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MEMORANDUM

RECEIVED
DEC 10 2001
UTILITY DIVISION

TO: Docket Control

FROM: Ernest G. Johnson
Director
Utilities Division

DATE: December 3, 2001

RE: STAFF REPORT ON THE ROLLING AVERAGE PGA MECHANISM (DOCKET NO. G-00000C-98-0568)

Attached is the Staff Report on the Rolling Average PGA Mechanism. Staff recommends refining the interest rate component of the purchased gas adjustor mechanism to reflect the consequences of incomes taxes, as discussed in the Staff Report. Staff further recommends that clarifications contained in the Staff Report be adopted.

EGJ:RGG:rdp

Originator: Robert Gray

Attachment: Original and Ten Copies

Arizona Corporation Commission

DOCKETED

DEC 05 2001

DOCKETED BY: *rdp*

Docket No. G-00000C-98-0568

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STAFF ACKNOWLEDGMENT

The Staff Report on the Rolling Average PGA Mechanism, Docket No. G-00000C-98-0568, was the responsibility of Staff Member Robert Gray.



Robert G. Gray
Economics and Research Analyst V

EXECUTIVE SUMMARY
STAFF REPORT ON THE ROLLING AVERAGE PGA MECHANISM
DOCKET NO. G-00000C-98-0568

Commission Decision Number 62994 (November 3, 2000) required that "Staff should file a further review of the PGA mechanism with the Commission by December 1, 2001." This report provides Staff's review and recommendations regarding the 12 month rolling average purchased gas adjustor (PGA) mechanism used by Arizona local distribution companies (LDCs).

It is Staff's opinion that the PGA mechanism is working as it was expected to work and there do not appear to be any compelling reasons to undertake a major overhaul of the mechanism. Staff recommends that the proposal to account for ADIT in the calculation of interest on the PGA bank balance be adopted. In addition, the clarifications contained in this report should also be recognized and implemented.

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Introduction

Commission Decision Number 62994 (November 3, 2000) required that "Staff should file a further review of the PGA mechanism with the Commission by December 1, 2001." This report provides Staff's review and recommendations regarding the 12 month rolling average purchased gas adjustor (PGA) mechanism used by Arizona local distribution companies (LDC's).

The 12 month rolling average PGA mechanism is currently being used by the following LDCs: Black Mountain Gas - Cave Creek Division, Black Mountain Gas - Page Division, Citizens Utilities - Northern Arizona Gas Division, Citizens Utilities - Santa Cruz Division, Duncan Rural Services, Energy West (Broken Bow Gas), Graham County Utilities, and Southwest Gas. The new PGA mechanism was implemented by most of the LDC's in June 1999. The exceptions were Citizens Utilities - Santa Cruz Division, which implemented it in October 1999 and Black Mountain Gas - Page Division, which implemented it in January 2000.

This Staff review of the PGA mechanism has involved a review of the LDC's' monthly PGA information as well as an on-going dialogue with the LDCs and other interested parties. On November 8, 2001 Staff held a PGA Mechanism Review Workshop which was attended by a number of interested parties.

Previously Staff had conducted a review of the PGA mechanism in 2000. Staff's review and findings from that time are contained in the Staff Report on the Rolling Average PGA Mechanism which Staff filed on September 6, 2000. Following the filing of this Staff Report the Commission acted on Staff's recommendations in the report, approving several adjustments to the PGA mechanism in Decision Number 62994 (November 3, 2000). At the time of the 2000 review natural gas prices were trending upward. It was recognized at the time that an additional review of the PGA mechanism, after experiencing the high prices of 2000-2001, would be beneficial.

Since the last review and during the November 8, 2001 workshop a number of issues have been raised by various parties. The major issues are the treatment of accumulated deferred income taxes (ADIT) in relation to the interest on the PGA bank balance, the interest rate applied to the bank balance, and the banding of the monthly PGA rate. This report contains a discussion of these issues, a general review of the mechanism's performance, and several clarifications of minor issues.

Accumulated Deferred Income Taxes Impact on PGA Bank Balance Interest

The current PGA mechanism includes an interest rate component to recognize the carrying cost/benefit to a utility of an under/over collected bank balance. The interest rate component compensates a utility/ratepayer for the investment or advanced receipt of cash to purchase gas. A utility that is a taxable entity receives an income tax benefit from an under-collected bank balance and is subject to an income tax liability from an over-collected bank

balance. The income tax benefit or liability is a consequence of a timing difference between the recognition of purchased gas costs for rate-making and income tax purposes.

This is an issue that was discussed at the November 8, 2001 workshop and had been discussed at past workshops. A correct calculation of the carrying charge on the bank balance requires recognition of the income tax effect. Accordingly, Staff recommends refining the interest rate component of the purchase gas adjustor mechanism to reflect the consequences of income taxes. The income tax effect on the carrying charge is recognized by reducing the interest rate applied by a factor equal to one minus the marginal income tax rate. This calculation does not apply to Duncan Rural Services, which is a tax exempt cooperative and therefore has no income taxes. At the November 8, 2001 workshop a number of parties expressed support for this change and no parties expressed opposition. This change requires a simple calculation that would add several lines to the monthly accounting for the PGA bank balance. Shown below is a sample calculation showing how this adjustment would be made:

PGA bank balance	\$1,000,000
Adjustment for ADIT (one minus applicable marginal tax rate, 40% in this example)	$1.00 - 0.40 = 0.60$
Balance for Interest Calculation (PGA bank balance x Adjustment for ADIT)	$\$1,000,000 \times 0.60 = \$600,000$
Applicable Interest Rate (6.00 percent in this example)	$0.06 / 12 = 0.005$
Interest Component	$\$600,000 \times 0.005 = \$3,000$
End of Month PGA bank balance	\$1,003,000

It is worth noting that absent this adjustment for ADIT, there would have been \$5,000 in interest applied to the PGA bank balance. The net effect of this change, whether there is an over or under-collection, is to reduce the amount of interest being added to the PGA bank balance.

The marginal tax rate at times may change for the utilities. In setting the marginal tax rate to be used in this calculation, the marginal tax rate should be updated each year in the PGA report which contains the PGA bank balance information for May of that year. The marginal tax rate would be the Arizona jurisdictional LDC's marginal tax rate unless the LDC does not file a separate tax return. In cases where the LDC does not file a separate tax return, the marginal tax rate would be that of the consolidated tax return of the parent company. In the monthly PGA report the LDCs should include a footnote identifying the components of the marginal tax rate that is applied in the calculation of interest on the PGA bank balance.

Interest Rate for the PGA Bank Balance

When the new rolling average PGA mechanism was introduced the Commission began allowing the collection of interest on the new PGA bank balance. However, the Commission chose to not allow interest on PGA bank balances which had accumulated up to that time, meaning that only the new PGA bank balance, started at the time the new PGA mechanism was

introduced, was eligible for interest. The interest on the new PGA bank balance is calculated based upon the end of the month bank balance for each month. The application of interest applies to both over and under-collected bank balances, so in some cases the ratepayers benefit from the application of interest and in other cases the utility benefits. Since the inception of the application of interest to the PGA bank balance, the rate which has been applied is the monthly three month nonfinancial commercial paper rate published by the United States Federal Reserve Board in Federal Reserve Statistical Release G.13. This rate is a monthly average of the three month nonfinancial commercial paper rate as it changes throughout the given month. Recently the Federal Reserve announced that it was discontinuing Statistical Release G.13, but the applicable interest rate will be available in other federal reserve publications, including the Federal Reserve Board's Statistical Release H.15, Selected Interest Rates.

At the November 8, 2001 workshop, parties discussed the application of interest to the bank balance and what the best interest rate would be. There was not a consensus among the group. Possible interest rates that were discussed included the currently applicable rate, the customer deposit rate, and the Allowance for Funds Used During Construction (AFUDC) rate. Some parties favored a fixed interest rate, while others favored a rate that adjusted. Some parties also commented that they would prefer a rate that matched the type of borrowing they typically rely on. For example one utility indicated that its borrowing is typically long term, so it would prefer a stable rate that would more accurately match its long term borrowing costs. Many of the utilities also expressed an interest in having a higher interest rate.

At the time the application of interest to the PGA bank balance was approved, it was recognized that the interest rate to be used would not necessarily reflect the borrowing costs of the utilities. There may even be some benefit in having the interest rate be less than the utility's cost of borrowing in that the utility would be given an incentive to not let the bank balance become overly large without taking action to address it. While several other interest rate options have been discussed, there does not appear to be a compelling reason to depart from the use of the monthly three month nonfinancial commercial paper rate. The monthly three month nonfinancial commercial paper rate should continue to be applied to the PGA bank balance.

Banding of the Monthly PGA Rate

One feature of the existing PGA mechanism is that the monthly rate is banded, limiting the magnitude of its ability to change each month. When the rolling average PGA mechanism was first implemented, the banding was such that for natural gas utilities the monthly PGA rate set each month could not be more than \$0.07 per therm different than the monthly PGA rate in place in any of the previous twelve months. The band for propane utilities was set at \$0.12 per therm. In Decision Number 62994 the Commission changed these bands to \$0.10 per therm for natural gas utilities and \$0.16 per therm for propane utilities.

At the November 8, 2001 workshop a number of parties indicated that they believe the band should either be adjusted upward or eliminated altogether. The main concern that was

expressed at the workshop was that the band limited the ability of utilities to have their monthly PGA rate adjust as natural gas costs rise and fall.

In addressing this concern a brief review of the PGA mechanism is useful. Prior to the implementation of the banded 12 month rolling average PGA mechanism in June 1999, most Arizona LDCs had a fixed PGA rate that only adjusted when the utility filed for and the Commission approved such an adjustment. The exception to this was Citizens Utilities Northern Arizona Gas Division (NAGD), which had been using a 12 month rolling average PGA rate, with no band, for a number of years. During the winter of 1996-1997 market prices for natural gas spiked to between \$4.00 and \$5.00 per therm after prices had typically been \$2.00 per therm or less for a number of years. During this price spike Citizens' PGA rate rose quickly as the higher gas costs were entered into the 12 month rolling average. In a three month period early in 1997 Citizens' NAGD monthly PGA rate rose by over \$0.15/therm. Following this increase the Commission received numerous complaints from Citizens' customers regarding the rapid increase in their rates. Shortly thereafter the Commission, in Decision Number 60735 (March 23, 1998) ordered Staff to establish a working group to explore possible changes to the PGA mechanism. The result of these working group sessions was the banded 12 month rolling average PGA mechanism which the Commission adopted in Decision Number 61225 (October 30, 1998). This order also recognized price stability as one of the goals of the gas procurement process.

As can be seen from this history of the PGA mechanism, one of the major factors in implementing the current PGA mechanism was the desire to reduce the volatility which customers experience in the cost of gas they see. During the working group meetings in 1998 a number of different PGA structures were discussed, including the use of a straight monthly PGA rate that would fully reflect the changing price of natural gas each month. Such a mechanism was rejected at that time because it did not address the Commission's goal of price stability. Price volatility is an oft cited customer concern regarding natural gas rates. On the other hand, it is commonly held that consumers of a commodity such as natural gas should be sent a price signal indicating the increase or decrease of the actual cost of the commodity, so the consumer can make an informed decision on whether to increase or decrease consumption. It must be recognized that the competing goals of price stability and sending a price signal to consumers are inherently in conflict, at least to some extent. In considering the structure of the PGA mechanism, the current banded 12 month rolling average mechanism strikes a balance between the goals of price stability and sending price signals.

Within the current PGA mechanism the proper level of the band on the PGA rate has been and likely will continue to be an issue for discussion. As noted previously, the Commission expanded the band to address the need for more flexibility in the monthly PGA rate. There is no perfect setting for the size of the band, but rather it is a matter of setting it at what seems to be the appropriate setting, given current conditions and the goals of the PGA mechanism. The smaller the band is set, the less fluctuation there will be in the monthly PGA rate and the more likely it is that the utility will file for a temporary surcharge or credit to address an under or over-collected PGA bank balance. The larger the band is set, the more fluctuation there is in the monthly PGA rate and the less likely the utility is to file for a temporary surcharge or credit.

When the banding was introduced, it was contemplated that when there is a large price swing that the utilities would have to file with the Commission for approval of temporary surcharges or credits. At the time this was felt to be beneficial, in that the Commission would have the opportunity to review any large changes to the effective cost of gas, before ratepayers would experience those changes. If the banding were removed altogether there would not be a requirement for any Commission review before large changes in the cost of gas were passed through to ratepayers.

Appendix A contains a number of scenarios showing how the monthly PGA rate and PGA bank balance change from month to month, depending on the size of the cap, whether a temporary surcharge is implemented, and how the cost of gas changes. It should be noted that the scenarios in Appendix A do not address the potential smoothing of gas costs through the gas procurement process and that the gas procurement process is not addressed in this review.

A review of the scenarios shows that absent setting the band at a very high level, it must be expected that utilities will file for temporary surcharges or credits when there are large price swings such as the price spike that was experienced during the winter of 2000-2001. The scenarios also demonstrate that the movement of prices is the key factor in how the PGA bank balance and monthly PGA rate move. If natural gas prices are relatively stable, the existing band on the monthly PGA rate will likely never be reached. However, in recent years natural gas prices have been relatively unstable.

Given the Commission's goals of achieving greater price stability for gas consumers in Arizona and also the Commission's desire to review large changes in the cost of natural gas seen by consumers, the PGA rate should continue to be banded. At this time the PGA mechanism has been operating with the current bands for approximately one year. During this year natural gas prices have risen to record heights before moderating. Given the limited experience so far with the current bands and the record swings in natural gas prices in the past year, it would be beneficial to gain further experience at the current banding levels before making further adjustments. At this time it is unclear whether it would be beneficial to increase the bands, as proposed by some parties. Staff will continue to monitor the movement of the monthly PGA rates and will continue the on-going dialogue with the LDCs regarding the PGA mechanism. If it becomes apparent that a different level of banding on the monthly PGA rate should be set, such action can be taken in the future. The current bands on the monthly PGA rate should be retained.

General Review of the PGA Mechanism

Appendix B contains a series of graphs showing the movement of the monthly PGA rate as well as any temporary PGA surcharges or credits in recent years. Initially most LDCs had a relatively small temporary PGA surcharge or credit applied to customer rates to amortize the existing PGA bank balance at the time the LDCs began using the new banded 12 month rolling average PGA mechanism. Most of those credits and surcharges have now expired.

The dominant feature in the recent performance of the PGA mechanism was the extremely high natural gas prices which peaked in the winter of 2000-2001. The graphs in Appendix B show a diversity of the ways in which the increased natural gas costs were passed on to the LDCs' ratepayers. The monthly PGA rates all hit the \$0.10 or \$0.16 per therm caps during the price run-up and therefore the full extent of the price spike was not felt by ratepayers last winter except to the extent that some utilities had temporary PGA surcharges approved by the Commission. The size of the PGA surcharges varied, as did the length of time they were in effect. At this point it is too early to fully ascertain how successful the PGA surcharges were in addressing the undercollected PGA bank balances, although one LDC was able to drop its surcharge ahead of schedule as its PGA bank balance reached zero.

It should be noted that the enormous and largely unanticipated increase in natural gas prices through 2000 and early 2001 created a situation where no PGA mechanism is likely to perform as all parties wish it would. PGA mechanisms trade off the passing through of large price increases quickly to consumers against the carrying over of large undercollected bank balances into the near future for collection. Overall it appears that the current PGA mechanism balanced these two approaches, passing through some costs while carrying over some costs for collection in the near future. If anything, this situation has highlighted the need for further efforts to address price stability issues in the gas procurement process and to encourage utilities to consider and if necessary pursue all possible gas supply options, including the development of natural gas storage facilities.

The PGA mechanism appears to be functioning as it was expected to function. The banding of the monthly PGA rate has limited the size of the automatic adjustment of the monthly PGA rate and has forced the LDCs to file for Commission approval of temporary PGA surcharges to address their undercollected PGA bank balances.

Minor Clarifications

There were several topics discussed at the November 8, 2000 workshop that did not necessarily represent a change to the way the PGA was administered, but never the less represented clarification of certain issues.

One issue that was discussed was whether the interest component was calculated based upon the beginning of the month or end of the month PGA bank balance. It was agreed by all parties at the workshop that the interest component should be calculated based upon the end of the month PGA bank balance for each month.

Another area of clarification was exactly how PGA related information should be filed at the Commission. Commission Staff at the workshop indicated that the full monthly PGA report should be filed with the Compliance Section at the Commission. Second, the monthly update for the tariff sheet(s) showing the new monthly PGA rate should be sent to the designated Commission Staff person who has responsibility for updating the ACC website with the new

PGA rates each month. Although not required, the LDC's may, as part of the provision of the monthly tariff sheet(s), provide the full PGA report at the same time, as that may assist in identifying errors more quickly.

Summary

It is Staff's opinion that the PGA mechanism is working as it was expected to work and there do not appear to be any compelling reasons to undertake a major overhaul of the mechanism. Staff recommends that the proposal to account for ADIT in the calculation of interest on the PGA bank balance be adopted. In addition, the clarifications contained in this report should also be recognized and implemented.

Appendix A: PGA Scenarios

This appendix contains a number of scenarios, comparing the impact on the monthly PGA rate and PGA bank balance, depending upon what the band is on the monthly PGA rate, whether a PGA surcharge is implemented, and what the cost of gas is from month to month. The scenarios cover the period from January 1999 through December 2004. These scenarios assume a generic, winter-peaking local distribution company. It must be recognized in reviewing these scenarios that there are additional factors which were not included in these scenarios and some things, including the interest component, were not considered for the sake of simplicity. The scenarios represent a generic local distribution company for the purpose of demonstrating the impact of changes in the band, the use of surcharges, and the cost of gas. For the monthly cost of gas the monthly historical spot market cost of gas on the El Paso interstate pipeline, in the San Juan basin is used for all historical months. The impact of the surcharge was considered by running scenarios with and without a \$0.20 per therm surcharge for 12 months. Three sets of scenarios were created, based upon three different spot market price scenarios for the future cost of natural gas. Listed below are the assumptions and parameters of the scenarios.

Assumptions:

Fixed pipeline capacity costs = \$100,000/year

Variable pipeline costs = \$0.04 per therm

Line loss = 1.00%

Base cost of gas = \$0.268 per therm (beginning average cost of gas in January 1999)

No interest on monthly bank balance

No changes to the base cost of gas

Monthly volumes for the LDC are (in therms):

January - 5,500,000

February - 5,000,000

March - 4,000,000

April - 3,000,000

May - 2,000,000

June - 1,700,000

July - 1,600,000

August - 1,500,000

September - 1,600,000

October - 2,400,000

November - 3,200,000

December - 5,000,000

Total yearly volume = 36,500,000

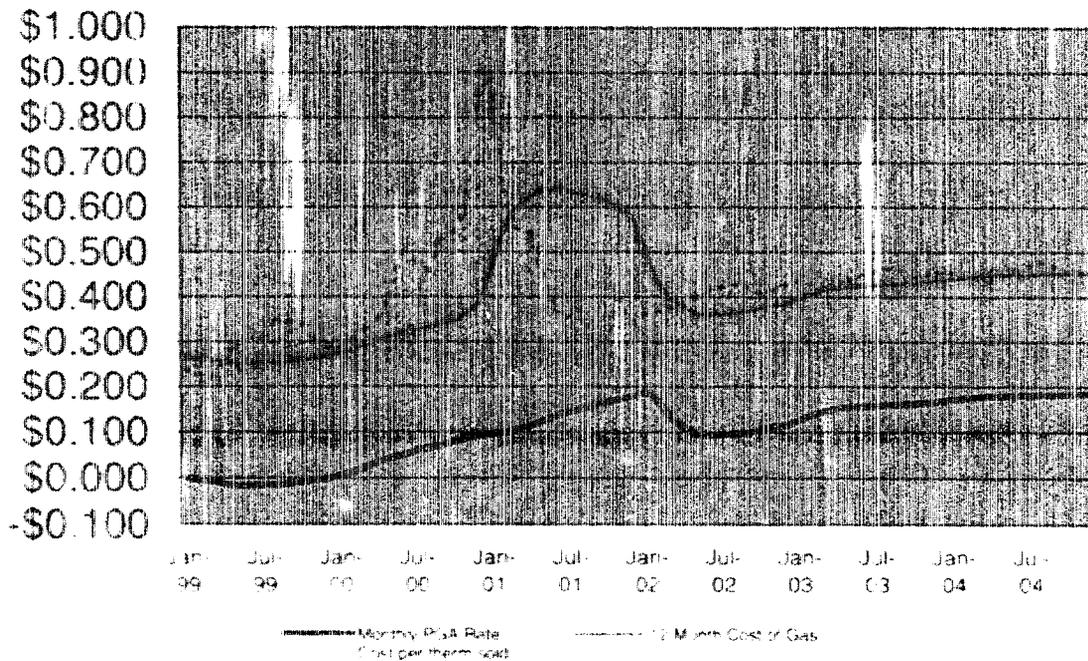
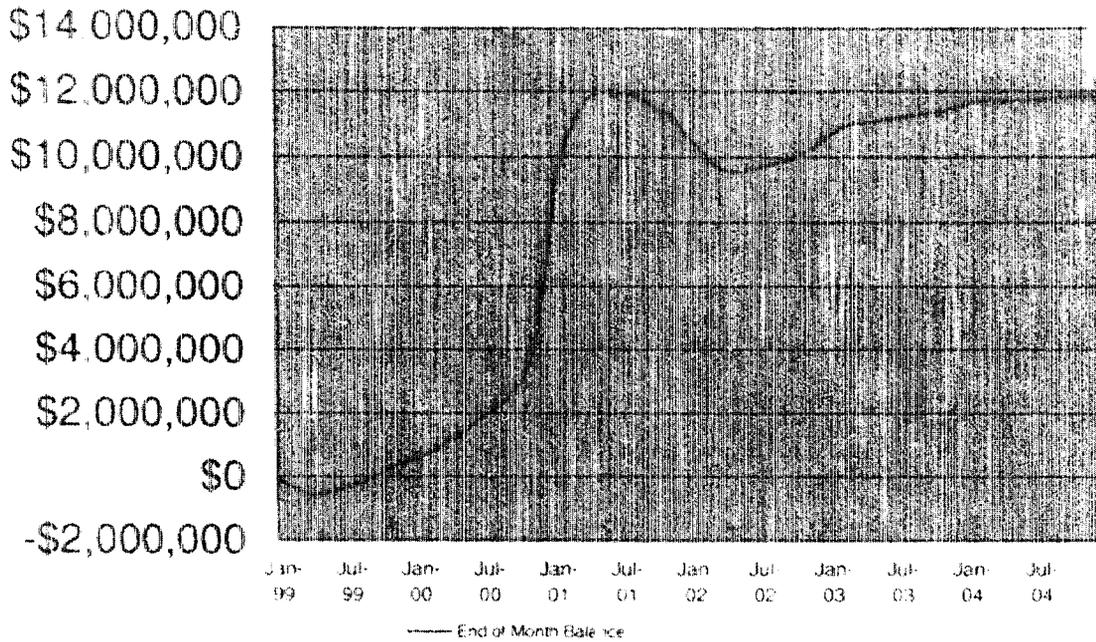
Scenario Three: Low Prices

Month	1998	1999	2000	2001	2002	2003	2004
January	\$2.00	\$1.77	\$2.24	\$8.18	\$2.60	\$2.60	\$1.90
February	\$1.94	\$1.65	\$2.41	\$5.70	\$2.30	\$2.50	\$1.80
March	\$2.08	\$1.52	\$2.59	\$4.84	\$1.90	\$2.20	\$2.40
April	\$2.18	\$1.79	\$2.76	\$4.63	\$1.70	\$2.00	\$2.30
May	\$1.95	\$2.02	\$3.06	\$3.56	\$1.80	\$1.80	\$2.40
June	\$1.70	\$2.05	\$4.01	\$2.70	\$2.00	\$2.00	\$2.00
July	\$1.90	\$2.04	\$3.74	\$2.47	\$2.30	\$2.30	\$1.80
August	\$1.79	\$2.41	\$3.46	\$2.59	\$2.20	\$2.00	\$1.90
September	\$1.72	\$2.41	\$4.18	\$1.86	\$2.00	\$2.10	\$2.20
October	\$1.72	\$2.55	\$4.58	\$2.13	\$2.30	\$2.20	\$2.40
November	\$1.94	\$2.29	\$5.20	\$2.50	\$2.40	\$2.00	\$2.30
December	\$1.78	\$2.26	\$7.80	\$2.60	\$2.50	\$1.80	\$2.50

Scenario One: Futures Prices

Assumptions:

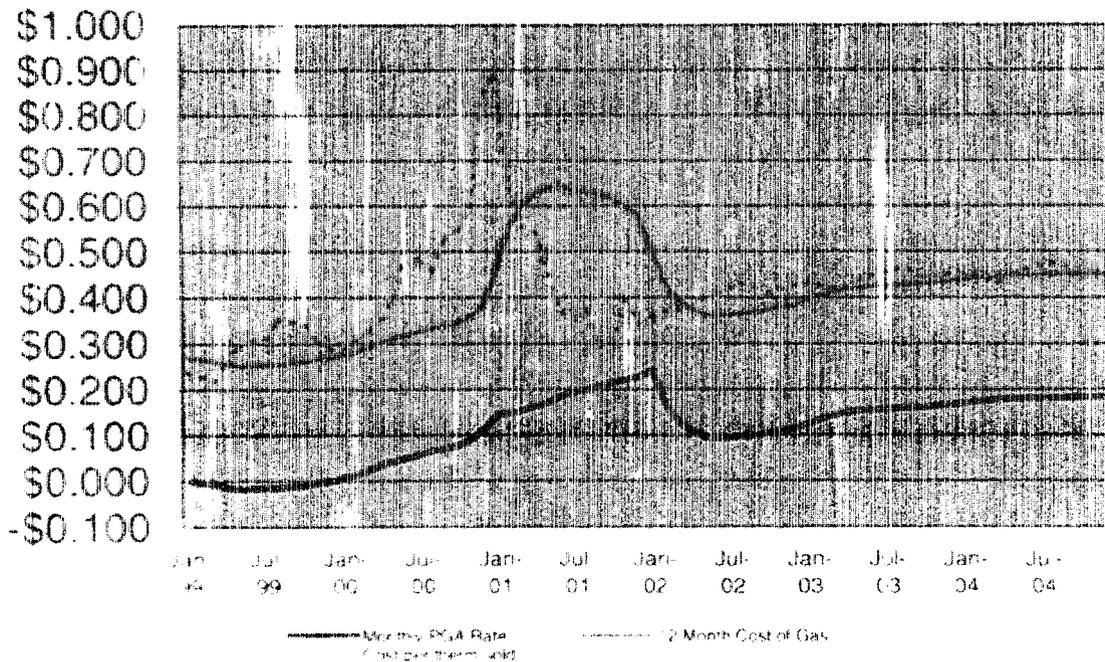
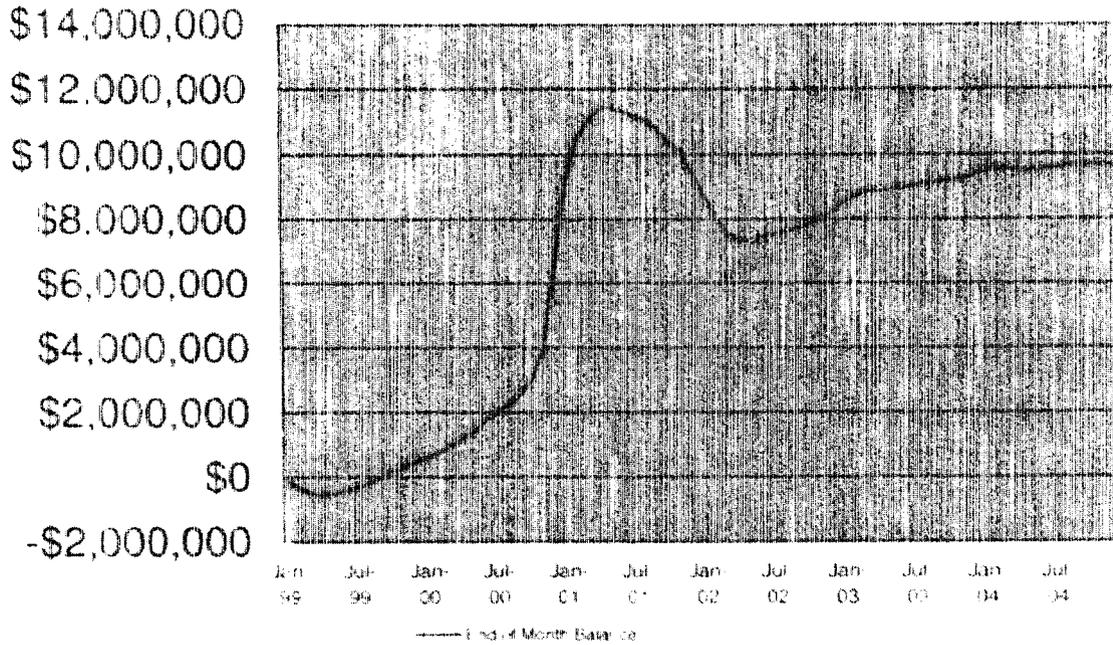
Cap on PGA rate \$0.10 per therm
 Surcharge from 11:00 through 13:01 \$0.00 per therm



Scenario One - Futures Prices

Assumptions

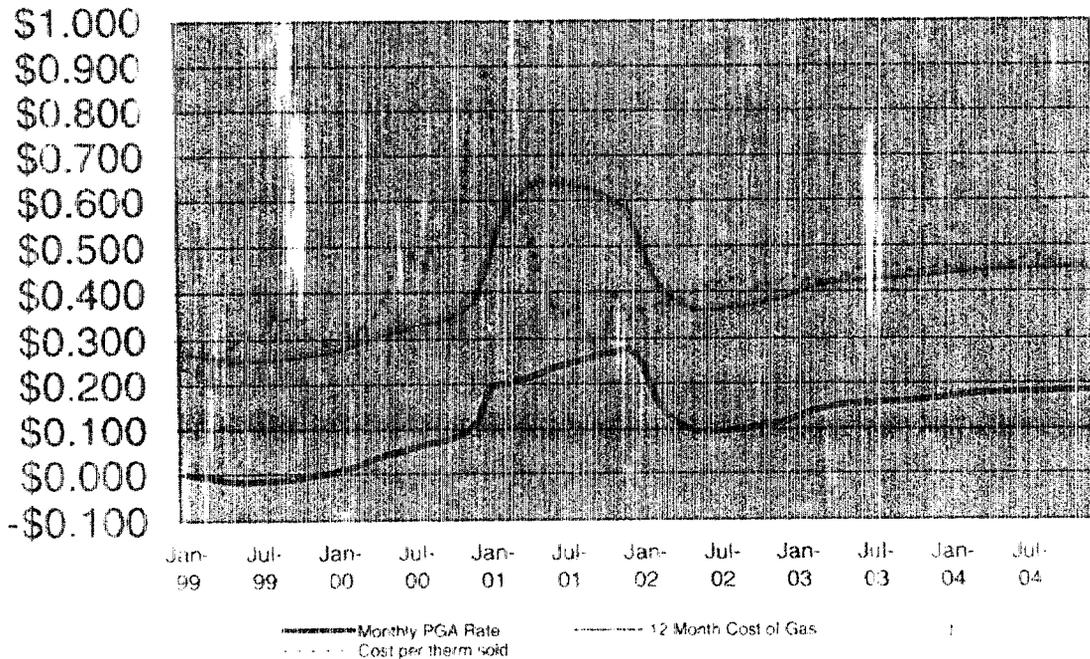
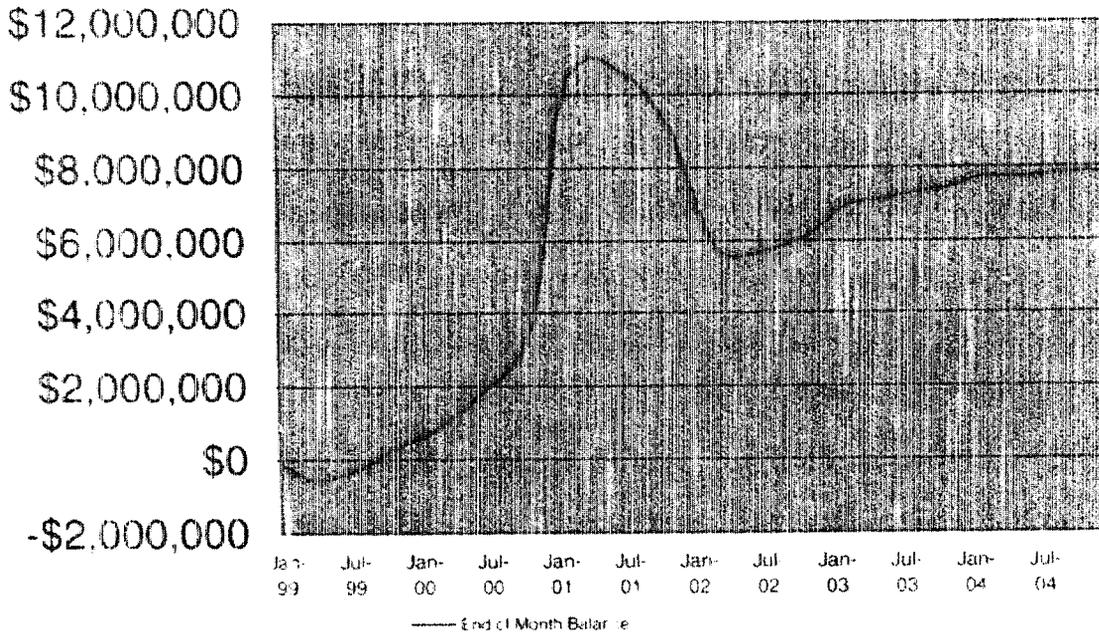
Cap on PSA rate \$0.15 per therm
 Surcharge from 11/00 through 10/01 \$0.00 per therm



Scenario One - Futures Prices

Assumptions

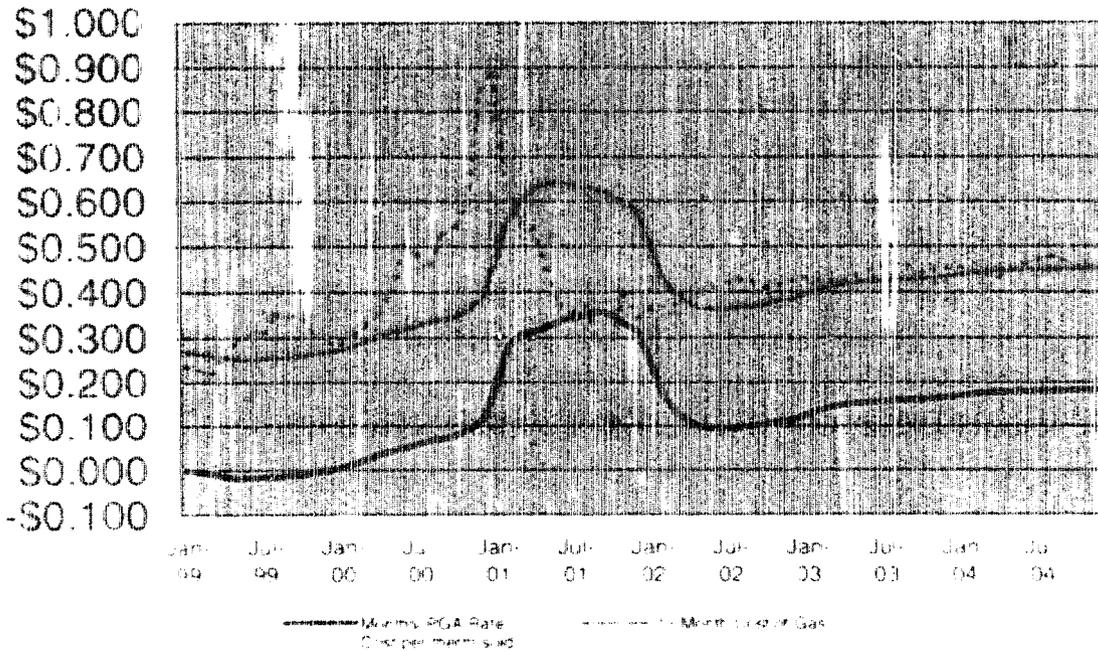
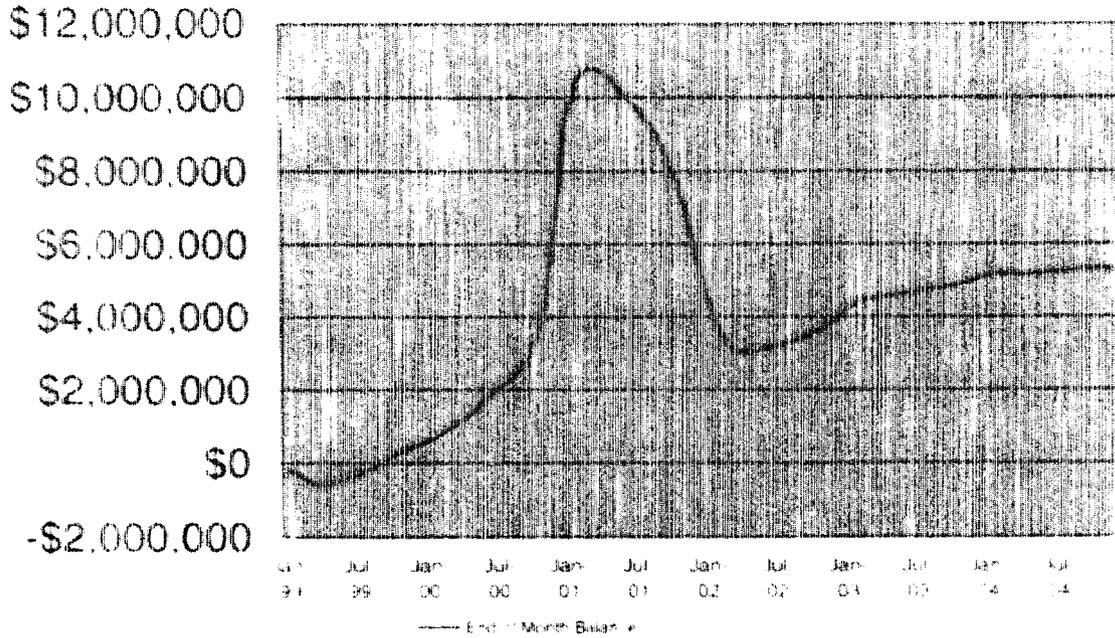
Cap on PGA rate \$0.20 per therm
 Surcharge from 11/00 through 10/01 \$0.00 per therm



Scenario One - Futures Prices

Assumptions

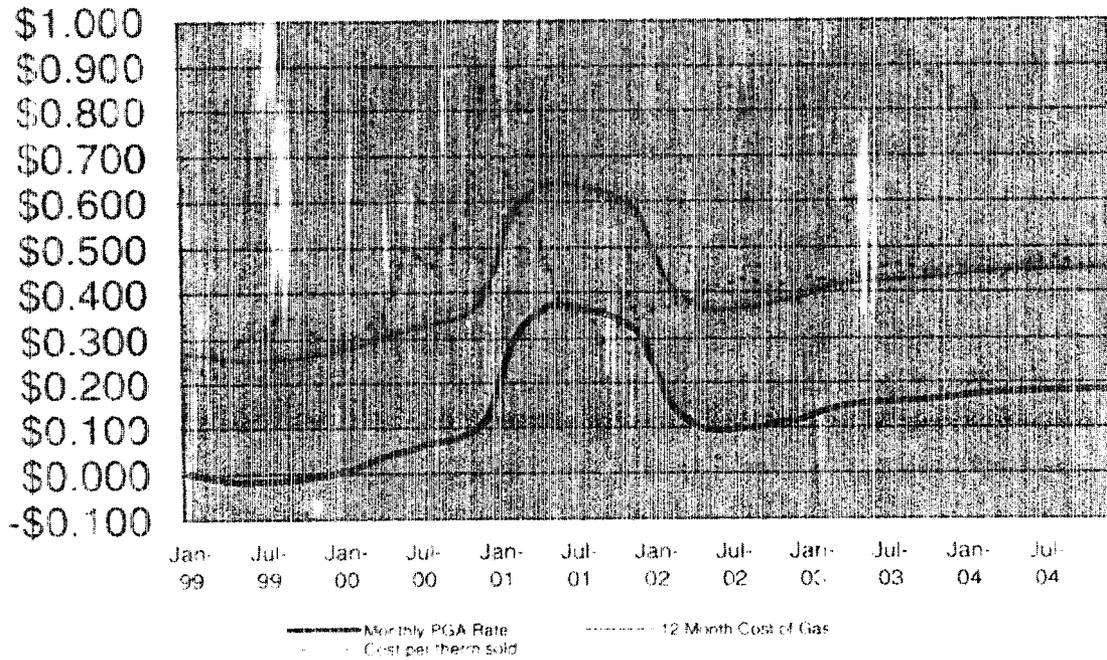
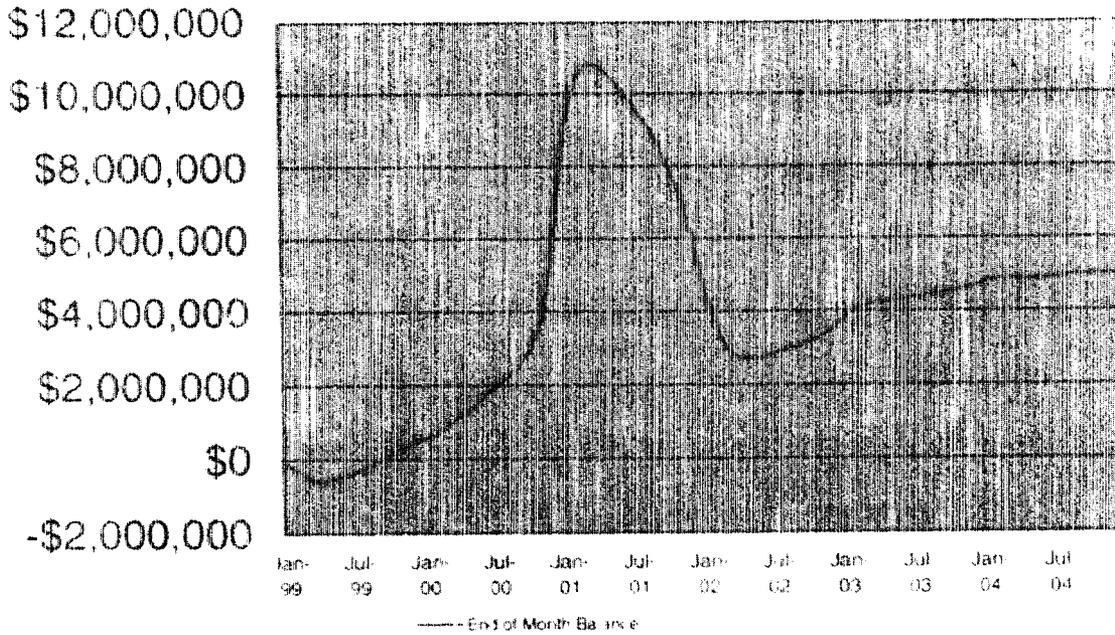
Cap on PSA rate \$0.30 per therm
 Surcharge from 11/00 through 1/01 \$0.00 per therm



Scenario One - Futures Prices

Assumptions

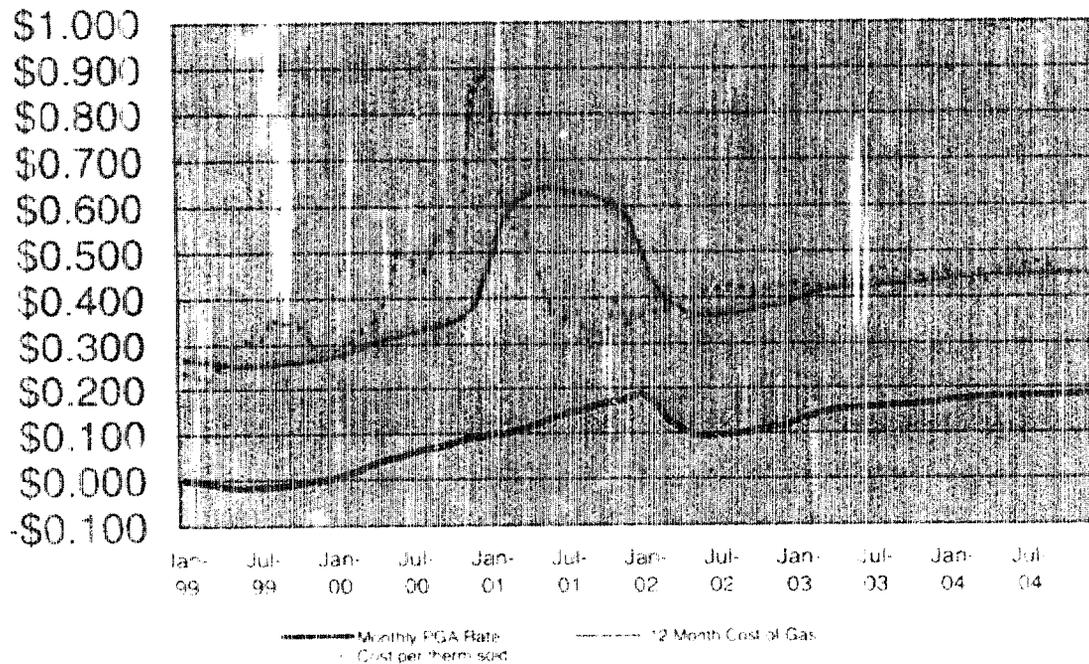
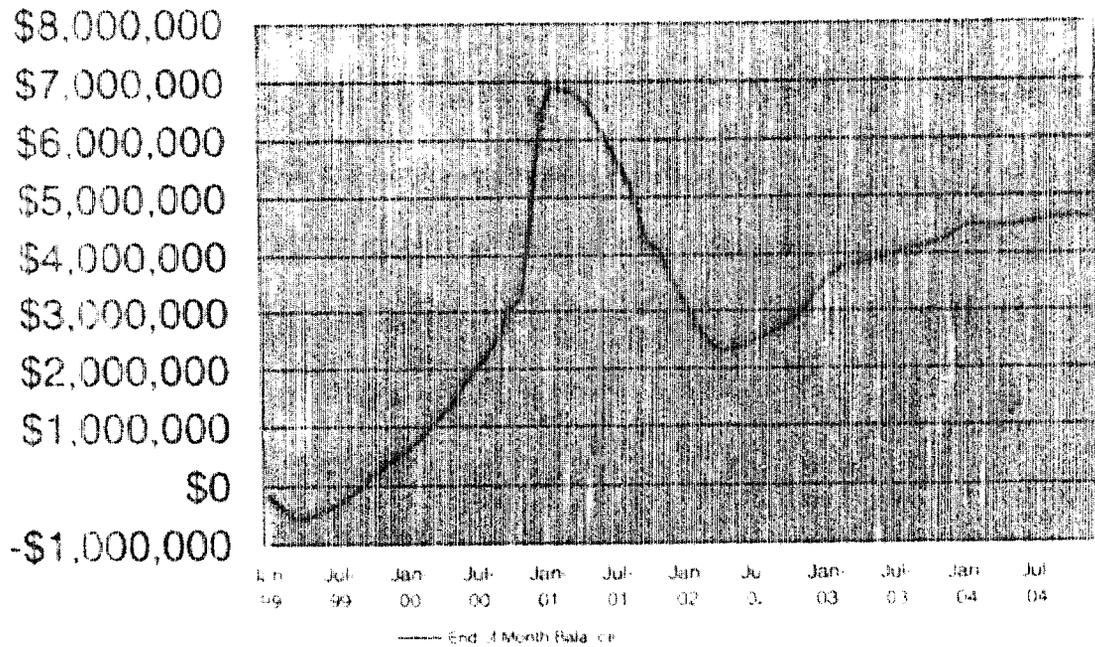
Cap on PGA rate \$0.99 per therm
 Surcharge from 11-00 through 10-01 \$0.00 per therm



Scenario One - Futures Prices

Assumptions

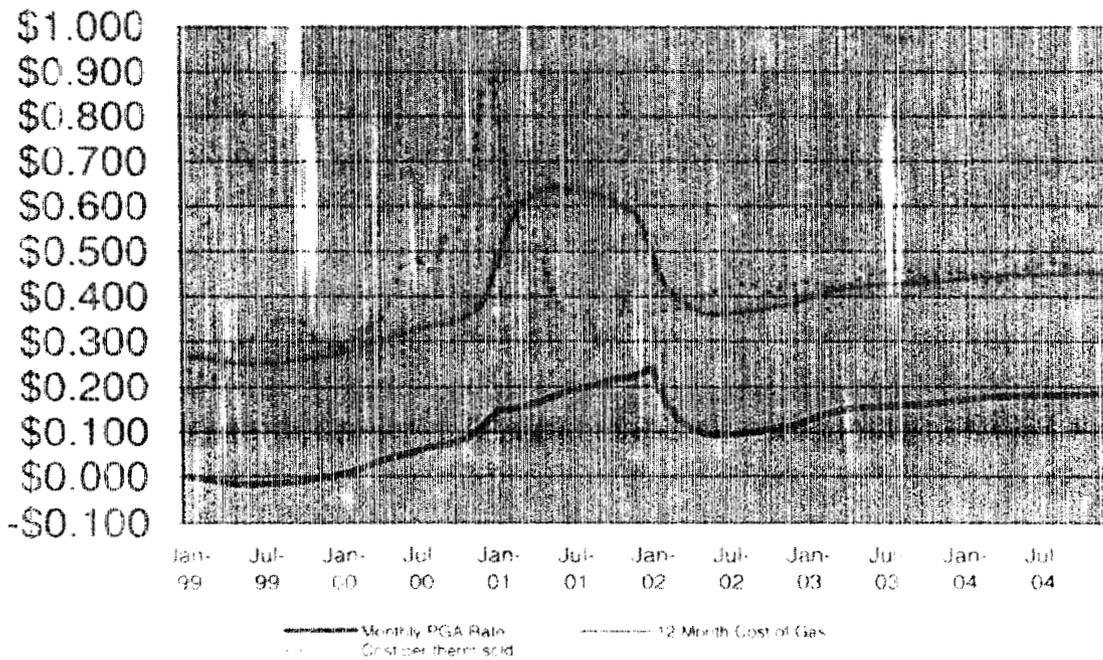
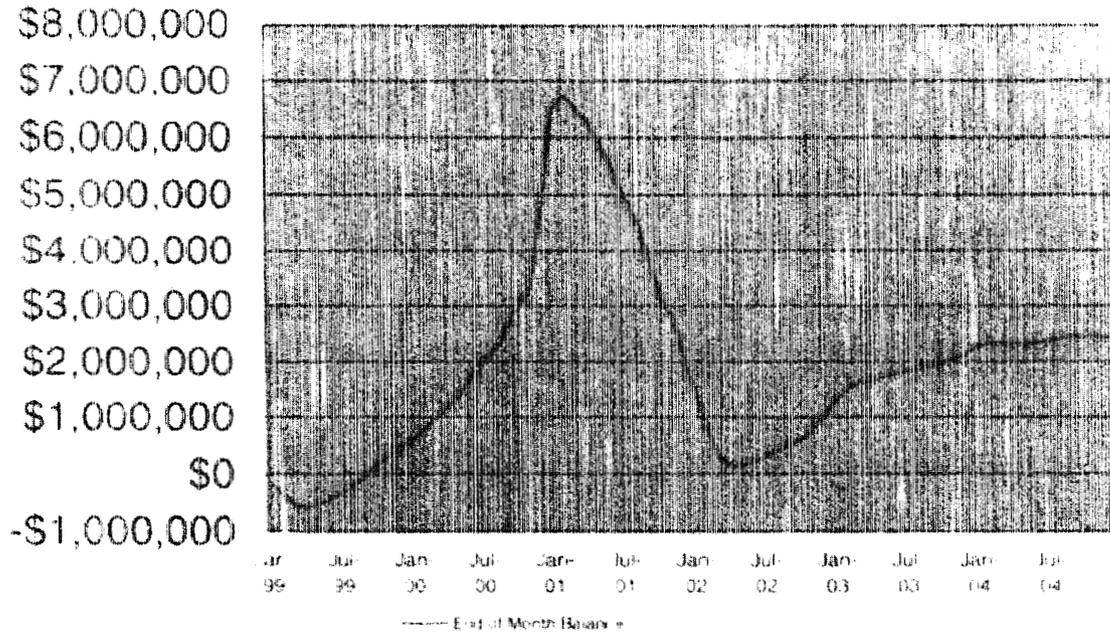
Cap on PGA rate \$0.10 per therm
 Surcharge from 11/00 through 10/01 \$0.20 per therm



Scenario One - Futures Prices

Assumptions

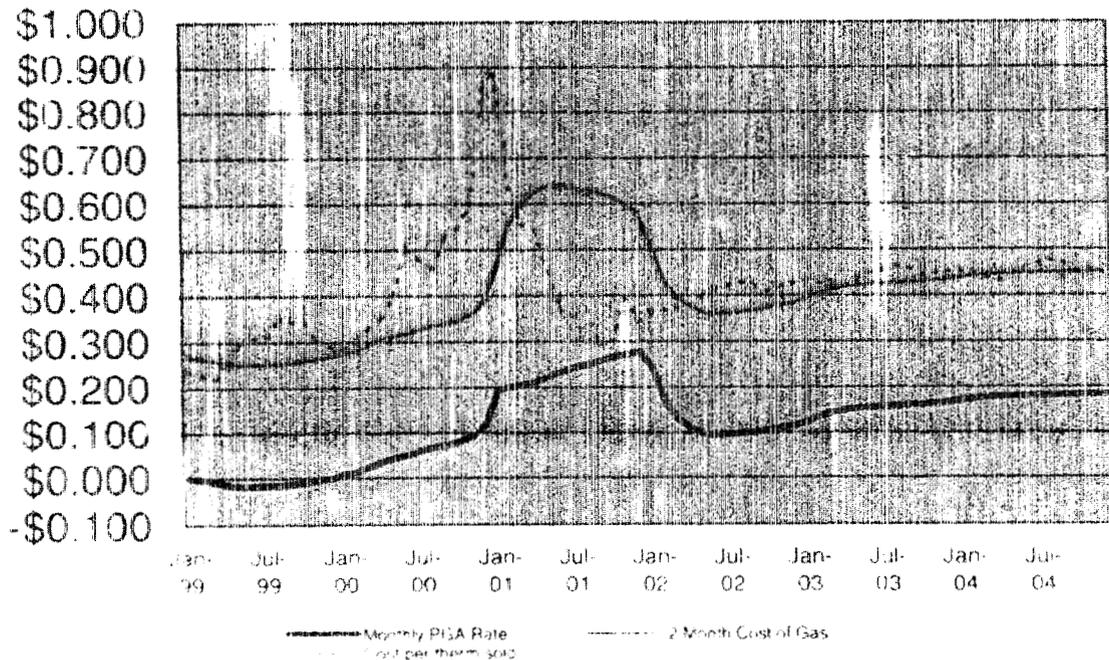
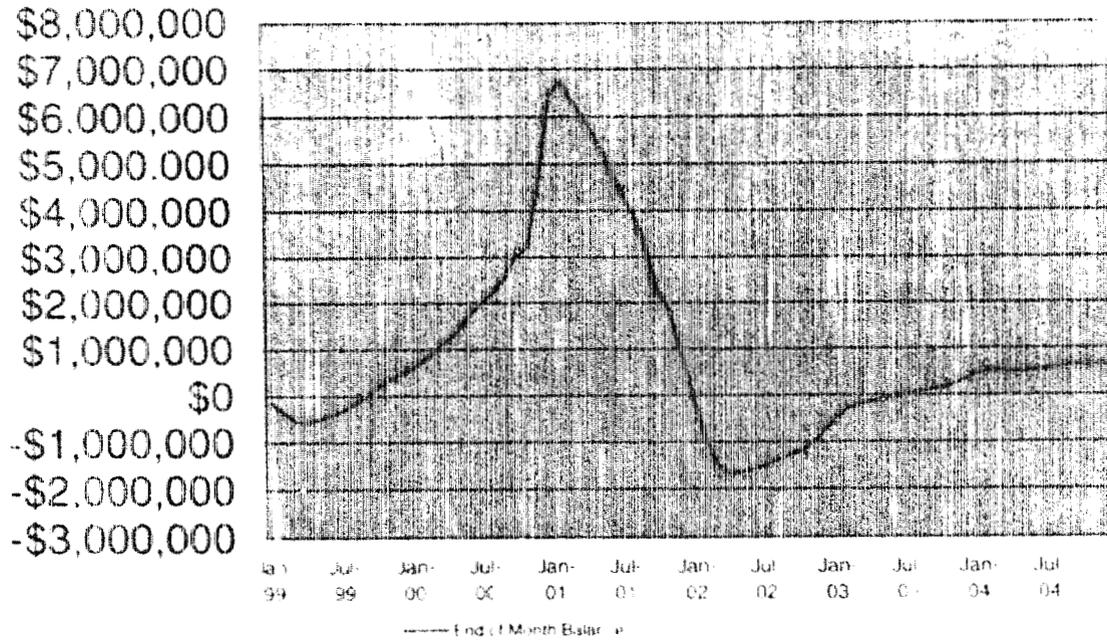
Cap on PGA rate \$0.15 per therm
 Surcharge from 11/00 through 10/01 \$0.20 per therm



Scenario One - Futures Prices

Assumptions

Cap on FGA rate \$0.20 per therm
 Surcharge from 11/00 through 11/01 \$0.20 per therm



Scenario One - Futures Prices

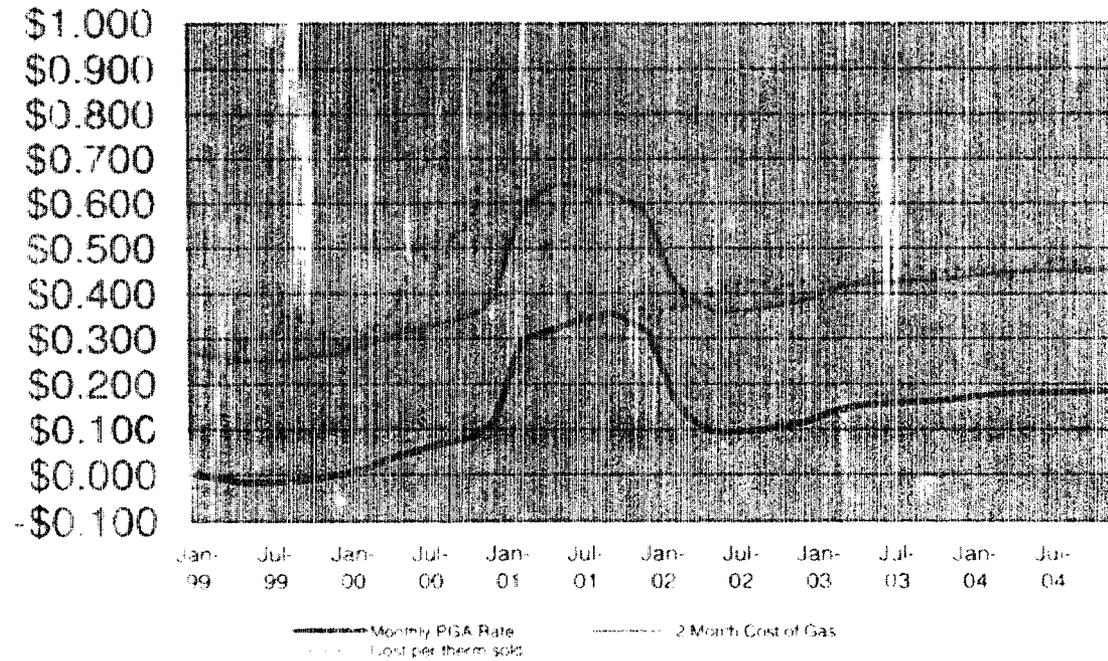
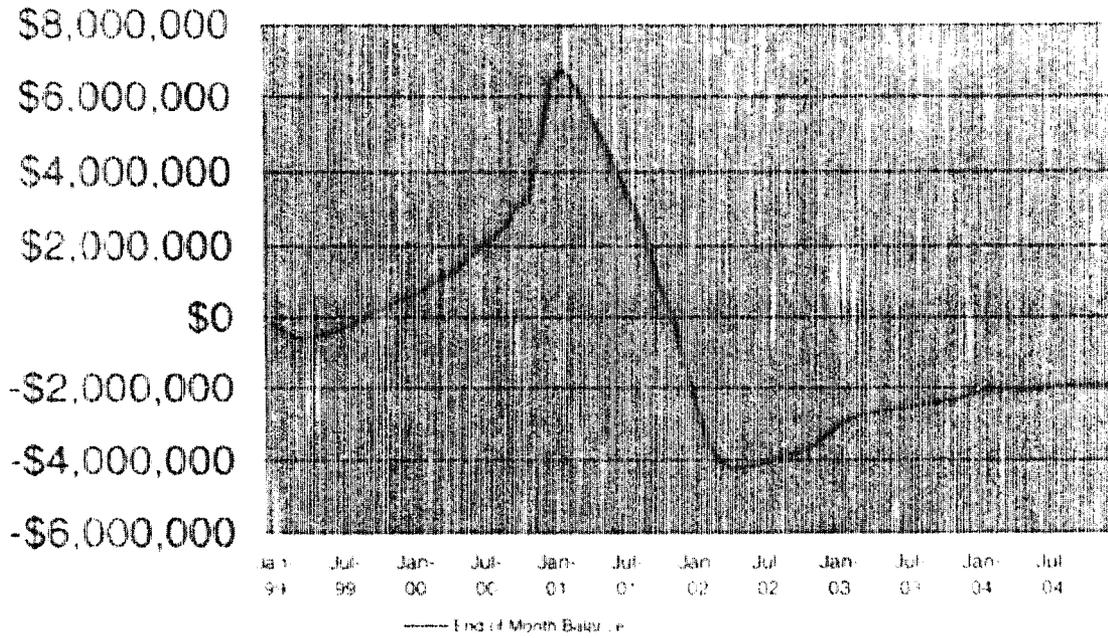
Assumptions

Cap on FGA rate

\$0.30 per therm

Surcharge from 11/00 through 1/01

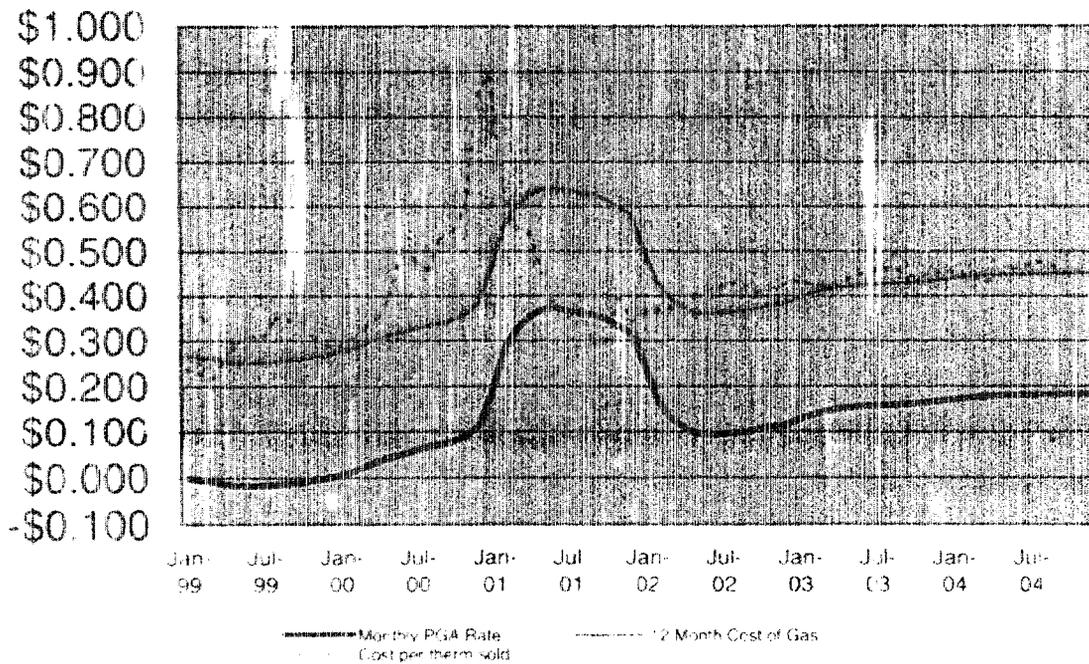
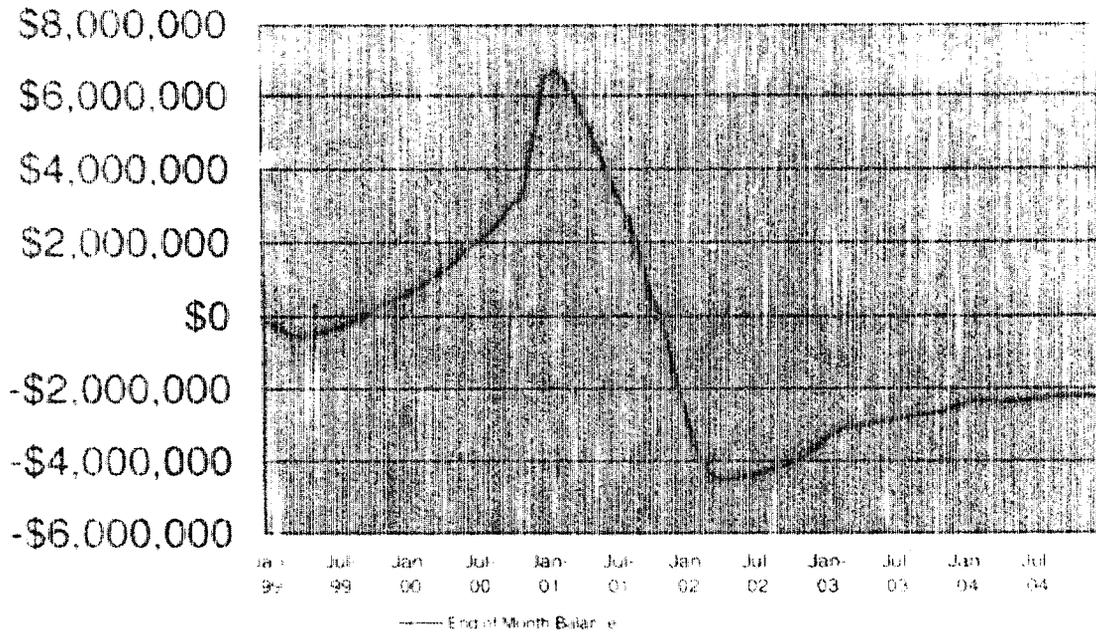
\$0.20 per therm



Scenario One - Futures Prices

Assumptions

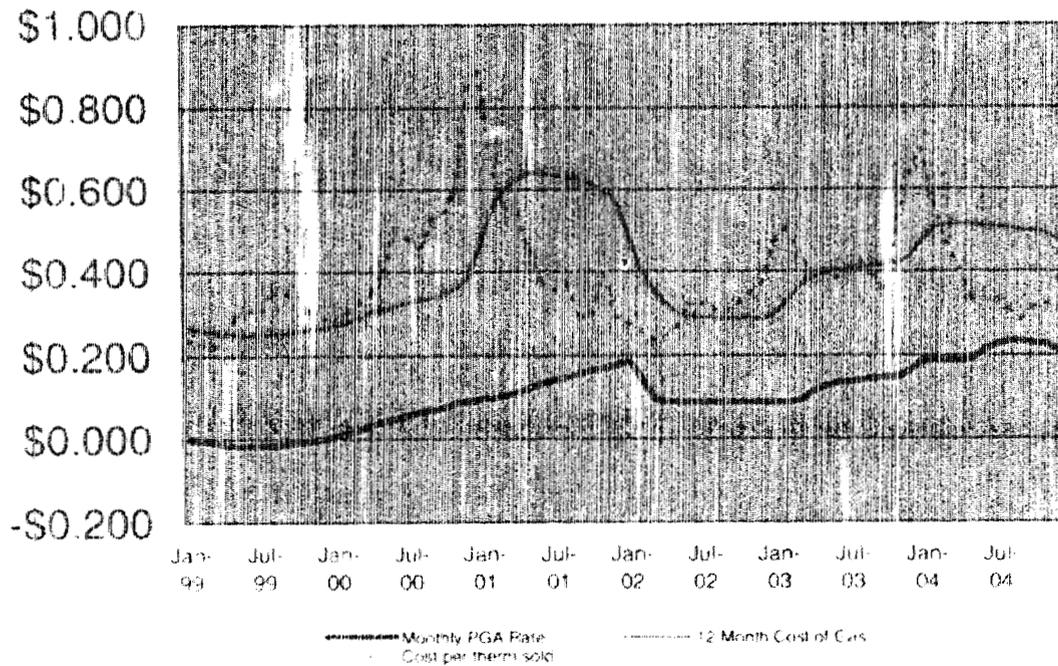
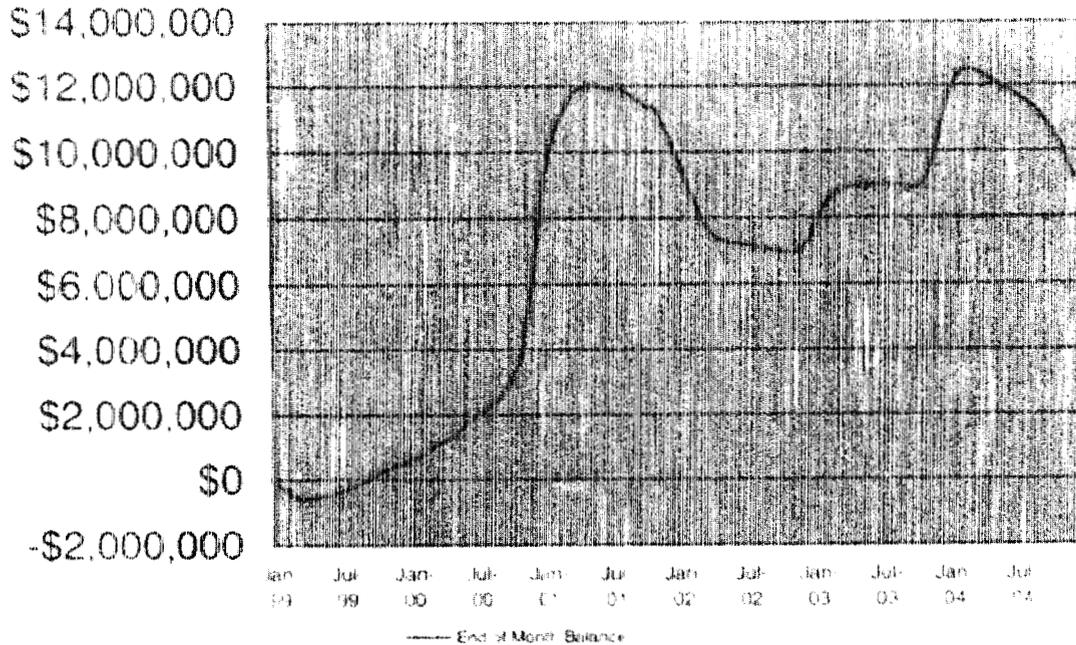
Cap on PGA rate \$0.99 per therm
 Surcharge from 11/00 through 10/01 \$0.20 per therm



Scenario Two - Future Price Spike

Assumptions

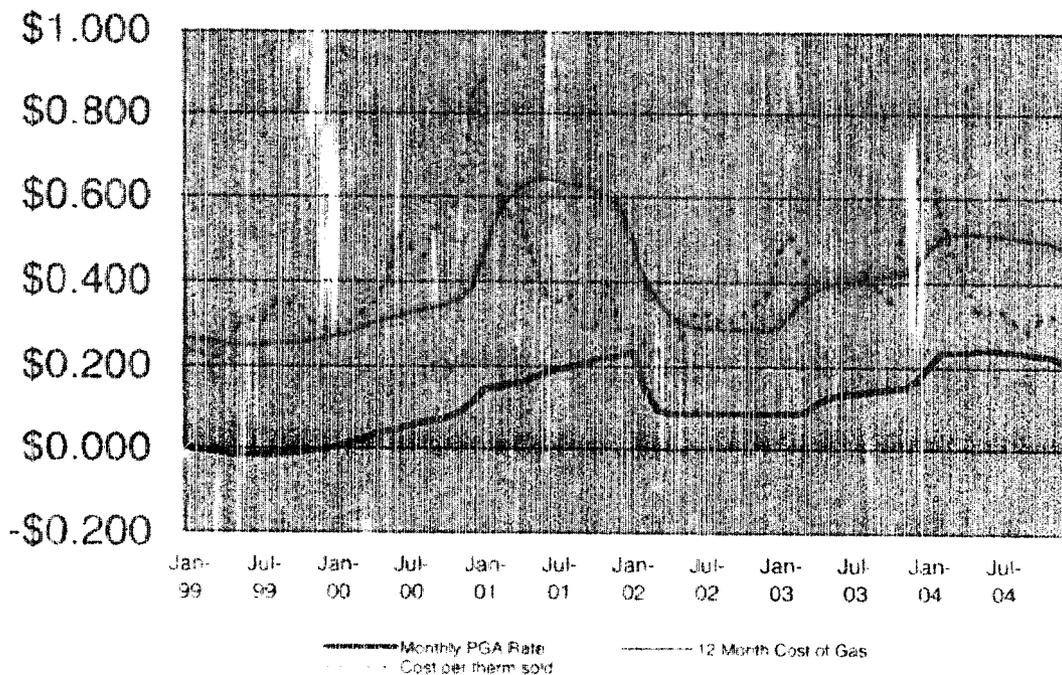
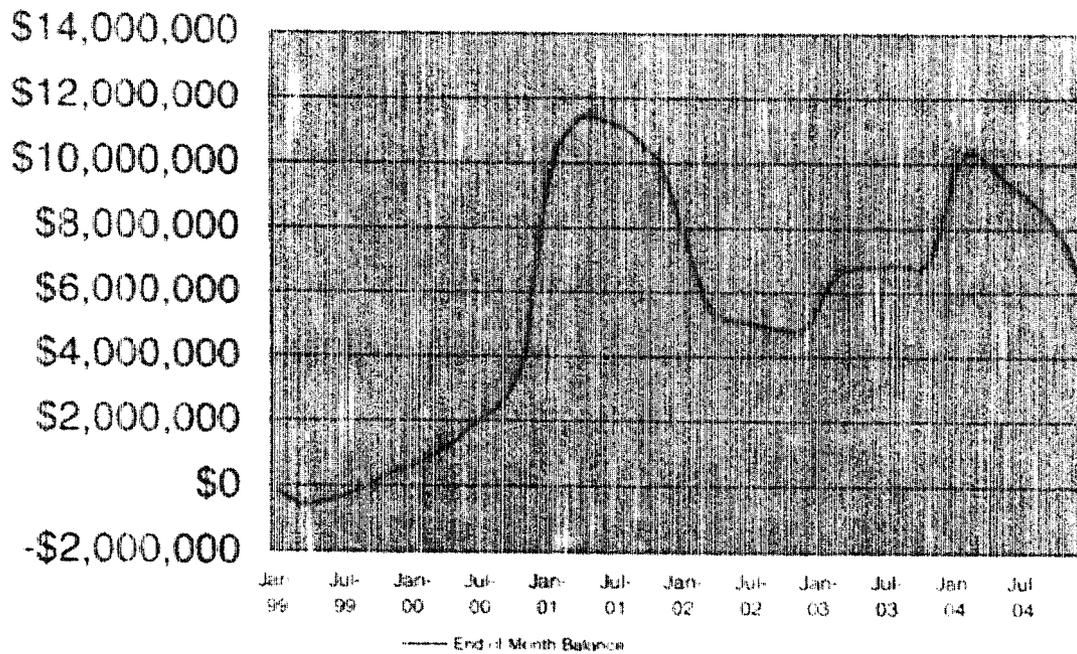
Cap on PGA rate \$0.10 per therm
 Surcharge from 10:00 through 12:01 \$0.00 per therm



Scenario Two - Future Price Spike

Assumptions

Cap on PGA rate \$0.15 per therm
 Surcharge from 10/00 through 10/01 \$0.00 per therm

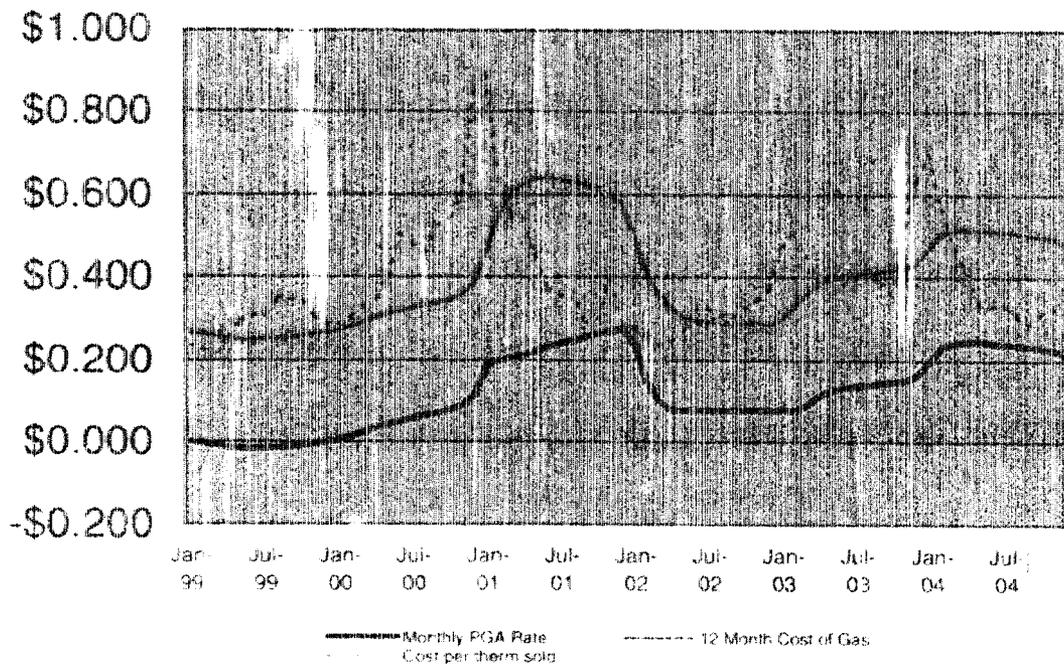
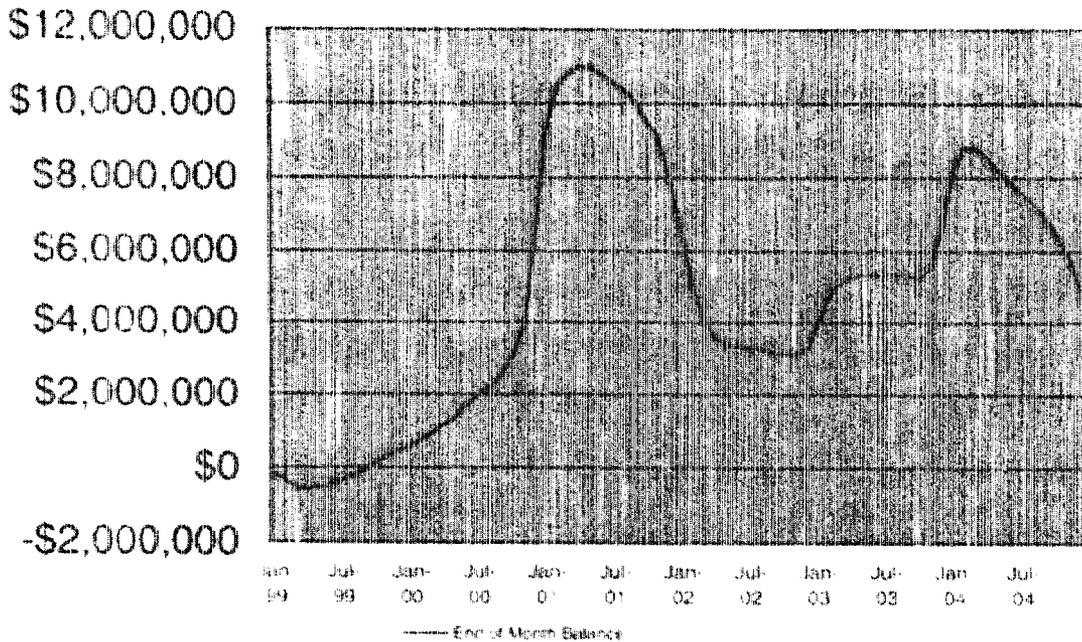


Scenario Two: Future Price Spike

Assumptions

Cap on PGA rate \$0.20 per therm

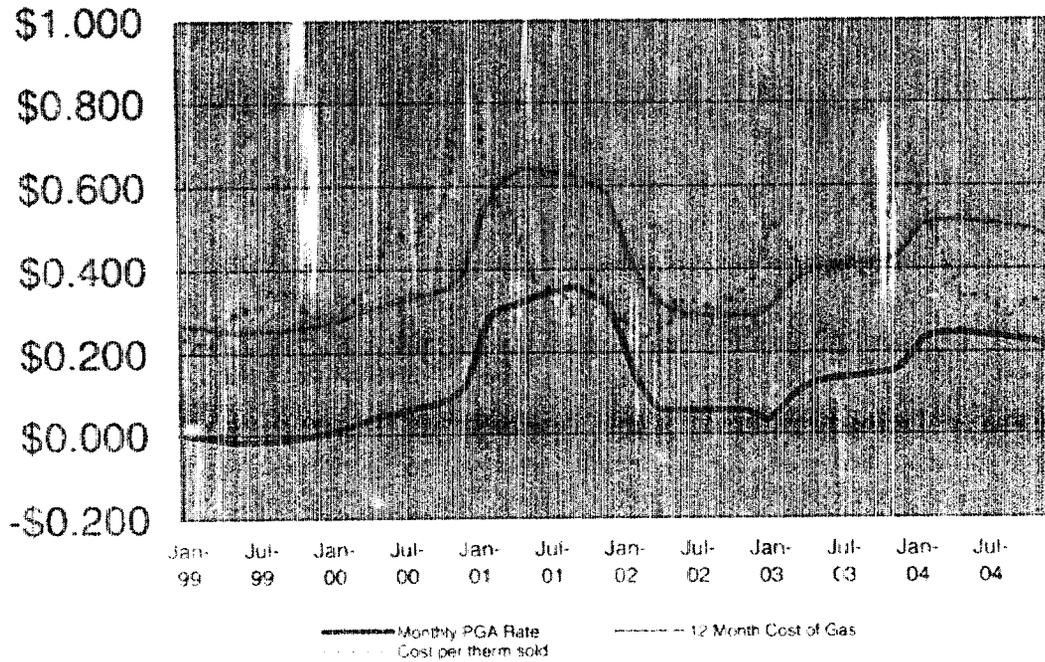
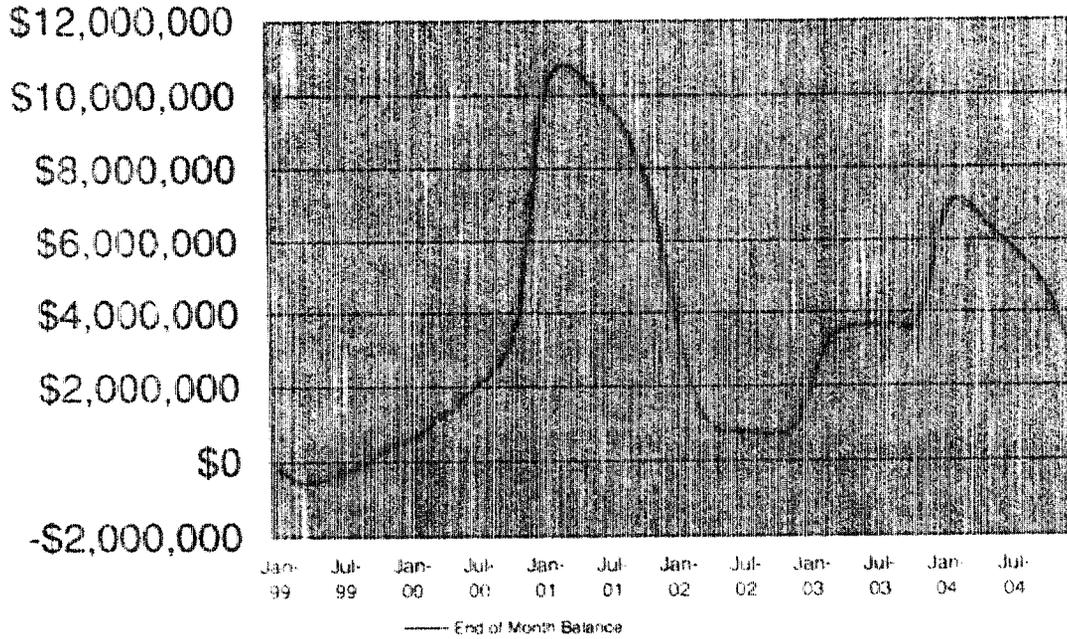
Surcharge from 10/00 through 10/01 \$0.00 per therm



Scenario Two - Future Price Spike

Assumptions

Cap on PGA rate \$0.30 per therm
 Surcharge from 10/00 through 10/01 \$0.00 per therm

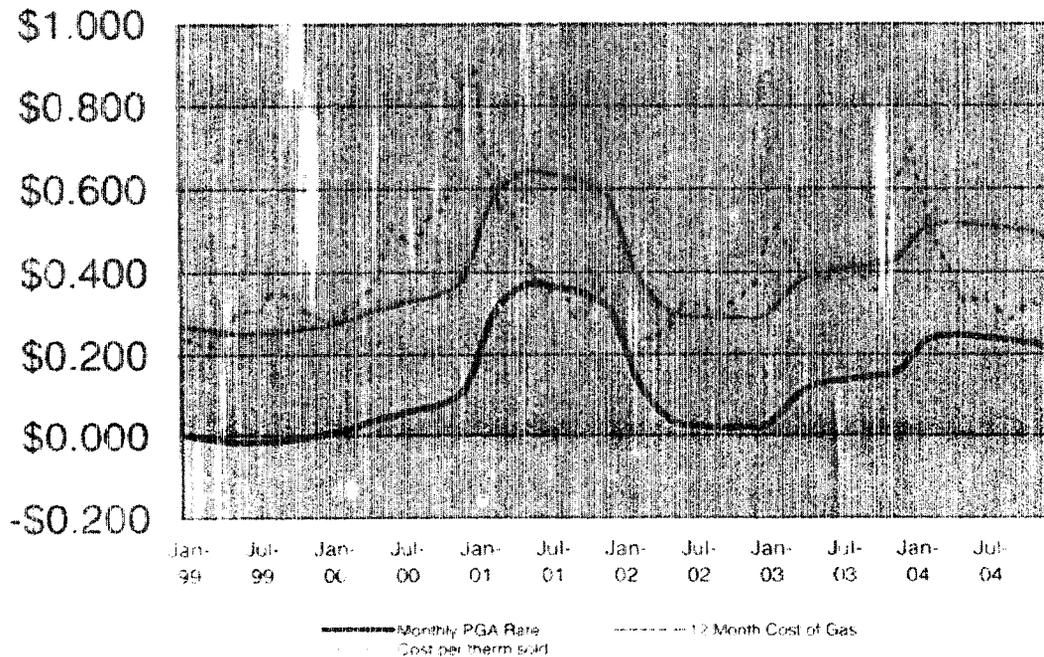
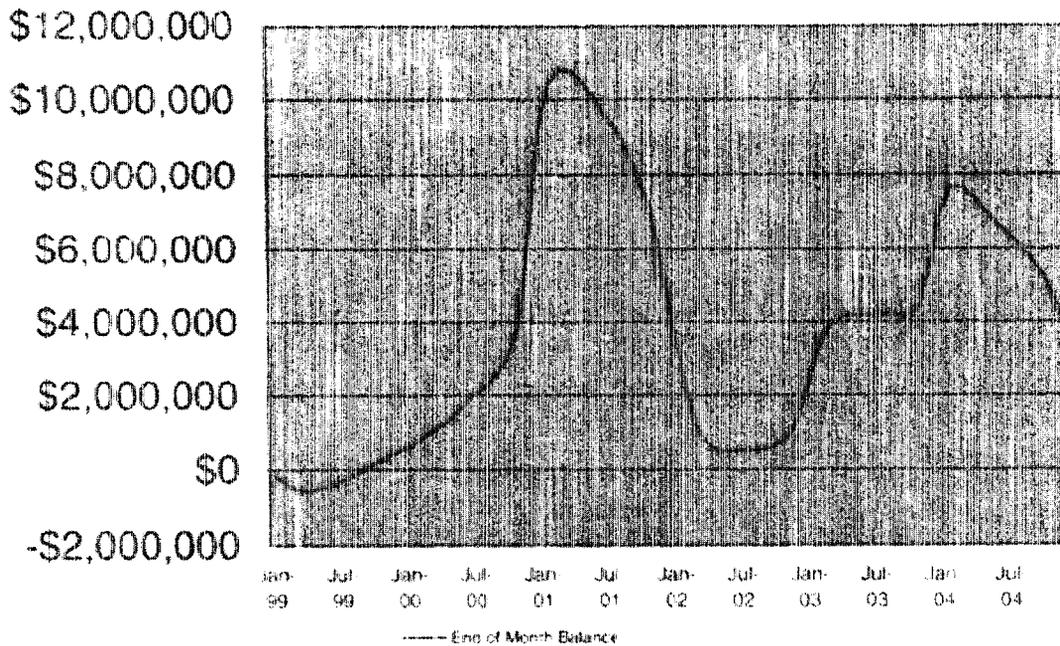


Scenario Two - Future Price Spike

Assumptions

Cap on PGA rate \$0.99 per therm

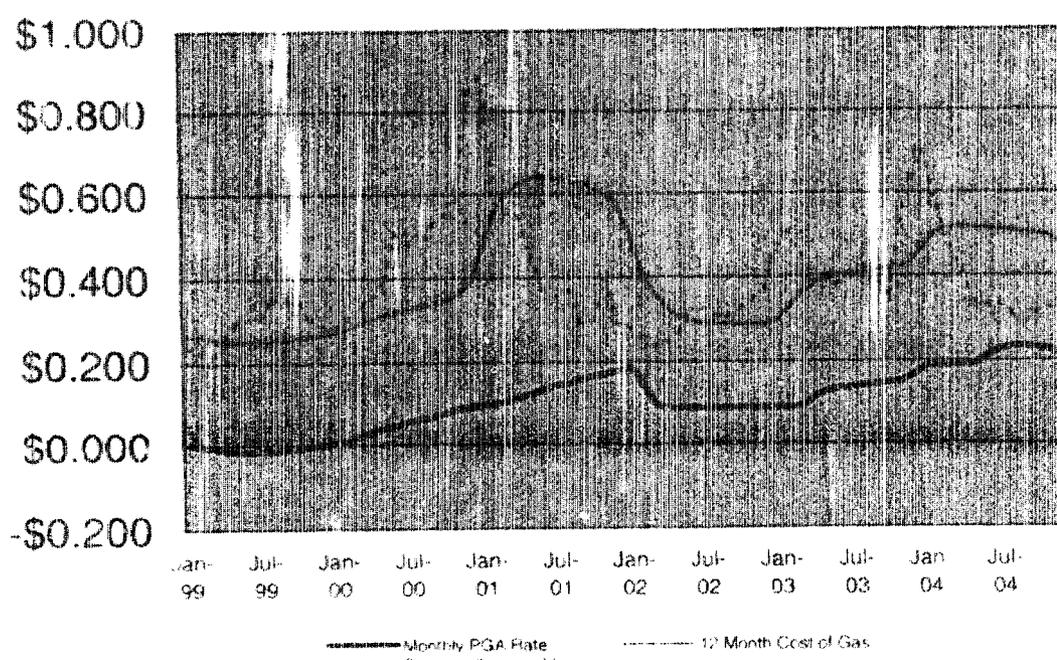
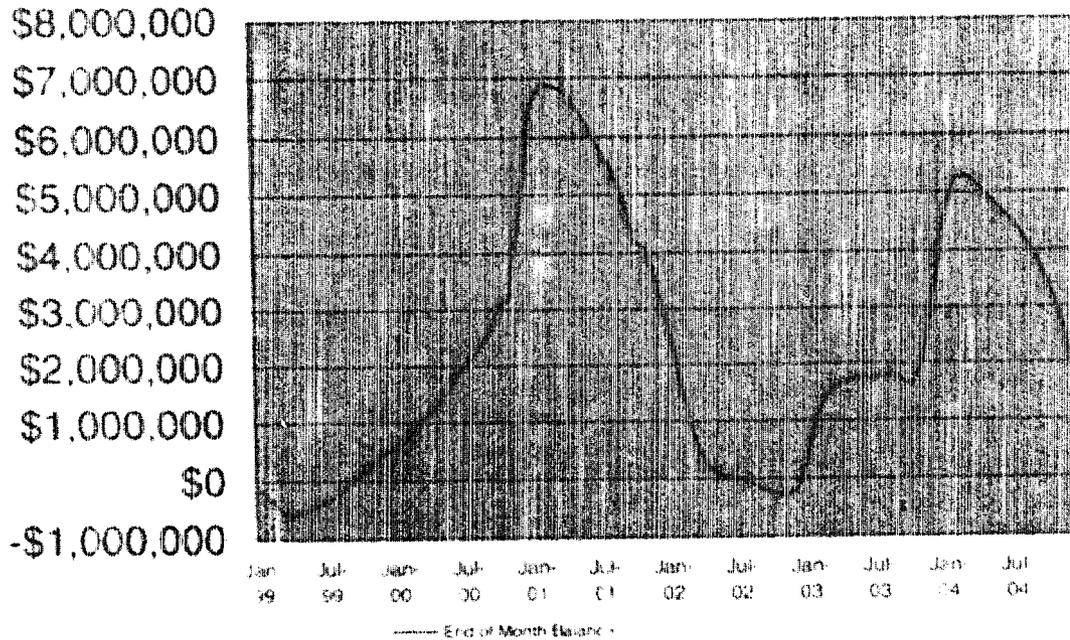
Surcharge from 10/00 through 10/01 \$0.00 per therm



Scenario Two: Future Price Spike

Assumptions:

Cap on PGA rate \$0.10 per therm
 Surcharge from 10/00 through 10/01 \$0.20 per therm



Scenario Two - Future Price Spike

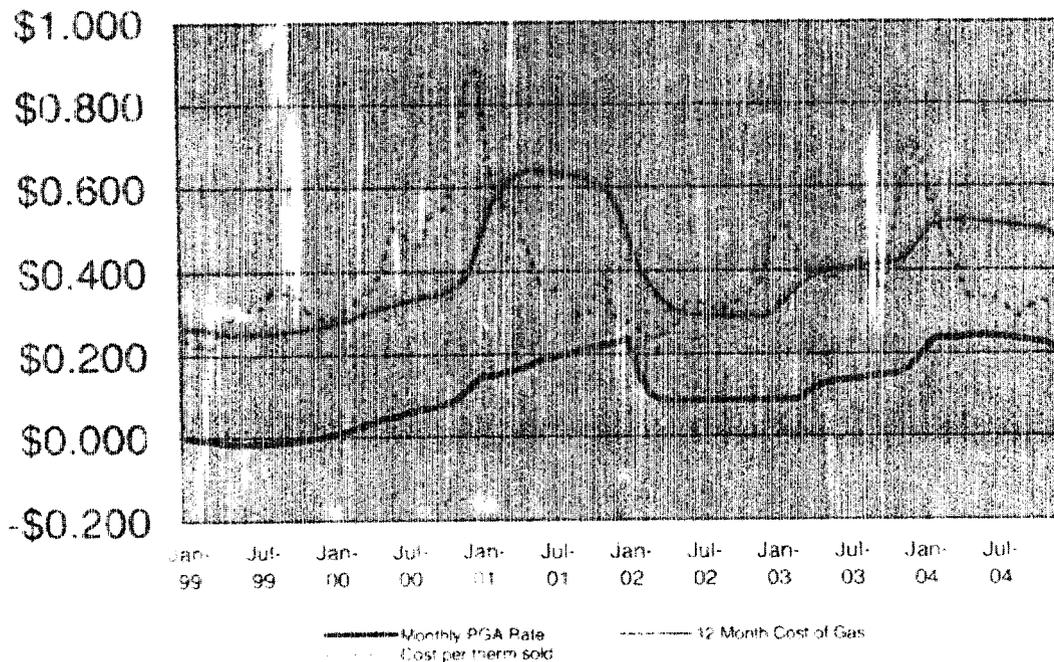
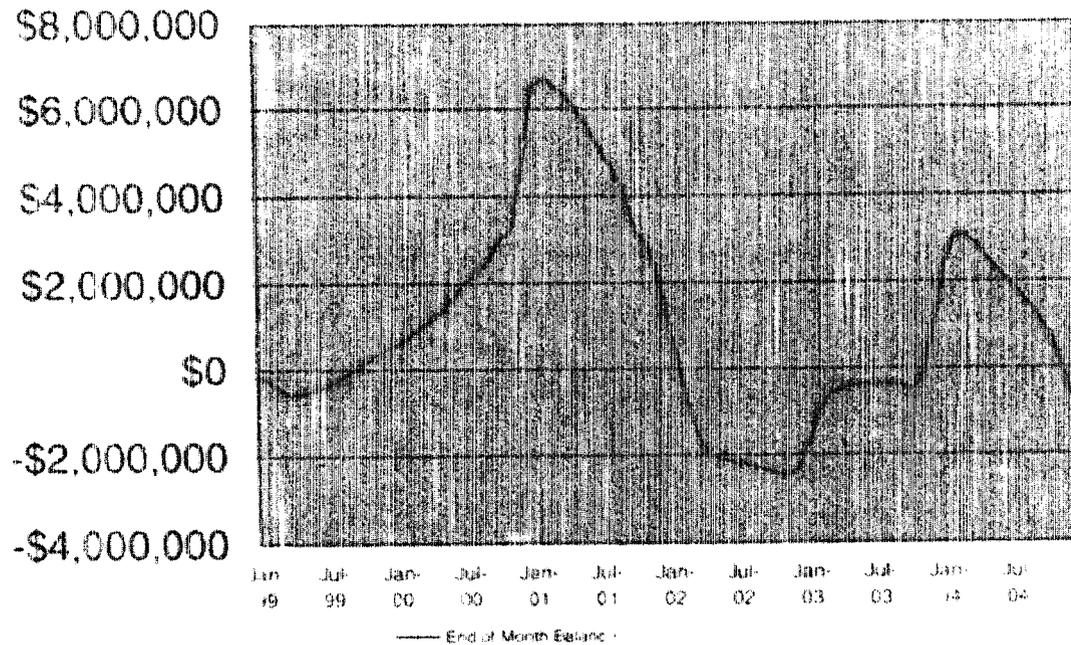
Assumptions:

Cap on PGA rate

\$0.15 per therm

Surcharge from 10/00 through 10/01

\$0.20 per therm



Scenario Two - Future Price Spike

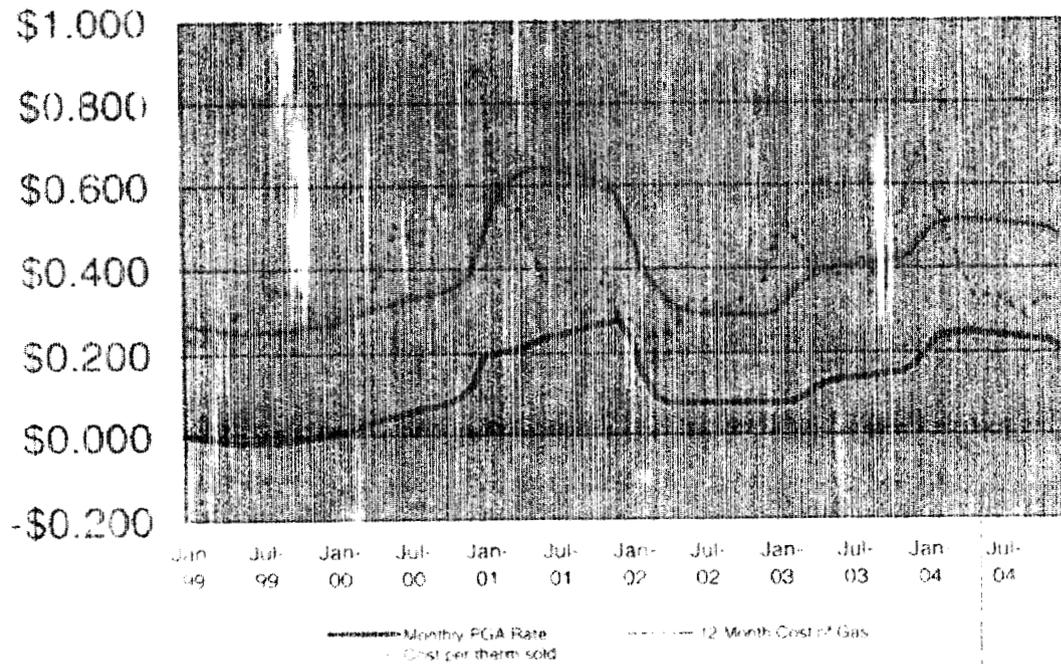
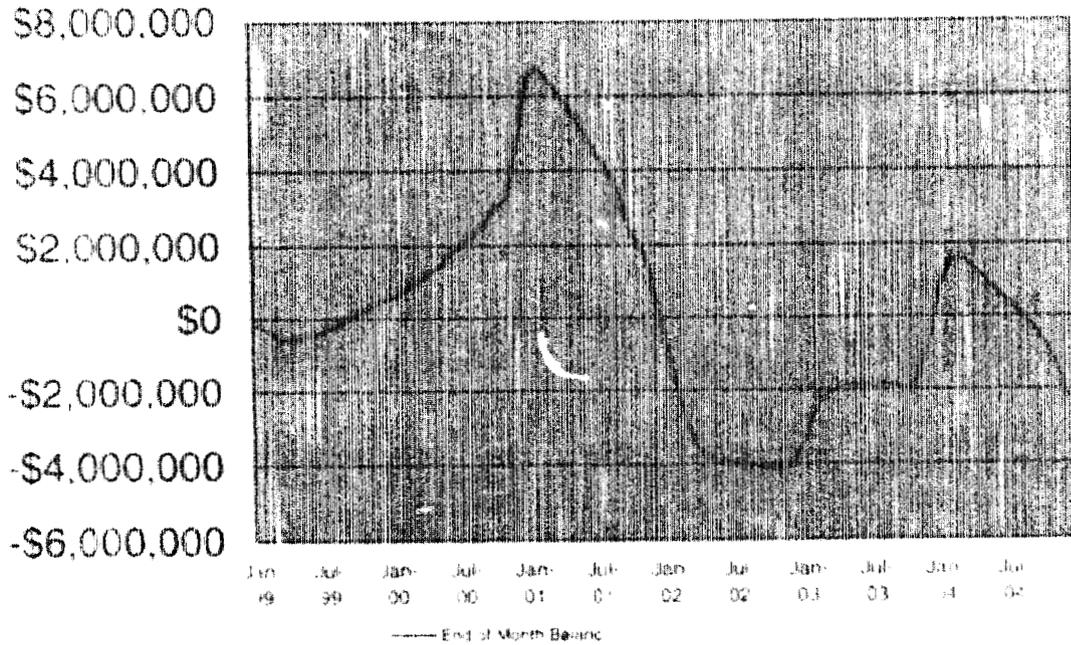
Assumptions

Cap on PGA rate

\$0.20 per therm

Surcharge from 10/00 through 10/01

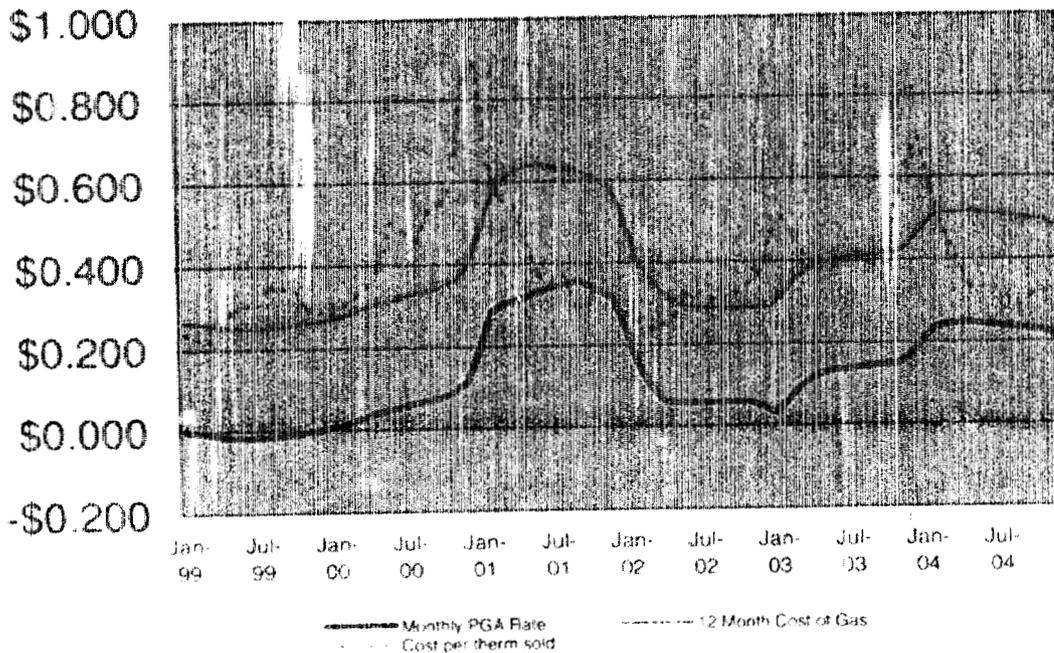
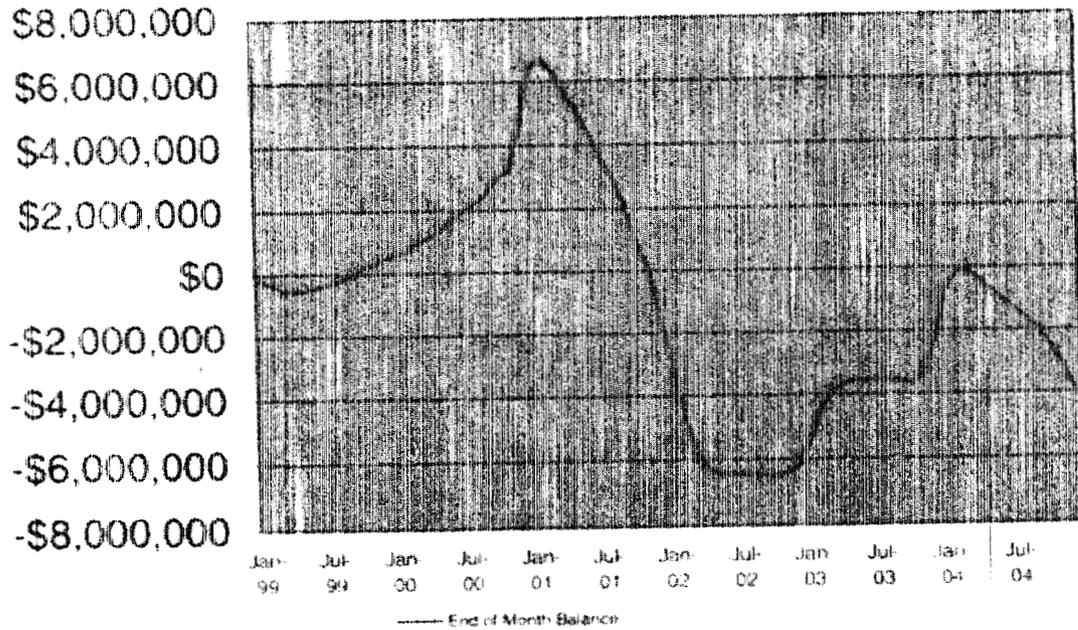
\$0.20 per therm



Scenario Two - Future Price Spike

Assumptions

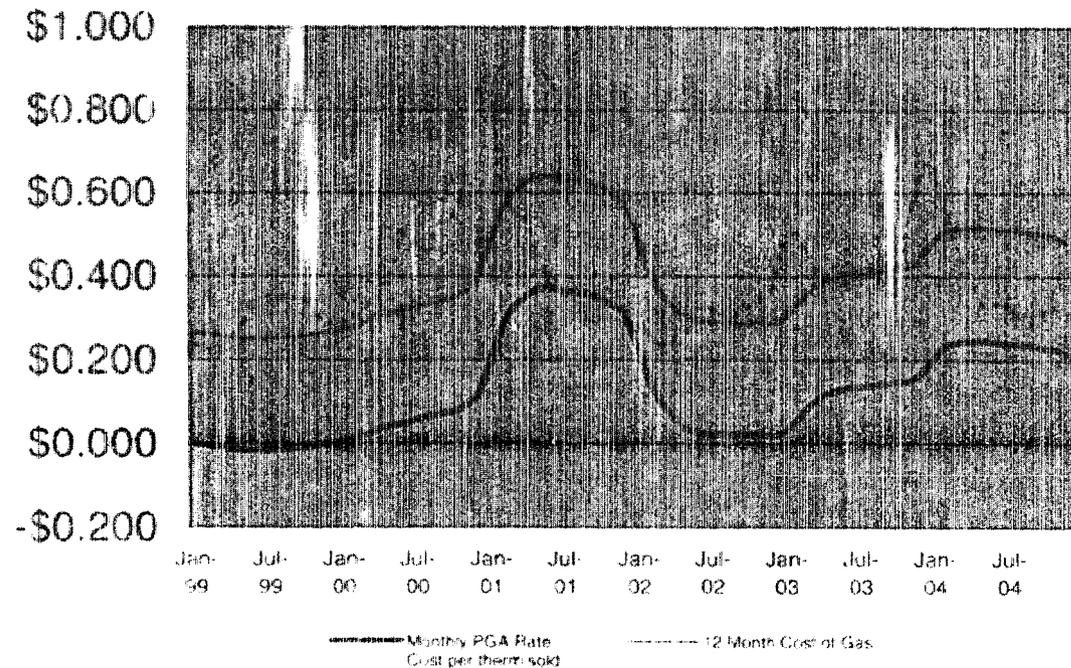
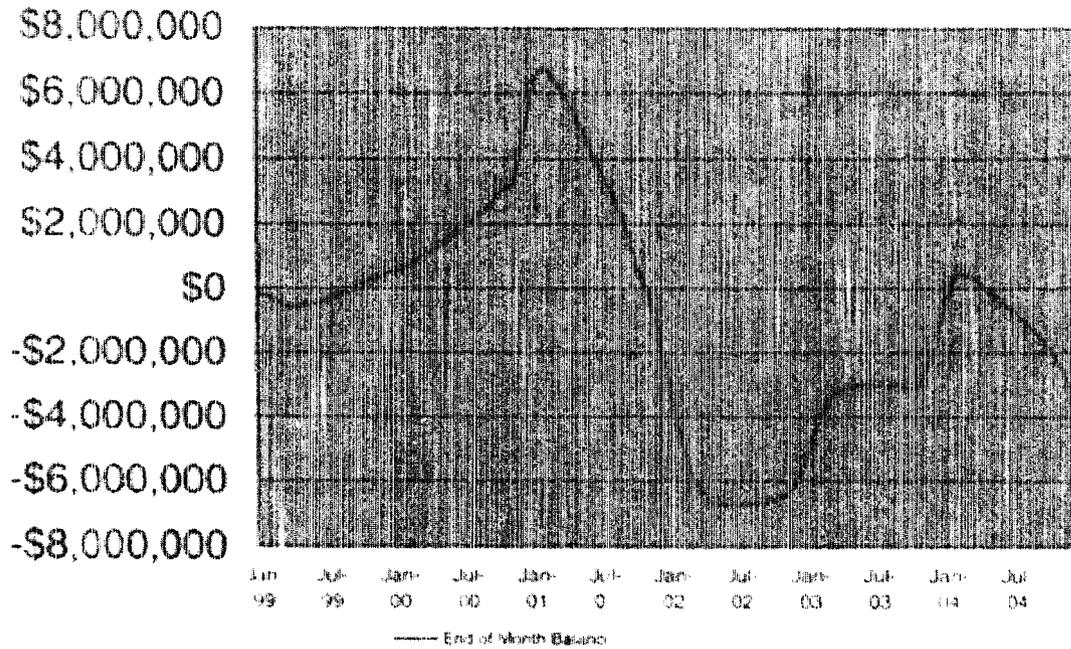
Cap on PGA rate \$0.30 per therm
 Surcharge from 10/00 through 10/01 \$0.20 per therm



Scenario Two - Future Price Spike

Assumptions

Cap on PGA rate	\$0.99 per therm
Surcharge from 10/00 through 10/01	\$0.20 per therm



Scenario Three - Low Prices

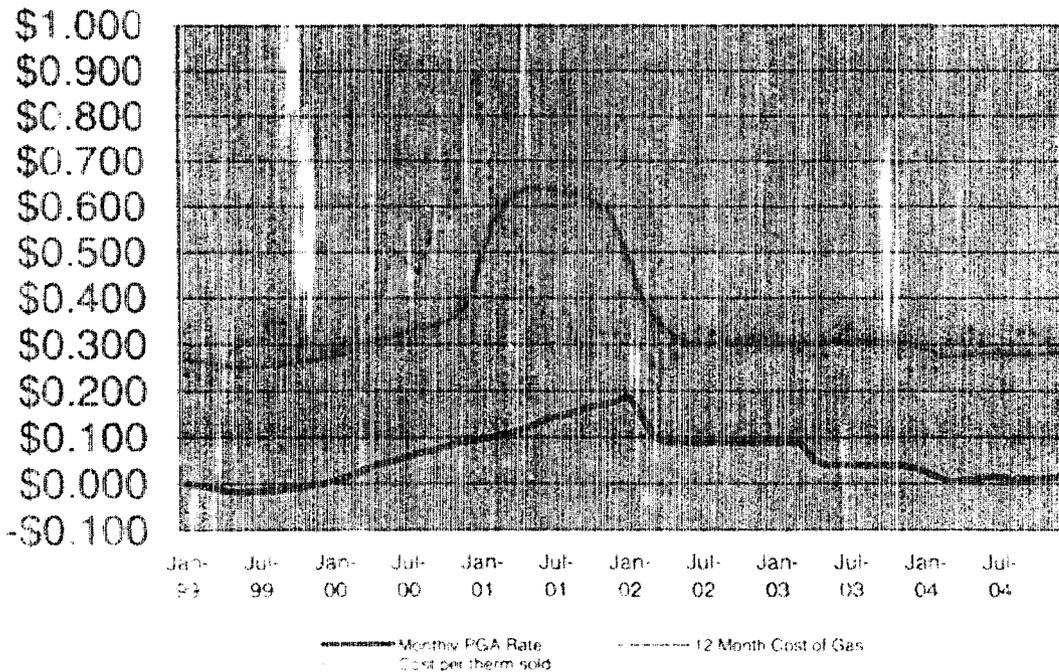
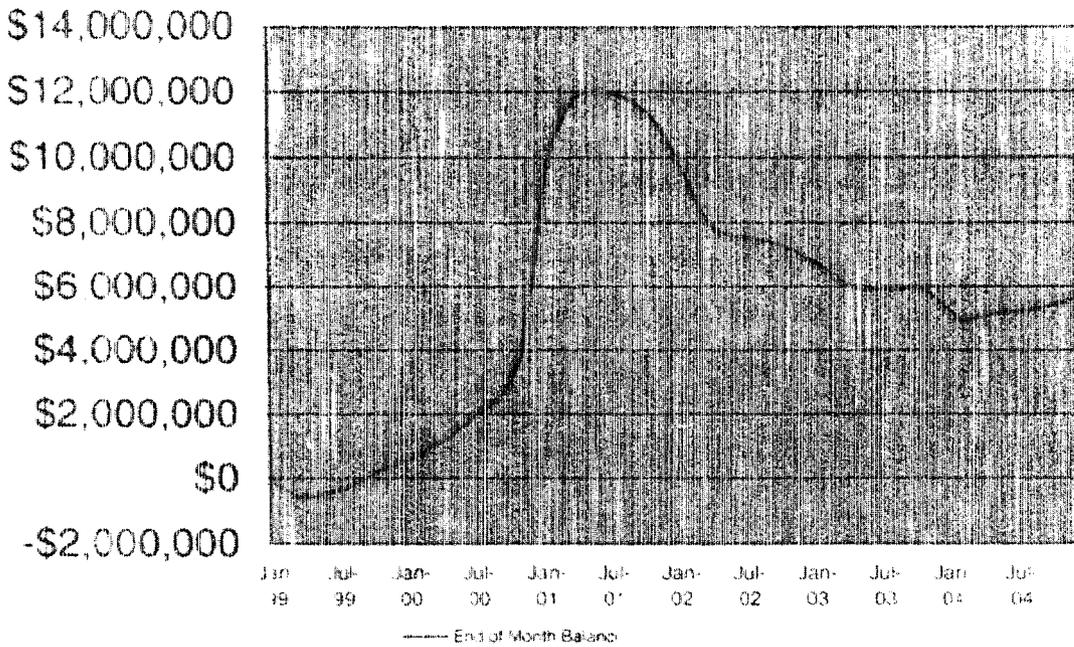
Assumptions

Cap on PGA rate

\$0.10 per therm

Surcharge from 10/00 through 10/01

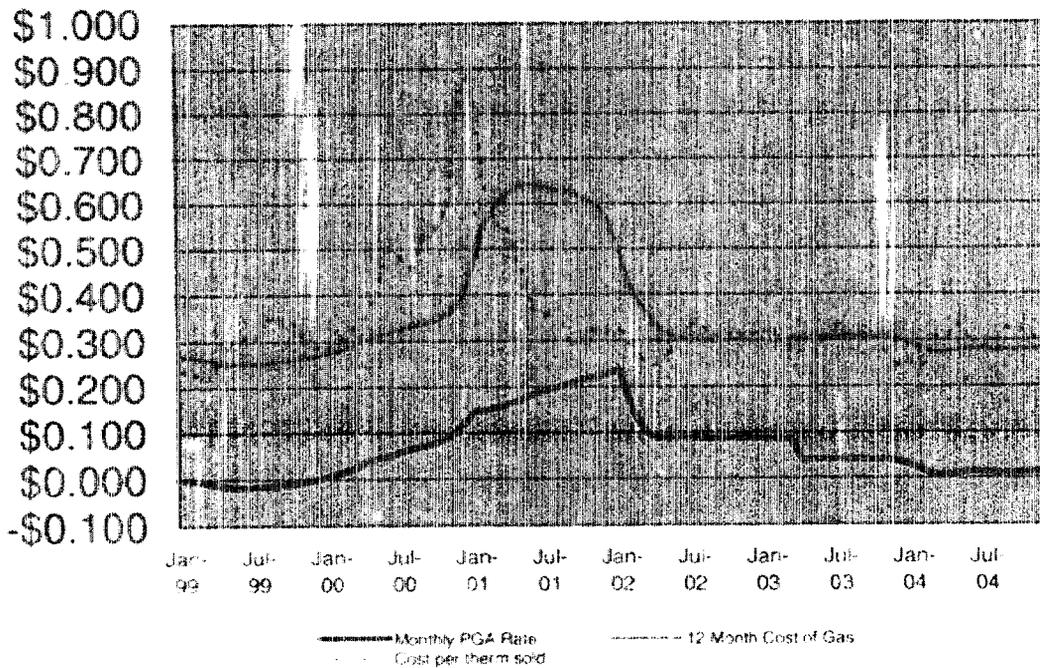
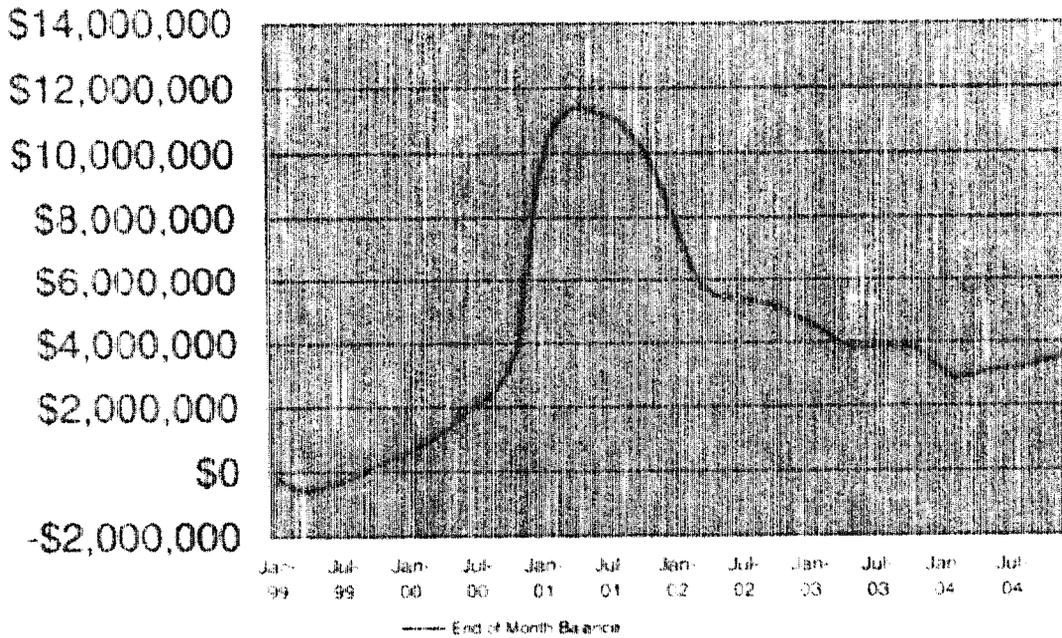
\$0.00 per therm



Scenario Three - Low Prices

Assumptions

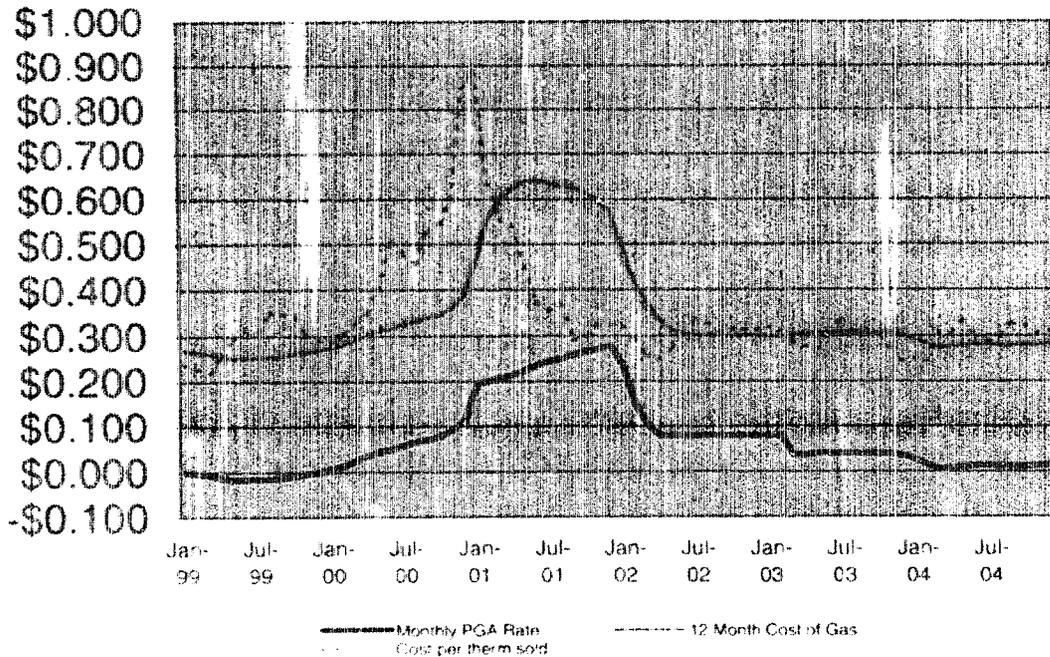
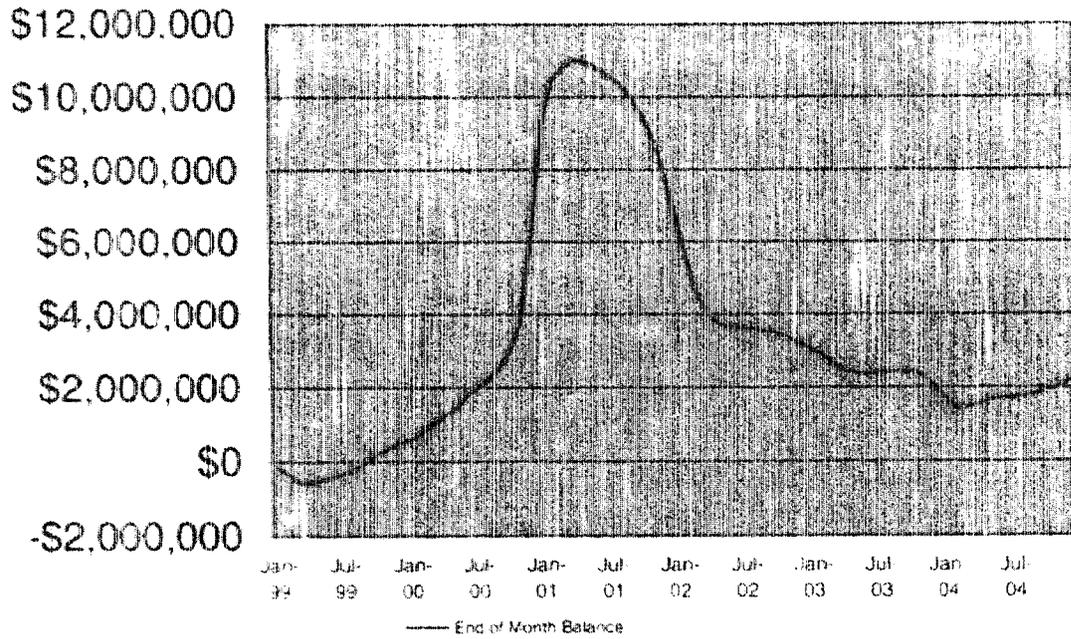
Cap on PGA rate \$0.15 per therm
 Surcharge from 10/00 through 12/01 \$0.00 per therm



Scenario Three - Low Prices

Assumptions

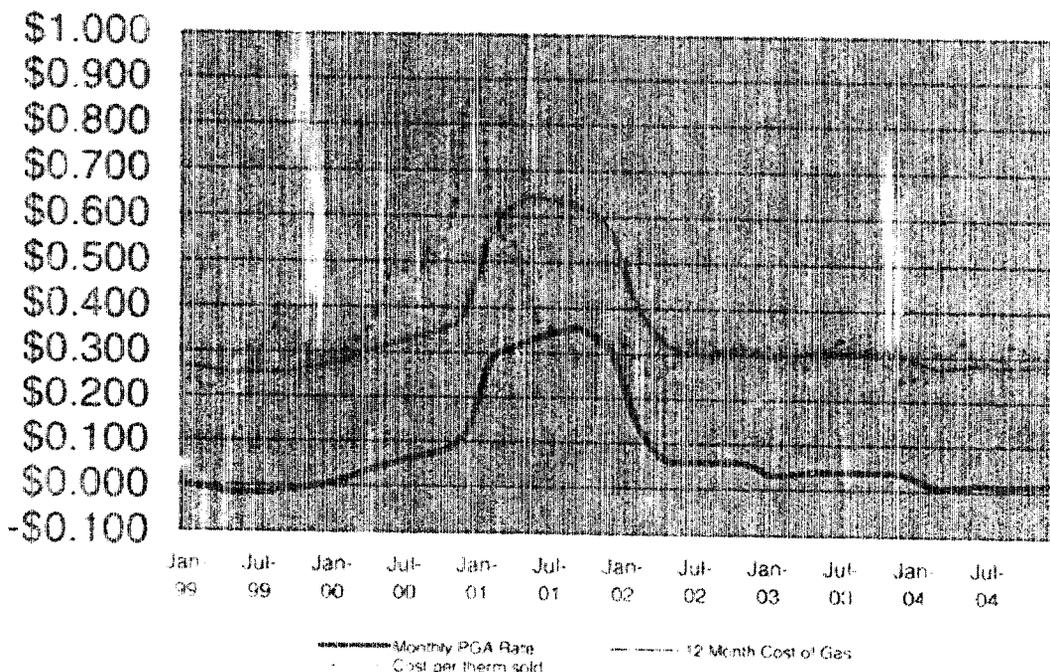
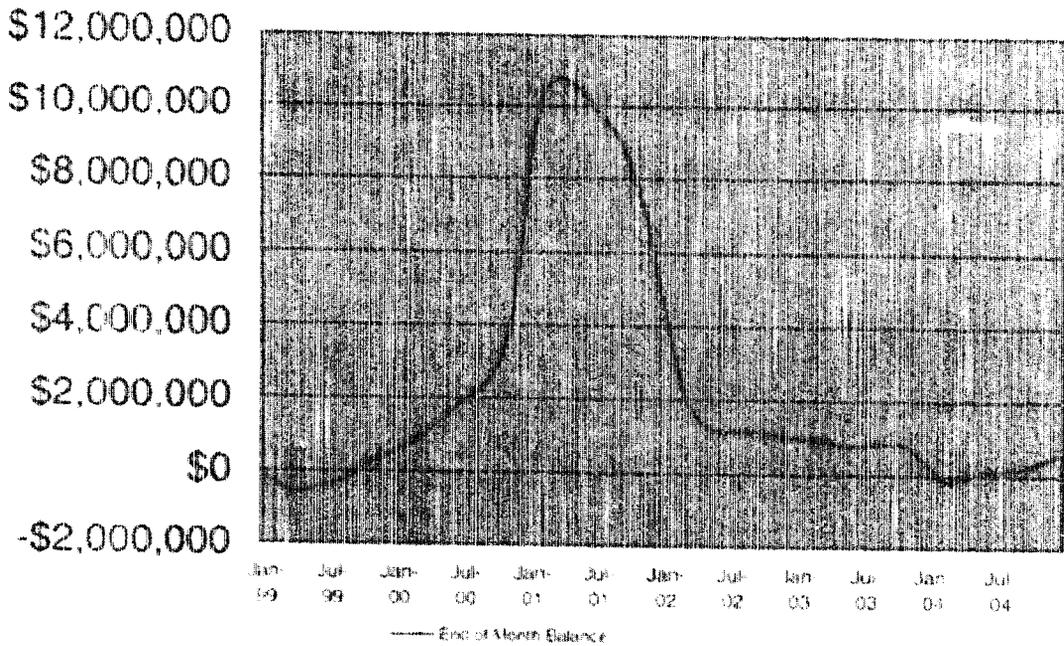
Cap on PGA rate \$0.20 per therm
 Surcharge from 10/00 through 10/01 \$0.00 per therm



Scenario Three - Low Prices

Assumptions

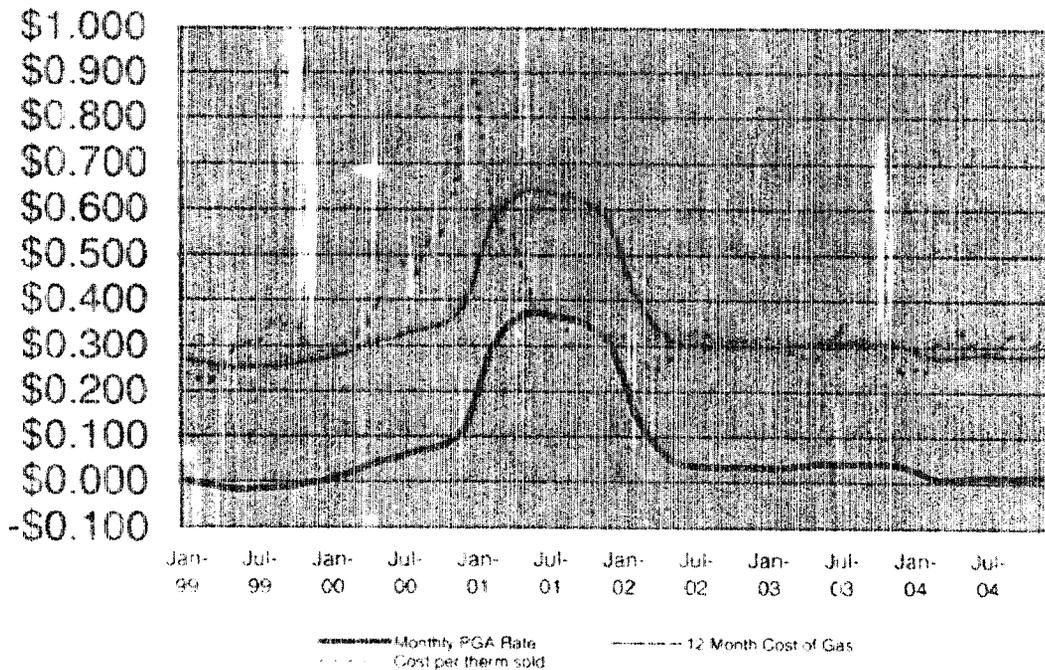
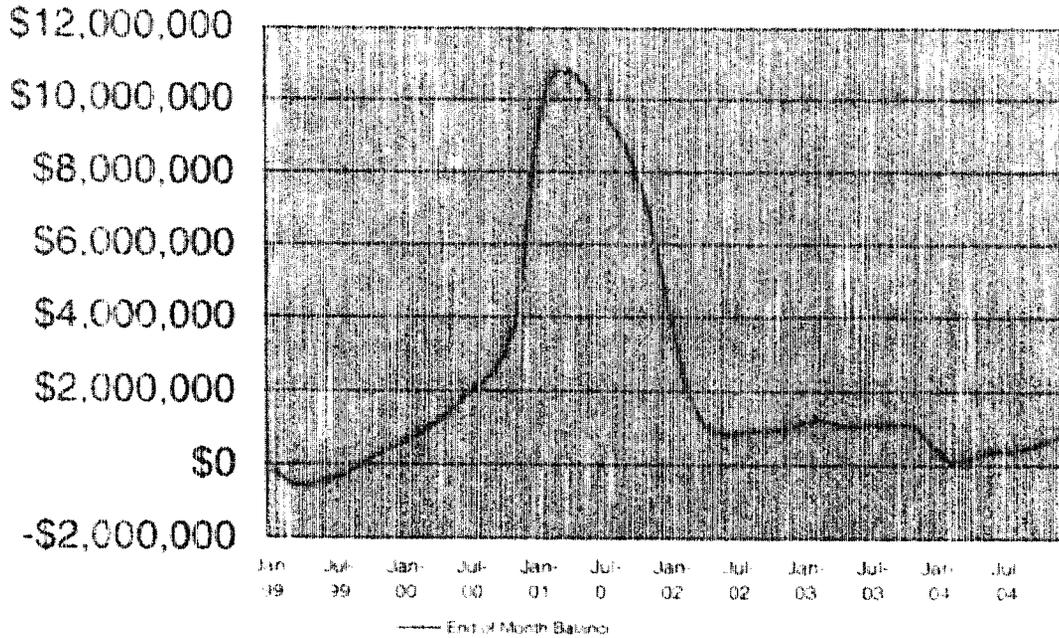
Cap on PGA rate \$0.30 per therm
 Surcharge from 10:00 through 10:01 \$0.00 per therm



Scenario Three - Low Prices

Assumptions

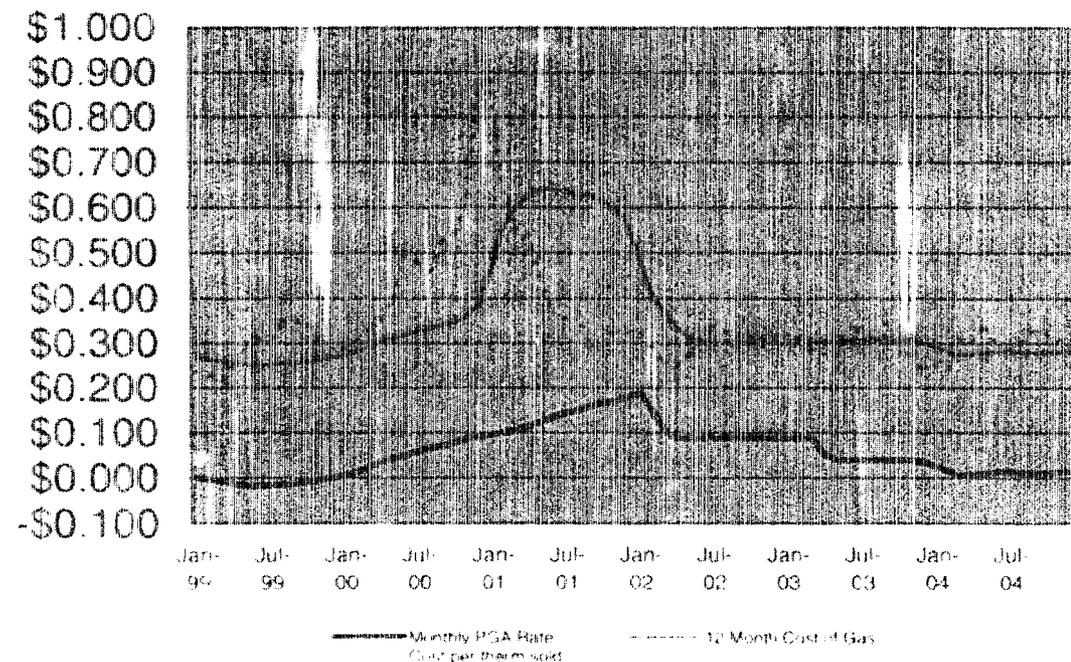
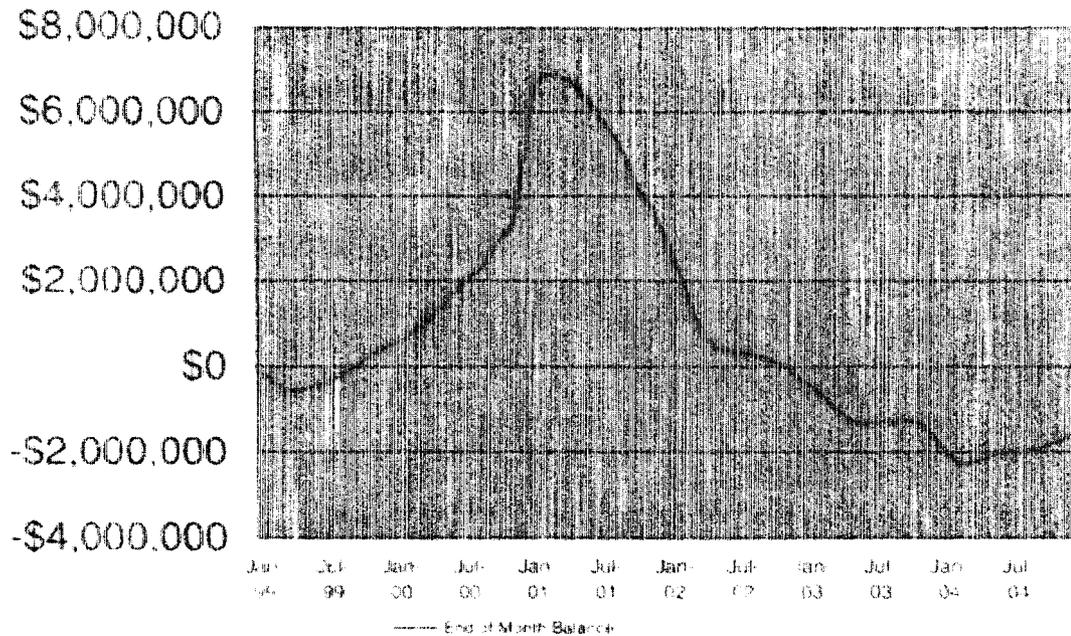
Cap on PGA rate \$0.99 per therm
 Surcharge from 10/00 through 10/01 \$0.00 per therm



Scenario Three - Low Prices

Assumptions

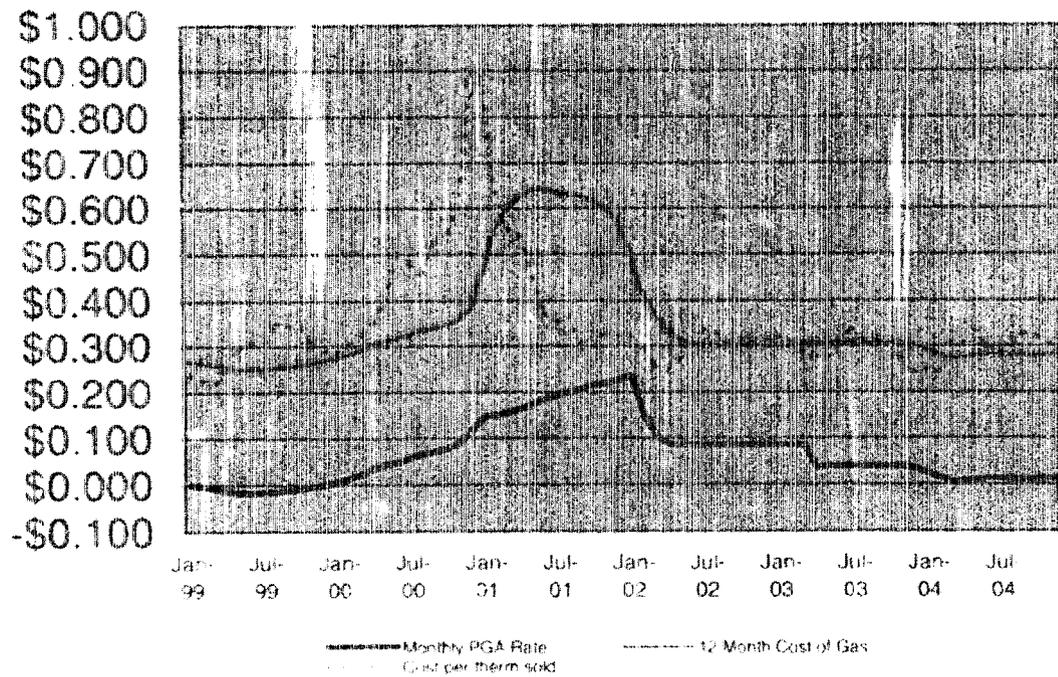
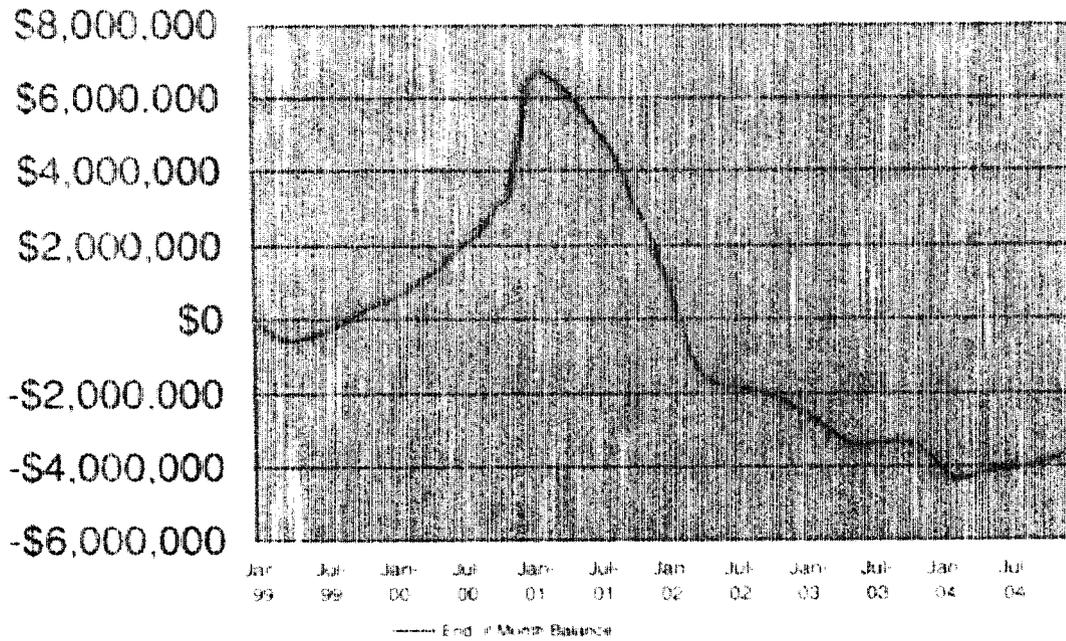
Cap on PGA rate \$0.10 per therm
 Surcharge from 10/00 through 7/01 \$0.20 per therm



Scenario Three - Low Prices

Assumptions

Cap on PGA rate \$0.15 per therm
 Surcharge from 10/00 through 10/01 \$0.20 per therm



Scenario Three: Low Prices

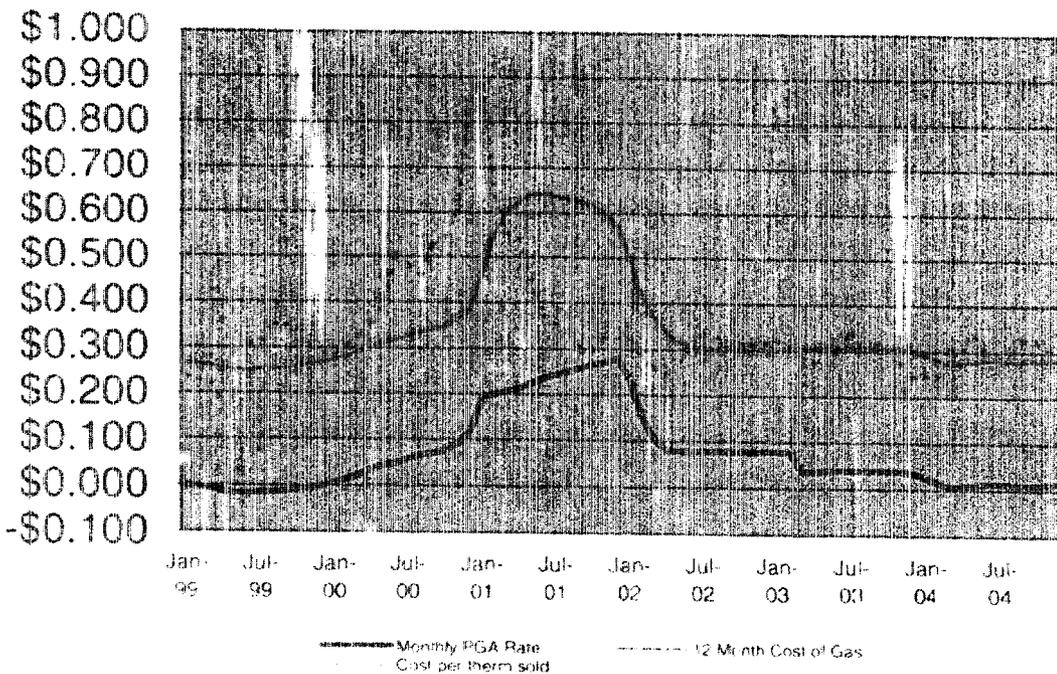
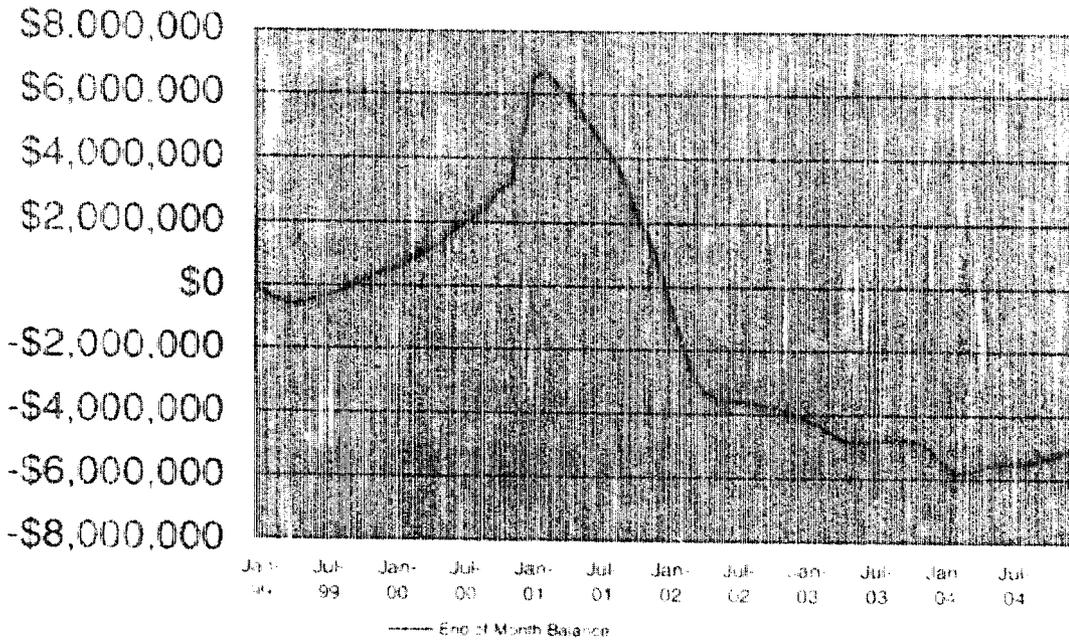
Assumptions

Cap on PGA rate

\$0.20 per therm

Surcharge from 10:00 through 10:01

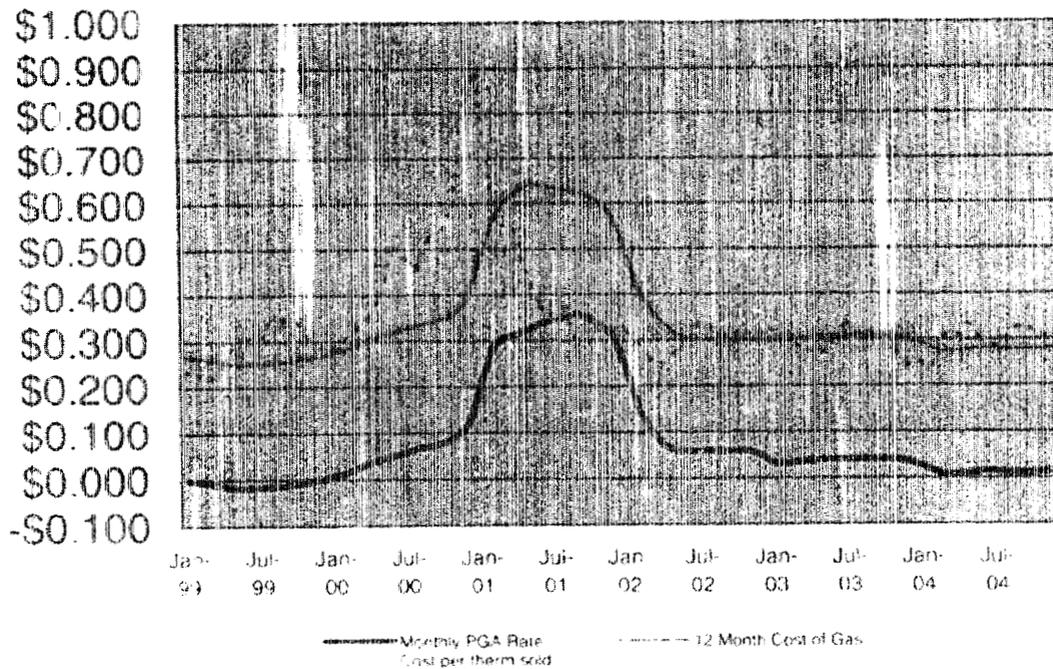
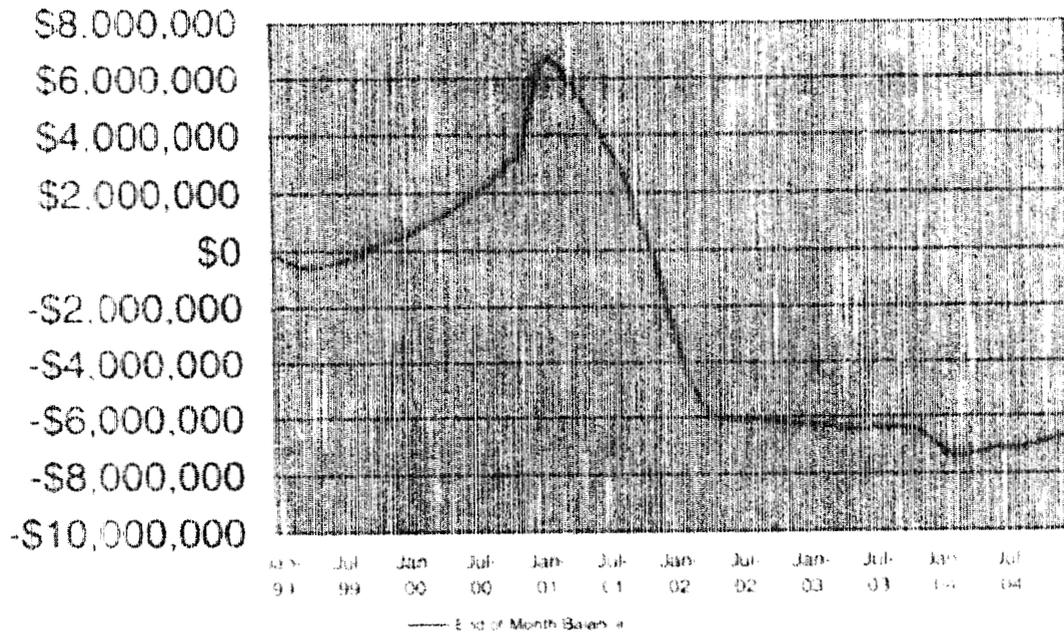
\$0.20 per therm



Scenario Three - Low Prices

Assumptions

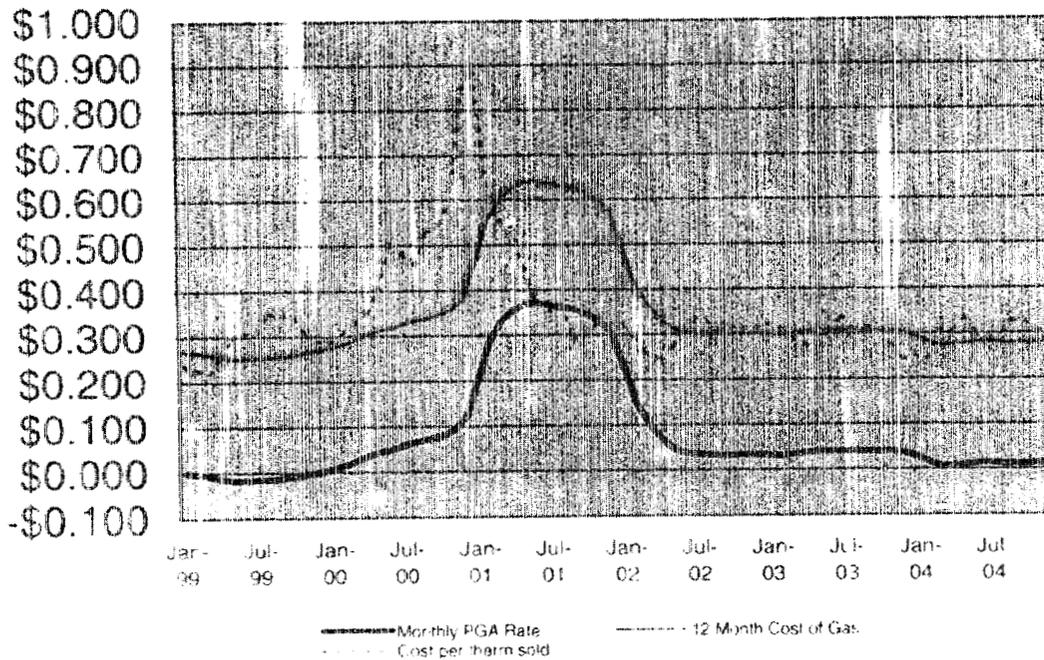
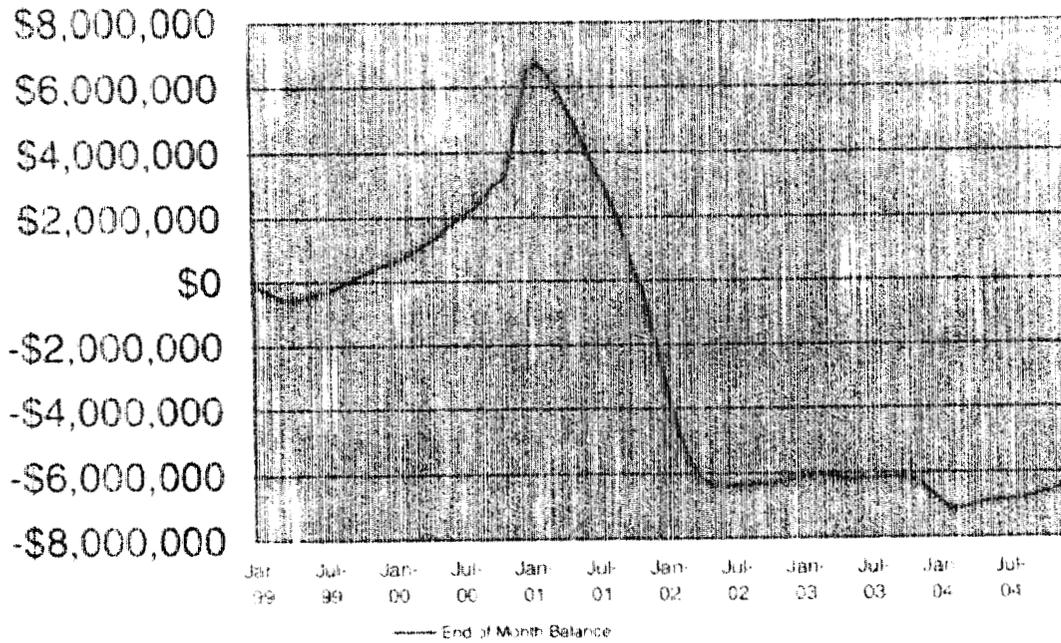
Cap on PGA rate \$0.30 per therm
 Surcharge from 10-00 through 10-01 \$0.20 per therm



Scenario Three - Low Prices

Assumptions:

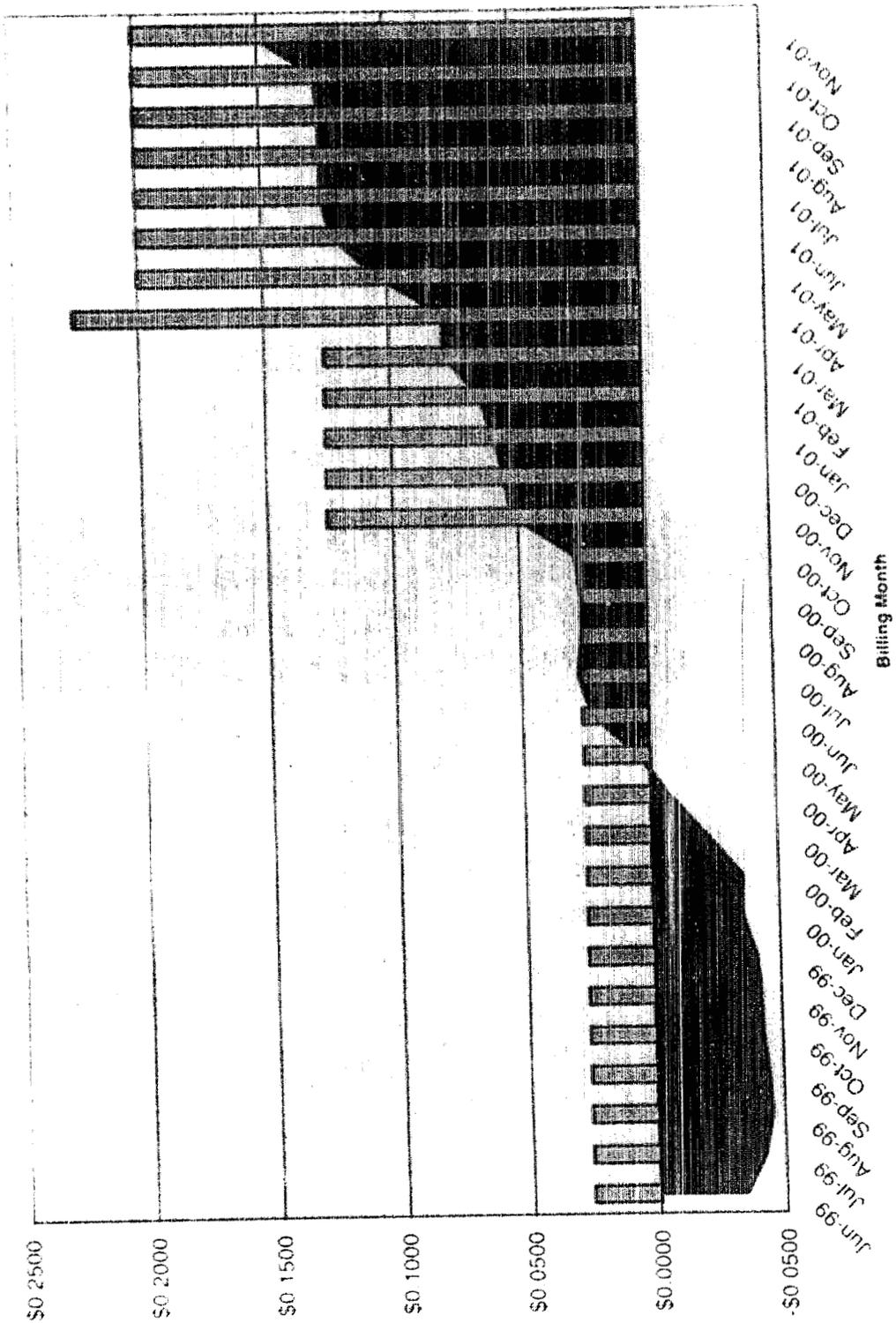
Cap on PGA rate \$0.99 per therm
 Surcharge from 10/00 through 10/01 \$0.20 per therm



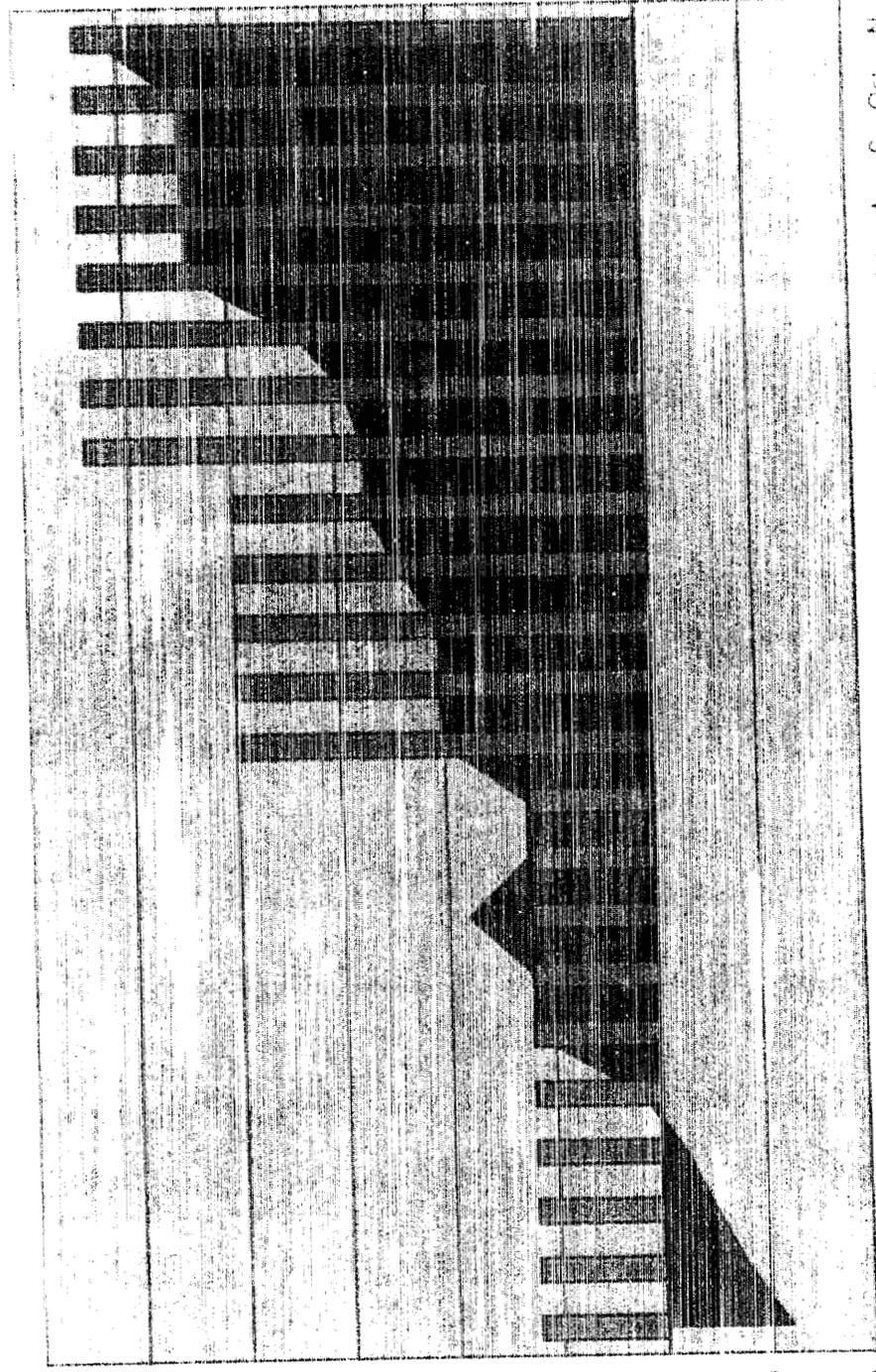
Appendix B: Graphs of Monthly PGA Rates and PGA Surcharges/Credits

This appendix contains a series of graphs showing the monthly PGA rates for LDCs and any temporary PGA surcharges or credits that have been in effect since the introduction of the banded 12 month rolling average PGA mechanism.

Black Mountain Gas - Cave Creek Division

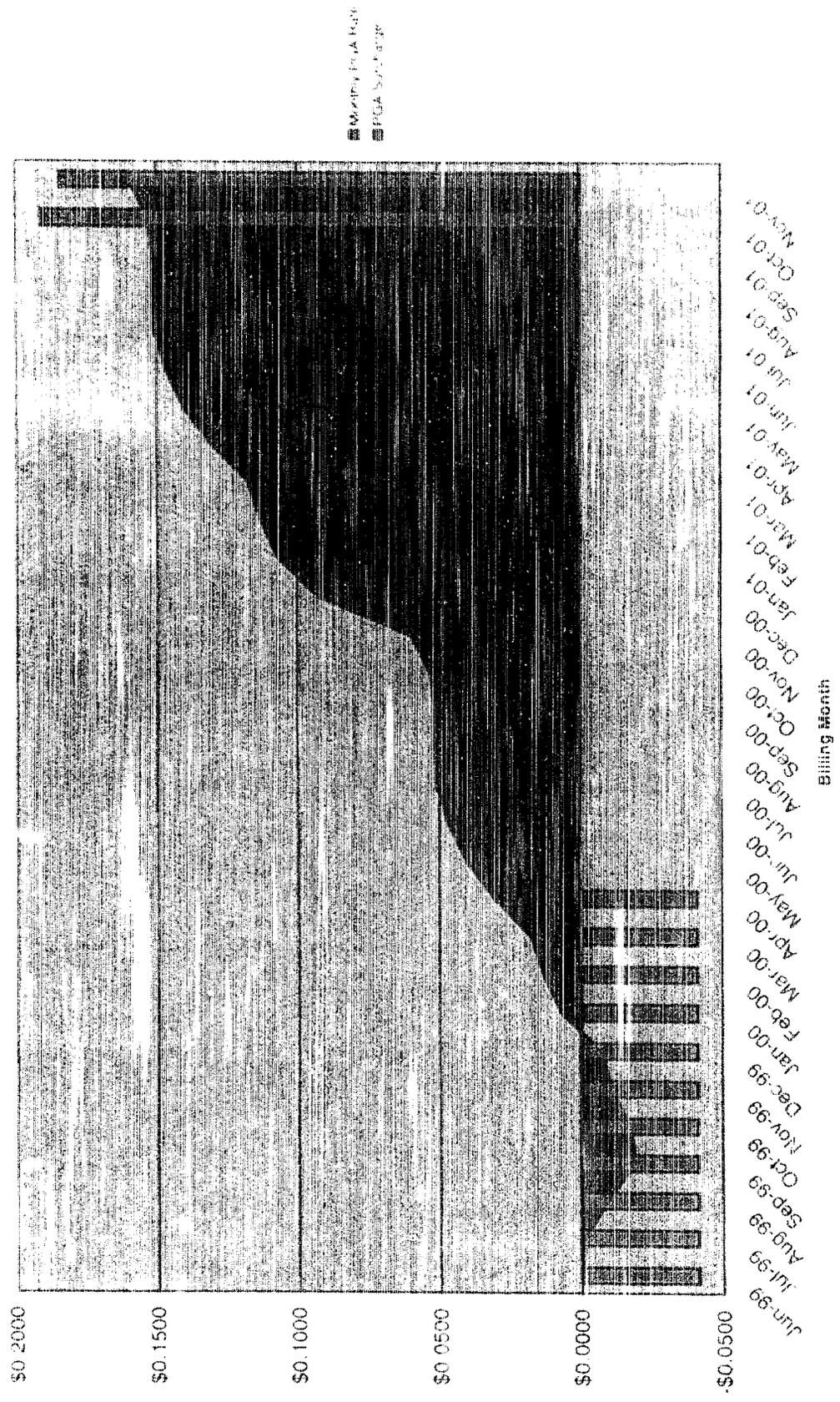


Black Mountain Gas - Page Division

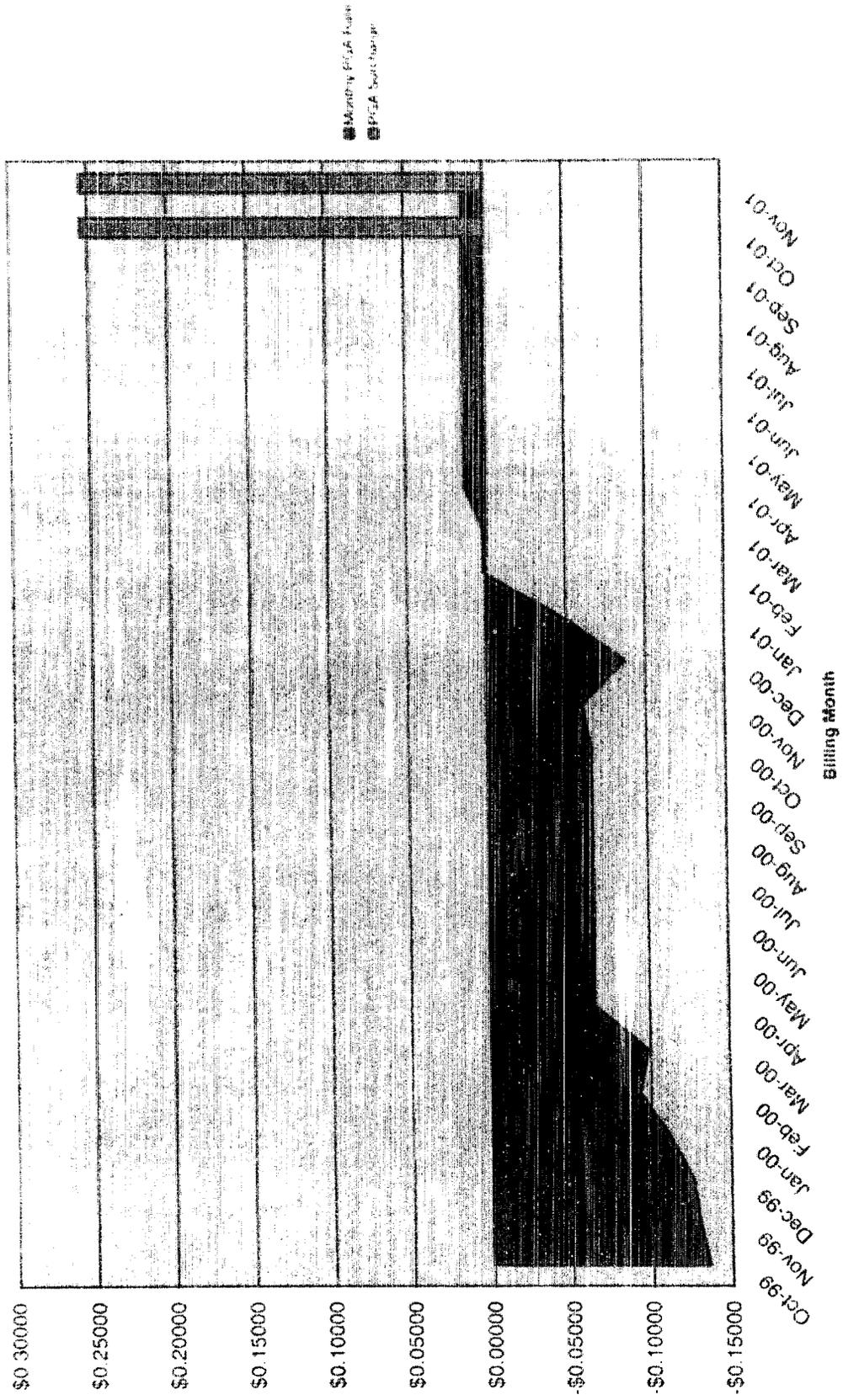


Black Mountain Gas
 1000 Mountain Road
 Asheville, NC 28801

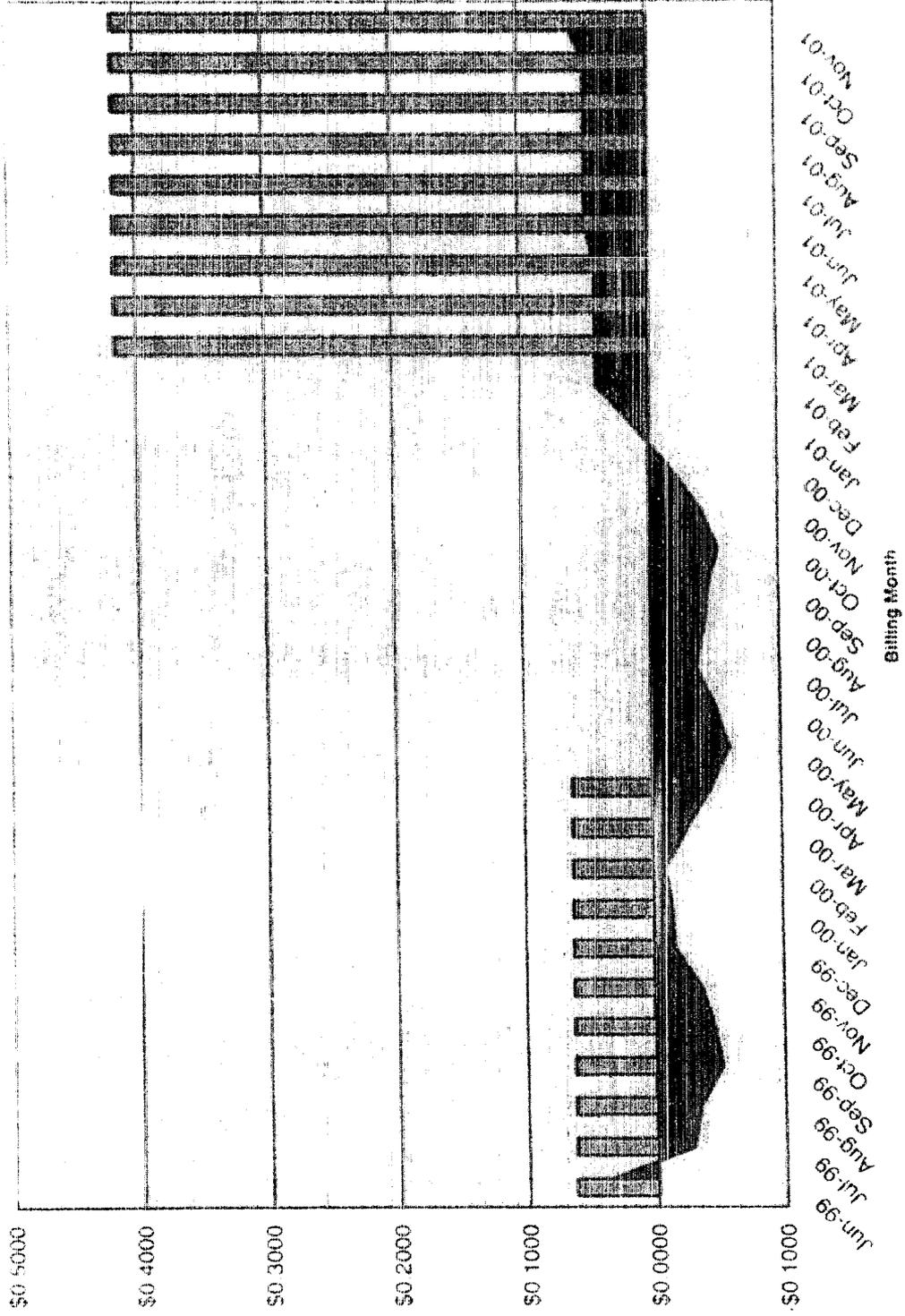
Citizens Utilities - Northern Arizona Gas Division



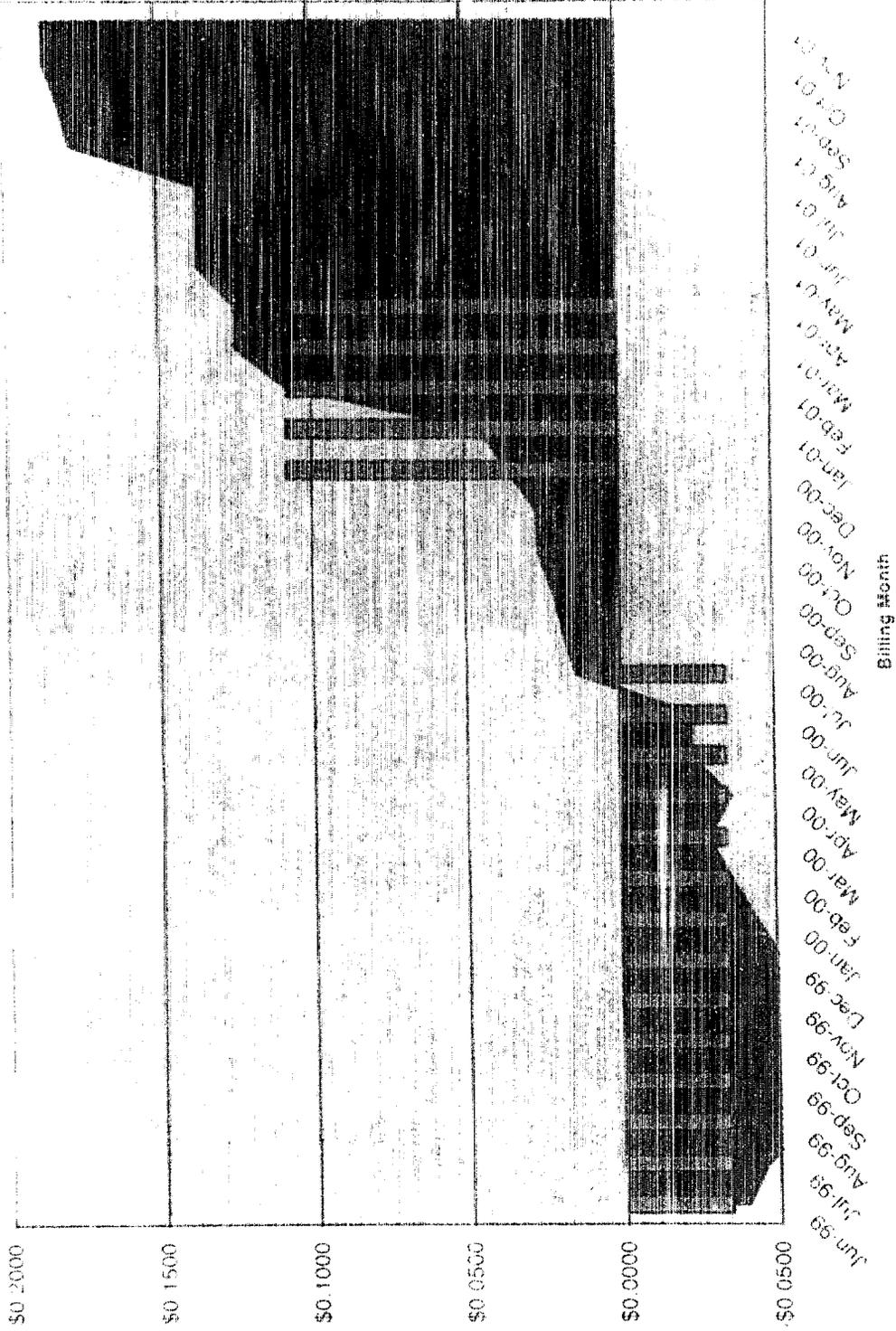
Citizens Utilities - Santa Cruz Gas Division



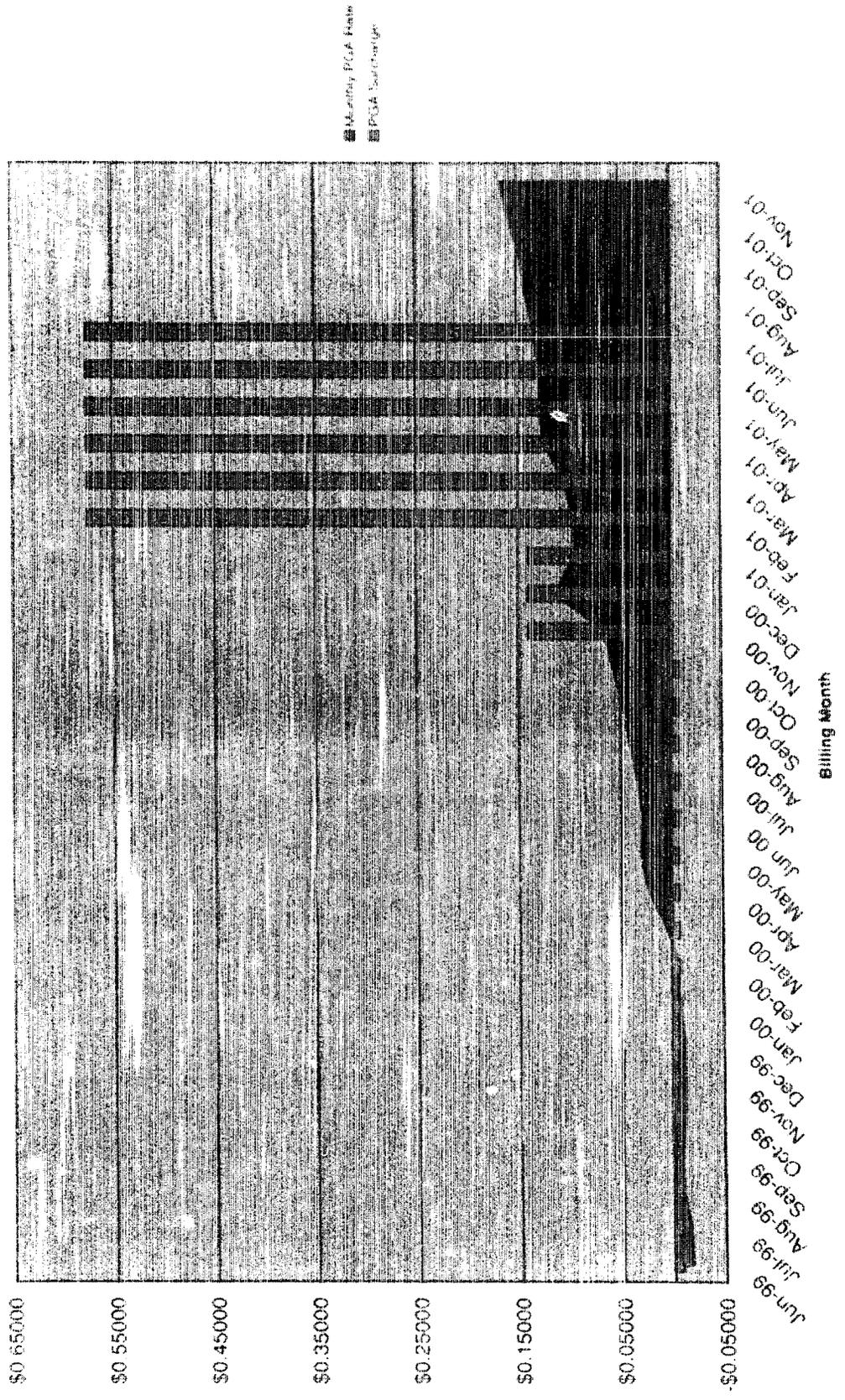
Duncan Rural Services



Energy West



Graham County Utilities



Southwest Gas

