinental Transmission Corp.	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60
Texas Eastern Transmission Corp.	2,570	43	2,570	43	2,570	43	2,570	43	2,570	43	2,570	43
Texas Eastern Transmission Corp.	2,390	20	2,390	20	2,390	20	2,390	20	2,390	20	2,390	20
Transcontinental Transmission Corp.	453	5	453	5	453	5	453	5	453	5	453	5
Total	9,137	128	9,137	128	9,137	128	9,137	128	9,137	128	9,137	128
Upstream Transportation Contracts:												
Transcontinental Transmission Corp.	58,546	160	58,546	160	58,546	160	58,546	160	58,546	160	58,546	160
Texas Eastern Transmission Corp.	26,578	73	26,578	73	26,578	73	26,578	73	26,578	73	26,578	73
Texas Eastern Transmission Corp.	8,442	23	8,442	23	8,442	23	8,442	23	8,442	23	8,442	23
Texas Eastern Transmission Corp.	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17
Texas Eastern Transmission Corp.	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17	2,359	17
Transcontinental Transmission Corp.	172	2	172	2	172	2	172	2	172	2	172	2
Total	98,456	293	98,456	293	98,456	293	98,456	293	98,456	293	98,456	293
Storage-Related Transportation Contracts:												
Dominion Transmission Inc.	9,110	25	9,110	25	9,110	25	9,110	25	9,110	25	9,110	25
Dominion Transmission Inc.	2,760	8	2,760	8	2,760	8	2,760	8	2,760	8	2,760	8
Equitrans	1,911	5	1,911	5	1,911	5	1,911	5	1,911	5	1,911	5
Total	13,782	38	13,782	38	13,782	38	13,782	38	13,782	38	13,782	38

FORM-IRP-GAS-2C: NATURAL GAS STORAGE [1]
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(volumes in MMcf)

	Historical Data				Current Year		Three Year Forecast					
Index Year	-2		-1		0		1		2		3	
Actual year	2004		2005		2006		2007		2008		2009	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Transcontinental Transmission Corp.	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60	3,723	60
Dominion Transmission Inc.	3,481	32	3,481	32	3,481	32	3,481	32	3,481	32	3,481	32
Transcontinental Transmission Corp.	3,086	36	3,086	36	3,086	36	3,086	36	3,086	36	3,086	36
Texas Eastern Transmission Corp.	2,467	43	2,467	43	2,467	43	2,467	43	2,467	43	2,467	43
Texas Eastern Transmission Corp.	2,219	20	2,219	20	2,219	20	2,219	20	2,219	20	2,219	20
Transcontinental Transmission Corp. [3]	802	80	802	80	1,106	110	1,106	110	1,106	110	1,106	110
Equitrans	507	5	507	5	507	5	507	5	507	5	507	5
Transcontinental Transmission Corp.	453	5	453	5	453	5	453	5	453	5	453	5
Total	16,738	281	16,738	281	17,042	311	17,042	311	17,042	311	17,042	311

[1] Rank contracts in order of magnitude for the current year, noting the transportation provided and termination date for each contract reported
Reporting should proceed along rank ordering until 75% of total is accounted for, or until ten contracts have been listed, whichever occurs first.

Conversions at 1030 Btu

	Contract Expiration Date [2]
Transcontinental Transmission Corp.	03/31/2013
Dominion Transmission Inc.	03/31/2006
Transcontinental Transmission Corp.	Evergreen
Texas Eastern Transmission Corp.	04/30/2012
Texas Eastern Transmission Corp.	04/30/2012
Transcontinental Transmission Corp.	10/31/2013
Equitrans	03/31/2006
Transcontinental Transmission Corp.	04/15/2006

[2] For purposes of this report, all contracts due to expire are assumed renewed for the forecast years.
[3] Storage withdrawal increase in 2006 is due to the termination of the Firm Service (FS) Contract.

Section 59.81 **Forms IRP-Gas 3 - Historical, Current and Forecast Number of Customers**

Provide the number of year end customers displayed by component parts.

Response: Please see the attached form.

FORM-IRP-GAS-3: NUMBER OF CUSTOMERS [1]
REPORTING UTILUTY: PHILADELPHIA GAS WORKS

	Historical Data		Current Year	Three Year Forcast		
Index Year	-2	-1	0	1	2	3
Fiscal Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Firm Customers						-
Retail Residential	487,300	486,144	479,395	477,169	475,607	474,051
Retail Commercial	26919	26769	26512	30275	30,512	30,746
Retail Industrial	952	896	862	1307	1,481	1,655
Other	-	-	-	-	-	-
Subtotal Sales Service	515,171	513,809	506,769	508,751	507,600	506,452
Electric Power Generation	9	4	8	2	3	4
Interruptible Customers	485	407	340	301	302	308
Transportation Service [2]	24	76	127	195	206	211
CUSTOMER TOTAL	515,689	514,296	507,244	509,249	508,111	506,975
Increase (Decrease)	na	(1,393)	(7,052)	2,005	(1,138)	(1,136)
Percent Change (%)	na	-0.3%	-1.4%	0.4%	-0.2%	-0.2%

[1] Customer Count is based on the average number of billings over the course of the year.

[2] The increase in Transportation customers is due to Interruptible customers switching to transportation.

Section 59.81 **Forms IRP-Gas 4A and 4B - Annual and Peak Day Energy Supply and Demand**

Response: Please see the attached forms.

FORM-IRP-GAS-4A: ANNUAL SUPPLY AND REQUIREMENTS SUMMARY
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(Volumes in MMcf)

	Historical Data		Current Year	Three Year Forcast		
Index Year	*-2*	*-1*	*0*	*1*	*2*	*3*
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Gas Supply:						
Supply Contracts	67,000	64,394	58,813	65,826	67,082	64,684
Storage Withdraws	14,082	11,116	16,071	16,970	14,188	14,490
LNG	2,609	2,199	1,541	2,067	1,822	1,656
Subtotal Gas Supply	83,692	77,709	76,426	84,863	83,092	80,830
Transportation	8,981	11,727	11,620	14,212	14,229	14,356
TOTAL GAS SUPPLY	92,673	89,436	88,046	99,075	97,321	95,186
Requirements:						
Firm Requirements	58,356	55,970	53,060	60,811	61,077	61,171
Liqufaction	2,699	2,571	2,321	2,949	1,867	1,719
Interruptible Requirements	4,347	4,760	2,968	3,338	3,330	3,360
Storage Injections	18,290	13,939	18,076	17,765	16,818	14,579
Sales to other LDC's	-	470	-	-	-	-
Subtotal Firm & Interruptible	83,693	77,709	76,426	84,863	83,091	80,830
Transportation	8,981	11,727	11,620	14,212	14,229	14,356
Load Reductions						
TOTAL GAS REQUIREMENTS	92,674	89,436	88,046	99,075	97,321	95,186
Surplus (Deficiency)	0	0	0	0	0	0

FORM-IRP-GAS-4B: PEAK DAY SUPPLY AND REQUIREMENTS SUMMARY [1]
REPORTING UTILITY: PHILADELPHIA GAS WORKS
(Volumes in MMcf)

	Historical Data		Current Year	Three Year Forcast		
Index Year	-2	-1	0	1	2	3
Actual Year	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Gas Supply:						
Supply Contracts	348	288	249	259	255	253
Storage Withdraws	86	160	167	167	205	206
LNG	188	135	245	301	270	272
Subtotal Gas Supply	622	583	661	727	730	732
Transportation	4	46	-	-	-	-
TOTAL GAS SUPPLY	625	630	661	727	730	732
Requirements:						
Firm Requirements [2]	601	552	630	695	697	698
Interruptible Requirements	19	29	27	26	26	27
Storage & LNG Fuels	1	3	4	6	6	7
Subtotal Firm & Interruptible	621	583	661	727	730	732
Transportation	4	46	-	-	-	-
Load Reductions	-	-	-	-	-	-
TOTAL GAS REQUIREMENTS	625	630	661	727	730	732
Surplus (Deficiency)	0	0	0	0	0	0

[1] Peak Day is forecasted at a 2 degree temperature.
[2] Firm requirements for the forecast years include plant use.

Section 59.82 **Forms IRP-Gas 5 - Energy Conservation Report-Program Description**

Response: Please see the attached forms.

FORM-IRP-GAS-5 PROGRAM DESCRIPTION

Company: Philadelphia Gas Works (PGW)

Program: Conservation Works Program (CWP)

Existing [X] Proposed [ ]

Contact Person: Cristina Coltro
(215) 684-6785

Objective: To reduce energy usage, therefore, making bills more affordable for low-income customers whose usage is average or above average and who are participants in the Customer Responsibility Program.

Details of Activity and Implementation Schedule:

Eligible customers are targeted for program participation. For each participating household, PGW's contractors will perform an energy diagnostic audit, energy education, and conservation treatments such as home repairs, automatic clock thermostat, insulation, etc.

Actual and/or Anticipated Results:

		Energy Savings			
Year	Peak Load Reduction Mcf	Electic Mwh	Gas Mcf	Oil Gallons	Other Results
2002 (1)			13		3180 Homes w/ Treatment
2003 (1)			13		3417 Homes w/ Treatment
2004 (2)			16		2985 Homes w/ Treatment

Monetary and Personal Resources:

	Categorized program Expenses			
Year	Personnel Est. Hrs. (3)	Outside Services	Admin. (PGW Internal)	Total
2002 (1)	34,980	$1,922,540	$60,000	$1,982,540
2003 (1)	37,587	$1,975,962	$60,000	$2,035,962
2004 (1)	32,835	$2,008,697	$50,000	$2,058,697

(1) Actual
(2) Actual number of participants, actual expenditure, estimated energy savings
(3) Personnel hours were estimated by multiplying the number of homes by 11, the average number of hours spent per home.

C. Coltro
05/24/06

Section 59.82 **Forms IRP-Gas 6 - Energy Users**

Response: Please see the attached forms.

FORM-IRP-GAS-6

ENERGY USERS

COMPANY: PHILADELPHIA GAS WORKS

Fiscal Year Ending August 31, 2005

	Number of Customers	Sales (Mcf)
Firm:		
Residential:		
Heating	425,820	39,033,374
Non-heating	60,324	1,955,424
Commercial	26,769	11,781,190
Industrial	896	1,037,757
Sub-total Firm	513,809	53,807,745
Interruptible		
Commercial & Industrial	411	4,510,476
Total Gas Sold	514,220	58,318,221
Unbilled Adjustment	-	(91,345)
Transportation	76	11,624,395
Utility Use	-	94,731
Total	514,296	69,946,002

Section 59.82 **Forms IRP-Gas 7 - Conservation and Load Management Program Cost Benefit Analysis Inputs**

Response: Please see the attached forms.

FORM-IRP-GAS-7 PROGRAM SUMMARY

Company: Philadelphia Gas Works (PGW)

Program Name	Peak Load Reduction (Mcf)	Energy Use Change (Mcf)	Personnel Est. Hrs (3)	Categorized Program Expenses		
				Outside Services	Adm.	Total
Conservation Works Program (CWP) - 2001 (1)	NA	13	46,475	$2,352,533	$60,000	$2,412,533
Conservation Works Program (CWP) - 2002 (1)	NA	13	34,980	$1,922,540	$60,000	$1;982,540
Conservation Works Program (CWP) - 2003 (1)	NA	13	37,587	$1,975,962	$60,000	$2,035,962
Conservation Works Program (CWP) - 2004 (2)	NA	16	32,835	$2,008,697	$50,000	$2,058,697

(1) Actual
(2) Actual figures except for Energy Savings
(3) Personnel hours were estimated by multiplying the number of homes by 11, the average number of hours spent per home

Section 59.82 **Forms IRP-Gas 8 - Conservation and Load Management Program Cost Benefit Analysis Results**

Response: Please see the attached forms.

Company Name:
FORM-IRP-GAS-8

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis Input

PROGRAM: Conservation Works Program

t	Year	Energy Savings (E) Mcf	Average Energy Cost (ACE) $ per Mcf	Avoided Enegy Cost (MCE) $ per Mcf	Participant Demand Savings (D) Mcf	Utility Capacity Savings (G) Mcf	Average Demand Costs (ACD) $/Mcf	Avoided Demand Costs (MCD) $/Mcf	Participant Costs (PC) $
1	2004	44,500	$ 13.40	$ 7.78220	N/A	N/A	N/A		$ -
2	2005	44,500	$ 14.10	$ 9.08130	N/A	N/A	N/A		$ -
3	2006	44,500	$ 19.23	$ 12.56320	N/A	N/A	N/A		$ -
4	2007	44,500	$ 18.87	$ 12.37460	N/A	N/A	N/A		$ -
5	2008	44,500	$ 17.15	$ 10.64753	N/A	N/A	N/A		$ -
6	2009	44,500	$ 16.60	$ 10.10652	N/A	N/A	N/A		$ -
7	2010	44,500	$ 15.60	$ 9.10319	N/A	N/A	N/A		$ -
8	2011	44,500	$ 14.77	$ 8.27081	N/A	N/A	N/A		$ -
9	2012	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
10	2013	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
11	2014	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
12	2015	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
13	2016	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
14	2017	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
15	2018	44,500	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
16	2019	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
17	2020	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
18	2021	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
19	2022	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
20	2023	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
21	2024	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
22	2025	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
23	2026	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
24	2027	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -
25	2028	19,845	$ 14.51	$ 8.01684	N/A	N/A	N/A		$ -

Company Name:
FORM-IRP-GAS-8

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis Input

PROGRAM: Conservation Works Program

t	Year	Incentive Cost (I) $	Utility Costs (UC) $	Discount Rates: Participant (d) %	Non-Participant (d) %	Utility (1) (d) %	Escalation Rate (e) %	System Sales or Demand (S) Mcf	Sales or Demand Ratio (f) %
1	2004	$ -	$2,058,697	5.9	5.9	5.9	$ -	60,272,032	0.0066
2	2005	$ -	$ -	5.9	5.9	5.9	$ -	58,318,221	0.0068
3	2006	$ -	$ -	5.9	5.9	5.9	$ -	50,675,592	0.0071
4	2007	$ -	$ -	5.9	5.9	5.9	$ -	55,650,293	0.0074
5	2008	$ -	$ -	5.9	5.9	5.9	$ -	55,937,140	0.0074
6	2009	$ -	$ -	5.9	5.9	5.9	$ -	56,095,485	0.0074
7	2010	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
8	2011	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
9	2012	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
10	2013	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
11	2014	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
12	2015	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
13	2016	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
14	2017	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
15	2018	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0074
16	2019	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
17	2020	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
18	2021	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
19	2022	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
20	2023	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
21	2024	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
22	2025	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
23	2026	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
24	2027	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078
25	2028	$ -	$ -	5.9	5.9	5.9	$ -	56,359,849	0.0078

(1) The Participant, Non-Participant and Utility discount rates are based on PGW's long-term debt and AFUDC (Allowance for Funds Used During Construction).

Section 59.81 **Forms IRP-Gas 9 - 2000 Annual Resource Summary Planning Report**

Response: The Summary Report is included as a separate document.

Company Name:
FORM-IRP-GAS-9

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis Input

Program:

Conservation Works Program (CWP)

Period of Analysis		Total Utility Benefits (Bu) $	Total Utility Costs (Cu) $	Revenue Reduction Cost (Cr) $	Participant Revenue Requirement (Rp) $	Total participant Benefits (Bp) $	Total Participant Costs (Cp) $
Beginning Year	Ending Year						
2004	2028	$ 4,803,337	$ 2,058,697	$ 8,129,595	$ 27,198	$ 8,129,595	$ 27,198

	NET PRESENT VALUE			BENEFIT COST RATE			
Discounted Payback Period Yrs.	Participant (NPVp) $	Non-Part (NPVnp) $	Utility (NPVu) $	Participant (BCRp)	Non-Part (BCRnp)	Utility (BCRu)	Rate Impact Non-Part (RIMnp) $/Mcf
25	$ 8,102,397	(5,343,806.66)	$2,744,639.58	298.91	0.47	2.33	0.038

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below in accordance with the requirements of § 1.54 (relating to service by a participant).

VIA FIRST CLASS MAIL

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