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MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2006-

DIRECT TESTIMONY OF

RONALD J. AMEN

Jefferson City, Missouri

May 1, 2006

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DIRECT TESTIMONY OF RONALD J. AMEN

**I. BACKGROUND AND TESTIMONY HISTORY OF
WITNESS**

Q. Please state your name and business address.

A. My name is Ronald J. Amen. My business address is 1201 Third Avenue, Suite 3320, Seattle, WA 98101.

Q. By whom are you employed and in what capacity?

A. I am a Director with Navigant Consulting, Inc. ("NCI") and a member of the Litigation, Regulatory and Markets Practice Area of the Firm. NCI is a leading nationwide provider of consulting services to electric and gas utilities and other energy-related and network businesses.

Q. Please describe NCI's business activities.

A. NCI is a global management consulting firm that provides strategic, financial, management, and expert services to energy-based, network and other regulated industries. From an industry-wide perspective, NCI has extensive experience in all aspects of the North American natural gas and electric industries. Included in NCI's relevant experience are the areas of utility costing and pricing, gas supply and transportation planning, competitive market analysis and regulatory practices and policies gained through management and operating responsibilities at transmission and distribution, gas pipeline and other energy-related companies, and through a wide variety of client assignments. NCI has assisted numerous utility companies located in the U.S. and Canada.

1 **Q. What has been the nature of your work in the utility consulting field?**

2 A. I have over twenty-seven (27) years of experience in the utility industry, the last
3 eight (8) years of which have been in the field of utility management and
4 economic consulting. Specializing in the gas industry, I have advised and assisted
5 utility management and energy marketers in matters pertaining to costing and
6 pricing, regulatory planning and policy development, strategic business planning,
7 organizational restructuring, new business development, and load research
8 studies. Further background information summarizing my education, presentation
9 of expert testimony and other industry-related activities is included in Appendix A
10 to my testimony.

11 **II. EXECUTIVE SUMMARY**

12 **Q. For what purpose has NCI been retained by Missouri Gas Energy ("MGE"**
13 **or the "Company")?**

14 A. NCI has been retained by MGE as a consultant in the area of utility costing and
15 rate design and related regulatory matters. Specifically, MGE has requested that
16 we assist the Company in conducting a cost of service study to determine the
17 embedded costs of serving its natural gas retail customers, in addition to various
18 costing and pricing studies related to the provision of gas distribution service.

19 **Q. What is the purpose of your testimony in this proceeding?**

20 A. I will present the results of the retail natural gas cost of service study filed by the
21 Company in this proceeding. I will discuss the underlying methodology and basis
22 used in the Company's gas cost of service study.

1 I will then describe the full-cost level of revenue responsibility between
2 customer classes as a result of the revenue requirement proposed by MGE in this
3 proceeding and as supported by the cost of service study. I will discuss the use of
4 cost of service results as a guide to be incorporated into the rate design process.
5 Because the results of the cost of service study suggest shifts in revenue
6 responsibility between customer classes, witness Mr. Russell Feingold will be
7 proposing changes in the rates of MGE's rate schedules that reflect the cost of
8 service study results and the Company's alternative rate design proposals.

9 **Q. Please summarize your conclusions with regard to the selection and use of**
10 **the Company's cost allocation methodology?**

11 A. The Company's design day coincident peak allocation methodology, along with
12 the identification of a customer component of distribution mains, best reflects cost
13 causation on the Company's system. It has a sound conceptual and theoretical
14 basis and reflects the principles deemed appropriate by the Commission in
15 establishing an allocation methodology because it is related to the actual system as
16 built to serve all classes of customers. Therefore, it is superior to other cost
17 allocation methodologies that give recognition to system utilization
18 characteristics.

19 **Q. What conclusions did you reach with regard to the class-by-class results of**
20 **the cost of service study?**

21 A. The residential service class ("Rate RS") exhibits the lowest rate of return of all
22 the classes and is well below the current system average of 4.54%. While the rate
23 of return exhibited by the small general service class ("Rate SGS") is above the

1 current system average, it is still below the Company's proposed 8.936% rate of
2 return. Both the large general service class ("Rate LGS") and the large volume
3 service class ("Rate LV") exhibit rates of return that are highest among the classes
4 at 11.935% and 12.655%, respectively.

5 **III. LIST OF SCHEDULES SPONSORED IN TESTIMONY**

6 **Q. What Schedules are you sponsoring in this proceeding?**

7 **A.** I am sponsoring the following Schedules:

- 8 • Schedule RJA – 1 Embedded Class Cost of Service Study Summary
- 9 • Schedule RJA – 2 Functionalized Rate Base, Revenue Requirement and
10 Unit Costs
- 11 • Schedule RJA – 3 Detailed Cost of Service Study Results
- 12 • Schedule RJA – 4 Allocation Factors
- 13 • Schedule RJA – 5 Class Load and Service Characteristics of the
14 Company's Customers
- 15 • Schedule RJA - 6 Graph of Relationship between Footage of Mains and
16 Number of Customers

17 **IV. INTRODUCTION OF THE COMPANY'S COST OF** 18 **SERVICE STUDY PRESENTATION**

19 **Q. Please describe Schedule Nos. RJA – 1, RJA – 2, RJA – 3 and RJA – 4 in**
20 **more detail.**

21 **A.** Schedule **RJA – 1** presents the following revenue requirement and rate of return
22 summary results of the Company's embedded cost of service study:

- 23 • Earned Return Summary at Present Rates

- Revenue Requirement at Equalized Rates of Return, and
- Proposed Revenue Requirement and Rate of Return by Service Classification

Schedule **RJA – 2**, presents the following summary information:

- Functionalized Rate Base at Equalized Rates of Return
- Functionalized Revenue Requirement at Equalized Rates of Return
- Unit Costs at Equalized Rates of Return

Schedule **RJA – 3** presents all details of the Company's proposed cost of service study by Federal Energy Regulatory Commission ("FERC") primary account by rate schedule.

Finally, Schedule **RJA – 4** summarizes the following:

- External Classification and Allocation Factors
- Internal Allocation Factors

The external classification and allocation factors were derived from MGE's pro forma level of customers, volumes and revenues, as well as the results of subsidiary analyses conducted by NCI, with the assistance of Company personnel, related to cost causation indicators for certain plant and expense elements. The internal allocation factors are derived within the cost of service study model, consisting of subtotals and other combinations of related plant and O&M

1 accounts, which are then used to allocate certain related accounts and
2 miscellaneous, general and administrative overhead accounts.

3 **Q. What was the source of the cost data analyzed in the Company's cost of**
4 **service study?**

5 A. All cost of service data have been extracted from the Company's total cost of
6 service (i.e., total revenue requirement) contained in this filing. Where more
7 detailed information was required to perform various subsidiary analyses related
8 to certain plant and expense elements, the data were derived from the historical
9 books and records of the Company.

10 **Q. Did you make any changes to the classes of service included in the**
11 **Company's cost of service study compared to the cost study submitted in its**
12 **last gas rate proceeding?**

13 A. No.

14 **V. FACTORS INFLUENCING THE COST ALLOCATION**
15 **FRAMEWORK**

16 **Q. Please discuss the factors that you believe can influence the overall cost**
17 **allocation framework utilized by a gas Local Distribution Company**
18 **("LDC").**

19 A. The overall framework within which an LDC performs a cost of service cost
20 study, that is, the three standard steps or phases followed by a utility when
21 performing a cost study – cost functionalization, cost classification and cost
22 allocation, can be influenced by various factors. These factors can include: (1) the
23 physical configuration of the LDC's gas system; (2) the availability of data within

1 the LDC; and (3) the state regulatory policies and requirements applicable to the
2 LDC. The physical configuration of the transmission and distribution system
3 provides certain considerations. For example, is the distribution system a
4 centralized grid/single city-gate or a dispersed/multiple city-gate configuration?
5 Does the LDC have an integrated transmission and distribution system or a
6 distribution-only operation? Does the system operate under a multiple-pressure
7 based or a single-pressure based configuration?

8 The structure of the LDC's books and records can influence the cost study
9 framework. This structure relates to attributes such as the level of detail,
10 segregation of data by operating unit or geographic region and the types of load
11 data available.

12 State regulatory policies and requirements refer to the particular
13 approaches historically used to establish utility rates in the state. Specific
14 methodological preferences or guidelines for performing cost studies or designing
15 rates, which have been previously established by the state regulatory agency, can
16 influence the particular cost allocation method utilized by the LDC.

17 **Q. How do these factors relate to the specific circumstances applicable to the**
18 **Company?**

19 A. The physical configuration of the Company's gas system is a dispersed/multiple
20 service area transmission and distribution system in central and western Missouri
21 (including Kansas City, St. Joseph, Joplin and Monett). The multi pressure-based
22 local distribution system consists of approximately 8,074 miles of mains, 5,022
23 miles of service lines and 47 miles of transmission lines. The Company has

1 detailed plant accounting records for many of its distribution-related facilities
2 including mains, services and meters.

3 In the Company's most recent prior rate case, the Commission expressed a
4 preference for utilizing a costing methodology that allocates some distribution
5 mains costs on the basis of the number of customers served in order to recognize
6 the fact that the distribution system is built to provide customers with access to
7 the system as well as to accommodate peak demand.

8 **Q. Why are these considerations relevant to conducting the Company's cost of**
9 **service study?**

10 A. It is important to understand these considerations because they influence the
11 overall context within which the Company's cost studies were conducted. In
12 particular, they provide an indication of where efforts should be focused for
13 purposes of conducting a more detailed analysis of the Company's gas system
14 design and operations and understanding the regulatory environment in the State
15 of Missouri as it pertains to cost of service studies and gas ratemaking issues.

16 **VI. GUIDING PRINCIPLES OF COST ALLOCATION**

17 **Q. Please state the purpose of a cost of service study.**

18 A. A cost of service study is an analysis of costs which attempts to assign to each
19 customer or rate class its proportionate share of the Company's total cost of
20 service (i.e., the Company's total revenue requirement). The results of these
21 studies can be utilized to determine the relative cost of service for each class and
22 to help determine the individual class revenue requirements.

1 **Q. What are the guiding principles that should be followed when performing a**
2 **cost of service study?**

3 A. The concept of *cost causation* is the fundamental and underlying philosophy
4 applicable to all cost studies for purposes of allocating costs to customer groups.
5 Cost causation addresses the question – which customer or group of customers
6 causes the utility to incur particular types of costs? To answer this question, it is
7 necessary to establish a linkage between a utility's customers and the particular
8 costs incurred by the utility in serving those customers.

9 The essential element in the selection and development of a reasonable
10 cost of service study allocation methodology is the establishment of relationships
11 between customer requirements, load profiles and usage characteristics on the one
12 hand and the costs incurred by the utility in serving those requirements on the
13 other hand. For example, providing a customer with gas service during peak
14 periods can have much different cost implications for the utility than providing
15 service off-peak.

16 The distribution system is designed to meet three primary objectives: (1)
17 to extend distribution services to all customers entitled to be attached to the
18 system; (2) to meet the aggregate peak design day capacity requirements of all
19 customers entitled to service on the peak day; and (3) to deliver volumes of
20 natural gas to those customers, either on a sales or transportation basis. There are
21 certain costs associated with each of these objectives. Also, there is generally a
22 direct link between the manner in which such costs are defined and their
23 subsequent allocation.

1 *Customer* related costs are incurred to attach a customer to the distribution
2 system, meter any gas usage and maintain the customer's account. Customer costs
3 are a function of the number of customers served and continue to be incurred
4 whether or not the customer uses any gas. They may include capital costs
5 associated with minimum size distribution mains, services, meters, regulators and
6 customer billing and accounting expenses.

7 *Demand* or *capacity* related costs are associated with plant that is
8 designed, installed and operated to meet maximum hourly or daily gas flow
9 requirements, such as transmission and distribution mains, or more localized
10 distribution facilities which are designed to satisfy individual customer maximum
11 demands.

12 *Commodity* related costs are those costs that vary with the throughput sold
13 to, or transported for, customers. Costs related to gas supply are classified as
14 commodity related to the extent they vary with the amount of gas volumes
15 purchased by the LDC for its sales service customers. However, when a gas
16 utility company's cost of gas is not recovered through its base rates, very little of
17 its remaining delivery service cost structure is commodity related.

18 **Q. What are the steps to performing cost of service studies?**

19 A. The three broad steps used to perform cost of service studies are
20 1) functionalization; (2) classification; and (3) allocation. The first step,
21 functionalization, identifies and separates plant and expenses into specific
22 categories based on the various characteristics of utility operation. The
23 Company's functional cost categories associated with gas service are Distribution

1 and Customer Accounts. Classification of costs, the second step, further separates
2 the functionalized plant and expenses into the three cost-defining characteristics
3 previously discussed: (1) customer; (2) demand or capacity; and (3) commodity.
4 The final step is the allocation of each functionalized and classified cost element
5 to the individual customer or rate class. Costs typically are allocated on customer,
6 demand, and commodity or revenue allocation factors.

7 **Q. How does the cost analyst establish the cost and utility service relationships?**

8 A. To establish these relationships, the cost analyst must analyze a company's gas
9 system design and operations, its accounting records and its system and customer
10 load data (e.g., annual and peak period gas consumption levels). From the results
11 of those analyses, methods of direct assignment and "common" cost allocation
12 methodologies can be chosen for all of the utility's plant and expense elements.

13 **Q. Please explain the term "direct assignment."**

14 A. The term "direct assignment" relates to a specific identification of plant and/or
15 expense incurred exclusively to serve a specific customer or group of customers.
16 Direct assignments best reflect the cost causative characteristics of serving
17 individual customers or groups of customers. Therefore, in performing a cost of
18 service study, the cost analyst seeks to maximize the amount of plant and expense
19 directly assigned to particular customer groups to avoid the need to rely upon
20 other more generalized allocation methods although for many costs, those
21 associated with meters and services as an example, allocation methods supported
22 by special studies, discussed below, can be a good proxy for direct assignment.

1 Direct assignments of plant and expenses to particular customers or classes
2 of customers are made on the basis of special studies wherever the necessary data
3 are available. These assignments are developed by detailed analyses of the
4 utility's maps and records, work order descriptions, property records and customer
5 accounting records. Within time and budgetary constraints, the greater the
6 magnitude of cost responsibility based upon direct assignments, the less reliance
7 need be placed on common plant allocation methodologies associated with joint
8 use plant.

9 **Q. Is it realistic to assume that a large portion of the plant and expenses of a**
10 **utility can be directly assigned?**

11 A. No. The nature of utility operations is characterized by the existence of common
12 or joint use facilities. Out of necessity, then, to the extent a utility's plant and
13 expense cannot be directly assigned to customer groups, "common" allocation
14 methods must be derived to assign or allocate the remaining costs to the customer
15 classes. The analyses discussed above facilitate the derivation of reasonable
16 allocation factors for cost allocation purposes.

17 **Q. Please explain the considerations relied upon in determining the cost**
18 **allocation methodologies that are used to perform a cost of service study.**

19 A. As stated above, in order to allocate costs within any cost of service study, the
20 factors that cause the costs to be incurred must be identified and understood.
21 Additionally, the cost analyst needs to develop data in a form that is compatible
22 with and supportive of rate design proposals. The availability of data for use in
23 developing alternative cost allocation factors is also a consideration. In evaluating

1 any cost allocation methodology, appropriate consideration should be given to
2 whether it provides a sound rationale or theoretical basis, whether the results
3 reflect cost causation and are representative of the costs of serving different types
4 of customers, as well as the stability of the results over time.

5 **Q. Please describe the key issues related to the allocation of demand-related**
6 **costs within a cost of service study.**

7 A. A complex part of the allocation process is the allocation of demand-related costs.
8 Several methodologies have been used by gas utilities to develop allocation
9 factors for the demand components of costs. In fact, it is not unusual for more
10 than one demand cost allocation methodology to be used in a cost of service
11 study. Despite the use of different methods to allocate demand costs, it is fair to
12 say that three basic methodologies form the foundation for the allocation process.
13 These three methodologies are Peak Demand Allocations, Average and Excess
14 Demand Allocations and Non-Coincident Demand Allocations. Each of these
15 demand allocation methodologies is discussed below.

16 The concept of Peak Demand Allocation is premised on the notion that
17 investment in capacity is determined by the peak load or peak loads of the
18 company. Under this methodology, demand related costs are allocated to each
19 customer class or group in proportion to the demand coincident with the system
20 peak or peaks of that class or group. The Peak Demand Allocation process might
21 focus on a single peak, such as the highest daily demand occurring during the test
22 period. Alternatively, it might include the average of several cold days or the
23 expected contribution to the system peak on a design day.

1 The Average and Excess Demand Allocation methodology, also referred to
2 as the "used and unused capacity" method, allocates demand related costs to the
3 classes of service on the basis of system and class load factor characteristics.
4 Specifically, the portion of utility facilities and related expenses required to
5 service the average load is allocated on the basis of each class' average demand
6 and is derived by multiplying the total demand related costs by the utility's system
7 load factor. The remaining demand related costs are allocated to the classes based
8 on each class' excess or unused demand (i.e., total class non-coincident demand
9 minus average demand).

10 A simplified version of this methodology is the Average and Peak
11 methodology. This cost methodology often gives equivalent weight to peak
12 demands and average demands. As is the case with the Average and Excess
13 method, it has the effect of allocating a portion of the utility's capacity costs on a
14 commodity-related basis.

15 The Non-Coincident Demand Allocation methodology recognizes that
16 certain facilities, in particular distribution facilities, are designed to serve local
17 peaks, which may or may not be coincident with the system peak loads. Using
18 this methodology, demand costs are allocated on the basis of each group's or rate
19 class' maximum demand, irrespective of the time of the system peak.

1 **VII. REVIEW OF THE LOAD AND SERVICE**
2 **CHARACTERISTICS OF THE COMPANY'S CUSTOMERS**

3 **Q. As stated earlier, the load characteristics of an LDC's customers are an**
4 **important element in determining the costs incurred by the LDC in serving**
5 **its customers. Have the load characteristics of the Company's customers**
6 **been summarized?**

7 A. Yes. The relevant load characteristics of the Company's various customer groups
8 are shown in Schedule **RJA – 5**. In reviewing this information, it is important to
9 point out that for each class of service, the absolute and relative level of certain of
10 these load characteristics have a direct influence on the type and level of costs
11 incurred by the Company in serving its customers.

12 **Q. What are the implications of class load characteristics for purposes of**
13 **determining the costs to serve an LDC's customers?**

14 A. Annual load factor is an important indicator of how a customer utilizes an LDC's
15 pipeline capacity. As a customer's annual load factor increases, it indicates that
16 the customer is using the LDC's system capacity more efficiently than a lower
17 load factor customer. In addition, peak day demand is a key element in the sizing
18 of an LDC's facilities and in determining the level of costs incurred in serving its
19 customers. The day-to-day utilization of an LDC's facilities by its customers is
20 measured by their annual gas consumption characteristics.

1 **VIII. THE METHODOLOGICAL AND CONCEPTUAL BASIS**
2 **USED IN THE COMPANY'S COST OF SERVICE STUDY**

3 **Q. How have the demand-related costs been allocated in the Company's Cost of**
4 **Service Study?**

5 A. The Company's cost of service study methodology uses a coincident peak demand
6 allocation factor, derived on a design day basis, for allocating various portions of
7 its capacity related costs. Capacity costs for the Company consist of the costs
8 associated with city-gate facilities and the capacity portion of the Company's
9 transmission and distribution system.

10 **Q. Please explain why the Company has chosen to utilize a Coincident Peak**
11 **methodology in developing its Cost of Service Study?**

12 A. The Company has based its proposed rates on the study results using the
13 coincident peak allocation methodology because this demand allocation approach,
14 along with an additional cost causative principle – that being a customer related
15 element to the distribution system, best reflects cost causation on the Company's
16 system. From a gas engineering perspective, it is clear that a peak demand design
17 criterion is always utilized when designing a gas distribution system to
18 accommodate the gas demand requirements of the customers served from that
19 system, whether the investment is driven by the need to replace aging and
20 deteriorating pipelines or for the purpose of expanding distribution capacity to
21 serve growing demand on the system. An LDC's gas system sized to
22 accommodate average gas demands would be unable to accommodate system
23 peak demands. That is, by sizing plant investment for peak period demands, the

1 LDC is assured of being able to satisfy its service obligation throughout the year.
2 As such, cost causation with respect to demand related costs are unrelated to
3 average demand characteristics.

4 Additionally, use of average demand characteristics for the allocation of
5 demand related costs penalizes customers that exhibit efficient gas consumption
6 characteristics (i.e., customers with high load factors) and encourages the
7 inefficient use of the LDC's gas system by customers with low load factors.
8 Clearly, under-utilization of an LDC's gas system is a result that an LDC can
9 hardly encourage, recognizing that higher system utilization will result in lower
10 unit costs to all customers served by the LDC.

11 For the above-stated reasons, it is inappropriate to rely upon a commodity-
12 based allocation factor, as derived from annual gas throughput volume, for
13 purposes of allocating demand related costs to an LDC.

14 **Q. Why did you choose to utilize the Company's design day demand rather than**
15 **its actual peak day demand as a demand allocation factor?**

16 A. Use of an LDC's design day demand is superior to using its actual peak day
17 demand or an historical average of multiple peak day demands over time for
18 purposes of deriving demand allocation factors for a number of reasons. These
19 include:

- 20 1. An LDC's gas system is designed, and consequently costs are incurred, to meet
21 design day demand. In contrast, costs are not incurred on the basis of an
22 average of peak demands.

1 2. Design day demand is more consistent with the level of change in customer
2 demands for gas during peak periods and is more closely related to the change
3 in fixed plant investment over time.

4 3. Design day demand provides more stable cost allocation results over time.

5 **Q. Please explain why the Company's design day demand best reflects the**
6 **factors that actually cause costs to be incurred.**

7 A. The Company must consistently rely upon design day demand in the acquisition
8 of its upstream gas supply-related resources and in the design of its own
9 distribution facilities required to service its firm service customers. And perhaps
10 more importantly, design day demand directly measures the gas demand
11 requirements of the Company's firm service customers which create the need for
12 the Company to acquire resources, build facilities and incur millions of dollars in
13 fixed costs on an ongoing basis.

14 In my opinion, there is no better way to capture the true cost of the
15 Company's operations than to utilize its design peak day requirements within its
16 cost of service studies.

17 **Q. Please explain why use of design day demand provides more stable cost**
18 **allocation results over time.**

19 A. By definition, an LDC's design day peak is as stable a determinant of planned
20 capacity utilization as you can derive. If it were not a stable demand determinant,
21 the design of an LDC's gas system and supply portfolio would tend to vary and
22 make the installation of facilities and acquisition of supply resources and capacity
23 a much more difficult task. Therefore, use of design day demands provides a

1 more stable basis than any of the other demand allocation factors available based
2 on either actual peak day demand or the averaging of multiple peak days.

3 **Q. Please discuss the rationale and evidentiary basis for the classification of a**
4 **portion of the investment in distribution mains as customer related.**

5 A. It is an accepted principle throughout the gas industry that distribution mains
6 (Account No. 376) are installed to meet both system peak load requirements and
7 to connect customers to the LDC's gas system. Therefore, to ensure that the rate
8 classes that cause the investment in this plant are charged with its cost,
9 distribution mains should be allocated to the rate classes in proportion to their
10 peak period load requirements and number of customers.

11 There are two cost factors that influence the level of distribution mains
12 facilities installed by an LDC in expanding its gas distribution system. First, the
13 size of the distribution main (i.e., the diameter of the main) is directly influenced
14 by the sum of the peak period gas demands placed on the LDC's gas system by its
15 customers. Secondly, the total installed footage of distribution mains is
16 influenced by the need to expand the distribution system grid to connect new
17 customers to the system. Therefore, to recognize that these two cost factors
18 influence the level of investment in distribution mains, it is appropriate to allocate
19 such investment based on both peak period demands and the number of customers
20 served by the LDC.

21 **Q. Is the method used to determine a customer cost component of distribution**
22 **mains a generally accepted technique for determining customer costs?**

1 A. Yes, it is. The two most commonly used methods for determining the customer
2 cost component of distribution mains facilities consist of the following: (1) the
3 zero-intercept approach, and; 2) the most commonly installed, minimum-sized
4 unit of plant investment. Under the zero-intercept approach, which is the method
5 utilized in the Company's cost study, a customer cost component is developed
6 through regression analyses to determine the unit cost associated with a zero inch
7 diameter distribution main. The method regresses unit costs associated with the
8 various sized distribution mains installed on the LDC's gas system against the size
9 (diameter) of the various distribution mains installed. The zero-intercept method
10 seeks to identify that portion of plant representing the smallest size pipe required
11 merely to connect any customer to the LDC's distribution system, regardless of his
12 peak or annual gas consumption.

13 The most commonly installed, minimum-sized unit approach is intended
14 to reflect the engineering considerations associated with installing distribution
15 mains to serve gas customers. That is, the method utilizes actual installed
16 investment units to determine the minimum distribution system rather than a
17 statistical analysis based upon investment characteristics of the entire distribution
18 system. Two of the more commonly accepted literary references relied upon
19 when preparing embedded cost of service studies, (1) Electric Utility Cost
20 Allocation Manual, by John J. Doran et al., National Association of Regulatory
21 Utility Commissioners (NARUC), and (2) Gas Rate Fundamentals, American Gas
22 Association, both describe minimum system concepts and methods as an

1 appropriate technique for determining the customer component of utility
2 distribution facilities.

3 From an overall regulatory perspective, in its publication entitled, Gas
4 Rate Design Manual, NARUC presents a section which describes the zero-
5 intercept approach as a minimum system method to be used when identifying and
6 quantifying a customer cost component of distribution mains investment. Clearly,
7 the existence and utilization of a customer component of distribution facilities,
8 specifically for distribution mains, is a fully supportable and commonly used
9 approach in the gas industry.

10 **Q. With respect to the Company's specific operating conditions, is there**
11 **demonstrable evidence to support the use of a customer component of**
12 **distribution mains?**

13 A. Yes. As an example, the results of the zero intercept analysis based on the
14 Company's investment in plastic distribution mains can be expressed
15 formulaically as follows:

16
$$y = mx + b$$

17 Where: y = average cost per installed foot of MGE's distribution mains

18 m = \$1.33 per installed foot per inch of pipe diameter

19 x = diameter of distribution mains

20 b = \$3.89 per installed foot

21 This equation reveals that regardless of the main's diameter, the average
22 cost of a plastic distribution main on MGE's gas system will be at least equal to
23 \$3.89 per installed foot. Stated differently, \$3.89 of the total cost of each foot of

1 installed main is unrelated to the main's diameter. The \$3.89 per foot cost
2 component is exclusively related to the simple fact that MGE incurs this cost to
3 install a plastic main, regardless of its size. That is, the installation is unrelated to
4 either peak gas flows or average gas flows. Rather, these disaggregated costs are
5 related more strongly to the process of extending the distribution mains to connect
6 customers, which is a function of the length of distribution mains and not of the
7 size or diameter of the mains. This is the per foot customer cost component of
8 MGE's plastic distribution mains as distinguished from the per foot demand cost
9 component, which is equal to \$1.33 per foot times the diameter of the plastic
10 distribution main.

11 **Q. Please summarize the results of the zero intercept study for MGE's**
12 **distribution mains?**

13 A. Similarly to the analysis described above for plastic distribution mains, statistical
14 regressions were performed for the Company's steel and cast iron mains, the
15 results of which were applied to the current system footage of the respective pipe
16 types to derive the total cost of a zero inch distribution system. The results of the
17 study indicate that 32.6% of the distribution mains investment should be
18 considered customer-related. The remaining 67.4% of the investment in
19 distribution mains is demand-related. The total mains investment costs are
20 classified accordingly for allocation purposes in the cost study.

21 **Q. Have you analyzed the relationship between the number of customers served**
22 **by MGE and level of investment in distribution mains?**

1 A. Yes. I have provided a graphical representation of the relationship between total
2 installed footage of distribution mains and the number of residential customers,
3 the class of customers that represent most of the growth in recent years on the
4 Company's system. This graph is shown on Schedule **RJA – 6**. As would be
5 expected, as the number of customers served by MGE increases, the level of
6 investment in distribution mains, as measured by installed footage, also increases.

7 **Q. Why would one expect there to be a strong correlation between the number**
8 **of customers served by MGE and the length of its system of distribution**
9 **mains?**

10 A. Development of the Company's distribution grid over time is a dynamic process.
11 Customers are added to the distribution system on a continuous basis under a
12 variety of installation conditions. Accordingly, this process cannot be viewed as
13 static situation where a particular customer being added to the system at any one
14 point in time can serve as a representative example for all customers. Rather, it is
15 more appropriate to understand that for every situation where a customer can be
16 added with little or no additional footage of mains installed, there are contrasting
17 situations where a customer can be added only by extending the distribution mains
18 to the customer's more remote or "off-system" location. Recognizing that the
19 goal is to more reasonably classify and allocate the total cost of MGE's
20 distribution mains facilities, it is appropriate to analyze the cost causative factors
21 that relate to these facilities based on the total number of customers serviced from
22 such facilities. Accordingly, the concept of using a minimum system or "zero
23 capacity" approach for classifying distribution mains simply reflects the fact that

1 the average customer serviced by the Company requires a minimum amount of
2 mains investment to receive such service. Thus, it is entirely appropriate to
3 conclude that the number of customers served by MGE represents a primary
4 causal factor in determining the amount of distribution mains cost that should be
5 assessed to any particular group of customers. One can readily conclude that a
6 customer component of distribution mains is a distinct and separate cost category
7 that has much support from an engineering and operating standpoint.

8 **Q. Has the Commission previously endorsed the development of a customer**
9 **component of distribution mains for MGE?**

10 A. Yes. The development of a customer component of distribution mains is
11 consistent with the Commission's 2004 Order in MGE's prior rate case (Docket
12 No. GR-2004-0209), wherein the Commission stated:

13 " The zero-intercept method used by MGE recognizes that when a
14 main is built to reach a customer, a certain portion of the cost of
15 the main will be incurred no matter how much gas the customer
16 uses. Thus the cost of a zero inch main would be the customer-
17 related portion of the cost of the main. The extra cost derived from
18 installing larger mains, mains that are large enough to meet peak
19 demand, would be the demand-related portion of the cost of the
20 main. ... MGE's zero-intercept method recognizes the different
21 nature of these costs and is a preferable method. " ¹

22 **Q. Please describe the special studies conducted for purposes of allocating other**
23 **distribution plant investment.**

24 A. Regarding the Company's major plant accounts, customer weighting factors were
25 developed to allocate the following plant accounts: Services – Account No. 380,

¹ Missouri Public Service Commission, Case No. GR-2004-0209, Report and Order dated September 21, 2004, pages 40-42.

1 Meters – Account 381, Meter Installations – Account No. 382 and House
2 Regulators – Account No. 383. These weighting factors reflect any differences in
3 the current unit costs that particular customer groups cause the Company to incur.
4 For example, the cost of a 3/4-inch plastic service line that could serve a
5 residential customer costs less, on a per unit basis, than the cost of a 4-inch steel
6 service line to serve a larger commercial or industrial customer. The use of
7 weighting factors takes these unit cost differences into account when assigning
8 costs to the various customer classes. For Industrial Measuring & Regulating
9 Station Equipment – Account No. 385, a direct assignment of this plant to the
10 Large Volume Service (“LVS”) service class was facilitated by the identification
11 in the property records of specific electronic gas measurement equipment with the
12 customers in this class. Similarly, the Company’s Automated Meter Reading
13 (“AMR”) Communication Equipment, Account 397.1, were assigned to the
14 services classes other than LVS on the basis of number of customers, as these
15 AMR devices are installed on the meters of all but the LVS customers.

16 **Q. How were the particular type and size of facilities for each plant account that**
17 **should be attributed to each of the Company's customer groups determined?**

18 A. Based on its historical installation and operating experience, the Company has
19 established engineering and operational standards which enable the direct
20 identification of the typical size, length and material type of service line by
21 customer group. This information is contained in the Company’s customer
22 information system and property records. Similarly, with regard to meters, the
23 Company was able to conduct a detailed analysis of data also contained in its

1 customer information system and property records that identified the type and size
2 of meter for each customer it serves. This analysis also was used to determine the
3 type and size of equipment, by customer class, for house regulators and to assign
4 the installation costs of meters and house regulators to specific customer classes.

5 **Q. Please describe the method used to allocate the reserve for depreciation as**
6 **well as depreciation expenses.**

7 A. These items were allocated by function in proportion to their associated plant
8 accounts.

9 **Q. How did the study allocate distribution-related operation and maintenance**
10 **expenses?**

11 A. In general, these expenses were allocated on the basis of the cost allocation
12 methods used for the Company's corresponding plant accounts. A utility's
13 operation and maintenance expenses generally are thought to support the utility's
14 corresponding plant in service accounts. That is, the existence of particular plant
15 facilities necessitates the incurrence of cost (i.e., expenses) by the utility to
16 operate and maintain those facilities. As a result, the allocation basis used to
17 allocate a particular plant account will be the same basis as used to allocate the
18 corresponding expense account. For example, Account No. 893, Maintenance of
19 Meters and House Regulator Expense, is allocated on the same basis as its
20 corresponding plant accounts, Account No. 381 – Meters and Account No. 383 –
21 House Regulators. With the Company's detailed analyses supporting its
22 assignment of plant in service components, where feasible, it was deemed

appropriate to rely upon those results in allocating related expenses in view of the overall conceptual acceptability of such an approach.

Q. How did the study allocate Customer Accounting Expenses (Accounts 902 – 904)?

A. Meter Reading Expense, Account 902, was allocated on the basis of the number of customers by class. A special study of the cost types and activities performed related to charges to Account 903, Customer Records and Collection Expense, resulted in the construction of a composite allocation, which was derived from a weighting of the number of payment arrangements, bills and service orders by class. An analysis of uncollectible expenses by class was conducted for the purpose of allocating Account 904, Uncollectible Accounts Expense.

Q. How did the study allocate Customer Service and Information Expenses (Accounts 908 – 910) and Sales Expenses (Accounts 912 and 916)?

A. Customer Assistance Expense, Account 908, was directly assignable to the Residential class. An analysis of the charges to this account revealed that the labor costs and other expenditures were entirely related to MGE's administration of and funds expended under its low-income weatherization program. The remaining customer service and information accounts, Account 909, Informational & Instructional Advertising, and Account 910, Miscellaneous Expenses, were allocated on the basis of number of customers.

Demonstration and Selling Expense, Account 912, was apportioned to the classes based on an evaluation of the underlying cost types, cost centers and activities performed. Charges to this account consisted primarily of labor costs

1 related to the functions performed by the Company's "Key Account"
2 representatives and activities associated with residential builders and developers.
3 Miscellaneous Sales Expense, Account 916, was allocated on the same basis as
4 Account 912.

5 **Q. How did the study allocate administrative and general expenses?**

6 A. Administrative and general ("A&G") expenses, Account 920, were allocated on
7 the basis of the Company's total O&M, exclusive of A&G.

8 **Q. How did the study allocate amortization expenses and taxes other than**
9 **income taxes?**

10 A. The study allocated Amortization Expense – SLRP, Accounts 404 – 405 in a
11 manner to reflect the specific cost factor associated with this particular
12 amortization expense category, that is, the Service Line Replacement Program.
13 Therefore, the expenses were allocated on the same basis as services.
14 Amortization Expense – Other was allocated on the basis of intangible plant, as
15 this amortization expense is related to intangible plant items, including various
16 computer and technology systems and the associated capitalized software. Taxes
17 other than income taxes were allocated on the basis of total plant.

18 **Q. How were income taxes allocated to each customer class?**

19 A. Deferred income taxes were allocated on a total plant basis. Current income taxes
20 were directly calculated for each rate class based on its income before federal and
21 state income taxes. This approach made certain that the income tax assigned to
22 each rate class reflected the proper weighting of class revenues, previously

1 allocated expenses and any adjustments made by the Company for tax
2 computation purposes.

3 **IX. RESULTS OF THE COMPANY'S COST OF SERVICE**
4 **STUDY**

5 **Q. Please discuss the results of the cost of service study filed by the Company.**

6 A. Referring to Schedule **RJA – 1**, the following results at present rates from the
7 Company's cost of service study are indicated on Line No. 15:

- 8 1. The residential service class ("Rate RS") exhibits the lowest rate of return
9 at 2.878%, well below the current system average of 4.54%.
- 10 2. The small general service class ("Rate SGS") currently provides a rate of
11 return of 7.503%, which is above the current system average of 4.54%,
12 with a revenue-to-cost ratio of .927 at the Company's proposed 8.936%
13 rate of return.
- 14 4. The large general service class ("Rate LGS") currently provides the second
15 highest return among all classes at 11.935% and exhibits a revenue-to-cost
16 ratio of 1.175.
- 17 5. The large volume service class ("Rate LV") exhibits the highest return
18 among all of the classes at 12.655%, with a revenue-to-cost ratio of 1.231.

19 It should also be noted here that the foregoing cost of service study results reflect
20 the Company's proposed revenue requirement for base rates that excludes the
21 Company's cost of purchased gas.

1 **Q. Please explain how the full-cost revenue requirement by class and unit cost**
2 **analysis presented in Schedule RJA – 2 were determined.**

3 A. The NCI computer model extracts the functionalized, classified and allocated
4 expenses and rate base data for each class of service and applies the system
5 average rate of return to the allocated rate base to determine the required net
6 income. This amount is then grossed up to account for the income and general tax
7 related revenue responsibilities. The sum of the expense related revenue
8 requirement and the rate base related revenue requirement yield the total revenue
9 requirement by function for each component of cost (i.e., the customer, demand
10 and commodity portions of the distribution and customer accounts functional
11 categories) at the system average rate of return. The summary total of these
12 calculations is shown in Schedule **RJA – 2**, page 1 of 2. The computer model then
13 unitizes each of the various cost components by dividing the associated revenue
14 full-cost requirement by the corresponding customer usage characteristics or
15 billing determinants. The results of the unit cost calculations are presented on
16 page 2 of the schedule. A monthly customer cost is calculated for each customer
17 class, as well as unit commodity and demand costs.

18 **X. COST OF SERVICE STUDY GUIDELINES FOR REVENUE**
19 **ALLOCATION AND RATE DESIGN**

20 **Q. How can the Cost of Service Study results provide guidelines for rate design?**

21 A. Cost of service study results provide cost guidelines for use in evaluating class
22 revenue levels and rate structures. When evaluating class revenue levels, the rate
23 of return results and resulting revenue-to-cost ratios show that rates charged to

1 certain rate classes recover less than their indicated cost of service. Conversely,
2 rates for other rate classes recover more than their indicated cost of service. By
3 adjusting rates accordingly, class revenue levels can be brought closer to the
4 indicated cost of service (or "parity"), resulting in class rates of return nearer the
5 system average rate of return. Thus, rate levels will be more in line with the cost
6 of providing service.

7 **Q. Do the Cost of Service Study results provide guidance in establishing rates**
8 **within each rate class as well?**

9 A. Yes. The classified costs, as allocated to each class of service within the cost
10 study, provide useful cost information in determining the level of customer,
11 demand and commodity charges.

12 **Q. Please explain how the classified costs can be used for rate design.**

13 A. If the classified costs presented in Schedule **RJA - 2**, the Unit Cost Summary by
14 Function, were used to set three-part rates (Customer, Demand and Commodity),
15 the Company's operating expenses and return on investment in its pro forma
16 revenue requirement would be recovered.

17 **Q. Have the results of the cost of service study been used in establishing the**
18 **Company's proposed class-by-class revenue responsibility levels?**

19 A. Yes. As discussed by witness Russell A. Feingold, the results of the cost of
20 service study have been used to move the classes toward a more cost based
21 distribution of the overall revenue responsibility.

1 **XI. CONCLUDING REMARKS**

2 **Q. Please summarize the reasons why the design day coincident peak**
3 **methodology was chosen by the Company as its allocation methodology.**

4 **A. The Company's allocation methodology was chosen for the following reasons:**

- 5 1. As a capacity allocation approach, the design day coincident peak method best
6 reflects cost causation on the Company's system,
- 7 2. Along with the identification of a customer component of distribution mains,
8 it reflects the principles deemed appropriate by the Commission in
9 establishing an allocation methodology, that is, it is related to the actual
10 system as built to serve all classes of customers,
- 11 3. It has a sound conceptual and theoretical basis, and
- 12 4. It is superior to the other commonly used, primary cost allocation
13 methodologies that give recognition to system utilization characteristics.

14 **Q. Does this conclude your direct testimony?**

15 **A. Yes.**

Appendix A
to Accompany the
Direct Testimony
of
Ronald J. Amen
Director
Navigant Consulting, Inc.

Ronald J. Amen

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Professional History

- Director, Navigant Consulting
- Manager, Federal Regulatory Affairs, Puget Sound Energy, Inc.
- Director, Rates and Tariffs, Washington Natural Gas Company
- Regional Director; Director of Rates, Indiana Energy (now Vectren)
- Data Processing Manager, Asst. District Manager, Ohio Valley Gas Corporation

Education

- B.S., Business Administration (Finance and Economics), College of Business Administration, University of Nebraska

Professional Associations

- Associate Member, American Gas Association
- Past Member, Marketing & Regulatory Committees of the Pacific Coast Gas Association
- Past Member, Rate Committee of the American Gas Association
- Past Member, Statistics and Load Forecasting Methods Committee of the American Gas Association
- Past Chairman, Rate Committee of the Indiana Gas Association

Mr. Amen is a Director with the Energy practice group of Navigant Consulting, Inc. He has over twenty-seven years of combined experience in utility management and consulting in the areas of regulatory affairs, resource planning, organizational development, distribution operations and customer service, marketing and sales, and systems administration. He has particular expertise in the following areas: cost allocation and pricing issues; regulatory strategy; resource strategy, planning and financial analysis; and expert witness testimony.

Professional Experience

Resource Planning, Strategy and Financial Analysis

- » As part of a review of a *Pacific Northwest electric/gas utility's* gas procurement strategy and hedging analytics, provided gas LDC case studies for gas procurement and risk management practices, including identification of risk management best practices across the industry.
- » For a *Pacific Northwest electric/gas utility*, Mr. Amen provided resource planning strategy and analysis for the company's 2003 Least Cost Plan, including a review of the company's underlying 20-year electric and gas demand forecasts.
- » Engaged by a *Pacific Northwest electric/gas utility* as a member of an NCI team serving as the client's financial advisor for the acquisition of new electric power supply resources. Conducted a multi-track solicitation process for and evaluation of generation assets and purchase power agreements. Provided regulatory support for the acquisition in a subsequent power cost rate proceeding.
- » Provided an evaluation of the functions provided by a *Midwestern gas/electric utility's* underground storage facilities for the purpose of assigning cost responsibility to the various customer groups, which had been challenged by parties in the company's general rate proceeding.

- » Engaged by a *Midwestern municipal electric utility* as a member of three-consultant team that established a self-sustaining energy services business to replace its rebate-based, demand-side management programs. Area of focus included the finance and administrative functions as well as the employee evaluation and recruitment process.
- » For a *Southern gas/electric utility*, conducted an evaluation of two operating subsidiaries, their capital planning, asset management strategy, and customer growth practices. Formulated a strategy for improving the profitability of the entities, with regulatory strategies for its two jurisdictions that included a special cost recovery mechanism for accelerated infrastructure replacement programs.
- » For a *European electric utility*, provided strategy and analysis support, including a review of the natural gas value chain in the U.S., as part of an overall project scope focusing on the evaluation of retail multi-energy strategies for the client.

Cost Allocation, Pricing Issues and Rate Design

- » For a *Midwestern energy company*, assisted the client with the pursuit of alternative regulatory initiatives in conjunction with company's expansion of its energy efficiency and conservation programs. Supported the research, design, and selection of Revenue Decoupling and Weather Normalization Adjustment ("WNA") mechanisms for its two regulated gas utility subsidiaries. Regulatory filings are currently pending.
- » For a *Midwestern gas/electric utility*, assisted the Company with the preparation of a retail customer choice filing for one of its gas distribution jurisdictions. Provided support for the development ancillary service costs, the design of program cost recovery mechanisms, and tariff structure for service offerings.
- » Served as engagement manager for cost of service and rate design support for a *Canadian gas utility* client. Work included expert witness testimony, for the client's capital investment recovery proceeding for a major pipeline project, a cross-provincial transmission pipeline. The three-phase project included regulatory strategy support for executive management regarding the integration of the pipeline proposal with the utility's PBR and unbundling initiatives and an upcoming global rate design proceeding. Cost of service support included the licensing of a Navigant Consulting Cost of Service computer model.
- » Representing a *Pacific Northwest electric/gas utility*, he provided Cost of Service and Rate Design support, including expert witness testimony and conducted research on Electric Power Cost Adjustment Mechanisms and Gas Supply Pricing Options of utilities in North America.

- » For a *Northeastern gas utility*, served as engagement manager for cost of service and rate design support, including expert witness testimony, for the client's participation in a state-wide gas unbundling proceeding. Subsequent projects included analysis of the client's demand forecasting capability, implementation of an algorithm-based balancing service and a cost of service studies related to transportation related administrative costs, resources supporting system reliability and recovery of potentially stranded costs.
- » Engagement manager for cost of service and rate design support, including expert witness testimony, for client's asset separation and unbundling proceeding as well as a subsequent general rate case for a *Midwest gas transmission/distribution utility*. Integrated gas utility (wellhead to burner-tip) unbundled upstream services (production and gathering, storage, and intra-state transmission) from its distribution business.
- » Provided rate design support for reconfiguration of a *Pacific Northwest gas utility's* Commercial / Industrial sales and transportation service offerings. Included collaborative work with an industrial customer stakeholder group.
- » Engagement manager for Cost of Service and Rate Design support for two of a *Northeastern gas utility* client's general rate proceedings.
- » For a *South American gas utility*, affiliate of a major U.S. energy company, conducted a cost of service and rate design training for management personnel engaged in the planned restructuring of the rate-setting processes for three gas utilities in Brazil.
- » For a *Canadian energy marketer*, provided consulting support and position paper on cost allocation and pricing issues for Canadian gas marketer's participation in a restructuring collaborative sponsored by the intra-provincial pipeline and local distribution utility in Saskatchewan.
- » For a *Northwestern gas utility*, negotiated and obtained regulatory approval of a 20-year contract with the company's largest industrial customer, which avoided bypass of 14 primary plant facilities within the service territory, prevented loss of 48.5MM therms of annual throughput, and maintained contribution to system costs.
- » For a *Northwestern gas utility*, obtained regulatory approval of unbundled, cost-based transportation services to meet large commercial and industrial customer needs and re-designed rates of other classes to better align with new cost of service methodology. The project required the facilitation of a collaborative working group of key industrial customers, customer associations, commission staff, and consumer advocacy agencies.

Regulatory Policy, Strategy and Analysis

- » Provided management of an *Eastern electric/gas utility* with an evaluation of its line extension practices for both its gas and electric services and an earnings impact assessment using NCI's proprietary evaluation model. Conducted a workshop for management on the results of the evaluation and recommendations for consideration in the areas of revenue enhancements, modification of internal policies and procedures and construction cost control areas.
- » Provided management of an *Eastern gas utility* with an evaluation of the policies, procedures and tools presently used in its new customer addition process, an assessment of the impact of new customer growth on NOI, and regulatory solutions to accelerate recovery of new customer costs that best meet the regulatory requirements of its three state jurisdictions.
- » Provided expert witness testimony for an *Eastern gas utility* on the subject of new area expansion programs in the U.S. for the client's general rate case proceeding. As part of a negotiated settlement of the case, the client was permitted to establish a new area expansion pilot program.
- » For a *Pacific Northwest electric/gas utility*, redesigned gas line extension policy based on financial investment criteria, standardized construction costs, and revenue contributions derived from the client's residential end-use data (building type/size/vintage, appliance type, etc.). Introduced a new customer rate option for customers whose facilities extensions did not meet the target rate of return requirement, which significantly reduced earnings attrition caused by rapid customer growth. In a later general rate proceeding, testimony support was provided regarding the modifications and revisions to the facilities extension program.
- » Assisted a *Pacific Northwest gas utility* in the restructuring of its commercial / industrial service offerings, including collaborative work with an industrial customer group.
- » Provided case strategy and cost of service support for the biennial cost allocation proceedings of *two utility subsidiaries of a Western U.S. energy company*.
- » Represented a *Western Canadian gas utility* in the client's capital investment recovery proceeding for a major pipeline project, a cross-provincial transmission pipeline. The project included regulatory strategy support for executive management regarding the integration of the pipeline proposal with the utility's PBR and unbundling initiatives and a global rate design proceeding.

Utility Distribution System Operations

- » Provided research and consulting support for a *Midwestern gas/electric utility* to establish performance metrics and benchmarks from peer group companies for the client's performance management system.

- » For a *Midwestern energy company*, Mr. Amen was responsible for marketing, customer service, distribution system construction, operation and maintenance, for one of six operating service territories of the company's gas utility. Mr. Amen managed a field sales force responsible for sales plan development, including market analysis, program design, regulatory considerations, and cost-effectiveness evaluations for the following customer segments and/or trade alley groups: residential home builders and commercial developers; HVAC contractors; large commercial and industrial key accounts; public institutions; and governmental facilities.

Expert Witness Testimony Presentation

- » Arkansas Public Service Commission
- » British Columbia Utility Commission (Canada)
- » Connecticut Department of Public Utility Control
- » Delaware Public Service Commission
- » Illinois Commerce Commission (pending)
- » Indiana Utility Regulatory Commission
- » Oklahoma Corporation Commission
- » Pennsylvania Public Utility Commission
- » Washington Utilities and Transportation Commission
- » Federal Energy Regulatory Commission

Recent Industry Presentations

"Enhancing the Profitability of Growth," American Gas Association, Rate and Regulatory Issues Seminar, April 4-7, 2004

"Regulatory Treatment of New Generation Resource Acquisition: Key Aspects of Resource Policy, Procurement and New Resource Acquisition," Law Seminars International, Managing the Modern Utility Rate Case, February 17-18, 2005

"Managing Regulatory Risk – The Risk Associated with Uncertain Regulatory Outcomes," Western Energy Institute, Spring Energy Management Meeting, May 18-20, 2005

"Capital Asset Optimization – An Integrated Approach to Optimizing Utilization and Return on Utility Assets," Southern Gas Association, July 18-20, 2005