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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

BARBARA BISGAIER

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-00006042

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

January, 2001

DSH:25486

Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.

A. Barbara C. Bisgaier, Managing Director, Public Financial Management, Inc., 2 Logan Square, Suite 1600, Philadelphia, Pennsylvania 19103-2770, (215) 567-6100. I am a Financial Advisor to state and local governments and authorities.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Public Financial Management, Inc. I am a shareholder in the firm.

Q. SUMMARIZE YOUR PROFESSIONAL QUALIFICATIONS.

A. I have been employed by Public Financial Management, Inc. for more than 18 years. For approximately 16 of those years, I have had the title of managing director and have managed the firm's municipal utility practice. During my career at Public Financial Management, Inc., I have served as a Financial Advisor to a broad range of state and local governments and authorities. In particular, my experience has been concentrated in the area of publicly-owned utility systems. In addition to the Philadelphia Gas Works, my utility clients have included the Water Department of the City of Philadelphia, the Pittsburgh Water and Sewer Authority, the Harrisburg Water and Sewer Authority, the New Jersey Water Supply Authority, the North Jersey District Water Commissioners, the Passaic Valley Sewerage Commissioners, the Middlesex County (NJ) Utilities Authority, the Ocean County (NJ) Utilities Authority, the Atlantic County (NJ) Utilities Authority, the Southeast Morris County Water Authority and the Atlantic City Sewerage Authority. In addition, I have served, since 1992, as the Financial

Advisor to the City of Philadelphia. In that capacity, I have served as the City's advisor for all debt issued by the City and by its authorities and enterprises (the Water Department, the Division of Aviation, the Philadelphia Municipal Authority and PGW). This has included serving as the advisor for two bond issues that were each in excess of one billion dollars. Most recently, I served as the Financial Advisor for the largest issue of municipal bonds to come to market in 2000: $1.8 billion of Turnpike Revenue Bonds for the New Jersey Turnpike Authority. Over the course of my career, I have served as the advisor for the issuance of long-term debt having a par value in excess of $15 billion.

In the course of these various engagements, my responsibilities include general financial planning and the management of the debt issuance process. With regard to the financial planning aspect of my work, I assist clients with their development of capital financing strategies, debt policies, budgets and rate setting issues. With regard to the debt issuance process, I frequently serve as the liaison between my clients and the bond rating agencies, the municipal bond insurers and other credit-providing agencies. I also advise my clients throughout the debt issuance process as to the costs and benefits of various alternative approaches to business and financial issues under consideration. I am also frequently responsible for working with my clients to prepare disclosure documents, offering circulars and presentations to the bond rating agencies and credit enhancers.

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I have an A.B. degree from Mount Holyoke College and a Master of City and Regional Planning degree from Rutgers University.

Q. WHAT IS YOUR EMPLOYMENT EXPERIENCE?

A. Prior to my employment by Public Financial Management, Inc., I was employed by Strouse, Greenberg & Co. from 1980-1982 as a financial analyst. From 1974-1980, I was employed by the City of Philadelphia, concluding my employment with the title of Deputy Director of the Office of Housing and Community Development.

Q. EXPLAIN THE BASIS OF YOUR EXPERIENCE WITH AND KNOWLEDGE OF PGW.

A. Public Financial Management, Inc. was engaged in 1992 by the City of Philadelphia to serve as its Financial Advisor. That engagement included, broadly, responsibility for the preparation of the Five-Year Financial Plans mandated by the Pennsylvania Intergovernmental Cooperation Authority, general financial planning for the City and traditional financial advisory work for the City and its enterprises in connection with the issuance of long-term and short-term debt. At the commencement of this engagement, the City's below-investment-grade bond rating and general fiscal distress essentially barred it and its enterprises from the public debt markets. In 1993, with the beginning of a return to fiscal stability, the City began its return to the capital markets. I began serving specifically as the Financial Advisor to PGW with the issuance of its 14th Series Bonds. I have subsequently worked on each of PGW's bond transactions. I have assisted PGW in the implementation of certain asset management

transactions, most notably the competitive acquisition of a Forward Rate Agreement for its debt service reserve fund and the implementation of a "knock-in" swap with Morgan Guaranty Trust Company. I have also assisted PGW with the issuance of its commercial paper; that assistance has included the annual preparation of the offering/disclosure document, procurement of the various letters of credit that have provided program liquidity and management of the process of obtaining and maintaining a credit rating for PGW's commercial paper program. I also managed the competitive implementation of PGW's equipment leasing program. In the course of each of these specific engagements, I have made various presentations on PGW's behalf to the Philadelphia City Council, the Philadelphia Gas Commission and the Philadelphia Facilities Management Corporation. I have had extensive contact with each of the three municipal bond rating agencies on behalf of PGW, both with regard to specific bond transactions and to the general credit of PGW. I have had similar contacts with the four principal municipal bond insurers on PGW's behalf and have been responsible for the procurement of letters of credit for the commercial paper program. This work has permitted me to become familiar with the financial structure, condition and issues of PGW, and to have obtained a substantial institutional knowledge of PGW.

Q. HAVE YOU EVER TESTIFIED BEFORE ANY REGULATORY AGENCIES?

A. Yes, I have testified before the Philadelphia Gas Commission and I submitted testimony to the Public Utility Commission in PGW's interim rate proceeding.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is: 1) to provide my expert opinion regarding the impact on PGW if the Company fails to meet the coverage requirements in its bond ordinances or if it fails to maintain its short term, commercial paper program; 2) the effect on the Company of the downgrading to non-investment grade of PGW's bonds; and 3) the effect on the Company if the PUC fails effectively to permit PGW to recover its costs and to maintain the requirements of its bond indentures. I am also incorporating into this submission my previous testimony in PGW's interim rate proceeding in which I explained the bond coverage requirements.

Q. YOU HAVE PREVIOUSLY TESTIFIED THAT PGW IS FINANCIALLY VULNERABLE IF IT FAILS TO MEET THE DEBT SERVICE COVERAGE REQUIREMENTS SPECIFIED IN ITS BOND ORDINANCE AND/OR IT IS UNABLE TO RENEW ITS COMMERCIAL PAPER PROGRAM. HAS ANYTHING CHANGED WITH REGARD TO EITHER OF THESE TWO REQUIREMENTS?

A. It remains essential to the financial viability of PGW that it continue to have access to both the long-term and short-term credit markets, the former to satisfy capital requirements and the latter for liquidity purposes. I would like to address each of these points separately.

Access to the long-term capital market. PGW must have the ability to access the long-term capital market to satisfy its capital funding requirements. Maintenance of plant and the continuation of the cast iron pipe replacement program are obviously essential to PGW's future. The only available source of funding for this effort is through the public sale of bonds. **PGW's ability to sell its bonds will**

be eliminated if it loses its investment-grade long-term bond rating. PGW will lose its investment grade rating if it does not meet its debt service coverage requirements. The rating agencies have long stressed the fact that PGW's debt service coverage requirements are the most significant factor for the continued maintenance of an investment grade rating in view of the financial stress PGW faces.

PGW is now projecting that without rate relief, it will not achieve its bond ordinance debt service coverage requirements in the fiscal year ending August 31, 2001. I explained PGW's bond ordinance requirements in my testimony in PGW's interim rate proceeding, a copy of which I am attaching here. (Exhibit BB-1). I am also attaching the relevant bond ordinance covenant itself. (Exhibit BB-2). Once this result becomes reasonably certain, PGW will be required to report its projected default in meeting those bond ordinance requirements to the investment community. If the bond rating agencies do not believe PGW can continue to meet its coverage requirements, they will downgrade the long-term credit ratings to below investment grade and PGW will be unable to access the credit markets. Moody's Investors Service currently has PGW on "negative outlook", a warning that it expects to downgrade PGW unless there is a change in basic financial outlook. Standard & Poor's Corporation, similarly, has PGW on "credit watch with negative implications". The risk of a downgrade is, therefore, quite real.

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PGW's investment-grade bond rating would also be threatened by a demonstration that its new regulators are unwilling to provide the rate relief necessary both to meet debt service coverage requirements and to produce **adequate cash for operations**. The $11 million of base rate relief granted in PGW's interim rate case is demonstrably inadequate --- in the face of the additional $20 million of bad debt expense that will result from the additional increase to the Gas Cost Rate --- both to satisfy its bond ordinance requirements and to provide sufficient cash to meet its cash needs during the rest of the year. It is essential that PGW receive additional rate relief as soon as possible in order to prevent not only the further deterioration of its already fragile cash condition but also a further deterioration in the public perception of PGW and an almost certain downgrading of its bond ratings.

Access to the short-term credit markets. PGW has for the past 20 years relied upon its commercial paper program to provide liquidity to deal with the fact that revenues are realized irregularly throughout the year. During the past several years, however, the PGW commercial paper program has changed from one that provides liquidity to one that has essentially become a permanent part of PGW's capital structure. Were the commercial paper program to be eliminated, PGW would, in my opinion, face fiscal collapse. However, it is clear that merely providing sufficient cash to allow PGW to renew its commercial paper is not sufficient to solve PGW's problems. Renewing the commercial paper is essential. Providing additional revenue to PGW to give it the resources to

address the fundamental problems that produced the current crisis is also essential.

PGW will be able to sustain the commercial paper program at its current level only if it is successful in having Morgan Guaranty Trust Company ("Morgan") renew the letter of credit that supports the program. The letter of credit will expire in June 2001. Pursuant to the terms of the letter of credit, PGW requested a letter of credit extension in June 2000. To date, Morgan has been unwilling to grant that extension and has delayed taking formal action. Morgan had indicated to PGW that it would await the outcome of the interim rate case and the actions of the PUC with regard to the GCR before it acts on the PGW extension request. Further, one of the three participants in the letter of credit, PNC Bancorp, has already informed Morgan and PGW that it will not renew its participation in the letter of credit. Morgan must, therefore, either increase its own level of participation in the letter of credit (an action that it is unwilling to take) or find a substitute for PNC. This will be extremely difficult, at best, but will be more difficult to the extent that PGW cannot demonstrate its ability to meet its debt service coverage requirements and sustain itself, from a cash perspective, as a viable concern.

One critical factor in Morgan's decision as to its willingness to renew the letter of credit will be PGW's ability to demonstrate that, in accordance with the terms of the letter of credit, it will have cash on hand sufficient to demonstrate to Morgan that it could pay off the full amount of the letter of credit. During calendar year

2001, the only way in which PGW can satisfy this requirement is that it have the proceeds of its projected bond issue in May, 2001. Even if PGW's financial position improves to the point that it appears that it will just meet its bond ordinance requirements and have sufficient end of year cash to meet obligations the ability of PGW to complete the May bond issue will depend upon Morgan's willingness to extend the letter of credit because prospective bond buyers will be unwilling to purchase bonds if the imminent collapse of the commercial paper program is disclosed to them.

Morgan has also indicated to PGW that one of the critical elements of its analysis of PGW's creditworthiness will be the rapidity with which the PUC grants rate relief via the GCR in the event of escalating gas costs. To the extent that the PUC permits immediate GCR relief, particularly during the winter heating season when delays are costly, Morgan will be encouraged to continue its support of the commercial paper program.

The collapse of the commercial paper program, in addition to keeping PGW from the long-term bond market, will also create an extraordinary financial crisis for PGW. At the final maturity of the commercial paper program in June 2001, the Morgan letter of credit will have to be drawn upon. The drawing will convert, after 30 days to a $97,000,000 taxable loan from Morgan that must be repaid rapidly. PGW will be unable to repay this loan. This obligation will presumably fall upon the City, as owner, to repay. I am not sure how the City could possibly accommodate such a huge liability.

Q. WHAT IS THE CURRENT ATTITUDE OF MORGAN TOWARD PGW?

A. After PGW's request for the letter of credit extension, Morgan informed PGW that it would await the outcome of the interim rate case to make a decision. Because PGW has indicated that the $11 million base rate increase is inadequate and, at any rate, has not accepted it for other reasons, Morgan continues to defer its decision on the letter of credit extension. Morgan has also expressed concern about PGW's ability to receive approval for timely interim GCR increases given the recent rapid increase in gas costs nationally. The issue of contemporaneous recovery of gas cost increases is a key consideration in their deliberation of this matter.

Q. WHAT IS THE CURRENT ATTITUDE OF THE RATING AGENCIES TOWARD PGW?

A. PGW officials have spoken to each of the three rating agencies on almost a weekly basis since September in an effort to keep them informed of ongoing developments. In particular, the rating agencies have expressed concern as to the ability of PGW to remain financially viable absent significant and immediate base rate relief. They have also expressed concern as to the ability of PGW to obtain timely interim increases to the GCR in the face of rapidly escalating gas prices.

Q. WOULDN'T THE COMMERCIAL PAPER ISSUE BE RESOLVED IF THE CITY PROVIDED THE FUNDS NEEDED TO RENEW THE COMMERCIAL PAPER PROGRAM?

A. Aside from the fact that it is highly unlikely that the City can or will make additional cash payments to PGW, Morgan would be unwilling to renew its letter

of credit based upon a one time City payment to PGW. Morgan is seeking systemic improvement at PGW that can sustain the credit exposure it has to PGW. Both Morgan and the bond rating agencies need to be convinced that PGW will generate sufficient revenue by its rates to demonstrate that it is a "going concern," that is that PGW will, in the normal course of business, be capable of meeting the requirements of its bond covenants and be capable of funding a capital program that will insure the safety of the system and its ability to continue to provide service to its customers into the future. Only adequate rate relief can satisfy the "going concern" requirement. City grants and/or loans may help PGW in a short-term crisis, but do not address the essential "going concern" issue. If anything, such reliance on City assistance demonstrates that PGW is not, on its own, a "going concern."

Q. MS. BISGAIER, YOU TESTIFIED IN PGW'S INTERIM RATE PROCEEDING THAT A FAILURE BY THE PUC TO ALLOW ADEQUATE RATE RELIEF WOULD RESULT IN A DOWNGRADING OF PGW'S BONDS. HAS THAT OCCURRED?

A. No, not yet. I attribute that to our communication with the agencies and the information we have provided to them. We have informed them that PGW's future failure to meet its bond ordinance requirements or its being short of the cash needed to meet its commercial paper requirements and other obligations are not as yet certain outcomes. We have also explained that PGW still has the opportunity to avoid these results if it finds a way to obtain higher rates in the next few months that will permit it to meet its debt service and cash

requirements. The more time that passes without base rate relief the more unlikely it is that PGW will avoid these negative results.

Q. DOES THAT COMPLETE YOUR TESTIMONY?

A. Yes, it does.

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EXHIBIT BB-1

DOCKET NO. R-00006042

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

BARBARA BISGAIER

ON BEHALF OF
PHILADELPHIA GAS WORKS

DOCKET NOS. P-00001831
R-00005654

RE: PETITION OF PHILADELPHIA GAS WORKS
FOR ESTABLISHMENT OF INTERIM RATE
PROCEDURES AND FOR A DECLARATORY ORDER

AUGUST 2000

Q. **PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

A. Barbara C. Bisgaier, Managing Director, Public Financial Management, Inc., 2 Logan Square, Suite 1600, Philadelphia, Pennsylvania 19103-2770, (215) 567-6100. I am a Financial Advisor to state and local governments and authorities.

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the advisor for two bond issues that were each in excess of one billion dollars. Most recently, I served as the Financial Advisor for the largest issue of municipal bonds to come to market in 2000: $1.8 billion of Turnpike Revenue Bonds for the New Jersey Turnpike Authority. Over the course of my career, I have served as the advisor for the issuance of long-term debt having a par value in excess of $15 billion.

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Deputy Director of the Office of Housing and Community Development.

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program. In the course of each of these specific engagements, I have made various presentations on PGW's behalf to the Philadelphia City Council, the Philadelphia Gas Commission and the Philadelphia Facilities Management Corporation. I have had extensive contact with each of the three municipal bond rating agencies on behalf of PGW, both with regard to specific bond transactions and to the general credit of PGW. I have had similar contacts with the four principal municipal bond insurers on PGW's behalf and have been responsible for the procurement of letters of credit for the commercial paper program. This work has permitted me to become familiar with the financial structure, condition and issues of PGW, and to have obtained a substantial institutional knowledge of PGW.

Q. HAVE YOU EVER TESTIFIED BEFORE ANY REGULATORY AGENCIES?

A. Yes, I have testified before the Philadelphia Gas Commission.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide my expert opinion regarding the impact on PGW of a failure by the Public Utility Commission to grant the establishment of the interim rates requested by PGW in its petition dated August 8, 2000 as it relates to access to the capital markets generally, the cost of funds and the commercial paper program and the impact on PGW of a failure by the Public Utility Commission to grant an increase in the Gas Cost Recovery charge requested by PGW in its petition dated August 2, 2000.

SUMMARY OF FINDINGS

Q. COULD YOU SUMMARIZE YOUR FINDINGS.

A. I would like to divide my findings into several separate related sections in order to

address the impact of certain outcomes for PGW.

a. **Failure to meet its bond covenants** – If PGW is not granted increases in both its GCR and base rates, there is a substantial probability that PGW will be in default of one or more of its bond covenants. In its various bond resolutions, PGW has essentially committed to its bondholders to set rates that are sufficient to pay for the cost of operating and maintaining PGW and to pay principal and interest on its outstanding debt (as well as provide for a minimum of 1.5x debt service coverage on all long-term debt). Failure of PGW to generate revenues to pay all of its expenses or to meet the 1.5x debt service coverage test, even if debt service payments are timely made, will result in a technical default under those bond resolutions. In my opinion, and in the present circumstances, this technical default (and the implications of such an eventuality) will immediately result in the down-grading to below investment-grade of PGW's long-term credit rating by each of the three municipal credit rating agencies. It has long been understood that PGW has maintained its investment grade rating substantially as a result of its unusually high debt service coverage requirement (most municipal utilities have required coverage between 1.1x and 1.25x annual debt service). **Absent achievement of the debt service coverage requirement, the rating agencies will have no alternative but to reduce PGW's rating to junk bond status. That status will prevent PGW from accessing the public credit markets.** Further, PGW will be unable to obtain insurance on its bonds. Furthermore, PGW will be unable to obtain capital to maintain and or upgrade its capital facilities.

This was precisely the situation that the City of Philadelphia found itself in 1991. In fact, the final financial crisis that led to the Commonwealth's passage of the Pennsylvania Intergovernmental Cooperation Act was the attempt by and failure of the City to sell its temporary loan notes in 1991, after the City's general credit was reduced to junk bond status. In fact, extreme fiscal distress is often heralded by a cash flow crisis.

The implications of PGW's loss of investment-grade status are dire in that PGW will be denied access to the capital markets.[1] This inability to replenish PGW's capital account through the sale of bonds will initially and immediately contribute to the stress on PGW's cash position in that it is currently PGW's intention to reimburse itself for previous capital expenditures in the amount of $21.5 million from the proceeds of bonds to be issued in the spring of 2001. It is my understanding that PGW believes that the availability of this $21.5 million of capital is essential to the maintenance of its program of upgrading crucial capital facilities, such as mains. This reimbursement has been anticipated in the cash flow projections prepared by PGW and will not be available in the event that bonds cannot be sold.

b. **Collapse of the commercial paper program** – In my opinion, the most immediate and devastating impact of a failure of PGW to meet its rate covenant would be the absolute collapse of the commercial paper program. PGW has, for

[1] PGW is currently two rating steps above junk bond status. There is no requirement that a downgrade occur one step at a time.

many years, depended upon its commercial paper program to provide a stable source of monthly operating cash in the face of the peaks and valleys of cash receipts over the course of each year. For the past several years, PGW has maintained an outstanding balance of commercial paper at the $100,000,000 level for much of every year. The commercial paper has become, in effect, a permanent part of PGW's capital structure rather than a mechanism used to smooth over cash flow irregularities. **In either of these two modes, the ability of PGW to issue its commercial paper is an absolute necessity for the maintenance of the basic operation and financial integrity of PGW. It is almost impossible to imagine PGW as a going concern without access to its commercial paper program.**

Tax-exempt commercial paper (except in the instance of very highly rated governments) is always secured by a letter of credit provided by a highly rated commercial bank. The PGW commercial paper is currently secured by a letter of credit provided by the Morgan Guaranty Trust Company. The letter of credit matures in June 2001. Pursuant to the terms of that letter of credit, PGW, in June 2000, requested a one-year extension of the Morgan letter of credit (to June 2002). Assuming that Morgan grants that extension (by no means a sure thing), the commercial paper program will survive until June 2002. If Morgan does not grant the extension, PGW will be faced with the immediate need to find a letter of credit bank to replace Morgan in 2001. In my opinion, that will be difficult to do. It will be difficult, in part, because the letter of credit market is currently contracting and there is a substantially reduced number of banks that remain active in the

municipal market. In particular, the troubled financial condition of PGW, absent the requested interim rate increase, will virtually eliminate the possibility of getting a replacement letter of credit. Even assuming that Morgan grants the requested one year extension (and does so because PGW will have met its rate covenant as of August 31, 2000), it is a virtual certainty that neither Morgan nor any other bank would issue a letter of credit in June 2001 if no rate relief has been granted and PGW has been down-graded to below investment-grade. Given the reserve requirements that the Controller of the Currency places on a commercial bank, providing a letter of credit to a below investment-grade entity, no bank would be willing to provide such a facility. While there may be a year of grace until June 2002 if Morgan does grant the extension, a failure to meet the rate or coverage covenant on August 31, 2001 will guarantee that no extension or replacement would be available in June 2002. In my opinion, this would be catastrophic for PGW.

The cash flow projections for fiscal year 2000-2001 prepared by PGW rely upon the fact that $97 million of commercial paper will be outstanding for virtually the entire year. Other analyses, for example, the Public Advocate's cash flow projection presented to the Philadelphia Gas Commission (which assumes no increase to the base rate but rather a commitment by the City to forego the $18 million annual payment and a loan to PGW of $20 million) assumes that the full amount of $97 million of commercial paper is already fully outstanding at the start of the year. This is an unrealistic projection because there will be no

commercial paper available after June 2001 if PGW loses its investment grade rating and, as a direct result of that loss, the letter of credit that supports the commercial paper program.

The potential loss of the Morgan Guaranty letter of credit is a very real threat. The current letter of credit agreement permits PGW to request a one-year extension of the letter of credit one year prior to the final maturity date of that letter of credit. Therefore, in May 2000, PGW requested that Morgan Guaranty extend the term of the letter of credit for one year past the scheduled maturity date of June 2001. In response to my recent (the second week of August, 2000) request to Morgan Guaranty as to the status of that extension application, I was advised by a senior official at Morgan that the banks that participate in the letter of credit with them were unwilling to continue to do so after the current expiration date in June 2001.[2] Morgan Guaranty must, therefore, seek other bank participants as they are unwilling to underwrite the full $100 million of the letter of credit themselves. They further advised me that, in their opinion, the search for new participants should be delayed until November or December 2000 in anticipation that the GCR and base rate increases will have been granted and thus make it possible to find new participants. **Absent the unlikely commitment of new participants, Morgan Guaranty, on its own, may or may not elect to**

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[2] PNC Bank had previously informed me that, based upon the unanimous vote of its credit committee, it was withdrawing its participation in the Morgan Guaranty letter of credit.

extend the letter of credit but in no event will that extension be for an amount in excess of $50 million. This will be the first result of a failure to receive GCR and base rate relief.

c. **Substantially increased cost of funds** - Even if and when PGW were to return to investment-grade status at a point in time in the future, the credit markets would continue for some time to extract an interest rate premium on PGW bonds. In my opinion (which is substantially based upon the experience of the City of Philadelphia when it finally returned to investment-grade status and had access to the public credit markets), the markets will demand interest rates higher than those paid on comparable bonds for at least five years following the return to investment-grade status. This premium may begin in the range of 50 basis points and decline over time. That additional cost would be borne by PGW's rate payers for years to come. Additionally, PGW would be forced to pay a premium when it attempted to obtain municipal bond insurance to improve the marketability of its bonds. That additional premium could be as much as 100 basis points. For example on a $75 million bond issue, this would translate into an added cost of $750,000 in increased insurance premiums alone. This conclusion is again based upon the experience of the City of Philadelphia that was required to pay a bond insurance premium of 125 basis points when it first returned to investment-grade status and now routinely pays insurance premiums of 25 basis points.

The investment-grade bond rating would be lost because the rating agencies would view the City's contributions as a one-time fix rather than a

systemic improvement to PGW's financial condition. The rating agencies are well aware of the fact that the City is not in a position to maintain this level of financial commitment to PGW without severely stressing its own financial well-being and, in fact, will be prevented from doing so by the Pennsylvania Intergovernmental Cooperation Authority, the body that oversees the City's financial affairs. In addition, the rating agencies would view such a City bailout as PGW using up of the only "life preserver" available to PGW in the event that its financial projections understate its case or income results (e.g., PGW experiences a considerably warmer than normal winter).

In my opinion, the rating agency analysis and conclusion in this instance will not only focus upon the fact that the bond covenants had been met, but also upon whether the Public Utility Commission clearly demonstrates a willingness to meet its legal obligation to grant rates sufficient to permit PGW to meet its bond covenants. It is important to PGW and its customers that the correct signal be sent to PGW's creditors.

II. SPECIFIC ANALYSES OF PGW BOND COVENANTS

Q. ARE YOU FAMILIAR WITH THE RATE COVENANT THAT IS CONTAINED IN PGW'S BOND ORDINANCES?

A. Yes.

Q. HOW HAVE YOU BECOME FAMILIAR WITH THEM?

A. In the course of my work with PGW during the past eight years, I have read and worked with their bond documents on many occasions.

Q. **EXPLAIN THESE COVENANTS AS YOU UNDERSTAND THEM.**

A. The major elements of the rate covenants require PGW to set rates and charges at a level that generates revenue that is sufficient to:

1) pay the costs of operating and maintaining PGW (the "rate covenant");

2) pay the interest and principal, when due, of outstanding PGW revenue bonds;

3) after operating expenses have been met, provide at least 1.5x coverage of the debt service on outstanding PGW revenue bonds (its "coverage" covenant); and

4) pay principal and interest on subordinated bonds, including interest on the commercial paper (Nos. 2 and 4 are its debt service covenants).

Q. **EXPLAIN WHAT PGW MUST DO TO AVOID A DEFAULT.**

A. To avoid a technical default of its "rate covenant," it needs to have collected sufficient revenue in that year to cover all of its operating expenses including all of its debt service obligations, but not including its payment obligation to the City. In addition, PGW must satisfy its covenants associated with its "debt service" and "coverage." A monetary default would occur if PGW failed to pay timely principal and/or interest on its revenue bonds. A technical default would occur if PGW paid principal and interest timely, but did not produce sufficient revenue from rates to cover all of its net operating expenses (which does not include its City payment) and provide the mandated 1.5x debt service coverage from revenues available after the payment of operating and maintenance expenses.

Q. **HAVE YOU REVIEWED MR. KNUDSEN'S TESTIMONY?**

A. Yes.

Q. **BASED UPON MR. KNUDSEN'S FINANCIAL PRESENTATION AND ASSUMING IT TO BE ACCURATE, WHAT WOULD BE THE EFFECT ON PGW'S ABILITY TO MEET ITS BOND COVENANTS IF PGW DOES NOT RECEIVE ADDITIONAL RATE RELIEF?**

A. Without rate relief, PGW would be in technical default of its "rate" covenant at the end of August, 2001 because it would end the year with a negative income level of over $100 million, over and above its commercial paper borrowing. (PGW St. 1.0, App. B). Even if PGW obtained a GCR increase but no base rate relief, it would, at the end of the year, still be over almost $17 million short of covering its expenses in 2000-01, even with its ability to borrow from its commercial paper line of credit.

Q. **WITHOUT RATE RELIEF WILL PGW BE ABLE TO MEET ITS COVERAGE COVENANTS?**

A. Mr. Knudsen's financial presentation indicates that PGW will barely make its coverage covenant at the end of fiscal year 1999-2000. Without any rate relief PGW clearly would not be able to meet its coverage covenants at the end of August 2001. It would also fail its coverage test (for its 1998 revenue bonds) even if it obtained an immediate GCR increase. Even with interim rate relief, PGW's ability to make coverages will not be without risk. This is because Mr. Knudsen's presentation makes several crucial assumptions. Most importantly, he assumes that weather will be normal (i.e., 4,600 degree days[1]). Any deviation from that — whether warmer or colder — will result in, at a minimum, cash flow difficulties and, if warmer, a huge loss of income as well.

Q. **WHAT WOULD BE THE EFFECT IF PGW RECEIVED RATE RELIEF IN**

---

[1] PGW's proposed budget forecasts a marginal reduction in revenues of $4 million to reflect a warmer heating season.

LATE 2001 RATHER THAN IN NOVEMBER 2000?

A. If PGW obtained permanent rate relief in the late 3rd or 4th Quarter 2001, a technical default would have occurred or have been projected. This would result in the bond rating degradation and other negative consequences I have described. In any event, it would likely delay PGW's ability to sell the long-term debt it is counting on in June, 2001, with very negative consequences on its cash flow.

Q. WHAT WOULD BE THE OVERALL CONSEQUENCES TO PGW AND ITS CUSTOMERS IF PGW FOUND ITSELF IN TECHNICAL DEFAULT OF ITS COVENANTS?

A. As noted above, PGW's bonds would be down-graded to junk bond status. Access to the capital markets would be eliminated. Even upon an ultimate return to investment-grade status, interest rate premiums would be significant and would add to the cost to carry PGW's debt for years to come. Most immediately, there would, in my opinion, be a staggering cash crisis that would threaten the ongoing operation of PGW as a result of an inability to retain the cash life line of the commercial paper program.

Q. ARE YOU FAMILIAR WITH THE INVESTMENT COMMUNITY AND THE RATING AGENCIES THAT FOLLOW ISSUERS LIKE PGW?

A. Yes. Working with the investment community and the rating agencies is an essential element of my job as a financial advisor. I work with these institutions on virtually a daily basis.

Q. IN YOUR OPINION, HOW WOULD INVESTORS AND THE RATING AGENCIES RESPOND IF PGW WERE UNABLE TO SECURE SUFFICIENT RATE RELIEF IN A TIMELY FASHION?

A. In the secondary market, investors will either experience a loss in the value of the PGW

bonds they already own (whether or not that loss is immediately realized) and potential investors will only buy PGW bonds if their yield is sufficiently high to overcome the risk of non-payment and lack of liquidity (i.e., the ability to resell the bonds to someone else in the future). As I have noted above, I believe that PGW will not itself pay an immediate interest rate penalty since I have concluded PGW will not be in a position to issue new bonds after the decline to junk bond status that I believe will follow a failure to secure sufficient and timely rate relief. Standard & Poor's Corporation, for example, has recently placed PGW's credit on their Credit Watch with Negative implications. Their report on PGW, dated July 21, 2000, explicitly states that "rate relief is needed by this fall" and "to preserve its ratings, PGW will need to obtain rate relief . . . ." A copy of that report is attached hereto (Appendix A). Both Moody's and Fitch IBCA are closely monitoring the rate increase situation and there is no doubt that each would reduce PGW's rating absent the requested rate relief.

Q. WOULD THERE BE AN EFFECT ON THE BOND RATING OR INVESTMENT VIEW REGARDING OTHER TAX-EXEMPT INVESTMENTS IN THE COMMONWEALTH AS THE RESULT OF A TECHNICAL DEFAULT BY PGW?

A. The secondary impact of a PGW technical default would be felt first by the City of Philadelphia. The City has spent the past nine years re-establishing its financial condition. A technical default by one of its related entities would not reflect well upon the City. For example, the City believes that it is a candidate for a rating increase from BBB to BBB+ at Standard & Poor's. This rating increase would result in a reduced cost of capital to the City. A technical default of PGW might well imperil that increase. From

the point of view of the Commonwealth, I do not believe there would be a direct or immediate cost, but I do believe, just as the technical default of the Pennsylvania Housing Finance Authority in the mid-1970's raised questions for the Commonwealth, the failure of the PUC to act to grant necessary rate relief might well raise questions for other state financing entities.

Q. HOW WOULD THE INVESTMENT COMMUNITY/RATING AGENCIES RESPOND IF PGW HAD TO GET A SHORT-TERM LOAN FROM THE CITY TO AVOID A TECHNICAL DEFAULT?

A. A loan from the City to PGW would certainly help PGW's cash flow situation but a loan (as opposed to an outright, unconditional grant) would not be "Project Revenues" under the terms of the rate covenant and, therefore, could not be counted toward meeting the rating covenant requirements. A loan from the City would not help PGW avoid a technical default.

Q. DESCRIBE YOUR UNDERSTANDING OF PGW'S FINANCIAL OBLIGATIONS TO THE CITY.

A. I understand that PGW has a contractual obligation to make an annual payment of $18 million to the City and that that payment is permitted (but not required) under PGW's bond ordinance.

Q. IF PGW WERE ABLE TO AVOID ITS OBLIGATION TO MAKE THE PAYMENT TO THE CITY, HOW WOULD THIS AFFECT ITS ABILITY TO MAINTAIN ITS BOND COVENANTS?

A. I do not believe that a failure to pay the City would result in a violation of PGW's rate covenant because it is a contractual obligation rather than part of the rate covenant. By the same token, however, relief from making the City payment does not translate directly

into the availability of additional revenues for the purpose of calculating compliance with the rate covenant. PGW would have to pay the $18 million to the City and have the City grant it back to PGW as "Project Revenues" for the $18 million to accrue to PGW's benefit.

Q. WHAT WOULD THE IMPACT ON PGW BE IF IT WERE ABLE TO MEET ITS BOND COVENANTS DURING FISCAL YEAR 2000-2001 AS A RESULT OF SOME COMBINATION OF THE CITY'S FORGIVENESS OF THE $18 MILLION ANNUAL PAYMENT AND A CITY LOAN IN THE AMOUNT OF APPROXIMATELY $20 MILLION?

A. In my opinion, PGW's ability to satisfy technically its bond covenants (e.g., the payment of operating and maintenance expenses and the satisfaction of the debt service coverage test) as a result of one time payments from the City necessitated by the unwillingness or inability for some reason of the Public Utility Commission to grant rate relief would result in virtually the same set of outcomes described above. Specifically, PGW would be viewed very negatively by the rating agencies. One of their greatest concerns in rating utility bonds is the potential responsiveness of a regulatory body to provide rate relief to enable bond covenants to be satisfied. The failure of the Public Utility Commission to grant such requested relief would be a substantial negative in their assessment of PGW's creditworthiness.

Q. ARE THERE OTHER CONSEQUENCES IF PGW DOES NOT MEET ITS FINANCIAL OBLIGATION TO THE CITY?

A. The financial consequences of PGW's failure to pay the City would, in the first instance, be felt by the City. In its Ninth Five-Year Plan (Fiscal Years 2001-2005), the City has anticipated a total of $90 million of revenues from PGW. The loss of some or all of this

revenue would be a significant financial hardship for the City. PGW would also suffer certain negative consequences of a failure to make the required payments. While this would not precipitate a technical bond default, it would eliminate the comfort that the rating agencies, bond holders and credit enhancers have always felt in knowing that the need to make the City payment (after debt service had been fully paid) was a "cushion" against a monetary default. Failure to make the payment even once would signal the City's willingness to forgive the payment and hence remove the assurance of the cushion that had been provided.

Q. IN YOUR OPINION, FROM THE STANDPOINT OF PGW'S STATUS WITH MUNICIPAL BOND INVESTORS, THE CAPITAL MARKETS GENERALLY AND THE RATING AGENCIES SPECIFICALLY, WHAT WOULD BE THE BEST COURSE TO FOLLOW?

A. Without a doubt or hesitation, the best course for PGW is to obtain both the full amount of interim rate relief and the increase to the GCR that are the subject of the pending petition. This rate relief will permit stabilized operations to be sustained while a long-term rate strategy and permanent rate structure for PGW is developed and approved.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes it does.

APPENDIX A

Ratings Services
55 Water Street 38th Floor
New York, NY 10041-0003
Tel 212 438-2064
Reference No.:

Curtis Moulton
Managing Director
Infrastructure Finance Ratings

Standard & Poor's
A Division of The McGraw-Hill Companies

July 20, 2000

Mr. Kumar Kishinchand, P.E.
President & Chief Executive Officer
Philadelphia Gas Works
800 W. Montgomery Avenue
Philadelphia, PA 19122

Re: ***$355,825,000 Philadelphia Gas Works, Revenue Bonds***
$103,550,000 Philadelphia Gas Works, Revenue Bonds, 1998 General Ordinance, Series B (SPUR)
$160,660,000 Philadelphia Gas Works, Revenue Bonds, 1998 General Ordinance, Series A (SPUR)
$112,245,000 Philadelphia Gas Works, Revenue Bonds, Second Series (SPUR)
$61,960,000 Philadelphia Gas Works, Revenue Bonds, Sixteenth Series (SPUR)

Dear Mr. Kishinchand:

As part of Standard & Poor's ongoing secondary market surveillance, we have reviewed the latest financial report and other relevant data on the above debt. After such review, we have placed the rating of 'BBB' on CreditWatch with negative implications due to PGW's very weak cash flows arising from a convergence of budgeting that did not reflect the trend toward warmer winters; historic ongoing problems with high revenue receivables; and the faulty implementation of a new billing system.

Please continue to send updated information including annual audit reports and budgets, and if applicable, updated operating and construction progress data, addressed to:

Standard & Poor's Ratings Services
Public Finance Secondary Market Surveillance
55 Water Street, Muni Drop Box No. 1, 38-2-2
New York, NY 10041-0003

If you have any questions please feel free to contact Jodi Hecht at (212) 438-2019.

Thank you for continuing your relationship with Standard & Poor's Ratings Services.

Very truly yours,

Curtis Moulton

cc. Barbara C. Bisgaier, Public Financial Management

STANDARD &POOR'S

Credit Profile

Outstanding Ratings
$794.2 mil rev bnds, varies series — BBB
$20.0 mil rev bnds, subordinate, 1998 gen ordinance, series C — BBB-

Revised, CreditWatch Negative

Analysts:
Jodi Hecht, New York (212) 438-2019
Elizabeth Fitzgerald Smith, Chicago (312) 669-2132

PHILADELPHIA GAS WORKS, PENNSYLVANIA

Rationale

The rating action reflects PGW's very weak cash flows arising from a convergence of budgeting that did not reflect the trend toward warmer winters; historic ongoing problems with high revenue receivables; and the faulty implementation of a new billing system. Rate relief is needed by this fall. The rate filings that PGW has filed before the state Public Utilities Commission are projected to generate an additional $52 million and increase base rates and monthly charges by 10%. The proposed tariff will increase rates to above-average in a service area with below-average income levels.

Rate applications to the PUC are typically resolved over a nine-month period, but it is not clear that PGW's application, which was filed in July 2000, will be approved before the 2000 winter heating season that is a critical component of the utility's cash flow.

Other credit weaknesses include the following:

--Potentially above-average gas rates if PGW's five year plan is not fully implemented, especially in a market that will be open to retail choice beginning in fiscal 2004;

--Aggressive future projections which assume normal weather conditions that have not been realized in recent years and productivity cost savings, ranging from 5% to 10% of expenditures;

--Deferred capital spending limited by declining excess cash flow; and

--Uncertainty regarding the long term management structure and operating strategy.

These are offset by sound legal provisions, which require, on an accrual basis, 1.50 times (x) coverage on the senior bonds, in spite of the lowered revenue requirement from the creation of a subordinate lien.

The bonds are secured by the net revenues of the gas system. Under provisions of the Natural Gas Choice and Competition Act, which was signed into law in June 1999 by Gov. Tom Ridge, after July 1, 2000 the rate relief and customer service functions for PGW were to be regulated by the PUC. Previously, these powers belonged to the Philadelphia Gas Commission (PGC). The PGC maintains the authority to approve operating and capital budgets, while the city of Philadelphia remains the owner of the system.

PGW filed a rate increase in July 2000, which they would like to take effect before the 2000 winter heating season. However, the PUC's approval process takes nine months to complete. PGW requested that the PUC allow this rate filing to be reviewed by PGW, which has a shorter process, and would enable the new rates to be effective by October 2000. Without the rate increase in place, the ending cash position for fiscal 2001 is projected to be negative $16.9 million (approximately 4% of operating expenditures).

The 1998 indenture created senior and subordinate liens. The senior lien rate

PHILADELPHIA GAS WORKS, PENNSYLVANIA

covenant remains at 1.50 times (x) annual debt service, while the subordinate lien and refunded 1975 bond rate covenant require only 1x coverage of annual debt service. While 1.5x coverage is sound for a triple-B-rated gas system, debt service coverage of all obligations after the $18 million annual transfer to the city was less than 1 times (x) in fiscals 1998 and 1999. The payment is made throughout the year. However, the city had been willing to defer the payment until year end, providing some latitude to address unanticipated year-end financial needs.

Minimal coverage has been a historic problem. PGW implemented non-recurring actions in fiscals 1995, 1998, and 1999 to meet its rate covenant. Steps were not needed in fiscal 2000, because the calculation of the rate covenant was liberalized under the provisions of the 1998 indenture. Another warmer-than-budgeted winter in 2000 led to reduced gas sales, and revenues were 15% lower than budget. Debt service coverage in fiscal 1999 of all revenue bonds was 1.11 times (x), with estimated fiscal 2000 results generating 1.31x DSC. However, when coverage of all fixed payments—including lease payments—is calculated, fiscal 1999 DSC was a minimal 1.01x, and fiscal 2000 DSC is 1.20x. Financial projections, while somewhat aggressive, assume a normal number of degree days, which has not occurred in the past three years; approval of the rate increase; discontinuation of the senior citizen discount program; and productivity and cost savings that are expected to be implemented under a new labor contract beginning in late fiscal 2001.

Over the past three years, including estimates for fiscal 2000, operating expenses have exceeded operating revenues, reducing reserves and cash balances. In fiscal 2000, no excess revenues were generated to contribute to ongoing and long-term capital needs. The revised five-year fiscal 2002-2006 capital program totals $266.4 million—a $91 million decline from the previous program. While current management believes this program is better targeted to address immediate needs, it is unclear that the ongoing investment has been adequately made in the system. Funding for this program includes a $75 million bond issue next fiscal year (28% of the program) with the balance (72%) funded from internally generated funds. Funding for the capital program is largely dependent on PGW's ability to implement the five-year operating plan, as projected.

Outlook

To preserve its ratings, PGW will need to obtain rate relief and implement the projected productivity savings ranging between 5% to 10% annually. Cost reductions are critical to PGW's ability to fund future capital needs and maintain competitive commodity charges to retain customers following the introduction of customer choice in fiscal 2004.

EXHIBIT BB-2

DOCKET NO. R-00006042

(cc) a statement that, in the opinion of the Engineer, the Gas Works are in good operating condition or that adequate steps are being taken to make them so.

(b) It will, at a minimum, impose, charge and collect in each Fiscal Year such gas rates and charges as shall, together with all other Gas Works Revenues to be received in such Fiscal Year, equal not less than the greater of:

A. The sum of:

(i) all Net Operating Expenses payable during such Fiscal Year;

(ii) all principal of and interest on bonds issued and outstanding under the 1975 Ordinance payable during such Fiscal Year and amounts required to be paid into the sinking fund reserve under the 1975 Ordinance during such Fiscal Year;

(iii) 150% of the amount required to pay Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Senior Bonds and 100% of the amounts payable in respect of the Prior Obligations during such Fiscal Year;

(iv) the amount required to pay Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Subordinate Bonds and other obligations of the Gas Works on a parity with Subordinate Bonds payable during such Fiscal Year;

(v) the amount, if any, required to be paid into th Sinking Fund Reserve during such Fiscal Year;

(vi) the Rebate Amount required to be paid to

United States during such Fiscal Year; and

(vii) the amounts required to be paid to the issuers of Credit Facilities and the providers of Qualified Swaps and Exchange Agreements during such Fiscal Year; or

B. The sum of:

(i) all Net Operating Expenses payable during such Fiscal Year;

(ii) all principal of and interest on bonds issued and outstanding under the 1975 Ordinance payable during such Fiscal Year and amounts required to be paid into the sinking fund reserve under the 1975 Ordinance during such Fiscal Year;

(iii) all Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Bonds and all amounts payable in respect of obligations of the Gas Works which are on a parity with any of the Bonds and in respect of general obligation bonds issued for improvements to the Gas Works and all amounts, if any, required during such Fiscal Year to be paid into the Sinking Fund Reserve;

(iv) the Rebate Amount required to be paid to the United States during such Fiscal Year; and

(v) the amounts required to be paid to the issuers of Credit Facilities and the providers of Qualified Swaps and Exchange Agreements during such Fiscal Year.

For purposes of estimating Sinking Fund deposits with respect to Interim Debt and Variable Rate Bonds, the City shall be entitled to assume that (1) Interim Debt will be amortized

over a period of up to the maximum term f
but not in excess of the useful life of the assets
on an approximately level debt service basis and bear inter
the average interest rate on bonds of a similar maturity and credit rating (without any credit enhancement) as the Bonds Outstanding under this Ordinance and (2) Variable Rate Bonds will bear interest at a rate equal to the average interest rate on such Variable Rate Bonds during the period of twenty-four (24) consecutive calendar months immediately preceding the date of calculation or during such shorter period that such Variable Rate Bonds have been Outstanding.

The Gas Commission is hereby authorized and directed, without further authorization, to impose and charge and to collect, or cause to be collected, rents, rates and charges which shall be sufficient in each Fiscal Year to comply with the foregoing Rate Covenant.

Notwithstanding the requirements of this Section 4.03(b) and the pledge under Section 4.02, the City may, at such time as there are no bonds outstanding under the 1975 Ordinance, pursuant to a Supplemental Ordinance, securitize and sell that portion of the Gas Works rents, rates and charges which relate to assets which are designated as non-performing by the Gas Commission and as to which the Gas Commission has designated specific rents, rates or charges; provided that prior to any such securitization and sale the City delivers to the Fiscal Agent (1) an Engineer's report including a statement that, for the three year period following such securitization and sale, the Gas Works rents, rates and charges (excluding those securitized and sold) are currently and will be sufficient to comply with the Rate Covenant set forth in Section 4.03(b) applied as if the percentage in subsection A(iii) were 175% rather than 150% and (2) an opinion of Bond Counsel that such securitization and sale will not adversely affect the exclusion

PGW St. 2.1

5/22/01

Phila, PD

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF

BARBARA BISGAIER

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-00006042

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

MAY, 2001

Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.

A. Barbara C. Bisgaier, Managing Director, Public Financial Management, Inc., 2 Logan Square, Suite 1600, Philadelphia, Pennsylvania 19103-2770, (215) 567-6100. I am a Financial Advisor to state and local governments and authorities.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to provide my opinion of the effect on the company's financial status if the PUC were to accept the recommendations of OCA witness Lelash that PGW should receive just a $21.5 million rate increase.

Q. PLEASE PROVIDE AN UPDATE OF PGW'S EFFORTS TO ACCESS THE CAPITAL MARKETS TO ISSUE ADDITIONAL LONG TERM DEBT AND TO MAINTAIN ITS COMMERCIAL PAPER PROGRAM.

A. Both the bond issuance and the maintenance of the commercial paper program are under active negotiation at this time. It is anticipated that both instruments will be finalized in the next few days. Once that process is completed, I will update the parties and the Commission on the results.

Q. WHAT, IN YOUR OPINION, WOULD BE THE EFFECT UPON PGW'S FINANCIAL CONDITION IF OCA WITNESS LELASH'S, $21.5 MILLION RECOMMENDATION WERE TO BE ADOPTED AS THE PERMANENT RATE INCREASE FOR PGW?

A. In my opinion it would be a disaster. First, as indicated above, by the time the PUC rules on PGW's base rate increase request PGW (it is our hope) will have issued its Third Series Revenue Bonds and will have renewed its commercial paper letter of credit. Both of these successful actions will have been based, in large part on the independent Engineering Report prepared by Black and Veatch. That report reviewed PGW's financial data and projections and concluded that the company needed a levelized annual increase of at least $53 million for PGW to have sufficient revenues to satisfy its bond convents and to meet other crucial

financial goals. It is upon these explicit findings that PGW will have been able to issue its revenue bond. Similarly, I know that the banks who are currently supplying the lines of credit that make the commercial paper program possible also are relying on this independent assessment. This report, I understand, is being submitted to the PUC in testimony.

If the PUC diverges materially from this assumed level without any change in the assumed level of expenses, revenues, capital expenditures or cash needs projected by PGW, I do not know why these investors will conclude that PGW is able to meet its obligations and continue to operate as a going concern. In my opinion, a material difference in the authorized rate increase from that independently determined to be needed by B&V likely will result in the downgrading of PGW's bonds.

Moreover, if PGW can renew its Letter of Credit in the next few weeks, there is no assurance that the banks that are guaranteeing PGW's commercial paper will not pull out next year when the full impact of inadequate rate relief is evident. As I have explained previously, PGW cannot function without its commercial paper program. Indeed, in this instance, the reaction will likely be even more negative since the PUC will have received these assumptions in filings with the PUC prior to this year's Letter of Credit (LOC) being issued and the PUC will have ignored PGW's pleadings on behalf of the credit. As of this writing (May 8, 2001), PGW does not have guarantees for renewal of its LOC; such renewal being mandated in less than 30 days.

Q. HOW WOULD THE INVESTMENT COMMUNITY REACT IF THE PUC ESTABLISHED A REVENUE REQUIREMENT THAT ASSUMED THAT THE CITY WOULD HAVE TOFOREGO IT S $18 MILLION PAYMENT IN ORDER TO

PERMIT PGW TO MEET ITS EXPENSE AND CASH WORKING CAPITAL NEEDS.

A. In my opinion, PGW's ability to technically satisfy its bond covenants (e.g., the payment of cash obligations when they come due and the satisfaction of the debt service coverage test) as a result of one time payments from the City necessitated by the Public Utility Commission's grant of inadequate rate relief would result in virtually the same set of outcomes described above. Specifically, PGW would be viewed very negatively by the rating agencies. One of their greatest concerns in rating utility bonds is the potential responsiveness of a regulatory body to provide rate relief to enable bond covenants to be satisfied. The failure of the Public Utility Commission to grant such requested relief would be a substantial negative in their assessment of PGW's creditworthiness. I know from first hand discussions that such failure to face up to the requirements of the law will also have an extremely negative effect upon the interest of the commercial paper banks to continue to participate in this program.

Q. DOES THAT COMPLETE YOUR TESTIMONY?

A. Yes, it does.

PGW St. 3.0
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Phila, PA
015

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

JOSEPH R. BOGDONAVAGE

ON BEHALF OF
PHILADELPHIA GAS WORKS

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

DOCKET NO. R-00006042

JANUARY, 2001

Q. PLEASE STATE YOUR NAME AND POSITION WITH THE COMPANY.

A. My name is Joseph R. Bogdonavage. My position is Senior Vice President, Finance.

Q. HOW LONG HAVE YOU HELD THIS POSITION?

A. I was promoted to this position in December 2000.

Q. PLEASE SUMMARIZE YOUR WORK EXPERIENCE.

A. I have been employed with PGW since 1973, during which time I have held various positions in the Finance area. I most recently held the position of Director – Budget & Financial Forecasting. My principal responsibilities included the preparation of the financial areas for the operating and capital budgets, review of operating budgets prepared by the individual departments, and the coordination, analysis, issuance and overall control of the complete annual Operating Budget filing.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.

A. I received a Bachelor's Degree in Accounting from Temple University in 1972.

Q. HAVE YOU EVER TESTIFIED BEFORE ANY REGULATORY AGENCIES?

A. Yes, I have testified before the Philadelphia Gas Commission ("PGC") on numerous occasions. I have most recently presented written direct testimony and testified before the Philadelphia Gas Commission on matters associated with PGW's 2000-01 Operating Budget proceedings in 2000.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE PROCEEDINGS?

A. The purpose of my testimony is to: 1) provide the documentation and supporting methodology for the schedules and exhibits that are included in the filing, provide

detailed information regarding certain income and expense items and, where necessary, explain the reasons for variations between the fiscal periods; 2) describe the changes that have been incorporated into the revised filing including the proposed $65.0 million base rate increase that is the subject of the base rate increase request; 3) comment upon PGW's current financial condition for Fiscal Year 2000-01, in light of known actual information and changes to PGW's Gas Cost Rate and the Interim Base Rate order; 4) comment on PGW's Five Year Forecast that is also included in this filing which shows the impact that the proposed $65.0 million base rate increase has on PGW's longer term financial condition.

Q. MR. BOGDONAVAGE, ARE YOU SPONSORING THE FINANCIAL DATA SUPPORTING PGW'S CLAIM FOR A $65 MILLION BASE RATE INCREASE?

A. Yes. Those schedules are displayed in Part 2 of Volume II of the Company's filing and reflect PGW's "fully forecasted" fiscal year 2000-01 projection. Just as PGW's filing in the interim rate proceeding, this presentation utilizes as a starting point PGW's proposed 2000-01 fiscal year budget that was initially prepared and submitted in the summer of 2000. My testimony previously filed on June 19, 2000 before the Philadelphia Gas Commission provides a detailed explanation of the pertinent line items in PGW's Income Statement, Cash Flow Statement and Debt Service Coverage Statement. The testimony filed on January 5, 2001 discusses the changes that have been incorporated in the revised financial schedules.

Q. MR. BOGDONAVAGE COULD YOU PLEASE EXPLAIN THE MAJOR CHANGES THAT ARE REFLECTED IN THE MOST RECENT UPDATE OF

PGW'S FULLY FORECASTED FISCAL YEAR 2000-01 OPERATING BUDGET?

A. The most significant factor that affected the financial projections was the unprecedented rise in natural gas prices and their impact on PGW's Gas Cost Rate, Revenues, Accounts Receivable, Bad debt expense and working capital requirements for natural gas storage inventories. PGW's natural gas utilized expense increased by $100.0 million to $394.6 million from the $294.6 million included in the original June 19, 2000 filing. This added cost had a dire impact on PGW's accounts receivable and bad debt projections. The original estimate of accounts receivable of $138.0 million with a bad debt expense of $46.0 million is now anticipated to be $186.6 million and $65.3 million, respectively. The additional bad debt expense is one of the main components contributing to the rise in the proposed base rate increase from $52.0 million to $65.0 million. In addition, PGW has now reduced its degree day forecast for normal weather to 4,555 a 1% decline from the previously utilized level of 4,600. This change was the result of using a 30 year historical average for degree days. The use of the lower level of degree days resulted in approximately $1.6 million less in marginal "normalized" revenues and was the impetus for removing PGW's original $4.0 million weather adjustment from the current filing. Also, PGW does not anticipate being able to make the necessary changes in the current Senior Citizen Discount program to effectuate a revenue source that will impact the 2000-01 Fiscal Year. PGW has also included additional expenses in the revised 2000-01 Fiscal Year Operating Budget reflecting more recent cost estimates on projected savings and expenditures. PGW increased its Health Insurance costs by $1.0 million due to a

more realistic estimate of the premium savings that can be achieved by changes to active and retired plan participants during the current period. Additional expenditures are expected as a result of amortizing non-recurring costs related to billing system improvements during the recently completed 1999-00 fiscal period totaling $.6 million. Legal costs are expected to rise by $.5 million associated with the protracted proceedings before at the Public Utility Commission and the courts regarding PGW's gas cost rate filings and interim and permanent base rate cases. Expenditures associated with on-going environmental remediation at PGW facilities resulted in the inclusion of $.5 million in PGW's revised Operating Budget Filing.

The revised filing includes the utilization of actual information for the 1999-00 Fiscal period; although no final audited statements are available as of this date, PGW does not anticipate any material change to the actual information presented in the supporting documents. PGW in the recently completed fiscal year met its bond indenture requirements and achieved 1.72x coverage on its 1975 Ordinance debt service and 1.59x coverage on its 1998 Ordinance debt service. On a more significant note, PGW's outstanding commercial paper balance was at a level of $97.0 million, with a cash balance of only $8.4 million at August 31, 2000. This leaves PGW with little flexibility in attempting to fund working capital requirements, as they become necessary.

The above mentioned items are the significant changes that have been reflected in the January 5, 2001 filing.

Q. MR. BOGDONAVAGE WERE THE PA. PUBLIC UTILITY COMMISSION TO GRANT PGW THE $65.0 MILLION BASE RATE INCREASE WOULD THERE BE ENOUGH OF A SUBSTANTIVE IMPROVEMENT IN THE FUNDAMENTAL FINANCIAL OUTLOOK TO ALLOW PGW ACCESS TO FINANCIAL MARKETS?

A. If the rate increase was in effect for the full period of the 2000-01 fiscal period, and PGW was permitted to adjust its Gas Cost Rate on a timely basis, I would expect that PGW would have access to the financial marketplace at reasonable rates to sell long term bonds and renew its short term commercial paper program. Ms. Barbara Bisgaier, PGW's financial advisor has presented additional testimony regarding PGW's current and projected financial condition including possible rating downgrades and the inability to access financial markets if PGW is not granted timely and adequate rate relief. However, PGW is currently facing a severe cash flow problem as a result of delayed implementation of changes to its Gas Cost Rate charge, the inadequate rate relief granted in the interim proceeding and higher unrecovered bad debt expenses and cash needs owing to higher gas costs. PGW has used its limited sources of funding to pay for the escalating cost of natural gas over the last several months, whether to procure natural gas storage inventories or for flowing gas requirements. As a result of this situation, PGW finds itself in a tenuous position of having to borrow $45.0 million from the City of Philadelphia to alleviate the cash shortfall. PGW needs to enter the financial market in late spring of 2001 to sell a long term revenue bond to fund its on-going capital programs and, at the same time, get a renewal of its short term Commercial Paper program. To assure access to these financial markets PGW must demonstrate sufficient revenues

and cash receipts to the financial community. The proposed $65.0 million base rate increase along with the ability to change the gas cost rate on a timely basis should be sufficient to allow PGW access to the funding sources it so desperately needs. With sufficient revenues as a result of the rate increase on an annualized basis, PGW will be able to start to change the fundamental financial outlook by reducing its reliance on the short term commercial paper program as a permanent part of its recent financial structure. This will allow PGW to utilize its short term debt to truly fund working capital requirements, as they become necessary due to the seasonal nature of its revenues and customer receipts.

Q. HAVE YOU ALSO SUBMITTED FIRST QUARTER UPDATED ACTUAL AND ACTUAL PROJECTED SCENARIOS FOR THE 2000-01 FISCAL YEAR?

A. Yes. They are included as Part One of Volume II. PGW has provided supporting documentation that includes two different scenarios involving the 2000-01 Fiscal Year. Each of these cases involves the use of the latest information for gas sales and natural gas prices and deteriorating customer payment patterns as a result of the escalating bills reflecting the higher cost of gas and the colder weather.

The first scenario incorporates no base rate increase during the 2000-01 fiscal period, but assumes higher sales as a result of the colder weather experienced through the period. This results in added marginal revenues of $4.0 million. However, with no substantive rate relief, PGW most likely will have no ability to enter the long term credit market and will thus be unable to fully fund its capital construction program. It also will most likely be unable to renew its short term commercial paper program. More importantly due to insufficient cash flow, the

repayment of the outstanding $97.0 million will not be made, and it will result in PGW having to draw upon the letter of credit which will convert to a taxable loan and have an expedited repayment term. Under the scenario (which is where PGW is at presently), PGW has no way of repaying this obligation in full at the time it is due. Even if there were some way of repaying this obligation without the renewal of this program, PGW would be unable to meet its other obligations including natural gas and debt service payments. The $45.0 million City loan would be fully drawn and PGW would end the year with a large, $35.5 million, negative cash balance and fail to meet its statutory bond indenture requirements. As a way of trying to alleviate the cash flow problem PGW would have to severely curtail its capital construction programs. PGW will have no way of funding its continuing working capital needs to purchase natural gas storage inventories and would cease being an on-going enterprise.

The second case assumes that the $11.0 million interim base rate increase is in effect. It is highly unlikely that this level of rate relief would be enough to allow PGW to enter the financial credit markets both short and long term. As a result PGW again would be unable to repay the outstanding level of $97.0 million of commercial paper. PGW again has no way of repaying this obligation in full at the time it is due. PGW would again be unable to meet its other obligations. Although on paper it would barely achieve the mandatory bond indenture requirements, it would end the year again with a $25.8 million negative cash balance and the $45.0 million City loan would be fully drawn. PGW would again try to conserve cash by curtailing its capital construction programs or by not being able to make

necessary gas purchases. PGW as in the previous scenario would for all purposes cease to be a viable on-going enterprise.

Q. HAVE YOU PREPARED A FIVE YEAR FORECAST OF PGW'S FINANCIAL RESULTS?

A. Yes. This is a filing requirement of the PGC and we are presenting it to the PUC as well. This analysis is Part 3 of Volume II.

Q. REGARDING THE FIVE YEAR FORECAST PRESENTED IN THE FILING COULD YOU EXPLAIN SOME OF THE MAJOR ASSUMPTIONS THAT WERE THE BASIS FOR THE FINANCIAL PROJECTIONS.

A. The *major* assumptions for the five year forecast are as follows: A $65.0 million permanent rate increase was assumed effective during the 2000-01 Fiscal period continuing in place until the 2003-04 Fiscal Year when a $20.0 million reduction is proposed and remains at that level for the remainder of the period. Due to the current situation where no interim rate increase is in place an update of the five year forecast is contemplated that addresses the final outcome of rates in the current period and the impact on the financial projections contained in the five year forecast.

Natural gas prices were assumed to remain at the levels included in the 2000-01 fully forecasted test year ($153 million higher than original budget) and not the higher prices that are currently being experienced. These prices are assumed to increase in FY 2003 and then decline substantially during the remaining period of the forecast.

Current margins on customers were assumed to be maintained during the period of deregulation. There is anticipated to be a substantial shift from firm and interruptible load to transportation service after deregulation has occurred.

Marginal revenue loss is projected starting in FY 2001-02 and continuing throughout the forecast due to reduced customer utilization resulting in more energy efficient appliances.

Bad debt expense is expected to stabilize as customer billings decline over time reflecting the lower natural gas prices anticipated combined with improved collection efforts.

Cost savings are projected to rise from the $13.0 million included in FY 2001, to $18.0 million in FY 2002, and rise to $24.0 million annually throughout the remaining forecast period.

Personnel levels are forecasted to continue to decline from an average level of 1,822 in FY 2001 to 1,650 in FY 2006, while wage increases of 2% annually were included in the labor expenses effective in FY 2001-02.

A bond sale of $75.0 million was assumed in FY 2001 with no plans for a future sale during the forecast period. However, as a result of the delay in the permanent base rate increase in FY 2001, either an increase in the level of the planned bond sale or at least one additional bond sale may be required to satisfy capital construction requirements during the forecast period.

A declining level of outstanding commercial paper is anticipated during the forecast period allowing PGW to utilize short term paper for working capital requirements and not as a permanent part of the financial structure at PGW.

Cash balances were projected to range between $11.0 million to $17.0 million during the five year period.

The forecast period due to the fully forecasted nature of the filing did not include the $45.0 million City loan as part of the financial projections. As was previously mentioned when an update is prepared the latest available information will be utilized when revising the five year forecast.

Q. COULD YOU EXPLAIN THE BASIS FOR CALCULATING PGW'S BAD DEBT AND UNCOLLECTIBLE RESERVE REQUIREMENT FOR FISCAL YEAR 2000-01?

A. PGW's calculates its reserve for bad debt requirements based on an automated collectiblity study that is usually performed several times during the year and at fiscal year end. The study identifies each customer account with an amount due, calculates payments on the account during the period, and compares the amount paid with the amount due. The lower amount is considered the likely collectible amount. The collectible amounts are totaled and subtracted from the total receivable balance. The difference is the expected uncollectible balance. This uncollectible balance is compared to the reserve balance in the general ledger and adjustments are made as appropriate.

PGW has many customers who do not pay their amounts owed. An inordinate amount of low income customers, less than efficient collection activities, and a mandated collection moratorium have historically caused bad debt problems. Problems with the new billing system have worsened these problems.

PGW's FYE 2000 bad debt reserve of $102 million is $35 million (52%) higher than in FYE 1999 and over $32 million (38%) higher than the historical 10 year average of $70 million. Bad debt expense in FY 2000 was $54 million, a $15

million (38%) increase over FY 1999 and a $17 million (46%) increase over the historical 10 year average of $37 million.

This dramatic run up in bad debt expense is expected to repeat again in FY 2001 and later years. Steep increases in gas costs will result in higher bills to customers who, in many households, already struggle to pay their gas bills. With unprecedented billings, PGW expects unprecedented bad debt and reserve requirements. Recent years statistics or historical averages may not be good indicators for the actual bad debt expense in FY 2001 and later years.

The collectibility study attached as part of Volume II, Part One, Schedule 8 was used to calculate PGW's FY 2000 bad debt reserve requirement. The "Grand Total" of $203 million in the report agrees with the total accounts receivable balance in the Billing and Customer Collection System (BCCS). The receivable balances reported in the general ledger ($141 million) as of August 31, 2000 are less than in BCCS because the CRP customers' "frozen arrears" of approximately $62 million are not included in the general ledger totals.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes it does.

EXHIBIT JRB-1

DOCKET NO. R-00006042

PHILADELPHIA GAS WORKS
BAD DEBT EXPENSE & ACCOUNTS RECEIVABLE
(Dollars in Thousands)

Fiscal Year Ended	Gas Revenues	Bad Debt Expense	Customer Accts. Rec.	Uncollect Reserve	Bad Debt %/ Revenue	Bad Debt %/ Accts. Rec
6/30/78	$238,024	$5,169	$39,891	($6,023)	2.17%	12.96%
6/30/79	248,027	5,251	45,721	(5,743)	2.12%	11.48%
6/30/80	326,750	5,539	47,200	(5,785)	1.70%	11.74%
6/30/81	419,712	15,977	91,931	(16,216)	3.81%	17.38%
6/30/82	488,510	27,131	104,005	(32,243)	5.55%	26.09%
8/31/83	494,757	26,990	77,718	(25,009)	5.46%	34.73%
8/31/84	525,028	25,441	71,781	(26,071)	4.85%	35.44%

PGW St. 3.1
5/22/01

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF

JOSEPH R. BOGDONAVAGE

ON BEHALF OF
PHILADELPHIA GAS WORKS

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

R-00006042

MAY, 2001

DSH:27199.1

Q. PLEASE STATE YOUR NAME AND POSITION WITH THE COMPANY.

A. My name is Joseph R. Bogdonavage. My position is Senior Vice President, Finance.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to: 1) to present most current "projected and actual" data for the FY 2001 budget year and to provide a revised "fully forecasted" budget to reflect revised estimates of natural gas costs; 2) to provide a cash flow analysis demonstrating the inadequacy of the overall rate increase recommendations of Mssrs. Lelash and Weakley; and 3) to respond to the pro forma revenue and expense adjustments proposed by OCA witness Lelash and OTS witness Weakley.

UPDATED 2001 FY TEST YEAR

Q. HAVE YOU PREPARED UPDATED "ACTUAL PROJECTED" RESULTS FOR FY 2001 SHOWING THE EFFECTS OF THE INTERIM SETTLEMENT INCREASE?

A. Yes, those results are shown on Exhibit JRB-2. These data also update the FY 2001 budget for additional actual data. This analysis has 7 months of actual data with the remaining 5 months on a projected basis.

Q. PLEASE COMMENT ON THIS ANALYSIS.

A. We are projecting that PGW will experience 4555 degree days in FY 2001 but, nonetheless will suffer a $9.5 million loss at year end. We will just barely make our debt service coverages (1.51x) in FY 2001 (JRB-2, p.3,4). In terms of cash, PGW is projecting a that it will be able to satisfy its $97 million, June commercial paper obligations only by fully utilizing the City's $45 million loan, and obtaining $24 million

from the Capital Fund to reimburse PGW for these advances. The Capital Fund contribution is only possible if PGW actually issues its 2001 bonds. Without the ability to use some of these funds for working capital, PGW would not be able to satisfy its commercial paper pay down obligation. Also, the cash balances of the company were improved by $11.5 million ($17 million in total) but only due to the deferral of commodity purchases, authorized in the interim rate case settlement. Those purchases will now have to be made in the fall, 2001. Our projected, end of year cash balance (produced from operations and from reimbursements from the capital fund, is projected to be $34 million. This balance, which is within the range of the minimally required amount, is misleading in that, without the one-time ability to defer approximately $11.5 million in natural gas purchase obligations, we would finish the year with just $22 million in end of year cash.

Q. HAVE YOU PREPARED AN UPDATED "FULLY FORECASTED BUDGET YEAR?

A. Yes, those results are also shown on Exhibit JRB-2. The updated fully forecasted test year has been revised to show the known and definite change in our projections for the cost of natural gas in this period, using the most recent independent projections prepared by DRI.. These current projections are the same as those that were used in PGW's most recent GCR filing with the PUC for FY 2002. This level is higher by $106.0 million as compared to the amount of natural gas costs assumed in our original, January 5, 2001 fully forecasted test year (Vol. II, Part 2) and reflects the now more accepted view that

natural gas costs, while retreating from the record levels experienced this winter are, nonetheless going to stay several dollars above historic levels for the foreseeable future. I obtained these gas cost projections from Mr. White who has informed me that, at the present time, they represent the best available projections of the level of natural gas expenditures that PGW will experience in the next 18-24 months. They are also identical to those that he has used to support PGW's 2002 GCR filing. Mr. White is prepared to support these projections for use in the fully forecasted test year/budget presentation.

Q. **WHAT ASPECTS OF YOUR FULLY FORECASTED BUDGET YEAR ARE AFFECTED BY ASSUMING THIS UPDATED LEVEL OF NATURAL GAS COSTS?**

A. The most direct impact is on PGW's bad debt expense, which is projected to increase by $13.6 million from the previous forecast. These increased gas costs will also significantly increase PGW's cash working needs because the level of payments required will be some $20-30 million higher during September-December. This can be seen in the cash flow statement which shows that, even with the full $65 million being charged in FY 2002, PGW will finish the year with just $8 million in cash from all sources (including the capital fund). To reach the $35-40 million cash working capital minimum end of year requirement, our rate increase would have to be $28 million greater than the $65 million we are requesting.

Q. ***DID YOU MAKE ANY OTHER UPDATES TO YOUR FULLY FORECASTED TEST YEAR ANALYSIS?***

A. No, although I could have updated several expense items that, we now know, will be higher than originally projected. For example PGW's PUC assessment will be approximately $400,000 higher than originally budgeted.

Q. HOW DOES THIS REVISION AFFECT PGW'S DEMONSTRATED REVENUE REQUIREMENT USING THE CASH FLOW METHOD?

A. This updated, fully forecasted test year/budget shows that PGW would be able to justify a rate increase of $93 million ($28 million to produce the minimum needed cash working capital at the of test year and to cover the additional bad debt expense). As I will show below, this update is also relevant to show that the recommendations of Mr. Lelash and Mr. Weakley are inadequately low. While I am advised that PGW's rates can not be increased in this proceeding beyond the amount it originally requested, any analysis of its revenue requirement, and any adjustments thereto, should be made from PGW's updated fully forecasted analysis.

RESPONSE TO OCA WITNESS LELASH AND WEAKLEY

Q. HAVE YOU ANALYZED THE FINANCIAL EFFECTS UPON PGW IF THE RECOMMENDATIONS OF MR. LELASH OR MR. WEAKLEY (FOR THE OTS) WERE ADOPTED BY THE PUC?

A. Yes. Mr. Lelash's recommendation was derived by refusing to consider the cash working capital produced by his recommendation. Therefore he was not able to say whether his $21.5 million recommendation would enable PGW to have sufficient cash in any month to pay its bills when they come due or whether it would leave PGW with sufficient cash at the end of fiscal year to be able to pay its bills in the first 4 months of the following

year. If a cash flow and income analysis for PGW were presented on PGW's updated "fully forecasted" basis, assuming that Mr. Lelash's $21.5 million recommendation were to be approved by the PUC and was in place for a full year, PGW would not even make its minimally required coverages -- the standard that even Mr. Lelash agrees is required. An increase of $26.6 million is shown to be needed ($5.1 million plus 21.5 million, Sch. JRB-2, p.3) to produce the bare minimum coverages. The cash flow analysis that I have prepared shows that, at $21.5 million, PGW will not have sufficient cash to pay its projected obligations in FY 2002 -- i.e., PGW's $13.3 million debt service payment in August, 2002 (JRB-3, p. 1). This analysis would also show that, absent the successful issuance of the bonds that are scheduled to be sold in June, and the short term cash working capital that is made possible by that issuance, PGW would not have the cash to pay down its commercial paper, would not be able to pay off its obligations through the rest of the current fiscal year and will have a $32 million cash hole at the end of FY 2002. Obviously, there is no way that PGW could extricate itself from such a disaster.

Q. WHAT ARE YOUR CONCLUSIONS ON THE BASIS OF THIS ANALYSIS?

A. Mr. Lelash's recommendation is not consistent with PGW's prior ratemaking methodology because it would not set rates to fund PGW's operating budget, pay its debt service or provide reasonable cash working capital needed to be able to pay its obligations. It also violates PGW's bond covenants which require PGW to charge rates that permit PGW to have sufficient cash to pay all of its obligations, including its debt service obligations, during each fiscal year, in full, when due. Without these funds, PGW

will not be able to assure that it will be able to continue to operate the Gas Works in a reasonable manner, thus violating yet another of its bond covenants.

Q. IS OTS WITNESS WEAKLEY'S RECOMMENDATION INSUFFICIENT AS WELL?

A. Yes. While I understand that Mr. Weakley's recommendation is that PGW's base rates should increase $33 million over and above PGW's existing, $11 million interim increase, for a total of $44 million, this recommendation would nonetheless produce inadequate levels of cash such that PGW would not be able to meet its financial obligations and goals in the short or long term. On the updated, fully forecasted test year basis that I have calculated, showing the effects of PGW's filed GCR, PGW would negative $11.3 million at the end of the year. An increase of $44 million would force PGW to continue to have to rely substantially on its commercial paper as a permanent part of its capital structure and would clearly have to look to trying to issue additional debt, if possible, to fund next year's capital improvements sooner than anticipated in our planning and the Black and Veatch Engineering Report. Neither of these scenarios is something that PGW should be doing and it is not something that it will be able to continue to do indefinitely.

RESPONSE TO LELASH TESTIMONY, PP. 32-33.

Q. PLEASE COMMENT ON MR. LELASH'S CLAIM (pp. 32-33) THAT PGW'S BUDGET PRESENTATION INCORRECTLY FAILS TO "ANNUALIZE" TEST YEAR REVENUES AND LABOR EXPENSE BY USING "YEAR END" RATHER THAN "AVERAGE" COUNTS.

A. While Mr. Lelash does not actually propose adjustments in these areas, his premise is incorrectly applied to PGW for at least two reasons. First, PGW's prior ratemaking

methodology employed budget data that is representative of future operations to establish revenue requirement for PGW. In regulatory parlance, it is a "fully forecasted" test year for which forward looking averages and not end of year estimates are appropriate. Therefore, the PUC is bound to use the same approach. Second, if PGW's FY 2001 budget figures are "annualized" the PUC potentially will set rates assuming a higher level of revenues and a lower level of labor expense than it actually will experience. PGW's main obligation in setting rates is to assure that in each year it satisfies all of its bond covenants. Setting rates as if "end of year" counts existed throughout the year would deny PGW the revenue needed to meet these requirements.

Q. BUT DOESN'T PGW'S PROPOSED BUDGET ALREADY INCLUDE CERTAIN NORMALIZATION ADJUSTMENTS?

A. Yes, but all of the adjustments are designed to accurately calculate the level of expense that PGW projects it will book in the budget year. Mr. Lelash's adjustments would restate expenses to some future period and leave PGW unable to cover its present expenses.

Q. CAN YOU COMMENT ON THE APPROPRIATENESS OF MAKING THE SPECIFIC "ANNUALIZATIONS" MENTIONED BY MR. LELASH?

A. Yes. As Mr. Lelash recognizes (p. 41), PGW's fully forecasted test year/budget already contains a $2.5 million work force attrition adjustment and a $10 million productivity adjustment which PGW expects to achieve in substantial part through force reductions and greater productivity. An end-of-year employee count adjustment would thus simply double count the company's adjustments that it has already made.

With respect to appropriate customer counts, Mr. White's rebuttal testimony responding to OTS witness Kubas presents a revised customer count, based upon the most-current available data, which Mr. White has determined would better reflect fully forecasted, customer levels, and, thus, would be appropriate to utilize here. In any event, the effect of increasing the budget year customer levels would be to add $2 million of additional revenue to the fully forecasted Test Year.

MR. LELASH'S NORMALIZATION ADJUSTMENTS

Q. PLEASE COMMENT ON MR. LELASH'S PROPOSED $800,000 ADJUSTMENT TO AMORTIZE OVER FIVE YEARS, A $1 MILLION EXPENDITURE FOR CONTINUED BCCS REMEDIATION, HIS PROPOSAL TO AMORTIZE THE COST OF MARKETING CONSULTING STUDIES, EMERGENCY OPERATIONS COSTS, CUSTOMER AFFAIRS – TRAINING AND TEMPORARY EMPLOYEES.

A. Each of these adjustments reflects a determination that they are non-recurring and are applicable to a number of years. Therefore, PGW has determined that it will be amortizing on its books these items over the periods that Mr. Lelash has indicated. Accordingly, it is appropriate to make these adjustments for ratemaking purposes.

Q. HOW WILL THESE ADJUSTMENTS, IF REFLECTED IN PGW'S REVENUE REQUIREMENT, AFFECT ITS ABILITY TO SATISFY ITS BOND COVENANTS?

A. Because PGW is going to amortize these expenses on its books, it will be able to satisfy its debt service coverage covenants. Our analysis is that, assuming we are granted the $65 million we have proven we need, these adjustments will not interfere with PGW's ability to pay its obligations when they come due, when combined with the short term

cash working capital that will be made available from the contemplated bond issuance and, hence, will not violate its rate covenant.

Q. DO YOU HAVE A RESPONSE TO MR. LELASH'S RECOMMENDATION TO ELIMINATE AMOUNTS THAT WAS BUDGETED FOR PERSONAL COMPUTERS AND STORAGE SPACE, BUT HAS BEEN PUT ON HOLD?

A. We do not object to this adjustment.

Q. PLEASE COMMENT ON MR. LELASH'S ADJUSTMENT TO ELIMINATE $115,000 FOR LOBBYING EXPENSE.

A. Lobbying expense has always been permitted in rates by the PGC, PGW's prior ratemaking authority, and thus, I am advised by counsel, must be included in the PUC's adoption of these "methodologies and requirements." Moreover, if PGW is not able to collect for this expenditure in its rates, PGW will violate its bond covenants' requirement that its rates are sufficient to cover all of its obligations as PGW will indeed incur this charge in FY 2001 and in future years.

Q. IS IT APPROPRIATE TO AMORTIZE OVER THREE YEARS THE COST OF ADDITIONAL MATERIAL PURCHASES MADE IN ANTICIPATION OF A WORK STOPPAGE ?

A. PGW accepts this adjustment but the actual amount that we are amortizing over three years is $150,000.

Q. PLEASE COMMENT ON MR. LELASH'S CLAIM THAT THE PREVIOUS AMORTIZATION OF CUSTOMER RESPONSIBILITY PROGRAM ARREARAGES SHOULD BE OFFSET BY THE ANTICIPATED LEVEL OF CRISIS GRANTS THAT IT HAS BEEN ABLE TO COLLECT.

A. PGW accepts this adjustment because, as Mr. Lelash points out, PGW has now had a fairly consistent history of receiving these grants at around these levels.

RESPONSE TO WEAKLEY ADJUSTMENTS

Q. **MR. WEAKLEY HAS RECOMMENDED THAT PGW'S BAD DEBT EXPENSE SHOULD BE BASED ON A "FIVE YEAR HISTORIC ANALYSIS" IN ORDER TO "LEVELIZE ANY FLUCTUATION ACTIVITY." PLEASE COMMENT.**

A. Mr. Weakley's adjustment is completely inappropriate. By using a five year average, rather than PGW's projected actual level, Mr. Weakley would reduce PGW's budgeted expenses – and, thus, its revenue requirement -- by $4.1 million in PGW's initial test year filing (now increased to reflect the reality of increased gas costs on the company). However, Mr. Weakley fails to recognize the following:

PGW will actually experience nearly $70 million in bad debt expense in FY 2001 (JRB-2, p. 6, 5/7/01 estimate). Indeed, in contrast to Mr. Weakley, OCA witness Lelash actually recommends that the PUC permit PGW to include a higher level of Bad Debt expense than the Company's originally proposed.

At present, the Company calculated that some 40% of its customers are in arrears and that it has over $200 million in potential delinquencies. PGW is doing everything it can to reduce this level, but restraints on PGW as a municipal utility subject to the demands of the PGC and Philadelphia City Council and the PUC are enormous.

The actual level of bad debt expense for the fully forecasted test year/budget is now projected to be $76.7 million and, if any adjustment is to be accepted, Mr. Lelash's frank recognition of reality that bad debt expense is going to increase is the only course that makes any sense.

Q. ARE THERE ADDITIONAL REASONS TO REJECT MR. WEAKLEY'S ADJUSTMENT?

A. Yes. It is not consistent with PGW's prior ratemaking methodology which specifically required revenue to cover all of the Company's authorized expenditures and costs, including PGW's "fully forecasted" budgeted level of bad debt expense – not a five year average. If Mr. Weakley's adjustment were to be accepted, PGW would violate its bond covenants because it would realize over $4 million less than the revenues it actually needs to cover all of its expenses. Moreover, PGW's updated projection is consistent with our likely level of revenues and therefore it is what I expect the outside auditors will verify as being reasonable.

Q. DO YOU HAVE A COMMENT ON MR. WEAKLEY'S RECOMMENDATION THAT $100,000 SHOULD BE EXCLUDED FROM RATES TO ELIMINATE THE COST OF THE TESTIMONY SUBMITTED BY JAY LUKENS ON THE RELATIVE LEVEL OF REVENUE REQUIREMENT PRODUCED IF THE RATEMAKING METHODOLOGY USED FOR NON-MUNICIPAL UTILITIES WERE EMPLOYED

A. Yes. Mr. Weakley misunderstands the purpose of this testimony. Mr. Lukens' testimony demonstrated that PGW, as a municipal utility with rates set using the cash flow method, produces a revenue requirement that is significantly lower than that which would be produced if the Company were (or was regulated) as a non-municipal utility. The testimony was submitted in direct anticipation of the likelihood that some party might try to argue (notwithstanding the law) to utilize some ratemaking approach used for non-municipals. Indeed, one witness – Mr. Lelash – does in fact, implicitly, insist that such a method be used. As Mr. Knudsen discusses, Mr. Lelash's calculations amount to a

contention that PGW should be denied any rate increase unless it can show that the increase is needed to provide a "return" on "capital" invested by the City. He has come up with his own method – the debt service coverage only method. Mr. Lukens' testimony is nonetheless relevant to show that if another approach more familiar to the PUC were to be used, the result would be a far higher rate increase than even PGW has requested. Thus, Mr. Weakley's fundamental premise for his adjustment is invalid.

Q. DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY?

A. Yes it does.

EXHIBIT JRB-2

DOCKET NO. R-00006042

PHILADELPHIA GAS WORKS
STATEMENT OF INCOME
(Dollars in Thousands)

					Natural Gas Increase		
		$65 M	$18 M	$65 M	$21.5M	$44 M	$65 M
		1/05/01	5/07/01	1/05/01	5/07/01	5/07/01	5/07/01
	Actual	Estimate	Estimate	Forecast	Budget	Budget	Budget
OPERATING REVENUES	1999-2000	2000-01	2000-01	2001-02	2001-02	2001-02	2001-02
Non-Heating	$87,830	$130,699	$122,960	$130,815	$123,229	$123,229	$123,229
Gas Transport Service	3,313	3,656	2,330	3,503	2,130	2,130	2,130
Heating	434,544	591,260	619,397	605,866	644,599	644,599	644,599
Proposed Base Rate	-	-	-	-	21,500	44,000	65,000
Marginal Revenue Loss Customer Utilization	-	-	-	(2,000)	(2,000)	(2,000)	(2,000)
LNG Marginal Sales	-	-	-	150	150	150	150
Unbilled Adjustment	7,299	1,844	1,050	(100)	(150)	250	600
Total Gas Revenues	532,986	727,459	745,737	738,234	789,458	812,358	833,708
Appliance Repair & Bill Paid Turn-Ons	11,978	13,233	12,933	13,559	13,559	13,559	13,559
Other Operating Revenues	10,911	14,793	14,927	14,804	16,077	16,527	16,947
Total Other Operating Revenues	22,889	28,026	27,860	28,363	29,636	30,086	30,506
Total Operating Revenues	$555,875	$755,485	$773,597	$766,597	$819,094	$842,444	$864,214
OPERATING EXPENSES							
Natural Gas	$266,350	$394,576	$454,015	$400,299	$506,073	$506,073	$506,073
Other Raw Material	4	10	10	10	10	10	10
Sub-Total Fuel	266,354	394,586	454,025	400,309	506,083	506,083	506,083
CONTRIBUTION MARGINS	$289,521	$360,899	$319,572	$366,288	$313,011	$336,361	$358,131
Gas Processing	14,032	13,968	13,466	13,738	13,552	13,552	13,552
Field Services	33,704	33,061	32,111	33,176	33,176	33,176	33,176
Distribution	14,246	13,601	13,601	13,782	13,782	13,782	13,782
Collection	12,609	13,740	13,490	14,014	14,014	14,014	14,014
Customer Service	11,753	13,287	12,937	13,553	13,553	13,553	13,553
Customer Accounting	3,669	4,181	3,881	4,265	4,265	4,265	4,265
Bad Debt Expense	54,642	65,297	69,995	63,088	75,156	75,947	76,684
Marketing & Point-of-Sale Expenses	3,041	6,713	3,713	6,874	6,874	6,874	6,874
Administrative & General	37,676	45,407	41,407	41,157	41,157	41,157	41,157
Health Insurance	24,241	26,290	27,790	28,188	28,188	28,188	28,188
Capitalized Fringe Benefits	(4,654)	(5,333)	(5,333)	(5,642)	(5,642)	(5,642)	(5,642)
Capitalized Administrative Charges	(4,857)	(6,815)	(6,815)	(7,630)	(7,630)	(7,630)	(7,630)
Regulatory Asset Amortization	1,984	3,750	2,750	3,750	3,750	3,750	3,750
Amortization of Restructuring Costs	965	965	965	965	965	965	965
Year 2000 & Deregulation Amortization	882	888	888	-	-	-	-
Pensions	1,096	1,376	2,000	1,645	1,645	1,645	1,645
Taxes	6,512	6,548	6,548	6,575	6,575	6,575	6,575
Personnel Reductions/Retirements	-	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)
Cost Savings/Productivity Improvements	-	(10,000)	(4,000)	(15,000)	(15,000)	(15,000)	(15,000)
Sub-Total Other Oper.& Maintenance	211,541	224,424	226,894	213,998	225,880	226,671	227,408
Depreciation	32,614	33,381	33,381	34,704	34,704	34,704	34,704
Cost of Removal	2,519	2,500	2,500	2,500	2,500	2,500	2,500
To Clearing Accounts	(4,328)	(3,344)	(3,344)	(2,921)	(2,921)	(2,921)	(2,921)
	30,805	32,537	32,537	34,283	34,283	34,283	34,283
TOTAL OPERATING EXPENSES	$508,700	$651,547	$713,456	$648,590	$766,246	$767,037	$767,774
OPERATING INCOME	47,175	103,938	60,141	118,007	52,848	75,407	96,440
Other Income	9,417	6,106	6,156	8,189	8,189	8,189	8,189
INCOME BEFORE INTEREST	$56,592	$110,044	$66,297	$126,196	$61,037	$83,596	$104,629
INTEREST							
Long-Term Debt	$49,256	$47,871	$47,871	$49,600	$49,600	$49,600	$49,600
Other	5,810	6,102	6,102	4,480	5,942	5,942	5,942
AFUDC	(374)	(346)	(346)	(383)	(383)	(383)	(383)
Loss From Extinguishment of Debt	4,311	4,162	4,162	3,976	3,976	3,976	3,976
Total Interest	59,003	57,789	57,789	57,673	59,135	59,135	59,135
NET INCOME	(2,411)	52,255	8,508	68,523	1,902	24,461	45,494
City Payment	18,000	18,000	18,000	18,000	18,000	18,000	18,000
Net Earnings	($20,411)	$34,255	($9,492)	$50,523	($16,098)	$6,461	$27,494

PHILADELPHIA GAS WORKS
CASHFLOW STATEMENT
(Dollars In Thousands)

					Natural Gas Increase		
		$65 M	$18 M	$65 M	$21.5M	$44 M	$65 M
		1/05/01	5/07/01	1/05/01	5/07/01	5/07/01	5/07/01
	Actual	Estimate	Estimate	Forecast	Budget	Budget	Budget
	1999-2000	2000-01	2000-01	2001-02	2001-02	2001-02	2001-02
SOURCES							
Net Income	($2,411)	$52,255	$8,508	$68,523	$1,902	$24,461	$45,494
Depreciation & Amortization	40,985	42,827	42,827	44,853	44,853	44,853	44,853
Earnings on Restricted Funds	563	451	451	-	-	-	-
Impact of Refunded Debt Service	548	-	-	-	-	-	-
Increased/(Decreased) Other Liabilities	14,800	3,682	3,682	(2,284)	(2,284)	(2,284)	(2,284)
Available From Operations	54,485	99,215	55,468	111,092	44,471	67,030	88,063
Funds Required for Capital	69,264	34,000	56,293	32,000	57,927	57,927	57,927
Capital Leasing	2,228	6,000	6,000	4,142	4,142	4,142	4,142
City Loan	-	-	45,000	-	-	-	-
Adjustment for Projected Cash	-	-	8,895	-	-	-	-
Deferred Natural Gas Payment	-	-	11,510	-	(11,510)	(11,510)	(11,510)
Temporary Financing	22,000	-	-	-	-	-	-
TOTAL SOURCES	$147,977	$139,215	$183,166	$147,234	$95,030	$117,589	$138,622
USES							
Net Construction Expenditures	$48,139	$62,293	$62,293	$62,069	$62,069	$62,069	$62,069
Funded Debt Reduction:							
Revenue Bonds	33,595	34,192	34,192	33,977	33,977	33,977	33,977
PMA Lease/Subordinate Debt	1,020	1,065	1,065	1,105	1,105	1,105	1,105
Capital Lease	6,538	6,901	6,901	5,273	5,273	5,273	5,273
Notes Payable - CNG Acquisition	219	59	59	-	-	-	-
Temporary Financing Repayment	-	-	-	40,000	-	-	-
City Loan Repayment	-	-	-	-	-	-	-
Distribution of Earnings	18,000	18,000	18,000	18,000	18,000	18,000	18,000
Additions To (Reductions of)							
Non-Cash Working Capital	48,128	14,891	34,981	(17,395)	40,696	42,630	44,413
Cash Needs	155,639	137,401	167,491	143,029	161,120	163,054	164,837
Cash Surplus (Shortfall)	(7,662)	1,814	25,675	4,205	(66,090)	(45,465)	(26,215)
TOTAL USES	$147,977	$139,215	$183,166	$147,234	$95,030	$117,589	$138,622
Cash - Beginning of Period	$16,087	$8,425	$8,425	$12,837	$34,100	$34,100	$34,100
Cash - Surplus (Shortfall)	(7,662)	1,814	25,675	4,205	(66,090)	(45,465)	(26,215)
ENDING CASH	$8,425	$10,239	$34,100	$17,042	($31,990)	($11,365)	$7,885
Internally Generated Funds	-	$22,293	$0	$25,927	$0	$0	$0
Outstanding Commercial Paper	$97,000	$97,000	$97,000	$57,000	$97,000	$97,000	$97,000

PHILADELPHIA GAS WORKS
DEBT SERVICE COVERAGE
(Dollars in Thousands)

					----------Natural Gas Increase----------		
	Actual 1999-2000	$65 M 1/05/01 Estimate 2000-01	$18 M 5/07/01 Estimate 2000-01	$65 M 1/05/01 Forecast 2001-02	$21.5M 5/07/01 Budget 2001-02	$44 M 5/07/01 Budget 2001-02	$65 M 5/07/01 Budget 2001-02
FUNDS PROVIDED							
Total Gas Revenues	$532,986	$727,459	$745,737	$738,234	$789,458	$812,358	$833,708
Other Operating Revenues	22,889	28,026	27,860	28,363	29,636	30,086	30,506
Total Operating Revenues	555,875	755,485	773,597	766,597	819,094	842,444	864,214
Other Income Less Restricted Funds	9,980	6,557	6,607	8,189	8,189	8,189	8,189
AFUDC (Interest)	374	346	346	383	383	383	383
TOTAL FUNDS PROVIDED	$566,229	$762,388	$780,550	$775,169	$827,666	$851,016	$872,786
FUNDS APPLIED							
Fuel Costs	266,354	394,586	454,025	400,309	506,083	506,083	506,083
Other Operating Costs	242,346	256,961	259,431	248,281	260,163	260,954	261,691
Total Operating Expenses	508,700	651,547	713,456	648,590	766,246	767,037	767,774
PMA Lease Cost	-	-	-	-	-	-	-
$20.1M Capital Lease Cost	3,991	3,980	3,980	1,957	1,957	1,957	1,957
$23M Capital Lease Cost	3,997	3,997	3,997	3,997	3,997	3,997	3,997
Less: Non-Cash Expenses	44,343	37,272	36,975	38,767	38,447	38,447	38,447
TOTAL FUNDS APPLIED	$472,345	$622,252	$684,458	$615,777	$733,753	$734,544	$735,281
Funds Available to Cover Debt Service	$93,884	$140,136	$96,092	$159,392	$93,913	$116,472	$137,505
Add-back Lease Costs	7,988	7,977	7,977	5,954	5,954	5,954	5,954
Funds Available Excluding Lease Costs	$101,872	$148,113	$104,069	$165,346	$99,867	$122,426	$143,459
1975 Ordinance Bonds Debt Service	$59,345	$51,611	$51,611	$55,528	$55,528	$55,528	$55,528
Debt Service Coverage 1975 Bonds	**1.72**	**2.87**	**2.02**	**2.98**	**1.80**	**2.20**	**2.58**
Net Available after Prior Debt Service	$42,527	$96,502	$52,458	$109,818	$44,339	$66,898	$87,931
PMA & Other Capital Leases	7,988	7,977	7,977	5,954	5,954	5,954	5,954
Net Available after Prior Capital Leases	$34,539	$88,525	$44,481	$103,864	$38,385	$60,944	$81,977
1998 Ordinance Bonds Debt Service	$21,659	$29,449	$29,449	$28,988	$28,988	$28,988	$28,988
Debt Service Coverage New Bonds	**1.59**	**3.01**	**1.51**	**3.58**	**1.32**	**2.10**	**2.83**
Net Available after New Debt Service	$12,880	$59,076	$15,032	$74,876	$9,397	$31,956	$52,989
1998 Ordinance Subordinate Bond Debt Ser	$1,987	$1,990	$1,990	$1,986	$1,986	$1,986	$1,986
Debt Service Coverage Subordinate Bond	**6.48**	**29.69**	**7.55**	**37.70**	**4.73**	**16.09**	**26.68**
Surplus (Shortfall)	2,051	44,352	308	60,382	(5,097)	17,462	38,495

Estimated weather 4555 degree days
Rate increase -$11.0 MM Interim - Cust Charge 3/01/01, $7.0 MM GCR 3/01/01
Productivity/cost savings $10.0 MM
GCR $230.0 MM Billed / Nat. Gas Costs $230.0 MM
City Loan $45.0 MM Utilized / $100.0 MM Bond Sale

BUDGET OF CASH RECEIPTS AND DISBURSEMENTS
FISCAL YEAR ENDING AUGUST 31, 2001
(Millions of Dollars)

03/15/01		ACTUAL Sep	ACTUAL Oct	ACTUAL Nov	ACTUAL Dec	ACTUAL Jan	ACTUAL Feb	ACTUAL Mar	ESTIMATE Apr	ESTIMATE May	ESTIMATE June	ESTIMATE July	ESTIMATE Aug	TOTAL
OPENING BALANCE - CASH INCLUDES 97.0 TXCP		$8.7	$21.8	$15.2	$3.0	$5.2	$0.2	$0.1	$0.1	$5.9	$28.5	$92.4	$53.5	$8.7
RECEIPTS														
Gas		29.4	31.1	32.5	40.3	77.0	86.6	82.9	81.1	72.0	61.0	51.0	46.0	690.9
Other		0.6	1.1	4.2	0.5	1.3	0.3	1.9	1.6	1.6	1.6	1.5	3.9	20.1
Drawn from Capital Funds - Principal $34.8		26.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0	0.0	0.0	57.9
Drawn from Capital Funds - Interest		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Drawn from Lease Funds - Principal $10.3		0.0	0.0	0.0	3.5	0.0	0.0	0.9	0.0	2.5	0.0	0.0	0.0	6.9
Drawn from Lease Funds - Interest		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advance (Repayment) of Capital Fund		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pension Withdrawal		0.0	4.4	2.2	8.8	0.0	0.0	6.6	0.0	0.0	3.9	0.0	0.0	25.9
City Loan					7.8	83.8	54.1	36.4			45.0	0.0		207.2
TOTAL RECEIPTS		56.9	43.6	38.9	61.0	142.1	141.0	128.7	82.7	76.1	135.5	52.5	49.9	1,008.9
TOTAL		65.6	65.4	54.1	64.0	147.3	141.2	128.8	82.8	82.0	164.0	144.9	103.4	1,017.6
DISBURSEMENTS														
Labor		10.3	11.2	12.4	11.2	13.2	10.8	12.2	10.1	10.9	10.3	10.2	10.8	133.6
Natural Gas		23.6	25.3	32.0	31.8	80.0	74.2	49.1	38.4	31.5	32.3	33.8	34.1	466.1
Debt Service		0.0	3.7	0.0	0.1	25.9	2.7	0.0	4.0	1.7	1.4	37.9	13.3	90.7
TXCP, Interest		0.4	0.5	0.0	0.4	0.3	0.0	1.1	0.4	0.3	0.3	0.4	0.4	4.5
Capital Fund Repayment													1.6	1.6
Repayment of City Loan					7.8	35.4	44.7	56.2	15.0	0.0				162.2
Natural Gas Deferral										0.0	0.0	0.0	0.0	0.0
City Fee		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	18.2
Other Disbursements		9.5	9.5	6.7	7.4	12.3	8.7	7.1	9.0	9.1	9.1	9.1	9.1	106.6
TOTAL DISBURSEMENTS		43.8	50.2	51.1	58.8	147.1	141.1	128.7	76.9	53.5	71.6	91.4	69.3	983.5
MONTHLY CASH FLOW		13.1	(6.6)	(12.2)	2.2	(5.0)	(0.1)	0.0	5.8	22.6	63.9	(38.9)	(19.4)	25.4
CUMULATIVE CASH FLOW		13.1	6.5	(5.7)	(3.5)	(8.5)	(8.6)	(8.6)	(2.8)	19.8	83.7	44.8	25.4	
OPENING TXCP	97	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
TXCP ISSUED DURING MONTH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TXCP ISSUED PAID DOWN DURING MONTH		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING TXCP		97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
OPENING BALANCE - CASH		8.7	21.8	15.2	3.0	5.2	0.2	0.1	0.1	5.9	28.5	92.4	53.5	8.7
MONTHLY CASH FLOW		13.1	(6.6)	(12.2)	2.2	(5.0)	(0.1)	0.0	5.8	22.6	63.9	(38.9)	(19.4)	25.4
NET TXCP ACTIVITY MONTHLY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING BALANCE - CASH		21.8	15.2	3.0	5.2	0.2	0.1	0.1	5.8	28.5	92.4	53.5	34.1	34.1
CITY LOAN AVAILABLE - END OF MONTH	45				18.5	18.6	7.2	30.0	45.0	45.0	0.0	0.0	0.0	0.0
CITY LOAN UTILIZED - END OF MONTH		0.0	0.0	0.0	0.0	28.4	37.8	15.0	(0.0)	(0.0)	45.0	45.0	45.0	45.0
CASH POSITION NET OF TXCP & CITY LOAN		(75.2)	(81.8)	(94.0)	(91.8)	(125.2)	(134.7)	(111.9)	(91.1)	(68.5)	(49.6)	(88.5)	(107.9)	(107.9)

Normal weather 4555 degree days
Rate increase $ 65 0 MM
Productivity/cost savings $15 0 Million
Deferred Natural Gas $17.1 Million Payable (Dec-April)
Recent 1307F GCR Filing

BUDGET OF CASH RECEIPTS AND DISBURSEMENTS
FISCAL YEAR ENDING AUGUST 31, 2002
(Millions of Dollars)

03/19/01	BUDGET Sep	BUDGET Oct	BUDGET Nov	BUDGET Dec	BUDGET Jan	BUDGET Feb	BUDGET Mar	BUDGET Apr	BUDGET May	BUDGET June	BUDGET July	BUDGET Aug	TOTAL
OPENING BALANCE - CASH INCLUDES 97.0 TXCP	$34.1	$36.5	$23.6	$6.7	$6.9	$9.8	$13.7	$36.0	$63.3	$70.3	$58.4	$23.2	$34.1
RECEIPTS													
Gas	41.5	43.8	50.1	65.2	77.6	88.1	97.6	93.2	77.3	57.1	50.1	47.3	788.7
Other	7.0	9.0	1.4	1.0	1.3	1.5	1.6	1.9	1.9	2.0	1.8	6.9	37.3
Drawn from Capital Funds - Principal	8.0	0.0	0.0	13.0	20.0	4.0	0.0	0.0	0.0	13.0	0.0	0.0	58.0
Drawn from Lease Funds - Principal	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
City Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advance (Repayment) of Capital Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pension Draw	0.0	0.0	6.9	0.0	6.9	0.0	0.0	6.9	0.0	0.0	6.9	0.0	27.6
TOTAL RECEIPTS	56.5	52.8	58.4	79.2	109.8	93.6	99.2	102.0	79.2	72.1	58.8	54.2	915.6
TOTAL	90.6	89.4	82.0	85.9	116.7	103.4	112.9	138.0	142.4	142.4	117.1	77.3	949.7
DISBURSEMENTS													
Labor	11.5	12.0	13.3	13.4	10.8	10.7	11.2	10.3	11.5	11.2	10.8	11.3	138.0
Natural Gas	33.8	41.0	52.5	55.6	58.3	65.2	55.0	50.1	48.7	43.3	34.7	34.9	573.1
Debt Service	0.0	3.9	0.0	0.1	26.6	2.7	0.0	4.0	1.7	1.4	38.7	13.3	92.4
Repayment City Loan												0.0	0.0
TXCP: Interest	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.3	4.3
City Fee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	18.2
Other Disbursements	8.5	8.6	9.1	9.5	10.8	10.7	10.3	9.9	9.8	9.5	9.6	9.7	115.9
TOTAL DISBURSEMENTS	54.1	65.8	75.3	79.0	106.9	89.7	76.9	74.7	72.1	84.0	94.0	69.5	941.9
MONTHLY CASH FLOW	2.4	(12.9)	(16.9)	0.2	2.9	3.9	22.3	27.3	7.0	(11.9)	(35.2)	(15.3)	(26.2)
CUMULATIVE CASH FLOW	2.4	(10.5)	(27.4)	(27.2)	(24.3)	(20.4)	1.9	29.2	36.2	24.3	(10.9)	(26.2)	
OPENING TXCP 97	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
TXCP ISSUED DURING MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TXCP ISSUED PAID DOWN DURING MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING TXCP	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
OPENING BALANCE - CASH	34.1	36.5	23.6	6.7	6.9	9.8	13.7	36.0	63.3	70.3	58.4	23.2	34.1
MONTHLY CASH FLOW	2.4	(12.9)	(16.9)	0.2	2.9	3.9	22.3	27.3	7.0	(11.9)	(35.2)	(15.3)	(26.2)
NET TXCP ACTIVITY MONTHLY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING BALANCE - CASH	36.5	23.6	6.7	6.9	9.8	13.7	36.0	63.3	70.3	58.4	23.2	7.9	7.9
CASH POSITION NET OF TXCP	(60.5)	(73.4)	(90.3)	(90.1)	(87.2)	(83.3)	(61.0)	(33.7)	(26.7)	(38.6)	(73.8)	(89.1)	(89.1)

Accounts Receivable	Actual 1999-00	$18 M 5/07/01 Estimate 2000-01	$21.5 M 05/07/01 Budget 2001-02	$44 M 05/07/01 Budget 2001-02	$65 M 05/07/01 Budget 2001-02
Beginning Receivable Balance	97,038	141,080	199,985	199,985	199,985
Billed Gas Revenues	495,545	746,360	782,333	782,333	782,333
Proposed Rate increase			21,500	44,000	65,000
Other Operating Revenues	30,789	24,880	26,796	27,546	28,246
Total Revenues	526,334	771,240	830,629	853,879	875,579
	87.74%	87.50%	90.00%	90.00%	90.00%
Collections Current Revenues	(461,824)	(674,835)	(747,566)	(768,491)	(788,021)
Collections on Prior AR			(10,000)	(10,000)	(10,000)
Write-Offs Less Reactivations	(20,468)	(37,500)	(52,000)	(52,000)	(52,000)
Total Credit / Reductions	(482,292)	(712,335)	(809,566)	(830,491)	(850,021)
Ending Receivable Balance	141,080	199,985	221,047	223,372	225,542
Bad Debt Expense					
Current Year Net Receivable	141,080	199,985	221,047	223,372	225,542
Reserve Factor	38.73%	35.00%	34.00%	34.00%	34.00%
Total Bad Debt Expense	54,642	69,995	75,156	75,947	76,684
Write Off Account Balance	19,465	37,500	52,000	52,000	52,000
Total Reserve Balance					
Beginning Reserve Balance	66,520	101,697	134,192	134,192	134,192
Write-Off Balance	(19,465)	(37,500)	(52,000)	(52,000)	(52,000)
Appropriation to Reserve	54,642	69,995	75,156	75,947	76,684
Ending Reserve Balance	101,697	134,192	157,348	158,139	158,876
OAR Reserve	253	250	250	250	250
M & J Reserve	50	50	50	50	50
Total Reserve Balance	102,000	134,492	157,648	158,439	159,176

EXHIBIT JRB-3

DOCKET NO. R-00006042

Normal weather ree days
Rate increase $ 2[illegible]MM
Productivity/cost savings $15.0 Million
Deferred Natural Gas $17.1 Million Payable (Dec-April)
Recent 1307F GCR Filing

BUDGET OF CASH RECEIPTS AND DISBURSEMENTS
FISCAL YEAR ENDING AUGUST 31, 2002
(Millions of Dollars)

03/19/01	BUDGET Sep	BUDGET Oct	BUDGET Nov	BUDGET Dec	BUDGET Jan	BUDGET Feb	BUDGET Mar	BUDGET Apr	BUDGET May	BUDGET June	BUDGET July	BUDGET Aug	TOTAL
OPENING BALANCE - CASH INCLUDES 97.0 TXCP	$34.1	$34.5	$19.5	$4.8	$10.9	$11.9	$7.3	$26.5	$50.0	$52.0	$23.2	($14.5)	$34.1
RECEIPTS													
Gas	39.5	41.7	47.3	61.1	73.7	83.6	94.5	89.5	72.2	53.3	47.6	45.0	748.9
Other	7.0	9.0	1.4	1.0	1.3	1.5	1.6	1.9	1.9	2.0	1.8	6.9	37.3
Drawn from Capital Funds - Principal	8.0	0.0	5.0	23.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.0
Drawn from Lease Funds - Principal	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
City Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advance (Repayment) of Capital Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pension Draw	0.0	0.0	6.9	0.0	6.9	0.0	0.0	6.9	0.0	0.0	6.9	0.0	27.6
TOTAL RECEIPTS	54.5	50.7	60.6	85.1	107.9	85.1	96.1	98.3	74.1	55.3	56.3	51.9	875.8
TOTAL	88.6	85.3	80.1	89.9	118.8	97.0	103.4	124.7	124.1	107.3	79.5	37.4	909.9
DISBURSEMENTS													
Labor	11.5	12.0	13.3	13.4	10.8	10.7	11.2	10.3	11.5	11.2	10.8	11.3	138.0
Natural Gas	33.8	41.0	52.5	55.6	58.3	65.2	55.0	50.1	48.7	43.3	34.7	34.9	573.1
Debt Service	0.0	3.9	0.0	0.1	26.6	2.7	0.0	4.0	1.7	1.4	38.7	13.3	92.4
Repayment City Loan												0.0	0.0
TXCP: Interest	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.3	4.3
City Fee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	18.2
Other Disbursements	8.5	8.6	9.1	9.5	10.8	10.7	10.3	9.9	9.8	9.5	9.6	9.7	115.9
TOTAL DISBURSEMENTS	54.1	65.8	75.3	79.0	106.9	89.7	76.9	74.7	72.1	84.0	94.0	69.5	941.9
MONTHLY CASH FLOW	0.4	(15.0)	(14.7)	6.1	1.0	(4.6)	19.2	23.5	1.9	(28.7)	(37.7)	(17.6)	(66.1)
CUMULATIVE CASH FLOW	0.4	(14.6)	(29.3)	(23.2)	(22.2)	(26.8)	(7.6)	15.9	17.9	(10.9)	(48.6)	(66.1)	
OPENING TXCP 97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
TXCP ISSUED DURING MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TXCP ISSUED PAID DOWN DURING MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING TXCP	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
OPENING BALANCE - CASH	34.1	34.5	19.5	4.8	10.9	11.9	7.3	26.5	50.0	52.0	23.2	(14.5)	34.1
MONTHLY CASH FLOW	0.4	(15.0)	(14.7)	6.1	1.0	(4.6)	19.2	23.5	1.9	(28.7)	(37.7)	(17.6)	(66.1)
NET TXCP ACTIVITY MONTHLY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING BALANCE - CASH	34.5	19.5	4.8	10.9	11.9	7.3	26.5	50.0	52.0	23.2	(14.5)	(32.0)	(32.0)
CASH POSITION NET OF TXCP	(62.5)	(77.5)	(92.2)	(86.1)	(85.1)	(89.7)	(70.5)	(47.0)	(45.0)	(73.8)	(111.5)	(129.0)	(129.0)

Normal weather ee days
Rate increase $ 44.0 MM
Productivity/cost savings $15.0 Million
Deferred Natural Gas $17.1 Million Payable (Dec-April)
Recent 1307F GCR Filing

BUDGET OF CASH RECEIPTS AND DISBURSEMENTS
FISCAL YEAR ENDING AUGUST 31, 2002
(Millions of Dollars)

03/19/01	BUDGET Sep	BUDGET Oct	BUDGET Nov	BUDGET Dec	BUDGET Jan	BUDGET Feb	BUDGET Mar	BUDGET Apr	BUDGET May	BUDGET June	BUDGET July	BUDGET Aug	TOTAL
OPENING BALANCE - CASH INCLUDES 97.0 TXCP	$34.1	$35.5	$21.5	$3.4	$2.1	$3.0	$4.7	$24.9	$49.8	$54.8	$41.5	$5.1	$34.1
RECEIPTS													
Gas	40.5	42.8	48.9	63.7	75.6	85.8	95.5	90.8	75.3	55.7	48.8	46.1	769.5
Other	7.0	9.0	1.4	1.0	1.3	1.5	1.6	1.9	1.9	2.0	1.8	6.9	37.3
Drawn from Capital Funds - Principal	8.0	0.0	0.0	13.0	20.0	4.0	0.0	0.0	0.0	13.0	0.0	0.0	58.0
Drawn from Lease Funds - Principal	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
City Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advance (Repayment) of Capital Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pension Draw	0.0	0.0	6.9	0.0	6.9	0.0	0.0	6.9	0.0	0.0	6.9	0.0	27.6
TOTAL RECEIPTS	55.5	51.8	57.2	77.7	107.8	91.3	97.1	99.6	77.2	70.7	57.5	53.0	896.4
TOTAL	89.6	87.3	78.7	81.1	109.9	94.3	101.8	124.5	127.0	125.6	99.1	58.1	930.5
DISBURSEMENTS													
Labor	11.5	12.0	13.3	13.4	10.8	10.7	11.2	10.3	11.5	11.2	10.8	11.3	138.0
Natural Gas	33.8	41.0	52.5	55.6	58.3	65.2	55.0	50.1	48.7	43.3	34.7	34.9	573.1
Debt Service	0.0	3.9	0.0	0.1	26.6	2.7	0.0	4.0	1.7	1.4	38.7	13.3	92.4
Repayment City Loan												0.0	0.0
TXCP: Interest	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.3	4.3
City Fee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	18.2
Other Disbursements	8.5	8.6	9.1	9.5	10.8	10.7	10.3	9.9	9.8	9.5	9.6	9.7	115.9
TOTAL DISBURSEMENTS	54.1	65.8	75.3	79.0	106.9	89.7	76.9	74.7	72.1	84.0	94.0	69.5	941.9
MONTHLY CASH FLOW	1.4	(14.0)	(18.1)	(1.3)	0.9	1.7	20.2	24.9	5.1	(13.3)	(36.5)	(16.5)	(45.5)
CUMULATIVE CASH FLOW	1.4	(12.6)	(30.7)	(32.0)	(31.1)	(29.4)	(9.2)	15.7	20.7	7.4	(29.0)	(45.5)	
OPENING TXCP 97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
TXCP ISSUED DURING MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TXCP ISSUED PAID DOWN DURING MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING TXCP	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
OPENING BALANCE - CASH	34.1	35.5	21.5	3.4	2.1	3.0	4.7	24.9	49.8	54.8	41.5	5.1	34.1
MONTHLY CASH FLOW	1.4	(14.0)	(18.1)	(1.3)	0.9	1.7	20.2	24.9	5.1	(13.3)	(36.5)	(16.5)	(45.5)
NET TXCP ACTIVITY MONTHLY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDING BALANCE - CASH	35.5	21.5	3.4	2.1	3.0	4.7	24.9	49.8	54.8	41.5	5.1	(11.4)	(11.4)
CASH POSITION NET OF TXCP	(61.5)	(75.5)	(93.6)	(94.9)	(94.0)	(92.3)	(72.1)	(47.2)	(42.2)	(55.5)	(91.9)	(108.4)	(108.4)

05/08/2001

PGW- St. 4.0
REVISED
February 2, 2001

5/22/01 PLLC PD RJS

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

CRAIG WHITE

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-00006042

RE: PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

JANUARY, 2001

Q. PLEASE STATE YOUR NAME AND POSITION WITH THE COMPANY.

A. My name is Craig White. My position is Senior Vice President, Marketing and Supply Services.

Q. HOW LONG HAVE YOU HELD THIS POSITION?

A. I was promoted to this position in November 1999.

Q. PLEASE SUMMARIZE YOUR WORK EXPERIENCE.

A. I have been associated with PGW since 1980, during which time I have held the following positions: Accounting Specialist, Office of VP, Finance; Demand Analyst, Energy Planning & Forecasting; Planning Analyst, Corporate Planning & Analysis; Federal Regulatory Specialist and Administrator, Federal Regulatory Affairs, Gas Acquisitions & Federal Regulatory Affairs; Manager, Energy Planning & Federal Regulatory Affairs; Vice President, Marketing/Economic and New Business Development, and Senior Vice President, Marketing and Supply Services.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.

A. I received a Bachelor's Degree in Business from Kutztown University in 1978 and a Master's Degree (MBA) in Finance/Management from Drexel University in 1986.

Q. HAVE YOU EVER PROVIDED TESTIMONY TO THIS COMMISSION BEFORE?

A. Yes. I have provided direct written testimony concerning PGW's Proposed 2000-2001 Gas Cost Rate. I also submitted testimony on the allocation of the rate increase in PGW's interim rate proceeding.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to: 1) describe the 30-year average degree day analysis used to establish projected sales for the budgeted test year; 2) describe the process used to develop fully forecasted test year or budgeted sales; 3) support PGW's request for an increase in the General Service ("GS Rate") Customer Charge for firm service Residential, Commercial and Industrial customers as well as for firm service Municipal Service ("MS Rate") and firm service Philadelphia Housing Authority ("PHA Rate") customers in order to bring these rates more in line with their cost to serve and identify the volumetric rate increase component of PGW's proposed $65 million base rate increase; 4) comment upon PGW's present method of recovering certain non-gas costs; 5) propose a tariff modification to allow large industrial and commercial customers to enter into non-standard contract arrangements with PGW; and 6) revise the tariff to clarify the parameters for establishing the rates for boiler plant (BPS) customers.

I. TOTAL DEGREE DAYS

Q. WHAT ASSUMPTIONS DID YOU MAKE IN PROJECTING SALES FOR PGW'S FISCAL YEAR?

A. PGW is proposing to utilize the most recent thirty year average heating season degree days actually experienced in PGW's service territory. As shown in Exhibit

CW-1, that level is 4,555 degree days or 45 degree days less than the level adopted by the PUC as a "normal level" for PGW in the interim rate proceeding.

Q. WHY SHOULD THE NORMAL LEVEL OF BUDGETED OR "NORMALIZED" DEGREE-DAYS BE REDUCED FROM 4,600 TO 4,555?

A. The 4,555 degree day year is based on a simple average of Philadelphia temperatures over the last 30 fiscal years from 1970-71 through 1999-2000, for the months of September through May. (While there are a small number of degree days recorded during the summer, they do not produce any heating load.) Utilizing the 30-year methodology incorporates the recent three-year warming trend in the context of a long-range average. (It should be noted that a 20-year methodology would produce only 4,509 degree days.) The 45-degree day difference in comparison to the 4,600 degree day average amounts to a change of just less than 1%.

II. TEST YEAR SALES

Q. WHAT ARE THE UNDERLYING ASSUMPTIONS FOR TEST YEAR SALES?

A. In addition to assuming that gas usage will be based on the revised normal 4,555 Degree-Day temperature pattern, PGW made revised gas cost assumptions as it did in the first quarterly GCR update which was filed on December 29, 2000. However, the gas costs in this filing were based upon data available at the time the Company prepared the underlying base information which differ from the data available for the first quarterly GCR filing. The gas costs assumed in this

forecast are $55.6 million higher than those reflected in PGW's $97 million GCR increase, which was approved by the PUC in November.

PGW also made a series of additional assumptions which are consistent with its proposed operating budget that forms the basis for its $65 million permanent base rate increase request. These include the following:

1. LBS/BPS tariff sales are assumed to continue year-round, drawn from seasonal supply and storage supplies.
2. Customer demand incorporates the Marketing Department's latest estimate of additional load to be gained in FY 2000.
3. Unaccounted-for gas (calculated on a gross, send-out versus sales basis) will be at a level of 3.6% calculated on firm gas only.
4. Customer Responsibility Program (CRP) anticipated total customer statistics are assumed to decline from 52,000 to 49,000 through Fiscal Year 2000-2001. The total CRP discount is $36.9 million.

III. ALLOCATION OF BASE RATE INCREASE

Q. WHAT RATE INCREASE IS PGW PROPOSING?

A. An increase of $65 million. Exhibit CW-2 shows the present revenue stream from the existing customer charge and volumetric components of PGW's base rates for all firm customers. Additionally, this exhibit shows the proposed revenue stream from the proposed increases in the customer charge and the volumetric component of PGW's base rate for all firm customers.

Q. WHAT IS THE BASIS FOR THE CHANGES TO THE CUSTOMER CHARGE FOR GS RESIDENTIAL, COMMERCIAL AND INDUSTRIAL CUSTOMERS AS

WELL AS MUNICIPAL (MS) AND THE PHILADELPHIA HOUSING AUTHORITY (PHA)?

A. The devastating effects of the last three winters with 10% to 15% warmer than normal weather has adversely affected the Company's ability to collect sufficient revenues to meet operating, maintenance and debt service requirements. To help mitigate the impact of warmer-than-normal temperatures in the future, PGW is proposing the recovery of a greater portion of its fixed costs in a fixed monthly

Customer Charge. The increase in the customer charge will generate approximately $44.5 million of the requested total increase of $65 million. The remaining $20.5 million is proposed to be recovered through an increase in the volumetric portion of the base rates.

Q. HOW DO PGW'S PROPOSED CUSTOMER CHARGES COMPARE TO THOSE CHARGED BY SURROUNDING UTILITIES?

A. A comparison was made of other Pennsylvania utilities based on similar expected usage patterns by rate class. The following table summarizes our findings in this regard:

Comparison of Monthly Customer Charges
(Pennsylvania Gas Utilities)

Company	Residential	Commercial/ Industrial
PECO Energy	$7.20	$14.40 - $72.01
Columbia Gas of Pennsylvania	$10.81	$14.53 - $22.60
Equitable Gas Company	$11.65	$17.00 - $75.00
People's Natural Gas	$10.21	$10.21 - $34.20
National Fuel Gas Distribution Co.	$11.09	$15.42-$121.01
North Penn Gas Co./PFG Gas Inc.	$8.08	$14.96 - $23.75
T.W. Phillips Gas & Oil Co.	$8.46	$33.25 - $33.25
Average	$9.64	$17.11 - $54.56
PGW Current	**$ 8.00**	**$10.00 - $20.00**
PGW Proposed	$15.00	$25.00 - $50.00

Q. HOW DOES PGW'S PROPOSED CUSTOMER CHARGE COMPARE TO THOSE OF COMPANIES OF SIMILAR SIZE AND WHICH SERVE SIMILAR POPULATIONS?

A. In my view the most appropriate comparison is to the customer charges for Pittsburgh area utilities which serve urban areas as we do. That comparison is shown below:

Comparison of Monthly Customer Charges
(Pittsburgh Area Gas Utilities)

Company	Residential	Commercial/ Industrial
Columbia Gas of Pennsylvania	$10.81	$14.53 - $22.60
Equitable Gas Company	$11.65	$17.00 - $75.00
People's Natural Gas	$10.21	$10.21 - $34.20
Average	$10.89	$13.91 - $43.93
PGW Current	**$ 8.00**	**$10.00 - $20.00**
PGW Proposed	$15.00	$25.00 - $50.00

Q. **HOW DO YOUR RECOMMENDED CUSTOMER CHARGES COMPARE TO THE FIXED DISTRIBUTION-RELATED COSTS IDENTIFIED IN THE COST-OF-SERVICE STUDY PREPARED BY R. J. RUDDEN, ASSOCIATES ON BEHALF OF PGW?**

A. The R. J. Rudden Cost-of-Service Study indicates that the fixed, distribution related costs that would appropriately be recovered in a monthly customer charge are higher in all sectors than either PGW's current or proposed customer charges (see table).

	Res. – GS	Com. – GS	Ind. – GS	Mun. - GS	Mun. – MS	PHA – GS	PHA – PHA
Rudden Study	$39.94	$106.41	$280.85	$109.09	$109.09	$62.76	$127.47
PGW Current	**$ 8.00**	**$10.00**	**$20.00**	**$ 10.00**	**$ 0.00**	**$ 8.00**	**$ 0.00**
PGW Proposal	$15.00	$25.00	$50.00	$25.00	$ 25.00	$15.00	$25.00

Q. **WHAT CONCLUSIONS CAN YOU DRAW FROM THESE DATA?**

A. PGW's current customer charge lags significantly compared to the cost of providing non-volumetric service and also lags behind the level of customer charge imposed by most comparable gas companies. In addition, an increase in the charge is essential to mitigate PGW's current substantial reliance upon cold winter weather to generate sufficient annual revenues since PGW's load is heavily weighted toward weather–sensitive customers (residential and small commercial). Its sensitivity to weather variations is greater than most other gas companies. Accordingly, an increase in the customer charge as PGW has proposed is warranted.

IV. NON-FUEL RATE COMPONENTS

Q. CAN YOU SUMMARIZE THE CURRENT BILL COMPONENTS FOR FIRM CUSTOMERS FOR THE RECOVERY OF NON-GAS COSTS?

A. A PGW firm rate customer's bill contains two volumetric charges plus a monthly customer charge. The customer charge simply recognizes the need to collect a certain amount of the fixed costs of the distribution system on a fixed basis in order to make rates better track costs as well as to reduce the level of risk, which I previously described, associated with recovering all costs on a volumetric basis. The two volumetric charges consist of 1) a base rate charge and 2) a Gas Cost Rate (GCR) which, under PGW's existing tariff, includes certain non-fuel costs. The base rate charge, for all PGW firm Rate Schedules, includes a base fuel component of $3.18 per Mcf and a non-fuel component.

The Company's GCR includes Natural Gas Expenses & Purchased Electric as well as non-fuel costs associated with the Company's Customer Responsibility Program (CRP) and Conservation Works Program (CWP). Additionally, since the Senior Citizen Discount is applied to a customer's total bill, a significant portion of the total Senior Citizen Discount is also applied to the GCR mechanism.

Q. PLEASE DESCRIBE THE CRP COSTS YOU REFERRED TO ABOVE.

A. The CRP program is defined in detail in PGW's tariff Section 4.50. In summary, the customers pay the Company for a portion of the natural gas bill which is

reflective of the customer's income level. Additionally, the company collects LIHEAP grant money for which the customer is eligible. The sum of these two items represent the entire amount that the Company receives in payment for the customer's gas bill. The total customer bill minus these two components is referred to as the CRP discount. As indicated above, the CRP discount is currently collected through the GCR.

Q. PLEASE DESCRIBE THE CWP COSTS YOU REFERRED TO ABOVE.

A. The CWP program is designed to help low income customers reduce their energy costs by investing in conservation efforts to reduce their consumption and ultimately to limit future uncollectible amounts. The costs of the conservation efforts are collected through the GCR. Historically, CWP funds available to customers total approximately $2.2 million annually.

Q. WHY DOES PGW RECOVER THE COSTS OF THESE SOCIAL PROGRAMS THROUGH ITS GCR?

A. Traditionally, PGW has collected these costs through the GCR because it assured dollar-for-dollar recovery of these non-gas costs — no more and no less. It also assured that these costs were collected in the year in which they were incurred with little build up or over/under collection. This methodology was accepted and approved by PGW's previous regulatory authority, the Philadelphia Gas Commission (PGC).

Q. WHAT IS PGW'S POSITION ON THE CONTINUATION OF THIS RECOVERY MECHANISM?

A. As these programs are all part of PGW's current tariff and approved or directed by the PGC and/or the City of Philadelphia, PGW believes that any revision of these programs should occur in PGW's restructuring proceeding. So long as these programs continue, it is crucial to PGW's financial stability that the Company continue to have the ability to recover all of these costs on a dollar-for-dollar basis. The inclusion of these items in its GCR assures such a dollar-for-dollar tracking recovery.

V. NON-STANDARD CONTRACT ARRANGEMENTS

Q. WHAT NON-STANDARD CONTRACT ARRANGEMENTS ARE YOU PROPOSING FOR YOUR INDUSTRIAL AND COMMERCIAL CUSTOMERS?

A. PGW proposes to modify its tariff so as to be able to enter into individual contracts with customers at a negotiated price and/or terms and conditions of service for an agreed upon period of time. Such flexibility will allow the Company to offer individual, alternative pricing solutions to customers when they are faced with competitive fuel offerings, or to attract them back to natural gas when they are currently using an alternative fuel. Because the result would be an arrangement with rates and/or terms of service that would be different than PGW's standard schedule, PGW is proposing to characterize such arrangements as "non-standard contracts."

Q. PLEASE GIVE AN EXAMPLE OF SUCH A POTENTIAL OFFERING.

A. One solution to regain customers lost to alternative fuels may be to offer a fixed discount from the published comparable tariff rate for a set period of time with minimum usage requirements.

Q. WHAT IS DRIVING THIS REQUEST TO CHANGE PGW'S TARIFF TO ALLOW NON-STANDARD CONTRACTS?

A. Though PGW exists in a regulated market environment, it faces significant price competition from alternative energy service providers. When competition is present, the utility's prices should be based on its customers' competitive alternatives. PGW's current tariff does not allow any negotiated rates or terms for any rate class other than for gas transportation service (GTS) customers. PGW proposes to obtain pricing and contracting flexibility in order to retain load and attract new load, when doing so will provide net benefits to PGW and its firm customers.

Q. Does PGW have competition now?

A. Yes. Natural gas customers have the opportunity to use alternate fuels in all major applications now. Because the customer's ultimate needs can be satisfied by alternative energy sources, aggressive competition is a fact of life in the natural gas business today.

PGW faces particularly intense competition from alternate energy suppliers, including oil dealers, electricity suppliers, district steam, as well as other natural gas distribution companies. In addition to the well known competitive alternatives to natural gas – No. 6 and No. 2 oil and electric suppliers, – PGW also faces significant challenges from an existing steam loop that provides service throughout downtown Philadelphia and is able to make attractive offers, particularly for large renovation projects where pre-existing conditions and space can drive decisions.

Moreover, PGW's condensed, relatively small geographic market means that for many of its customers moving to an alternative NGDC service territory (or moving

load to another existing location in another company's service territory) is relatively easier than for customers of other NGDC's whose service territories are expansive. PGW's situation therefore is closer to the situation in western Pennsylvania where gas-on-gas competition is the norm.

Q. DOES PGW'S TARIFF CURRENTLY PROVIDE ANY PRICING FLEXIBILITY?

A. PGW's current rate formula for interruptible customers reflects the price of #2 and #6 oil, but requires that PGW set a single, posted rate, at 110% of the predicted avoided cost for the customer, which must be posted monthly and well in advance of the pricing period. This approach limits PGW's ability to provide truly competitive pricing alternatives, particularly to its large commercial and industrial customers whose energy pricing alternatives are becoming more and more customized.

Q. WHAT DO YOU PROPOSE IN ORDER TO PERMIT PGW TO RESPOND COMPETITIVELY TO THOSE ALTERNATIVES?

A. PGW proposes that it be given the authority to establish non-standard contracts for commercial and industrial customers. Non-standard contracts offer PGW the opportunity to compete successfully for new business and strengthen our business retention efforts.

The ability to charge market-based rates in competitive markets is critical to PGW's ability to compete effectively. Aside from the issue of straight price competition, competitive fuel dealers are more flexible than PGW regarding discounts, term of contract, benchmarked prices, fixed price alternatives and availability of up-front funds for capital costs. Under PGW's current tariff, PGW is unable to offer customers terms, conditions and prices that are available from the competition.

PGW believes that such flexibility is already reflected in the tariffs of other gas LDCs in Pennsylvania. There are many that contain provisions for individually negotiated, non-standard contracts, for at least part of their customer base. Additionally, PGW has long competed with energy entities providing greater flexibility and options to commercial and industrial customers. As indicated, the pricing alternatives available from PGW's competitors continue to grow.

Q. WHAT BENEFITS CAN THE RESIDENTIAL CLASS CUSTOMER AND OTHER FIRM RATEPAYERS EXPECT AS A RESULT OF THIS TARIFF CHANGE?

A. As proposed, PGW will not be obligated to enter into non-standard contracts; it will be left to PGW's sole discretion. The only time PGW will consider a non-standard deal is when flexibility in terms, price and conditions will result in an overall financial benefit to the company and its firm customers by increasing expected margin. The contracts will be written to insure maximum margin. For each non-standard contract PGW will require the customer to provide indications of the alternative competitive service price against which PGW is being asked to compete.

Q. HAVE YOU ENCLOSED THE PROPOSED TARIFF LANGUAGE CHANGES?

A. Yes. The attached Proposed Tariff Language for Non-Standard Service Contracts is contained in Supplement No. 7 (revised), the Supplement implementing PGW's proposed base rate increase. Because of the specifics of this proposal for its success, PGW reserves the right to withdraw these requested tariff changes if the PUC declines to provide approval in the form acceptable to PGW

V. BOILER PLANT SERVICE (BPS) RATE TARIFF MODIFICATION

Q. ARE YOU PROPOSING ANY ADDITIONAL CHANGES TO YOUR TARIFF?

A. Yes. PGW is proposing to clarify the rate schedules for BPS-S and BPS-L which could currently be interpreted to limit the maximum price that PGW can charge its BPS customers to 90% of the General Service (GS) rate for Commercial customers even if that rate is below PGW's cost of gas.

Q. WHY ARE YOU PROPOSING A CLARIFICATION?

A. There are two conflicting parameters in the tariff which could prevent the company from being able to set any rate at all. Specifically, one parameter dictates that the company must charge at least 110% of the cost of the gas used to serve that class, while the second parameter mandates that the rate be set at a level not greater than the 90% GS Commercial threshold. Currently, the Company interprets the 90% GS Commercial provision to not apply when it would produce a price below the Company's incremental cost of gas. Otherwise, PGW would have to impose an "economic interruption" under its tariff to prevent the selling of gas to BPS customers at below cost rates.

While we believe that the Company's interpretation is reasonable, PGW believes that it would be best to revise the tariff language to remove any potential confusion or conflict. PGW suggests that the tariff be revised to include only the 110% of incremental gas costs provision. In the alternative, the tariff should clearly indicate that the parameter that mandates that the company be required to charge no less than 110% of its commodity cost will supercede the 90% GS Commercial rate

threshold requirement when using that 90% parameter would require us to interrupt the customer.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBIT CW-1

DOCKET NO. R-00006042

Annual Degree Day History

YEAR	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	TOTAL	+/- NOR	%NOR	HTG SEA
1943-44	54	304	598	927	882	855	783	450	48	14	0	0	4,915	315	6.8%	4901
1944-45	34	287	544	958	1,169	815	397	261	164	51	0	6	4,666	66	1.4%	4609
1945-46	31	249	604	1,022	915	830	438	376	107	43	0	1	4,518	(84)	-1.8%	4472
1946-47	17	138	417	801	781	987	810	368	172	20	0	0	4,509	(91)	-2.0%	4489
1947-48	101	95	619	914	1,168	913	640	388	145	9	0	0	4,992	392	8.5%	4983
1948-49	24	272	375	796	753	681	539	337	111	2	0	0	3,990	(610)	-13.3%	3968
1949-50	45	124	539	754	663	659	803	473	160	10	0	0	4,430	(170)	-3.7%	4420
1950-51	91	179	525	936	859	785	681	339	104	24	0	0	4,527	(73)	-1.6%	4503
1951-52	29	198	656	781	834	771	734	297	120	11	0	0	4,431	(169)	-3.7%	4420
1952-53	15	312	510	803	801	797	614	364	89	21	0	0	4,236	(364)	-7.9%	4215
1953-54	27	155	482	736	990	636	684	304	161	8	0	0	4,193	(407)	-8.8%	4185
1954-55	27	219	572	872	984	792	646	291	54	25	0	0	4,492	(108)	-2.3%	4487
1955-56	18	180	581	1,022	972	787	779	481	171	9	5	2	4,947	347	7.5%	4931
1956-57	88	188	520	666	1,036	721	669	332	119	14	0	0	4,329	(271)	-5.9%	4315
1957-58	44	271	486	720	983	978	751	303	138	22	0	0	4,671	71	1.5%	4849
1958-59	31	272	490	1,034	966	823	694	296	77	17	0	0	4,700	100	2.2%	4683
1959-60	34	217	547	774	877	794	935	282	98	0	0	0	4,536	(64)	-1.4%	4536
1960-61	12	228	444	1,013	1,098	797	678	481	158	5	0	0	4,843	243	5.3%	4838
1961-62	19	178	483	880	964	898	692	381	114	10	0	5	4,804	4	0.1%	4589
1962-63	82	228	622	1,023	1,064	1,021	638	353	160	6	0	0	5,195	595	13.0%	5191
1963-64	96	120	421	1,041	882	913	650	443	92	19	2	3	4,682	82	1.8%	4581
1964-65	62	323	457	830	1,077	844	754	410	54	15	0	4	4,830	230	5.0%	4811
1965-66	29	252	521	741	1,055	831	639	439	153	11	0	0	4,671	71	1.5%	4660
1966-67	58	250	449	839	793	923	734	406	282	4	0	2	4,740	140	3.0%	4734
1967-68	46	239	643	606	1,098	975	606	293	155	4	0	0	4,864	264	5.7%	4860
1968-69	3	215	531	932	1,009	860	744	257	62	0	0	0	4,613	13	0.3%	4613
1969-70	28	229	546	938	1,178	833	791	374	98	4	0	0	5,019	419	9.1%	5015
1970-71	31	175	475	864	1,097	776	741	383	137	0	0	0	4,679	79	1.7%	4679
1971-72	18	86	576	682	884	918	747	426	91	32	0	0	4,460	(140)	-3.0%	4428
1972-73	25	350	605	745	902	852	528	333	163	1	0	0	4,504	(96)	-2.1%	4503
1973-74	17	147	457	758	827	842	834	281	130	21	0	0	4,115	(485)	-10.5%	4094
1974-75	55	315	523	752	837	785	739	493	84	4	0	0	4,587	(13)	-0.3%	4583
1975-76	50	180	389	870	1,104	677	585	301	115	14	0	1	4,266	(334)	-7.3%	4251
1976-77	35	367	713	1,030	1,296	833	517	303	77	31	0	0	5,202	602	13.1%	5171
1977-78	22	304	507	923	1,129	1,053	771	392	171	8	7	0	5,287	687	14.9%	5272
1978-79	51	263	492	809	1,014	1,136	552	398	76	19	7	0	4,817	217	4.7%	4791
1979-80	27	328	435	800	988	991	752	309	84	20	8	8	4,728	128	2.8%	4692
1980-81	12	297	628	973	1,154	702	719	265	97	5	0	0	4,852	252	5.5%	4847
1981-82	38	320	542	896	1,189	837	685	389	49	23	0	0	4,968	368	8.0%	4945
1982-83	23	242	463	682	912	811	631	337	112	2	0	0	4,215	(385)	-8.4%	4213
1983-84	42	241	503	965	1,112	741	858	382	128	0	1	2	4,975	375	8.2%	4972
1984-85	68	100	546	676	1,143	839	844	319	93	20	0	0	4,648	(152)	-3.3%	4628
1985-86	40	186	430	953	972	914	607	352	82	9	0	13	4,558	(42)	-0.9%	4536
1986-87	23	222	575	787	988	860	582	344	117	0	0	0	4,498	(102)	-2.2%	4498
1987-88	19	338	485	767	1,089	655	603	413	109	32	0	0	4,708	108	2.3%	4676
1988-89	28	378	474	868	829	828	884	344	148	1	0	0	4,580	(20)	-0.4%	4579
1989-90	47	210	565	1,187	727	650	578	352	115	5	1	1	4,438	(162)	-3.5%	4431
1990-91	51	158	462	705	908	674	598	308	45	12	0	0	3,912	(688)	-15.0%	3900
1991-92	60	228	504	769	883	787	732	408	171	14	1	3	4,560	(40)	-0.9%	4542
1992-93	64	332	537	816	836	946	786	355	59	12	0	1	4,744	144	3.1%	4731
1993-94	73	281	522	868	1,210	932	721	232	159	2	0	2	5,002	402	8.7%	4998
1994-95	23	242	412	718	835	919	583	353	115	6	0	0	4,206	(394)	-8.6%	4200
1995-96	48	227	585	1,013	1,055	859	783	355	192	6	0	0	5,223	623	13.5%	5217
1996-97	42	258	680	786	1,000	678	661	383	154	40	0	0	4,682	82	1.3%	4622
1997-98	45	274	525	525	727	607	588	241	64	7	1	0	4,004	(596)	-13.0%	3996
1998-99	7	188	441	667	884	700	654	297	58	6	0	0	3,892	(708)	-15.4%	3886
1999-00	25	235	403	725	974	738	456	329	75	19	1	1	3,981	(619)	-13.5%	3960
2000-01													0	(4,600)	(1)	0
HISTORY AVG	40	235	521	849	971	830	673	352	116	13	1	1	4,521			4,505
HISTORY HIGH MO.	101	378	713	1,187	1,296	1,136	935	493	282	51	8	13				
HISTORY LOW MO.	3	86	389	656	663	667	397	232	45	0	0	0				
MEAN																
PGW DESIGN	38	226	617	994	1,160	987	606	334	116	0	0	0	5,280			
40 year average	39	243	519	847	993	840	686	354	114	11	1	1	4,628	28	0.6%	4,615
30 year average	37	249	521	828	983	825	657	346	108	12	1	1	4,569	(31)	-0.7%	4,555
20 year average	39	248	524	831	971	794	658	338	107	11	0	1	4,521	(79)	-1.7%	4,508

EXHIBIT CW-2

DOCKET NO. R-00006042

65 MILLION RATE INCREASE
4555 DEGREE DAYS

Rate	Forecasted Applicable Sales 9/1/00 thru 8/31/01 (mcf)	Current Customer Charge Revenue	Current Volumetric Revenue	Total Current Revenue	Proposed Customer Charge Revenue	Proposed Volumetric Revenue	Total Proposed Revenue	Revenue Contribution Increase
ResGS/PHAGS	43,380,423	$ 44,807,577	$ 286,874,737	$ 331,682,314	$ 84,014,208	$ 299,546,159	$ 383,560,367	15.64%
ComGS/MUNGS	10,445,678	$ 2,986,886	$ 74,373,227	$ 77,360,113	$ 7,467,215	$ 80,289,659	$ 87,756,874	13.44%
Industrial/GS	1,479,249	$ 281,600	$ 10,532,253	$ 10,813,853	$ 704,000	$ 11,563,289	$ 12,267,289	13.44%
PHA/PHA	171,505	$ -	$ 1,222,145	$ 1,222,145	$ 143,400	$ 1,243,000	$ 1,386,400	13.44%
MUN/MS	1,285,030	$ -	$ 8,240,897	$ 8,240,897	$ 267,600	$ 9,080,922	$ 9,348,522	13.44%
Total Applicable Sales	56,761,885	$ 48,076,063	$ 381,243,260	$ 429,319,323	$ 92,596,423	$ 401,723,029	$ 494,319,452	

CW-2

PGW St. 4.1

5/22/01 R-00006042

Pblic PD

OS

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF

CRAIG WHITE

ON BEHALF OF
PHILADELPHIA GAS WORKS

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

MAY 2001

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is: a) to rebut the testimony of OTS witness Joseph Kubas; b) to respond to OTS witness Keim; c) to respond to OTS witness Metro; d) to respond to PICGUG witness Baudino; and e) to respond to OCA witness Miller.

RESPONSE TO MR. KUBAS:

Q. ARE YOU IN AGREEMENT WITH MR. KUBAS' CONTENTION THAT THE COMPANY HAS UNDERSTATED SALES VOLUME AND THE ASSOCIATED REVENUE.

A. No, I am not.

Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF MR. KUBAS' ANALYSIS AND RECOMMENDATION.

A. Mr. Kubas has suggested that PGW's pro forma revenues are too low because PGW allegedly has understated the amount of gas it will sell per residential and commercial customer, on a "normal degree day basis." He also suggests that the pro forma number of residential and commercial customers for PGW has also been understated.

Q. IS MR. KUBAS' ANALYSES WITH RESPECT TO USAGE PER CUSTOMER CORRECT?

A. No. I have examined PGW's forecasting model used to estimate usage per customer, depending upon the level of degree days experienced. Based upon the empirical evidence, PGW's forecasted gas model is a highly accurate predictor of PGW's sales levels.

Q. HAVE YOU PREPARED ANY ANALYSIS TO SUPPORT PGW'S FILED LEVELS OF SALES AND REVENUE.

A. Yes I have. I have prepared an analysis which compares firm sendout to a calculated sendout using PGW's forecasting model. Below are the results of a comparison for the most recent winter months of November 2000 through March 2001. The calculated sendout, listed in the second column below, utilizes the same customer counts, same base load factors, same heating load per degree day factors and the same monthly historical utilization factors as I used in preparing the projected, fully forecasted test year for this rate filing. By replacing normal year degree-days with the degree-days actually experienced during this period, the accuracy of PGW's forecast model can be tested. If the relationships between experienced degree days and usage are accurate, then the run results should correlate with the actual sendout PGW experienced in this period. The table below shows the results of this analysis. Again, this analysis uses the forecast model PGW used to project annual sales for FY 2001 normal daily degree days with the actual daily degree days:

Firm Sendout Comparison Actual versus Rate Case Filing Run
November 2000 through March 2001

	Mcf Firm Sendout Company Recorded Actual	Mcf Firm Sendout COSS (Rudden) Run [1]	Mcf Volumetric Difference COSS Run vs. Actual Sendout	% Difference COSS Run vs. Actual Sendout
Nov-00	6,399,133	6,332,745	(66,388)	-1.04%
Dec-00	11,988,436	11,308,922	(679,514)	-5.67%
Jan-01	11,177,718	10,969,811	(207,907)	-1.86%
Feb-01	8,675,536	8,804,293	128,757	1.48%
Mar-01	8,361,600	8,276,360	(85,240)	-1.02%
Total	46,602,423	45,692,131	(910,292)	-1.95%

(1) Budgeted temperatures were replaced with actual temperatures for the period November 2000 through March 2001 in this study.

Q. BASED UPON THESE DATA, HOW WOULD YOU RATE THE LEVEL OF ACCURACY OF PGW'S FORECASTING MODEL IN PREDICTING THIS PAST WINTERS SENDOUT WHEN ACTUAL DEGREE DAYS ARE INCORPORATED?

A. In my opinion, the level of accuracy is excellent. The average weighted variation for the five month period is less than 2% or 910,000 Mcf out of over 46 million Mcf (46,602,423 Mcf). Further, only one month out of the five tested falls outside of a 2% variation and this month was the month of December 2000 in which the company absorbed a significant operational disaster at its Passyunk facility that undoubtedly impacted the sendout.

Q. WHY DID YOU CHOOSE THE WINTER PERIOD FOR THIS COMPARISON?

A. Greater than 70 percent, or approximately 43 Bcf of PGW's normal year annual firm sendout occur during the winter operating season (November through March). Of this 43 Bcf, approximately 36 Bcf is weather sensitive or heating load. If the residential and/or commercial utilization per degree day estimating factors were incorrect, the impact of such a problem would be most evident during this period.

Q. WHY HAVE YOU UTILIZED SENDOUT FOR THIS COMPARISON?

A. Actual sendout is metered at PGW's nine city gate stations, unlike sales, which are reported at more than 500,000 locations. Also, sendout metering contains backup systems to assure accuracy and is devoid of the many anomalies impacting sales data.

Q. SINCE REVENUES ARE CALCULATED BASED UPON SALES HOW THEN DOES THIS COMPARISON HIGHLIGHTING THE ACCURACY OF PGW'S ABILITY TO FORECAST SENDOUT SUPPORT YOUR

CONTENTION THAT PGW HAS NOT UNDERSTATED SALES VOLUME AND IN TURN REVENUES RESULTING FROM SALES?

A. The only variation between sales and sendout is unaccounted for gas. PGW therefore applied the actual five year average unaccounted for gas percentage of 3.6% to sendout to calculate the estimated sales for the test year. As a result, if the sendout forecasting model accurately calculates sendout, (which, I have shown, it does), the projected sales are also presumed accurately calculated.

Q. WHY DIDN'T PGW UTILIZE 2000 YEAR DATA IN DEVELOPING FACTORS FOR ESTIMATING SALES?

A. My December, 2000 review of the billing, sales and revenue data for the 2000 calendar year found deficiencies in these data. Reported sales and billing counts through the period in which PGW was assessing and developing the rate case filing were clearly inconsistent. Attached as Exhibit CW-R-1 is a comparison of the customer billings and sales for the 18 month period ending February 2001 and the 18 month period ending June 1999. The most recent 18 month period ending February 2001 represents the post-conversion to the new billing system period, while the June 1999 ending period represents the period pre-conversion. During the conversion month of July 1999, and the following month of August 1999, billing history was not available. Notwithstanding the historical impacts of turn-ons and shut-offs that are recognizable in the pre-conversion period, it is very apparent that the month-to-month variation in data for the post conversion months, particularly through the month of November 2000, is inconsistent.

PGW has and is continuing to improve the billing system. However, the ancillary reports, from which estimating factors are developed, continue to have

problems, and, therefore, are not yet appropriate to be used as inputs into the sendout forecast model.

Q. HAVE YOU RECENTLY REEVALUATED THE VALIDITY OF THESE ANCILLARY REPORTS?

A. As recently as the beginning of April 2001, PGW assessed the value of the sales data provided by these ancillary reports and has determined that the factors I used to estimate pro forma sales continue to provide better results than that which can be derived from 2000-01 information. PGW went as far as to develop initial base load and heating load factors for all firm classes. However, it was subsequently determined that there was an unacceptable variation from comparative benchmarks. Considering that the pre-2000 factors have been shown to be accurate within a margin of 2%, I conclude that the factors we currently utilize are the most accurate and should continue to be utilized.

Q. PLEASE SUMMARIZE YOUR POSITION ON THIS ISSUE.

A. Our comparison of model calculated to actual information clearly shows that with only the inclusion of actual degree days in our forecasting model inputs PGW's model output accurately reflects sendout and sales for the recent period of November, 2000 through March 2001. The degree days incorporated in the rate filing are based upon a thirty year average and therefore provide a representative estimate of the most likely number of annual degree days or what is referred to as PGW's normal year degree days, when PGW's currently recommended factors are used.

The PGW model has proven to be extremely accurate when tested against recent monthly historical data (i.e., November 2000 through March 2001).

Therefore, Mr. Kubas' calculations increasing Residential Heating Revenue by $12,892,000 and Commercial Heating Revenue by $6,859,000 annually does not accurately reflect PGW's "normalized" annual revenues. Mr. Kubas' adjustment, therefore, is unfounded and if implemented would materially overstate normalized revenues for PGW.

Q. DO YOU AGREE WITH MR. KUBAS' CONTENTION THAT THE COMPANY HAS ALSO UNDERSTATED RESIDENTIAL HEATING AND COMMERCIAL HEATING CUSTOMER COUNTS AND THEREFORE FURTHER UNDERESTIMATED CUSTOMER CHARGE REVENUE AND REVENUE FROM PER MCF SALES?

A. In our initial filing, we used the customer counts that matched the sales data included in our forecast model, although we did update these customer counts for certain known changes such as increases in the level of Customer Responsibility Program participants. PGW has continually reviewed available customer billing, sales and revenue data during the period in which difficulties were experienced with the billing system (i.e., post conversion). During this time, internal efforts were directed first, toward improvement of customer billing and second, toward the development of ancillary reports used in the development of forecasting factors.

During our just completed April, 2001 review of the recently produced ancillary billing, sales and revenue reports, we reviewed the projected customer count information shown in those reports. The following is a listing of the Residential Heating customers, including CRP Heating, along with the Commercial Heating customer counts, for the month of February as originally

projected in the PGW rate case filing and as per the March 2001 reported customer count data.

	Rate Case Filing	Billing Report	Variation
Residential Heating	367,589	374,856	7,267
CRP Heating	50,616	53,058	2,442
Sub Total	418,205	427,914	9,709
Commercial Heating	19,039	19,739	700
Total Variation			**10,409**

This new customer count data included in these reports have now been verified as being accurate.

Q. WHAT CONCLUSION DO YOU DRAW FROM THIS ANALYSIS?

A. I concluded that it would be reasonable to utilize the actual customer count data produced from the ancillary reports because these data appear reliable.

Q. IF THE CUSTOMER COUNT IS INCREASED, WHY SHOULDN'T BOTH THE PRO FORMA CUSTOMER CHARGE REVENUE AND REVENUE FROM SALES BE INCREASED?

A. Intuitively one would assume that both the customer charge revenue and revenue from sales would increase. However, as shown above, PGW's sales forecast, utilizing pre-2000 usage factors, is highly accurate. Changing the count without properly adjusting the usage factors will upwardly bias what is already an accurate forecast of usage. Specifically, if customer count were increased while the current per customer baseload and heating load factors remain unchanged or, worse yet increased, the greater number of customers would result in an over estimation of sales and revenue.

In summary, the sendout comparison discussed above shows that the current forecasting factors provide an accurate estimate of sendout and in turn

sales. Therefore, while Mr. Kubas' recommended increase in total customers may be reasonable, his suggested increase in annual usage per customer is not reasonable.

Q. IF THE HIGHER CUSTOMER COUNT WERE ADOPTED, WHAT IS THE TOTAL ANTICIPATED INCREASE IN CUSTOMER CHARGE REVENUE ANNUALLY?

A. Assuming for the moment that the count does not change over the course of a twelve month period, the increase in customer charge revenue based on the numbers I have identified above, not Mr. Kubas' estimated increase in count, would be slightly less than $2.0 million in additional annual revenue (i.e., 9,709 @ $15/mth. plus 700 @ $25/mth). **(note that if PGW's recommended $15 customer charge is not accepted the revenue effect of this adjustment will have to be recalculated.)**

Q. ARE YOU THEREFORE RECOMMENDING THIS CHANGE OF $2.0 MILLION?

A. If a modification to revenue were considered, PGW believes that only this modification has some merit.

Q. IF YOU WERE TO PREPARE A NEW GAS DEMAND FORECAST TODAY WOULD YOU INCLUDE AN INCREASED LEVEL OF CUSTOMERS?

A. Yes. In point of fact, PGW is currently preparing the annual pre-filing for Gas Costs in which the company will reflect more recent customer count history. PGW believes that in the area of customer count, the reported results over the recent months have materially improved. However, usage per customer in PGW's pre-filing is being decreased in recognition of the increase in customer count and in recognition that the current usage factors are accurately estimating

sendout and an increase in count without an offsetting decrease in usage factors will overstate sales, sendout, gas costs and revenue.

Q. PLEASE SUMMARIZE YOUR POSITION RELATING TO MR. KUBAS' RECOMMENDATIONS RELATING TO ESTIMATED REVENUES.

A. Mr. Kubas has recommended a total increase in revenue of $34.3 million. Of this total amount, $32.3 million is based on Mr. Kubas's inappropriate recommendation to increase annual Residential Heating and Commercial Heating sales. This amount is based solely on Mr. Kubas' unfounded assertion that PGW has understated per Mcf annual usage. PGW has shown through comparative analysis that its forecasting tools all but replicate the most recent winter operating season sendouts. Therefore, of Mr. Kubas' total $34.3 million in recommended increase to billed revenue, only the increase in the number of customers – amounting to slightly less than $2.0 million, at proposed rates, should be accepted.

Q. SINCE YOU DISAGREE WITH MR. KUBAS' RECOMMENDED INCREASES IN SALES, I ASSUME YOU ALSO DISAGREE WITH ANY CHANGE IN NATURAL GAS COSTS.

A. Yes. In addition, the added revenues related to increased customer counts that I identified above is associated with additional customer charges and, thus, it is not necessary to add additional natural gas expense.

RESPONSE TO OTS WITNESS KEIM:

Q. DO YOU AGREE WITH MR. KEIM'S OBJECTION THAT THE CRP DISCOUNT SHOULD NOT BE RECOVERED THROUGH THE GCR?

A. No. PGW's counsel has advised me that, during the time period ending with PGW's restructuring filing in compliance with the Gas Choice Act, the PUC can

only rule on modifications to the PGW tariff initiated by PGW. Accordingly, Mr. Keim's suggested changes are more properly raised in PGW's restructuring proceeding in which PGW's entire tariff will be at issue.

Q. PUTTING THE LEGAL LIMITATIONS OF MR. KEIM'S RECOMMENDATIONS ASIDE, DO YOU BELIEVE THEY ARE APPROPRIATE?

A. Certainly removing social program costs from the GCR would be consistent with the practice of non-municipal utilities regulated by the PUC. This however is not the key concern. The major concern is a financial one. PGW has no shareholders to absorb under-recovery of social program costs. The GCR provides a mechanism for dollar for dollar recovery of costs, which, is essential if PGW is to maintain its financial health on an ongoing basis. Moreover, I understand that PGW's bond covenants dictate that it be able to charge rates to cover all of its charges and liabilities – including discounts to CRP customers and seniors. Accordingly, the only way to ensure 100% recovery of these extremely variable charges is to include them in some sort of "sliding scale" mechanism

Q. WHAT ABOUT MR. KEIM'S ASSERTION THAT THESE COSTS SHOULD BE PLACED IN BASE RATES TO PUT PGW MORE "AT RISK" AND TO PROVIDE "INCENTIVIES" TO CONTROL THE COSTS OF THE PROGRAM?

A. There are at least two problems with this suggestion. First, as Mr. Keim appears to acknowledge, the social programs that make up the overwhelming share of the non-gas costs in the GCR are dictated and/or approved by City government. As such, these are essentially legally required programs and PGW is not in a position to eliminate or reduce their scope without approval of Philadelphia City Council. Second, the main driver of the total "cost" is the level of PGW's overall rates.

Thus, when PGW's gas costs increased in November, 2000, January, 2001 and March 1, 2001, those increases resulted in substantial increases in the Company's CRP and Senior discount exposure, amounting to $38 million. Just as important, when our GCR goes down, as we are projecting will occur starting in September, the non-gas cost portion of the present GCR will automatically adjust downward, thereby immediately benefiting customers.

Accordingly, in the event recovery of social program costs were moved into base rates it would be necessary to include an additional tracker type mechanism to ensure recovery of under-billing and refund of over-billing to the firm customers of PGW.

Q. HOW WOULD YOU RECOMMEND SUCH A CHANGE BE INSTITUTED?

A. I believe that, due to PGW's municipal structure and its bond ordinance obligations, if any changes are going to be made, a two part recovery mechanism should be established. First, the lion's share of the historical CRP discount could be moved into base rates with the anticipated annual future over/under recovery of costs remaining in the GCR. In this way the majority of the costs would no longer be included in the GCR, the company would recover on a dollar for dollar basis, firm customers would not be subject to over-recovery or frequent base rate case requests related to under-recovery, and PGW's billing system would not have to endure yet another modification in advance of restructuring.

RESPONSE TO OTS WITNESS METRO:

Q. MR. METRO AGREES WITH THE COMPANY'S PHILOSOPHY FOR RECOMMENDED INCREASES TO THE GS RATES, HOWEVER, MR. METRO ALSO BELIEVES THAT INCREASES SHOULD BE APPLIED

TO LBS LARGE DIRECT, TRIGEN DIRECT AND NGV DIRECT CUSTOMER CLASSES. DO YOU AGREE?

A. No. PGW has projected 68,857,153 Mcf of total annual heating and non-heating sales and 10,358,768 Mcf of total annual interruptible sales. The categories referred to by Mr. Metro are in the family of interruptible tariff rates.

LBS-L Direct is a subset of the LBS-L tariff. The total annual sales volumes associated with this category are 335,355 Mcf or 0.03% of total interruptible sales or 0.005% of total heating and non-heating sales.

As for Trigen Direct, PGW has no such tariff rate but rather for forecasting purposes has created a Trigen Direct class to account for any bundled interruptible sales to Trigen Energy. The PGW/Trigen contract contains multiple rate options with the forecast assuming that if bundled interruptible volumes were utilized by Trigen, such volumes would be billed at the LBS-XL rate. The total annual forecasted volume for bundled interruptible sales to Trigen under rate LBS-XL equals 69,936 Mcf or 0.007% of total interruptible sales or 0.001% of total heating and non-heating sales.

Finally, PGW's presumed annual NGV Direct sales equals 2,863 Mcf or .0003 % of total interruptible sales and .00004% of total heating and non-heating sales.

Q. DO YOU AGREE WITH MR. METRO'S INCLUSION OF MR. KUBAS'S RECOMMENDED ADJUSTMENTS?

A. No, I do not. As I have addressed previously, Mr. Kubas' volumetric adjustments would overstate sendout, sales, revenues and gas costs and should not be

included. In the event some modification is made to customer count, I would agree that this change would minimally restate the company's revenue request.

Q. DO YOU AGREE WITH MR. METRO'S RECOMMENDATION THAT PGW'S GS CUSTOMER CHARGES ARE INAPPROPRIATE?

A. No. First, Mr. Metro compares PGW's requested customer charge levels to the statewide average customer charge levels. PGW is both larger than most utilities in the comparison group and operates in an urban environment where customer-related costs are very high. A more appropriate comparison for this purpose would be a comparison to Equitable Gas of Pittsburgh which has a residential customer charge of $11.65 per month. Equitable's commercial and industrial customer charges range from $17 to $800 per month. Further, these rates have been in place for some time and may not be representative of the potentially increased customer charge level if requests for changes were made at this time.

Q. WOULD YOU AGREE THAT PGW'S REQUESTED RESIDENTIAL GS CUSTOMER CHARGE OF $15/MONTH IS A SIZABLE INCREASE?

A. Yes, however, even at the $15 customer charge rate level, the company is recovering only slightly more than 50 percent of the fixed costs incurred by the company, to serve Residential GS customers, in the monthly customer charge.

Q. ARE FIXED CHARGES ASSOCIATED WITH PGW GS CUSTOMERS GREATER THAN THE NORM?

A. Based upon discussions with RJ Rudden's Howard Gorman and as Mr. Gorman has testified (in testimony before the Philadelphia Gas Commission), it is my understanding that PGW's fixed costs allocated to the GS rates are comparable to similarly situated gas utilities.

Q. DO YOU AGREE WITH MR. METRO'S RECOMMENDATION THAT THE COMPANY FILE NEW TARIFF LANGUAGE RELATED TO RATE SCHEDULE GTS WITHIN 6 MONTHS OF THIS PROCEEDING?

A. PGW has an obligation to file restructured rates in compliance with the Gas Choice Act. At that time, PGW intends to modify its transportation tariff in accordance with the requirements of the Act. I believe this would be the most appropriate point to address the dynamics of the changes to rates, terms, and conditions of service. As indicated previously, I am advised by counsel that, until that time, the PUC does not have the legal authority to mandate any such changes.

Q. DO YOU AGREE WITH MR. METRO'S TARIFF RECOMMENDATIONS? (SEE PAGE 25, LINES 16 THROUGH 21 AND PAGE 26, LINES 1 AND 2 OF METRO'S TESTIMONY?)

A. As previously stated, PGW council has advised me that the PUC can only rule on modifications to the PGW tariff initiated by PGW during the time period ending with PGW's restructuring filing in compliance with the Gas Choice Act. Having said this, the company is willing to address critical operational issues and issues as they arise. With respect to curtailment rules and priority of service, the company is assessing the plan requirements submitted by other Pennsylvania LDC's. PGW is willing to continue to work with the Trial Staff at the conclusion of this base rate proceeding – in a workshop environment – to determine whether a specific plan and tariff provision could be mutually agreed to.

Q. DO YOU HAVE ANY FURTHER REACTION TO MR. METRO'S RECOMMENDED TARIFF MODIFICATIONS?

A. Yes, PGW's interruptible tariffs require alternate fuel. PGW does not allow human needs type facilities, such as apartment complexes, to take gas service

under an interruptible rate schedule unless they meet the requisite alternate fuel requirement.

RESPONSE TO OTS WITNESS WEAKLEY:

Q. DO YOU AGREE WITH MR. WEAKLEY'S RECOMMENDATION THAT PGW'S EXPENDITURES FOR PROMOTIONAL EXPENSES BE DENIED?

A. No I do not. Mr. Weakley fails to consider that PGW is a municipal utility with no shareholders and no margin sharing mechanism. Of PGW's $1,645,000 total promotional budget, $1,210,000 supports major accounts. Major Accounts, are historically dual fuel interruptible customers from which all margins benefit firm customers through a credit of 100 percent of the margin to PGW's revenue requirement. Currently PGW has approximately 500 interruptible customers with approximately 10 Bcf of annual interruptible sales. Without the ability to provide incentive payments to offset both the "first cost" obligations and competitive oil, electric, propane and steam alternatives, PGW's competitive position would be significantly reduced. PGW provides no incentives below a 12 percent Internal Rate of Return, which at this time is greater than double the company's cost of capital. From program inception to date, PGW has captured 21 new customers totaling 388,000 Mcf in annual usage. One time incentive payments totaled $558,103 with annual margin totaling an estimated $511,000.

Similarly, the $435,000 earmarked for Residential/Light Commercial provides PGW with an additional tool to assist in expanding this market. It is no secret that Philadelphia has experienced a significant demographic loss over the past ten years. Although PGW has not experienced significant customer loss over

this same period, the realities of a smaller population will eventually decrease the customer base. Further, it is not anticipated that fixed costs will reduce in a linear fashion to the reduction in customers and revenues. Therefore, it is vitally important that PGW have the ability to retain and attract new load. These dollars provide one more "arrow in the quiver" in acquiring new customers.

Q. DO YOU BELIEVE MR. WEAKLEY'S RECOMMENDATION TO ELIMINATE PROMOTIONAL INCENTIVES IS SHORT SIGHTED?

A. Certainly, particularly in light of the company's financial condition. I believe taking such tools from PGW will only increase the need for future rate increases. The combination of a shrinking customer base and the removal of tools which allow the company to offset load loss is inappropriate and ill conceived.

Q. MR. WEAKLEY QUOTES FROM THE COMMISSION'S ORDER IN DOCKET NO. R-901595. DO YOU BELIEVE THIS HAS RELEVANCE?

A. No, I do not. First, I am advised that these PUC policy determinations do not apply to PGW, but rather its prior ratemaking methodology and requirements apply. PGW has traditionally been permitted to expend such amounts in its budget and to recover those expenditures in rates.

Second, PGW's promotional dollars are not used for cooperative advertising with any developers or builders. PGW has utilized these funds to offset equipment costs and to provide conversion incentives. Third, the statement referenced on page 13 at lines 17 and 18 (Weakley Testimony), "The builder or developer may not choose a gas company on the basis . . ." seems to suggest that the builder or developer has more than one choice with respect to a gas distribution company. Unlike Pittsburgh, Philadelphia only has one distribution

company, PGW. Therefore, the incentive provided by PGW is to offset competing oil, electric, propane, and steam alternatives. The purpose of providing the incentive is to gain a new natural gas customer in the city of Philadelphia. Finally, 100% of the benefits of retained or added load produced by these incentives flow to PGW customers – unlike investor owned utilities where shareholders can absorb much or all of the benefit. Thus, this actively poses a direct benefit to customers and should not be questioned.

RESPONSE TO PICGUG WITNESS BAUDINO

Q. DO YOU AGREE WITH MR. BAUDINO'S RECOMMENDED ALLOCATION OF THE PROPOSED RATE INCREASE?

A. No, I do not. PGW's proposed allocation already is weighted towards allocating slightly more of the proposed increase to the Residential class. I do not believe that further increasing that percentage, as Mr. Baudino advocates, would be appropriate at this time. PGW must be concerned not only with the reasonableness of the rates charged, but also with the likelihood that it will collect the charges when made. Increasing the base rate allocation over and above that which we have recommended would only serve to increase the burden on the customers who are having the most difficulty paying their bills. This, in turn, would create additional uncollectible risk for the Company. Accordingly, I urge the Commission to apply the principles of gradualism and to adhere to the class allocations and rate structure that I have proposed.

Q. DO YOU AGREE WITH MR. BAUDINO'S RECOMMENDED CHANGES TO PGW'S TRANSPORTATION TARIFFS.

A. No, I do not. PGW's counsel has advised me that until the effective date of the PUC's final order approving PGW's restructuring plan and new tariff, PGW is to continue operating and providing service in accordance with its pre-PUC tariff, policies and programs. Counsel further advises that the PUC can only rule on modifications to PGW's tariff initiated by PGW. Therefore, Mr. Baudino's recommendations concerning changes to PGW's tariff are untimely, and should not be considered until PGW's restructuring filings when its entire tariff will be under review.

Q. ASSUMING IT WAS LEGALLY POSSIBLE FOR THE PUC TO CONSIDER MR. BAUDINO'S RECOMMENDATIONS, DO YOU BELIEVE THAT THEY ARE APPROPRIATE?

A. No, I believe that Mr. Baudino's proposed changes to PGW's transportation tariffs are inappropriate, unwise, and could even pose a risk to the reliability and integrity of the system that would actually harm customers. Operationally, Mr. Baudino's suggestions would result in a serious shock to PGW's business systems as large numbers of new transportation customers would come online. PGW is concerned that its present ability to coordinate and balance a large amount of transportation load is inadequate. At this time, PGW is simply not equipped from a billing standpoint to successfully implement the proposed tariff changes, and, if forced to do so, risks creating problems where none currently exist including the release of inaccurate information which could undermine the reliability of PGW's system and harm its transportation customers. For these reasons, I believe that waiting until PGW's restructuring proceeding is a more prudent approach, as the Choice Act contemplated.

Q. CAN YOU PROVIDE US WITH A SPECIFIC EXAMPLE THAT ILLUSTRATES YOUR CONCERNS?

A. Yes. Mr. Baudino recommends that PGW be required to provide daily imbalance information to transportation customers through the Internet, an electronic bulletin board, or some other means. PGW has proposed to do this by 2003, and Mr. Baudino's suggestion to do it sooner is simply not workable. Operationally, PGW does not have the personnel or systems necessary to receive, process and disseminate the type and volume of information required by Mr. Baudino's proposal. Prematurely attempting to undertake such a change could result in the mishandling of information, the undermining of system reliability, and subsequent harm to customers. This concern exists for all of the other suggested changes as well, such as reducing the minimum volumetric level for transportation customers as well as the right to combine usage at various locations and meters to meet this minimum. PGW does not have the systems or mechanisms to permit such a change at this time. Many customers that would be eligible for transportation under Mr. Baudino's recommendation would be General Service customers. These customers' meters are read monthly on a cycle meter-reading basis. Further, PGW has reserved firm, upstream assets, as well as on-system storage capability, to support these customers. Therefore, these and many other issues would have to be addressed and resolved before his recommendations could be put in place. That is why PGW is planning to implement these measures as part of its restructuring.

RESPONSE TO OCA WITNESS MILLER

Q. DO YOU AGREE WITH MR. MILLER'S RECOMMENDATION THAT THE RESIDENTIAL CUSTOMER CHARGE SHOULD BE "ROUNDED DOWN" FROM ITS PRESENT, INTERIM LEVEL OF $11.66 TO $11.50?

A. No. The points that I raised in response to Mr. Metro's slightly higher recommendation apply to Mr. Miller's recommendation as well. I would also note that, to the extent that Mr. Miller's position is reliant upon his adjustments to PGW's Cost of Service Study, Mr. Rudden is submitting testimony showing why those proposed adjustments are not valid.

Q. PLEASE RESPOND TO MR. MILLER'S RECOMMENDED TARIFF CHANGES REGARDING THE REMOVAL OF THE PRICE CEILING FOR PGW'S BPS RATE SCHEDULE.

A. Although PGW does not agree with all aspects of Mr. Miller's analysis, it will agree to and concur in the suggested tariff change regarding the removal of the BPS price ceiling.

Q. MR. MILLER ALSO SUGGESTED MODIFICATIONS TO YOUR REQUESTED TARIFF CHANGE ALLOWING PGW TO OFFER INDIVIDUAL CONTRACTS WITH NON-STANDARD RATES TO SELECTED INTERRUPTIBLE CUSTOMERS. DO YOU AGREE WITH MR. MILLER'S PROPOSED MODIFICATIONS?

A. No. Mr. Miller's proposal to require that the contract rate charged must be at least 110% of the incremental cost of gas is too restrictive in today's environment and would remove the flexibility that PGW needs to compete effectively with other fuel sources. For example, it may be necessary to offer a rate that over the term would produce revenues in excess of 110% of the incremental cost of gas used to serve that customer but which, in the early years, is at or slightly above the natural gas costs that PGW secures for the customer. The current tariff language would ensure that PGW would never enter an arrangement unless it produced a net

benefit. That should be sufficient. Also, the minimum take requirements proposed by Mr. Miller would inappropriately limit PGW's discretion. PGW may choose to require minimum takes, but this should not be a requirement of every deal.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.

EXHIBIT CW R-1

DOCKET NO. R-00006042

History of Customers -- January 1998 through February 2001

Pre BCCS	JAN 1998	FEB 1998	MAR 1998	APR 1998	MAY 1998	JUN 1998	JUL 1998	AUG 1998	SEP 1998	OCT 1998	NOV 1998	DEC 1998	JAN 1999	FEB 1999	MAR 1999	APR 1999	MAY 1999	JUN 1999
Heating																		
Residential	376,019	378,128	376,844	377,509	374,774	372,608	370,281	365,563	363,241	368,403	370,235	371,303	385,188	376,561	376,198	376,996	382,804	376,609
CRP	48,697	47,995	48,125	48,529	49,224	49,573	49,597	49,647	49,490	46,144	44,171	43,772	44,974	43,294	43,362	43,747	45,407	45,053
Commercial	17,871	17,801	17,758	17,675	17,600	17,341	17,499	17,226	17,172	17,218	17,202	17,427	18,351	17,758	17,548	17,655	18,658	18,481
Total	442,587	443,924	442,727	443,713	441,598	439,522	437,377	432,436	429,903	431,765	431,608	432,502	448,513	437,613	437,106	438,398	446,869	440,143
% Change from Prior Month		0.30%	-0.27%	0.22%	-0.48%	-0.47%	-0.49%	-1.13%	-0.59%	0.43%	-0.04%	0.21%	3.70%	-2.43%	-0.12%	0.30%	1.93%	-1.51%

Post BCCS	JUL 1999	AUG 1999	SEP 1999	OCT 1999	NOV 1999	DEC 1999	JAN 2000	FEB 2000	MAR 2000	APR 2000	MAY 2000	JUN 2000	JUL 2000	AUG 2000	SEP 2000	OCT 2000	NOV 2000	DEC 2000	JAN 2001	FEB 2001
Heating																				
Residential	Not Avail	Not Avail	396,380	332,917	317,646	418,389	378,177	385,155	411,095	391,359	382,656	380,776	390,486	380,731	375,242	369,441	369,747	389,570	374,753	374,856
CRP	Not Avail	Not Avail.	(21,813)	92,603	40,328	28,751	27,460	53,507	42,058	31,773	30,851	153,164	54,347	64,285	55,519	54,072	53,068	52,294	51,383	53,058
Commercial	Not Avail	Not Avail.	16,427	15,284	12,902	20,552	19,322	19,578	23,125	21,498	20,233	20,732	21,288	18,768	19,214	19,229	19,236	19,221	20,656	19,739
Total			390,994	440,804	370,874	467,692	424,959	458,240	476,278	444,630	443,740	554,672	466,121	463,784	449,975	442,742	442,051	441,085	446,792	447,653
% Difference from Prior Month			-11.2%	12.74%	-15.86%	26.11%	-9.14%	7.83%	3.94%	-6.64%	-0.20%	25.00%	-15.96%	-0.50%	-2.96%	-1.61%	-0.16%	-0.22%	1.29%	0.19%

History of Sales – January 1998 through February 2001

Pre BCCS Mcf	JAN 1998	FEB 1998	MAR 1998	APR 1998	MAY 1998	JUN 1998	JUL 1998	AUG 1998	SEP 1998	OCT 1998	NOV 1998	DEC 1998	JAN 1999	FEB 1999	MAR 1999	APR 1999	MAY 1999	JUN 1999
Heating																		
Residential	5,815,086	5,493,847	4,890,672	3,060,393	1,579,178	1,031,027	883,320	824,706	706,039	1,112,833	2,442,656	3,822,729	6,809,555	5,077,714	5,223,548	3,663,033	2,389,552	1,188,498
CRP	1,045,022	966,448	878,464	580,533	309,915	184,980	138,935	120,439	115,114	163,764	393,341	641,641	1,042,968	797,004	819,606	618,017	428,075	202,210
Commercial	1,016,266	924,401	845,125	522,679	270,548	192,559	203,084	217,129	175,579	226,255	464,289	671,749	1,177,154	887,523	962,541	649,045	484,807	239,332
Total	7,876,374	7,384,696	6,614,261	4,163,605	2,159,641	1,408,566	1,225,339	1,162,274	996,732	1,502,852	3,300,286	5,136,119	9,029,677	6,762,241	7,005,695	4,930,095	3,302,434	1,630,040
Cycle DD	822	750	645	355	145	24	1	0	2	67	295	461	956	781	749	406	154	17

Post BCCS Mcf	JUL 1999	AUG 1999	SEP 1999	OCT 1999	NOV 1999	DEC 1999	JAN 2000	FEB 2000	MAR 2000	APR 2000	MAY 2000	JUN 2000	JUL 2000	AUG 2000	SEP 2000	OCT 2000	NOV 2000	DEC 2000	JAN 2001	FEB 2001
Heating																				
Residential	0	0	(866,433)	1,778,911	2,619,525	3,482,180	7,173,787	8,208,061	4,812,965	3,255,134	2,070,294	2,605,891	989,539	978,643	920,908	1,508,010	2,994,091	5,404,696	9,223,256	5,656,312
CRP [1]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155,361	251,726	504,040	1,038,423	1,476,070	1,160,866
Commercial	0	0	255,698	320,370	295,512	913,304	1,230,789	1,505,243	1,196,041	529,000	471,141	436,606	440,565	325,617	292,033	360,012	689,432	1,017,065	1,594,755	1,305,251
Total	0	0	(610,735)	2,099,280	2,915,038	4,395,484	8,404,576	9,713,304	6,009,006	3,784,135	2,541,435	3,042,296	1,430,104	1,304,260	1,368,302	2,119,748	4,187,563	7,460,184	12,294,081	8,122,429
Cycle DD	4	0	5	93	285	518	931	976	552	364	187	62	5	0	7	103	254	761	1072	849

(1) CRP sales data for September 1999 through August 2000 reported in company sales reports combined with Residential

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF

HOWARD S. GORMAN

ON BEHALF OF
PHILADELPHIA GAS WORKS

DOCKET NO. R-00006042

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

DOCKET NO. R-00006042

MAY 20

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Howard Gorman. I am a Managing Consultant with R. J. Rudden Associates, Inc. ("Rudden"). I also serve as Rudden's Chief Financial Officer. My business address is 898 Veterans Highway, Hauppauge, NY 011788.

Q. PLEASE STATE THE PURPOSE OF THIS RESPONSE.

A. The purpose of this Response is to respond to certain matters discussed by Ralph E. Miller in his Direct Testimony in connection with the recent filing by Philadelphia Gas Works ("PGW" or "Company") before the Pennsylvania Public Utility Commission in this Docket. The matters I will address concern the Cost of Service Study ("COSS") performed by R. J. Rudden Associates, Inc. ("Rudden").

Q. DO YOU AGREE WITH MR. MILLER'S STATEMENT THAT THERE SHOULD BE NO CUSTOMER COMPONENT OF DISTRIBUTION MAINS INVESTMENT?

A. No, I do not agree. Mr. Miller provides several reasons for his statement. First, he states "the connection of customers to the distribution system is not a separate product or service provided by PGW, and it has no independent value to PGW's customers." In fact, attachment is a common service for most utilities. PGW needs to have a distribution system to deliver gas from the city gate to each customer regardless of when and how the customer uses gas service. The zero-intercept cost analysis, a common method of identifying that part of the cost, identifies the hypothetical cost of constructing the pipe of zero size from the city gate to the customer and allocates that portion on a per customer basis. This hypothetical method of cost allocation reflects the fact that each customer benefits

from having access to the distribution mains system and that some investment is required solely to provide the customer access to service.

Second, Mr. Miller argues that because PGW has the fewest feet of main per service among a group of its peers, PGW's system is so unique that other zero-intercept studies can't be used for comparison. While we did rely on a proxy, the proxy data was the best information available. Moreover, the fact that PGW has the lowest value for the ratio cited by Mr. Miller (feet of main per service), does not change the appropriateness of using the zero intercept method. The fact that PGW has the lowest number of feet per service for the group does not appear to be related to the percentage that we are seeking to identify: that is, the percentage of the total cost of mains represented by the cost of hypothetical minimum-diameter pipes. We believe that the 25% component we used is appropriate. Moreover, this number is at the bottom of the range cited in my testimony and below the three companies cited, in order to take into account the density of the PGW system and the proportion of multi-tenant facilities.

Finally, Mr. Miller recommends "allocating the entire amount of this investment in accord with the peak and average demand method." Mr. Miller does not state why he believes this method is preferable to the design-day demand allocation used in the COSS. Allocation of the demand component of mains based on design-day demand is appropriate, because mains are sized to provide capacity for the maximum demand level imposed on the system by firm service customers. On the other hand, Peak and Average allocation would not reflect the cost causality of the investment in mains. Under the Peak and Average allocation,

high load factor customer classes are assigned more of the cost of the demand component of mains than under the design-day method, even though the mains, and the investment, are sized to meet customers' maximum demands and not their average demands.

Q. DO YOU AGREE WITH MR. MILLER'S STATEMENT REGARDING ADMINISTRATIVE AND GENERAL ("A&G") SALARIES (ACCOUNT 920) AND OFFICE SUPPLIES AND EXPENSES (ACCOUNT 921), "SOME OF THESE EXPENSES RELATE MUCH MORE CLOSELY TO PGW'S PLANT INVESTMENT, AND THEY SHOULD BE ALLOCATED ON THAT BASIS"?

A. No, I do not agree. The costs in account 920 include, for example, salaries for: Officers; Internal Auditing; Security; Finance, Treasury and Accounting; Human Resources; Legal; Public Policy; Operations; and Customer Affairs. The costs in account 921 include office supplies and expenses for the above categories. Account 920 is shown net of $2.5 million budgeted savings due to unspecified personnel reductions and retirements, and account 921 is shown net of $10.0 million budgeted savings due to costs savings and productivity improvements. Allocating A&G on the basis of direct labor is appropriate for these costs.

Mr. Miller states that another method would allocate A&G in a manner that better reflects PGW's business. Direct labor costs are incurred in a way that reflects PGW's business, and therefore allocating A&G based on direct labor does in fact reflect PGW's business. It is for this reason that the Federal Energy Regulatory Commission generally accepts allocating A&G based on direct labor costs. For Mr. Miller's contention to be valid, there would have to be A&G costs incurred to manage assets without having direct labor involved; this is not the case

with PGW. As a practical matter, a special study to allocate account 920 (which has 33 subaccounts) and account 921 (which has 39 subaccounts) would have been time-consuming and costly without a likely change in the overall allocation.

Q. DO YOU AGREE WITH MR. MILLER'S STATEMENT THAT CREDITS FOR DUPLICATE CHARGES SHOULD BE ALLOCATED IN ACCORDANCE WITH THE COSTS THEY ARE REVERSING, INSTEAD OF IN ACCORDANCE WITH CONSTRUCTION WORK IN PROGRESS?

A. Yes, I agree. However, we did not have the detailed data to determine which costs were reversed. Therefore, we assumed that the costs that were reversed are similar to the costs for which the construction is being performed. For example, we assumed that capitalized costs of constructing Production assets were originally incurred in the Production function. We believe this is a reasonable assumption.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

PGW St. 8-0

5/22/01

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF

THOMAS J. SULLIVAN

ON BEHALF OF
PHILADELPHIA GAS WORKS

DOCKET NO. R-00006042

PHILADELPHIA GAS WORKS
BASE RATE PROCEEDING

DOCKET NO. R-00006042

MAY 2001

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Thomas J. Sullivan. My business address is 8400 Ward Parkway, P.O. Box 8405, Kansas City, Missouri 64114.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Black & Veatch Corporation as a project manager.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGRUOND AND PROFESSINAL EXPERIENCE.

A. My educational background and professional experience are outlined in my curriculum vitae, attached hereto as Exh. TJS-1.

Q. PLEASE STATE THE PURPOSE OF YOUR TESTIMONY.

A. I am sponsoring the submission into the record of Black & Veatch's Independent Consultant's Engineering Report, April 25, 2001 (TJS-2). The Black & Veatch Engineering Report ("the Report") was prepared and submitted to the City of Philadelphia Director of Finance Janice D. Davis on April 25 in conjunction with the issuance of $119,280,000 (preliminary) Gas Works Revenue Bonds, Third Series (the "2001 Bonds"). The Report is required by Section 8 of the First Class City Revenue Bond Act and Section 4.03(a) of the General Gas Works Revenue Bond Ordinance of 1998. This Report will be an appendix to the Offering Statement for the 2001 Bonds. Both the Report and the Offering Statement has or will shortly be submitted to Philadelphia City Council together with a proposed ordinance for approval of the issuance of the 2001 Bonds.

Q. WAS THE REPORT PREPARED BY YOU OR UNDER YOUR SUPERVISION AND DIRECTION?

A. Yes it was.

Q. WHAT WAS THE BASIS ON WHICH BLACK & VEATCH REACHED THE OPINIONS AND CONCLUSIONS CONTAINED IN THE REPORT?

A. As stated in the transmittal letter, Black & Veatch's report was based upon a review of the books and records and customer and financial projections and other materials supplied by PGW. While Black & Veatch considers such materials to be reliable, we have not verified the accuracy of these documents. The report is also based on our own analyses, projections and assumptions, which were independently developed, and which are set forth in the report.

Q. PLEASE SUMMARIZE THE PRINCIPAL CONTENTS AND CONCLUSIONS OF THE REPORT?

A. As stated in the Report.

1. PGW is a competently managed and operated gas distribution utility. PGW and its facilities are organized, operated and maintained at a level equal to, or in excess of, regulatory requirements and generally accepted industry practices. PGW's facilities are in good operating condition. (B-58)

2. Based on our evaluation of financial projections covering the period September 1, 2000 through August 31, 2006, and on the basis of actual and estimated future annual financial operations of PGW's facilities and certain assumptions with respect thereto over the amortization period of the 2001 Bonds, which Black & Veatch believes to be reasonable, current and future project revenues will be adequate to meet PGW's obligations. (B-58)

3. Significantly, Black & Veatch's analysis was based upon the finding that a $53 million per year permanent base rate increase on a levelized basis over the FY 2002 – 2006 period is, in our opinion, the minimum level of increase needed to satisfy PGW's

bond covenants and to meet the objectives of paying down commercial paper, funding more of its construction from internally generated funds and meeting the other objectives listed in the Report. (B-44, B-52)

4. The level of revenues projected for the 2002 through 2006 period is based on normal weather conditions. To the extent that weather is warmer than normal, PGW will likely realize lower revenues. While most of such a reduction in revenues would be offset by a reduction in purchased gas costs, the contribution margin would also decline, potentially impacting PGW's ability to meet its Bond Ordinance covenants without additional rate relief. If weather is colder than normal over the projection period, PGW's contribution margin would increase, enhancing PGW's ability to meet its Bond Ordinance covenants and reducing the need for future base rate increases. (B-44)

5. If the overall approved rate relief over the 2002 through 2006 period is significantly lower than the level assumed herein, PGW's ability to meet Bond Ordinance covenants will be significantly impaired, including its covenants to pay operating expenses and debt service in full when due, to continuously operate and maintain the System, and to pay all City Charges, including the annual base payment to the City, and to achieve the coverage required by the Rate Covenants. If PGW receives a higher level than assumed herein, the need for future long-term borrowing might be reduced and short-term debt might be retired sooner than what is projected in our analysis. Potentially, this would result in further funding of working capital reserves and the deferring of the need for future rate increases; and PGW's overall financial health would be improved. (B-56)

6. The PUC has recognized its obligation to utilize PGW's "prior ratemaking methodology" to set rates for PGW. Black & Veatch has determined that the prior rate-making methodology is the "cash flow method." (B29-30)

7. The Transition to Excellence Program initiatives currently in place will meet PGW's projections. (B-57). In addition, our independent assessment found that PGW had already included in its Program, initiatives that will produce at least as much cost savings as are likely to be realized from implementation of the PUC Management Audit, if not more. Id.

We also found that, in some ways, PGW's measures will result in real savings that are realistically capable of being achieved by the Company. For example, the Audit called for the realization of "savings" in excess of $13 million by eliminating the senior citizen discount program. However, currently, PGW recovers the discounted portion of senior citizens' bills through its GCR factor and base rates. If senior citizens paid their full billed amount without any discount, the Company would make a correlated reduction in its rates. Thus, such a measure would not produce any savings, but rather would merely transfer the recovery of revenue from one group of customers to another. As another example, the Audit calls on PGW to reduce its accounts receivable, or bad debt expense, by $28 million. While such a goal is easily embraced, it is not easily achieved. PGW has estimated a reduction in its accounts receivable that we view as more realistic.

Q. WHY ARE YOU SUBMITTING THE REPORT AT THIS TIME?

A. The report was completed only recently (April 25, 2001) and was filed with the PUC last week. The Report represents an independent review and assessment of PGW's financial condition and needs and, therefore, should be of interest to the PUC in reaching its

decision in PGW's permanent base rate case. Moreover, several of the independent opinions and conclusions in the Report, as summarized above, contradict recommendations of certain witnesses for the opposing parties and, therefore, I believe they will be relevant when the PUC considers these issues. Specifically, our finding that $53 million represents the minimum base rate increase needed for PGW to meet its bond covenants and other obligations starkly contradicts Office of Consumer Advocate witness Lelash's assertion that a $21.5 million is sufficient. Further, Office of Trial Staff witness Weakley's recommended $33 million increase (exclusive of interim relief) also appears to be inadequate.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.

EXHIBIT TJS - 1

DOCKET NO. R-00006042

Thomas J. Sullivan
Black & Veatch
Senior Management Consultant
Management Consulting Division

Mr. Sullivan is a Senior Management Consultant in the firm of Black & Veatch Corporation. Since graduation from college, he has been continuously employed by Black & Veatch, and has worked in the Civil-Environmental, Power and Management Consulting Divisions. Prior to transferring to the Management Consulting Division in 1982, Mr. Sullivan performed structural design for wastewater and power facilities and wrote operation and maintenance manuals for wastewater facilities. Mr. Sullivan currently works in the Management Consulting Division's energy services group. Mr. Sullivan's career in the Management Consulting Division has primarily focused on the application of engineering economics and financial analysis in engagements pertaining to gas and electric utilities.

Education: B.S., Civil Engineering, University of Missouri-Rolla, 1980
M.B.A., Business Administration, University of Missouri-Kansas City, 1985

Professional Qualifications: Registered Professional Engineer: Missouri
Member: American Society of Civil Engineers

Honorary Societies: Tau Beta Pi, Phi Kappa Phi, Chi Epsilon, Beta Gamma Sigma

Joined Black & Veatch: 1980

Birthdate: 31 December 1958

Citizenship: United States of America

Expert Witness Testimony:

Project	Location	Activity	Year
UtiliCorp United, Inc.	Kansas	Gas – Rate design, class cost of service study, and weather normalization. Docket No. 00-UTCG-336-RJS.	2000
Southern Union Gas Company	Texas	Gas – Depreciation rates. El Paso, Texas.	2000
Southern Union Gas Company	Texas	Gas – Depreciation rates. Texas Railroad Commission. Docket No. 8878.	1999
UtiliCorp United, Inc.	Kansas	Gas - Rate design and class cost of service study. Docket No. 193, 788-U.	1996
Peoples Natural Gas Company	Iowa	Gas - Class cost of service study. Docket No. RPU-92-6.	1992
Peoples Natural Gas Company of South Carolina	South Carolina	Gas - Revenue requirements, cost of capital, pro forma adjustments, and rate design. Docket No. 88-52-G.	1988

Professional Experience:

Project	Location	Activity	Position	Year
Orangeburg DPU	Orangeburg, South Carolina	Development of continuing property record for electric, gas, water, wastewater, and administrative facilities.	Project Manager	1997-2001
Southern Union Gas Company	Austin, Texas	Depreciation rate study.	Project Manager	1998-2001
Philadelphia Gas Works	Philadelphia, Pennsylvania	Engineer's report.	Project Manager	2001
UtiliCorp United, Inc.	Michigan	Rate case assistance. Weather normalization, cost of service, and rate design.	Project Manager	2001
Orangeburg DPU	Orangeburg, South Carolina	Geographic Information Systems assistance.	Project Manager	2000-2001
MidAmerican Energy	Orange City, Iowa	Valuation of natural gas utility properties.	Project Manager	2000-2001
Geneva, Illinois	Geneva, Illinois	Outage, wheeling rate, transmission feasibility, and generation feasibility studies.	Project Manager	2000-2001
Orangeburg DPU	Orangeburg, South Carolina	Cost of electricity recovery model.	Project Manager	2001
Missouri Gas Energy	Missouri	Rate case assistance – depreciation rate issues.	Project Manager	1997, 2000, 2001
Energy Services of Pensacola	Pensacola, Florida	Review rates and natural gas supply for annual report.	Project Consultant	1997, 2001
Orangeburg DPU	Orangeburg, South Carolina	Purchased power contract evaluation and negotiation.	Project Manager	1996-2001
Orangeburg DPU	Orangeburg, South Carolina	Wholesale electric rate assistance - South Carolina Gas & Electric.	Project Manager	1996-2001
Orangeburg DPU	Orangeburg, South Carolina	Electric load forecast and supply study.	Project Manager	1995-2001
Orangeburg DPU	Orangeburg, South Carolina	Electric, gas, water, and wastewater rate study.	Project Manager	1995-1996, 2000-2001

Professional Experience (Continued):

Orangeburg DPU	Orangeburg, South Carolina	Purchased gas assistance.	Project Manager	1994-2001
Orangeburg DPU	Orangeburg, South Carolina	Electric rate assistance.	Project Manager	1992-2001
Midwest Power	Iowa	Electric cost of service study and weather normalization study.	Project Manager	1992-1995, 2001
Bamberg Board of Public Works	Bamberg, South Carolina	Purchased gas cost model.	Project Manager	1991-2001
Nicholasville, Kentucky	Nicholasville, Kentucky	Valuation of a water utility.	Project Manager	1999-2000
MidAmerican Energy	Illinois	Gas class cost of service study.	Project Manager	1999-2000
MidAmerican Energy	South Dakota	Gas class cost of service study.	Project Manager	1999-2000
Bamberg, South Carolina	Bamberg, South Carolina	Electric, gas, water, and wastewater rate study.	Project Manager	2000
K N Energy, Inc.	Lakewood, Colorado	Depreciation rate study.	Project Manager	2000
Southern Union Gas Company	El Paso, Texas	Expert witness testimony – El Paso, Texas.	Project Manager	2000
Geneva, Illinois	Geneva, Illinois	Electric bond coverage certification.	Project Manager	2000
Columbia, South Carolina	Columbia, South Carolina	Electric franchise assistance.	Project Manager	2000
Southern Union Gas Company	North Texas	Depreciation rate assistance.	Project Manager	2000
Energy Services of Pensacola	Pensacola, Florida	Valuation of natural gas pipeline.	Project Manager	2000
Geneva, Illinois	Geneva, Illinois	Electric load forecast and rate study.	Project Manager	1996, 2000
UtiliCorp United, Inc.	Kansas	Rate case assistance. Weather normalization, cost of service, and rate design.	Project Manager	1995-1996, 1999-2000

Professional Experience (Continued):

Missouri Gas Energy	Kansas City, Missouri	Depreciation rate study.	Project Manager	1995, 2000
K N Energy, Inc.	Neligh, Nebraska	Valuation of natural gas utility properties.	Project Manager	1999
MidAmerican Energy	Iowa	Gas class cost of service study.	Project Manager	1998-1999
Metropolitan Airports Commission	Minneapolis, Minnesota	Purchased gas and electricity contract evaluation and negotiation.	Project Manager	1997, 1999
York County Natural Gas Authority	York County, South Carolina	Gas supply study, rate study, and purchased gas cost model.	Project Manager	1989-1991, 1996, 1999
Chester County Natural Gas Authority	Chester County, South Carolina	Gas supply study and rate study.	Project Manager	1989-1990, 1999
K N Energy, Inc.	Lakewood, Colorado	Determination of construction overhead allowance.	Project Manager	1998-1999
Southern Union Gas Company	Austin, Texas	Expert witness testimony – Texas Railroad Commission.	Project Manager	1998
UtiliCorp United Inc.	Nebraska	Value Wahoo and Scribner natural gas properties.	Project Manager	1997
K N Energy, Inc.	Lakewood, Colorado	Value natural gas pipeline.	Project Manager	1997
Orange & Rockland Utilities, Inc.	Pearl River, New York	Evaluation of natural gas pipeline project.	Project Manager	1997
County of Cumberland	Fayetteville, North Carolina	Evaluate contracts and prepare pro forma cash flow analysis for waste to energy facility.	Project Consultant	1997
Stanberry, Missouri	Stanberry, Missouri	Valuation of electric and gas facilities.	Project Manager	1996-1997
Colorado Springs Utilities	Colorado Springs, Colorado	Review natural gas rate filing.	Project Manager	1996

Professional Experience (Continued):

Greensville County, Virginia	Emporia, Virginia	Gas feasibility study.	Project Manager	1995-1996
Las Cruces, New Mexico	Las Cruces, New Mexico	Natural gas cost-of-service data systems.	Project Manager	1992-1996
Rio Grande Natural Gas Assoc.	Las Cruces, New Mexico	Natural gas cost-of-service data systems.	Project Manager	1992-1996
Municipal Electric Authority of Georgia	Atlanta, Georgia	Wholesale electric rate assistance.	Project Manager	1995
Hall, Estill, et al.	Oklahoma City, Oklahoma	Oklahoma natural gas rate case assistance.	Project Manager	1995
North Carolina Municipal Power Agency No. 1	Raleigh, North Carolina	Wholesale electric rate assistance.	Project Manager	1995
Midwest Power	South Dakota	Class cost of service.	Project Manager	1994-1995
Midwest Gas	South Dakota	Class cost of service.	Project Manager	1994-1995
Midwest Gas	Nebraska	Jurisdictional and class cost of service study.	Project Manager	1994-1995
Midwest Gas	Iowa	Jurisdictional and class cost of service study, developmental energy efficiency plan cost recovery factors.	Project Manager	1994-1995
Indianapolis Power & Light	Indianapolis, Indiana	Fair market value rate base.	Project Manager	1993-1995
Peoples Natural Gas	Omaha, Nebraska	Avoided gas cost and load forecasting.	Project Manager	1994
Kansas Public Service	Lawrence, Kansas	Class cost of service study and weather normalization.	Project Manager	1994
Mesa, AZ	Mesa, Arizona	Gas rate study.	Project Manager	1994
Black Hills Power & Light	Rapid City, South Dakota	Depreciation rate study; generating facilities interim updates.	Project Manager	1993-1994

Professional Experience (Continued):

Johnson & Johnson	Benson, South Carolina	Review proposed gas supply contract. Review electric tariffs for standby service.	Project Engineer	1992, 1994
Black Hills Power & Light	Rapid City, South Dakota	Electricity load and sales forecast, Wyoming certification proceeding, and Integrated Resource Plan.	Project Manager	1990, 1992, 1993-1994
Pennsylvania & Southern Gas Co.	Sayre, Pennsylvania	Stock valuation and corporate assessment.	Project Manager	1993
K N Energy, Inc.	Kansas	Natural gas rate and class cost of service assistance.	Project Manager	1993
K N Energy, Inc.	Lakewood, Colorado	FERC Order 636 Restructuring.	Project Manager	1993
Minnegasco	Wahoo, Nebraska	Feasibility of municipalizing natural gas utility property.	Project Manager	1992-1993
Midwest Gas	Minnesota	Jurisdictional and class cost-of-service study.	Project Manager	1992
Kansas Public Service	Lawrence, Kansas	Gas supply study.	Project Manager	1992
Atlantic, Iowa	Atlantic, Iowa	Electric cost-of-service.	Project Engineer	1992
Midwest Gas and IPS Electric	Sioux City, Iowa	Energy efficiency plan filing assistance.	Project Engineer	1991-1992
Peoples Natural Gas	Kansas	Gas cost-of-service study, rate design, and weather normalization.	Project Engineer	1991-1992
Keleher & McLeod (PNM)	Albuquerque, New Mexico	Feasibility of municipalizing electric utility properties.	Project Manager	1990-1992
Orangeburg DPU	Orangeburg, South Carolina	Gas supply study and purchased gas cost model.	Project Engineer	1989-1992
Peoples Natural Gas	Iowa	Natural gas cost-of-service study and expert witness testimony.	Project Engineer	1986-1987, 1992
Iowa Public Service Company	Iowa	Electric cost-of-service study.	Project Engineer	1984-1985, 1991-1992

Professional Experience (Continued):

Midwest Gas	Sioux City, Iowa	Jurisdictional cost-of-service study and weather normalization.	Project Engineer	1982, 1990-1992
KN Energy, Inc.	Stuart, Nebraska	Valuation of natural gas utility properties.	Project Engineer	1991
Roanoke Valley Project	Halifax County, Virginia	Reviewed rail transportation, coal supply, lime supply, and ash removal contracts.	Project Engineer	1991
Missouri Public Service	Kansas City, Missouri	Electric cost-of-service.	Project Engineer	1991
Black Hills Power & Light	Rapid City, South Dakota	Depreciation rate study.	Project Engineer	1990-1991
Midwest Gas	Minnesota	Jurisdictional and class cost-of-service study.	Project Engineer	1990-1991
Orange & Rockland Utilities, Inc.	Pearl River, New York	Federal Energy Regulatory Commission (FERC) rate assistance.	Project Engineer	1984, 1986-1987, 1989, 1991
Lancaster County Natural Gas Authority	Lancaster County, South Carolina	Gas supply study and rate study.	Project Engineer	1989-1990
Orange & Rockland Utilities, Inc.	Pearl River, New York	Gas supply study and update of weather normalization study.	Project Engineer	1988-1990
Peoples Natural Gas Company of South Carolina	Florence, South Carolina	Natural gas rate study and return on equity analysis and expert testimony.	Project Engineer	1983-1986, 1988, 1990
Chase Manhattan Bank	New York City, New York	Reviewed gas supply contracts for Sayreville, New Jersey and Bellingham, Massachusetts cogeneration projects.	Project Engineer	1989
Midwest Gas	Sioux City, Iowa	Analysis of feasibility of an incremental interruptible sales service program.	Project Engineer	1989
Black Hills Power & Light	Rapid City, South Dakota	Electricity load and sales forecast.	Project Engineer	1988

Professional Experience (Continued):

Peoples Natural Gas	Wayne, Nebraska; Mora, Minnesota; and Spencer, Iowa	Feasibility of municipalizing natural gas utility properties.	Project Engineer	1988
Peoples Natural Gas	Hartley, Iowa	Valuation of natural gas utility properties.	Project Engineer	1988
Iowa Public Service Company	Iowa	Electric cost-of-service and weather normalization studies.	Project Engineer	1987-1988
KN Energy, Inc.	Wyoming	FERC rate assistance.	Project Engineer	1987-1988
KN Energy, Inc.	Kansas	Natural gas rate assistance.	Project Engineer	1985-1988
Monroe & Lemann (NOPSI)	New Orleans, Louisiana	Feasibility of municipalizing electric and natural gas utility properties.	Project Engineer	1985-1988
KN Energy, Inc.	Nebraska	Natural gas rate studies.	Project Engineer	1982-1988
Midwest Energy	Hayes, Kansas	Electric rate design.	Project Engineer	1986-1987
KN Energy, Inc.	Lakewood, Colorado	Great Western Sugar Lawsuit - natural gas curtailments.	Project Engineer	1985-1987
Colorado Springs	Colorado Springs, Colorado	Electric contribution in aid of construction study.	Project Engineer	1984-1985, 1987
Orange & Rockland Utilities, Inc.	Pearl River, New York	Weather normalization study.	Project Engineer	1984, 1987
Kiawah Island Utilities	Kiawah Island, South Carolina	Water utility rate of return analysis.	Project Engineer	1986
KN Energy, Inc.	Colorado	Natural gas rate study.	Project Engineer	1985-1986
Peoples Natural Gas	Iowa	Natural gas cost-of-service study.	Project Engineer	1985-1986

Professional Experience (Continued):

Iowa Public Service Company	Iowa	Natural gas cost-of-service study.	Project Engineer	1985-1986
KN Energy, Inc.	Lakewood, Colorado	FERC natural gas rate assistance.	Project Engineer	1984-1986
Wyoming Gas Company	Wyoming	Natural gas utility rate of return analysis.	Project Engineer	1985
Colorado Springs	Colorado Springs, Colorado	Electric cost-of-service study.	Project Engineer	1985
United States Steel	Utah	FERC electric rate assistance.	Project Engineer	1984-1985
Oklahoma Gas & Electric	Oklahoma	Cogeneration study.	Project Engineer	1984
Northern Utilities, Inc.	Wyoming	Natural gas rate study.	Project Engineer	1984
United States Steel	Utah	FERC natural gas rate assistance.	Project Engineer	1984
KN Energy, Inc.	Nebraska	Marathon Lawsuit - natural gas migration.	Project Engineer	1984
KN Energy, Inc.	Lakewood, Colorado	Natural gas rate case computer models.	Project Engineer	1983-1984
Orange & Rockland Utilities, Inc.	Pearl River, New York	Feasibility of extending natural gas pipeline.	Project Engineer	1983
Orangeburg DPU	Orangeburg, South Carolina	Natural gas and electric rate assistance.	Project Engineer	1983
Gas Service Company	Kansas and Missouri	Natural gas rate design.	Project Engineer	1982-1983
Carolina Pipeline Industrials	South Carolina	Natural gas rate assistance.	Project Engineer	1982
Colorado Springs	Colorado Springs, Colorado	Electric rate assistance.	Project Engineer	1982

Professional Experience (Continued):

Charleston	Charleston, South Carolina	Water rate assistance and valuation study.	Staff Engineer	1982
Indianapolis Water Company	Indianapolis, Indiana	Water utility valuation study.	Staff Engineer	1982
Orlando Utilities Commission	Orlando, Florida	Structural steel design for Stanton Energy Center.	Design Engineer	1981-1982
Pima County	Pima County, Arizona	Wastewater treatment plant operation and maintenance (O&M) manual.	Staff Engineer	1981
Emporia	Emporia, Kansas	Wastewater pump station O&M manual.	Staff Engineer	1981
Lincoln	Lincoln, Nebraska	Wastewater treatment plant O&M manual.	Staff Engineer	1981
Memphis	Memphis, Tennessee	Wastewater treatment plant O&M manual.	Staff Engineer	1981
Johnson County	Johnson County, Kansas	Wastewater treatment plant O&M manual.	Staff Engineer	1981
Kansas City	Kansas City, Missouri	Wastewater pump station O&M manual.	Staff Engineer	1981
Beloit	Beloit, Wisconsin	Wastewater treatment plant O&M manual.	Staff Engineer	1981
Columbia	Columbia, Missouri	Wastewater treatment plant O&M manual.	Staff Engineer	1980-1981
Henrico County	Henrico County, Virginia	Reinforced concrete design for wastewater treatment plant.	Design Engineer	1980

EXHIBIT TJS - 2

DOCKET NO. R-00006042

Engineering Report

$119,280,000
Gas Works Revenue Bonds
(1998 General Ordinance) Third Series

Philadelphia Gas Works
Philadelphia, Pennsylvania

BLACK & VEATCH
Corporation

BLACK & VEATCH

8400 Ward Parkway
P.O. Box 8405
Kansas City, Missouri 64114 USA

Tel: (913) 458-2000

Black & Veatch Corporation

April 25, 2001

Ms. Janice D. Davis
Director of Finance
City of Philadelphia
13th Floor, Municipal Services Building
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102

Dear Ms. Davis:

In accordance with our agreement with the Philadelphia Gas Works ("PGW") through the Philadelphia Facilities Management Corporation, the management entity for PGW, we submit herewith our consulting engineers' report to be included as an appendix to the official statement ("Official Statement") prepared by PGW in connection with its issuance of $119,280,000* Gas Works Revenue Bonds, Third Series (the "2001 Bonds") and upon which you may rely in furnishing your report required by Section 8 of the First Class City Revenue Bond Act and Section 4.03(a) of the General Gas Works Revenue Bond Ordinance of 1998. The purpose of this report is to present the findings of our evaluation of PGW's gas works system (the "System") and to set forth information concerning financial factors relating to the 2001 Bonds. This report is based on our analysis of the records and capital improvement programs of PGW, physical inspection of predominantly above-ground facilities and underground facilities at existing sites, discussions with key PGW personnel and such other investigations, as we have deemed necessary.

The evaluation of the System, which includes a discussion of organization, management, and staffing; system service area; supply facilities; distribution facilities; and the Capital Improvement Program (the "CIP") for fiscal years 2001 through 2006, is presented in the first part of the report. The second part of the report contains financial feasibility information including analyses of gas rates and rate methodology; projection of future operation and maintenance expenses; CIP financing plans; projection of revenue requirements as a determinant of future revenues; and assessing the ability of PGW to satsify the covenants in the City Ordinances authorizing the issuance of the Prior Bonds and the 2001 Bonds. A listing of our principal assumptions and opinions developed as a result of our studies is presented at the end of this report.

In conducting our studies, we reviewed the books, records, agreements, capital improvement programs, and customers, sales and financial projections of PGW as we deemed necessary to express our opinion of PGW's operating results and projections. While we consider such books, records, documents, and projections to be reliable, Black & Veatch has not verified the accuracy of these documents.

Black & Veatch is one of the oldest, largest and most diversified engineering, procurement, and construction firms in the United States. Over the past decade, the firm has expanded into the worldwide market and maintains a global network of regional, marketing, and project offices. Founded in 1915, the

*Preliminary, subject to change.

firm employs over 8,400 people performing financial, economic, and engineering studies and design and construction of facilities for clients in government and industry in the fields of energy, water, and wastewater. The firm has extensive experience in the design and analysis of the operation and financing of electric, natural gas, water, and wastewater systems serving communities ranging in size from small villages to large metropolitan systems of the magnitude of the System.

In this report, where standards or requirements are indicated as being applicable, being fulfilled, or to be attained, such standards or requirements are those promulgated by the Pennsylvania Public Utilities Commission (the "PUC") and other Federal, State, and local agencies, in accordance with the provisions of Federal laws and the laws of the Commonwealth of Pennsylvania governing the storage, delivery, and sale of gas. Capitalized terms not otherwise defined herein shall have the same meanings as ascribed to them in the Official Statement. References made herein to specific years are for the fiscal years ending August 31, unless otherwise noted.

The report includes our assessment of the condition of PGW's physical plant including PGW's existing storage and distribution facilities, based upon on-site inspections of facilities. We also reviewed and evaluated existing and planned natural gas transportation and supply contracts with respect to volumes of gas to be delivered. The general physical condition of the System's facilities has been evaluated using three rating categories - good, adequate, and poor - as described below.

- *Good*: The facility is in condition to provide reliable operation in accordance with design parameters and requires only routine maintenance.
- *Adequate*: The facility is operating at or near design levels, however, non-routine renovation, upgrading, and repairs are needed to ensure continued reliable operation. Significant expenditures for these improvements may be required.
- *Poor*: The facility is not being operated within design parameters. Major renovations are required to restore the facility and assure reliable operation. Major expenditures for these improvements may be required.

The ratings assigned in this report are the result of physical inspections of individual above-ground facilities and underground facilities at existing sites conducted in February and March 2001.

An evaluation of a gas storage, and distribution system of the magnitude and complexity of PGW's requires an assessment of each of the System's various components. The evaluation described in this report is based on estimates of the degree of improvement that has been and will be provided by the projects in the current CIP and their impact in meeting service requirements.

The proceeds from the 2001 Bonds, along with available fund balances and internally generated funds are to be used in part to finance capital improvement expenditures scheduled in the CIP for 2001 through 2002. The remaining capital improvement expenditures scheduled for 2003 through 2006 are expected to be financed, in part, with future bond issues. *See "Capital Improvement Program Financing."*

In conducting our analyses and in forming an opinion of the projection of future operations summarized in this report, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology utilized by Black & Veatch in performing the analysis follows generally accepted practices for such projections. Such assumptions and methodologies are summarized in this Report and are reasonable and appropriate for the purpose for which they are used. While Black & Veatch believes the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that actually occur.

Based on these analyses and the assumptions set forth or referred to in this report, we offer the following opinions to indicate PGW's conformance with specific requirements which must be met for the issuance of the 2001 Bonds as provided in the 1975 and 1998 General Ordinances:

1. PGW is a competently managed and operated gas distribution utility. PGW and its facilities are organized, operated and maintained at a level equal to, or in excess of, regulatory requirements and generally accepted industry practices. PGW's facilities are in good operating condition.

2. Based on our evaluation of financial projections covering the period September 1, 2000 through August 31, 2006, and on the basis of actual and estimated future annual financial operations of PGW's facilities and certain assumptions with respect thereto over the amortization period of the 2001 Bonds, which Black & Veatch believes to be reasonable, current and future project revenues, which are pledged under the 1975 General Ordinance and the 1998 General Ordinance, comply with the requirements of the definition of Project Revenues in Section 2 of the Act, and over the amortization period of the 2001 Bonds and the Prior Bonds, such Project Revenues will be adequate to meet all expenses of operation and maintenance, repair and replacement, reserve fund deposits, debt service on the bonds issued under the 1975 General Ordinance and debt service on the Bonds issued under the 1998 General Ordinance, as the same shall become due and payable, and the surplus requirements of the rate covenants contained in Section 4.03(b) of the 1975 General Ordinance and Section 4.03(b) of the 1998 General Ordinance.

3. The Project Revenues and Gas Works Revenues which are pledged as security for the bonds issued under the 1975 General Ordinance and the 1998 General Ordinance, respectively, are currently and are projected to be sufficient to comply with the Rate Covenants set forth in Section 4.03(b) of the 1975 General Ordinance and Section 4.03(b) of the 1998 General Ordinance.

4. The capital improvements proposed during the projection period, September 1, 2000 through August 31, 2006, will, along with continued good operation and maintenance practices, enable PGW to maintain its system in good operating condition. Review of present management practices indicates that good operation and maintenance is likely to continue.

5. Contracted PGW gas supplies plus (a) spot market purchases (b) anticipated additional contracted supplies plus supplemental gas capacities, as well as (c) the pipeline transport capacity to move these supplies to PGW, are adequate to meet PGW's projected demand on a day of maximum demand (a "design peak day"), or an hour of maximum demand (a "design peak hour"), and during a year of maximum demand (a "design peak year").

Very truly yours,

BLACK & VEATCH

Larry W. Loos
Vice President

Enclosure

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Introduction

The Philadelphia Gas Works ("PGW") is a gas distribution utility owned by the City of Philadelphia, Pennsylvania (the "City"), that acquires, stores, and distributes gas to residents and other customers within the City.

Under the terms of certain of the current revenue bond covenants, PGW is obligated to charge and collect rents, rates and charges to maintain net revenues at or above certain specified levels in excess of annual debt service requirements. In addition, prior to the issuance of bonds under the General Gas Works Revenue Ordinance of 1975 ("1975 Ordinance") or the General Gas Works Revenue Ordinance of 1998 ("1998 Ordinance"), a financial report from the City's Chief Fiscal Officer, which may be given in reliance on an engineering report, is required.

Purpose

The purpose of this report is to summarize findings of engineering studies performed by Black & Veatch Corporation ("Black & Veatch") related to the gas system of the Philadelphia Gas Works and to set forth information concerning the financial factors relating to the issuance of the $119,280,000[1] Gas Works Revenue Bonds, Third Series (the "2001 Bonds").

Scope

This report addresses the organization and management, physical condition, adequacy of system capacity, operation and maintenance practices, and staffing levels of PGW's systems. It provides a review of the proposed capital improvement program ("CIP") and includes the results of engineering studies regarding the financial requirements of the gas works system. Evaluation of the projected financing of future operating and capital improvement needs is based upon a review of historical operating and financial data and projected capital program and operating budget information provided by PGW. Projections of revenues and revenue requirements are presented for the fiscal years 2001 through 2006. The financial feasibility of the issuance of the 2001 Bonds is evaluated recognizing the results of these analyses and PGW's projected compliance with applicable revenue bond covenants.

PGW representatives and others have provided certain historical data and other information presented in this report. Black & Veatch has not conducted detailed verification tests of this information. As is normal in preparing the types of projections summarized in this report, certain assumptions have been made with respect to conditions, events, and circumstances that may occur in the future. While it is believed the assumptions made are reasonable and the methodology valid, actual results may differ significantly from those projected, as influenced by the conditions, events, and circumstances that actually occur. The methodology utilized in performing the analyses follows generally accepted practices for such projections under similar conditions.

Black & Veatch Qualifications

Black & Veatch is one of the largest and most experienced engineering firms in the United States specializing in utility engineering. Our experience includes the planning, design, operation analysis, and construction of gas, electric, water, and wastewater systems. In addition, the firm has extensive experience in assisting utilities with management and financial aspects of their operations. The firm has

[1] Preliminary, subject to change.

been engaged in more than 35,000 projects for over 6,200 clients, including utilities owned by municipalities ranging in size from small villages to large metropolitan regions, investor-owned utilities, industrial and commercial businesses, local and state agencies and the United States Government. Since 1972, the City of Philadelphia's Water Department has engaged Black & Veatch for various consulting services. These consulting services have included engineering evaluation reports for all Water and Wastewater System Revenue Bonds sold by the City since 1974 and various projects involving the development of water and wastewater rates.

Experienced personnel from Black & Veatch have performed the physical evaluation of PGW's gas supply and distribution systems. In performing our engineering assessment of PGW, Black & Veatch reviewed the current condition and operation and maintenance of the gas supply and distribution systems. We conducted inspections of PGW's major facilities in February and March 2001, including eight of nine city gate stations and PGW's two liquefied natural gas facilities. We also interviewed key members of PGW's management team on numerous occasions in February and March 2001, regarding operations and maintenance issues and practices.

The financial feasibility review has been performed by personnel from the Management Consulting Division of Black & Veatch which provides services in such areas as utility rates, utility property valuation, depreciation rate studies, financial analysis and planning, non-audit accounting, management and operations analysis and the preparation of independent engineering reports for official statements.

Organization and Management

The Philadelphia Gas Works is owned by the City of Philadelphia and is responsible for the acquisition, storage, and distribution of gas within the limits of the City. As described in greater detail herein (*See "The PGW Gas System"*), PGW is the largest municipally owned gas utility in the nation.

PGW's operations are managed by the Philadelphia Facilities Management Corporation ("PFMC"), a not-for-profit corporation whose Board is appointed by the Mayor. PFMC's responsibilities are set forth in a Management Agreement between the City and PFMC, which delegates responsibility for PGW's operation to an executive management team provided by PFMC. Under the Management Agreement, those responsibilities that are not specifically granted to PFMC fall under the domain of the Philadelphia Gas Commission ("PGC"), except to the extent preempted by the Pennsylvania Public Utility Commission ("PUC").

Prior to the passage of the Natural Gas Choice and Competition Act ("Gas Choice Act")[2], rates charged by PGW were regulated exclusively by the PGC because PGW was not a "public utility" within the meaning of the Pennsylvania Public Utility Code, as it was defined prior to the passage of the Gas Choice Act. On June 22, 1999, the Pennsylvania General Assembly passed the Gas Choice Act which amends the Public Utility Code by providing for the implementation of choice of suppliers of natural gas for retail customers of gas distribution companies. In addition, the Gas Choice Act provides that PGW is subject to regulation by the PUC, effective July 1, 2000, and that choice among natural gas suppliers will be provided to PGW's customers in 2003 after the resolution of PGW's initial tariff and restructuring proceedings by the PUC.

City of Philadelphia

The City of Philadelphia was founded in 1682 and merged with the County of Philadelphia in 1854. There are two principal governmental entities in Philadelphia: (1) the City, which performs ordinary municipal functions as well as traditional county functions; and (2) the School District, which has boundaries coterminous with the City and has responsibility for all public primary and secondary education. The court system in Philadelphia, consisting of Common Pleas, Municipal, and Traffic Courts, is part of the Commonwealth of Pennsylvania (the "Commonwealth") Judicial System. Although the Commonwealth pays judges and top level administrators, the City pays all other court costs, with partial reimbursement from the Commonwealth.

The City is governed primarily under the Home Rule Charter[3], which provides for the election, organization, powers, and duties of the legislative branch (the "City Council"); the powers and duties of the executive and administrative branches; and the City's fiscal and budgetary matters, contracts, procurement, property, and records.

The School District is governed primarily under the 1965 Educational Supplement to the Home Rule Charter. It has no independent taxing powers and may levy only the taxes authorized on its behalf by the City and Commonwealth. The School District is managed by a nine-member Board of Education appointed by the Mayor. In some matters, including the incurrence of short-term and long-term debt, separate laws of the Commonwealth govern the City and the School District. The School District is a separate political subdivision of the Commonwealth and the City has no property interest in or claim on any revenues or property of the School District.

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[2] Act of June 22, 1999, P.L. 122, No. 21, §3 (66 Pa. C.S.A. §2201 et seq.).

[3] Philadelphia Home Rule Charter, 351 Pa. Code §1.1-100 et seq., adopted pursuant to authorization of the First Class City Home Rule Act approved April 21, 1949, P.L. 665, §1 et seq. (53 P.S. §13101 et seq.).

Philadelphia Gas Works

In March 1835 a City ordinance was passed authorizing private ownership and operation of a public gas utility under trustee management. This ordinance also contained an option clause permitting the City to take ownership of the gas utility properties by issuing City bonds to the private stockholders. This option initiating City ownership of gas utility properties to ultimately form PGW was exercised March 1, 1841, and has since been continuously in effect. Manufactured gas production commenced February 8, 1836 and service was inaugurated February 10, 1836 to 46 gas lamps along Second Street.

During its 165 years of existence, the operation and management of PGW has evolved to its present configuration through a variety of arrangements. Initially the private owners managed it. In 1841, a Board of Trustees assumed management of PGW in accordance with an enabling City ordinance. This arrangement continued through April 1887 when the City under the Director of Public Works assumed management and operation of PGW. Serious financial and operating problems led to replacement of this arrangement on November 12, 1897. At that time, the City, unable to sell PGW, contracted with the United Gas Improvement Company ("UGI"), now UGI Corporation, for the operation and management of PGW under authority granted by the Home Rule Charter. Operation and management by UGI continued through December 31, 1972.

On December 5, 1972, the City caused the incorporation of the Philadelphia Facilities Management Corporation as a not-for-profit Pennsylvania corporation for the specific purpose of operating PGW. PFMC currently manages PGW in accordance with the original agreement with the City dated December 29, 1972, effective January 1, 1973, as subsequently amended (the "Management Agreement"). The relationship between the City, PGC, PFMC, and PGW as originally detailed in the Management Agreement is summarized below. As described later in this report, as of July 1, 2000, the Gas Choice Act confers the responsibility of regulating PGW's rates and services to the PUC *(See "Pennsylvania Public Utility Commission" and "Regulation").*

Organization	Function
City of Philadelphia	Owns PGW property and establishes legislation for the functioning of PGW. City Council approves the capital budget.
The Philadelphia Gas Commission	Responsibilities include: approval of personnel provided by PFMC, review of gas supply contracts for approval by City Council, approval of PGW's operating budget, review of PGW's capital budgets, and regulation of rates.[4]
PFMC	Provides executive management and directs operation of PGW facilities.
PGW	Manages construction, operation and maintenance of the gas system on a day-to-day basis.

The Management Agreement states that for the operation of PGW the PFMC shall provide:

- A Chief Executive Officer,

[4] As of July 1, 2000, the PUC became responsible for regulating rates pursuant to the Gas Choice Act.

- A Chief Operating Officer,
- A Chief Financial Officer, and
- Other personnel as deemed appropriate by PFMC.

All PFMC personnel are subject to the approval of the PGC. The PGC consists of five members: the City Controller, two Mayoral appointees, and two City Council appointees. The PGC has the general responsibility to oversee operation of PGW by PFMC and retains all powers not specifically granted to PFMC. In addition, the Management Agreement specifies certain functions of the PGC, mainly:

- Approval of PFMC personnel,
- Review and make recommendations regarding gas supply contracts for City Council approval,
- Approval of PGW's annual operating budget,
- Review and make recommendations regarding PGW capital budgets for City Council approval,
- Approval of short-term loans,
- Review and approval of all PGW real estate acquisitions, sales, or leases for submittal to City Council for approval by ordinance, and
- Power to establish procurement standards and to fix and regulate rates and charges[5] for supplying gas to customers other than the City and the Board of Education, which will annually produce revenues sufficient to:
  - Pay all operating and maintenance expenses of PGW and the interest and amortization expense of its debt;
  - Maintain debt coverage ratios;
  - Pay $18,000,000 to the City each year; and,
  - Provide such other funds as may be approved by the PGC and City Council for debt reduction or capital additions.

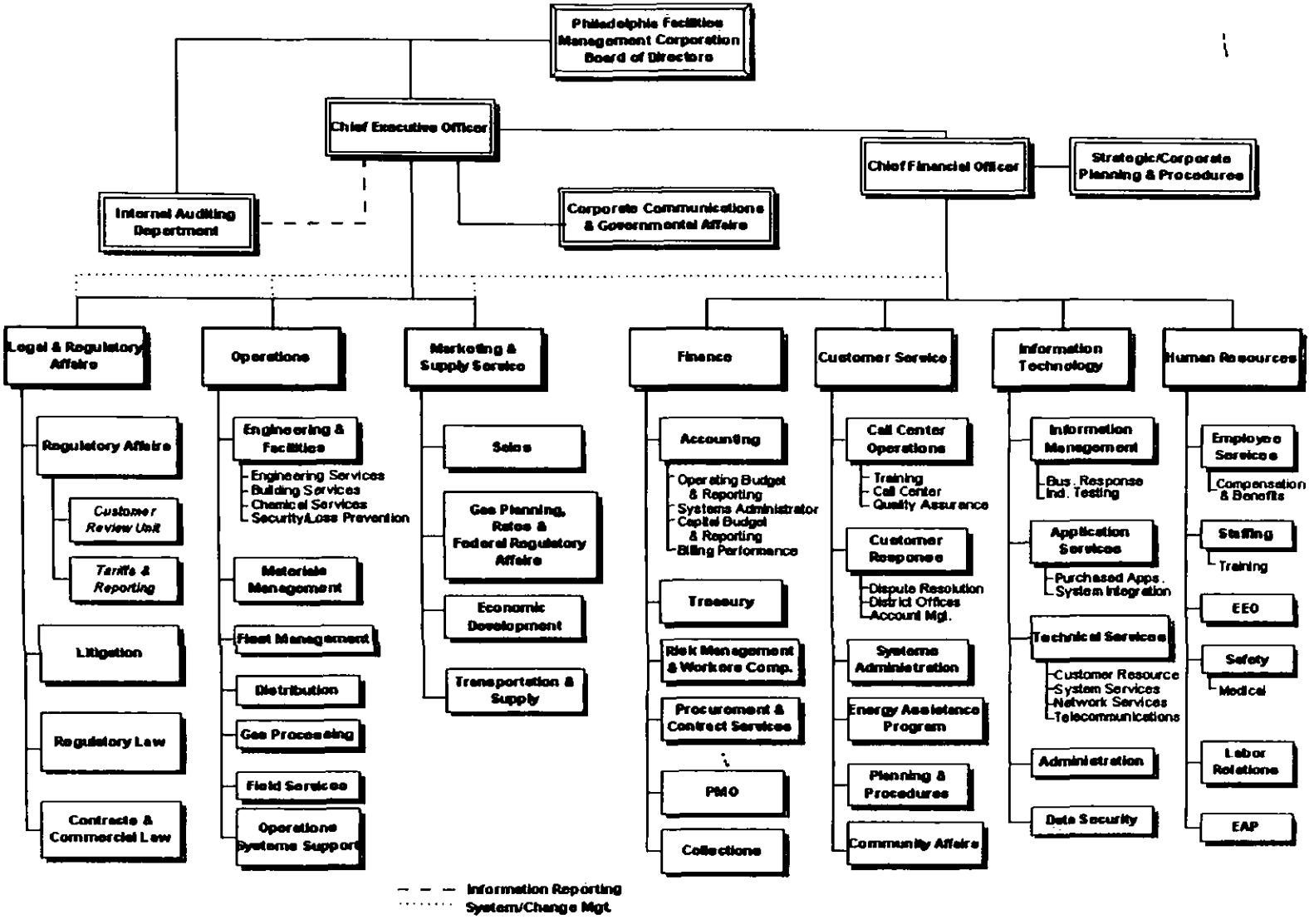
In the late 1990s, PGW experienced a number of changes in its management organization. As a result, PFMC set up an interim management structure for PGW. This interim management organization is shown in Figure 1.

In preparing this report, Black & Veatch interviewed key PGW officers[6] and a number of its managers. The interviews were supplemented with reviews of PGW's policies, practices, procedures and field observations of employees at various facilities performing their daily activities. Based on these interviews, reviews, and observations, it is our opinion that PGW is suitably organized, managed and operated by qualified personnel.

As of February 2001, PGW employed 1,810 people. Of this total, 78 percent are members of the Gas Works Employees' Union of Philadelphia, Local #686, Service Employees' International Union. The current agreement with the Gas Works Employees' Union expires May 15, 2001 and contract talks are presently being conducted.

[5] As of July 1, 2000, the PUC became responsible for regulating rates, pursuant to the Gas Choice Act.
[6] For the purpose of this report, PGW officers and management include individuals provided by PFMC.

Figure 1
Philadelphia Gas Works Interim Organization Chart



The following are brief biographical descriptions of the current PFMC/PGW Senior Officers:

Kumar Kishinchand, Interim President and Chief Executive Officer. Kumar Kishinchand was appointed Interim President and Chief Executive Officer in March 2000. He is responsible for the overall management of PGW and its operations, as well as coordinating with stakeholders. Mr. Kishinchand is a registered professional engineer and holds a B.S. degree in metallurgical engineering from the University of Maryland. Mr. Kishinchand has served in a variety of positions in government and industry encompassing research, development, applications and operations. Prior to his joining PGW, Mr. Kishinchand held the position of Water Commissioner for eight years at the Philadelphia Water Department. He was recruited by the Water Department in 1968 and served in increasingly responsible management positions, including Deputy Water Commissioner of Operations and General Manager of the Planning and Engineering Division at that utility. He is active in various professional organizations and is on the Board of Directors as well as past President of Association of Metropolitan Sewerage Agencies.

Thomas E. Knudsen, Interim Chief Financial Officer. Mr. Knudsen joined PGW as Interim Chief Financial Officer in March 2000. Mr. Knudsen is responsible for formulation of strategic policies and positions, implementation of program changes, coordination of company-wide initiatives, and assisting the Interim Chief Executive Officer in maintaining the financial and operational viability of PGW. Prior to joining PGW, Mr. Knudsen was the founding partner of The Woodside Group, a management consulting firm located in Stamford, Connecticut specializing in utility economics and regulation. For over 25 years, Mr. Knudsen has advised industrial, commercial and residential customers and groups, as well as regulatory commissions, regarding appropriate utility operations, budgeting, pricing and rate design issues. Mr. Knudsen's involvement with PGW dates from 1986, having served as a consultant to the Public Advocate in all rate and budget proceedings of PGW before PGC from 1986 until 1991. His prior experience includes management consulting with Touche Ross & Co., as Assistant to the Finance Administrator of the City of New York and the United States Navy Supply Corps. Mr. Knudsen received his Masters of Business Administration degree in Finance from Columbia University in 1968 and a Bachelor of Arts degree in Economics from Northwestern University in 1964.

Joseph Bogdonavage, Senior Vice President – Finance. Mr. Bogdonavage was appointed Senior Vice President, Finance in November, 2000. He is responsible for Accounting & Budget, Credit & Collection, Treasury, Risk Management, Procurement and the Project Management Office. Mr. Bogdonavage has over 27 years of diverse experience in the finance area of PGW. He previously held the positions of Director Budget & Financial Forecasting, Manager Budget & Financial Forecasting, Supervisor Budget & Financial Forecasting, Accounting Assistant Supervisor & Budget Analyst. Mr. Bogdonavage received his Bachelor of Business Administration in Accounting in 1972 from Temple University.

Abby L. Pozefsky, Esq., Senior Vice President and General Counsel. Ms. Pozefsky was appointed Senior Vice President and General Counsel in July 1998. She serves as General Counsel, managing all legal work of PGW. She previously held the position of Chief Deputy City Solicitor of Regulatory Affairs for the City of Philadelphia Law Department. In her twelve years with the City Law Department she served in various capacities, including general counsel to the Water Department, the Philadelphia Airport and the City Municipal Energy Office. Prior to that she held a variety of positions in public and private practice. She received her Bachelor of Arts degree from the University of Pennsylvania and a Juris Doctor degree from New York University Law School.

Craig E. White, Senior Vice President - Marketing and Supply Services. Mr. White was appointed Senior Vice President, Marketing and Supply Services in November 1999. He is responsible for sales, marketing and business development along with gas acquisition, gas accounting, gas control, energy planning and forecasting, rates and Federal regulatory issues. His previous positions at PGW include: Vice President, Marketing and New Business Development; Manager, Planning & Federal Regulatory Affairs; Administrator, Federal Regulatory Affairs; Federal Regulatory Specialist; Planning

Analyst; Demand Analyst; and Accounting Specialist. Mr. White received his Bachelor of Science degree in Business Administration from Kutztown University and Master of Business Administration degree in Financial Management from Drexel University.

Dennis E. Stinson, Senior Vice President – Operations. Mr. Stinson was appointed Senior Vice President - Operations in November 1999. He is responsible for PGW's Field Services, Distribution, Gas Processing, Engineering & Facilities, Fleet Operations, Security & Materials Management Departments. He previously held many positions at PGW since commencing employment in June, 1970. Mr. Stinson received his Bachelor of Science degree in Mechanical Engineering from Drexel University and his Master in Business Administration degree from Temple University. He has been a member of the American Gas Association, Gas Research Institute and the Engineers Club of Philadelphia.

Harvey E. Clark, Vice President – Corporate Communications and Governmental Affairs. Mr. Clark was appointed Vice President, Corporate Communications and Governmental Affairs in December 2000. He is responsible for communications programs to inform employees and stakeholders of corporate priorities, corporate mission, events and developments within PGW and energy industry; relations with all print and electronic media, planning company-wide coordination of public relations, branding and tactical advertising campaigns; and, graphic and photographic design and information for releases, publications and advertisements to promote the corporate image. Mr. Clark previously held the position of Manager, Communications and Media Relations at PGW. Mr. Clark received a Bachelor of Science degree in Political Science from Vassar College and had a twenty-year career as a television news correspondent.

Les A. Fyock, Vice President – Regulatory Affairs. Mr. Fyock was appointed Vice President, Regulatory Affairs in February 2000. Mr. Fyock is PGW's liaison for state regulatory interaction between PGW and the PUC. He is responsible for the formal and informal complaint Customer Review Unit, and Tariff and Reporting requirements for PGW. Mr. Fyock has held various positions with two natural gas distribution companies and the American Gas Association over the past twenty-five years. Mr. Fyock received his Bachelor of Science degree in Business Administration from University of Maryland.

Sherry N. Rubin, Vice President – Information Technology and Chief Information Officer. Ms. Rubin has been Vice President, Information Technology and Chief Information Officer since November 1999 and has responsibility for the strategic planning and management of information technology enterprise wide. Ms. Rubin came to PGW from Community Behavioral Health, a managed health care firm created by the former Health Commissioner of the City. She served as the first chief information officer of CBH. Her responsibilities included hiring and organization of the information technology department, replacement of faulty hardware, and disseminating client information available for the enterprise. Before CBH, Ms. Rubin was a program manager at the Mayor's Office of Information Services. She launched several computer and technology projects including the School District of Philadelphia's Wide Area Network, which connects schools to each other and the internet, and the debut of the City's own web site, www.phila.gov. Ms. Rubin has entrepreneurial experience and has worked in information technology in a variety of industries including healthcare, legal, and publishing.

John P. Straub, Vice President - Human Resources. Mr. Straub was appointed Vice President of the Human Resources Department in January 1999. He is responsible for all Human Resources related matters including Labor Relations, Staffing, EEO Compliance, Employee Compensation & Benefits, Training, EAP, and Occupational Health & Safety and also serves as the Drug and Alcohol Program Manager. Previously, Mr. Straub headed the Special Litigation Group for the City of Philadelphia's Law Department where he was responsible for the management and supervision of all employment law related matters and litigation involving the City of Philadelphia. Mr. Straub also worked as an Assistant District Attorney for the Philadelphia District Attorney's office. He holds a Juris Doctor degree from Temple University School of Law and is a graduate of Villanova University.

Joseph F. Golden, Jr., Controller. Mr. Golden was appointed Controller in March 2001. He is responsible for the treasury, accounting, budget, and mail receipts and bill preparation functions. Prior

titles held by Mr. Golden at PGW include: Treasurer, Manager - Treasury Department, Senior Staff Accountant, and Staff Accountant. Mr. Golden started his career with PGW in August of 1986. Mr. Golden has prior work experience in public accounting, treasury accounting and cash management, and manufacturing. Mr. Golden holds a Bachelor of Science degree in Accounting from Villanova University, a Master of Business Administration degree from Drexel University, and a Juris Doctor degree, cum laude, from Temple University School of Law.

Philadelphia Gas Commission

The Philadelphia Home Rule Charter contains provisions for the establishment of the PGC with powers and duties as set forth in ordinances and contracts. The Management Agreement grants PGC certain specified powers and duties and all other powers not specifically granted to PFMC. The powers and duties granted to PGC include the fixing of PGW rates and charges (now the jurisdiction of the PUC), approval of personnel provided by PFMC, review of gas supply contracts for approval by City Council, approval of changes in tests and standards of gas quality and pressure, approval of PGW's operating budget, review of PGW's capital budgets and recommendations thereon to City Council, approval of certain loans (but not the issuance of Bonds), access to and review of all books, records and accounts of PGW, prescription of insurance requirements, promulgation of standards for procurement and disposal of material, supplies and services and approval of all real property acquisitions for further approval of City Council.

Pennsylvania Public Utility Commission

The PUC regulates and supervises the rates and service of Pennsylvania's public utilities, including electricity, water, natural gas and telephone. Under current law, all rate regulation authority for PGW is held by the PUC, pursuant to the Gas Choice Act. The Gas Choice Act contains provisions which are designed to (i) preserve the tax-exempt status of bonds or other obligations issued by the City for PGW, including the 2001 Bonds, and (ii) preserve the ability of the City to comply with its covenants, including the City's covenants with respect to the imposition and collection of rates and charges to the holders of such bonds and other obligations, including the 2001 Bonds. The Gas Choice Act provides, among other things:

- Commencing July 1, 2000, PGW is regulated by the PUC and, except as otherwise provided in the Gas Choice Act, the provisions of the Public Utility Code apply to PGW as if it were a public utility. The PUC, instead of the PGC, sets rates for PGW's customers.
- Notwithstanding the initiation of customer choice in gas suppliers, PGW's gas distribution business will remain a regulated monopoly.
- In setting rates and notwithstanding any other provision of the Public Utility Code, the PUC must permit the City to impose, charge and collect rates or charges as necessary to permit the City to comply with its covenants to the holders of any Approved Bonds, as defined in the Gas Choice Act. All bonds issued by the City on behalf of PGW under the Act, including the 2001 Bonds, are Approved Bonds.
- The PUC is barred from requiring the City or PGW to take any action (or omit taking any actions) under the Public Utility Code if such action or omission would have the effect of causing the interest on any tax exempt bonds issued by the City, including the 2001 Bonds, to be includable in the gross income of the holders of such bonds for Federal income tax purposes.

- PGW is required to file an initial tariff and a restructuring filing with the PUC between January 1 and June 30, 2002, unless PGW and the PUC agree to an earlier filing. Since the effective date of the Gas Choice Act, PGW has filed and obtained through settlement an interim adjustment to its base rates. PGW has also filed for a permanent base rate adjustment with the PUC. PGW has also filed and obtained increases in its GCR *(See "Rates and Tariffs").*
- Pending resolution of the restructuring proceeding by the PUC, the tariff that existed prior to July 1, 2000 will remain in place, unless an earlier filing is made by PGW, as described above.
- At the beginning of PGW's fiscal year immediately following the conclusion of its restructuring proceeding, PGW will be required to implement customer choice and to permit licensed natural gas suppliers to deliver gas to their customers in Philadelphia using PGW's distribution system.
- The PUC must continue the existing senior citizen discount for all individuals who are properly receiving the discount at the time PGW's restructuring proceeding is concluded unless City Council modifies the program. The Gas Choice Act permits, but does not require, the PUC to approve a senior citizen discount program in the future for those individuals who are not covered by the existing senior citizen discount program.
- The PUC is required to provide for a management audit of all employees, records, equipment, contracts, assets, liabilities, appropriations and obligations of PGW prior to the commencement of the restructuring proceeding.
- Effective June 30, 2000, the provisions of the Home Rule Charter with respect to the powers and duties of the PGC are abrogated to the extent inconsistent with the Gas Choice Act.
- The City cannot be required to take any action under the Public Utility Code if the effect of the action is to cause a variation in the City's financial plan approved by the Pennsylvania Intergovernmental Cooperation Authority.
- The City's executive or legislative powers to "legislate or otherwise determine the powers, functions, budgets, activities and mission of PGW" are not abrogated or limited.

This report assumes rate regulation will be administered by the PUC to comply with the City's bond covenants.

The PGW Gas System

Philadelphia Gas Works began gas production in February 1836 and has since continuously provided the City of Philadelphia with service. Today, PGW is the largest municipally owned gas utility in the nation, maintaining a distribution system of approximately 3,000 miles of gas mains and 500,000 service lines. In addition to this extensive distribution system, PGW operates facilities for the liquefaction, storage, and vaporization of natural gas to supplement gas supply taken directly from pipeline transmission companies and storage facilities.

Population and Service Area

As shown in Figure 2, the PGW Gas System presently serves the limits of the City of Philadelphia with a customer base of approximately 512,000 accounts. This service area consists of an urban area of 129 square miles located in southeast Pennsylvania along the Delaware River. Philadelphia is the largest incorporated area within the Delaware Valley region, which also consists of Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania, and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. According to the 2000 United States Census, Philadelphia has a population of 1,517,550 inhabitants, a decrease of 4.3 percent since 1990.[7] With the exception of Philadelphia and Delaware counties, the counties within the Delaware Valley region all reported increases in population over their 1990 census figures.

Supply Facilities

The principal PGW natural gas supply facilities include nine city gate stations owned in large part by the interstate pipelines serving PGW, and two liquefied natural gas ("LNG") plants, Richmond and Passyunk, owned by the City. The supply facilities also include a gas control center, a deactivated propane/air plant, and two gas holders, one of which has been removed from service.

City Gate Stations

Natural gas is received through nine city gate stations from two pipeline transmission companies – Texas Eastern Transmission Corporation ("Texas Eastern") and Transcontinental Gas Pipe Line Corporation ("Transco"). The two pipelines own most of the facilities and land at eight of the nine city gate stations. PGW's facilities at each of the city gate stations perform two basic functions – to odorize gas and to control the pressure delivered to PGW's distribution system. Eight city gate stations are equipped with gas heaters.

Gas Control Center

The gas control center is located at 800 W. Montgomery Avenue, with a backup at the Richmond Plant. The center monitors and controls gas flow and pressure from the nine city gate stations to the high-pressure distribution system. The gas control dispatchers also provide direction to the LNG production plant operators concerning startup, shutdown and gas flow output from the LNG facilities. Operations are facilitated through the use of a computer system that includes a backup unit and an auxiliary power supply.

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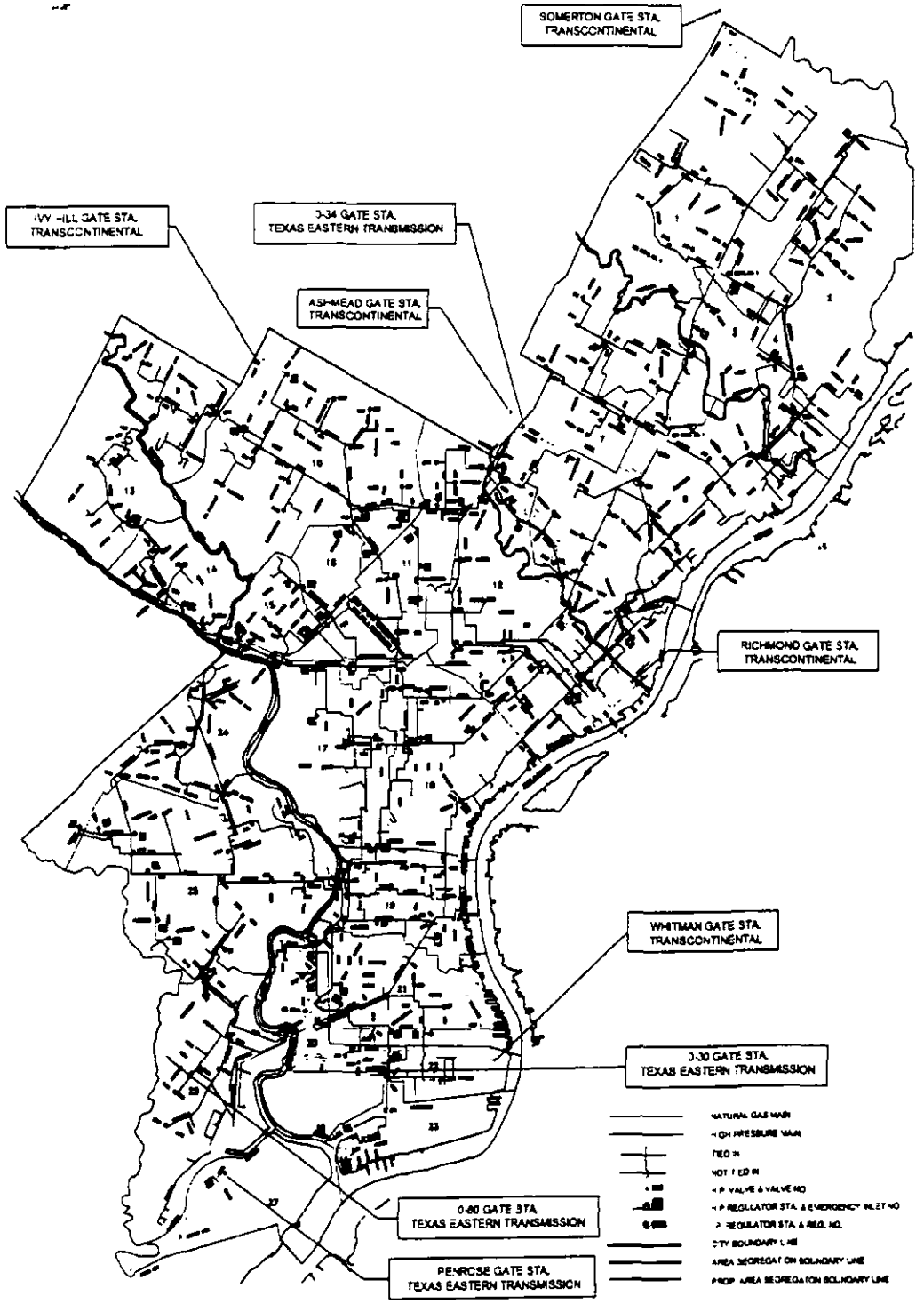
[7] The City of Philadelphia and Philadelphia County are coextensive. *United States Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary File, Table PL1 and 1990 Census.*

Figure 2
Philadelphia Gas Works Service Area and Major Facilities Map



LNG Facilities

There are two LNG facilities – the Passyunk Plant and the Richmond Plant. The smaller LNG storage and vaporization facility at the Passyunk Plant receives its liquefied gas supply from the larger Richmond Plant via cryogenic trailer trucks. The Passyunk LNG facility consists of one LNG storage tank of 3,066,000 gallons gross capacity (i.e., the equivalent of 253,300 thousand cubic feet ["Mcf"] of natural gas) and three LNG vaporizers, each having a capacity of 45,000 Mcf per day resulting in 90,000 Mcf per day planned capacity and 45,000 Mcf per day reserve. In December 2000, the plant's exit piping suffered fire damage along with two large diameter (20 inch) intake lines from city gate stations. The piping and intake lines were removed from service for repairs. The intake lines from the city gate stations have been replaced. The vaporization process at the Passyunk Plant is scheduled to return to service during the fall 2001.

The Richmond LNG plant is one of the largest liquefaction facilities in the United States and also includes storage and vaporization. During the non-heating season, PGW uses the Richmond LNG Plant to liquefy and store natural gas delivered from the pipelines. The plant has the capacity to liquefy and store approximately 23,500 Mcf per day, and the two storage tanks have a combined gross capacity of 48,970,000 gallons of LNG (4,045,800 Mcf). Regasification of the liquid is accomplished with six vaporizers having a total output of 450,000 Mcf per day.

Propane/Air Facilities

At the Passyunk location, PGW also has a propane/air plant. The plant has the air compression and propane vaporization capacity to produce 60,000 Dekatherms ("Dth") of propane/air mix per day (45,000 Dth per day planning basis) and has a liquid propane storage capacity of approximately 662,250 gallons. This facility has been idle since 1994 due to PGW removing this capacity from service. Its use is not anticipated in the current six-year gas supply projection.

Gas Holder Storage Facilities

The Richmond Plant has a low pressure gas holder. The Passyunk holder has been removed from service. The Richmond holder has an operating capacity of 1,000 Mcf. It was installed in the manufactured gas era and is in working order. It is used to enhance operational flexibility of the LNG Plant.

Distribution Facilities

The principal gas distribution facilities consist of approximately 3,006 miles of main, 511,453 service lines, 205 regulator stations, 599,189 total meters (of which 520,811 are active) and miscellaneous valves, instruments and other appurtenances. PGW operates five different operating pressure systems; each system is connected to the other by control regulators. The high-pressure systems operate at approximately 110, 60, and 35 pounds per square inch gauge (psig); the intermediate pressure system operates at 5 psig; the low-pressure system operates between 6 and 9 inches of water column (approximately 0.25 pounds per square inch). The majority of customers are served from the low-pressure system.

Approximately 58 percent (by length) of the gas mains are cast iron, 33 percent are steel, 5 percent are ductile iron, and 4 percent are plastic. Of the steel mains, approximately 47 percent are protected. Approximately 51 percent of the service lines are steel (of which 15 percent are protected) and 49 percent are plastic.

Other Facilities

PGW has its executive and operating offices located at 800 W. Montgomery Avenue, which is a 150,000 square foot office building constructed in 1988. The former general office building, located at 1800 N. 9th Street, now houses distribution and field service dispatch centers, a customer information center, operating stations, and warehousing, as well as management information systems, a meter shop, and a metal fabrication shop. Additional facilities include eight district offices and five operating stations for field service and distribution crews. There are also a warehousing facility and an automotive maintenance and repair facility. The automotive maintenance and repair facility is responsible for the upkeep of PGW's fleet of approximately 1,000 vehicles and related equipment. PGW also maintains minor automotive repair facilities, fuel dispensing equipment and materials and supplies at its field offices.

At the present time, the current Supervisory Control and Data Acquisition ("SCADA") control and monitoring equipment is located at the Montgomery complex and was placed in service in 1999. During the implementation period, it operated in parallel with the old SCADA system for approximately three months to ensure a smooth and efficient transition of the system.

Condition of Facilities

In February and March 2001, Black & Veatch conducted site inspections of certain PGW facilities as deemed appropriate. During the inspections, Black & Veatch used three evaluation criteria based on observation categorized as good, adequate and poor as described below:

- *Good*: The facility is in condition to provide reliable operation in accordance with design parameters and requires only routine maintenance.
- *Adequate*: The facility is operating at or near design levels, however, non-routine renovation, upgrading, and repairs are needed to ensure continued reliable operation. Significant expenditures for these improvements may be required.
- *Poor*: The facility cannot be operated within design parameters. Major renovations are required to restore the facility and assure reliable operation. Major expenditures for these improvements may be required.

Construction Sites

Observations at construction sites included the observation of crews, vehicles, power-operated equipment, tools, safety procedures for the crew and public, construction standards, and general quality of work performed.

System maps were also examined and compared to existing facilities. This comparison showed the maps to have adequate detail to describe the system at the site. The maps contain the year the line was placed in service, size and material used, operating pressure, location of valves and bends and where repairs have been performed.

Meter Settings

Meter setting observations include materials and equipment. Observed meter settings conformed to accepted industry standards, accessibility, and safety and security measures.

Field and District Offices

Field and district office sites, including related facilities, such as vehicle and equipment fueling stations, garage and vehicle maintenance supply, structures, driveways, parking, material and equipment storage areas and security features, were observed. Four of the eight district offices are leased to PGW.

Inspections of these leased sites were focused primarily on materials and equipment typically provided by the lessee.

Personnel

During the inspection period, Black & Veatch conducted interviews and was assisted by PGW staff who are experienced, qualified, well trained and knowledgeable in their assigned tasks. In addition to details of the operations, they were knowledgeable in details of routine and preventative maintenance procedures PGW has in place.

The following is a list of key areas discussed in conducting inspections and in the collection of system data.

Construction	System Losses & Meter Maintenance Programs
Corrosion Engineering	Leak Surveys
Field Offices	Operations
District Offices	SCADA System
Treasury	Meter Settings
District Regulators	City Gates and LNG Plants
Field Services	Accounts Receivable
Gas Supply	

Facility Inspections

The following facilities were inspected:

Supply Facilities

Liquefied Natural Gas Facilities
- Richmond & Passyunk Plants

City Gate Stations
- 030
- 034
- Ashmead
- Ivy Hill
- Penrose
- Richmond
- Somerton
- Whitman
- 060 - Not inspected due to snow

Distribution Facilities

District Regulator
- 16th St. & Berks St. - Underground Vaults

Meter Setting
- Residential
  - 472 Christian St.
- Commercial
  - PGW - 1800 N. 9th St.
  - PA Convention Center - 1201 Arch St.
- Industrial
  - United Parcel Service
  - PA Convention Center - 1201 Arch St. (Interruptible)

Other Facilities

Construction Sites
- 54th & Market St. - Preparation for installation of Starliner.
- 55th & Market St. - Replacement of gas main.
- 5700 block of Market St. - Plastic gas main and replacement of service line.
- 5800 block of Market St. - Replacement of steel gas service with new, plastic main.
- 60th & Market St. - Replacement/Lowering of gas main.
- Wayne St. near Greene St. - Tie-in to main.

Field Offices/On-Site Facilities
- Belfield
- Castor
- Montgomery
- Porter
- Tioga

District Offices

Bustleton (Northeast) - Leased	North Central - Owned	
Center City - Leased	South - Owned	
Frankford Avenue - Leased	West - Owned	
Germantown - Leased		
North - Owned		

SCADA Control Room
- PGW - 1800 N. 9th St.

All observed facilities, vehicles, equipment and warehouse stock appeared to be reasonably maintained and in good operating condition. During our inspections, we identified only minor items not in good operating condition as would be expected during the normal course of operation. These items were either in the process of being repaired or were essentially retired in place. Employees appeared to be knowledgeable of their job requirements and well trained.

PGW's highest operating priority is response to emergencies and the maintenance of a safe gas distribution system. PGW maintains maps and other records of the distribution system in good order and has comprehensive written construction, operating and maintenance standards and procedures. Its personnel appeared well trained in the operation and maintenance of the gas distribution system. PGW is actively involved in entering its facility records (Corrosion, Service and Leak Records) into computer databases, thus facilitating and improving the accuracy of accessing information. Reasonable property security measures are maintained at the major facilities visited including the two LNG facilities, the city gate stations, and the headquarters building complex.

Based on the inspections and interviews conducted, it is our opinion that PGW operates and maintains its system prudently and in accordance with current regulatory standards and generally accepted industry practices.

PGW Gas Supply

PGW manages its gas supply through a mix of flowing supplies, off-system underground storage and City-owned and PGW-operated LNG facilities. PGW utilizes this mix to meet its obligation to meet customers' demand on the coldest day (peak day) as well as a customer's annual requirements. PGW's gas distribution facilities are directly connected to Texas Eastern through four city gate stations and to Transco through five city gate stations. All gas purchased by PGW is transported to the City Gates through either one of these pipelines. During predominantly off-peak (summer) periods, a portion of the purchased gas supply is stored in off-system underground storage facilities connected to these two pipelines or in PGW's LNG facilities. Through the effective use of off-system storage and LNG, PGW is able to more efficiently utilize its transportation contracts with Texas Eastern and Transco. Through a gas cost rate ("GCR"), PGW is able to file for a change in its rates in response to changes in the cost of all of these gas supply components, typically on a quarterly basis, although PGW has some limited authority to file on a monthly basis should it so choose. To the extent that gas supply costs differ from the recovery of gas supply costs through rates (including the GCR), the GCR factor is adjusted upward to collect under-recoveries or downward to return over-recoveries in subsequent periods.

Supply Services

PGW purchases gas through a combination of term contracts and spot market purchases. Natural gas supplies are purchased under a portfolio approach intended to secure the lowest price consistent with reliability of supply. Consideration is given to maintaining a diversity of sources and types of supply. During the 2001 fiscal year, purchased gas costs are estimated to account for approximately 88 percent of the total gas supply expenses of $475 million and over 50 percent of total revenues of $764 million. The cost of gas supply is a function of the prices paid and the quantity purchased, both of which are variable. While this price component can be managed by PGW to some extent through the timing of purchases, the prices paid are largely determined in a very competitive and recently volatile marketplace. While the total annual volumes purchased are highly dependent on temperatures during the heating season and are beyond the direct control of PGW, PGW can manage the timing of purchases and hence prices to a limited degree, by utilizing off-system and LNG storage.

Transportation and Storage Services

All of PGW's gas purchases are ultimately transported from the sources of supply to the city gates through either Texas Eastern and/or Transco facilities. Injections and withdrawals of gas from off-system storage also rely on these two pipelines. Table 1 summarizes the existing transportation agreements between PGW and the two pipelines. As shown in this table, PGW's currently available pipeline capacity is almost equally divided between the two pipelines. Of PGW's total contract pipeline capacity of 446,300 Mcf per day, Texas Eastern accounts for 227,277 Mcf per day, or 51 percent, and Transco accounts for 219,023 Mcf per day, or 49 percent. The major contracts for the Texas Eastern transportation service (CDS and FT) expire prior to the 2003-04 winter period and the major contract for the Transco transportation service (FT) expires after the 2004-05 winter period. PGW's current long-term plan assumes that these contracts will be renewed.

Due to the highly seasonal nature of PGW's load (demand), the efficiency of pipeline transportation service can be increased significantly through the use of storage services. During periods when PGW's load is less than contracted transportation service, PGW may utilize the available capacity to deliver gas to off-system storage facilities or liquefy gas and store it in its LNG facilities. The ability to store gas off-system and in LNG facilities provides three significant benefits. First, reduced capacity can

be reserved on interstate pipelines to serve higher seasonal loads to the extent that gas can be stored in off-system storage and local LNG facilities. Second, less volumes need to be actually purchased during the generally higher cost winter period to the extent that gas be can purchased during the lower cost non-winter period, stored and then redelivered from storage during the winter. Third, market area storage provides increased security of supply.

Table 1
Gas Supply, Transportation, and Storage Contracts

		2001 - 2006			
	Contract	Transportation		Storage	
Contract	Expiration	Dth	Mcf	Dth	Mcf
Transco					
FT	03/31/05	165,212	160,400		
PSFT	07/31/11	1,967	1,910		
S-2	04/15/01	4,544	4,412	4,544	4,412
GSS	06/30/01	53,871	52,302	53,871	52,302
WSS[a]	03/31/05			39,246	38,103
ESS[a]	03/31/05			8,446	8,200
Subtotal		225,594	219,023	106,107	103,017
Texas Eastern					
CDS	10/31/03	75,000	72,816		
FT1 - 800233R	10/31/03	23,822	23,128		
FT1 - 800514R	10/31/03	18,000	17,476		
FT1 - 800515R	10/31/06	18,000	17,476		
CNG/GSS/FTS7	03/31/06	6,815	6,617	6,815	6,617
CNG/GSS/FTS8	03/31/06	22,495	21,840	22,495	21,840
Equitable/FTS2	03/31/02	4,998	4,852	4,998	4,852
SS1A		44,118	42,833	44,118	42,833
SS1B		20,847	20,240	20,847	20,240
ANR[b]	10/31/03			9,590	9,311
Subtotal		234,095	227,277	108,863	105,692
Total		459,689	446,300	214,970	208,709

(a) Transportation included in FT.
(b) Transportation included in CDS.

As shown in Table 1, PGW's currently available off-system storage capacity is almost equally divided between facilities connected to Texas Eastern and Transco. Of PGW's total contract storage deliverability of 208,709 Mcf per day, services provided on Texas Eastern account for 105,692 Mcf per day, or 51 percent, and Transco accounts for 103,017 Mcf per day, or 49 percent. All of this deliverability requires transportation to PGW via the respective transportation services obtained from Texas Eastern and Transco. This storage deliverability combined with the total volume of storage available from these services are used primarily to reduce contract demand for long haul transportation services and reduce the quantity of gas that needs to be purchased during the typically higher cost winter period to meet winter peak demand.

During the 2001 fiscal year, transportation and storage costs are estimated to account for approximately 12 percent of the total gas supply expenses of $475 million. The prices paid for these services are determined by long-term contracts and tariff rates regulated by the Federal Energy

Regulatory Commission ("FERC"). Generally, these components of gas supply cost represent the purchase of capacity, are relatively fixed, and do not vary directly with the volumes of gas purchased.

LNG Facilities

The City owns and PGW operates two LNG facilities, the Richmond Plant and the Passyunk Plant. Gas is liquefied, stored, and vaporized at the Richmond Plant, and stored and vaporized at the Passyunk Plant. Total liquefaction (converting natural gas to liquid state for storage) capacity at the Richmond Plant is approximately 23,500 Mcf per day. With the current equipment at the Richmond Plant, liquefaction is limited to the non-winter period. Capital improvements planned over the next two years will provide capability to liquefy gas year round creating additional operational flexibility and thereby the opportunity for increased revenues and reduced costs. The Richmond Plant can store approximately 49 million gallons of LNG (4.05 million Mcf natural gas equivalent) and the Passyunk Plant can store approximately 3 million gallons of LNG (250,000 Mcf natural gas equivalent). The LNG stored at the Passyunk Plant is liquefied at the Richmond Plant and then transported by cryogenic trailer trucks to the Passyunk Plant. Total vaporization (converting the liquid LNG to gas) capacity at the Richmond Plant is 450,000 Mcf per day and 90,000 Mcf per day at the Passyunk Plant. The highest daily vaporization rate from the LNG facilities of approximately 360,000 Mcf occurred at the time of the all time system peak in January 1994.

The LNG facilities are primarily used to minimize pipeline capacity needed to serve peak demand. The LNG facilities displace capacity that would otherwise be needed from flowing gas and off-system storage (i.e. pipeline and storage capacity) to meet peak day demands. The LNG facilities also allow for a nominal reduction in purchases during the higher cost winter period. Based upon current pipeline and storage charges, which have remained relatively constant over the past five years, PGW estimates that utilizing the existing LNG facilities in lieu of additional pipeline and storage capacity saves approximately $75 million per year. The gas liquefied at the Richmond Plant is purchased during the generally lower cost non-winter period.

Supply and Demand Balance

Table 2 summarizes the supply mix that was used to meet historical peak day demand from 1996 through 2000, and the supply mix that would enable PGW to meet future demand assuming design conditions over the 2001 through 2006 fiscal years. A design day on PGW's system is based on the highest actual historical peak day experienced by PGW. This occurred on January 19, 1994 with a peak day total demand (sendout) of 752,707 Mcf. The average temperature on that day was 2°F. For design purposes, PGW projects total demand based on a 65 heating degree-day ("HDD") which translates to an average temperature of 0°F. During the past five years, pipeline supplies (flowing gas plus underground storage) have met between 65 and 97 percent of peak day demand. During the projection period, approximately 55 percent of peak day demand under design conditions would be met from pipeline supply with the remaining 45 percent met from LNG. It should be noted that the projections in Table 2 assume no unbundling of services and further, that all customers are sales customers. Since some firm customers will likely convert to transportation services, actual demand will likely be somewhat less than indicated on Table 2 and some capacity may be available for sale or return to pipelines. Table 2 shows that PGW has sufficient capacity to meet demand requirements.

Table 3 summarizes the supply mix that is projected to meet annual requirements during normal and design years from 2001 through 2006. PGW defines a normal year as one containing 4,600 HDD.[8]

[8] In its 2001 rate filing, PGW's 2001 normal year projection is on based on 4,555 HDD. Projections for 2002 through 2006 are based on 4,600 HDD.

Table 2
Peak Day Supply and Demand

Description	Fiscal Year Ending August 31,										
	Actual					Projected[a]					
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Actual[b]											
Heating Degree-Days	54	53	35	42	49						
Demand - Mcf	620,873	661,715	458,461	541,880	639,903						
Supply - Mcf											
Pipeline/Storage	421,727	434,222	447,080	448,654	434,955						
LNG	199,146	227,493	11,381	93,226	204,948						
Total	620,873	661,715	458,461	541,880	639,903						
Projected - Design											
Heating Degree-Days[c]						65	65	65	65	65	65
Demand - Mcf[c]						783,400	789,700	796,100	803,800	812,800	821,700
Supply - Mcf[d]											
Pipeline/Storage						446,300	446,300	446,300	446,300	446,300	446,300
LNG (net)						337,100	343,400	349,800	357,500	366,500	375,400
Total						783,400	789,700	796,100	803,800	812,800	821,700

(a) Assumes no unbundling of services.
(b) SDS 7, Gas Cost Rate Filing, Volume 1, August 2000.
(c) SDS 6, Page 3 of 9, Gas Cost Rate Filing, Volume 1, August 2000.
(d) SDS 6, Page 4 of 9, Gas Cost Rate Filing, Volume 1, August 2000.

This normal year is based on a 30-year average. PGW defines a design year as one containing 5,280 HDD. A design year is based on the temperatures experienced during the 1977-1978 winter, which was the coldest recorded winter in the last 60 years.

Table 3
Annual Supply and Demand

Description	Fiscal Year Ending August 31, 2001	2002	2003	2004	2005	2006
	dt	dt	dt	dt	dt	dt
Normal Year - 4,600 Heating Degree-days[a]						
Demand - Sales						
Firm Service	63,030,840	62,996,226	63,090,383	62,545,848	61,128,789	60,140,095
Boiler and Power Plant Service	4,960,790	4,829,262	5,121,858	4,982,011	4,597,310	4,350,436
Load Balancing Service	5,481,405	5,474,910	5,529,407	4,834,809	3,981,032	3,531,670
Cogeneration Service	180,023	178,466	177,891	129,545	83,877	68,281
Gas Transportation Service	0	121,200	121,967	122,122	121,967	121,967
Natural Gas Vehicle Service	3,062	3,054	3,062	3,073	3,065	3,065
Trigen	71,894	71,894	71,894	71,894	71,894	71,894
Grays Ferry	179,735	179,735	179,735	179,735	179,735	179,735
Subtotal Sales	73,907,749	73,854,747	74,296,197	72,869,037	70,167,669	68,467,143
Plant Use	1,530,358	1,588,228	1,573,461	1,538,996	1,514,632	1,507,898
Storage Return	16,751,296	17,099,767	17,194,981	16,992,702	15,447,075	15,087,804
Liquefaction	3,976,774	5,028,195	4,968,055	4,732,310	4,692,434	4,549,024
Total Demand	96,166,177	97,570,937	98,032,694	96,133,045	91,821,810	89,611,869
Supply						
Texas Eastern	23,373,425	24,580,345	24,141,653	23,892,690	21,975,817	19,834,235
Transco	49,512,649	52,005,758	52,006,267	51,697,368	50,347,094	48,736,000
Pipeline Subtotal	72,886,074	76,586,103	76,147,920	75,590,058	72,322,911	68,570,235
Texas Eastern	10,896,751	9,573,585	9,603,845	8,776,268	8,179,584	8,642,219
Transco	7,689,191	6,712,633	7,549,724	7,075,364	6,636,863	7,714,828
Storage Subtotal	18,585,942	16,286,218	17,153,569	15,851,632	14,816,447	16,357,047
LNG	4,694,161	4,698,616	4,731,205	4,691,355	4,682,452	4,684,587
Total Supply	96,166,177	97,570,937	98,032,694	96,133,045	91,821,810	89,611,869
Design Year - 5,280 Heating Degree-days						
Demand - Sales						
Firm Service	69,901,136	69,860,888	69,966,556	69,365,736	67,806,757	66,712,778
Boiler and Power Plant Service	5,032,908	4,609,237	5,070,089	5,446,695	5,042,527	4,779,954
Load Balancing Service	2,845,569	3,110,969	2,994,831	2,647,453	2,350,399	2,167,682
Cogeneration Service	113,879	120,565	114,494	80,416	55,241	47,102
Gas Transportation Service	49,083	54,267	49,803	49,760	53,883	56,776
Natural Gas Vehicle Service	1,938	2,055	1,963	1,965	2,057	2,082
Trigen	20,370	28,487	28,487	29,647	29,647	33,241
Grays Ferry	76,687	88,128	73,820	74,870	88,051	98,949
Subtotal Sales	78,041,570	77,874,596	78,300,043	77,696,542	75,428,562	73,898,564
Plant Use	1,550,768	1,599,168	1,605,828	1,603,089	1,582,875	1,484,601
Storage Return	18,032,864	17,067,191	17,268,447	17,658,270	16,073,998	14,917,450
Liquefaction	3,979,322	5,088,326	4,976,003	4,735,278	4,694,323	4,531,048
Total Demand	101,604,524	101,629,281	102,150,321	101,693,179	97,779,758	94,831,663
Supply						
Texas Eastern	29,622,755	27,714,934	27,740,442	27,512,401	26,392,718	25,304,875
Transco	49,925,344	52,381,544	52,156,884	51,862,738	50,386,757	49,512,520
Pipeline Subtotal	79,548,099	80,096,478	79,897,326	79,375,139	76,779,475	74,817,395
Texas Eastern	9,620,571	9,470,063	9,743,893	10,134,495	9,938,074	8,784,403
Transco	7,761,025	7,755,514	7,865,651	7,608,194	7,353,767	7,776,380
Storage Subtotal	17,381,596	17,225,577	17,609,544	17,742,689	17,291,841	16,560,783
LNG	4,674,829	4,307,226	4,643,451	4,575,351	3,708,442	3,453,485
Total Supply	101,604,524	101,629,281	102,150,321	101,693,179	97,779,758	94,831,663

Reference: SDS4 A, Gas Cost Rate Filing, Volume 1, August 2000.

(a) In PGW's January 2001 Rate filing, PGW uses a normal year of 4,555 HDD for 2001. Projected years are based on 4,600 HDD.

Even though 100 percent of PGW's supply is originally transported through one of the two interstate pipelines, the supply components shown in Table 3 are based on the source of gas used when the gas is delivered to the end user. As shown, approximately 65 percent of PGW's total gas supply during a normal year flows through the Transco pipeline system. On a projected normal annual basis, approximately 95 percent of volume is delivered to end users through the interstate pipeline systems (75 to 80 percent flowing gas[9] and 15 to 20 percent off-system storage), and 5 percent is delivered from the LNG facilities.

The declining volumes shown in Table 3 reflect the anticipated migration of customers from a fully bundled service from PGW towards the customer's option to purchase natural gas from a third party beginning in the 2003-04 time frame *(See also Table 9, Historical and Projected Sales and Throughput)*. A comparable decline is not shown in contract pipeline and storage capacity *(See Table 1)* or in peak day supply and demand *(See Table 2)*. As is discussed more fully in the section on *"Unbundled Services"*, any potential negative impact of excess capacity can be mitigated if PGW's unbundled rate tariff provides for assigning or releasing capacity to customers who choose an alternate gas supplier and/or if PGW is allowed to reduce the amount of contract transportation or storage to reflect customers who choose an alternate gas supply.

Gas Cost Recovery

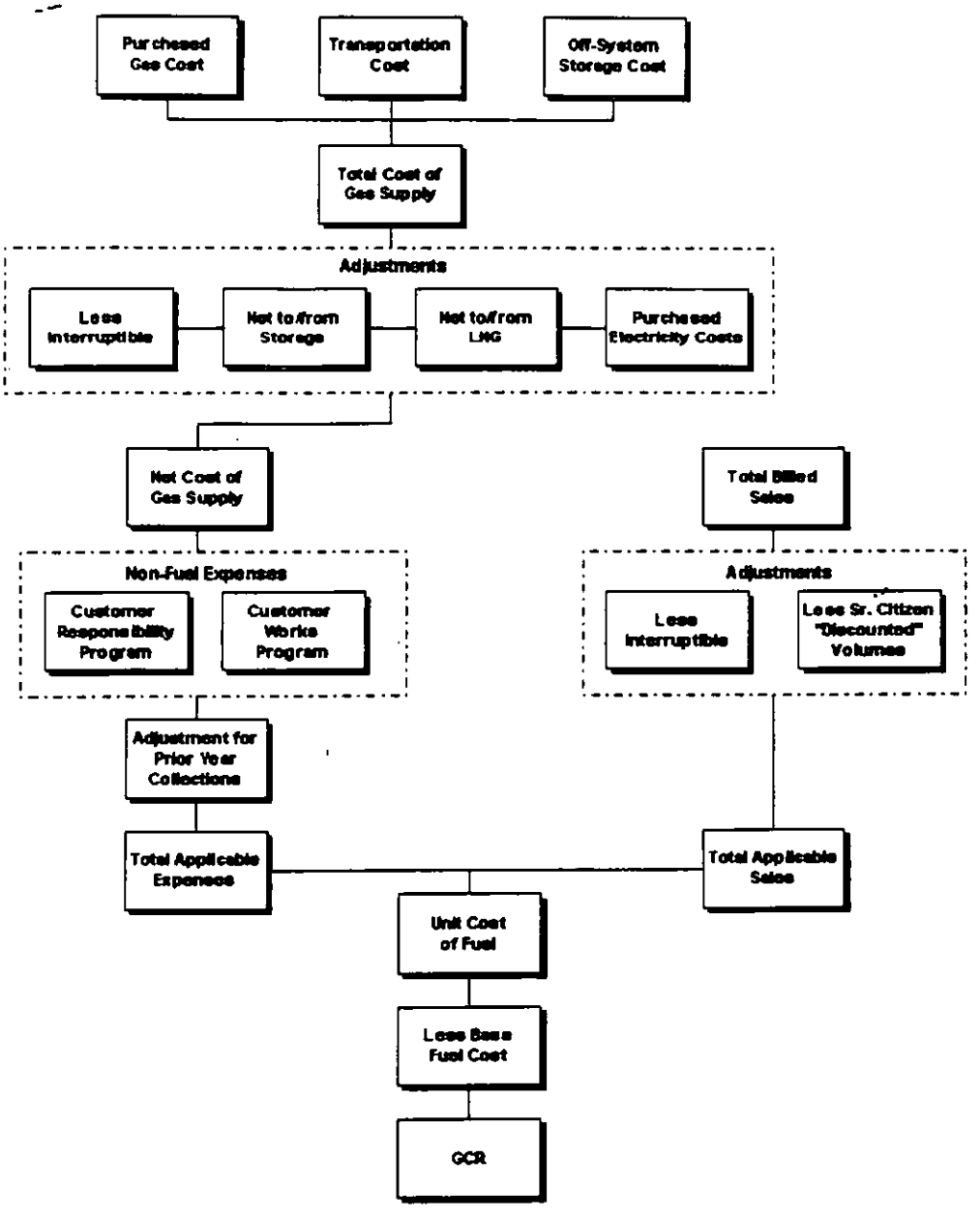
As previously discussed, all changes in gas supply related costs are passed through to customers through the gas cost rate (GCR). The specific components of PGW's GCR are depicted in Figure 3. PGW's gas supply costs consist of purchased gas costs, transportation costs, and off-system storage costs. This cost is reduced by the cost directly paid by interruptible customers (specifically, load balancing service customers). Sales are made to these interruptible customers based on prices quoted monthly by PGW. The prices quoted are based on the highest prices paid by PGW during the month with some consideration given to the customer's cost of alternative fuel oil. Natural gas service is competing against the price of alternative fuel; however, PGW only incurs gas supply cost attributable to these customers to the extent that sales are made (and gas is purchased to meet load). Total gas supply costs are also adjusted to reflect changes in the inventory cost of off-system and LNG storage and the cost of power purchased for the LNG facilities. The change in inventory cost is attributable to changes in volume as well as the price paid for the gas put into storage.

In addition to gas supply costs, certain non-fuel expenses are also recovered through the GCR. These include discounts given to low income customers through the Customer Responsibility Program and funds provided to weatherize the homes for low-income customers through the Conservation Works Program. The net cost of gas supply plus these non-fuel expenses constitute the costs recovered through PGW's GCR.

These costs are divided by the total sales volumes less the volumes attributable to direct billed interruptible customers and less the "discounted" volumes (20 percent of the total volumes delivered to senior citizens) attributable to the Senior Citizen Discount program to determine the unit cost of fuel. A portion of the fuel cost (currently, $3.18 per Mcf) is included in PGW's base rates, so the actual GCR factor represents the difference between the unit cost of fuel and the portion included in base rates. PGW tracks the revenues recovered by the GCR factor and the base fuel cost. To the extent that these revenues differ from costs over the course of a fiscal year, the difference is collected or returned in the subsequent year's GCR.

[9] Flowing gas represents gas that is purchased at the same time as delivered to customers.

Figure 3
Components of PGW Gas Cost Rate



Capital Improvement Program

PGW uses a formal process for evaluating capital needs and funding programs to meet those needs. This annual capital planning process is used to formally review the Capital Improvement Program ("CIP") and incorporates revisions into the five-year capital program projection using certain specified economic parameters to prepare the capital requirement estimates that form the basis for departmental budgets. Department budgets and projections are based on meeting PGW's design hour and design day projections as prepared by the Gas Management Department.[10] Under the terms of the Management Agreement, PGW submits the annual CIP for review by the PGC and approval of the current fiscal year budget, by City Council.

In keeping with PGW's philosophy of maintaining a safe gas distribution system, all capital projects are assigned a priority. The highest priority projects (1 and 2) relate to expenditures required for maintaining the safety and reliability of PGW's System. Priority 3 expenditures relate to facility relocations that are based on City, State, or Federal mandated projects. Priority 4 expenditures relate to projects that will result in additional revenues from load growth, and the lowest priority projects (Priority 5) are for those expenditures associated with improving operational efficiencies and/or discretionary items.

Table 4 presents a summary of PGW's historical and budgeted capital improvement program. Capital expenditures for the major PGW departments are shown in the table. Historically, capital expenditures for all departments other than Gas Processing, Distribution, Field Services, and Transportation, have been grouped together under the miscellaneous category "Other Departments". The figures presented in the table are net of reimbursements, contributions, and salvage costs. In addition, a line item for capital expenditures related to customer growth has been added to address costs associated with PGW's plan to increase its customer base. These projected costs are not in the current PGW six-year capital improvement program.

Proposed capital expenditures over the six-year projection period total $342.4 million. For fiscal year 2001, PGW's projected capital budget of $64.5 million represents a 33.9 percent increase over 2000 actual capital expenditures but only an 8.1 percent increase over fiscal year 2000's planned capital budget. The bulk of the 2001 capital budget, 57.6 percent, is committed to Distribution department projects. The second largest commitment of funds, $12.9 million or 20.0 percent is allocated to the Gas Processing department; primarily, for the Richmond LNG Liquefaction Plant Replacement project. Over the projection period, Distribution department projects have planned expenditures of $203.3 million, which represents 59.4 percent of the total capital budget. The majority of the Distribution department capital projects involve the replacement of gas services and ongoing and required main replacements for intermediate and low-pressure mains of small diameter (8 inches or less).

Based on our inspection of existing facilities and under normal conditions, the proposed capital expenditures should be sufficient to maintain the system in good condition.

A listing of projects approved for fiscal year 2001, by major department, is shown in Table 5. This table also shows the priority assigned to each project.

[10] Operating department budgets are based on assessing capital requirements for maintaining a safe and reliable system calculated for a design day of 0°F average temperature, a -5°F design hour, and a normal annual weather pattern resulting in 4,600 annual degree-days.

Table 4
Historical and Proposed Capital Improvement Program[a]
(Thousands of Dollars)

	Fiscal Year Ending August 31,											
	Actual					Budget[b]	Projected					Total
Category	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2001 - 2006
	$	$	$	$	$	$	$	$	$	$	$	$
Gas Processing	126	858	978	744	926	12,878	11,417	10,788	5,060	922	679	41,744
Distribution	31,205	37,719	32,452	24,945	31,194	37,125	33,246	32,743	33,858	33,666	32,657	203,295
Field Services	13,159	8,132	12,157	9,141	8,097	6,542	6,614	4,162	4,312	6,632	6,783	35,045
Transportation	31	182	2,033	5,048	761	1,715	3,860	2,595	3,097	3,108	3,115	17,490
Other Departments	588	5,611	22,877	28,213	7,161	6,193	9,419	14,788	5,096	3,766	5,588	44,850
Subtotal	45,109	52,502	70,497	68,091	48,139	64,453	64,556	65,076	51,423	48,094	48,822	342,424
Customer Growth-Related Projects									558	546	543	1,647
Total Program	45,109	52,502	70,497	68,091	48,139	64,453	64,556	65,076	51,981	48,640	49,365	344,071

(a) All figures are net of reimbursements, contributions, and salvage costs.

(b) Figures from proposed capital budget recommended to City Council and the Director of Finance by the PGC. Awaiting approval by Ordinance.

Table 5
Proposed Capital Projects for FY2001
(Thousands of Dollars)

Category	Priority 1 Safety	Priority 2 Reliability	Priority 3 Enforced	Priority 4 New Rev	Priority 5 Efficiency	Total
	$	$	$	$	$	$
Gas Processing						
Additions - Measurement	0	26	0	0	0	26
Replace Odorizers	199	0	0	0	0	199
Replacement - Measurement	0	51	0	0	0	51
Additions - Supplemental	0	86	0	0	0	86
LNG Replacement	0	11,890	0	0	0	11,890
Replace Fire Gates	0	158	0	0	0	158
Replacement - Supplemental	0	187	0	0	0	187
Additions - Buildings	0	92	0	0	0	92
Building Improvements	0	79	0	0	0	79
Replacements - Building	0	111	0	0	0	111
	199	12,679	0	0	0	12,878
Distribution						
High Pressure Additions	0	0	0	314	0	314
High Pressure Enforced	0	0	1,298	0	0	1,298
LP/ Intermediate Small - Add	0	0	0	1,402	0	1,402
LP/ Intermediate Small - Enfor	0	0	5,554	0	0	5,554
Prudent Main	5,005	0	0	0	0	5,005
LP/ Intermediate Small -Clamp	500	0	0	0	0	500
LP/ Intermediate Small -Encap	800	0	0	0	0	800
Lp/Inter Large - Addition	*0*	*0*	*0*	*75*	*0*	*75*
LP/Inter Large - Enforced	0	0	3,233	0	0	3,233
LP/Interm - Encapsulation	902	0	0	0	0	902
LP/Interm - Clamping	250	0	0	0	0	250
Cathodic Protection	0	218	0	0	0	218
High Pressure Valves	76	0	0	0	0	76
Presure Regulating	0	76	0	0	0	76
Small Service Additions	0	0	0	2,737	0	2,737
Large Service Additions	0	0	0	2,118	0	2,118
Small Service Replacements	12,040	0	0	0	0	12,040
Large Service Replacements	852	0	0	0	0	852
Addition Tools	0	0	0	0	219	219
Reimbursement	0	0	0	0	(750)	(750)
Replacement Tools	0	203	0	0	0	203
	20,425	498	10,086	6,647	(531)	37,125
Field Services						
Meter Installation Addition	0	0	0	1,842	0	1,842
Meter Replacements	1,196	0	0	0	0	1,196
Regulator Installations	0	0	0	80	0	80
Regulator Replacements	28	0	0	0	0	28
Telemetering Installation	0	0	0	0	600	600
Telemetering Replacements	49	0	0	0	0	49
Training Equipment - Addition	0	0	0	0	25	25
Training Equip. - Replacements	0	25	0	0	0	25
AMR Installations	0	0	0	0	2,372	2,372
AMR Replacements	0	0	0	0	325	325
	1,273	25	0	1,922	3,322	6,542
Transportation						
Shop Equipment - Additions	0	42	0	0	0	42
Vehicle Replacement	0	1,117	0	0	0	1,117
Mobile Equipment Additions	0	34	0	0	0	34
Mobile Equipment Replacements	0	465	0	0	0	465
Shop Equipment Replacements	0	56	0	0	0	56
	0	1,715	0	0	0	1,715
All Other Departments	100	1,360	0	0	4,733	6,193
Total FY2001 Program	**21,997**	**16,277**	**10,086**	**8,569**	**7,524**	**64,453**

Gas Processing

As noted earlier, the proposed capital budget for the Gas Processing department is $12.9 million in fiscal year 2001. This represents a $11.95 million increase over actual 2000 expenditure levels. The Replacement project for the Richmond LNG Liquefaction Plant is a Priority 2 project, budgeted at $11.9 million in 2001. The remainder of the budget is distributed among several smaller projects ranging from fire gate replacements to miscellaneous building improvements.

The LNG Replacement project is primarily related to the replacement of the existing liquefaction equipment at the Richmond LNG Plant. This replacement project will be conducted in phases over the 2001 through 2003 fiscal years. The existing liquefaction equipment was installed in the late 1960's and is more expensive to operate and maintain relative to newer technologies now available. In addition, the existing equipment is nearing the end of its expected life. The new equipment utilizes technology with fewer moving parts, will be significantly less expensive to operate and maintain and will allow for year-round liquefaction operation. During the initial phases of the project, PGW plans to operate the existing and new equipment in parallel until the new equipment has been successfully tested.

Distribution

Unlike Gas Processing Department projects, planned capital projects for the Distribution Department follow a recurring pattern which require generally equal capital outlays each year. The largest capital costs for the distribution system relate to the replacement of small diameter (1.25 inches or less) services. This ongoing multi-year project is budgeted at $12.0 million for 2001. These expenditures are scheduled for the renewal of services based on customer complaints, leak surveys, and City and State work. The next largest planned expenditures are for ongoing main replacements ($5.0 million) and replacement of intermediate and low-pressure mains of small diameter ($5.6 million) due to anticipated City and State construction activities.

The ongoing mains replacement capital program follows recommendations made by Navigant Consulting Inc. ("Navigant") in a February 2000 report entitled "Philadelphia Gas Works Mains Replacement Study." The study recommended an 18-mile annual replacement program for cast iron mains, about one percent of current inventory, which was projected by Navigant to eliminate most of PGW's trouble-prone cast iron pipe in five years. A one percent annual replacement program was found by Navigant to be typical for gas distribution utilities, like PGW, with greater than 500 miles of cast iron mains.

Field Services

Over the past few years, PGW has embarked on an aggressive program to retrofit customer meters with electronic devices to maximize the effectiveness of its automated meter reading system. The fiscal year 2001 budget for field service activities is markedly less than previous years due to the near completion of the retrofitting program. PGW continues to realize benefits from the implementation of an automated meter reading system, including fewer estimated readings, increased reading accuracy, reduction in meter reading personnel and reduced customer complaints.

Transportation

The majority of the planned capital expenditures for this department are associated with vehicle replacements (65.1 percent). The remainder of the Transportation budget is distributed between additions and replacements for mobile equipment and shop equipment.

Other Departments

The "Other Departments" category includes budgeted capital expenditures for Building Services, Information Technology, and Customer Affairs. For fiscal year 2001, the majority of the planned capital expenditures is divided between Building Services (30.0 percent of the budget or $1.9 million) and Information Technology (38.4 percent or $2.4 million). Among the approved Building Services projects for 2001 is work on a compressed natural gas ("CNG") Station and miscellaneous building additions throughout the PGW system. Major Information Technology expenditures are slated for server hardware upgrades, data servers, and software testing.

Rates and Tariffs

The past fiscal year has been one of transition for PGW due to changes in regulatory jurisdiction as the result of the passage of the Gas Choice Act. The following sections present a discussion of existing rate programs and some of the ongoing issues facing PGW due to the changes in legislation and regulation and the impact on rates and rate-making methodology.

Regulation

Prior to July 1, 2000, PGW's rates were regulated by the PGC. After July 1, 2000, PGW became subject to regulation by the PUC. Although the PGC continues to approve PGW's operating budget, which has the effect of setting PGW's revenue requirement, the PUC has the authority to approve the rates charged by PGW. Further, PGW is required to file unbundled rates with the PUC by July 1, 2002 with these rates to be implemented by September 1, 2003. The unbundled rates are required so customers may choose from which supplier to purchase natural gas.

To date, PGW's experience with the PUC is limited. PGW filed its annual GCR filing with the PUC in August 2000 and has filed for revisions to its GCR twice since that time in order to pass along increases in gas supply costs. The PUC has approved all of the GCRs filed by PGW. In our opinion, PGW has requested and received timely changes in its GCR.

On August 8, 2000, PGW filed for interim base rate relief of $52 million (annually) with the PUC. In its order dated November 22, 2000, the PUC granted $11 million of this interim increase but attached certain conditions precedent to the increase that were not acceptable to PGW. PGW and the City filed an appeal of the PUC Order with the Commonwealth Court. On February 22, 2001, the PUC issued an order adopting a settlement between the PUC Law Bureau and PGW that included the following:

1. PGW would be allowed to increase rates to provide an additional $11 million in base rate revenues by August 31, 2001.
2. PGW would be permitted to recover an additional $7 million through its GCR to account for higher than anticipated bad debt expense. PGW would be allowed to reserve any overcollection of GCR up to $25 million.
3. PGW agreed to implement all of the recommendations of the PUC Management Audit (the "Audit") or explain why it believes it cannot or should not.
4. The PUC is obligated to establish rates that permit PGW to meet all of its Bond Ordinance covenants.
5. PUC and the City agreed on a timetable and process to replace interim management with permanent management.

The appeal was withdrawn following the February 22, 2001 Order approving the settlement. PGW implemented rates consistent with the order on March 1, 2001.

On January 5, 2001, PGW filed for a $65 million permanent increase in base rates. In order to mitigate PGW's weather related risk, the rate design proposed by PGW in this filing is heavily weighted towards increasing the fixed monthly customer charges that are not impacted directly by changes in consumption due to weather. The PUC's Office of Trial Staff, Office of Consumer Affairs ("OCA"), and intervenor testimony have been filed in this matter. These parties are advocating different base rate increases (as low as $21.5 million) and different rate design methodologies from those proposed by PGW. Since this is the first permanent base rate filing PGW has submitted to the PUC for approval, there is no

history or precedent available upon which to assess the likely outcome of this rate filing. The Gas Choice Act requires, and the PUC has acknowledged, that the PUC establish rates that will permit PGW to meet all of its Bond Ordinance covenants, and that the PUC use the prior rate-making methodology in setting overall rates. Black & Veatch has determined that the prior rate-making methodology is the cash-flow method. It cannot be predicted how the PUC will interpret and actually implement this in the form of a base rate increase and what rate-making and rate design methodology the PUC will ultimately approve. In addition, based on the typical PUC procedural schedule, any increase in base rates would not become effective until the beginning of the 2002 fiscal year unless there is a settlement in the rate case. If there is a settlement during the 2001 fiscal year, 2001 operating results could improve slightly above the levels contained in this report. The base rate increases and rate design assumptions utilized in this report are discussed in the sections of the report titled *"Proposed Rates"* and *"Financial Feasibility for the 2001 Bonds – Projected Revenues – Sales and Transportation Revenues"*.

Existing Rates

PGW's existing Gas Service Tariff became effective on March 1, 2001 when rates were changed on an interim basis pursuant to the PUC Order entered February 22, 2001. On January 5, 2001, PGW filed for a permanent change in base rates of $65 million annually. A PUC rate proceeding is now ongoing, as described above. The PUC's decision in this proceeding will determine new rates which will replace those set on an interim basis pursuant to the February 22, 2001 Order.

The current tariff sets forth the rules and regulations for gas service and the rates PGW is allowed to charge for various types of service. Changes to this tariff must be approved by the PUC. PGW primarily provides service under three broad classifications: firm, interruptible and transportation service. Table 6 summarizes the existing, interim and proposed PGW rates.

Table 6
Comparison of Existing, Interim, and Proposed Tariff Rates

Tariff	Tariff Charges Existing[a]	Interim[b]	Proposed[c]
Firm Service			
General Service - Rate GS			
Customer Charge - $/meter per month			
Residential Customers	8.00	11.66	15.00
Commercial Customers	10.00	14.57	25.00
Industrial Customers	20.00	29.14	50.00
Commodity Charge (exclusive of gas cost) - $/Mcf			
Residential Customers	3.4330		3.7250
Commercial Customers	3.9400		4.5060
Industrial Customers	3.9400		4.6370
Base Cost of Gas - $/Mcf[d]	3.1800		3.1800
Total Commodity Charge - $/Mcf			
Residential Customers	6.6130		6.9050
Commercial Customers	7.1200		7.6860
Industrial Customers	7.1200		7.8170
Municipal Service - Rate MS			
Customer Charge - $/meter per month	0.00		25.00
Commodity Charge (exclusive of gas cost) - $/Mcf	3.2330[e]		3.8881
Base Cost of Gas - $/Mcf	3.1800		3.1800
Total Commodity Charge - $/Mcf	6.4130		7.0681[f]

Table 6 (continued)
Comparison of Existing, Interim, and Proposed Tariff Rates

Tariff	Tariff Charges Existing[a]	Interim[b]	Proposed[c]
Firm Service Continued			
Philadelphia Housing Authority Service - Rate PHA			
Customer Charge - $/meter per month	0.00		25.00
Commodity Charge (exclusive of gas cost) - $/Mcf	3.9460		4.0680
Base Cost of Gas - $/Mcf	3.1800		3.1800
Total Commodity Charge - $/Mcf	7.1260		7.2480
Interruptible Service			
Boiler and Power Plant Service-Small Volume - Rate BPS-S			
Customer Charge - $/meter per month			
Annual consumption less than 10,000 Mcf.	35.00		35.00
Annual consumption between 10,000 and 100,000 Mcf, inclusive.	75.00		
Annual consumption greater than 100,000 Mcf.	150.00		
Commodity Charge[g] - $/Mcf	7.2120		7.2120
Boiler and Power Plant Service - Large Volume - Rate BPS-L			
Customer Charge - $/meter per month			
Annual consumption less than 10,000 Mcf.	35.00		50.00
Annual consumption between 10,000 and 100,000 Mcf, inclusive.	75.00		
Annual consumption greater than 100,000 Mcf.	150.00		
Commodity Charge[g] - $/Mcf	6.7758		6.7758
Load Balancing Service - Extra-Large Volume - Rate LBS-XL			
Customer Charge - $/meter per month	250.00		250.00
Commodity Charge[g] - $/Mcf	5.2635		5.2635
Load Balancing Service - Large Volume - Rate LBS-L			
Customer Charge - $/meter per month	175.00		175.00
Commodity Charge[g] - $/Mcf			
Indirect	5.3215		5.3215
Direct	5.4221		5.4221
Load Balancing Service - Small Volume - Rate LBS-S			
Customer Charge - $/meter per month	100.00		100.00
Commodity Charge[g] - $/Mcf	5.6773		5.6773
Gas Transportation Service - Rate GTS			
Customer Charge - $/meter per month	250.00		250.00
Commodity Charge[h] - $/Mcf	6.5613		6.5613
Cogeneration Service - Rate CG			
Customer Charge - $/meter per month	250.00		250.00
Commodity Charge[i] - $/Mcf	5.4508		5.4508
Developmental Natural Gas Vehicle Service - Rate NGVS			
Customer Charge - $/meter per month	35.00		30.00
Commodity Charge[j] - $/Mcf	5.4949		5.4949

(a) Reference: Philadelphia Gas Works, Gas Service Tariff, Number 1, issued July 3, 2000.
(b) Reference: Documents from interim filing dated February 23, 2001. Interim filing only increases residential, commercial, and industrial customer charges, no other charges are affected.
(c) Reference: Rate Case Exhibit HSG-1 Schedule 4A.
(d) The Gas Cost Rate Clause applies in addition to these charges.
(e) Rate Case Exhibit HSG-1, Schedule 5A indicates Municipal, Non-Heat customer charge of $9.74 & Municipal, Heat customer charge of $9.95.
(f) Rate Case Exhibit HSG-1, Schedule 4A indicated Municipal, Non-Heat commodity charge of $7.0681 and Municipal, Heat commodity charge of $7.1075.
(g) Competitively priced based on cost of alternative fuel.
(h) Commodity charge includes Delivery Charge, Transportation charge, and Standby Service Charge, if applicable.
(i) Commodity charge based on cost of gas purchased and delivered to PGW gate stations.
(j) Commodity charge based on schedule of charges related to Maximum Daily Quantity.

Firm Service

PGW provides firm service under three rate schedules: General Service, Municipal Service, and Philadelphia Housing Authority ("PHA") Service. The vast majority of PGW's customers are served under the General Service Rate. During the 2001 fiscal year, over 98 percent of PGW's customers are served under this rate and these customers account for over 80 percent of sales volumes (and over 67 percent of total throughput). This rate is available to any residential, commercial, or industrial customer. Monthly customer charges differ depending on whether the customer is classified as residential, commercial, or industrial. A different commodity rate applies to residential customers versus commercial and industrial customers. The General Service Rate contains special provisions for separately metered summer air conditioning and CNG vehicle service. Residential senior citizens may qualify for a discount under this rate. The commodity rate is subject to adjustment under the GCR clause.

Table 7 presents a comparison of a typical peak winter month's residential gas bill for PGW and the other principal gas distribution utilities in Pennsylvania. Based on rates currently in effect and on annualized cost of gas, PGW's typical winter residential bill is near the group average of $233.64. PGW's GCR includes the recovery of costs related to the Customer Responsibility Program, the Conservation Works Program, and the Senior Citizen Discount Program. We understand costs of comparable programs at other utilities in Pennsylvania are not as substantial.

Table 7
Comparison of Residential Gas Bills – Pennsylvania Utilities
For Customers Using 20 Mcf per Month

Utility	Monthly Bill[a, b]
Philadelphia Gas Works	$ 239.32
Columbia Gas of Pennsylvania	$ 227.62
UGI Corporation	$ 253.00
Peoples Natural Gas	$ 221.76
PECO Energy	$ 236.22
Penn Fuel Gas	$ 239.52
T. W. Phillips Gas and Oil Company	$ 218.05

(a) Based on annualized cost of gas.
(b) Table assumes 1 cubic foot equals 1,000 Btu.

PGW's current rates include approximately $1.18 per Mcf related to the Customer Responsibility Program, the Conservation Works Program, and the Senior Citizen Discount. For the typical peak winter month's residential bill for 20 Mcf of consumption, these costs equate to $23.60.

Interruptible Service

PGW provides interruptible service under several rate schedules. Over 98 percent of the interruptible customers take service under the Boiler and Power Plant Service ("BPS") or Load Balancing Service ("LBS"). The BPS rates are set within a range based on the price of No. 2 fuel oil with a ceiling based on the total price (including GCR) for commercial and industrial firm service. The LBS service is priced similarly except that No. 6 fuel oil is used rather than No. 2 fuel oil. Because their service is

interruptible, customers taking BPS or LBS service must have an alternate energy source. Under normal operating conditions, interruption may be requested if the temperature is at or below 18 degrees Fahrenheit. Service to these customers is a competitive service. If the price of No. 2 or No. 6 fuel oil is less expensive than the equivalent price that PGW offers in any given month, the customer may choose to switch to alternate fuel rather than burn natural gas.

Transportation Service

PGW currently provides transportation service to eight customers. The majority of the throughput and revenues from transportation service is attributable to one customer, the Grays Ferry Cogeneration Facility. Service to this customer is provided through essentially dedicated facilities under a long-term negotiated contract. Under this contract, PGW receives approximately 8 cents per Mcf for each unit transported plus a service charge intended to cover PGW's cost of operating and maintaining the facilities required to serve this customer. The other seven customers are served under individually negotiated contracts. PGW negotiates the rates charged under these contracts so that the margin realized is equal to the margin that PGW would realize from these customers under the applicable sales rate schedule. In most cases, transportation customers also take some service under the sales rate schedule (Gas Transportation Service or "GTS") for a portion of their load.

Interim Rates

On February 22, 2001, PGW received approval from the PUC to increase certain rates on an interim basis. These interim rates are designed to increase revenues by $18 million from the effective date until the end of the 2001 fiscal year. These interim rate changes are shown in Table 6. Eleven million of the $18 million interim rate change was made to the existing customer charges for general service. Therefore, recovery of this portion of the interim rate increase will not be susceptible to variations in the volume of gas used. The remaining portion, $7 million, is being recovered through the GCR as a non-gas cost. The interim rates are temporary and may expire on August 31, 2001 unless they are extended by the PUC or replaced by a permanent rate change resulting from PGW's January 2001 base rate filing.

Proposed Rates

The rates proposed by PGW in its January 2001 base rate filing are also summarized in Table 6. These rates are based on producing an overall increase in revenues from base rates of $65 million per year. The proposed rate design is heavily weighted towards increasing the customer charges for all services and implementing a customer charge for services that currently do not have a customer charge (municipal and public housing authority services). PGW has proposed this rate design methodology in order to reduce the risks of changes in weather on its contribution margin. The proposed rate design results in a higher percentage of margin revenues (total revenues less GCR revenues) that are derived from a fixed customer charge that does not vary with changes in weather.

Customer Responsibility Program

In November 1993 the Philadelphia Gas Commission adopted a low-income program known as the Customer Responsibility Program ("CRP"). This program became effective in February 1994. The purpose of CRP is to increase the collection of revenues, provide an affordable payment plan for low-income customers, impress payment responsibility on the customer, reinforce the importance of conservation and increase grant assignment. The goal of the program is to increase cash flow to PGW and decrease accounts receivable.

The CRP is open to any customer who is at or below 150 percent of the Federal poverty level ("FPL"). New CRP customers are asked to pay 5 percent of their arrearage as a down payment, although exceptions are provided if warranted. CRP customers are also required to accept conservation measures offered to them in the Conservation Works Program. CRP customers are required to recertify for the program each year and are considered in default when they are two full payments past due. A formula is developed to forgive past arrearages after successful completion of five years on the program.

CRP agreements are divided into two primary categories based on participant household income. Discount Agreements apply if a participant's gross monthly household income is at or below 135 percent of the FPL. The CRP budget amount is 7.35 percent of the gross household income; however, a $30 minimum is the lowest monthly payment allowed to eligible CRP customers. Non-Discounted Agreements apply if the household income is greater than 135 percent but less than 150 percent of FPL. A monthly budget amount, plus two percent of arrears is established with the participants. If customers are tenants of the PHA, the CRP budget amount is the utility allowance they receive from PHA.

Approximately 56,000 customers or about 11 percent of PGW's total residential customer base are enrolled in the CRP. The level of participation has generally increased in recent years, primarily due to PGW's improved eligibility verification and account processing initiatives. Upgrading of PGW's Customer Information System has also provided improvements in the CRP administration.

The CRP revenue shortfall is recovered in the GCR. In the past three fiscal years, these amounts were $11,970,272 in 1998, $9,312,172 in 1999, and $14,783,518 in 2000.

Conservation Works Program

The Conservation Works Program ("CWP") is designed to provide cost-effective energy savings to PGW's low-income customers who participate in the CRP. CWP is intended to reduce the overall long-term costs of CRP.

CWP began in 1990 and was operated by the Energy Coordinating Agency of Philadelphia ("ECA") for the first years of the program. In September 1996, the program was redesigned, a second weatherization contractor was added, and PGW became the program operator. Both contractors have pursued a lower cost program approach designed to install only the most cost-effective measures. Since redesign, the program has continued with some occasional interruptions with an annual budget of approximately $2.2 million. About 3,700 homes have been treated annually in recent years.

Generally, CRP customer consumption levels are approximately 30 percent greater than that of the average residential customer. Most CRP customers live in row houses more than 100 years old that are in poor condition. Abandoned and vacant neighboring properties are also factors inducing high-energy usage. Average gas used among Philadelphia's low-income population (qualifying customers) when calculated on a per square foot per degree-day basis is far above national levels.

The basic characteristics of the targeted CWP population are customers with household income at or below 150 percent of the FPL and gas usage levels that are at or above their usage limit. CRP customers whose actual usage is above their usage limit are charged with an excess usage charge.

The goals of the CWP program include:

- Reducing gas usage of low-income households in a cost-effective manner
- Lowering gas bills and improving the payment practices of participant customers

The CWP focuses on this population of low-income customers by addressing the main factors that influence their energy usage, such as, mechanical and structural systems, as well as, behavior issues. The principal program treatments are:

- Energy education and basic health and safety checks provided to all houses
- Set back thermostats installed in about two-thirds of all houses
- Roof insulation installed by subcontractors in about 15 percent of houses
- Blower-door guided air sealing performed in about 25 percent of the houses

PGW commissioned an independent evaluation of the CWP that was completed in August 2000. Overall, the CWP was found to produce impressive energy savings for a modest cost. The report recommended that the measures should be applied to a greater proportion of houses.

Senior Citizen Discount Program

PGW offers a senior citizen discount program to residential customers at age 65 or older. Currently, there is no means or income test for eligibility in this program. The discount amounts to approximately 20 percent of the total gas bill for the residence. Approximately 85,600 PGW customers are taking advantage of this discount program.

Other Programs and Grants

In addition to the programs described above, PGW also maintains several other assistance programs that are intended to increase cash flow and reduce accounts receivable.

LIHEAP Program

The Federally funded Low Income Home Energy Assistance Program ("LIHEAP") provides funds to households in order to ensure continued utility service. The City's low-income residential gas consumers may apply for assistance through PGW's neighborhood offices, the Department of Public Welfare, or at one of many community sites. The LIHEAP program consists of two grant components: "Cash" and CRISIS grants. The main difference between the two grant types is that CRISIS is only offered to eligible customers whose utility service is off or in danger of having services terminated. Funds obtained are paid directly to PGW for crediting to the customer's account.

LIHEAP is an important source of low income assistance funding for PGW and has ranged over the last five years from $7.6 million in 1996 to $13.8 million in 2000. PGW's share of LIHEAP funds allocated to the Commonwealth of Pennsylvania has ranged from approximately 17 to 20 percent since 1996. These levels have been achieved through a vigorous educational and outreach program by PGW to enroll its low-income residential population.

In 1996, the Commonwealth of Pennsylvania changed the customer eligibility criteria for LIHEAP participation from 150 percent of the FPL to 110 percent of the FPL. Consequently, the number of PGW customers that are eligible for LIHEAP was reduced. In fiscal year 2001, the LIHEAP Cash eligibility criteria increased to 135 percent of the FPL while CRISIS eligibility was increased to 150 percent of FPL. Therefore, PGW expects an increase in the number of grants and funds received this year as compared to last year.

Vendor Payment Program

PGW continues to support a Vendor Payment Program for a group of customers known as Scattered Site Tenants of the PHA. The customers occupy dwellings, usually single family homes, owned by the PHA and for which the Federal Government provides rent subsidies. Under agreement with the

PHA and the Scattered Site Tenants, the Federal Government's Department of Housing and Urban Development provides a utility allowance to PHA, on behalf of the tenant. There are basically two groups of PHA tenants: one for which utility payments are received by PGW directly from PHA, and another group that is responsible for paying their own utility bills.

Utility Emergency Services Fund

PGW also participates in the Utility Emergency Services Fund ("UESF") which is a private fuel fund set up with the assistance of the City of Philadelphia Water Department and PECO Energy. Under this program, customers at or below 150 percent of the FPL may make application for an energy assistance grant (LIHEAP) which together with their own payment, a grant from UESF, and a matching contribution from the utility involved, may enable the customers to zero-out any arrearages they may have. The maximum allowance that a customer may receive is $500; $250 from UESF and a matching grant of $250 from the utility.

Dollar Plus Program

PGW also continues to support a program called "Dollar Plus" wherein PGW's customers are asked to add $1.00 or more to their gas bill payments as a donation to the Utility Emergency Services Fund.

Payment Plans

PGW maintains a number of residential customer payment plans that are tailored to the customer's ability to pay in order to allow the customer the opportunity to pay down past arrearages and budget future usage and payments.

Billing and Collections

To strengthen its financial condition, PGW has focused on improving its billing and collections programs. The principal components to this effort are improving the functionality of the new billing system (installed in 1999); improving customer service in the Call Center and in the field; and creating the Accounts Receivable Task Force. PGW created the Project Management Office ("PMO") for the sole purpose of achieving these goals. While the immediate impact of these programs is encouraging and appears sustainable, the actual results have been muted by the recent effects of higher gas costs, a colder than normal heating season, and the related account delinquencies and uncollectibles expense.

The primary mission of the PMO since its inception in June 2000 has been to increase the functionality of the new Billing, Collections and Customer Service ("BCCS") system. The BCCS went on-line in July 1999. Start-up of the BCCS revealed a number of serious problems compounded by the fact that the prior billing and collection system was shut down when BCCS went on-line. The PMO has systematically attacked an initial backlog of 55,000 billing exceptions to a current level of less than 300 per day, which are being addressed on an ongoing basis. Estimated and unbilled accounts was an additional billing system transition problem, and the PMO identified and corrected over 70,000 accounts which were estimated in error and which were billed zero usage. The billing uploading error was identified and corrected, requiring a manual meter reading effort, which resulted in additional billings of $2.9 million in October 2000. PGW plans to continue PMO to effectively increase the functionality of the billing system, to provide necessary management reports, and to provide timely support to the customer service and collections operations, until such time as the system fully meets PGW's needs.

Call center operations were strengthened with ongoing employee training, expanded service hours weekdays and Saturday, and retaining the services of professional call center management to serve on an interim basis. These actions have resulted in better utilization of the information capability of the BCCS, a staff productivity gain of nearly 20 percent, and improvement in other call center metrics. These measures support the overall field service and collections operations.

In January 2001, PGW created the Accounts Receivable Task Force to improve collection activity and to create ongoing programs to improve collections yield. Four categories of receivables were identified for targeted response.

- Certain Residential Accounts - This effort concentrated on those areas of the City where average household incomes are above average, suggesting a greater probability of collection. Field collections are made on Saturdays when customers are more likely to be home.
- Commercial and Industrial Accounts –The Task Force concentrates its personnel on making dunning calls and field visits for accounts more than 90 days overdue and subject to shutoff. This effort generated over $3 million in collections, or 46 percent of receivables due, in January and February of 2001.
- Written-Off Accounts - PGW has assigned nearly all of its written-off accounts to six outside collection agencies. Accounts assigned do not include those that are assigned to the Lien/Judgment Program, which is handled by the City Law Department. The City Law Department and PGW have worked together for several years on this program, which realizes recoveries as properties in the City are sold.
- Slow Paying Accounts – These accounts represent Residential and Commercial and Industrial Accounts which are overdue less than 60 days. Collection evidence suggests that, without PGW monitoring or intervention, a large number of these accounts will tend to become non-paying over time. As of March 28, 2001, approximately 41,000 residential accounts and 4,600 non-residential accounts are considered "slow paying accounts". PGW intervention includes increased bill collection efforts coordinated with the Call Center and field operations.

Competition

PGW's customer, volume, and revenue mix is heavily weighted towards the residential and smaller commercial markets. PGW currently holds in excess of 85 percent of the home heating market in the City with fuel oil constituting most of the remaining market. This high market share combined with a service territory that is not growing limits PGW's ability to increase its customer base. For residential and small commercial customers, the short run cost of changing energy sources is generally prohibitive without some kind of incentive to switch appliance (rebates or financing of appliances, for example). While not totally immune from competition, the residential and small to medium-sized commercial markets are quite stable. Further, opportunities for PGW to increase market share are limited without investment in marketing or incentive programs.

Generally, competition in the larger commercial and industrial markets is common. PGW's BPS and LBS customers (interruptible customers) have the ability to burn alternate fuels (generally fuel oil). If the equivalent price of natural gas is higher than fuel oil, many customers will opt to burn oil. Further, these interruptible customers may be curtailed during peak periods in the winter. PGW's largest customer accounts for approximately 15 percent of total throughput but less than ½ of one percent of contribution

margin. While large commercial and industrial loads are an important part of PGW's base, PGW's risk to competition is lower than most natural gas utilities with a relatively higher industrial load.

Unbundled Services

To comply with the Gas Choice Act, PGW is required to file unbundled rates with the PUC on or before July 1, 2002 that will be implemented by September 1, 2003. Currently, all but a handful of PGW's customers receive fully bundled service from PGW. A fully bundled service is a service where the customer deals with one provider and pays for all services through a single charge. All of the separate services currently performed by PGW are packaged into one full-service rate. PGW's current rates reflect differences in the level and quality of service, but the same basic service is provided to all sales customers. When PGW (or any natural gas utility) unbundles its rates, separate charges are developed for each service provided. With customer choice, the customer may choose to repackage all or some of these services. While the actual format of these rates and services is not known at this time, the general framework exists in utilities that currently offer unbundled services. The general services that PGW is likely to offer include gas supply (likely similar to the service provided now and reflected in the GCR), distribution (a portion of the current non-gas commodity charge pays for this service now), balancing and storage (the gas supply portion of this is currently in the GCR and the investment cost is currently reflected in the non-gas commodity charge), and customer (currently unbundled in a customer charge but may not be reflective of the total cost).

The only portions of unbundled rates that will be subject to customer choice are the gas supply and storage elements. Even though some customers may purchase the natural gas commodity from a third party, PGW will still charge for the distribution service and will likely charge for additional services required by transportation customers as well. If PGW's unbundled rates are designed properly, offering unbundled rates and customer choice of supply should not adversely impact PGW's contribution margin and PGW should be largely indifferent as to whether the customer buys gas from PGW or some third party. PGW does not earn margin on the commodity cost of gas.

Certain costs within PGW's gas supply portfolio are fixed - transportation and storage contracts and PGW's investment in LNG facilities. If PGW's unbundled rate tariff provides provision for assigning or releasing capacity to customers who chose alternate gas supply and/or if PGW is allowed to reduce the amount of transportation and storage service under contract to reflect customers who choose alternate gas supply, any negative impact can be mitigated. Further, if PGW is allowed to structure services to transportation customers based on market prices, PGW may be able to unlock value to the benefit of its core market customers. To the extent that PGW has investment in facilities or commitments to gas supply that are stranded due to customers choosing an alternate gas supplier, PGW may be able to recover stranded costs. Finally, PGW is likely to incur additional costs (administrative, accounting, balancing, etc.) associated with serving transportation customers on a broader scale. If rates are designed properly, PGW should be able to charge transportation customers for the additional costs required to serve them.

Regardless of the ultimate rate design approved by the PUC, this report assumes that the PUC will adhere to its statutory obligation to provide PGW with revenues adequate to meet its bond covenants.

Financial Feasibility for the 2001 Bonds

The financial data used in the analyses presented herein were obtained from the historical financial records of PGW, the latest available estimates for fiscal year 2001, PUC GCR filings, and proposed operating and capital budgets for fiscal years 2001 through 2006. PGW's financial statements are audited annually. The most recently available audited financial statements are for fiscal year 2000. According to that audit, PGW's financial statements are maintained in conformity with generally accepted accounting principles for gas utilities.

Projected Revenues

Operating revenues for PGW consist principally of revenues from the sale of natural gas to residents of the City of Philadelphia. Non-operating revenues include interest income and other miscellaneous non-operating sources.

Historical and Projected Number of Customers

Consistent with the trend in a declining population base, the number of customers served by PGW is projected to decline slightly during the period 2001 through 2006. Table 8 summarizes historical and projected number of customers. The total number of customers served is projected to decline from approximately 513,000 in fiscal year 2001 to about 504,250 in fiscal year 2006, a total decline of about 2 percent over five years. Most of this decline is in residential customers served.

Recognizing that proactive steps should be taken to offset the recent trend in declining numbers of customers served, PGW plans to initiate steps that are intended to add approximately 900 new customers per year during the 2004 through 2006 period as shown in footnote (c) in Table 8. Recognizing that the underlying trend will not change without additional marketing efforts, we include an allowance for the capital investment required to add these customers in our financial projection. This capital investment includes an allowance for the physical facilities required to connect new customers and an allowance to recognize additional marketing investment.

Coincident with PGW's anticipated unbundled rate filing in the fiscal year 2002 to 2003 time frame, customers are projected to begin migrating from sales to transportation service. The principal difference between customers taking sales versus transportation service is that PGW will not be the buyer of the natural gas commodity for the transportation customers. However, PGW will continue to charge for the transportation of gas through its distribution system. This charge for distribution service will not likely differ appreciably from the charge (less gas cost) that would apply to sales service customers. Therefore, PGW is unlikely to experience a material reduction in contribution margin (gross revenues less cost of gas) due to customers migrating to transportation service. So long as PGW's existing GCR provision remains in effect, the contribution margin will be unaffected as long as the number of customers who opt for other suppliers is relatively modest. While it is difficult to predict with certainty the actual number of customers who will migrate and the timing of such a migration, PGW's projection appears to be reasonable. If the rates for transportation service are properly designed, the net revenues realized by PGW will not be materially sensitive to whether customers take sales or transportation service.

Table 8
Historical and Projected Number of Customers

Description	Actual[a] 1996	1997	1998	1999	2000	Estimated[b] 2001	Projected[b] 2002	2003	2004	2005	2006
Total Number of Customers	**513,000**	**511,000**	**512,000**	**510,000**	**512,000**	**512,894**	**510,542**	**508,213**	**506,916**	**505,788**	**504,258**
Gas Customers											
Non-heating											
Firm											
Residential						65,648	64,465	63,153	61,203	58,787	56,725
CRP Residential						2,332	2,199	2,199	2,199	2,199	2,199
Commercial						5,823	5,487	5,144	4,823	4,536	4,274
Industrial						388	388	388	388	388	388
Municipal						352	352	352	352	352	352
Housing Authority						8	8	8	8	8	8
Total Firm Non-heating						74,551	72,898	71,243	68,973	66,270	63,945
Interruptible											
BPS - Small						149	149	149	137	121	111
BPS - Large						261	275	288	276	254	241
BPS - A/C						9	10	11	12	12	12
LBS - L Direct						3	2	2	1	0	0
LBS - L Indirect						13	14	15	15	13	12
LBS - S Indirect						54	55	56	51	43	38
LBS - XL Direct						3	3	3	2	1	0
LBS - XL Indirect						3	3	3	3	3	3
Cogeneration - Direct						1	1	1	1	1	1
Cogeneration - Indirect						3	3	3	2	1	1
LNG - Direct						0	0	0	0	0	0
Grays Ferry						1	1	1	1	1	1
GTS - Sales						1	1	1	1	1	1
NGV Indirect						2	2	2	2	2	2
Off-System Sales						0	0	0	0	0	0
Total Interruptible						504	520	536	503	453	423
Total Non-Heating						**75,055**	**73,418**	**71,779**	**69,476**	**66,722**	**64,369**
Heating											
Residential[c]						363,244	364,824	363,536	358,828	350,919	344,920
CRP Residential						49,666	46,801	46,801	46,801	46,801	46,801
Commercial[c]						19,061	19,603	20,157	20,259	19,995	19,926
Industrial[c]						785	843	901	960	1,002	1,049
Municipal						552	552	552	535	511	494
Housing Authority						4,523	4,494	4,465	4,171	3,767	3,479
Total Heating						**437,831**	**437,116**	**436,412**	**431,555**	**422,994**	**416,669**
Total Sales Customers						**512,886**	**510,534**	**508,191**	**501,030**	**489,717**	**481,037**
Transportation Customers											
Residential						0	0	0	4,784	13,543	19,442
Commercial						0	0	0	724	1,665	2,503
Industrial						0	0	0	24	55	84
Municipal						0	0	0	17	39	59
Housing Authority						0	0	0	270	614	915
BPS						0	0	13	48	122	177
LBS						0	0	1	9	22	32
Other - Large[d]						8	8	8	9	10	10
Total Transportation Customers						**8**	**8**	**22**	**5,885**	**16,072**	**23,221**

(a) Breakdown of customer totals not available.

(b) 2001 figures are based on 6 months actuals and 6 months projected. Projected figures are based on budgeted department figures.

(c) Include following growth increases:

Residential	650	1,288	1,926
Commercial	248	494	737
Industrial	28	56	84
Transportation	1	1	1

Historical and Projected Gas Sales and Throughput

Historical throughput (sales plus transportation volumes) for the 1996 through 2000 fiscal years and projected throughput for the 2001 through 2006 fiscal years are summarized in Table 9. The throughput volumes for fiscal year 2001 are based on 4,555 HDD and for the subsequent five years are based on 4,600 HDD.

The decline in total residential throughput is consistent with the projected decline in the number of residential customers. An additional reduction to residential and commercial throughput is included in the projection to reflect a gradual decline in the use per customer due to the conservation effects of weatherization programs, increased efficiencies of replacement natural gas appliances (primarily higher efficiency furnaces and hot water heaters), and increased efficiencies of replacement housing stock. Consistent with the underlying trend, throughput to other customer classes (primarily industrial customers) is projected to increase such that the overall throughput is projected to increase through the 2001 to 2006 period.

Consistent with the customer growth initiative discussed above, PGW projects increased throughput associated with these new customers. The total increase in throughput is approximately 6 billion cubic feet ("Bcf"). Most of this increase in volume (5.8 Bcf) is associated with adding a large cogeneration facility customer.

As with the number of customers projection, customers are projected to begin migrating from sales to transportation service. Therefore, sales volumes are reduced since customers now opt for transportation service. As stated previously, if transportation rates are designed properly, this migration should not translate into a material reduction in net contribution margin.

Sales and Transportation Revenues

Historical revenues (sales plus transportation service) for the 1996 through 2000 fiscal years and projected revenues for the 2001 through 2006 fiscal years are summarized in Table 10. The revenue figures shown in Table 10 are based on application of PGW's existing rates (the rates in effect prior to the interim rate increase that went into effect March 1, 2001) to the projected number of customer and the projected normal sales and transported volume. The revenue projections reflect the same adjustments made to sales and throughput (the declining use per customer adjustment and customer growth adjustment). However, the revenue impact of the declining use per customer reflects only the decline in net contribution margin. We assume consistent with PGW's existing GCR, that changes in the gas cost recovery portion of revenues will equal changes in gas costs.

PGW's revenue and gas cost projection for 2001 through 2006 was prepared prior to the beginning of the current fiscal year. Thus, these projections do not reflect the recent significant escalation in the cost of purchased gas. As an alternative to PGW rerunning their revenue model to determine the impact by customer class, this increase in the cost of purchased gas is shown as a separate line item in Table 10 (Lines 25 and 35). The impact of the interim rate increase for fiscal year 2001 of $18 million and the assumed levelized base rate increase of $53 million expected to become effective beginning in fiscal year 2002 are shown on Line 50 in Table 10.

To reflect the slightly colder than normal weather actually experienced by PGW during the 2001 fiscal year, we have included the additional marginal revenue PGW expects to realize above the level contained in the 2001 base estimates. This $5.4 million increase is shown on Line 49 of Table 10.

Table 9
Historical and Projected Sales and Throughput

Description	Actual[a] 1996 MMcf	1997 MMcf	1998 MMcf	1999 MMcf	2000 MMcf	Estimated[b] 2001 MMcf	Projected[b] 2002 MMcf	2003 MMcf	2004 MMcf	2005 MMcf	2006 MMcf
Gas Sales Volumes											
Non-heating											
Firm											
Residential	2,413	2,253	2,115	2,038	1,940	2,124	2,081	2,038	1,981	1,898	1,830
CRP Residential	NA	NA	NA	NA	NA	184	181	181	182	182	182
Commercial	1,889	1,878	1,832	1,777	1,920	1,892	1,820	1,746	1,679	1,617	1,560
Industrial	743	651	540	612	456	551	551	551	551	551	551
Municipal	263	234	234	214	261	231	231	231	231	231	231
Housing Authority	46	51	34	30	17	37	37	37	37	37	37
Total Firm Non-heating	5,353	5,066	4,755	4,670	4,594	5,019	4,901	4,784	4,661	4,516	4,391
Interruptible											
BPS - Small	313	347	253	246	177	304	303	302	281	247	197
BPS - Large	3,235	3,596	3,741	3,447	3,769	4,148	3,996	4,241	4,123	3,789	3,593
BPS - A/C	0	0	0	115	0[e]	239	272	309	322	330	345
LBS - L Direct	653	655	308	219	177	337	337	271	97	0	0
LBS - L Indirect	1,133	1,299	1,429	1,102	1,114	1,293	1,293	1,369	1,348	1,231	1,104
LBS - S Indirect	1,791	1,405	1,759	1,607	1,649	1,813	1,813	1,857	1,691	1,432	1,256
LBS - XL Direct	1,095	760	663	529	312	672	666	660	348	59	0
LBS - XL Indirect	135	259	284	268	1,063	1,067	1,067	1,067	1,070	1,018	956
Cogeneration - Direct	0	0	0	0	0	70	70	70	70	70	70
Cogeneration - Indirect	392	279	177	169	208	169	168	167	122	79	64
LNG - Direct	201	0	3	5	0	0	0	0	0	0	0
Gaya Ferry	0	0	0	0	0	175	175	175	175	175	175
GTS - Sales	1,398	1,210	1,008	733	134	114	114	115	115	115	115
NGV Indirect	8	6	3	2	3	3	3	3	3	3	3
Off-System Sales	0	250	250	0	0	0	0	0	0	0	0
Total Interruptible	10,354	10,066	9,879	8,441	8,604	10,404	10,277	10,606	9,765	8,548	7,878
Total Non-Heating	**15,707**	**15,132**	**14,633**	**13,112**	**13,198**	**15,423**	**15,178**	**15,390**	**14,426**	**13,064**	**12,269**
Heating											
Residential[c,d]	48,819	44,412	39,664	39,617	39,048	35,562	34,982	34,606	34,035	32,939	32,313
CRP Residential	NA	NA	NA	NA	NA	6,492	6,370	6,375	6,391	6,389	6,389
Commercial[c,d]	7,345	6,794	6,117	6,404	8,192	8,547	8,815	8,924	9,007	8,897	8,869
Industrial[c]	1,000	867	766	794	844	938	992	1,048	1,100	1,142	1,191
Municipal	1,253	1,114	1,035	1,033	978	1,141	1,141	1,141	1,114	1,063	1,032
Housing Authority	1,602	1,417	1,224	1,166	871	1,273	1,269	1,265	1,230	1,172	1,133
Total Heating	**60,018**	**54,605**	**48,805**	**49,015**	**49,932**	**53,953**	**53,569**	**53,359**	**52,877**	**51,602**	**50,927**
Total Sales Volumes	**75,725**	**69,737**	**63,439**	**62,127**	**63,129**	**69,376**	**68,747**	**68,749**	**67,303**	**64,666**	**63,196**
Transportation											
Residential	0	0	0	0	0	0	0	0	491	1,245	1,782
Commercial	0	0	0	0	0	0	0	0	336	728	1,023
Industrial	0	0	0	0	0	0	0	0	27	61	86
Municipal	0	0	0	0	0	0	0	0	35	80	112
Housing Authority	0	0	0	0	0	0	0	0	42	91	126
BPS	0	0	0	0	0	0	0	308	926	1,775	2,438
LBS	0	0	0	0	0	0	0	106	884	1,801	2,404
Other - Large[e]	4,484	2,310	8,266	13,619	14,092	14,440	14,440	14,440	20,821	20,864	20,878
Total Transportation	**4,484**	**2,310**	**8,266**	**13,619**	**14,092**	**14,440**	**14,440**	**14,854**	**23,563**	**26,643**	**28,850**
Total Throughput	**80,210**	**72,047**	**71,705**	**75,746**	**77,221**	**83,816**	**83,187**	**83,603**	**90,866**	**91,309**	**92,047**

(a) PGW Historical data. CRP volumes are included in appropriate residential figure.
(b) 2001 figures are based on 6 months actuals and 6 months projected. Projected figures are based on budgeted department figures.
(c) Include following growth increases:

Residential			57	113	169
Commercial			114	230	345
Industrial			29	57	86
Transportation			5,840	5,840	5,840

(d) Marginal Revenue Loss Customer Utilization (Conservation)

Residential	(466)	(699)	(932)	(1,165)	(1,398)
Commercial	(117)	(175)	(233)	(291)	(350)

(e) Included in BPS - Large during fiscal year 2000.

Table 10
Historical and Projected Revenues
(Thousands of Dollars)

Line No.		Historical[a] 1996	1997	1998	1999	2000	Estimated[b] 2001	Projected[b] 2002	2003	2004	2005	2006
	Gas Sales Revenues											
	Non-heating											
	Firm											
1	Residential	21,753	22,112	20,944	20,201	21,039	27,754	23,011	22,488	21,847	21,049	20,323
2	CRP Residential	NA	NA	NA	NA	NA	1,308	1,291	1,291	1,298	1,300	1,301
3	Commercial	15,417	16,723	16,344	15,436	16,424	21,212	16,676	15,951	15,334	14,858	14,363
4	Industrial	5,885	5,599	4,699	5,168	4,111	6,068	4,944	4,933	4,942	4,975	4,987
5	Municipal	1,871	1,838	1,831	1,623	1,978	2,338	1,869	1,864	1,868	1,881	1,886
6	Housing Authority	357	429	289	246	139	399	324	323	323	326	326
7	Total Firm Non-heating	45,283	46,702	44,107	42,673	43,690	59,079	48,114	46,850	45,613	44,389	43,187
	Interruptible											
8	BPS - Small	1,930	2,449	1,511	1,576	1,737	2,238	2,038	2,051	1,902	1,674	1,345
9	BPS - Large	15,722	18,553	15,785	12,317	19,662	28,078	21,959	21,925	20,567	17,999	16,361
10	BPS - A/C	0	0	0	451	0[c]	1,305	1,169	1,307	1,354	1,373	1,422
11	LBS - L Direct	2,306	2,491	1,088	660	798	1,825	1,552	1,181	414	0	0
12	LBS - L Indirect	4,040	4,686	4,860	3,325	4,944	6,894	5,931	5,947	5,641	4,954	4,293
13	LBS - S Indirect	6,832	5,472	6,217	4,787	7,358	10,324	9,180	8,903	7,817	6,359	5,381
14	LBS - XL Direct	3,766	2,757	2,188	1,572	1,334	3,563	2,906	2,723	1,403	234	0
15	LBS - XL Indirect	380	843	1,010	802	4,578	5,587	4,631	4,388	4,233	3,866	3,515
16	Cogeneration - Direct	0	0	0	0	0	352	259	259	259	261	262
17	Cogeneration - Indirect	1,296	909	586	552	848	927	642	639	469	304	248
18	LNG - Direct	573	0	18	31	0	0	0	0	0	0	0
19	Grays Ferry	0	0	0	0	0	868	620	619	619	622	624
20	GTS - Sales	4,649	4,051	3,262	2,386	694	766	523	496	478	459	442
21	NGV Indirect	24	19	9	7	53	16	11	11	11	11	11
22	Off-System Sales	1,747	2,017	1,500	0	0	0	0	0	0	0	0
23	Total Interruptible	43,266	44,247	38,034	28,465	42,006	62,743	51,420	50,450	45,187	38,116	33,904
24	**Subtotal Non-Heating**	88,549	90,948	82,141	71,137	85,696	121,822	99,534	97,301	90,780	82,504	77,091
25	Cost of Gas Increase	NA	NA	NA	NA	NA	14,591	19,772	17,078	10,023	8,350	7,405
26	Prior Year's Gas Cost Recovery	2,596	(497)	(628)	(1,762)	2,134	(700)	0	0	0	0	0
27	**Total Non-Heating**	91,146	90,452	81,513	69,375	87,830	135,713	119,306	114,379	100,803	90,854	84,496
	Heating											
28	Residential[a,c,d]	360,820	367,114	333,557	328,135	315,227	380,524	313,041	310,282	306,578	300,497	297,614
29	CRP Residential	NA	NA	NA	NA	NA	38,265	37,476	37,468	37,508	37,613	37,658
30	Commercial[a,c,d]	59,067	60,139	54,373	55,381	69,435	94,894	79,503	81,700	82,846	83,777	86,139
31	Industrial[a,c]	7,951	7,585	6,710	6,764	7,140	10,349	8,934	9,415	9,894	10,615	11,602
32	Municipal	8,983	8,796	8,167	7,921	7,459	11,606	9,285	9,263	9,061	8,717	8,485
33	Housing Authority	12,640	12,432	10,780	9,987	7,275	13,546	10,925	10,868	10,563	10,122	9,789
34	**Subtotal Heating**	449,462	456,066	413,586	408,187	406,536	549,185	459,164	458,997	456,449	451,341	451,287
35	Cost of Gas Increase	NA	NA	NA	NA	NA	65,778	91,210	80,563	50,398	45,680	43,346
36	Prior Year's Gas Cost Recovery	26,494	(5,826)	(6,760)	(17,946)	28,009	(13,348)	0	0	0	0	0
37	**Total Heating**	475,956	450,240	406,826	390,241	434,544	601,615	550,374	539,560	506,847	497,021	494,634
38	**Total Sales Revenues**	567,101	540,691	488,339	459,616	522,374	737,328	669,680	653,938	607,650	587,875	579,130
	Transportation											
39	Residential	0	0	0	0	0	0	0	0	2,289	5,754	8,212
40	Commercial	0	0	0	0	0	0	0	0	1,470	3,168	4,451
41	Industrial	0	0	0	0	0	0	0	0	118	260	368
42	Municipal	0	0	0	0	0	0	0	0	117	266	373
43	Housing Authority	0	0	0	0	0	0	0	0	179	385	535
44	BPS	0	0	0	0	0	0	0	685	1,679	2,848	3,301
45	LBS	0	0	0	0	0	0	0	152	1,047	1,819	1,970
46	Other - Large[a]	1,108	1,441	2,258	3,376	3,313	3,656	3,503	3,570	5,169	5,184	5,196
47	**Total Transportation**	1,108	1,441	2,258	3,376	3,313	3,656	3,503	4,407	12,069	19,684	24,406
48	**Total Revenues**	568,210	542,133	490,597	462,992	525,687	740,984	673,183	658,346	619,719	607,559	603,535
49	Marginal Rev. Increase - Weather	0	0	0	0	0	5,376	0	0	0	0	0
50	Rate Increase	0	0	0	0	0	18,000	53,000	53,000	53,000	53,000	53,000
51	**Adjusted Total Revenues**	568,210	542,133	490,597	462,992	525,687	764,360	726,183	711,346	672,719	660,559	656,535

(a) PGW Historical data. CRP volumes are included in appropriate residential figure.
(b) 2001 figures are based on 6 months actuals and 6 months projected. Projected figures are based on budgeted department figures.
(c) Include following growth increases:

Residential			535	1,602	3,201
Commercial			1,035	3,128	6,277
Industrial			258	780	1,565
Transportation			1,463	1,463	1,463
(d) Marginal Revenue Loss Customer Utilization (Conservation)	(2,000)	(3,000)	(4,000)	(5,000)	(6,000)
Residential	(1,600)	(2,400)	(3,200)	(4,000)	(4,800)
Commercial	(400)	(600)	(800)	(1,000)	(1,200)

(e) Included in BPS - Large during fiscal year 2000.

The $53 million levelized annual increase in base rates assumed in this report is predicated on balancing several considerations. PGW filed for an annual increase in base rates of $65 million in January 2001. This rate case is currently pending and unless the case is settled in the near future, any rate changes resulting from this filing will not likely take effect until the beginning of fiscal year 2002, at the earliest. Regulated utilities rarely receive from the PUC the level of rate relief for which they file, which is the same as PGW's experience with the PGC. The level of rate relief actually realized by PGW in this filing or future filings will have a direct impact on cash flow, repayment of short-term borrowing, the level of long-term debt financing required by PGW to fund capital improvements, and PGW's ability to fund its financial obligations, including the $18 million payment to the City.

In this report, the revenue projections reflect the interim rate increase already in effect for fiscal year 2001, and a $53 million per year levelized increase in base rates over fiscal years 2002 through 2006. Based on the assumptions contained in this report, this overall level of rate relief is necessary for PGW to comply with its Bond Ordinance covenants, including its covenants to pay operating expenses and debt service in full when due, to continuously operate and maintain the System in good condition, to pay all City Charges, including the annual base payment to the City, and to achieve the coverage required by the Rate Covenants. This level of rate relief will also enable PGW to:

1. Significantly pay down outstanding commercial paper between 2002 and 2004 and pay off all commercial paper by 2005,
2. Fund a significant portion of capital expenditures from internally generated funds beginning in 2004,
3. Establish an adequate level of working capital, and
4. Repay the $45 million City loan by January 25, 2003.

If the overall level of rate relief realized by PGW is less than $53 million per year over the 2002 through 2006 period, PGW's ability to meet its Bond Ordinance covenants may be significantly impaired. If the overall level of rate relief realized by PGW is greater than $53 million per year over the 2002 through 2006 period, the need for future long-term borrowing might be reduced, short-term debt might be retired sooner, a greater portion of capital expenditures might be funded from internally generated funds, and PGW's overall financial health would be improved. This could ultimately be reflected in improved bond ratings, lower borrowing costs, and lower rates.

The level of revenues projected for the 2002 through 2006 period is based on normal weather conditions. To the extent that weather is warmer than normal, PGW will likely realize lower revenues. While most of such a reduction in revenues would be offset by a reduction in purchased gas costs, the contribution margin would also decline, potentially impacting PGW's ability to meet its Bond Ordinance covenants without additional rate relief. If weather is colder than normal over the projection period, PGW's contribution margin would increase, enhancing PGW's ability to meet its Bond Ordinance covenants and reducing the need for future base rate increases. The impact of warmer or colder than normal weather may be affected by the type of rate design approved by the PUC. All other things being equal, the greater the amount of revenues recovered through a customer charge, the lesser the impact of changes in weather.

As with the volume and number of customers projections, as sales volumes and customers migrate to transportation service, so do revenues. As stated previously, if transportation rates are designed properly, this migration should not translate into a material reduction in net contribution margin and hence, net cash flow and income will not be materially affected.

Other Operating Revenues

Other operating revenues are projected to remain at an annual level of approximately $28 million throughout the 2001 through 2006 period. These revenues consist of sales of energy-related appliance services, finance charges realized on overdue accounts, field collection charges, and other miscellaneous sources.

Assistance Programs

Over the past several years, PGW has seen high accounts receivable balances and higher than usual delinquent accounts. As part of PGW's proactive approach to managing this problem, PGW has continued to develop programs targeted at assisting customers with meeting their energy costs. Table 11 details PGW's LIHEAP participation in recent years and provides an estimate for fiscal year 2001. Assistance programs are estimated to contribute $25.3 million in revenues in 2001.

Accounts Receivable

As described previously, PGW has increased its focus on improving its billing and collection practices *(See "Billing and Collections")*. Overall, the corrected implementation of BCCS and increased collections activity is expected to reduce accounts receivables and ultimately, written-off accounts. The programs described in this report represent significant improvements over past practices and are expected to produce systematic, sustainable results. Table 12 summarizes historical and projected accounts receivable and account write-offs. As seen from the table, we assume receivables as a percent of billed gas revenues will remain constant over the projection period at 29.7 percent. Realized bad debt expense as a percent of billed gas revenues are projected to decrease from 9.2 percent in 2001 to 8.3 percent in 2006. Current year results are unfavorably impacted by high gas costs, colder than normal winter temperatures, and less than a full year of PGW's system improvements.

Capital Improvement Program Financing

The Capital Improvement Program described earlier (*See "Capital Improvement Program"*) will be financed by PGW through funds currently available for capital projects, revenue bond issues, investment income, and system revenues.

The CIP expenditures for the six-year period ending August 31, 2006 are shown on Line 9 of Table 13 and total approximately $342 million. Additional capital costs associated with PGW's plan to increase its number of customers that are not in the current CIP projection are presented on Line 10. Within the constraints of the rate covenants and additional bonds tests outlined in the 1975 and 1998 Ordinances, the total par amount of bonds to be issued of approximately $284 million during the projection period is designed to maximize the capital requirements financed with bond proceeds.

Lines 1 through 7 outline the sources available to meet the CIP financing requirements. Line 1 shows the net balance available in the Capital Improvement and Capital Leasing Funds as of August 31, 2000, available to fund the CIP. Lines 2 through 5 presents the net proceeds from bond sales, Line 6 shows the amount projected to be transferred to the Capital Improvement Fund each year from current operating revenues, and Line 7 presents the funds available from capital lease proceeds. The level of cash financing presented on Line 6 of the table has been modified from PGW's projection based on estimated available cash and maximizing PGW's financial position. Planned fund uses are summarized on Lines 9 and 10 of the table.

Table 11
Historical and Budgeted Assistance Programs

	Historical										Estimated	
	1996		1997		1998		1999		2000		2001	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Grant Money Available	$51,267,542		$63,183,961		$62,698,318		$60,840,118		$68,713,000		$145,000,000	
Cash	$34,094,179	66.5%	$50,344,451	79.7%	$49,116,706	78.3%	$52,315,704	86.0%	$50,954,000	74.2%	$78,500,000	54.1%
Crisis	$17,173,363	33.5%	$12,839,510	20.3%	$13,581,612	21.7%	$8,524,414	14.0%	$17,759,000	25.8%	$66,500,000	45.9%
Number of Grants												
State of PA												
Cash	244,461	77.6%	234,521	78.7%	231,694	78.2%	227,873	84.1%	220,000	70.7%	300,000	73.2%
Crisis	70,703	22.4%	63,310	21.3%	64,674	21.8%	43,057	15.9%	91,000	29.3%	110,000	26.8%
Total State of PA	315,164	100.0%	297,831	100.0%	296,368	100.0%	270,930	100.0%	311,000	100.0%	410,000	100.0%
PGW												
Cash	46,606	19.1%	47,966	20.5%	49,105	21.2%	43,035	18.9%	41,085	18.7%	56,000	18.7%
Crisis	6,361	9.0%	7,600	12.0%	12,140	18.8%	4,770	11.1%	16,786	18.4%	22,000	20.0%
Total PGW	52,967	16.8%	55,566	18.7%	61,245	20.7%	47,805	17.6%	57,871	18.6%	78,000	19.0%
CRP vs. Non-CRP												
Cash - CRP	27,184	58.3%	28,780	60.0%	28,934	58.9%	22,809	53.0%	23,622	57.5%	32,480	58.0%
Cash - Non-CRP	19,422	41.7%	19,186	40.0%	20,171	41.1%	20,226	47.0%	17,463	42.5%	23,520	42.0%
Crisis - CRP	3,356	52.8%	4,010	52.8%	6,545	53.9%	2,572	53.9%	12,106	72.1%	15,866	72.1%
Crisis - Non-CRP	3,005	47.2%	3,590	47.2%	5,595	46.1%	2,198	46.1%	4,680	27.9%	6,134	27.9%
Value of Grants												
State of PA												
Cash	$140		$215		$201		$230		$232		$255	
Crisis	$243		$278		$250		$198		$196		$550	
PGW												
Cash	$121		$209		$199		$212		$215		$216	
Crisis	$302		$250		$249		$249		$297		$600	
Total Funding - Final												
State of PA												
Cash	$34,124,311		$50,422,015		$46,570,494		$52,315,083		$50,952,000		$76,500,000	
Crisis	$17,173,052		$17,629,303		$16,168,500		$8,524,425		$17,836,000		$60,500,000	
Total State of PA	$51,297,363		$68,051,318		$62,738,994		$60,839,508		$68,788,000		$137,000,000	
PGW												
PGW - Cash	$5,639,326	16.5%	$10,000,911	19.8%	$9,778,573	21.0%	$9,123,420	17.4%	$8,812,733	17.3%	$12,096,000	15.8%
PGW - Crisis	$1,921,022	11.2%	$1,900,000	10.8%	$3,027,837	18.7%	$1,189,638	14.0%	$4,985,442	28.0%	$13,200,000	21.8%
Total PGW	$7,560,348	14.7%	$11,900,911	17.5%	$12,806,410	20.4%	$10,313,058	17.0%	$13,798,175	20.1%	$25,296,000	18.5%

Table 12
Historical and Projected Accounts Receivable and Write-offs

	Fiscal Year Ending August 31,										
	Historical[a]					Estimated	Forecast				
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Billed Gas Revenues ($000)	539,119	548,455	497,985	482,700	525,687	764,360	726,183	711,346	672,719	660,559	656,535
Accounts Receivable ($000)	143,303	132,560	110,790	116,094	156,080	226,940	215,610	211,200	199,730	196,120	194,930
Less: Reserve for Bad Debt	(83,214)	(77,100)	(64,724)	(67,070)	(102,000)	(137,185)	(115,088)	(115,327)	(115,891)	(114,577)	(113,489)
Net Accounts Receivable	60,089	55,460	46,066	49,024	54,080	89,755	100,522	95,873	83,839	81,543	81,441
Bad Debt Reserve/Accounts Receivable	58.1%	58.2%	58.4%	57.8%	65.4%	60.4%	53.4%	54.6%	58.0%	58.4%	58.2%
Net Write-Offs ($000)	33,975	39,149	45,873	36,806	37,807	64,497	52,000	53,000	55,000	57,000	59,000
Receivable/Billed Gas Revenues	26.6%	24.2%	22.2%	24.1%	29.7%	29.7%	29.7%	29.7%	29.7%	29.7%	29.7%
Delinquent Customer (Annual Average)	119,806	120,901	117,394								
Delinquent Customer (End of Year)	115,618	118,925	107,750								
Bad Debt ($000)	38,340	33,474	34,130	39,000	54,000	72,688	63,088	62,327	60,891	57,577	54,489
Bad Debt/Billed Gas Revenues	7.1%	6.1%	6.9%	8.1%	10.3%	9.5%	8.7%	8.8%	9.1%	8.7%	8.3%
Bad Debt/Accounts Receivable	26.8%	25.3%	30.8%	33.6%	34.6%	32.0%	29.3%	29.5%	30.5%	29.4%	28.0%

(a) Historical data from Schedule 9 of Gas Recovery Rate File, January 2001.

Table 13
Capital Improvement Fund
(Thousands of Dollars)

Line No.		Fiscal Year Ending August 31,					
		2001	2002	2003	2004	2005	2006
		$	$	$	$	$	$
1	*Balance from Previous Year*	*44,300*	*95,847*	*35,434*	*81,022*	*34,041*	*41,901*
2	Bond Proceeds @ Par[a]	119,280	0	120,000	0	45,000	0
3	Less Discount & Issuance Costs	(5,560)	0	(5,594)	0	(2,098)	0
4	Less Deposit to Sinking Fund Reserve	(3,720)	0	(3,742)	0	(1,403)	0
5	Net Bond Proceeds	110,000	0	110,664	0	41,499	0
6	Transfer from Operating Fund[b]	0	0	0	5,000	15,000	48,822
7	Proceeds from Capital Leases[c]	6,000	4,142	0	0	0	0
8	Total Sources of Funds	160,300	99,989	146,098	86,022	90,540	90,723
9	Capital Expenditures	64,453	64,556	65,076	51,423	48,094	48,822
10	Customer Growth-Related Projects	0	0	0	558	546	543
11	Total Uses of Funds	64,453	64,556	65,076	51,981	48,640	49,365
12	Net Balance - End of Year	95,847	35,434	81,022	34,041	41,901	41,358

(a) Assumes no capitalized interest.
(b) PGW internally generated funds.
(c) From a prior PMA $23 million bond sale. Restricted for use to purchase plant equipment.

As presented in Table 13, a total of three bond sales totaling $284.28 million are proposed for the six-year projection period. Coupled with a beginning available balance of $44.3 million and a total of $68.82 million of internally generated funds, sufficient funds will be available for PGW to complete its planned capital improvement program.

Projected Revenue Requirements

PGW's rates are developed to provide sufficient levels of revenue to meet cost of gas, all operation and maintenance expenses of the System, debt service requirements on obligations issued for the System, capital improvement expenditures to be funded from current revenues, and other specific bond ordinance and revenue requirements. This section provides a discussion of the components that make up PGW's revenue requirements.

Gas Costs

As discussed earlier, as a result of the GCR, changes in the cost of gas result in equal changes in revenues. Assumptions concerning gas costs over the six-year projection period may be found under "*Sales and Transportation Revenues*" section of this report.

Operation and Maintenance Expenses

Table 14 presents PGW's historical and projected operation and maintenance expense. The estimated 2001 expenses serve as a base for the remaining years and have been based on PGW's latest 2001 estimates. The projections for 2001 through 2006 incorporate planned savings totaling $124 million based on implementation of PGW's Transition to Excellence Program.

Table 14
Historical and Projected Operation and Maintenance Expenses
(Thousands of Dollars)

Line No.	Description	Fiscal Year Ending August 31,										
		Historical[a]					Estimated[b]	Projected[b]				
		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
		$	$	$	$	$	$	$	$	$	$	$
	Operating Expenses											
1	Natural Gas	276,574	271,627	246,699	219,081	266,350	474,945	400,299	387,548	345,694	332,249	324,340
2	Other Raw Materials	282	4	0	9	4	10	10	10	10	10	10
3	Subtotal Fuel	276,856	271,631	246,699	219,090	266,354	474,955	400,309	387,558	345,704	332,259	324,350
4	Gas Processing	14,846	14,238	13,582	13,881	14,033	13,968	13,738	14,071	14,402	14,683	15,091
5	Field Services	18,492	18,883	16,032	21,701	22,720	33,061	33,176	33,840	34,517	35,207	35,911
6	Distribution	22,817	20,454	16,500	15,527	14,246	13,601	13,782	14,058	14,339	14,625	14,918
7	Collection	10,131	9,460	7,477	7,980	12,609	13,740	14,014	14,295	14,581	14,872	15,169
8	Customer Services	17,747	17,049	16,711	9,860	10,759	13,287	13,553	13,825	14,101	14,383	14,671
9	Customer Accounting	3,357	5,898	6,577	7,960	3,669	4,181	4,265	4,351	4,438	4,527	4,617
10	Bad Debt Expense	38,340	33,474	34,130	38,999	54,642	72,688	63,088	62,327	60,891	57,577	54,489
11	Marketing & Point-of-Sale Expenses	3,454	3,841	6,698	5,253	3,041	6,713	6,874	7,039	7,209	7,384	7,562
12	Administrative & General	40,282	40,485	36,748	34,681	37,676	45,407	41,157	41,496	41,834	42,405	43,286
13	Health Insurance	0	0	18,690	23,432	24,241	26,290	28,188	30,227	32,420	34,777	37,331
14	Capitalized Fringe Benefits	0	0	(5,057)	(4,896)	(4,654)	(5,333)	(5,642)	(5,933)	(6,340)	(6,779)	(7,247)
15	Capitalized Admin. Charges	0	0	(7,002)	(7,242)	(4,858)	(6,815)	(7,630)	(7,369)	(6,067)	(5,881)	(6,153)
16	Regulatory Asset Amortization	3,750	3,750	(2,076)	3,155	1,984	3,750	3,750	3,750	3,750	0	0
17	Amortization of Restructuring Costs	965	965	965	1,847	965	965	965	965	0	0	0
18	Year 2000 & Deregulation Amortization	0	0	0	0	882	888	0	0	0	0	0
19	Pensions	7,337	4,591	3,334	787	1,096	1,376	1,645	1,905	2,158	2,414	2,563
20	Taxes	6,532	6,517	6,235	6,091	6,512	6,548	6,575	6,600	6,640	6,651	6,677
21	Additional Realized Cost Savings	0	0	0	0	0	(3,181)	0	0	0	0	0
22	Personnel Reductions/Retirements	0	0	0	0	0	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)
23	Cost Savings/Productivity Improvements	0	0	0	0	0	(10,000)	(15,000)	(21,000)	(21,000)	(21,000)	(21,000)
24	**Total Other Operating Expenses**	188,050	179,605	169,544	179,016	199,563	228,634	213,998	211,947	215,373	213,345	215,385
25	**Total Operating Expenses**	**464,906**	**451,236**	**416,243**	**398,106**	**465,917**	**703,589**	**614,307**	**599,505**	**561,077**	**545,604**	**539,735**
26	Depreciation	39,062	36,652	41,019	33,777	32,614	33,381	34,704	36,046	37,297	38,525	38,544
27	Cost of Removal	0	0	0	0	2,519	2,500	2,500	2,500	2,500	2,500	2,500
28	Less: Clearing Account Depreciation	(5,293)	(4,804)	(5,628)	(4,702)	(4,328)	(3,344)	(2,921)	(2,499)	(2,243)	(2,111)	(2,059)
29	Net Depreciation	33,769	31,848	35,391	29,075	30,805	32,537	34,283	36,047	37,554	38,914	38,985
30	**Total Operating Expense & Dep'n.**	**498,675**	**483,084**	**451,634**	**427,181**	**496,722**	**736,126**	**648,590**	**635,552**	**598,631**	**584,518**	**578,720**

(a) Source: Philadelphia Gas Works Base Rate Proceeding, Volume II - Supporting Financial Information, Part III, Schedule 1.
(b) 2001 figures are based on 6 months actuals and 6 months projected. Projected figures are based on budgeted department figures

As part of an overall plan which encompasses the proposed rate increase to restore PGW to financial stability, PGW has developed the "Transition to Excellence" Program. In the recently submitted base rate filing, PGW identified several areas of specific savings. These areas include: lowering employee health care premiums by $3.0 million; achieving an additional $2.5 million of savings through attrition of the workforce via the 30-years of service retirement program; and recognizing $10.0 million of imputed savings from all company-wide activities.

Some of the programs or expense categories that have been identified in connection with company-wide activities include:

- Reducing budgeted overtime
- Reducing general materials, purchased services, contracted maintenance and other expenses
- Delaying filling of personnel vacancies
- Eliminating PGW's payment for legal services plans
- Eliminating PGW's Perfect Attendance Incentive
- Eliminating PGW's Deferred Compensation Contribution
- Restructuring the Workers' Compensation Program
- Outsourcing specific activities subsequent to the May 15, 2001 Union contract expiration
- Restructuring PGW's Absence and Sick Pay Policies
- Restructuring vacation and holiday policies
- Identifying reductions to PGW's vehicle fleet and associated cost savings

A review of the available, unaudited year-to-date financial information indicates that PGW is on course to achieve the projected $12.5 million of savings outlined in the Transition to Excellence Program for 2001 as indicated on Table 14. In addition to these savings, year-to-date operation and maintenance expenditures are about $3.2 million (annualized) below original estimated levels.

Debt Service Requirements

Table 15 presents a summary of the existing and proposed debt service requirements for the six-year projection period. Included on the table are provisions for the repayment of PGW's commercial paper obligations ($97 million) and repayment of the City loan ($45 million). Both of these debt payments are subordinate to the debt service on any outstanding bonds issued under the General Bond Ordinances.

The proposed 2001 Bonds are assumed to be issued in June 2001. Debt service on this issue assumes a 30-year amortization schedule, a 5.5 percent interest rate, and level annual debt service payments. Issuance costs, including bond insurance, underwriters fees and original issue discount, have been assumed to be approximately 4.6 percent of the par value. Future bond issues are projected for June 2003 and June 2005 and debt service on these bonds is based on the same assumptions as those for the 2001 Bonds.

Table 15
Existing and Projected Debt Service Requirements
(Thousands of Dollars)

Description	Fiscal Year Ending August 31, Scheduled 2001	Projected 2002	2003	2004	2005	2006
	$	$	$	$	$	$
Revenue Bonds under 1975 Ordinance						
Series 11C	7,240	7,240	7,240	7,235	0	0
Series 12A	1,745	1,745	4,660	4,655	4,655	4,655
Series 13	1,467	0	0	0	0	0
Series 14	21,223	30,309	23,011	25,999	19,831	21,105
Series 15	16,031	12,324	8,473	8,470	8,474	5,640
Series 16	3,905	3,909	3,908	3,908	10,887	10,866
Total 1975 Ordinance Debt	51,611	55,527	47,292	50,267	43,847	42,266
Revenue Bonds under 1998 Ordinance						
Senior Debt						
First Series A	16,857	11,522	17,456	12,181	16,306	13,338
First Series B	5,190	5,190	5,190	5,190	5,190	5,190
Second Series	7,402	7,400	7,401	7,404	7,405	7,404
Third Series[a]		7,162	6,139	6,139	8,264	8,262
Fourth Series[a]				2,064	8,257	8,257
Fifth Series[a]						0
Senior Debt	29,449	31,274	36,186	32,978	45,422	42,451
Subordinate Debt						
First Series C	1,990	1,986	1,988	1,988	1,987	1,986
Total Subordinate Debt	1,990	1,986	1,988	1,988	1,987	1,986
Total 1998 Ordinance Debt	31,439	33,260	38,174	34,966	47,409	44,437
Capital Leases						
$20.1M Capital Lease	3,980	1,957	0	0	0	0
$23M Capital Lease	3,913	3,908	3,997	3,997	1,999	0
Capital Leases	7,893	5,865	3,997	3,997	1,999	0
Total Long-Term Debt	90,943	94,652	89,463	89,230	93,255	86,703
Commercial Paper[b]	0	25,000	20,000	32,500	19,500	0
CNG Note & City Loan[b]	59	0	45,000	0	0	0
Total Debt Service	91,002	119,652	154,463	121,730	112,755	86,703

(a) Projected debt service.
(b) Assumed debt service schedule.

Payments to City

In accordance with the Management Agreement and the Gas Choice Act, PGW makes an annual base payment of $18 million to the City. The payment to the City is subordinate to all outstanding debt.

Adequacy of Projected Revenues to Meet Projected Revenue Requirements Under Ordinance Requirements

Table 16 presents a pro forma statement developed from the revenue and expense projections for 2001 through 2006. This table in conjunction with Table 17, which presents a statement of cash flows, provides an indication of the adequacy of PGW's revenues and the financial feasibility of the currently proposed and future anticipated revenue bond sales.

The operating revenue projections presented earlier in Table 10 are summarized in Lines 1 through 4 of Table 16. These projected revenues are based on PGW's currently effective rate schedules (rate schedules in effect prior to the interim rate increase). Revenues from Other Sales, primarily unbilled gas adjustments, are shown on Line 5 of Table 16. Since the Gas Choice Act mandates that the PUC approve and the PUC has acknowledged it has to approve for PGW rates sufficient to meet PGW's bond covenants, we reasonably assume the PUC will approve rate increases required to meet those requirements in a timely manner. A levelized base rate increase of $53 million is presented on Line 7 (Line 50 on Table 10) and represents in our opinion, the minimum level of increase needed to satisfy PGW's bond covenants and to meet the objectives shown in Table 15. Other operating revenues presented on Line 9 include revenues from sales of energy-related appliance services and field collection charges. Projected Other Income for the System (Line 30) includes interest earnings from the different reserve funds.

The projected operation and maintenance expenses shown on Lines 11 through 23 are from Table 14. PGW's projected net operating income before interest is summarized on Line 31 of Table 16. Interest expense on existing bonds, proposed bonds, and capital leases is presented on Line 32. Other interest costs including loss from refunded debt and the allowance for funds used during construction ("AFUDC") are shown on Lines 33 through 35. PGW's projected net income is shown on Line 37 of the table and ranges from $9.3 million in 2001 to $58.2 million in 2006.

On Table 17, Line 1 presents PGW's cash balance as of September 1 for each fiscal year. To this starting point, the net income line from Table 16 is added as are non-cash adjustments (such as depreciation and amortization) expensed on the Income Statement. External sources of funds are summarized on Lines 6 through 9 and include revenue bond proceeds, drawdowns on the capital improvement fund, and temporary borrowings. The total for all sources of funds is shown on Line 11 of Table 17.

Uses of funds are summarized on Lines 12 through 21 of the table. Lines 12 through 15 present the principal payments made on long-term debt, CIP requirements are shown on Line 16 and payments to the City and short-term debt obligations are shown on Lines 17 through 20. Changes in non-cash working capital items, including changes in accounts payable and accounts receivable, are shown in Line 21.

The net increase or decrease in available cash for each fiscal year is shown on Line 23. The ending cash balance for the year, which is the sum of Lines 1 and 23, is shown on Line 24. The variation in ending cash balances for the projection period reflects PGW's intent to repay its short-term debt obligations by 2005. The ending cash balance for 2002 represents approximately 9 weeks of operations and maintenance expenses (excluding the cost of fuel), the ending cash balances for 2003 through 2005 represent approximately 3 to 4 weeks of operations and maintenance expense, and the ending cash balance for 2006 represents approximately 7 weeks' worth of operations and maintenance expense. These projected year-end cash balances should be sufficient for PGW to accommodate normal fluctuations in expenditures for utility operations.

Table 16
Statement of Income
(Thousands of Dollars)

Line No.		Fiscal Year Ending August 31, 2001 $	2002 $	2003 $	2004 $	2005 $	2006 $
	Projected Revenues						
1	Non-Heating	135,713	119,306	114,379	100,803	90,854	84,496
2	Gas Transport Service	3,656	3,503	4,407	12,069	19,684	24,406
3	Heating	601,615	550,374	539,560	506,847	497,021	494,634
4	Marginal Revenue Increase - Weather	5,376	0	0	0	0	0
5	Other Sales	4,844	50	(200)	(1,050)	150	500
6	Total Gas Revenues - Existing Rates	751,204	673,233	658,146	618,669	607,709	604,035
7	Base Rate Increase	18,000	53,000	53,000	53,000	53,000	53,000
8	Total Gas Revenues	769,204	726,233	711,146	671,669	660,709	657,035
9	Other Operating Revenues	28,731	28,363	28,420	27,609	27,736	28,036
10	**Total Operating Revenues**	797,935	754,596	739,566	699,278	688,445	685,071
	Operating Expenses						
11	Natural Gas	474,945	400,299	387,548	345,693	332,247	324,336
12	Other Raw Materials	10	10	10	10	10	10
13	Total Fuel	474,955	400,309	387,558	345,703	332,257	324,346
14	Gas Processing	13,968	13,738	14,071	14,402	14,683	15,091
15	Field Services	33,061	33,176	33,840	34,517	35,207	35,911
16	Distribution	13,601	13,782	14,058	14,339	14,625	14,918
17	Collection	13,740	14,014	14,295	14,581	14,872	15,169
18	Customer Services	13,287	13,553	13,825	14,101	14,383	14,671
19	Customer Accounting	4,181	4,265	4,351	4,438	4,527	4,617
20	Bad Debt Expense	72,688	63,088	62,327	60,891	57,577	54,489
21	Cost Savings Program	(12,500)	(17,500)	(23,500)	(23,500)	(23,500)	(23,500)
22	G&A and Other Expenses[a]	76,608	75,882	78,680	81,604	80,971	84,019
23	Total Non-Fuel O&M	228,634	213,998	211,947	215,373	213,345	215,385
24	Depreciation	33,381	34,704	36,046	37,297	38,525	38,544
25	Cost of Removal	2,500	2,500	2,500	2,500	2,500	2,500
26	Less: Clearing Accounts	(3,344)	(2,921)	(2,499)	(2,243)	(2,111)	(2,059)
27	Net Depreciation	32,537	34,283	36,047	37,554	38,914	38,985
28	**Total Operating Expenses**	736,126	648,590	635,552	598,630	584,516	578,716
29	**Net Operating Income**	61,809	106,006	104,014	100,647	103,929	106,355
30	Other Income[b]	6,106	8,189	8,800	8,200	7,500	8,200
31	**Net Income Before Interest Charges**	67,915	114,195	112,814	108,847	111,429	114,555
	Interest						
32	Long Term Debt	48,784	54,296	53,280	53,657	52,424	51,109
33	Other	6,102	4,480	3,047	2,617	2,353	2,104
34	Loss From Refunded Debt	4,162	3,976	3,789	3,591	3,414	3,137
35	AFUDC	(413)	(457)	(235)	(101)	(98)	0
36	Total Interest	58,635	62,295	59,881	59,764	58,093	56,350
37	**Net Income**	9,280	51,900	52,933	49,083	53,336	58,205

(a) For 2001, also includes O&M cost savings realized through February 2001, above and beyond those identified in the Cost Savings Program.
(b) Includes other operating and non-operating income, such as interest income on funds and accounts transferrable to the Operating Fund.

Table 17
Statement of Cash Flows
(Thousands of Dollars)

Line No.		Fiscal Year Ending August 31, 2001	2002	2003	2004	2005	2006
		$	$	$	$	$	$
1	**Beginning Cash Balance**	8,425	425	37,498	13,732	14,345	18,358
	Sources of Funds						
	Internal Sources						
2	Net Income	9,280	51,900	52,933	49,083	53,336	58,205
3	Depreciation	33,381	34,704	36,046	37,297	38,525	38,544
4	Amortized Costs[a]	9,446	10,149	9,880	9,603	4,695	4,356
5	Total Internal Sources	52,107	96,753	98,859	95,983	96,556	101,105
	External Sources						
6	Revenue Bond Proceeds	110,000	0	110,664	0	41,499	0
7	Capital Improvement Fund Drawdown	58,453	60,413	65,077	46,981	33,638	545
8	Capital Lease Proceeds	6,000	4,142	0	0	0	0
9	Temporary Borrowings	45,000	0	0	0	0	0
10	Total External Sources	219,453	64,555	175,741	46,981	75,137	545
11	**Total Sources of Funds**	271,560	161,308	274,600	142,964	171,693	101,650
	Uses of Funds						
12	Principal on 1975 Ordinance Bonds	23,878	28,517	19,829	23,269	22,422	21,886
13	PMA Bond Principal	1,065	1,105	1,155	1,205	1,255	1,310
14	Principal on 1998 Ordinance Bonds	10,315	5,460	11,645	7,354	15,204	13,172
15	Capital Lease Principal	6,901	5,273	3,554	3,745	1,947	0
16	Repayment of Commercial Paper	0	25,000	20,000	32,500	19,500	0
17	CIP Requirements	64,453	64,556	65,076	51,981	48,640	49,365
18	Payment to City	18,000	18,000	18,000	18,000	18,000	18,000
19	Deposit to CIP Fund	110,000	0	110,664	0	41,499	0
20	Repayment of City Loan & CNG Note	59	0	45,000	0	0	0
21	Change in Non-Cash Working Capital[b]	44,889	(23,676)	3,442	4,297	(788)	(12,516)
22	**Total Uses of Funds**	279,560	124,235	298,366	142,352	167,679	91,217
23	Increase/(Decrease) in Cash	(8,000)	37,073	(23,766)	613	4,013	10,433
24	**Ending Cash Balance**	425	37,498	13,732	14,345	18,358	28,791

(a) Includes amortization on capital leases, bond issuance costs, and extraordinary losses.
(b) Includes changes in Accounts Payable, Accounts Receivable, and Materials and Supplies.

A detailed calculation of debt service coverage requirements under the 1975 and 1998 Ordinances is presented in Table 18. The results of the table indicate that provided the assumptions made herein concerning level and timing of the base rate increase received and effectiveness of the Transition to Excellence Program are realized, PGW will meet the requirements of the 1975 and 1998 General Ordinances for all years in the projection period.

Table 18
Projected Debt Service Coverage
(Thousands of Dollars)

Line No.		Fiscal Year Ending August 31, 2001	2002	2003	2004	2005	2006
		$	$	$	$	$	$
	SOURCES OF FUNDS						
1	Total Gas Revenues	769,204	726,233	711,146	671,669	660,709	657,035
2	Other Operating Revenues	28,731	28,363	28,420	27,609	27,736	28,036
3	Total Operating Revenues	797,935	754,596	739,566	699,278	688,445	685,071
4	Other Income	6,106	8,189	8,800	8,200	7,500	8,200
5	**Total Sources of Funds**	804,041	762,785	748,366	707,478	695,945	693,271
	USES OF FUNDS						
6	Fuel Costs	474,955	400,309	387,558	345,703	332,257	324,346
7	Other Operating Costs	261,171	248,281	247,994	252,927	252,259	254,370
8	Total Operating Expenses	736,126	648,590	635,552	598,630	584,516	578,716
9	Less: Non-Cash Expenses	(37,272)	(38,747)	(40,243)	(41,598)	(42,894)	(42,958)
10	**Total Uses of Funds**	698,854	609,843	595,309	557,032	541,622	535,758
11	**Funds Available for Debt Service**	105,187	152,942	153,057	150,445	154,323	157,513
12	1975 Ordinance Bonds Debt Service	51,611	55,527	47,292	50,267	43,847	42,266
13	**Debt Service Coverage - 1975 Ordinance**	**2.04**	**2.75**	**3.24**	**2.99**	**3.52**	**3.73**
14	Net Available after Prior Debt Service	53,576	97,415	105,765	100,178	110,476	115,247
15	Less Capital Lease Costs	(7,893)	(5,865)	(3,997)	(3,997)	(1,999)	0
16	Net Available after Prior Capital Leases	45,683	91,550	101,768	96,181	108,477	115,247
17	1998 Ordinance Bonds Debt Service	29,449	31,274	36,186	32,978	45,422	43,225
18	**Debt Service Coverage - 1998 Ordinance**	**1.55**	**2.93**	**2.81**	**2.92**	**2.39**	**2.67**
19	Net Available after Prior Debt Service	16,234	60,276	65,582	63,203	63,055	72,022
20	1998 Ordinance Subordinate Debt[a]	1,990	1,986	1,988	1,988	1,987	1,986
21	**Debt Service Coverage on Subordinate Debt**	**8.16**	**30.35**	**32.99**	**31.79**	**31.73**	**36.26**

(a) Debt service shown does not include commercial paper which is payable on a parity with 1998 Ordinance Subordinate Debt.

Assumptions and Opinions

In developing the information which Black & Veatch utilized for preparing the projections presented herein, Black & Veatch relied on PGW's financial planning model and PGW's assumptions in that model with several exceptions as noted in the report. The analyses summarized in this report are based on assumptions that have been provided by or reviewed by PGW and others and relied on currently available information and present circumstances. Black & Veatch has not conducted detailed verification tests of this information. While we believe that these assumptions are reasonable, actual results may differ from those projected, as influenced by the conditions, events and circumstances that actually occur.

Considerations and Assumptions

The following is a list of critical assumptions used in the development of the projections presented herein:

Revenues

1. As set forth by the PUC in its order dated February 22, 2001, the PUC will comply with its statutory obligations under the Public Utility Code, including the section of the Gas Choice Act (66 Pa C.S.A. §2212(b)) requiring that the PUC, in determining PGW's revenue requirement and approving overall rates and charges, "follow the same rate-making methodology and requirements that were applicable to [PGW] prior to the assumption of jurisdiction by the [PUC]" and permit PGW to "impose, charge or collect rates or charges as necessary to permit...PGW to comply with its covenants to the holders of any approved bonds." "Approved Bonds" include the 2001 Bonds and the commercial paper.
2. The throughput and revenue figures are based on the assumption of normal weather (4,555 HDD per year for 2001 and 4,600 HDD per year for 2002 through 2006). To the extent that weather is warmer than normal, the resulting contribution margin (gross revenues less cost of gas supply) will be less than the amounts projected in this report.
3. Projected revenue figures are based on the assumption that PGW will recover, in a timely manner, 100 percent of all gas supply costs and 100 percent of the costs (or discounted revenues) attributed to the Customer Responsibility Program, Customer Works Program, and Senior Citizen Discount Program.
4. PGW will receive a $53 million per year in permanent base rate increase on a levelized basis (compared to rate levels existing prior to the implementation of the interim rate increase in March 2001) over the 2002 through 2006 period. If the overall approved rate relief over the 2002 through 2006 period is significantly lower than the level assumed herein, PGW's ability to meet Bond Ordinance covenants will be significantly impaired, including its covenants to pay operating expenses and debt service in full when due, to continuously operate and maintain the System, and to pay all City Charges, including the annual base payment to the City, and to achieve the coverage required by the Rate Covenants. If PGW receives a higher level than assumed herein, the need for future long-term borrowing might be reduced and short-term debt might be retired sooner than what is projected in our analysis. Potentially, this would result in further funding of working capital reserves and the deferring of

the need for future rate increases; and PGW's overall financial health would be improved.

5. Rates implemented in 2003 to comply with PUC requirements to unbundle rates and permit customer choice will be designed such that PGW's contribution margin is not materially impacted regardless of whether a customer purchases gas from PGW or only transports gas on PGW's system. It is further assumed that PGW will be allowed to assign any excess capacity and associated costs that may result from customer choice or collect any stranded costs.
6. PGW will initiate a program by fiscal year 2003 to mitigate the trend of a declining number of customers.

Operating Expenses

1. The Transition to Excellence Program initiatives currently in place will meet PGW's projections and will produce at least as much cost savings as are likely to be realized from implementation of the PUC Management Audit.
2. PGW's annual accounts receivable write-offs will continue to follow historical patterns and track with revenues. If gas supply costs do not moderate in future fiscal years, accounts receivable write-offs will likely exceed the levels assumed in this report.
3. Gas supply costs will moderate slightly from the levels experienced during fiscal year 2001.

Capital Improvement Program

1. The planned capital improvements are assumed to be sufficient to maintain the System and meet regulatory requirements.
2. Projected levels of cash-financed capital improvements are assumed to comply with PGW's internal policies for financing capital improvements with internally generated funds.
3. Budgeted capital costs associated with PGW's plan to increase its customer base as of fiscal year 2003 are assumed to be sufficient.

Debt Service and Outstanding Obligations

1. The short-term loan from the City in the amount of $45 million will be paid back by January 25, 2003.
2. The commercial paper obligations in the amount of $97 million will be paid off by August 31, 2005.

Organization and Management

1. The current labor negotiations will result in a collective bargaining agreement that will not have a material adverse impact on operating expenses.
2. Permanent management with qualifications and experience comparable to existing interim management will be in place by December 31, 2001.

Opinions

Based on the engineering studies conducted, we offer the following statements and conclusions to indicate the City's conformance with specific requirements which must be met for the issuance of the 2001 Bonds as provided in The First Class City Revenue Bond Act and the 1975 and 1998 General Ordinances:

1. PGW is a competently managed and operated gas distribution utility. PGW and its facilities are organized, operated and maintained at a level equal to, or in excess of, regulatory requirements and generally accepted industry practices. PGW's facilities are in good operating condition.

2. Based on our evaluation of financial projections covering the period September 1, 2000 through August 31, 2006, and on the basis of actual and estimated future annual financial operations of PGW's facilities and certain assumptions with respect thereto over the amortization period of the 2001 Bonds, which Black & Veatch believes to be reasonable, current and future project revenues, which are pledged under the 1975 General Ordinance and the 1998 General Ordinance, comply with the requirements of the definition of Project Revenues in Section 2 of the Act, and over the amortization period of the 2001 Bonds and the Prior Bonds, such Project Revenues will be adequate to meet all expenses of operation and maintenance, repair and replacement, reserve fund deposits, debt service on the bonds issued under the 1975 General Ordinance and debt service on the Bonds issued under the 1998 General Ordinance, as the same shall become due and payable, and the surplus requirements of the rate covenants contained in Section 4.03(b) of the 1975 General Ordinance and Section 4.03(b) of the 1998 General Ordinance.

3. The Project Revenues and Gas Works Revenues which are pledged as security for the bonds issued under the 1975 General Ordinance and the 1998 General Ordinance, respectively, are currently and are projected to be sufficient to comply with the Rate Covenants set forth in Section 4.03(b) of the 1975 General Ordinance and Section 4.03(b) of the 1998 General Ordinance.

4. The capital improvements proposed during the projection period, September 1, 2000 through August 31, 2006, will, along with continued good operation and maintenance practices, enable PGW to maintain its system in good condition. Review of present management practices indicates that good operation and maintenance is likely to continue.

5. Contracted PGW gas supplies plus (a) spot market purchases, (b) anticipated additional contracted supplies plus supplemental gas capacities, as well as (c) the pipeline transport capacity to move these supplies to PGW, are adequate to meet PGW's projected demand on a day of maximum demand (a "design peak day"), or an hour of maximum demand (a "design peak hour"), and during a year of maximum demand (a "design peak year").