Docket No, UG-06____
Exhibit ____(LMD-1T)
Witness: Lamar Maxwell Dickey

BEFORE THE

WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

UG-06_____

GENERAL RATE APPLICATION

OF

February 14, 2006

Prepared Direct Testimony of

Lamar Maxwell Dickey

Cost Allocation Study

PREPARED TESTIMONY OF LAMAR MAXWELL DICKEY

(Cost Allocation Study)

Q. Please state your name, business address and occupation.

A. My name is Lamar Maxwell Dickey. My business address is 9611 Trail Hill Drive, Dallas, Texas 75238. I am President of Threshold Associates, Inc.

Q. Please outline your educational background.

A. I attended the University of Tennessee in 1951 and the University of Georgia in 1952. After serving four years in the U. S. Navy, I enrolled at Tennessee Technological University where I received the Degree of Bachelor of Science in Electrical Engineering. I am a member of Tau Beta Pi, an honorary engineering society and Kappa Mu Epsilon, an honorary mathematics society.

Q. What is your business experience?

A. In 1960 I was employed at the Cincinnati Gas & Electric Company and assigned to their Cadet Engineering Program where I spent one year on a rotating training program which covered all departments of the Company. After completing this program I was assigned to the Industrial Division of the Marketing Department where I serviced Industrial, Municipal and Governmental Accounts. In 1964 I was transferred to the Rate and Economic Research Department where I held the positions of Rate Administrator, Rate Analyst, Senior Rate Analyst and Assistant Manager. I joined H. Zinder & Associates in March of 1976 and was elected a Vice President in December of 1977, named Dallas Office Manager in January of 1979, elected Senior Vice President in December of 1979, and

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elected to the Board of Directors in December of 1983. I resigned my position with Zinder in October 1985 to devote full time to Threshold Associates, Inc.

Q. Have you previously appeared before Regulatory Commissions as an expert witness?

A. Yes. I have appeared before the Regulatory Commissions in Arkansas, Idaho, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Minnesota, Ohio, Texas and Washington; the Federal Power Commission; the Federal Energy Regulatory Commission; the Public Utilities Board of The Province of Newfoundland, Canada, as well as numerous city and county commissions presenting rate ordinances, contracts, franchises, and cost of service studies, cost allocation studies, load research studies and rate design proposals.

Q. What is your assignment in this proceeding?

A. I was engaged by Cascade Natural Gas Corporation to perform cost allocation studies and prepare testimony in support of such studies.

Q. What is the purpose of a cost allocation study?

A. The purpose of an allocation study is to determine what costs are incurred to serve the various classes of customers of the utility. When these costs are all tabulated, we can determine the return and the rate of return being earned by the utility on each class of service based on the allocation method used. The cost allocation study is a tool that the analyst uses to assist in rate design. If the cost allocation study is properly done, the results will provide the analyst with the data necessary to design "cost-based" rates. The allocation procedures are necessary because utilities incur costs, which are jointly used in serving more than one customer class.

Q. Please discuss the principles underlying the preparation and the use of a cost allocation study in the field of public utility operations.

A. The only cost which is definitely known for a gas utility is the total cost of doing business. It should be fully understood that the end results of the technical accounting and engineering procedures involved in a cost allocation study establish only one thing -- the costs assignable under certain basic principles recognized as reasonable allocation procedures. In no instance does a cost allocation study, per se, establish either the "value" of service or the levels of "reasonable" rates. Such determinations can only be made after full consideration of all factors, in addition to cost allocations, that bear upon the economics of product pricing and marketing. Those factors include historical rate relationships, relative benefits, competitive fuel costs, promotion of conservation, political factors such as minimum bills and so-called "life-line" rates, and, finally, administrative and regulatory factors such as customer understanding, ease of billing, and the ability to make meaningful comparisons with the rates of other utilities regulated by the Commission. These factors relate to rate design and will be discussed in more detail later in my testimony.

In actual practice the processes of cost allocation are considerably more complex than would be implied from a discussion of theory and method -- each project involves special problems and no two-allocation studies are alike. In fact, in view of the relatively broad area open for the play of individual opinion in the treatment of various cost elements, it is probable that no two analysts, undertaking separately the allocation of the costs of a specific system, would arrive at identical answers, although the magnitude of the difference should be relatively narrow <u>if</u> soundly established procedures are used by both analysts.

Gas utility systems are comprised of plant and facilities designed to produce, gather, transmit and distribute gas to customers variously located within the service area of the utility. The utilization characteristics of the customers of a gas utility system vary over a wide range, particularly with respect to time of use, quantities of the commodity taken, the

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rate of consumption, and the relative location of service. Ideally, every customer should be charged for the total cost of the service he consumes. A major portion of the facilities of a gas utility system is installed for, and is used jointly in the supply of service to all, or major portions of the customers served. Because of this fact, it is apparent that the extent, or size of the various functional elements of a utility system, together with the associated operating expenses and capital charges, are controlled by the combined group characteristics of the utility's customers. Accordingly, reasonable cost allocations to customer classes can be arrived at only through a fairly complex process.

Q. Are the "soundly established procedures" you mentioned in the preceding answer generally document in the cost allocation literature?

A. Yes. The American Gas Association publishes a "Gas Rate Fundamentals" book, which has a discussion of cost allocation studies in Chapters 12 and 13. The National Association of Regulatory Utility Commissioners also publishes a "Cost Allocation Manual" regarding this subject.

Q. Please identify and explain the different classifications of costs incurred in supplying gas service.

A. They are as follows:

1. <u>"Functional Classifications"</u>

Most regulated gas utilities operate with accounting systems prescribed by the Uniform Systems of Accounts of the Federal Energy Regulatory Commission or the State Commission or both. These are precise procedures for reporting income and balance sheet items. The data provides a basic segregation of costs for the purpose of allocations into

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capital costs and related annual operating and maintenance expenses and other costs. This segregation is called "functional", i.e. production and gathering, transmission, distribution and general, with expenses being further broken down to sales, customer accounting, general and administrative. This functional segregation is the first step in allocation.

2. "Accounting Classification"

Specifically, the total costs of a utility operation and, as a matter of fact, the costs of practically any other type of business may be considered as comprised of the following major components.

a. "Fixed Costs" - annual capital and operating costs which are controlled by the size and extent of plant and service installations and not by the number of customers or the extent of use of plant facilities.

b. "Variable Costs" - the cost of fuel and other consumable elements which are used in the supply of gas. Certain variable labor and even some capital costs may be included in this category if these costs are a direct function of the quantity of the product sold.

c. "Customer Costs" - fixed and annual capital and operating costs which are directly affected by the number of customers served; i.e. meters, billings, services.

d. "Overhead and Other General Costs" - certain fixed and annual capital costs, salaries and wages of general administrative personnel, supplies, certain taxes, insurance and expenses not directly related to the operations.

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e. "Revenue Costs" - income taxes and other general costs which are related directly to revenues. These are general definitions to describe the broad categories into which costs are segregated for purposes of ultimate allocation to classes.

3. "Cost Items"

There are at least three basic items in gas utility operations which regulate cost behavior:

a. "Capacity or Demand": The sizes, or capacities of facilities installed to serve customers are directly related to the composite maximum rates of use (coincident demands) of the classes of customers.

Therefore, the allocations of the related costs, both investment and operating, should flow to the classes in direct proportion to the demands made on the facilities. The capacity costs are sometimes called readiness-to-serve costs.

b. "Commodity or Energy": The total quantity of the purchased and distributed commodity controls the quantities of consumable elements and certain other cost elements (labor, maintenance, etc.) which are used in providing the required service. The commodity component should be spread to the customer classes on the basis of their respective commodity requirements.

c. "Customer": A considerable portion of both capital and operating costs is a function of the number of customers served. This item is important to a distribution company due to the great number of customers.

The above three cost components provide the measurements by which the bulk of all utility costs are normally allocated. Even so, there are a number of costs that do not fall neatly into

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any of these categories and which must be assigned by some appropriate formula or by assignment based upon experienced judgment. Certain elements of costs can only be assigned after all basic costs have been allocated. These costs then follow proportionately the assignment of the functional costs. For example – supervision costs are classified and allocated the same as the costs that require supervision. Account 870, Operation Supervision & Engineering, is classified and allocated based upon Accounts 871 through 879.

Q. Please explain how these cost classifications are used in the cost allocating procedures.

A. Briefly, the allocating procedure follows three basic steps:

1. All of the costs (plant investment, depreciation, operating and maintenance expenses, etc.) that are available from the utility records are analyzed, adjusted and assigned to functional categories and related sub-functions. Some costs do not fall into one or another function and must be studied by further detailed analysis of the utility records and then assigned.

2. After functional assignment, costs are further classified into the cost categories of capacity; commodity, customer and/or revenue based upon the cost causation factors of each individual item.

3. Once assigned to cost categories, allocation to classes follows according to the allocation factor developed for each specific cost item by function or sub function. At times, when data are available, direct assignment to classes is preferred. For example is assigned to the Firm Service rate group. But each such direct assignment must be specifically supported.

Q. Please explain the development of allocation factors.

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A. The development of allocation factors for the following three cost categories is as set forth below:

1. "Capacity/Demand" - Capacity factors are controlled by size or capacity of the facilities which in turn are dictated by the demands placed upon the system by the customers. Normal use and general characteristics of load for the broad classes result in distinct and different load patterns for each. The problem of selecting a demand allocation method can be a controversial question in cost analysis. Even the regulatory bodies indicate no clear pattern of preference of which method to use. Some years ago the National Association of Regulatory Utility Commissioners (NARUC) formed a committee to study this problem. Guidelines which it developed for demand allocation methods include:

(a) The method should be based on some basic philosophy.

(b) The method should recognize the following factors:

- demand;
- supply;
- time of use of energy.

(c) The method should recognize the characteristics of various loads.

(d) It should not be dependent on judgment introduced in the allocating process.

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2. "Commodity" - Again, by definition, commodity costs are those which relate directly to consumables used in producing and distributing the commodity and the related labor, maintenance, and other costs. The allocation factors are the ratios of the commodity that each class requires to the total required for the system.

3. "Customer" - The development of a customer allocation factor is rather straight-forward. By definition those costs assigned to the customer item relate directly to the number of customers in each class. The allocation factor for each class then is the ratio that the number of customers in the class bears to the total number of customers for the utility. Certain refinements are made from time to time when circumstances indicate, such as weighting the customers according to the difficulty of reading the customers' meters or according to the amount of record keeping necessary to bill the account, etc. Choices between average customers or year-end must be made.

Q. What methods of demand allocations are used in cost allocation studies?

A. Perhaps the most widely used methods of demand allocations are:

1. The Coincident Peak; 2. The Non-Coincident Peak; 3. The Average and Excess; 4. The Peak and Average.

1. "The Coincident Peak Method"

This method is based upon the demands of the various classes of service at the time of the system or sub system peak. This method assumes that the costs associated with the maximum load should be divided among the customers creating such maximum peak load regardless of the magnitude of their demands at other times of the month or year or how long they may use the demands they create. The apportionment of the capacity costs under

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this method would be the ratio of the various classes of service at the time of the system peak to the total demand at the same time.

2. "The Non-Coincident Peak Method"

This method is based upon the maximum demands of the individual classes of service regardless of when the demands occur. Under this method the effects of diversity are apportioned equally to each class. The apportionment of demand costs would be in the ratio of each of the class maximum demands to the sum of all the maximum demands irrespective of time of occurrence.

3. "The Average and Excess Demand Method"

This method of apportioning demand costs considers that they should be assigned on the basis of a two-part formula which recognizes first: average use of capacity, and second: responsibility for the additional capacity required to meet the maximum system demands.

4. "The Peak and Average Demand Method"

This method of apportioning demand costs considers that they should be assigned on the basis of a two-part formula which recognizes first: average use of capacity, and second: responsibility for the capacity required to meet the maximum system demands.

It is apparent from these methods of demand cost apportionment and from others that have not been described that much study has been done on the subject. The analyst must have a

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thorough knowledge of the problems involved and any one of the various apportionment methods may be appropriate under certain circumstances. If the system has no capacity limitations, the annual commodity method could also be used.

Q. Would you please outline the method followed in making this study?

A. This study was based on appropriate statistical data such as customers, peak day demands and Therms of annual sales, which were provided to me by Ms. Kathie Barnard of Cascade Natural Gas Corporation for the test year ending September 30, 2005. From these data the following steps were taken to determine the cost of service for each rate schedule:

1. Allocation factors were developed for each rate schedule. Customer factors were developed to allocate the customer classified items, demand factors were developed to allocate the capacity classified items, commodity factors were developed to allocate the commodity classified items, and a portion of the rate base and expense items were directly assigned. The demand factors were developed by using the coincident peak demand method of allocation. Commodity factors were developed by using the annual commodity requirements of each rate schedule. Customer factors were developed by using the number of customers served by each rate schedule.

2. Schedules were prepared classifying all rate base items and all expense items as Customer, Capacity, Commodity, Direct or Revenue.

3. Each of the above items was then allocated to the rate schedules using the allocation factors developed above.

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4. The return dollars per rate schedule were then determined by adding together the expense items per rate schedule and subtracting each total from the revenues per rate schedule.

Q. In the capacity allocation process, how were the demands for the rate schedules calculated?

A. The average of the peak days for the last three years was calculated for the Company. The allocation factors were then calculated.

Q. How were the rate base and expense items classified?

A. Each item, since it was functionalized by FERC account number, was classified based upon the particular use of the item, i.e., customer, capacity, commodity or direct assignment.

Q. How did you handle the intangible plant?

A. The intangible plant classification and allocation was derived based upon the other Operating Plant in Service.

Q. How did you handle the transmission plant?

A. The transmission plant was allocated to all customers being served based upon the Peak and Average Demand for each Rate Schedule, except for the items that were identified as being used only by the Special Contract customers.
These items were directly assigned only to the Special Contract customers. Also the four inch and above steel mains were directly assigned to the large volume customers.

Q. How was the distribution plant classified and allocated?

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A. The mains were classified demand related and allocated using the Peak and Average Demand factors, except for the mains that are used to serve the Special Contract customers, these were directly assigned only to the Special Contract customers, also the four inch and above steel mains were directly assigned to the Large Volume customers.
The M&R Station Equipment-General, and Services were classified demand related and allocated using the Peak and Average Demand factors, Meters, Meter Installations, House Regulators, House Regulator Installations and Other Property were classified as being customer related and allocated to the appropriate customers. The Industrial M&R Station Equipment was classified as being demand related and allocated to the large industrial customers. The Land & Land Rights and Structures & Improvements classification and allocation factors were derived based on the above accounts classification and allocation.

Q. How did you handle the general plant?

A. The general plant was classified and allocated based upon the operating plant in service.

Q. How were other rate base items classified and allocated?

A. Contributions in Aid of Construction, Customer Advances for Construction, Deferred Income Taxes and Working Capital were all classified and allocated based upon the operating plant-in-service.

Q. How were operation and maintenance expenses handled?

A. The Natural Gas City Gate Purchase expenses were classified as commodity costs and were then allocated using the annual commodity allocation factors. The Gas Use for Other Utility Operations was derived based upon the Cost of Gas. The Load Dispatching was

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allocated to all customers using the Peak and Average demand allocation factors, the other Distribution operating expenses were classified and allocated according to the related plant classification and allocation, the maintenance expenses also followed the classification and allocation of the related plant items.

Q. How were customer accounting related expenses handled?

A. Customer Accounts and Customer Service and Information expenses were allocated using the customer allocation factors. Sales expenses were classified evenly as customer, capacity and commodity and allocated to all customers.

Q. How were the administrative and general expenses handled?

A. Administrative and General operation and maintenance expenses were classified and allocated based upon the other operating expenses, Rate Base Plant and Labor Ratios.

Q. How were the other expenses handled?

A. FICA and Federal Unemployment Taxes were allocated based upon the Labor ratios of the O&M Expenses. Property Insurance followed the Operating Plant in Service, Revenue related Taxes followed the Rate Schedule Revenue, Miscellaneous expenses followed the Operating Plant in Service and the Restating and Proforma Adjustments followed the total Taxes Other Than Income classification and allocation. Depreciation expenses were classified and allocated based on the applicable plant in service. Federal Income Tax was allocated based upon the Net Taxable Income for each rate schedule.

Q. After this classification and allocation process you have described was completed, what was the next step in this cost allocation study?

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A. The next step was allowing the computer model, TACOS Gold, to perform the allocation to the various rate schedules and print the results which are the rates of return for each rate schedule and for the total Company. The results of this allocation process are shown in Schedule LMD-1, Page 1. The model, TACOS Gold, was developed by my associate, Dan Drummond, and myself. The current version was developed for use on a Personal Computer and was completed in 1998. Earlier versions ran on Main Frames and/or Micro Computers and were developed starting in 1977. All versions of the model have been used in developing cost allocation studies that have been presented before numerous Regulatory Bodies.

Q. Have you prepared Schedules which show the allocation of every item of Rate Base and Expense to the rate schedules?

A. Yes, Schedule LMD – 3 and LMD - 4 contains a complete listing of the allocation of every item contained in this study to the individual rate schedules.

Q. Mr. Dickey, earlier in your testimony you mentioned the fact that the cost allocation study does not establish either the "value" of service nor the level of "reasonable" rates. Would you please expand on this statement as to the rate design proposed in the current proceedings?

A. Yes, I will. The "value" of service is a decision that must be made by every user of the service. How much they are willing to pay for the service received must be answered by them. At the current time Cascade Natural Gas Corporation, as well as other distribution companies must be aware of the competition from the other fuels available to their customers for heating loads as well as for processing uses. If the price of the product is set at a level which is uneconomical for their uses, the possibility exists of their leaving service

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and using another product or obtaining another source for the product they are using. This fact of economic life must be recognized in the pricing of the product or else these customers will leave service. This means that ultimately the remaining customers will have to share in the plant investment and the expenses formerly paid by the customers who left service which in turn will increase their rates and cause more customers to leave service and the spiral continues.

Q. Mr. Dickey, does this conclude your testimony?

A. Yes