Exhibit No.:	
Issue(s):	Cost of Service/ Rate Design
Witness/Type of Exhibit:	Meisenheimer/Direct
Sponsoring Party:	Public Counsel
Case No.:	GR-2010-0192

DIRECT TESTIMONY

OF

BARBARA A. MEISENHEIMER

Submitted on Behalf of the Office of the Public Counsel

ATMOS ENERGY CORPORATION

CASE NO. GR-2010-0192

June 21, 2010

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Atmos Energy Corporation`s Tariff Revision Designed to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Area of the Company.	)))))	**GR-2010-0192**

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Barbara A. Meisenheimer, of lawful age and being first duly sworn, deposes and states:

1. My name is Barbara A. Meisenheimer. I am Chief Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony and attachments.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Barbara A. Meisenheimer

Subscribed and sworn to me this 21st day of June 2010.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

KENDELLE R. SEIDNER
My Commission Expires
February 4, 2011
Cole County
Commission #07004782

Kendelle R. Seidner
Notary Public

My Commission expires February 4, 2011.

DIRECT TESTIMONY
OF
BARBARA A. MEISENHEIMER

ATMOS ENERGY

(RATE DESIGN)

CASE NO. GR-2010-0192

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

A. Barbara A. Meisenheimer, Chief Utility Economist, Office of the Public Counsel, P. O. Box 2230, Jefferson City, Missouri 65102.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.

A. I hold a Bachelor of Science degree in Mathematics from the University of Missouri-Columbia and have completed the comprehensive exams for a Ph.D. in Economics from the same institution. My two fields of study are Quantitative Economics and Industrial Organization. My outside field of study is Statistics.

I have been with the Office of the Public Counsel since January 1996. I have testified on economic issues and policy issues in the areas of telecommunications, gas, electric, water and sewer. In rate cases my testimony has addressed class cost of service, rate design, miscellaneous tariff issues, low-income and conservation programs and revenue requirement issues related to the

development of class revenues, billing units, low-income program costs, incentive programs and fuel cost recovery.

Over the past 14 years I have also taught courses for the following institutions: University of Missouri-Columbia, William Woods University, and Lincoln University. I currently teach undergraduate and graduate level economics courses and undergraduate statistics for William Woods University.

Q. PLEASE DESCRIBE THE ATMOS ENERGY CORPORATION SERVICE AREA.

A. The service area of Atmos Energy Corporation ("Atmos" or "Company") was previously served by at least three different gas companies. The Company's current Northeast service territory (NEMO) consists of Kirksville-70 previously served by ANG, Palmyra-97, and the combined areas of Hannibal, Canton and Bowling Green-97 were all previously served by United Cities Gas. The Midwest territory (WEMO) consists of the Butler-71, previously served by ANG and Greeley-29 previously served by Greeley Gas. The Southeast territory (SEMO) consists of communities in Southeast MO previously served by ANG and Neelyville previously served by United Cities Gas. Prior to Case No. GR-2006-0387, the service area previously served by Greeley Gas has never had a Missouri rate review. The service areas previously owned by United Cities Gas have not had the rates reviewed since about 1994. The properties previously owned by Associated Natural Gas have not had rates review since about 1997.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THIS COMMISSION IN CASES RELATED TO THE ATMOS SERVICE AREAS?

A. Yes. I testified in the Company's last rate case, Case No. GR-2006-0387. I also testified in the last rate case for Associated Natural Gas, Case No. GR-97-272.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses the issues of rate design, CCOS and district consolidation. The Commission's decision that approved the current rate design and district consolidation was reversed by the Court of Appeals because the evidence presented by Atmos and the Staff was insufficient to support the findings on rate design and consolidating districts *State ex rel. Public Counsel v. PSC,* 289 S.W.3d 240 (MO. App. WD 2009). This testimony will analyze the evidence from Atmos' last rate case and the significance of that evidence on Atmos current request to raise rates.

Q. WHAT SIGNIFICANT CHANGES DID THE COMMISSION APPROVE IN ATMOS' LAST RATE CASE THAT WILL AGAIN BE AT ISSUE IN THIS CASE?

A. In GR-2006-0387, the Commission approved service area consolidation into the three areas described above, NEMO, WEMO and SEMO. The Commission also approved full recovery of non-gas costs for each district through a fixed delivery charge. Approval of the delivery charge rate design dismantled the long standing method of collecting a portion of non-gas costs through a customer charge and the remaining non-gas costs through volumetric charges.

Q. WHAT INFORMATION HAVE YOU REVIEWED?

A. I reviewed the Company's proposed tariff sheets, portions of the Company's current tariff, the Companies testimony and workpapers related to class cost of service and rate design, the Missouri Public Service Commission Staff's (Staff's) workpapers, Accounting Schedules and Cost of Service Report, customer and data request responses provided to the Staff and Public Counsel by the Company.

Residential and Small Commercial and Industrial Rate Design

Q. PLEASE DESCRIBE THE COMPANY'S CURRENT RESIDENTIAL RATES.

A. Atmos currently recovers all non-gas Residential class costs through a fixed delivery charge that applies regardless of gas usage:

NEMO	$20.61
SEMO	$13.92
WEMO	$19.43

Q. DO THESE RATES REFLECT COST CAUSATION?

A. No. The record in Case No. GR-2006-0387 did not provide cost support for district consolidation or for recovering all non-gas cost through a flat delivery charge. For example, in GR-2006-0387, the Company did not perform district class cost of service studies. Absent such studies, the Company could not demonstrate the similarity of costs between districts that would be reasonably necessary to support consolidation of the numerous districts into three districts.

The Company also lacked cost support for the fixed delivery charge rate design. Demand related costs and commodity related costs are recognized drivers of system costs. However, the fixed delivery charge rate design recovers the same amount of non-gas cost from each Residential customer regardless of peak demand or total consumption. The Staff supported district consolidation for non-gas rates and a delivery charge rate design. The Staff prepared class cost of service studies but only for the three consolidated districts. As was true for the Company, the consolidated studies prepared by Staff did not provide cost support for the underlying consolidation. Likewise, the Staff's studies that allocate some costs to customer classes based on demand and commodity related factors did not support uniform delivery charges.

Q. DID PUBIC COUNSEL OBJECT TO ANY OTHER ISSUES RELATED TO THE RESIDENTIAL DELIVERY CHARGE?

A. Yes. The Commission approved a "reconnection" charge that would recover not only the cost of physically reconnecting service but also included "lost" delivery charges associated with customers who stopped service but restarted service within 105 days. This "reconnection" charge made customers even more captive to a monopoly provider. Coupling this reconnection charge with the flat delivery charge substantially limited a customer's ability to reduce non-gas charges paid to the utility even by disconnecting service.

Q. PLEASE DISCUSS THE COMPANY'S CURRENT SMALL GENERAL SERVICE RATES.

A. Atmos currently charges Small General Service customers a fixed delivery charge for non-gas costs that applies regardless of gas usage. The Small General Service

delivery charges are the same as those paid by Residential customers for each of the three consolidated districts:

NEMO	$20.61
SEMO	$13.92
WEMO	$19.43

Like Residential customers, Small General Service Customers also pay a "reconnection" charge that recovers not only the cost of physically reconnecting service but also included "lost" delivery charges associated with customers who stopped service but restarted service within 105 days.

Q. DO THESE RATES REFLECT COST CAUSATION?

A. No. For the same reasons described above, the record from Case No. GR-2006-0387 did not support district consolidation of Small General Service non-gas rates, recovery through a fixed delivery charge or a "reconnection" charge that recovers "lost" delivery charges.

Q. DID PUBLIC COUNSEL OBJECT TO THE TREATMENT OF SMALL GENERAL SERVICE COST RECOVERY FOR ADDITIONAL REASONS?

A. Yes. In Case No. GR-2006-0387 the general service class was split between Small General Service and Medium General Service without reasonable cost data to support the new classifications. The result of splitting the class at 2000 Ccf resulted in Medium General Service customers paying much more for using 2001

Ccf than a Small General Service customer pays for using 2000 Ccf. For example a customer using 2001 Ccf annually has an average monthly use of 166.75 Ccf per month. The table shown below illustrates this difference:

Medium General Service (2001 Ccf Annual Use)	NEMO	SEMO	WEMO
Monthly Customer Charge	$75.00	$75.00	$75.00
Volumetric Rate	$0.12	$0.12	$0.16
Monthly Ave Use	166.75	166.75	166.75
Monthly Bill	$94.93	$95.67	$101.20

Small General Service (2000 Ccf Annual Use)	NEMO	SEMO	WEMO
Monthly Delivery Charge	$20.61	$13.92	$19.43

Q. IS THE EVIDENCE FROM CASE NO. GR-2006-0387 RELEVANT TO THE ISSUES TO BE ADDRESSED IN THIS CASE?

A. Yes. An analysis of the cost evidence in Case No. GR-2006-0387 is necessary to fully understand the cost issues being addressed in this case. In Attachment 1 Part 1, 2 and 3 HC, I have included testimony from the Company, Staff, Noranda Aluminum and Public Counsel witnesses on the issues of class cost of service and rate design and the transcripts on these issues from Case No. GR-2006-0387.

Q. HAS THE COMPANY PREPARED CLASS COST OF SERVICE STUDIES IN THIS CASE THAT SUPPORT CONSOLIDATION INTO THE THREE CURRENT DISTRICTS?

A. No. While the Company has provided cost studies, these studies are based on the three consolidated districts. The underlying data does not provide sufficient detail to support consolidating the original districts into the three current districts.

Q. WAS THERE EVIDENCE IN CASE NO. GR-2006-0387 THAT INDICATED SIGNIFICANT DIFFERENCES BETWEEN DISTRICTS?

A. Yes. In Case No. GR-2006-0387, the Staff developed accounting schedules for each district that reflected investments and expenses by district. Examples of the differences in net investment by district on a per customer basis are shown below:

Ave Net Plant Investment Per Customer
Case No. GR-2006-0387

	WEMO		NEMO			SEMO	
Account	**Butler**	**Greeley**	**Kirksville**	**Palmyra**	**United Cities**	**SEMO**	**Neelyville**
376 Distribution Mains	$343.95	$410.87	$311.29	$436.44	$676.74	$258.62	$577.94
380 Services	$278.37	$861.23	$147.44	$684.71	$469.42	$205.27	$423.54
381 Meters	$37.61	$28.07	$40.53	$0.00	$81.29	$47.32	$70.08
382 Meter Install	$76.56	$92.82	$41.87	$141.11	$96.82	$98.61	$148.28
383 House Regulators	$10.45	$6.27	$10.66	$0.00	$18.75	$8.83	$21.61
	$746.93	$1,399.27	$551.78	$1,262.26	$1,343.02	$618.65	$1,241.44

As illustrated, there were significant differences in investment per customer between districts that were consolidated in the last rate case. Differences for the accounts shown above may be due to factors such as the age of plant, customer density and terrain. These differences also lead to reasonable differences in rates charged to customers in different service areas.

Q. WHAT IS YOUR PRIMARY RATE DESIGN RECOMMENDATION IN THIS CASE?

A. With respect to district consolidation, the Commission should require that the original districts be reestablished and that the Company track investment, expense and revenue accounts based on the original districts. The Commission should implement a traditional rate design for the Residential and Small General Service classes that collects a reasonable portion of costs through a customer charge and the remainder through volumetric rates. Public Counsel would accepted a customer charge that collects up to 55% of non-gas costs with the remaining 45% collected through a uniform block rate. Since the Company has not provided class cost of service studies by original district, I recommend the commission assign district revenue increases on an equal percentage basis above the rates that existed prior to Case No. GR-2006-0387. The Commission should also restore reconnection charges to cost based rates.

Q. WOULD A MODERATE CUSTOMER CHARGE COUPLED WITH A UNIFORM BLOCK RATE STRUCTURE BE PREFERABLE?

A. Yes. A uniform block rate structure better aligns rates with costs and provides an additional incentive to conserve within the volumetric non-gas rate structure.

Q. DO YOU BELIEVE RECOVERING COSTS THROUGH A TRADITIONAL RATE STRUCTURE IS PREFERABLE TO THE DELIVERY CHARGE OR ANY ALTERNATIVE DECOUPLING MECHANISMS?

A. Yes. Under traditional rate design, consumers have better ability to control the non-gas portion of their bill by reducing use and the Company and customers share the risk associated with weather. Later in this testimony I discuss the benefits and appropriateness of traditional rate design in greater detail.

Q. IF CONTRARY TO YOUR RECOMMENDATIONS, THE COMMISSION DETERMINES THAT THE EXISTING DISTRICT CONSOLIDATIONS SHOULD BE MAINTAINED, HAVE YOU PREPARED CLASS COST OF SERVICE STUDIES AND RATE DESIGN RECOMMENDATIONS FOR THE CONSOLIDATED DISTRICTS?

A. Yes. I have prepared class cost of service studies for each of the three consolidated districts using alternative mains allocation methods and differing treatments of a customer component in developing mains allocations.

Class Cost of Service Study Results

Q. PLEASE DESCRIBE THE DIFFERENCES IN THE STUDIES YOU PERFORMED.

A. Attachment BAM Direct-RD2 illustrates the results of my class cost of service study for each district using an Average and Excess (A & E) method for allocating mains costs and using a zero-intercept method to assign a customer component of mains. Although the methods used in developing the Attachment BAM Direct-2 are not the methods I believe are most appropriate, they are methods supported by the Commission in recent decisions.

Attachment BAM Direct-3 illustrates the results of my class cost of service study for each consolidated district using an Average and Peak Mains Allocation method and excluding any customer component of mains. The Commission has previously rejected use of an Average and Peak method and rejected methods that do not identify a portion of mains as customer related. However, in my opinion these alternatives are reasonable and merit additional consideration by the Commission.

Q. WHAT ARE THE RESULTS OF PUBLIC COUNSEL'S CLASS COST OF SERVICE STUDY?

A. The results of Public Counsel's Average & Peak (A & P) and Average & Excess (A & E) class cost of service studies are shown below:

Revenue Neutral Shifts to Equalize Rates of Return

	Residential	Small General Service	Med General Service	Lg General Service	Large Volume and Transport
NEMO					
A&P	16.74%	-0.31%	-47.82%	-40.53%	-5.25%
A&E	22.89%	2.77%	-54.85%	-54.15%	-37.29%
SEMO					
A&P	28.48%	6.46%	-62.61%	-72.74%	-20.98%
A&E	34.51%	10.42%	-66.38%	-81.80%	-43.19%
WEMO					
A&P	5.36%	68.24%	-39.11%	-18.66%	0.00%
A&E	9.91%	71.67%	-45.74%	-37.92%	0.00%

Based on my studies, the Residential class and Small General Service class would need to increase significantly to equalize the rates of return. The Medium General Service, Large General Service and Large Volume and

Transport classes would need to decrease significantly to equalize class rates of return.

Attachment BAM Direct RD-2 and Attachment BAM Direct RD-3 provide additional detail on the derivation of these revenue neutral adjustments. The current rate of return for each class is shown on Line 16, of Attachment BAM Direct RD-2 and Attachment BAM Direct RD-3. The revenue neutral shift required to equalize the class rates of return is shown on Line 24, of Attachment BAM Direct RD-2 and Attachment BAM Direct RD-3

Q. WHAT LEVEL OF RESIDENTIAL CUSTOMER CHARGE IS SUPPORTED BY YOUR CLASS COST OF SERVICE STUDY?

A. My cost of service studies indicate that the direct customer costs related to serving the customer premises are as follows:

Customer Charge Costs

	Residential	Small General Service
NEMO	$12.75	$16.03
SEMO	$8.26	$11.63
WEMO	$10.34	$13.88

These amounts include a return on the Company's investment in meters, regulators, service lines and other customer premises, operating and maintenance expenses associated with those investments, meter reading expenses and billing expenses.

Q. HOW DO THESE COSTS COMPARE TO CUSTOMER CHARGES SET TO RECOVER 55% OF RESIDENTIAL AND SMALL GENERAL SERVICE COSTS?

A. The Residential and Small General Service charges set at 55% of class revenue are shown below:

Proposed 55% Customer Charge

	Residential	Small General Service
NEMO A&P	$18.06	$16.38
NEMO A&E	$18.43	$16.52
SEMO A&P	$10.49	$10.07
SEMO A&E	$10.57	$10.13
WEMO A&P	$14.00	$18.88
WEMO A&E	$14.19	$18.74

Class Revenue Requirement Recommendations

Q. IF THE COMMISSION DETERMINES THAT DISTRICT CONSOLIDATION SHOULD CONTINUE, WHAT CLASS REVENUE REQUIREMENTS DO YOU PROPOSE BASED ON YOUR CLASS COST OF SERVICE STUDY RESULTS?

Generally, Public Counsel recommends that, where the existing revenue structure departs greatly from the class cost of service, the Commission should impose, at a maximum, class revenue shifts equal to one half of the "revenue neutral shifts" indicated by Public Counsel's class cost of service study. Revenue neutral shifts are shifts that hold overall company revenue at the existing level but allow for the share attributed to each class to be adjusted to reflect the cost responsibility of the

class. In addition to moving half way to the revenue neutral shifts, if the Commission determines that an overall increase in revenue requirement is necessary, then no customer class should receive a net decrease as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue increase that is applied to that class. Likewise, if the Commission determines that an overall decrease in revenue requirement is necessary, then no customer class should receive a net increase as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue decrease that is applied to that class.

Q. HAVE YOU PREPARED A SCHEDULE ILLUSTRATING THIS METHOD OF DETERMINING CLASS REVENUE REQUIREMENTS?

A. Yes. For each district, Line 23 of Attachment BAM Direct RD-2 and Attachment BAM Direct RD-3 show the revenue neutral shift required to equalize class rates of return. Line 28 illustrates one half of the revenue neutral shift. Line 29 illustrates the spread of a net increase set at the low end of the Staff's range of returns. Lines 31-32 illustrate the adjustments to ensure that no class receives a reduction if another class would receive an increase as the result of the combined impact of ½ the revenue neutral shift and the net increase. Line 34 illustrates the resulting class revenues.

Q. CAN THIS METHOD OF DETERMINING CLASS REVENUE REQUIREMENTS BE USED FOR ANY NET INCREASE OR NET DECREASE APPROVED BY THE COMMISSION?

A. Yes.

Class Cost of Service Study Method

Q. WHAT IS THE REGULATORY PURPOSE OF A CLASS COST OF SERVICE STUDY?

A. A class cost of service study is a tool used by regulators to aid in determining an appropriate rate structure. It can be used as a guide in identifying, on a cost causative basis, the cost of serving a particular group of customers. A class cost of service study can also be used to evaluate the relative cost of service among classes. This comparison of relative cost is the focus of Public Counsel's study and is reflected in the study assumption that the Company's revenue requirement is equal to the level of current revenue.

Q. WHAT IS THE RELATIVE IMPORTANCE OF CLASS COST OF SERVICE STUDY RESULTS IN RATE DESIGN?

A. A class cost of service study provides the Commission with a general guide for a service based on costs to determine just and reasonable rates. The Commission must, on a case by case basis, balance the results of a cost of service study with other relevant factors that go into the rate making decision process. Other relevant factors include the value of a service, the affordability of service, rate impacts, and rate continuity, to highlight a few.

Q. WHAT COSTS ARE REFLECTED IN YOUR CLASS COST OF SERVICE STUDY?

A. Public Counsel's class cost of service study includes non-gas or margin costs associated with storing, transporting and delivering gas to customers. Gas costs recovered through the purchased gas adjustment rate are generally determined in a separate proceeding.

Q. WHAT ARE THE REPRESENTATIVE CLASSES INCLUDED IN PUBLIC COUNSEL'S CLASS COST OF SERVICE STUDY?

A. For class cost of service study purposes, customers are grouped into "classes" based on type of customer and utilization patterns. My class cost of service studies include the same customer classes as the Company's studies: Residential, Small General Service, Medium General Service, Large General Service and a class that includes Large Volume, Transport and Interruptible.

Q. ON WHAT DATA ARE YOUR CLASS COST OF SERVICE STUDIES BASED?

A. The Accounting Schedules filed with the Staff's direct revenue requirement testimony were the source of most of the investment and expense data that I used in my studies. The Accounting Schedule data is associated with a test year ending June, 30, 2009, updated through February 28, 2010. I used Company provided data related to customer counts, revenues and usage patterns to develop allocation factors for assigning revenues and costs to customer classes. Except where specified, my use of Staff and Company information should not be viewed as an endorsement of either Staff's or the Company's methods for calculating accounting costs, billing determinants, peak demands or allocation factors.

Q. IS THERE A POSSIBILITY THAT SOME INFORMATION USED IN YOUR STUDY WILL BE UPDATED AND REVISED AS THE CASE PROGRESSES?

A. Yes. It is common for the Staff and Company to update or reconcile information as cases progress. I will update my studies accordingly.

Q. PLEASE DESCRIBE THE ASSIGNMENT OF COST TO THE CUSTOMER CLASSES.

A. The assignment of costs to customer classes involves a three-step process in which costs are first functionalized, then classified, and finally allocated to customer classes based on factors that reflect cost causation.

Q. PLEASE DESCRIBE THE FUNCTIONALIZATION OF COSTS.

A. Functionalization involves categorizing cost accounts by associated function. Functional categories include; Production, Storage, Transmission, Distribution, Customer Accounts and Administrative and General (A&G).

Q. PLEASE DESCRIBE THE CLASSIFICATION OF COSTS.

A. Classification is achieved by further categorizing costs into customer related, commodity related, demand related or "other related" costs. Some costs are categorized as having multiple cost components.

Q. PLEASE DESCRIBE CUSTOMER RELATED COSTS.

A. Customer related costs vary directly (in fixed proportion) with the number of customers served. Examples of customer related costs include: expenses associated with meter reading, billing, and the return on investments associated with metering equipment and service connections.

Q. PLEASE DESCRIBE COMMODITY RELATED COSTS.

A. Commodity related costs vary with the quantity of gas purchased. While Missouri's local distribution companies recover purchased gas cost through the PGA, other plant accounts may still be categorized as commodity related.

Q. PLEASE DESCRIBE DEMAND RELATED COSTS.

A. Demand related costs vary with the capacity requirement of plant or equipment. They are related to the maximum system requirements that reflect the capacity necessary to serve demand during peak periods. Demand related costs include most production, transmission and storage costs and expenses associated with these types of plant. In addition, some distribution plant and related expenses are demand related costs.

Q. PLEASE DESCRIBE THE ALLOCATION PROCESS.

A. Following functionalization and classification, allocation factors are applied to distribute a reasonable share of jurisdictional costs to each customer class. Some costs are uniquely attributable to, and therefore directly assignable to, a particular customer class. For costs that are jointly attributable, in measurable proportions, to a group of customer classes, the costs are assigned to each customer class based on factors that reflect each class's share of joint use. Finally, cost accounts associated with common facilities or common overheads that cannot be directly or jointly assigned are allocated to classes based on general factors. Typical allocation factors include measures of usage, sales, or weighted measures of customer counts.

Q. WHAT TYPES OF PLANT INVESTMENTS ARE ALLOCATED IN A CLASS COST OF SERVICE STUDY?

A. Common types of plant allocated in a class cost of service study include intangible plant, production plant, storage plant, transmission plant, distribution plant and general plant.

Q. HOW ARE INTANGIBLE PLANT ACCOUNTS ALLOCATED?

A. Intangible plant accounts include expenses related to organizing the enterprise, obtaining franchise and consent and other miscellaneous items. (Accounts 301, 302, and 303) These costs are not directly or jointly attributable to particular customer classes, instead they are common costs allocated on the basis of the portion of overall net non-general plant assigned to each customer class.

Q. HOW ARE PRODUCTION PLANT ACCOUNTS ALLOCATED?

A. Atmos has limited investment in production plant. I allocated these investments and associated revenue based on the annual sales volumes associated each customer class.

Q. HOW ARE GAS STORAGE PLANT ACCOUNTS ALLOCATED?

A. I allocated storage related investments based on the winter sales volumes associated with each customer class.

Q. HOW ARE TRANSMISSION PLANT ACCOUNTS ALLOCATED?

A. Transmission plant accounts are allocated based on a transmission allocator that reflects peak demand.

Q. HOW ARE DISTRIBUTION PLANT ACCOUNTS ALLOCATED?

A. Mains transport gas throughout the Company's service area and represent a significant portion of distribution plant. The system of mains serves three primary purposes. It is designed to reach customers throughout the service area, to provide gas year round and to satisfy periods of peak demand. One of my mains allocation methods explicitly reflects these three purposes and assigns a portion of mains costs based on each.

The first component of my A&E mains allocator is related to reaching customers throughout the service area. Although I do not recognize any portion of mains costs as directly related to the number of customers, I do recognize that indirectly the number of customers and the dispersion of customers affect the cost of mains. To reflect the indirect affect of customers on mains costs, I used a "customer related" component of 27.61% in allocating mains. The customer component was derived using a zero-intercept method. The zero-intercept method uses regression analysis to determine the "best fit" equation to model cost per ft. of mains relative to the main diameter. The zero-intercept describes a height along the y axis that represents the cost of a hypothetical main of zero diameter. Theoretically, it is argued that this represents the portion of mains cost that would be incurred to extend facilities to customers independent of cost associated with sizing mains to satisfy either average or peak demand.

The remaining 72.39% of the Mains allocator is divided between a commodity related component based on average use and a demand related component based on excess demand.

The commodity related component of my mains allocator is related to the use of mains to deliver gas throughout the year. I allocated this portion of Mains (Account 376) based on each customer class's share of annual system sales volumes measured in Mcf. This method uses the load factor as the weight for average use and one minus the load factor and the weight for excess demand.

The demand related component of my mains allocator is related to the use of mains to deliver gas during periods of peak use. I allocated this portion of Mains (Account 376) based on each customer class's share of peak month demand in excess of average month demand measured in Mcf.

As an alternative method for allocating mains costs, I developed an Average and Peak allocator. For the alternative method, I did not include an explicit customer component. Excluding an explicit customer component recognizes that mains costs is not by definition customer related because there is no direct linear relationship between the number of customers and the cost of mains incurred simply to reach them. This approach is more holistic in that it recognizes that the primary reason to reach customers is to actually satisfy year round and peak demands. Mains costs are allocated based on a weighted average of year round use and peak use. Contrary to assertions that this double counts certain demand, it reasonably reflects that the system is used both to satisfy annual use and peak demand. This method uses the load factor as the weight for annual use and one minus the load factor and the weight for peak demand.

Q. HOW ARE OTHER PLANT ACCOUNTS ALLOCATED?

Land and Land Rights, Structures and Improvements (Accounts 374 and 375) are closely related to the system of distribution mains. I allocated these costs on the same basis as Mains (Account 376).

Measuring and Regulating Station Equipment (Accounts 378 and 379) are related to the year round flow of gas and are therefore classified as commodity related. I allocated these costs based on each customer class's share of annual throughput.

Accounts 380 through 385 include cost directly related to serving customer premises. For example, service lines connect the customer premise to distribution mains. Similarly, meters and regulators at the customer premise measure and regulate gas flow at the premise. While these types of cost may differ by customer class, for example the cost of a typical meter associated with residential use is less expensive than the typical meter used to serve a large industrial customer, within each class; the costs tend to vary directly with the number of customers served. Based on this direct relationship between the number of customers served and costs, I classified these costs as customer related and developed allocation factors based on customer numbers weighted to reflect cost differences between customer classes. The type of allocation for each account is shown below:

Table 3

Account	Description	Allocation based on
380	Service Lines	Weighted services
381	Meters	Weighted meters
382	Meter Installations	Weighted meter installations
383	House Regulators	Weighted regulators
384	House Regulators Installations	Weighted regulators
385	Meas. and Reg. Station Equip. - Industrial	Large Customers

Q. HOW ARE GENERAL PLANT ACCOUNTS ALLOCATED?

A. General plant accounts are allocated to customer classes based on each class's allocation of net non-general plant.

Q. HOW ARE OTHER RATE BASE ITEMS ALLOCATED?

A. Other rate base items include additions and deductions to net plant in service. For each, I selected an allocator that seemed most clearly related to the cost causation. The types of cost and allocation factor used in my studies are listed below:

Table 4

Rate Base Additions	Allocation Factor
Cash Working Capital	Cost of Service
Materials and Supplies	Total Net Plant
Prepayments	Cost of Service
Prepaid Pension Asset	Labor
Natural Gas Stored Underground	Winter Sales
Unamortized Balances	Rate Base
Rate Base Deductions	**Allocation Factor**
Interest Offset	Cost of Service
Federal Income Tax Offset	Rate Base
State Income Tax Offset	Rate Base
City Tax Offset	Rate Base
Accumulated Amortization	Total Net Plant
Customer Advances	Weighted Meters
Customer Deposits	Bills
Deferred Income Taxes	Rate Base
Rate Base Reductions	Rate Base
Misc. Rate Base Offsets	Rate Base

Q. PLEASE DESCRIBE HOW OPERATION AND MAINTENANCE EXPENSES ARE ALLOCATED IN YOUR CLASS COST OF SERVICE STUDIES?

A. For allocating most of the accounts in this category, I used the "expenses follow plant principle". For example, the operations and maintenance expenses related

to mains and services are allocated to customer classes on the same basis as the mains and services plant accounts. Similarly, operations and maintenance expenses related to storage are allocated on the basis of winter sales. For cost accounts not directly associated with a corresponding plant account, I selected an allocator that seemed most clearly related to the cost causation. The types of operation or maintenance expense and allocation factor used in my study are listed below:

Table 5

Operations

Account	Description	Allocation based on
870	Supervision & Engineering	Mains
871	Load Dispatch	Mains
874	Mains and services	Net Mains/Services Plant
875	Measuring & Regulating Stations	Annual Throughput
876	Measuring & Reg. Commercial	Large Ind. Bills
877	Measuring & Regulating City Gate	Annual Throughput
878	Meter & House Regulating	Weighted Meters and Regulators
879	Customer Installations	Weighted Meters and Regulators
880	Other Expenses	Mains
881	Rents	Net Distribution Plant

Maintenance

Account	Description	Allocation based on
885	Supervision & Engineering	Mains
886	Structures & Improvements	Mains
887	Mains	Mains
889	Measuring & Regulating Stations	Annual Throughput
890	Measuring & Reg. Commercial	Large Ind. Bills
891	Measuring & Regulating City Gate	Annual Throughput
892	Services	Weighted Services
893	Meters & House Regulators	Weighted Meters
894	Other Equipment	Net Distribution Plant

Q. HOW ARE CUSTOMER ACCOUNTS, CUSTOMER SERVICE, AND SALES PROMOTION EXPENSES ALLOCATED?

A. Customer service expenses and sales promotions are indirectly related to the number of customers and are allocated on the basis of number of customer bills. Meter Reading (Account 902) was allocated based on the number of bills per customer class. Customer Records and Collections (Account 903) were allocated on the basis of weighted meters. I allocated Supervision (Account 901) based on the number of bills. I do not view uncollectibles as having a direct relationship to the number of customers or to the paying customers within the same class, so I allocated Uncollectibles (Account 904) on the basis of overall cost of service. For each account the type of expense and allocation factor used in my study are listed below:

Table 6

Customer Accounts

Account	Description	Allocation based on
901	Supervision	Bills
902	Meter Reading	Bills
903	Customer Records and Collection	Bills
904	Uncollectible Accounts	Cost of Service
905	Miscellaneous	Customer Acct. Expense

Customer Service and Information

Account	Description	Allocation based on
908	Customer Assistance	Bills
909	Inform & Instruct Advertising	Bills

Sales

Account	Description	Allocation based on
911	Supervision	Bills
912	Demonstrating and Selling	Bills
912	Advertising	Bills
912	Misc. Expense	Bills

Q. HOW ARE ADMINISTRATIVE AND GENERAL (A & G) EXPENSES ALLOCATED?

A. Property insurance (Account 924) is allocated on the basis of net non-general plant. Expenses related to salaries, supplies, administration, outside services, injuries and damages, and employee pensions and benefits (Accounts 920, 921, 922, 923, 925 and 926) are allocated on the basis of payroll. The remainder of A & G expenses are allocated on the basis of the overall class cost of service.

Q. HOW ARE TAXES ALLOCATED?

A. Property taxes are allocated on the basis of the total net plant previously allocated to each class. Franchise taxes are allocated on the basis of rate base. Payroll taxes are allocated as a function of payroll expense. Income taxes are allocated according to the rate base attributable to each class.

Benefits of Traditional Rate Design

Q. DO YOU BELIEVE THAT A TRADITIONAL RATE DESIGN THAT RECOVERS A PORTION OF COSTS IN A CUSTOMER CHARGE AND A PORTION IN A VOLUMETRIC RATE PER UNIT PROVIDES A GREATER INCENTIVE FOR CUSTOMERS TO CONSERVE?

A. Yes. The traditional rate design provides a greater incentive for customers to conserve because increasing consumption has a greater impact on the non-gas charges a customer must pay than would a delivery charge or other decoupling mechanism.

Q. HOW IS COST CAUSATION INCORPORATED INTO SETTING THE PORTION OF COSTS TO BE RECOVERED THROUGH THE CUSTOMER CHARGE AND THE PORTION TO BE RECOVERED THROUGH VOLUMETRIC RATES?

A. It is common in regulated industries for companies to recover costs that are incurred independent of usage in a fixed fee and to recover costs that vary with usage through a usage based fee. Recovering a usage based cost through a usage based fee insures that those who did not cause the cost are not required to pay for it. This objective can be met through establishing a fixed component and a variable component of rates. The cost of meters that tend to be similarly sized for the majority of residential customers can be described as being independent of use and therefore reasonably recovered through a uniform fixed fee. However, the cost of other facilities and equipment are driven by consumption or peak demand and should be recovered on a volumetric basis. For example, storage facilities are associated with consumption during winter months and are reasonably recovered based on consumption. The cost of distribution mains is driven in large part by peak demand requirements and is another example of costs most reasonably recovered through volumetric rates.

In the context of class cost of service studies, we assign the portion of investments and expenses that are incurred based on demand and commodity related considerations to classes based on demand and commodity related factors. It is reasonable to collect these costs from each class through usage based charges.

Q. HOW CAN TRADITIONAL RATE DESIGN ENCOURAGE HIGHER SUBSCRIPTION TO THE SYSTEM?

A. Traditional rate design composed of a customer charge component and a volumetric component can benefit both low and high use customers. Low use customers benefit by retaining access to utility service. High use customers and other customer classes benefit by not having to make up the revenue lost when low use customers disconnect service.

Q. IS THE TRADITIONAL RATE DESIGN THAT CORRELATES HIGHER USE WITH HIGHER CHARGES CONSISTENT WITH THE PURPOSE OF REGULATION?

A. Yes. Utility regulation is intended to mimic the outcomes and market environment that is faced by competitive firms. The use of utility regulation to simulate a competitive environment and encourage the benefits that would accrue if the industry were suitable for a competitive structure has been referred to as the competitive market paradigm. This paradigm was described by Dr. James Bonbright on page 93 of *Principles of Public Utility Rates* in the following manner:

> Regulation, it is said, is a substitute for competition. Hence its objective should be to compel a regulated enterprise, despite its possession of complete or partial monopoly, to charge rates approximating those which it would charge if free from regulation but subject to market forces of competition. In short, regulation should be not only a substitute for competition, but a closely imitative substitute.

Q. IS THE TRADITIONAL RATE DESIGN THAT CORRELATES HIGHER USE WITH HIGHER CHARGES CONSISTENT WITH PRICING IN COMPETITIVE SERVICE MARKETS?

A. Absolutely. In highly competitive markets, it is common for firms to recover all cost through only usage based fees. Even in more concentrated markets, rate structures that recover some portion of costs through volumetric charges are the norm. For example, telephone rates typically include a fixed minimum fee charged for basic access to the telephone network and additional usage based incremental fees that recover a portion of the investment and associated expenses. If customers demand either more services "over the pipe" or "a larger pipe" the customer pays more.

It is also the norm in competitive markets for customers to have some control over the charges they pay to the service provider. This is not the case with the Straight & Fixed Variable (SFV) rate design. From a rate design perspective, recovery of all costs through a flat fixed rate is a recovery method of choice for firms with sufficient market power to impose flat fees or enough regulatory support to impose them. Rate designs that consist of a customer charge and volumetric charge are supportable based on recognizing that the value of service is both in having access to gas as well as in using gas so cost would not be uniformly allocated to customers. In my opinion, recovery through a customer charge and volumetric rate is reasonable and fair from both an economic and policy perspective. Historically, this Commission has determined that it is appropriate for those who use more to pay more. Public Counsel encourages the Commission to adhere to this policy.

Q. IS THE TRADITIONAL RATE DESIGN CONSISTENT WITH MIMICKING THE RATE OF RETURN OPPORTUNITIES AND RISK THAT EXISTS IN COMPETITIVE MARKETS?

A. Yes. The Commission's ordered non-gas revenue requirement is not a fixed or guaranteed level of revenue that a Company is entitled to recover each year. Instead, the level of revenue requirement approved by the Commission is a target level of costs including expenses, taxes and return on investment that an efficiently run company, barring unforeseen events, has the opportunity to recover under long term average weather conditions. The Commission approved revenue requirement accounts for and is intricately related to potential weather variations that may affect costs and revenues from year to year. The process of normalizing demand determinates to account for weather and establishing a rate of return sufficient to attract investment despite the risk of weather variations are probably the two most obvious elements linking weather variations to revenue requirement. After the revenue requirement is determined, rates are set at a level anticipated to recover the target level of costs. However, the ratemaking process only reflects the anticipated cost and revenues at a snap shot in time. It does not guarantee or limit levels of either future costs or revenues and is not designed or intended to provide uniform recovery each year. Once rates are set, by improved efficiency or other circumstances, a Company has an opportunity to earn a return above that incorporated in the revenue requirement. Likewise, by inefficiency, a Company faces the potential to earn a return below that incorporated in the revenue requirement. This process mimics a competitive business environment by creating incentives for the Company to minimize costs.

Utility regulation does not create an "entitlement" for the utility to earn a Commission determined return that fully compensates the utility for its cost of

service. If that were the case, there would be no reason to determine an appropriate level of a risk adjusted return that should be included in a utility's rates. Instead, utility regulation is intended to mimic the outcomes and market environment that is faced by competitive firms. While viewed by investors as undesirable, earnings uncertainty serves an important role in the efficient operation of competitive markets by providing inherent protections for consumers. Earnings uncertainty motivates competitive business entities to minimize costs and to strive for customer satisfaction. Eliminating earnings uncertainty in a regulated environment would have a similar detrimental effect on consumers as would eliminating earnings uncertainty in an unregulated market. However, in a competitive environment, consumers retain the ability to reduce or forgo purchases in response to excessive prices or poor service.

In recognition and in consideration of the service it provides as a natural monopoly, a local gas distribution company is granted an additional concession not ordinarily available in a competitive business environment. It is allowed to request a rate review to, when justified, realign revenues to costs. This concession together with other concessions made by the Commission and other governmental entities more than adequately addresses issues of potential under earnings. For example, direct pass-through of costs such as those flowed through the PGA have substantially shifted weather related risks to consumers. It is undesirable and unnecessary to shift greater earnings risk to consumers.

Q. CAN YOU CITE ANY ANALYSIS BY A RECOGNIZED UTILITY INDUSTRY EXPERT THAT SUPPORTS YOUR BELIEF THAT UTILITY COMMISSIONS GENERALLY SET RATES AT A LEVEL WHICH ALLOWS UTILITIES THE OPPORTUNITY (AS OPPOSED TO A GUARANTEE) TO ATTAIN THEIR AUTHORIZED RETURN?

A. Yes, the following quote from page 202 of A. J. G. Priest's *Principles of Public Utility Regulation* supports this widely recognized regulatory principle:

> ...the utility's return allowance might be compared with fishing or hunting license with a limit on the catch. Such a license does not guarantee that the holder will catch anything at all; it simply makes the catch legal (up to a specified limit) provided the holder is successful in his own efforts.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.