Exhibit No.:
Issue: ACA Recovery Method
Witness: Lewis
Exhibit: Direct Testimony
Sponsoring Party: Associated Natural Gas
Case No.: GR-97-191

ASSOCIATED NATURAL GAS
A DIVISION OF ARKANSAS WESTERN GAS COMPANY
CASE NO. GR-97-191

DIRECT TESTIMONY

OF

BRADLEY R. LEWIS

Table of Contents

	Page
Introduction	1
Purpose	3
Overview of LNG and NGPL Non-S2 Storage Gas	5
Summary of Staff Adjustment	7
Overview of ANG's Position	15
Purpose of ANG Purchase Gas Adjustments	20
Application of ANG Purchase Gas Adjustments	30
Determination of ANG Base Tariff Rates	48
Other Independent Reviews	58
Fallacy of Key Staff Assumption	60
Retroactive ratemaking	61
FERC Order 636	63
Summary	65

Introduction

Q. Please state your name and current business address.

A. My name is Bradley R. Lewis and my current business address is 11524 Hemlock, Overland Park, Kansas 66210.

Q. What is your present occupation?

A. I am an independent utility consultant.

Q. What is your educational background?

A. I have a Bachelor's degree in Business Administration and a Master's degree in economics from the University of Missouri.

Q. What experience have you had in the public utility field?

A. I have 24 years of utility experience. I have participated in numerous electric and gas regulatory proceedings and have presented expert testimony in several state and federal jurisdictions. I have held senior management positions in the areas of utility regulation, finance, and marketing. I worked for the Missouri Public Service Commission from 1975 to 1977, the utility consulting firms of Drees Dunn Lubow & Company, Lubow, McKay, Stevens, & Lewis, and Hagler Bailly from 1978 to 1988, and UtiliCorp United and EnergyOne LLC from 1989 to 1998.

Q. Have you previously participated in proceedings similar to this case involving Associated Natural Gas (ANG)?

A. Yes. I have prepared testimony and exhibits and served as a witness in regulatory proceedings before the Missouri Public Service Commission ("the Commission"). I participated in and testified on behalf of ANG in its retail rate filings in both Arkansas and Missouri when I worked for a consulting firm. I have been involved with similar filings by other utility companies in Missouri and other states.

Purpose

Q. What do you understand to be the purpose of this proceeding?

A. This is an Actual Cost Adjustment (ACA) case for ANG covering a twelve month period in 1996 and 1997, ending August 31, 1997. In an ACA proceeding, the Staff and the affected gas company reconcile "gas costs" with "gas revenues" for an historic twelve-month period. The overall purpose is to allow the gas company to recover, on a dollar for dollar basis, the prudently-incurred cost it incurred in purchasing and delivering natural gas to its customers. The ACA process is essentially a "true-up" type of process where revenues are compared to costs. If revenues are found to have exceeded costs, a refund amount is passed back to ratepayers by adjusting a component of the rate. If revenues have been less than costs, a "make-up" rate is billed in the same manner. Gas costs typically involve the cost of the natural gas itself plus related transportation and, if applicable, storage costs. Gas costs do not involve things such as the cost of salaries, trucks, pipes, office buildings, and other expenses of running the business. Those non-gas costs are set in general rate cases and collected through what is generally referred to as "base rates." While ACA rates typically are adjusted on a yearly basis, base rates only change as a result of general rate cases, which are on no set schedule. It is important to recognize throughout that the gas company makes no profit on "gas costs" in this situation. The Company is subject, however, to having some of those gas costs disallowed if the Commission determines they

have been imprudently incurred by the gas company. In this case, I am not aware of any imprudence being alleged.

Q. What is the purpose of your direct testimony?

A. I will be presenting direct testimony for ANG regarding an adjustment Staff proposed in its memorandum filed August 3, 1998, titled "Staff's recommendation in Associated Natural Gas Company's 1996-1997 Actual Cost Adjustment Filing." Basically, Staff is recommending disallowance of $382,162 in NGPL non-S2 and LNG storage withdrawal costs, alleging the withdrawal costs have been previously recovered through the operation of the purchased gas adjustment tariff in effect prior to July 1982. In summary, I disagree with the Staff's conclusions and will be explaining why those conclusions lack a factual basis and are contrary to widely held notions of gas rate making in this state.

Overview of LNG and NGPL Non-S2 Storage Gas

Q. Before you begin to address the specific issues in this proceeding, could you please provide a short overview of LNG and NGPL Non-S2 storage gas?

A. As is the case with many natural gas distribution companies, ANG has a greater demand for gas from its customers during the winter season due to heating needs. ANG meets these needs by purchasing "flowing gas" which is gas that comes directly from gas wells or gas marketers as needed, and "storage gas" which is gas that ANG has stored at other times of the year so it can be withdrawn at times when it is needed.

ANG maintains gas storage capability to ensure that gas will be available during the winter and as a means of providing gas during the winter at a lower cost than if ANG sought to buy the gas at the same time it was needed. Therefore, ANG generally injects gas into storage during the times of the year when gas prices are typically lower due to lack of demand, and withdraws "storage gas" during the winter months when market prices for gas are typically higher, thereby providing a lower cost for the gas to its customers.

Interstate pipelines connected to ANG's system maintain storage facilities of their own. One of these pipelines is Natural Gas Pipeline Company of America (NGPL). ANG has multiple storage services under contract with NGPL, and each has a name such as "S2." At issue in this case is gas stored via the NGPL services other than S2; gas stored via these other services is termed "NGPL non-S2."

ANG operates a liquefied natural gas storage facility to meet part of its peak needs. Before injections can be made into the LNG facility, ANG must acquire and transport gas to the facility for liquefaction. As gas is needed to meet peaking requirements, ANG withdraws gas from storage, transforms the liquid natural gas back to a gaseous state, and then pumps the gas into ANG's transmission system.

Summary of Staff Adjustment

Q. Please explain the change in ACA gas cost accounting methodology implemented by ANG on December 1, 1995.

A. The Staff addressed this issue in the prepared direct testimony of Michael J. Wallis in Case No. GR-96-227 where he stated the following:

> "On December 1, 1995, ANG changed its Actual Cost Adjustment (ACA) recovery methodology with regard to Liquefied Natural Gas (LNG) storage and Natural Gas Pipeline Company (NGPL) non-S2 storage by showing both the injections and withdrawals of gas as separate components in its ACA filing. Prior to December 1, 1995 ANG did not reflect the LNG and NGPL non-S2 storage injections or storage withdrawals as separate components of the ACA filing, but instead ANG accounted for the storage injections and storage withdrawals as part of the invoiced flowing supplies in the months in which the gas was purchased by ANG."

Q. Who recommended this change in gas cost accounting methodology?

A. The Staff did. In Case No. GR-93-169, the first recommendation of the Staff was "...the Company to adjust gas costs in future ACA filings to account for storage injections and withdrawals on the NGPL system." The Staff expanded on this recommendation in this same memorandum by stating, "The Staff believes a more accurate matching of the customers' usage and the cost of that usage would be achieved if the Company would adjust gas costs for injections and withdrawals on NGPL's system. This would also achieve consistency with the adjustments that are made for ANG's storage transactions on the TETC, ANR, and PEPL pipeline systems." I think it is important to point out that the Staff did not say anything

about a claim of "double recovery" if such a change were to be made by following the Staff recommendation.

Q. What impact will this change in accounting for the determination of the actual annual cost of purchased gas consumed by jurisdictional customers recovered through the ACA have on ANG's Missouri jurisdictional customers?

A. In the long term, changing from the cost of gas "purchased" to the cost of gas "consumed" method will have a negligible impact on the amount of ACA revenues ultimately collected from ANG's Missouri jurisdictional customers. However, in the short term, application of this new method should provide a better match of current revenues and expenses on a monthly and annual basis.

Q. How does Staff describe the adjustment at issue?

A. In its summary, Staff stated the following:

> "On December 1, 1995, ANG changed its ACA recovery methodology with regard to Liquefied Natural Gas (LNG) storage and Natural Gas Pipeline Company (NGPL) non-S2 storage by showing both the injections and withdrawals of gas as separate components in its ACA filing. Prior to December 1, 1995, ANG did not reflect the LNG and NGPL non-S2 storage injections or storage withdrawals as separate components of the ACA filing, but instead ANG accounted for the storage injections and withdrawals as part of the invoiced flowing supplies in the months in which the gas was purchased by ANG."
> "Staff agrees with ANG's decision to change its ACA recovery methodology with regard to LNG and NGPL non-S2 storage. However, Staff believes that ANG's approach of changing its storage recovery methodology over a one month period (which ignores the fact that the only storage withdrawals that should be shown in the filing are those associated with gas supplies injected into storage after

December 1, 1995) results in ANG receiving a double recovery of all LNG and NGPL non-S2 gas withdrawn from storage."

Q. What is your understanding of the impact of the Staff's adjustment in this case?

A. I have prepared and attached a document marked as Schedule BRL-1 that provides an overview of the context of this proceeding. For the ACA year ended August 31, 1997, ANG delivered approximately $16,740,000 of purchased gas to its jurisdictional customers in Southeast Missouri and collected approximately $16,785,000 in base rate and PGA gas revenues from those customers. After reducing the ACA approximately $25,000 for prior period adjustments and adding the net prior year ACA credit balance remaining of $250,000, the final proposed ACA balance for Southeast Missouri prepared by ANG is a credit of $319,364, meaning that ANG believes that it collected in revenue $319,364 more than its costs, and that that difference should be flowed back to ratepayers through the ACA refund process. The Staff's proposed adjustment, however, effectively recommends that an *additional* $382,162 be refunded to ANG's Missouri jurisdictional customers.

Q. Has the Staff previously proposed any similar adjustments?

A. Yes. As shown on Schedule BRL-1, in Case No. GR-96-227 the Staff made a similar adjustment for $254,476. In that proceeding, the Staff estimated that if the Commission upheld its position in Case No. GR-96-227, an additional estimated

$409,000 would be disallowed in future ACA cases. The Staff summarized its final position on this issue in the prepared surrebuttal testimony of Staff witness Michael J. Wallis as follows:

> "It is the Staff's position that the disallowed storage withdrawal amount ($254,476) has been double-recovered by ANG in its 1995/1996 ACA filing. The Company has already recovered this storage withdrawal amount as a result of its use (both before and after July 8, 1982) of an up-front storage recovery methodology which allows ANG to recover its storage withdrawal costs as volumes are injected into storage."
>
> "As I indicated in my rebuttal testimony, Staff is concerned that prior to July 8, 1982 (the date when ANG began recovering its procurement gas costs through the ACA true-up mechanism), ANG recovered approximately $663,000 (ANG's total-company amount is $835,859) of Missouri allocated storage withdrawal costs in an up-front fashion by charging its Missouri customers a tariffed estimated Purchased Gas Adjustment (PGA) rate (approved by the Commission) which was based on a determination of the Company's average cost of gas by using the most recent supplier invoices (including gas supplies injected into storage)."
>
> "Thus, despite the NGPL non-S2 and LNG storage balance of $835,859 which Mr. Kidd claims (throughout his rebuttal testimony) was unrecovered (per ANG's books) as of September 1, 1982 and of which amount $827,927 allegedly remained unrecovered (per ANG's books) as of November 30, 1995 the Company by following its pre July 8, 1982 Missouri PSC PGA tariffs has, in a previous period, already recovered the entire $835,859 balance of NGPL non-S2 and LNG storage withdrawal costs. In addition, Staff would point out that it is difficult to understand how ANG could have a booked capitalized (asset) inventory balance of $835,859 as of September 1, 1982 (or $827,927 as of November 30, 1995) when the Company has always expensed its storage costs, in an up-front fashion, as the gas supplies are purchased from the supplier and injected into storage."

Q. Did the Commission accept the Staff's adjustment?

A. Yes. The Commission addressed this issue beginning on page 10 of its Report and Order in Case No. GR-96-227 where it stated the following:

> "ANG's theory is premised on the existence of a pre-existing balance of gas in storage at the start of the ACA process in 1982. Staff did not attempt to

refute ANG's calculations regarding the interaction between the "as injected" and "as withdrawn" methods. Instead, Staff argued that the value of the pre-existing balance of gas in storage had already been recovered by ANG prior to the inception of the ACA process."

"As the basis for this theory, Staff cited the operation of tariff sheet 44, which was the PGA mechanism in effect for ANG for the period of June 2, 1978 to July 8, 1982. Staff argued that tariff sheet 44 allowed ANG to recover its storage withdrawal cost in an up-front fashion by charging its Missouri customers an estimated PGA rate which was based on the Company's average cost of gas - determined by using the most recent supplier invoices - to compute the appropriate adjustments to its rates. Staff pointed out that tariff sheet 44 does not state that ANG was to use the most recent supplier invoices less storage injections. Therefore, ANG would have been allowed to include the value of all gas purchased, whether stored or sold, in its PGA rates."

"Staff's position is persuasive. From June 2, 1978 to July 8, 1982, tariff sheet 44 served as ANG's PGA Clause for the SEMO District and it controlled ANG's recovery treatment of storage injection and withdrawal costs during that period. As of July 8, 1982, the date tariff sheet 44 was canceled, ANG had fully recovered its storage costs incurred up to that date. In order to understand the fact of this recovery, it is important to understand that tariff sheet 44 operated in a pre-FERC Order 636 environment in which all components of gas supply and service were provided by the pipeline and appeared on the pipeline invoices."

"Before the Federal Energy Regulatory Commission (FERC) issued Order 636, interstate natural gas pipeline companies provided local distribution companies with a bundled gas supply, transportation and storage. FERC Order 636 required interstate natural gas pipelines to unbundle their gas supply service from their transportation and storage services. Prior to FERC Order 636, components of gas supply service included fixed and variable storage charges, fixed and variable transportation charges and all gas supply costs, irrespective of whether that gas supply flowed directly to the city gate or was injected into storage. Thus, fixed and variable storage charges would have been included on pipeline supplier invoices in the pre-Order 636 environment in which tariff sheet 44 operated. When ANG changed its recovery mechanism for LNG and NGPL non-S2 gas on July 8, 1982, it had already recovered the gas cost associated with those volumes injected into storage prior to that date. To allow it to recover those costs again when the gas was removed from storage after December 1, 1995 would indeed result in double recovery."

Q. If all of the Staff's assumptions in GR-96-227 and this case are correct, do you have an opinion as to what that might mean as an overall impact on ratepayers?

A. Yes. As I said before, Staff essentially asserts that ANG has already collected all of the $827,927 storage gas balance as of November 30, 1995 (Missouri jurisdictional amount of approximately $660,000) from its ratepayers and that by changing gas cost accounting methodology, ANG effectively will receive double recovery on all gas withdrawn from storage.

If one accepted that all of the Staff's astonishing assumptions were correct, the Staff's estimate of the impact on ratepayers is grossly understated and inaccurate. Storage gas has been a component of ANG's jurisdictional rate base since at least 1978. Assuming a fair return on approximately $650,000 of jurisdictional rate base and allowing for income taxes, ANG's annual rates for Southeast Missouri have been increased approximately $100,000. Therefore, if the Staff is correct, and scores of regulatory and utility experts are wrong, ANG has over-collected well over $1,000,000 in base rates.

Q. How accurate do you believe your $1,000,000 figure to be?

A. It's a conservative estimate. The $650,000 estimate of storage gas represents a seasonal low balance. The average investment in storage gas included in rate base would be higher. In addition, it is likely that recovery of storage gas in rate base began prior to 1978.

Q. So are you recommending that ANG refund $1,000,000 to ratepayers?

A. Absolutely not. I'm trying to point out that I find it very hard to believe that all of the people over all of the years that have looked at this topic in ANG rate cases and ACA filings could have overlooked something of this magnitude. The fact that it is only being brought up as an issue these many years later should cause the Commission to view the accuracy of the Staff's assertion with great skepticism.

Q. Do you believe the Staff's assumptions have implications regarding rates paid by other customers of other gas companies?

A. Yes. The Staff's assumptions regarding the operation of tariff sheet 44 would apply to the use of "standard" PGA's by numerous gas utilities in the 1960's, 1970's, and 1980's in Missouri and throughout the country. Therefore, if the Commission believes the Staff is correct and endorses its theory, the net logical result is that hundreds -- perhaps thousands -- of regulatory and utility experts nationwide will be declared to have been wrong and numerous gas utilities have been deemed to have over-collected tens of millions of dollars, perhaps hundreds of millions of dollars, over the last 30 years. I will provide a detailed description of "standard" purchase gas adjustments later in my pre-filed testimony.

Q. Why are you stressing that is it important to understand the true impact of the Staff's recommendations?

A. The Staff has turned back the clock 17 years to 1982 and developed some astonishing and unsupported assumptions about the Pre-July 1982 PGA. These assumptions contradict the recommendations and assumptions of all parties that participated in the ratemaking process of that era and imply that significant errors were made in calculating gas rates by many people directly involved in the process. It is important to gain an appreciation of the relative magnitude of the true impact of these astonishing assumptions prior to discussing the specific issues associated with this proceeding. Also, because Staff's position is directly counter to precedent, it clearly suggests that Staff cannot meets its burden by reading the tariff and leaving ANG's arguments unrefuted.

Overview of ANG's Position

Q. In the Report and Order in Case No. GR-96-227 you just quoted, the Commission stated that "ANG's theory is premised on the existence of a pre-existing balance of gas in storage at the start of the ACA process in 1982." What is ANG's position, as reflected by your direct testimony, premised on in this proceeding?

A. ANG's position that it has a recoverable gas inventory balance is based upon the following:

- A general understanding of the objectives and operation of purchase gas adjustment mechanisms
- Familiarity with the specific operation of the Pre-July 1982 PGA
- Transition from Pre July 1982 PGA to ACA
- Reports and recommendations of numerous utility experts
- Monthly PGA computations required to comply with Pre July 1982 PGA
- Previous General Rate Proceedings
- Familiarity with other purchase gas adjustment and fuel adjustment proceedings

Q. Based on your experience with PGAs in general, and ANG's in particular, do you think that the Staff's theory "that the value of the pre-existing balance of gas in storage had already been recovered by ANG prior to the inception of the ACA process" is valid and supported by any facts or evidence?

A. No. This conclusion is based on the following review:

- **Purpose of ANG Purchase Gas Adjustments** – The Pre July 1982 PGA was designed to provide an opportunity for ANG to recover the actual annual cost of purchased gas consumed by jurisdictional customers. This gas recovery rate mechanism was never intended to allow the recovery of storage gas (gas in inventory) which had not yet been consumed by jurisdictional customers.
- **Application of ANG Purchase Gas Adjustments** – A review of the application of the Pre July 1982 PGA for the period of October 1970 through July 1982 indicates that as was intended, ANG has been allowed to recover an amount of base and PGA revenues which approximates the actual annual cost of purchased gas consumed by jurisdictional customers. During this period, ANG did not recover storage gas not yet consumed by jurisdictional customers.
- **Determination of ANG Base Rates** – The Staff's claim that storage gas was previously recovered through the application of the Pre July 1982 PGA tariff directly contradicts recommendations made by the Commission Staff, the Commission, and ANG in numerous general rate proceedings.
- **Other Independent Reviews** – Financial statements, Securities and Exchange Commission data submittals, regulatory filings, Commission orders, presentations to financial analysts, and accounting records

produced and reviewed by scores of regulatory and utility industry experts from the Commission Staff, ANG, and independent agencies over the last twenty years contradict the Staff's assertion that the investment in storage gas has already been recovered through the PGA.

- **Fallacy of Key Staff Assumption** – Staff's implication that jurisdictional customers have paid for more gas than they have consumed is unsupported and totally inaccurate.
- **Retroactive Ratemaking** - Staff's proposed adjustment should not be approved because it represents an inappropriate retroactive ratemaking adjustment.

Q. Does ANG agree with Staff's recommendation to disallow $382,162 of NGPL non-S2 and LNG gas inventory costs?

A. No. A careful and thorough analysis of the key issues in this proceeding overwhelmingly indicates that Staff has a total misunderstanding of the pre July 1982 PGA recovery process which forms the basis for Staff's recommendation.

Q. Do you agree with Staff's recommended $254,476 negative adjustment recommended in Case No. GR-96-227 for 1995/1996 ACA year?

A. No. Staff's reasoning for recommending the adjustment of the $254,476 is the same as that used to recommend the adjustment of $382,162 in this proceeding.

As I will demonstrate, the reasoning supporting the adjustment of $382,162 is totally inaccurate and based upon a complete misunderstanding of the gas cost recovery process prior to July 1982. Therefore, since the Staff used the same misguided logic to recommend the adjustment of $254,476, I can not agree with their prior recommendation.

ANG indicated in GR-96-227 (case for the 1995/96 ACA audit which is currently on appeal) that the impact of the gas inventory accounting change made it necessary to address the recovery of gas storage costs that occurred after the ACA process began in July 1982. To reflect the impact of the accounting change, the gas costs for the 1995/96 ACA year should be increased by $19,522 and reduced by $55,159 in the 1996/97 ACA year. The net of these two adjustments, a $35,637 reduction in gas costs, is the appropriate adjustment rather than adjustments proposed by Staff.

Q. The Report and Order in Case No. GR-96-227 stated "....To allow it [ANG] to recover those costs again when the gas was removed from storage after December 1, 1995 would indeed result in double recovery." If the Commission rejects the Staff's adjustment in this proceeding, will this decision result in double recovery of storage gas costs by ANG?

A. No. Because, as I will demonstrate ANG never recovered the gas held inventory by operation of the pre July PGA 1982 as alleged by Staff; therefore, there can be no "double recovery".

Q. Can you provide an outline of the organization of the remainder of your direct testimony?

A. My direct testimony is organized into the following topics:

- Purpose of ANG Purchase Gas Adjustments
- Application of ANG Purchase Gas Adjustments
- Determination of ANG Base Tariff Rates
- Other Independent Reviews
- Fallacy of Key Staff Assumptions
- Retroactive Ratemaking
- FERC Order 636

Purpose of ANG Purchase Gas Adjustments

Q. Why is it important to discuss the origin and objectives of ANG's purchase gas adjustments?

A. From my reading of what the Staff presented in Case No. GR-96-227, the Staff did not demonstrate an understanding of the purpose and operation of the Pre-July 1982 PGA, and this misconception apparently has carried over into this case.

Q. Are you familiar with ANG's purchase gas adjustments?

A. Yes. During the period of 1978 to 1986, I provided consulting services to ANG. My responsibilities included the preparation of the majority of ANG's general rate filings before the Arkansas and Missouri Commissions. During the course of this work, I frequently reviewed ANG's PGA filings and monthly PGA rate calculations and was very familiar with the operation of both the Pre July 1982 PGA and the ACA. Recently, I have refreshed my memory by reviewing currently available documentation.

Q. Historically, what have purchased gas adjustments been designed to accomplish for gas utilities?

A. Purchase gas costs are a normal operating expense incurred by a gas company in order to provide safe and reliable gas service to its jurisdictional customers. Most gas companies do not produce their own gas. They purchase it from others.

Normally, a representative level of gas cost expense would be included in base rates and collected from customers. For the years prior to the Commission approving purchased gas adjustment tariffs, when gas cost expense levels changed, the only option a company had was filing a rate case and updating the level of current expense recovered.

However, because purchased gas expense represented such a material portion of total operating expenses and was subject to frequent and volatile price increases, it was not practical to follow normal ratemaking procedures through a general rate case, which could take about a year to process. A purchase gas adjustment provided an alternative ratemaking method for collecting purchase gas costs on a more timely basis and helped minimize the number of general rate cases which involve significant efforts by the company, the Staff, and the regulatory commission.

I have excerpted pertinent conclusion statements from the order in Case No. 15,139 dated September 22, 1964, concerning Missouri Natural Gas Company's application for approval of a purchased gas adjustment clause. These excerpts address the design and objectives of purchase gas adjustments.

"The clause is designed to cope with the increasingly frequent changes in the wholesale prices for gas, which in turn have increased the frequency of applications for changes in retail rates to reflect the wholesale rate changes."

"It is clear that the wholesale price of gas is an expense that must be recovered by the company and that the fixing of such wholesale rates is a

matter over which the company and this commission have virtually no control. Changes in wholesale rates represent changes in a very large element of the company's costs and, accordingly, have a substantial effect upon the results of its operations. The adverse effects upon the company and its customers, as the case may be, due to the delay and expense involved in present procedures can be substantially eliminated by the operation of the clause."

"The operation of the purchased gas adjustment clause does not affect the return of the company one way or the other. Increases or decreases in wholesale gas cost are simply offset by corresponding increases in retail rates."

Q. Was it an absolute necessity for regulatory commissions to implement purchase gas adjustments?

A. Theoretically, no. However, from a practical standpoint, it was not feasible to subject all parties to constant preparation and review of general rate proceedings.

Q. What are or were the major purposes of a purchase gas adjustment?

A. Most state jurisdictions at one time had purchased gas adjustments. Almost all of these purchased gas rate mechanisms had some administrative and structural differences but they shared the primary purpose of providing a reasonable opportunity for the timely collection of the current actual annual cost of purchased gas consumed by jurisdictional customers. Other purposes are as follows:

- Proper matching of revenues and expense
- Appropriate documentation of actual purchase gas costs
- Minimize the administrative burden

Q. Were there difficulties in creating a purchase gas adjustment which appropriately balanced these objectives?

A. Yes. One significant difficulty was unique to the gas industry. From September through January when customer gas usage is constantly on the upturn because of cold weather conditions, the actual monthly cost of purchase gas consumed by jurisdictional customers far exceeds actual recoveries being accomplished through rates. This situation exists because gas purchases, which are recorded currently for accounting purposes (current calendar month costs), are reflecting the beginning of the new heating season while recorded revenue reflects usage primarily from the prior month due to the lag effect of cycle billing. This trend eventually reverses itself during the period of February through May when usage is declining. This dramatic "seasonal characteristic" made it challenging to effectively match revenues and expenses without creating a significant administrative burden.

Q. How was this seasonal characteristic addressed in most purchased gas adjustments?

A. The purchase gas adjustment was calculated using annual or a moving twelve months of information. While it is very difficult to match gas purchases and consumption on a monthly basis, much fewer difficulties occur on an annual basis.

Q. Are there different types of purchase gas adjustments?

A. There are at least two common types of purchase gas adjustments: a "standard" PGA and a "dollar tracker" PGA.

Q. What is the objective of a "standard" PGA?

A. The objective of a "standard" PGA was to provide a reasonable opportunity for the gas utility to collect a "representative level" of the current actual annual cost of purchased gas consumed by jurisdictional customers.

Q. Please describe the operation of a "standard" PGA.

A. Each month the "standard" PGA would assume recovery of a fixed amount per unit sold-- either thousand cubic feet (MCF) or hundred cubic feet (CCF) -- through base rates. In addition, it would apply a purchased gas adjustment to each unit sold (either MCF or CCF) based on the incremental changes (both increases and decreases) in the authorized current wholesale rates of gas suppliers included in base rates.

Q. Please describe what is meant by a "representative level" of the current actual annual cost of purchased gas consumed by jurisdictional customers.

A. Significantly, there was no "ACA" type of function in this rate mechanism. In other words, there was no "reconciliation" or "true-up" process as is commonly

used today in the ACA process to match actual gas costs with the revenues billed pursuant to PGA tariffs. Therefore, the "standard" PGA did not provide for the collection of the "exact amount" of the actual cost of purchased gas consumed, but rather provided for the application of a current PGA rate to all units of jurisdictional sales. The recovery provided by applying the current PGA rate to all units sold was the amount the utility was allowed to retain as recovery of the gas costs consumed by customers whether or not the recovery was above or below the actual gas costs incurred by the utility. This, in essence, provided the utility with the opportunity to collect a "representative level" of the current actual annual cost of purchased gas consumed by jurisdictional customers, but it had no assurance that it would collect the exact amount.

Q. Did the "standard" PGA prove to be a useful ratemaking mechanism?

A. Yes. The "standard" PGA was most common from the late 1960's to the early 1980's. During this period the gas industry experienced rapid increases in natural gas prices. The application of the "standard" PGA allowed both gas utilities and utility commissions to minimize the frequency of general rate proceedings while providing gas utilities a reasonable opportunity to recover a representative level of purchased gas costs.

Q. Please describe the operation of the PGA which ANG utilized prior to the implementation of the ACA process in July 1982.

A. From October 1970 to July 1982, ANG had a "standard" PGA. As mentioned earlier, this type of PGA was fundamentally different from what is in use today. Each month the Commission would allow ANG to collect from its customers the effect of wholesale gas supplier price increases or decreases (reflecting these rate changes in ANG's billings to customers on a two month lag basis), above or below that level of purchased gas which was included in the last determination of base rates in a general rate case. This additional monthly billing was collected in the form of a purchased gas adjustment factor appearing on the customer's bill.

Q. What was the purpose of the Pre July 1982 PGA?

A. The Pre July 1982 PGA provided for the application of a current PGA rate to all units of jurisdictional sales. This, in combination with the level of purchased gas per MCF included in base rates, provided ANG with the opportunity over an annual period to collect a "representative level" of the current actual annual purchased gas cost consumed by jurisdictional customers. However, the Pre July 1982 PGA did not guarantee the annual recovery of an exact amount of current gas costs.

The Pre July 1982 PGA, like all other purchase gas adjustments, was not designed to allow the recovery of the cost of storage gas which had not yet been consumed by jurisdictional customers.

Q. From your reading of the material in Case No. GR-96-227, what did you observe about the Staff's understanding of a "standard" PGA?

A. It is my observation that Staff witness Michael J. Wallis was confused. He highlights this fundamental confusion in his prepared surrebuttal testimony in that proceeding where he states "... In addition, Staff would point out that it is difficult to understand how ANG could have a booked capitalized (asset) inventory balance of $835,859 as of September 1, 1982 (or $827,927 as of November 30, 1995) when the Company has always expensed its storage costs, in an up-front fashion, as the gas supplies are purchased from the supplier and injected into storage."

The statement by Mr. Wallis that "the Company has always expensed its storage costs" is a clear signal to me that he did not fully understand or was not willing to admit the intent and practical application of the Pre July 1982 PGA. The Pre July 1982 PGA did not allow the recovery of storage gas which had not been consumed by jurisdictional customers. The Pre July 1982 PGA did not reconcile purchase gas revenues and purchase gas "expenses." As I will discuss later in my testimony, this lack of understanding led the Staff to conclusions

which directly contradict decades of work performed by the rest of the utility, financial, and regulatory community.

I also found it significant that Mr. Wallis could not point to any exact tariff sheet language to support his conclusions regarding gas in storage. He instead said that it was "implicit" in the tariff.

Q. What is the purpose of a "dollar tracker" PGA?

A. The objective of a "dollar tracker" PGA was to provide for the collection of an "exact amount" of the current actual annual cost of purchased gas consumed by jurisdictional customers.

Q. Did the "dollar tracker" PGA provide a better match of revenues and expenses than the "standard" PGA?

A. Yes. The application of a "standard" PGA rate provided the opportunity to recover a representative level of purchased gas costs. Utilities could either over or under recover the actual gas cost incurred because there was no matching of gas cost expense with gas cost revenues. However, the "exact amount" collected through the "dollar tracker" PGA could be precisely reconciled to PGA revenues.

Q. Please summarize your review of the purpose of ANG's Pre July 1982 PGA.

A. The Pre July 1982 PGA was designed to provide an opportunity for ANG to recover a "representative" level of the actual annual cost of purchased gas consumed by jurisdictional customers. The Pre July 1982 PGA proved to be an effective rate mechanism from October 1970 to July 1982. The Pre July 1982 PGA did not provide up-recovery of the cost of gas purchased and injected into storage (recovery before it was withdrawn from storage and consumed by ANG's jurisdictional customers) as alleged by Staff.

In July 1982 the ACA process was implemented for ANG. The ACA provided for a better match of current revenues and expenses because it more effectively addressed a fundamental weakness of early purchase gas adjustments of not matching gas costs incurred with gas cost revenues billed to jurisdictional customers.

The Pre July 1982 PGA was not intended to allow the recovery of storage gas which had not yet been consumed by jurisdictional customers.

Application of ANG Purchase Gas Adjustments

Q. What is the purpose of this section of your direct testimony?

A. In this section, I will ask the simple question: "What costs were recovered?" The results of my review of the application of the Pre July 1982 PGA for the period of October 1970 through July 1982 confirm both that it allowed a recovery of an amount of base and PGA revenues which approximated the annual actual cost of purchased gas consumed by jurisdictional customers and that it did not allow the recovery of storage gas which had not yet been consumed by jurisdictional customers.

Q. What costs were intended to be recovered by the Pre July 1982 PGA?

A. As stated earlier, from October 1970 to July 1982 the Pre July 1982 PGA provided for the application of a current PGA rate to all units of jurisdictional sales. This, in combination with the level of purchased gas per MCF included in base rates, was designed to provide ANG with the opportunity over an annual period to collect a "representative level" of the current actual annual cost of purchased gas consumed by jurisdictional customers.

Q. Please describe your review of the amounts collected through the application of the Pre July 1982 PGA.

A. The PGA mechanism effective prior to July 8, 1982, as set forth in Sheet 44, was not of the exact recovery variety. While there is not documentation in ANG's accounting records of the type which exists in the exact recovery environment of the ACA, on and after July 8, 1982, it is possible to understand the operation of Sheet 44 and to reach an irrefutable conclusion about whether the inventory balances in question had been recovered.

My review consisted of the following:

- a determination for the period of October 1970 to July 1982 of the MCF volume of gas charged a monthly PGA rate by means of the Pre July 1982 PGA process.
- an analysis of the monthly PGA rate applied to each MCF of gas metered and billed by ANG.

In combination, these reviews provide irrefutable evidence that Sheet 44 did not allow the recovery of storage gas which had not yet been consumed by jurisdictional customers.

Q. Why have you conducted your review in this manner?

A. In the simplest of terms, if the volume of gas charged a monthly PGA rate through the Pre July 1982 PGA equals the volume of gas consumed by jurisdictional customers, and the sum of the base rate and PGA rate reflects the price per MCF of purchased gas consumed by jurisdictional customers, then it is confirmed that

both the application of the Pre July 1982 PGA produced a recovery of base and PGA revenues which approximated the actual annual cost of purchased gas consumed by jurisdictional customers and that the Pre July 1982 PGA did not allow the recovery of storage gas which had not yet been consumed by jurisdictional customers. Or in mathematical terms:

(Volume Consumed) X (Price/MCF of Gas Consumed) = Cost of Gas Consumed

Q. What volume of gas was charged a monthly PGA rate through the Pre July 1982 PGA from October 1970 to July 1982?

A. The volume of gas charged a monthly PGA rate through the Pre July 1982 PGA equals the volume of gas consumed by and billed to jurisdictional customers. Sheet 44 describes this procedure as follows:

"The difference in annual cost determined above shall be divided by the CCF sold during the same twelve month period and the rate per CCF determined to the nearest $.00001 will be used as a net adjustment applicable to monthly billings under all of the Company's Gas Rate Schedules not having a purchased gas adjustment clause as part of the schedule."

Therefore, simply put, Sheet 44 required that the monthly PGA rate apply to all volumes consumed by (i.e., metered) and billed to jurisdictional customers.

Q. Can you provide an example which illustrates what volume of gas was charged a monthly PGA rate through the application of the Pre July 1982 PGA?

A. Yes. Think of the interstate pipeline as the water faucet on the side of your house. Think of storage gas as a bucket setting underneath the faucet. Think of ANG's distribution system as a garden hose. Imagine that there is a splitter in the hose connected to the faucet that sometimes allows the water to flow into the bucket, and there is a drain on the bottom of the bucket that is connected back to the hose. At times when you don't need to water the garden that much, the water flows into the bucket and fills it for later use, but the drain at the bottom of the bucket is shut and no water comes out of the bucket. Water also flows through the hose to water the garden. In times when you need more water, you let the water flow through the hose and you also open up the drain on the bottom of the bucket and the water in the bucket flows onto the garden.

The way sheet 44 is worded, and the way it worked, ANG's customers only paid for gas when it was consumed by them. Or in terms of the example, they only paid when the water actually was put on the garden, regardless whether the water flows directly from the faucet or from the drain at the bottom of the bucket.

Q. Please describe how the monthly PGA rate was calculated from October 1970 to July 1982.

A. Schedule BRL-2 attached to this prepared testimony is a copy of canceled Missouri PSC PGA tariff sheet Number 44. It served as ANG's PGA Clause for

the Southeast Missouri District for the period of June 2, 1978 to July 8, 1982. The PGA rate for the period of October 1970 to June 1978 was calculated in a similar fashion. Sheet Number 44 is the sheet that I worked with, in conjunction with ANG and Staff personnel at the time, in providing consulting services to ANG. The PGA factor was determined monthly by dividing the difference between annualized current cost and annualized base costs by the Ccf (one hundred cubic feet) sales for the most recent twelve month period of actual data (the same period used to determine annualized current cost). (See Sheet 44, part A.2). Annualized current cost was determined by accumulating the Mcf's (thousand cubic feet), billed by ANG's suppliers for the most recent twelve month period of actual data and multiplying by the most recent month's supplier rates. (See Sheet 44, part A.1. (b)). The base cost was determined in the same way except that the base rates set forth at part A.1. (a) were applied to the Mcf's billed by ANG's suppliers. The operation of this tariff involves a two-month lag between the most recent purchase month for which actual information is available and the revenue month in which the PGA factor was applied (See Sheet 44, part A.3).

Q. How was the seasonal characteristic of current purchased gas costs addressed in the Pre July 1982 PGA?

A. As detailed on Sheet 44 and illustrated in the example following, the Pre July 1982 PGA, like most other purchase gas adjustments, based recovery of a representative level of gas cost on an annual basis in an attempt to manage the seasonal characteristic of current purchased gas costs addressed earlier in my testimony. Therefore, the current gas costs, gas costs in base rates, and most recent gas sales were all determined on an annual basis. This annual approach enabled the Pre July 1982 PGA to provide a reasonable match of purchase gas costs consumed by customers and revenues.

Q. In your description of the operations of Sheet 44, do the annual gas volumes used to calculate the annualized current gas costs and the annualized gas costs in base rates in the Pre July 1982 PGA rate monthly computation reflect the volume of gas "purchased" or volume of gas "consumed"?

A. Sheet 44 specified that the annual gas volumes used to calculate the annualized current gas costs reflect volumes " purchased" for the most recent twelve month period.

Q. What is the difference between the annual gas volume "purchased" and "consumed"?

A. Simply put, the volume "consumed" for a particular year is computed as follows:

Volume Consumed = Gas Purchases – Storage Injections + Storage Withdrawals

The volume "purchased" considers gas purchases with no adjustments. Where storage injections and withdrawals are roughly equal, then there is practically no difference between volumes consumed and volume of gas purchased.

Q. You said that the annualized current and base costs were both calculated using the volume "purchased" for the most recent 12 months. Would the use of volumes "consumed" by jurisdictional customers for the most recent 12 months produce different results in the Pre July 1982 PGA monthly rate computation?

A. No. Although the determination of the volume "purchased" and "consumed" varies on a monthly basis, in the long run they are essentially the same on an annual basis. The annual volumes used in both the current and base cost calculations would be slightly higher or lower each month, but over the long run they would be practically the same.

This relationship is demonstrated on Schedule BRL-3 that I prepared. This schedule documents the comparison of annual storage gas volumes (September to August) using both the volume "purchased" and volume "consumed" approaches for the period of 1979 through 1995. The data for 1979 represents the oldest data still currently available. Although these methods vary materially in result on a monthly basis, in the long run they are essentially the same on an annual basis. For the sixteen-year period of September 1979 through

August 1995, the volume "purchased" and "consumed" differed by only approximately 17,500 MCF.

Assuming that the annual volume of gas consumed by jurisdictional customers is approximately 4,000,000 MCF per year for Southeast Missouri, this represents approximately 64,000,000 MCF for the sixteen-year period ending August 31, 1995. Therefore, the volume "purchased" and "consumed" methods have varied less than one tenth of one percent (17,500/64,000,000) for the period from 1979 through 1995.

This comparison indicates that sometimes the volume purchased is a little more and sometimes it is a little less than volumes consumed but over the long run, on an annual basis, they are essentially the same.

Therefore, the relationship of the volume "purchased" and "consumed" accounting methods for purchased gas in the long term on an annual basis can be expressed as follows:

Consumption = Purchases – Injections + Withdrawals

Where injections and withdrawals are equal, then the formula can be simplified as:

Consumption = Purchases

Q. Can you provide an example of a monthly Pre July 1982 PGA rate calculation under Sheet 44?

A. Yes. The following example, which assumes no demand costs (demand cost and demand cost recovery are irrelevant to this proceeding because the only cost ANG recorded in inventory was the commodity costs) demonstrates the basic fundamentals of the monthly computation of a Pre July 1982 PGA calculation. In fact the information is taken directly from the PGA calculation filed with the Commission for the PGA rate applicable to customer billings in the Southeast Missouri District for January 1982 (based upon information for the twelve months ended November 1981 and the supplier rates for November 1981) and is attached to my testimony as Schedule BRL-4. Again, this example considers only the commodity cost portion of the filing. To see the complete calculation please refer to Schedule BRL-4. You should also note that the following information is obtained from the data identified either as "NEARK-SEMO" or "Combined Last 4 Suppliers".

Annual Billed Volumes (Purchased) Volumes	9,879,731 Mcf
Present Commodity Rate $/Mcf	$2.5928
Annual Gas Cost in Dollars (9,879,731 X $2.5928)	$25,616,166
Base Rate (9,879,731 X $.7634)	$ 7,542,187
Increase ($25,616,166-$7,542,187)	$18,073,979
Annual Sales In Mcf	9,752,914 Mcf
Gas Cost Adjustment ($18,073,979/9,752,714)	$1.8532

Therefore, under the Pre July 1982 PGA, ANG would be entitled to charge

customers $2.6166 per Mcf ($1.8532 per Mcf PGA rate plus $.7634 per Mcf base rate) for all current gas consumed by customers in January 1982. This would provide ANG the opportunity to recover a representative level of the commodity gas cost for the actual gas cost consumed by customers in January 1982.

Q. Mr. Lewis, if you look at Schedule BRL-4, the Gas Cost Adjustment is $.19313 and the amount in the above example is $1.8532. Please explain the difference.

A. There are two reasons the adjustments are different. First, the adjustment in the above example is expressed as a rate per Mcf while the adjustment per the actual calculation is expressed as a rate per Ccf. ANG actually bills in quantities of Ccf. In the above example, I expressed the rate in Mcf for simplicity. If you converted the adjustment as shown in the actual calculation to a rate per Mcf the rate would be $1.9313 per Mcf. Secondly, the reason the amount of the adjustment differs is due to the above example excluding the demand cost portion of the gas cost expense. Again, I excluded the demand cost because it has no relevance to the issue in this proceeding.

Q. In your example, purchase volumes are 9,879,731 Mcf and sales volumes are 9,752,714 Mcf. What causes a difference between purchase volumes and sales volumes?

A. There are line losses that ANG experiences in transporting the gas through its

transmission and distribution system and delivering the gas to the customer's meter; there is the seasonal and cycle billing lag that I discussed earlier in my testimony; and, there is the net difference between gas injected into storage and withdrawn from storage. But as demonstrated on Schedule BRL-3, the annual difference between storage injections and withdrawals is very small.

Q. You have told us that the above example demonstrates how the PGA adjustment is calculated. Does this demonstrate if Sheet 44 recovers the gas purchased for injection into inventory in an up-front manner?

A. No, not directly.

Q. Can you provide examples to show how, or more importantly, when Sheet 44 recovers gas purchased and injected into storage?

A. Yes. I will use the PGA example above because it comes from an actual PGA calculation but I will use a hypothetical situation that reflects storage injections and withdrawals that will show that Sheet 44 does not collect the gas injected into inventory in an up-front manner. I will also assume no line losses or cycle billing difference. To use the information from the actual PGA calculation I will have to divide the cost in excess of the base recovery by the twelve months ending purchases rather than the twelve month ending sales. This will change the PGA factor from $1.8532 to $1.8294 ($18,073,979/9,879,731).

Assume that ANG purchased 1,000,000 Mcf in January at a commodity price of $2.5928 per Mcf (demand cost will be excluded because it is not relevant to this proceeding). ANG injects 100,000 Mcf of the gas purchased into storage. Since I am assuming there are no billing lag or line losses, ANG's sales to its customers (volumes measured at the customer's meter) would be 900,000 Mcf (1,000,000 Mcf purchased less 100,000 injected into storage). ANG would recover January's gas cost as follows:

Cost of Gas Purchased	(1,000,000 Mcf X $2.5928)	$2,592,800
Base Rate Recovery	(900,000 Mcf X $.7634)	$ 687,060
PGA Recovery	(900,000 Mcf X $1.8294)	$1,646,460
Total Recovery	($687,060 + $1,646,460)	$2,333,520
Un-recovered Gas Cost	($2,592,800 - $2,333,520)	$ 259,280

Now assume that ANG's sales to its customers are 1,000,000 Mcf and they are met by purchasing flowing gas of 900,000 Mcf and withdrawing 100,000 Mcf from storage. Assume all the other facts remain the same as above. ANG would recover January's gas costs as follows:

Cost of Gas Purchased	(900,000 Mcf X $2.5928)	$2,333,520
Base Rate Recovery	(1,000,000 Mcf X $.7634)	$ 763,400
PGA Recovery	(1,000,000 X $1.8294)	$1,829,400
Total Recovery	($763,400 + $1,829,400)	$2,592,800
Over-recovered Gas Cost	(2,333,520 – 2,612,412)	$ 259,280

Q. What do the examples above demonstrate?

A. The first example demonstrates there is no way that Sheet 44 recovers gas purchased for injection into inventory in an up-front manner. Staff's allegation would say that ANG recovered the full amount of gas purchased, including the 100,000 Mcf injected into storage, of $2,592,800. However, just because the purchases related to volumes injected into storage show up on an invoice does not mean that recovery would be accomplished. As this example shows, ANG did not recover the full $2,592,800 but only recovered $2,333,520. The unrecovered amount is $259,280. The un-recovered amount is made up of storage injections of $259,280 (100,000 Mcf X $2.5928).

The second example demonstrates that ANG recovers the gas cost related to gas maintained in storage when volumes of gas are withdrawn from storage and consumed by customers. In this example, ANG over recovered the purchased gas

cost by $259,280. The over recovery is due to ANG withdrawing storage volumes from inventory and selling the volumes to its customers. ANG is recovering the cost of gas previously injected into inventory when the gas is later withdrawn from storage.

Q. The Report and Order in Case No. GR-96-227 stated "...Staff argued that tariff sheet 44 allowed ANG to recover its storage withdrawal cost in an up-front fashion by charging its Missouri customers an estimated PGA rate which was based on the Company's average cost of gas - determined by using the most recent supplier invoices - to compute the appropriate adjustments to its rates." Did Sheet 44 specify that the monthly PGA rate computation use the most recent supplier invoices?

A. Yes. As illustrated in my example, the wholesale current rate was based on the most recent supplier invoices. The most recent supplier invoices reflected the fixed component of the current cost of gas (i.e., demand) and the variable component (i.e., commodity).

Q. Did the Pre July 1982 PGA have a billing lag?

A. Yes. Under the Pre July 1982 PGA, a gas utility could change its rates to deal with wholesale cost changes generally with a two month lag to allow time for the

company to prepare the PGA with the most recent actual data and the Commission to review the "standard" PGA rate calculations.

Q. While the Pre July 1982 PGA was in effect, what was the trend in natural gas prices?

A. As shown on Schedule BRL-5 that I prepared, from 1971 to 1982, the gas industry as a whole experienced double-digit rapid increases in natural gas prices. As shown on Schedule BRL-6 which I prepared, a review of the annual average cost per MCF of ANG storage gas injections indicates that ANG experienced similar rapid price increases during that time period.

Q Did the Pre July 1982 PGA allow ANG to recover all of the current actual annual cost of purchased gas consumed by jurisdictional customers for the period of October 1970 to July 1982?

A. No. Because of the lag in implementation of the PGA and a trend of rising prices during the period of 1971 through 1982, the PGA had a general tendency to undercollect current purchased gas costs. Therefore, during this period, the sum of the base rate and PGA rate was somewhat less than the price per MCF of purchase gas consumed by jurisdictional customers. Therefore, the Staff is making the unsupported assertion that ANG previously recovered gas in storage

when the evidence clearly suggests it did not even totally recover the gas consumed by jurisdictional customers.

Q. Please describe the transition to the current ANG PGA.

A. In Case No. GR-82-108 the Staff proposed the implementation of the ACA.

Q. Did ANG support the implementation of the ACA?

A. ANG supported the implementation of the ACA because that provided the opportunity to fully recover its actual cost of gas consumed. The ACA was subsequently approved by the Commission in its Report and Order for that case. The ACA was implemented July 8, 1982.

Q. Did the Pre July 1982 PGA prove to be a useful ratemaking mechanism?

A. Despite having a tendency to undercollect the actual cost of purchased gas consumed by jurisdictional customers during periods of rapidly increasing wholesale prices, the Pre July 1982 PGA did prove to be a useful ratemaking mechanism. The Pre July 1982 PGA was in effect from October 1970 to July 1982. The application of the Pre July 1982 PGA allowed both ANG and the Commission to minimize the frequency of general rate proceedings while providing ANG a reasonable opportunity to recover a "representative level" of its current actual annual cost of purchased gas provided to jurisdictional customers.

Q. Please summarize your review of the amounts collected through the application of the Pre July 1982 PGA.

A. The results of my review are as follows:

- The volume of gas charged a monthly PGA rate through the Pre July 1982 PGA equals the volume of gas consumed by jurisdictional customers.
- Sheet 44 specified that the annual gas volumes used to calculate the annualized current gas costs reflect volumes "purchased" for the most recent twelve month period.
- Although the determination of volume "purchased" and "consumed" varies on a monthly basis, in the long run they are essentially the same on an annual basis.
- The volume "purchased" method did not provide up-front recovery of gas purchased and injected into storage as alleged by Staff.
- The wholesale current rate was based on the most recent supplier invoices.
- Because of the lag in implementation of the PGA and a trend of rising prices during the period of 1971 through 1982, the PGA had a general tendency to undercollect current purchased gas costs. Therefore, during this period, the sum of the base rate and PGA rate was somewhat less than the price per MCF of purchase gas consumed by jurisdictional customers.

The results of this review confirm that the application of the Pre July 1982 PGA produced a recovery of base and PGA revenues which was a representative

level of the actual annual cost of purchased gas consumed by jurisdictional customers. More importantly to this proceeding, the Pre July 1982 PGA did not allow the recovery of storage gas which had not yet been consumed by jurisdictional customers.

Q. The Report and Order in Case No. GR-96-227 stated "... Staff argued that the value of the pre-existing balance of gas in storage had already been recovered by ANG prior to the inception of the ACA process." As of July 8, 1982, had the operation of the Pre July 1982 PGA allowed ANG to previously recover the value of the balance of gas in storage as of that date?

A. No. ANG did not recover the cost of storage gas not yet consumed through the application of the Pre July 1982 PGA.

Determination of ANG Base Tariff Rates

Q. Can you explain how ANG has historically recovered its expenditures associated with purchased gas and gas storage in customer rates?

A. Since October 1970, based on recommendations from ANG and the Staff, and orders issued by the Commission, ANG has recovered the current actual annual cost of purchased gas consumed by its jurisdictional customers through a combination of base rates set in general rate cases and the operation of the purchase gas adjustment ("PGA") mechanism approved by the Commission for ANG. ANG's investment in storage gas, which has not yet been delivered to and consumed by customers, has been included in jurisdictional rate base, examined in general rate cases, and ANG has presumably earned a fair return on that investment.

Q. Earlier in your testimony you quoted a portion of the testimony of Staff witness Mr. Michael Wallis as follows: "In addition, Staff would point out that it is difficult to understand how ANG could have a booked capitalized (asset) inventory balance of $835,859 as of September 1, 1982 (or $827,927 as of November 30, 1995) when the Company has always expensed its storage costs, in an up-front fashion, as the gas supplies are purchased from the supplier and injected into storage." This basically says that ANG's financial accounting records (books) reflect an asset in gas inventory that does not exist. It is also Staff's reasoning that

it does not exist because ANG expensed the gas purchased and injected into inventory and recovered the expense through Sheet 44 in an up-front fashion. Do you agree with Mr. Wallis that ANG's books are incorrect?

A. No. I definitely do not. ANG's books reflect the proper accounting for gas inventory and are consistent with the application of Sheet 44.

Q. What do you mean by the gas inventory accounting being consistent with the operation of Sheet 44?

A. As demonstrated earlier in my testimony Sheet 44 does not recover gas purchased and injected into storage in an up-front fashion as alleged by Staff but instead recovers the inventory gas when it is withdrawn and consumed by customers. The physical measurement of the gas in storage proves that it exists as storage. The physical measurement of customer usage proves that they were billed for actual consumption. The application of the actual consumption to the tariff rates proves that they were billed by ANG for recoveries of the gas actually consumed. As volumes were purchased and injected into storage, ANG appropriately recorded an asset for gas inventory because the cost had not been recovered from customers. When volumes are withdrawn from storage and sold to customers, recovery occurs and ANG appropriately reduces the gas inventory asset.

Q. Do you have any hard evidence of that?

A. Yes. Attached are Schedule BRL-7 through Schedule BRL-12 that demonstrate ANG's inventory accounting.

- Schedule BRL-7 is an LNG storage inventory worksheet that includes the disputed balance for July 8, 1982. The first page sets forth for each month end the measurement of the LNG tank level in feet, inches, gallons, and Mcf. Also shown on page 1 is the Mcf withdrawn and the unit price. The total cost of withdrawals is shown on page 2 followed by injections and net injections and withdrawals, that is, adjustments (both in Mcf, unit price, and total cost injected). Finally, on page 3 the inventory balance is set forth for the cost and Mcf with a calculation of the cost per Mcf (unit price).
- Schedule BRL-8 is a copy of the LNG storage report for June 1982, which was prepared from daily readings made by ANG employees. The ending reading of 24' 2" agrees to Schedule BRL-7, page 1, line 6. The withdrawals of 3,371 Mcf are displayed on Schedule BRL-7, page 1. On Schedule 7, page 2 the injections of 694 Mcf are shown.
- Schedule BRL-9 is a worksheet that includes the disputed July 8, 1982 NGPL storage inventory balance. The January 1, 1982 balance of Mcf and cost is set forth first, followed by monthly entries for injections and withdrawals.

Q. Please describe Schedule BRL-10.