LAW OFFICES OF

ANDERSON, BYRD, RICHESON, FLAHERTY & HENRICHS

A Limited Liability Partnership

216 S. HICKORY, P. O. BOX 17
OTTAWA, KANSAS 66067
(785) 242-1234, *Telephone*
(785) 242-1279, *Facsimile*

JOHN L. RICHESON
JAMES G. FLAHERTY
DEE A. HENRICHS

OF COUNSEL:
RICHARD C. BYRD

R. SCOTT RYBURN
DANIEL D. COVINGTON

ROBERT A. ANDERSON
(1920 - 1994)

June 18, 2003

Ms. Susan K. Duffy
Executive Director
Kansas Corporation Commission
1500 S. W. Arrowhead Road
Topeka, Kansas 66604-4027

Re: Aquila, Inc.
Weather Normalization Adjustment

Dear Ms. Duffy:

Please file the enclosed Application and Testimony of Scott H. Heidtbrink and Paul H. Raab on behalf of Aquila in the above captioned matter. I would appreciate receiving a file stamped copy of this cover letter as well as a file stamped copy of the Application and Testimony for my files. An envelope is included for your convenience.

Thank you for your assistance. If you have any questions, please call.

Sincerely,

James G. Flaherty

James G. Flaherty
jflaherty@abrfh.com

JGF/rr
Enclosure

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In The Matter of The Application of Aquila, Inc. for)
an Order to Permit the Company Establish Rates) Docket No. 03-AQLG-1076-TAR
For a Weather Normalization Adjustment)

APPLICATION

COMES NOW Aquila, Inc., d/b/a Aquila Networks - KGO ("Aquila"), and files this application pursuant to K.S.A. 66-117 and 66-1,200, *et seq*. Aquila is hereby seeking an order to permit Aquila to establish rates for a Weather Normalization Adjustment (WNA). In support of this Application, Aquila states as follows:

I. INTRODUCTION

1. Aquila is a natural gas public utility doing business in the State of Kansas pursuant to certificates of convenience and necessity issued by the Kansas Corporation Commission ("Commission"), with its principal place of business is located at 20 West Ninth Street, Kansas City, Missouri 64105-1711.

2. Aquila is seeking approval of a WNA as described more fully below and in the prefiled testimony attached hereto.

3. In support of this Application, Aquila is submitting the testimony and exhibits of Scott H. Heidtbrink and Paul H. Raab.

4. As explained in the testimony of Messrs. Heidtbrink and Raab, Aquila is seeking approval of a WNA similar to the WNA that Kansas Gas Service currently has in place for its customers in the state of Kansas. Aquila requests permission to implement the WNA beginning with the 2003-04 heating season.

II. AQUILA'S WNA

5. The objective of the proposed WNA is to reduce the variability of gas utility bills due to weather. During years with colder than normal weather, gas utility bills increase as customers use more gas. Part of the increase is necessary to pay for the additional gas commodity used, but the rest of the increase is a result of the utility charging for its gas distribution services through the commodity charge contained in its tariff. Since the utility's cost of providing these distribution services is relatively fixed, the utility receives a windfall from the abnormally cold weather while the customers pay higher bills. Conversely, during years with warmer than normal weather, gas utility bills decline as customers use less gas. This causes the utility to suffer a revenue shortfall while its customers enjoy lower bills. The proposed WNA is designed to adjust customer's bills during periods of abnormal weather so that customers pay approximately the same amount for the utility's gas distribution service as they would have during normal weather. The proposed WNA benefits customers by providing reductions to their bills when they are otherwise high due to abnormally cold weather and offsetting increases to customers bill when they are otherwise low due to abnormally warm weather. The proposal also benefits Aquila by making revenues more stable to better match up with the relatively stable cost of providing distribution service.

6. Under Aquila's proposed WNA, the revenue deviations resulting from abnormal weather are captured in a deferred account and collected or refunded over future sales. This is similar to the WNA currently approved by the Commission for Kansas Gas Service. The WNA will apply to all months of the year. The clause will apply to the same rate classes whose sales were weather normalized during the prior rate case. The WNA will apply with a one-year lag and will begin on October 1 of each year and end on September 30 of the following year. Any excess revenues collected during that period as a result of colder than normal weather will be refunded to customers in the WNA

collection year, which will extend from November 1 of each year to October 31 of the following year. That will allow Aquila time to collect the necessary data and will allow the Commission time to audit Aquila's calculations. Aquila will collect/refund the revenue difference in a separate rider, applied to the volumetric changes for each rate.

7. The set of weather normalization coefficients, heat sensitive factors by rate class, and the weather station Aquila is proposing to use in its WNA are set forth in Mr. Raab's Exhibit PHR-4. A copy of the proposed tariff to implement the WNA is provided as Exhibit PHR-6 to Mr. Raab's testimony.

8. Based upon the description of the proposed services set out herein and discussed in further detail in the prefiled testimony and exhibits submitted herewith, Aquila submits that the WNA will provide benefits to its customers, and will promote the public interest.

WHEREFORE, Aquila respectfully requests that the Commission approve the Application and the proposed WNA.

James G. Flaherty, #11177
ANDERSON, BYRD, RICHESON, FLAHERTY & HENRICHS, LLP
216 S. Hickory, P. O. Box 17
Ottawa, Kansas 66067
(785) 242-1234
Attorneys for Aquila, Inc.

VERIFICATION

STATE OF KANSAS)
)ss:
FRANKLIN COUNTY)

James G. Flaherty, of lawful age, being first duly sworn on oath, states:

That he is an attorney for Aquila, Inc.; that he has read the above and foregoing Application, knows the contents thereof; and that the statements contained therein are true.

James G. Flaherty

SUBSCRIBED AND SWORN to before me this 18 day of June, 2003.

NOTARY PUBLIC – State of Kansas
RONDA ROSSMAN
My Appt. Expires 5/25/06

Notary Public

My Commission Expires:

DIRECT TESTIMONY OF SCOTT H. HEIDTBRINK

AQUILA, INC.

Docket No. 03-AQLG-1076-TAR

Q. Please state your name and business address.

A. My name is Scott H. Heidtbrink. My business address is 110 E. 9th Street, Lawrence, Kansas 66044.

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

A. I am employed by Aquila, Inc. (Aquila) within the operating group Aquila Networks, as the Operating Vice President, Kansas/Colorado Gas.

Q. Briefly describe your educational background and employment history.

A. I have a Bachelor of Science degree in electrical engineering from Kansas State University in Manhattan, Kansas. I have been employed by Aquila since 1987 and was named to my current position in April 2002. I was the Vice President - Gas Operations in 2001, the Vice President - Network Management from 1997 to 2001 and I was the State President and General Manager for Aquila's Kansas gas and electric operations from 1994 to 1997. Prior to that, I held various engineering, supervisory and managerial positions in Aquila's West Plains Energy and Missouri Public Service divisions.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to explain how the proposed Weather Normalization Adjustment (WNA) Program is part of a three step plan to provide

customer's with low cost gas service and to aid in reducing the impact of weather fluctuations.

Q. What is Aquila's three step plan?

A. On September 17, 2002, the Company met with members of Staff to discuss its revenue deficiency and specific alternatives to address it. One available option was to file a rate case. In lieu of filing a rate case, the Company outlined a three-step plan that would delay the immediate need for a rate case. The plan included: 1) effectuating the new rates from the recent depreciation study, 2) an application to spin down the WTPL gathering system, and 3) a WNA Program. This last item is the focus of this application.

Q. Please briefly explain the first two items.

A. With respect to the first item, as part of the last Kansas gas rate case, Aquila agreed to complete a depreciation study. The study resulted in a decrease in depreciation expense of approximately three million dollars annually. The Commission approved the depreciation study in Docket No. 03-AQLG-262-DRS, and the Company began recording the new depreciation rates on January 1, 2003. The new depreciation rates will be reflected in rates established in its next rate case filing and will reduce the Company's revenue requirement.

Regarding the second item, Aquila filed an application in Docket No. 03-AQLG-587-MIS to spin-down the WTPL gathering system to be operated as a Chapter 55 regulated company. If the application is approved and the WTPL gathering system is spun down, then the operating costs and rate base associated

with the WTPL gathering system would not be included in the next rate case, which will further reduce the Company's revenue requirement.

As was explained in the meeting with Staff last September, although these actions will not resolve all of the deficiency, it will allow the Company to postpone its plans for a rate case this year.

Q. Please explain the WNA Program.

A. The WNA Program seeks to minimize the impact of weather to both the Company and its customers.

Q. How is this accomplished?

A. Mr. Paul Raab, Economic Consultant, will discuss this in more detail in his testimony. Briefly, each month the actual non-gas cost revenue collected is compared with the revenue that would have been collected under normal weather conditions. At the end of the twelve month period, the net excess or deficient revenue for the year is computed and the result is either refunded or surcharged over the next twelve months.

Q. Why is the company proposing this program?

A. There are a couple of reasons the Company is proposing this program. First, as Mr. Raab will explain in his testimony, weather normalization programs have been approved in a number of states including Kansas. Second, since weather normalized sales are used to set rates and actual weather is seldom at that normal level, the Company's earnings vary from the allowed rate of return. The Company earns a higher rate of return when the weather is colder than normal and a lower rate of return when the weather is warmer than normal. This program

would reduce the effect of weather on earnings and stabilize the Company's financial returns.

Q. How is this program beneficial to Aquila's customers?

A. The primary benefit to customers is protection from colder than normal weather. After a colder than normal year, the excess revenues earned by the Company would be refunded to customers. In addition the program helps stabilize earnings, which can ultimately result in lower debt costs, reducing the overall capital costs.

Q. How does the WNA Program benefit the Company?

A. The WNA Program will help the Company earn its allowed rate of return by reducing the impact of weather on earnings. Avoiding revenue shortfall due to warmer than normal weather benefits the Company and its shareholders.

Q. Does this conclude your testimony?

A. Yes.

VERIFICATION OF SCOTT H. HEIDTBRINK

STATE OF Kansas)
)ss:
COUNTY OF Douglas)

Scott H. Heidtbrink, being first duly sworn, deposes and says that he is Scott H. Heidtbrink referred to in the foregoing document entitled "Direct Testimony of Scott H. Heidtbrink" before the State Corporation Commission of the State of Kansas and the statements therein were prepared by him or under his direction and are true and correct to the best of his information, knowledge and belief.

Scott H. Heidtbrink

Scott H. Heidtbrink

SUBSCRIBED AND SWORN to before me this 12th day of June, 2003.

Jennifer P. Thomas

Notary Public

My Appointment Expires: 01/11/2007

NOTARY PUBLIC STATE OF KANSAS JENNIFER P. THOMAS My Appt. Exp. 01/11/07

BEFORE THE STATE CORPORATION COMMISSION

OF THE STATE OF KANSAS

DIRECT TESTIMONY

OF PAUL H. RAAB

ON BEHALF OF

AQUILA, INC.

DOCKET NO. 03-AQLG-1076-TAR

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

A. My name is Paul H. Raab and my business address is 4866 Cordell Avenue, Third Floor, Bethesda, MD 20814. I am an independent economic consultant.

Q. ON WHOSE BEHALF ARE YOU APPEARING TODAY?

A. I am appearing on behalf of Aquila, Inc. (Aquila or the Company).

QUALIFICATIONS

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I have a B.A. in Economics from Rutgers University and an M.A. from the State University of New York at Binghamton with a concentration in econometrics. While attending Rutgers, I studied as a Henry Rutgers Scholar.

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.

A. I have been providing consulting services to the utility industry for over twenty-five years, having assisted electric, natural gas, telephone, and water utilities, Commissions, and intervenor clients in a variety of areas. I am trained as a quantitative economist so that most of this assistance has been in the form of mathematical and economic analysis and information systems development. My particular areas of focus are regulatory change management, planning issues, marginal cost and rate design analysis, and depreciation and life analysis. I began my career with the professional services firm that is now known as Ernst & Young, where I was employed for ten years.

Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY BEFORE THIS COMMISSION?

A. Yes. I have provided expert testimony before this Commission in Docket Nos. 174,155-U, 176,716-U, 98-KGSG-822-TAR, 99-KGSG-705-GIG, 01-KGSG-229-TAR and 02-WSRE-436-RTS. In addition, I have provided expert testimony before the state regulatory authorities of the District of Columbia, Indiana, Kentucky, Louisiana, Maryland, Michigan, Missouri, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Tennessee, Virginia, West Virginia, and Wisconsin, as well as the Michigan House Economic Development and Energy Committee, the Province of Saskatchewan, and the United States Tax Court.

Exhibit_____(PHR-1) presents more details on the subject matter of the testimony provided.

Q. HAVE YOU EVER PRESENTED TESTIMONY BEFORE THIS COMMISSION ON THE SUBJECT OF WEATHER NORMALIZATION ADJUSTMENT CLAUSES?

A. Yes. In Docket No. 01-KGSG-229-TAR, I presented testimony on behalf of Kansas Gas Service Company in support of their successful application to implement a Weather Normalization Adjustment (WNA) Clause.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. Aquila is requesting that the Commission approve, by October 1, 2003, a Weather Normalization Adjustment Rider (WNAR) that would allow adjustments to sales customers' bills to reflect normal weather as defined by staff in Docket No. 00-UTCG-336-RTS. The Company is requesting that this program remain in effect until it receives a Commission Order in its next base rate proceeding. I have been asked by the Company to present the computational details of this proposed Weather Normalization Adjustment (WNA) Clause.

III. IDENTIFICATION OF EXHIBITS

Q. DO YOU SPONSOR ANY EXHIBITS?

A. Yes. I sponsor 6 exhibits. Exhibit_____(PHR-1) is a summary of my qualifications. Exhibit_____(PHR-2) is a graphical description of the difference between "normal" and actual weather for the weather station at

Garden City for calendar year 2001. A summary of an American Gas Association (AGA) survey of weather normalization clauses that have been implemented in other jurisdictions is provided in Exhibit_____(PHR-3). Exhibit_____(PHR-4) provides the heat sensitive factors by rate class and weather station that the Company is proposing to use in this WNA Clause. Exhibit_____(PHR-5) contains simplified sample calculations describing how the Company's proposed WNA would work, assuming it had been in existence from October 1999 to October 2002. Finally, the proposed tariff to implement the WNA is provided as Exhibit_____(PHR-6).

IV. ORGANIZATION OF TESTIMONY

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is organized into three additional sections. Section V provides a general discussion of WNA clauses. This discussion includes the types of WNA clauses, how they work mechanically, which Companies have applied for WNA clauses (and which have had them accepted or rejected), and if rejected, why. In the latter category, and of particular relevance to this proceeding, is the WNA clause proposed by United Cities Gas (UCG) in Kansas and rejected by the KCC. I also discuss the experience that Kansas Gas Service has had with its WNA, which was approved by the Commission for implementation on December 1, 2000.

Since the likely (and preferred) approach to be taken in this case is

an application of a WNA outside of a formal rate proceeding, and since any WNA clause would attempt to bring sales levels consistent with the weather normalized sales levels of that proceeding, it is important to understand the weather normalization approach adopted by the Commission in the Company's last formal rate proceeding. Thus, Section VI describes an analysis of the weather normalization approach of Staff witness Soojong Kwak and Company witness Thomas J. Sullivan in Docket No. 00-UTCG-336-RTS and provides a discussion of the heat sensitive factors proposed for use in this application.

Finally, this testimony concludes with a section describing the specific features of the proposed WNA, including the rider that the Company will use to implement the proposal and recommended filing requirements so that the Commission can verify that the Company is properly implementing the WNA ultimately approved by the Commission.

V. DISCUSSION OF WNA CLAUSES

Q. WHAT ARE WEATHER NORMALIZATION ADJUSTMENT MECHANISMS?

A. Weather normalization adjustment (WNA) mechanisms are ratemaking tools that can offset the impact of unusually warm or unusually cold weather on a gas company's operating revenues and earnings. They work by utilizing an adjustment factor that increases or decreases base rates to compensate for deviations from normal weather.

Gas rates charged by local distribution companies (LDCs) are

predicated in part on an assumption of anticipated gas throughput. Because throughput, particularly for heating customers, is highly weather sensitive, deviations from the weather conditions assumed in the development of those rates ("normal" weather) can lead to deviations in revenues and earnings. Indeed, because weather has been at record warm levels in the United States for many of the recent past winters, sales and earnings of LDCs have been significantly stressed.

Exhibit_____(PHR-2) shows graphically just how different actual weather conditions can be from "normal" weather conditions. The exhibit compares monthly HDDs from calendar year 2001 to the corresponding monthly normal HDD value. The degree to which actual HDDs can deviate from "normal" is apparent from the graph.

Q. HAVE OTHER GAS LDCS IMPLEMENTED WNA MECHANISMS?

A. Yes. In the summer of 1990, the AGA Rate Committee sponsored a survey of rate adjustment mechanisms that provide revenue stability in the event of abnormal weather conditions. The results of that survey were published by AGA in June 1991, and subsequently updated in September 1992, December 1994, and April 2000. To my knowledge, these surveys represent the most comprehensive evaluation of WNA clauses to date and are longitudinal in nature so that experience with WNA's can be tracked through time. In addition, these surveys appear to capture the features of such clauses that are in place today and represent a reasonable sample of those LDCs that have applied for a WNA clause,

both successfully and unsuccessfully.

Q. WHAT ARE THE KEY FINDINGS OF THE AGA SURVEY?

A. There are three key findings of the AGA survey work: (1) there are two general types of WNA clauses, (2) there are four key differences in the operation of WNA clauses, and (3) many LDCs have applied for and implemented WNA clauses.

Q. PLEASE DESCRIBE THE TWO TYPES OF WEATHER NORMALIZATION CLAUSES.

A. In what AGA refers to as a type (1) WNA, revenue adjustments to compensate for abnormal weather are added directly to the customer's monthly bill. A type (2) WNA, on the other hand, captures the revenue deviations in a deferred account and collects (or refunds) the difference over future sales.

Q. PLEASE DESCRIBE THE FOUR KEY DIFFERENCES IN THE OPERATION OF WNA CLAUSES.

A. The AGA report identifies four areas in which differences in the application of the WNA arise: the number of months over which the WNA will operate (all months, heating season only, or some combination); volumes covered (sales customers only, all weather-sensitive customers, all customers); threshold levels at which the WNA applies ($\pm$0.5%, $\pm$2.2%); and timing of the adjustment (one month delay, immediate application).

Q. HOW MANY LDCS HAVE IMPLEMENTED WNA CLAUSES?

A. When AGA conducted its first survey in 1991, 10 LDCs had operating WNA clauses and another 10 LDCs had applied. By the time of the last survey in April 2000, 43 WNA clauses were in operation, 3 were under consideration, and 14 had been denied, dismissed, or dropped as part of a rate settlement. Only 4 LDCs had terminated their WNA clauses. This information is summarized in Exhibit_____(PHR-3).

Q. WHAT REASONS ARGUE FOR THE IMPLEMENTATION OF A WNA?

A. One can argue for the implementation of a WNA because it provides benefits to both the customer and the Company.

Q. WHAT BENEFITS DOES THE WNA PROVIDE TO CUSTOMERS?

A. The primary benefit that a WNA provides to customers is bill stability. This program would benefit customers by moderating winter bills in colder than normal periods. Since such periods are often characterized by both greater consumption and higher gas prices, the program provides customers with financial relief, just when they need it the most. As noted by the Wyoming Commission in its Order in Docket No. 30010-GR-96-35:

> [The WNA] has the benefit of shielding customers from rate spikes for non-gas costs which would otherwise occur during periods of cold weather. During periods when the weather is colder than normal, customers will pay less than they would under standard, non-adjusted rate schedules.

Q. HAS THE COMMISSION STAFF PREVIOUSLY RECOGNIZED THE VALUE OF BILL STABILITY TO CONSUMERS?

A. Yes. The testimony of Staff Witness Paul Dietz in Docket No. 00-KGSG-162-PGA clearly recognizes the value of bill stability:

> ...Staff suggests that price risk is something most consumers prefer to avoid when given the choice between alternatives with varying price risk but identical expected prices. Thus, Staff suggests that consumers are, on average, risk averse. Testimony of Paul Dietz at 18.

Q. WHAT BENEFIT DOES THE WNA PROVIDE TO THE COMPANY?

A. The primary benefit is revenue stability.

Q. HOW DO YOU RESPOND TO ARGUMENTS THAT WITH A WNA IN EFFECT, CUSTOMERS ARE BEING CHARGED FOR GAS THAT THEY DID NOT USE?

A. As the Commission is clearly aware, such a statement reflects a lack of understanding of how rates are set in a regulatory arena. Since rates are based on volumes but the bulk of a utility's costs are fixed, a WNA allows the utility to recover its (fixed) costs during the period in which the service is rendered. Thus, customers are charged not for the gas that they did not use, but for the service that they did receive.

To summarize, WNA clauses can be regarded as a win-win situation for the utility and its customers.

Q. IF WNA CLAUSES PROVIDE BENEFITS TO ALL PARTIES, WHY HAVE THEY BEEN DENIED?

A. As a condition of approval, some regulatory Commissions have required the applicant to accept a lower return. The AGA survey cites the need for a lower return as the primary reason for a regulatory body to deny the application of a WNA. Indeed, the Kansas Commission rejected UCG's WNA proposal in 1992 for this very reason.

Q. WHEN THE COMMISSION APPROVED KGS' APPLICATION FOR ITS WNA, DID IT REQUIRE KGS TO ACCEPT A LOWER RETURN?

A. No. While the Commission expressed its belief that the WNA reduced weather-related risk, it only required that the ROE be fully examined in the next base rate proceeding to determine if "a lower ROE to reflect this reduction in weather-related risk could be appropriate."

Q. PLEASE DESCRIBE THE UCG WNA APPLICATION.

A. United Cities Gas applied for the adoption of a type 1 WNA in Kansas in 1992. Staff opposed the WNA, because it was alleged to cause customer confusion, lead to an increase in administrative costs, and send potentially misleading price signals. In addition, Staff believed that the necessary data to support the implementation of a WNA were not available and that the Company's proposal should have been accompanied by a reduction in return to reflect lower risk.

Q. PLEASE DESCRIBE THE KGS WNA APPLICATION.

A. Kansas Gas Service applied for the adoption of a type 2 WNA in Kansas in 2000 in Docket No. 01-KGSG-229-TAR. While Staff expressed similar concerns in this case as they had expressed in the United Cities case, they supported a settlement agreement that recommended the approval of the KGS application.

Q. DID THE COMMISSION ULTIMATELY APPROVE THE SETTLEMENT AGREEMENT?

A. Yes. The Commission approved the settlement agreement on October

27, 2000 and the KGS WNA was applied to all bills rendered on and after December 1, 2000.

Q. HOW COULD A WNA LEAD TO CUSTOMER CONFUSION?

A. Staff argued that, if the WNA were separately identified as a line item on the bill, it would lead to customer confusion as to why this charge appears on the bill. If the WNA were not identified on the bill, customers would be confused as to why the rate changes every month.

Q. HOW DO YOU RESPOND TO STAFF'S FIRST CONCERN THAT THE WNA WILL LEAD TO CUSTOMER CONFUSION?

A. As with any rate change, the Company will have an obligation to educate consumers. However, historical experience has shown that after the consuming public has experience with a new rate or structure, it is ultimately understood and accepted. For example, the Company's PGA varies periodically with little understanding of why it does so by the consuming public, and this does not cause significant customer confusion today.

I would also note that Kansas Gas Service has had its WNA operating since December 2000 and that the WNA factor is specifically identified on customers' bills. KGS management has indicated to me that they have seen no discernible increase in the number of inquiries as a result of the implementation of the WNA.

Q. HOW DO YOU RESPOND TO STAFF'S SECOND CONCERN THAT THE WNA WILL INCREASE ADMINISTRATIVE COSTS?

A. There are two responses. First, the WNA is being proposed outside of a general rate proceeding. As a result, whatever administrative cost increases the Company incurs in the short run will be borne by Company shareholders. Second, this proposal is being made on a trial basis, to be in effect until the Company's next general rate proceeding. Thus, the Company and the Commission can evaluate the increase in administrative costs (if any) during the trial period and determine whether the program benefits support whatever cost increases (if any) are observed. If, at the end of the trial period, either party believes that the program costs do not support the benefits, then the program can be discontinued.

Q. HAS KGS NOTICED ANY INCREASE IN ADMINISTRATIVE COSTS AS A RESULT OF THE IMPLEMENTATION OF THEIR WNA OVER TWO YEARS AGO?

A. No. I have also discussed this issue with KGS management personnel and they inform me that they have observed no incremental administrative costs as a result of the implementation of their WNA.

Q. HOW CAN THE WNA POTENTIALLY SEND MISLEADING PRICE SIGNALS?

A. In the UCG case cited above, Staff argued that the WNA will serve to lower the price during periods of colder weather, the time when a higher price signal may be called for to reduce demand.

Q. HOW DO YOU RESPOND TO STAFF'S CONCERN THAT THE WNA WILL SEND POTENTIALLY MISLEADING PRICE SIGNALS?

A. I do not believe this argument has merit. In an economic sense, the "proper" price signal during any time period or season is the marginal cost. If the Company's costs do not monotonically increase with consumption (since they include fixed costs, we know that they do not), then the marginal cost at high consumption levels will be less than the price charged at those consumption levels and an unnecessarily high price signal will be sent to consumers. A higher than economically efficient price signal leads to a set of consumption and resource allocation distortions that are not necessarily less serious than a lower than economically efficient price.

In other words, economic theory suggests that the WNA provides a more theoretically correct price signal than the price signal sent under a traditional flat rate.

Q. DOES AQUILA LACK THE HISTORICAL DATA TO PROPERLY IMPLEMENT THE WNA?

A. No. As will be described more fully below, the Company intends to utilize similar data from its last rate case to implement the WNA. Thus, Aquila is relying on the same data that have previously been employed in the rate setting process.

Q. HOW DO YOU RESPOND TO STAFF'S FINAL CONCERN THAT THE COMPANY'S WNA PROPOSAL SHOULD BE ACCOMPANIED BY A REDUCTION IN RETURN ON EQUITY TO REFLECT LOWER RISK?

A. As the Commission found in KGS' WNA application, it would only be

appropriate to consider the Company's return in the context of a rate proceeding in which all of the factors that influence that return are evaluated. Only then can the Commission make a determination as to whether the Company's current return is too high or too low with the implementation of the WNA.

However, whatever the merits of this argument may be, it is important to note that WNA clauses are becoming such a common element of the LDC ratemaking landscape that it is doubtful that a list of comparable companies for the purpose of developing a required return on equity could be developed which did not include LDCs that have already implemented WNAs. Accordingly, if WNAs do reduce weather-related financial risk, then utilities without WNAs, such as Aquila, could be disadvantaged if they are compared to allegedly less risky companies with WNAs.

Q. DID THE COMMISSION IMPOSE ANY SPECIAL CONDITIONS ON KGS' IMPLEMENTATION OF THE WNA?

A. The Commission imposed two specific conditions. First, they required KGS to address the relationship between weather risk and financial risk in its next base rate proceeding. Second, they required KGS "to work closely with the Commission's Consumer Affairs and Consumer Protection Division in developing and implementing its WNA Pilot Program consumer education materials, and will provide copies of any and all such consumer education materials to that Division for review and comment,

prior to its use."

Q. COULD AQUILA ABIDE BY THESE SAME CONDITIONS IF THE COMMISSION WERE TO APPROVE AQUILA'S WNA?

A. I have been informed by the Company that they could also abide by these conditions.

VI. DEVELOPMENT OF HEAT SENSITIVE FACTORS

Q. SINCE THE WNA IS BEING PROPOSED OUTSIDE OF A GENERAL RATE PROCEEDING, HOW DO YOU RECOMMEND THAT THE PROPER LEVEL OF WEATHER-NORMALIZED SALES BE DETERMINED?

A. In theory, since the WNA is being proposed outside of a base rate proceeding, then the weather normalization approach applied in the Company's last base rate case should apply when the WNA is developed. However, the rates established in the Company's last base rate proceeding were the result of a "black box" settlement and there were competing weather normalization approaches that were never reconciled by the Commission. Accordingly, the Company developed a new set of weather normalization coefficients that are summarized in Exhibit _____(PHR-4). The HSFs summarized in that exhibit are being proposed by the Company for use in its WNA.

VII. THE PROPOSED WNA

Q. PLEASE DESCRIBE A WNA THAT IS CONSISTENT WITH THE FINDINGS AND CONCLUSIONS ABOVE AND THAT CAN BE

IMPLEMENTED BY THE COMPANY.

A. In light of the above discussion, the Company's proposed WNA will incorporate the following general features:

1. The Company will implement what has been termed a type 2 weather normalization clause. From the AGA survey described above, there are two types of weather normalization clauses that could be proposed in this case. A type 1 clause collects any deficiency or refunds any over collection related to weather during the period over which the deficiency or over collection is identified. A type 2 clause defers the over- and under-collections, and recovers them in some future period. United Cities proposed a type 1 clause in Kansas. While a type 1 clause seems preferred as a mechanism to stabilize customer bills and revenues and also seems somewhat easier to implement (there is no need to true up the collections over a number of periods), I recommend a type 2 clause primarily because of a lack of timely data availability (related to sales and weather) and constraints imposed by the Company's billing system. The Commission approved a type 2 WNA for KGS.

2. Weather normalization will be performed using the factors described above. As indicated previously, these factors are summarized as Exhibit_____(PHR-4).

3. The WNA will apply to all months of the year. The AGA survey indicates a varying number of months during which the WNA can

apply. Since the Company is proposing to implement the WNA outside of a rate case, a primary concern is that it be consistent with the weather normalization process of the last rate case. This would allow/require the clause to operate for all twelve months of the year, although there will be little or no adjustment in June-September period. Since the Company is proposing a type 2 clause in which it will carry positive and negative balances to be collected over future periods, the hope is that the balances drop to 0 during this period.

4. The clause will apply to the same rate classes whose sales were weather normalized during the prior rate case. The primary reason for this feature is to make it consistent with the rate case.

5. Initially, the Company will propose no weather "dead-band". Certain Weather Normalization Adjustments employ a "dead-band," within which no adjustment takes place. This feature has not been incorporated into the Company's proposal because it is somewhat easier to implement without such a dead band.

6. The WNA will apply with a one-year lag. Consistent with the WNA implemented by KGS, the WNA calculation year will begin on October 1 of each year and end on September 30 of the following year. Any excess revenues collected during that period as a result of colder than normal weather will be refunded to customers in the WNA collection year, which will extend from November 1 of each

year to October 31 of the following year. This will allow the Company to collect the necessary data and will also provide the Commission with an opportunity to audit the calculations of the Company. These time periods are also consistent with the Company's PGA year.

7. The Company will collect/refund the revenue difference in a separate rider, applied to the volumetric charges of each rate. There are at least three possible ways to collect the revenue deficiency from or return the excess collections to customers: (1) in the margin rate itself; (2) in its own rider; or (3) in the Purchased Gas Adjustment (PGA) factor. United Cities proposed to implement its WNA in the margin rate. Staff believed that this approach would make bills more difficult to verify and lead to customer confusion, so this approach is not recommended. KGS implements its WNA as a separate factor, applied on a volumetric basis. Aquila proposes to make a similar calculation as KGS. This approach is designed to minimize the need to true up actual collections with anticipated collections from year to year.

Q. PLEASE DESCRIBE THE SPECIFIC ELEMENTS OF THE PROPOSED WNA.

A. The above discussion provides the general framework of the WNA. Exhibit_____(PHR-5) uses this general framework to develop a specific WNA mechanism. This exhibit assumes that the WNA went into place in

January 1998 and demonstrates how it would have operated for Aquila's customers. Using the exhibit as a guide, the following five steps implement the proposed WNA:

1. For each month, calculate the sales deficiency or excess (column (C)) as the product of the heat sensitive factors, the difference between weather normal sales and actual sales, and the number of customers.
2. Calculate the revenue deficiency or excess (column (D)) as the margin rate times the sales deficiency or excess. For the first period, this becomes the WNA account balance (column (G)).
3. Calculate the WNA factor for the upcoming WNA Collection Year (column (F)) as the balance in the WNA account as of September 30 in each year (column (H)) divided by volumes in the WNA Calculation Year (column (E)). This becomes the factor included in the WNA rider.
4. Calculate collections (column (G)) as the product of the current WNA factor (column (F)) and actual volumes (column (E)).
5. Calculate the WNA account balance (column (H)) as the cumulative difference between the current revenue deficiency or excess (column (D)) and the current collections (column (G)).

Q. PLEASE DESCRIBE THE WNA RIDER THAT THE COMPANY WILL IMPLEMENT TO COLLECT THE DEFICIENCIES OR REFUND THE OVER COLLECTIONS AS A RESULT OF WEATHER.

A. Exhibit_____(PHR-6) contains the tariff rider that is necessary to implement the Company's proposed WNA. It incorporates all of the features described above.

Q. YOU MENTIONED PREVIOUSLY THAT APPLYING THE WNA WITH A LAG WOULD PROVIDE THE COMMISSION WITH AN OPPORTUNITY TO AUDIT THE CALCULATIONS OF THE COMPANY. HOW WOULD THIS WORK?

A. I would recommend that should the Commission approve the Company's application they also specify a set of periodic filing requirements. Commission Staff can then use the data provided by the Company to verify that the correct amounts are being billed or refunded.

Q. WHAT FILING REQUIREMENTS WOULD YOU RECOMMEND?

A. I would recommend that the Company file with the Commission the information needed to develop the WNA factor on a monthly basis.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY AT THIS TIME?

A. Yes.

VERIFICATION OF PAUL H. RAAB

STATE OF Maryland)
)ss:
COUNTY OF Montgomery)

Paul H. Raab, being first duly sworn, deposes and says that he is Paul H. Raab referred to in the foregoing document entitled "Direct Testimony of Paul H. Raab" before the State Corporation Commission of the State of Kansas and the statements therein were prepared by him or under his direction and are true and correct to the best of his information, knowledge and belief.

Paul H. Raab

SUBSCRIBED AND SWORN to before me this 12 day of June, 2003.

Notary Public

My Appointment Expires: TIMOTHY W. HAMMETT NOTARY PUBLIC
Montgomery County
State Of Maryland
My Commission Expires Aug. 1, 2006

PAUL H. RAAB

Mr. Raab's consulting focus is on the regulated public utility industry. His experience includes mathematical and economic analyses and system development and his areas of expertise include regulatory change management, load forecasting, supply-side and demand-side planning, management audits, mergers and acquisitions, costing and rate design, and depreciation and life analysis.

PROFESSIONAL EXPERIENCE

Mr. Raab has directed or has had a key role in numerous engagements in the areas listed above. Representative clients are provided for each of these areas in the subsections below.

Regulatory Change Management. Mr. Raab has recently been assisting both electric and natural gas utilities as they prepare to operate in an environment that is significantly different from the one they operate in today. This work has involved the development of unbundled cost of service studies; the development of strategies that will allow companies to prosper in a restructured industry; retail access program development, implementation, and evaluation; and the development of innovative ratemaking approaches to accompany changes in the regulatory structure. Representative clients for whom he has performed such work include:

- Kansas Corporation Commission
- Atmos Energy Corporation
- Electric Cooperatives' Association
- Central Louisiana Electric Company
- Washington Gas
- Western Resources
- Kansas Gas Service
- Mid Continent Market Center.

Load Forecasting. Mr. Raab has broad experience in the review and development of forecasts of sales forecasts for electric and natural gas utilities. This work has also included the development of elasticity of demand measures that have been used for attrition adjustments and revenue requirement reconciliations. Representative clients for whom he has performed such work include:

- Washington Gas Energy Services
- Central Louisiana Electric Company
- Washington Gas
- Saskatchewan Public Utilities Review Commission

- Union Gas Limited
- Nova Scotia Power Corporation
- Cajun Electric Power Cooperative
- Cincinnati Gas & Electric
- Commonwealth Edison Company
- Cleveland Electric Illuminating
- Public Service of Indiana
- Atlantic City Electric Company
- Detroit Edison Company
- Sierra Pacific Power
- Connecticut Natural Gas Corporation
- Appalachian Power Company
- Missouri Public Service Company
- Empire District Electric Company
- Public Service Company of Oklahoma
- Wisconsin Electric Power Company
- Northern States Power Company
- Iowa State Commerce Commission
- Missouri Public Service Commission.

Supply Side Planning. Mr. Raab has assisted clients to determine the most appropriate supply-side resources to meet future demands. This assistance has included the determination of optimal sizes and types of capacity to install, determination of production costs including and excluding the resource, and an assessment of system reliability changes as a result of different resource additions. Much of this work for the following clients has been done in conjunction with litigation:

- Washington Gas
- Soyland Electric Cooperative
- Houston Lighting and Power
- City of Farmington, New Mexico
- Big Rivers Electric Cooperative
- City of Redding, California
- Brown & Root
- Kentucky Joint Committee on Electric Power Planning Coordination
- Sierra Pacific Power.

Demand Side Planning. Demand Side Planning involves the forecasting of future demands; the design, development, implementation, and evaluation of demand side management programs; the determination of future supply side costs; and the integration of cost effective demand side management programs into an Integrated Least Cost Resource Plan. Mr. Raab has performed such work for the following clients:

- Washington Gas Light Company
- Piedmont Natural Gas Company
- Chesapeake Utilities
- Pennsylvania & Southern Gas
- Montana-Dakota Utilities.

Management Audits. Mr. Raab has been involved in a number of management audits. Consistent with his other experience, the focus of his efforts has been in the areas of load forecasting, demand- and supply-side planning, integrated resource planning, sales and marketing, and rates. Representative commission/utility clients are as follows:

- Public Utilities Commission of Ohio/East Ohio Gas
- Kentucky Public Service Commission/Louisville Gas & Electric
- New Hampshire Public Service Commission/Public Service Company of New Hampshire
- New Mexico Public Service Commission/Public Service of New Mexico
- New York Public Service Commission/New York State Electric & Gas
- Missouri Public Service Commission/Laclede Gas Company
- New Jersey Board of Public Utilities/Jersey Central Power & Light
- New Jersey Board of Public Utilities/New Jersey Natural Gas
- Pennsylvania Public Utilities Commission/ Pennsylvania Power & Light
- California Public Utilities Commission/San Diego Gas & Electric Company.

Mergers and Acquisitions. Mr. Raab has been involved in a number of merger and acquisition studies throughout his career. Many of these were conducted as confidential studies and cannot be listed. Those in which his involvement was publicly known are:

- ONEOK, Inc./Southwest Gas Corporation
- Western Resources
- Constellation.

Costing and Rate Design Analysis. Mr. Raab has prepared generic rate design studies for the National Governor's Conference, the Electricity Consumer's Resource Council, the Tennessee Valley Industrial Committee, the State Electricity Commission of Western Australia, and the State Electricity Commission of Victoria. These generic studies addressed advantages and disadvantages of alternative costing approaches in the electric utility industry; the strengths and weaknesses of commonly encountered costing methodologies; future tariff policies to promote equity, efficiency, and fairness criteria; and the advisability of changing tariff policies. Mr. Raab has performed specific costing and rate design studies for the following companies:

- Western Resources
- Kansas Gas Service Company
- Central Louisiana Electric Company
- Washington Gas Light Company
- Piedmont Natural Gas Company
- Chesapeake Utilities
- Pennsylvania & Southern Gas
- KPL Gas Service Company
- Allegheny Power Systems
- Northern States Power
- Interstate Power Company
- Iowa-Illinois Gas & Electric Company
- Arkansas Power and Light
- Iowa Power & Light
- Iowa Public Service Company
- Southern California Edison
- Pacific Gas & Electric
- New York State Electric & Gas
- Middle South Utilities
- Missouri Public Service Company
- Empire District Electric Company
- Sierra Pacific Power
- Commonwealth Edison Company
- South Carolina Electric & Gas
- State Electricity Commission of Western Australia
- State Electricity Commission of Victoria, Australia
- Public Service Company of New Mexico
- Tennessee Valley Authority.

Depreciation and Life Analysis. Mr. Raab has extensive experience in depreciation and life analysis studies for the electric, gas, rail, and telephone industries and has taught a course on depreciation at George Washington University, Washington, DC. Representative clients in this area include:

- Champaign Telephone Company
- Plains Generation & Transmission Cooperative
- CSX Corporation (Includes work for Seaboard Coast Line, Louisville & Nashville, Baltimore & Ohio, Chesapeake & Ohio, and Western Maryland Railroads)
- Lea County Electric Cooperative, Inc.
- North Carolina Electric Membership Cooperative
- Alberta Gas Trunk Lines (NOVA)
- Federal Communications Commission.

TESTIMONY

The following table summarizes Mr. Raab's testimony experience.

Jurisdiction	Docket Number	Subject
District of Columbia	834	Demand Side Planning
	905	Costing/Rate Design
	917	Costing/Rate Design
	921	Demand Side Planning
	922	Rate Design
	934	Rate Design
	989	Rate Design
	1016	Costing/Rate Design
Indiana	36818	Capacity Planning
Kansas	174,155-U	Retail Competition
	176,716-U	Costing/Rate Design
	98-KGSG-822-TAR	Rate Design
	99-KGSG-705-GIG	Restructuring
	01-KGSG-229-TAR	Rate Design
	02-WSRE-301-RTS	Cost of Service
	03-KGSG-602-RTS	Cost of Service
Kentucky	9613	Capacity Planning
	97-083	Management Audit
Louisiana	U-21453	Restructuring/Market Power
Maryland	8251	Costing/Rate Design
	8259	Demand Side Planning
	8315	Costing/Rate Design
	8720	Demand Side Planning
	8920	Costing/Rate Design
Michigan	U-6949	Load Forecasting
	U-13575	Costing/Rate Design
Missouri	GR-2002-356	Rate Design
Nevada	81-660	Load Forecasting

Jurisdiction	Docket Number	Subject
New Jersey	OAL# PUC 1876-82 BPU# 822-0116	Load Forecasting
New Mexico	2087	Capacity Planning
New York	27546	Costing/Rate Design
Ohio	81-1378-EL-AIR	Load Forecasting
Oklahoma	27068	Load Forecasting
Tennessee	PURPA Hearings	Costing/Rate Design
US Tax Court	4870 4875	Life Analysis Life Analysis
Virginia	PUE900013 PUE920041 PUE940030 PUE940031 PUE950131 PUE-2002-00364	Demand Side Planning Costing/Rate Design Costing/Rate Design Costing/Rate Design Capacity Planning Costing/Rate Design
West Virginia	79-140-E-42T 90-046-E-PC	Capacity Planning Demand Side Planning
Wisconsin	05-EP-2	Capacity Planning

In addition, Mr. Raab has presented expert testimony before the Michigan House Economic Development and Energy Committee and the Province of Saskatchewan. He is a member of the Advisory Board of the Expert Evidence Report, published by The Bureau of National Affairs, Inc.

EDUCATION

Mr. Raab holds a B.A. (with high distinction) in Economics from Rutgers University and an M.A. from SUNY at Binghamton with a concentration in Econometrics. While attending Rutgers, he studied as a Henry Rutgers Scholar.

PUBLICATIONS AND PRESENTATIONS

Mr. Raab has published in a number of professional journals and spoken at a number of industry conferences. His publications/ presentations include:

- "Factors Influencing Cooperative Power Supply," National Rural Utilities Cooperative Finance Corporation Independent Borrower's Conference, Boston, MA, July 3, 1997.
- "Current Status of LDC Unbundling," American Gas Association Unbundling Conference: Regulatory and Competitive Issues, Arlington, VA, June 19, 1997.
- "Balancing, Capacity Assignment, and Stranded Costs," American Gas Association Rate and Strategic Planning Committee Spring Meeting, Phoenix, AZ, March 26, 1997.
- "Gas Industry Restructuring and Changes: The Relationship of Economics and Marketing" (with Jed Smith), National Association of Business Economists, 38th Annual Meeting, Boston, MA September 10, 1996.
- "Improving Corporate Performance By Better Forecasting," 1996 Peak Day Demand and Supply Planning Seminar, San Francisco, CA, April 11, 1996.
- "Natural Gas Price Elasticity Estimation," AGA Forecasting Review, Vol. 6, No. 1, November 1995.
- "Assessing Price Competitiveness," Competitive Analysis & Benchmarking for Power Companies, Washington, DC, November 13, 1995.
- "Avoided Cost Concepts and Management Considerations," Workshop on Avoided Costs in a Post 636 Gas Industry: Is It Time to Unbundle Avoided Cost? Sponsored by the Gas Research Institute and Wisconsin Center for Demand-Side Research, Milwaukee, WI, June 29, 1994.
- "Estimating Implied Long- and Short-Run Price Elasticities of Natural Gas Consumption," Atlantic Economic Conference, Philadelphia, PA, October 10, 1993.

- "Program Evaluation and Marginal Cost," The Natural Gas Least Cost Planning Conference, Washington, DC, April 7, 1992.

- "The New Environmentalism & Least Cost Planning," Institute for Environmental Negotiation, University of Virginia, May 15, 1991.

- "Development of Conditional Demand Estimates of Gas Appliances," AGA Forecasting Review, Vol. 1, No. 1, October 1988.

- "The Feasibility Study: Forecasting and Sensitivities," Municipal Wastewater Treatment Facilities, The Energy Bureau, Inc., November 18, 1985.

- "The Development of a Gas Sales End-Use Forecasting Model," Third International Forecasting Symposium, The International Institute of Forecasting, July 1984.

- "New Forecasting Guidelines for REC's - A Seminar," (Chairman), Kansas City, Missouri, June 1984.

- "A Method and Application of Estimating Long Run Marginal Cost for an Electric Utility," Advances in Microeconomics, Volume II, 1983.

- "Forecasting Under Public Scrutiny," Forecasting Energy and Demand Requirements, University of Wisconsin - Extension, October 25, 1982.

- "Forecasting Public Utilities," The Journal of Business Forecasting, Vol. 1, No. 4, Summer, 1982.

- "Are Utilities Underforecasting," Electric Ratemaking, Vol. 1. No. 1, February, 1982.

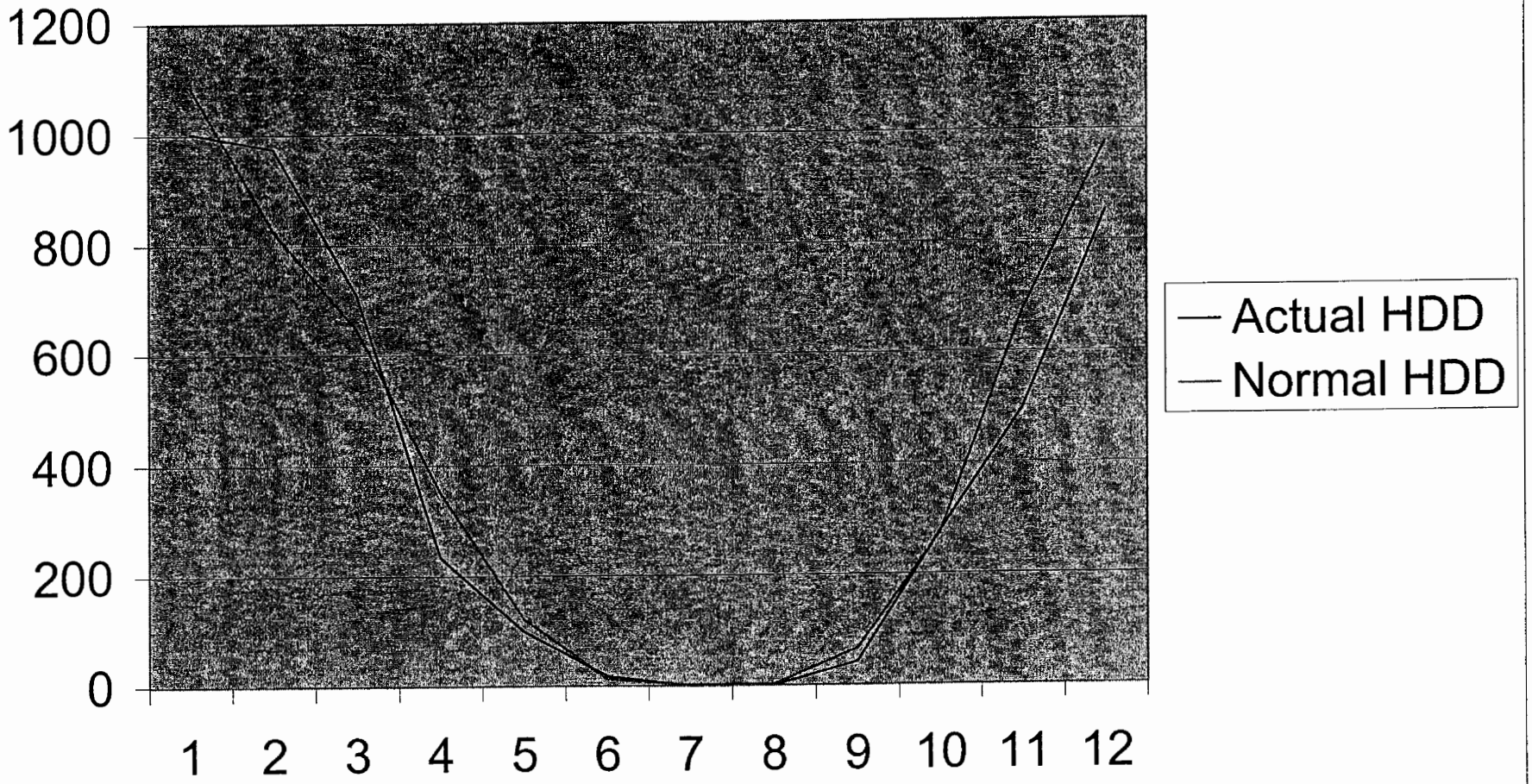
- "A Polynomial Spline Function Technique for Defining and Forecasting Electric Utility Load Duration Curves," First International Forecasting Symposium, Montreal, Canada, May, 1981.

- "Time-of-Use Rates and Marginal Costs," ELCON Legal Seminar, March 20, I980.

- "The Ernst & Whinney Forecasting Model," Forecasting Energy & Demand Requirements, University of Wisconsin - Extension, October 8, I979.

- "Marginal Cost in Electric Utilities--A Multi-Technology Multi-Period Analysis" (with Frederick McCoy), ORSA/Tims Joint National Meeting, Los Angeles, California, November 13-15, 1978.

Exhibit_____(PHR-2)
Comparison of Actual and Normal HDDs



EXHIBIT____(PHR-3)
STATUS OF WEATHER NORMALIZATION CLAUSE FILINGS
Primary Source: AGA UPDATE ON WEATHER NORMALIZATION CLAUSES, April 2000

COMPANY	STATUS	TYPE OF CLAUSE
Alabama Gas Corp.	Approved - 1990	1
Arkla, Inc. - AR	Approved - 1995	1
Arkla, Inc. - OK	Approved - 1997	1
Atlanta Gas Light Co.	Approved - 1989	1
BC Gas Inc.	Approved - 1994	2
Brooklyn Union	Approved - 1980	1
Chattanooga Gas Co.	Approved - 1991	1
City of Richmond, Department of Public Utilities	Approved - 1992	2
Columbia Gas of Kentucky, Inc.	Approved - 1994	1
Columbia Gas of Maryland, Inc.	Approved - 1993	1
Consolidated Edison Company of New York	Approved - 1989	1
Delta Natural Gas	Approved - 1999	1
East Ohio Gas Co.	Approved - 1994	1
Elizabethtown Gas Co.	Approved - 1991	2
Gaz Metropolitain, Inc.	Approved - 1980	2
Kansas Gas Service	Approved - 2000	2
Laclede Gas Co.	Approved - 2002	2
Long Island Lighting Co.	Approved - 1992	1
National Fuel Gas Distribution Co.	Approved - 1988	1
New Jersey Natural Gas Co.	Approved - 1992	2
Niagara Mohawk Power Corp.	Approved - 1994	1
North Carolina Natural Gas Corp.	Approved - 1991	1
Orange & Rockland Utilities, Inc.	Approved - 1993	1
Pacific Gas and Electric Co.	Approved - 1988	2
Peoples Gas	Approved - 2000	2
Piedmont Natural Gas Company - NC	Approved - 1991	1
Piedmont Natural Gas Company - SC	Approved - 1993	1
Piedmont Natural Gas Company -TN	Approved - 1992	1
Public Service Company of North Carolina	Approved - 1991	1
Questar - UT	Approved - 1995	1
Questar - WY	Approved - 1998	1
Rochester Gas & Electric Corp.	Approved - 1992	1
San Diego Gas & Electric Co.	Approved - 1985	2
South Carolina Electric & Gas Co.	Approved - 1991	1
South Jersey Gas Co.	Approved - 1992	2
Southern California Gas Co.	Approved - 1988	2
Southern Connecticut Gas Co.	Approved - 1993	1
Southern Union Gas Co.	Approved - 1991	1
Southwest Gas Corp.	Approved - 1990	2
TXU Electric and Gas	Approved - 1991	1&2
United Cities Gas Co. - GA	Approved - 1990	1
United Cities Gas Co. - TN	Approved - 1991	1
EnergyNorth Natural Gas, Inc.	Approved - 2002	1
Arkansas Oklahoma	Terminated - 1990s	1
Arkansas Western	Terminated - 1997	1
Arkla, Inc. - KS	Dropped in Settlement	1
Arkla, Inc. - LA	Dropped in Settlement	1
Bay State Gas Co.	Denied	2
Berkshire Gas Co.	Dismissed	2
Columbia Gas of Pennsylvania, Inc.	Dropped in Settlement	1
Columbia Gas of Ohio, Inc.	Terminated - 1995	1
Commonwealth Gas Services, Inc.	Denied	1
Connecticut Natural Gas	Under Consideration	1
Indiana Gas Co., Inc.	Dropped in Settlement	1
Madison Gas & Electric	Denied	1
Minnegasco	Dropped in Settlement	1
Montana-Dakota Utilities Co.	Under Consideration	1
National Fuel Gas Distribution Co.	Dropped in Settlement	1
New York State Electric and Gas Corp.	Terminated - 1995	1
Providence Gas Co.	Denied	1 & 2
United Cities Gas Co. - KS	Denied	1
Washington Energy Co.	Denied	1
Washington Gas	Under Consideration	2
Wisconsin Gas Co.	Denied	1

EXHIBIT_____(PHR-4)
SUMMARY OF HEAT SENSITIVE FACTORS

Rate Class	Weather Station	HDD Coefficient Current Month	Previous Month
Residential	Dodge City	0.004596	0.010095
	Garden City	0.004550	0.009558
	Goodland	0.002838	0.012964
	Hutchinson	0.004210	0.009627
	Lawrence	0.004076	0.010259
	Liberal	0.004758	0.010689
	Wichita	0.004621	0.009558
Small Commercial	Dodge City	0.005796	0.020801
	Garden City	0.006784	0.021729
	Goodland	0.000000	0.027389
	Hutchinson	0.006637	0.020733
	Lawrence	0.008048	0.021056
	Liberal	0.008204	0.024424
	Wichita	0.011186	0.022491
Small Volume	Dodge City	0.030446	0.081449
	Garden City	0.034616	0.091012
	Goodland	0.000000	0.106713
	Hutchinson	0.023824	0.135189
	Lawrence	0.044351	0.118269
	Liberal	0.000000	0.134581
	Wichita	0.058183	0.125270
Large Volume	Dodge City	0.000000	0.314214
	Garden City	0.428629	0.000000
	Goodland	0.000000	0.583040
	Hutchinson	-	-
	Lawrence	0.000000	1.543961
	Liberal	0.000000	0.777820
	Wichita	0.000000	0.899660

EXHIBIT____(PHR-5)
PROPOSED AQUILA WNA SAMPLE CALCULATIONS
RESIDENTIAL CLASSES

MARGIN RATE (MR) = $1.9519

Year	Month	Number of Customers	Volumetric Adjustment/ Customer	Sales Deficiency/ (Excess)	Revenue Deficiency/ (Excess)	Volumes	WNA Factor (F)=(J(Oct))/	Collections	Account Balance (H)=H(t-1)+(D)-
		(A)	(B)	(C)=(A)*(B)	(D)=MR*(C)	(E)	(E)	(G)=(E)*(F)	(G)
1999	October	88,258	(0.26)	(22,901)	($44,700)	292,149	$0.00000	$0	-$44,700
	November	88,937	1.28	113,403	$221,351	377,089	$0.00000	$0	$176,651
	December	89,812	3.22	289,240	$564,567	827,492	$0.00000	$0	$741,217
2000	January	90,262	2.15	193,982	$378,633	1,284,735	$0.00000	$0	$1,119,850
	February	90,508	2.32	210,012	$409,923	1,285,035	$0.00000	$0	$1,529,773
	March	90,522	2.16	195,912	$382,401	971,286	$0.00000	$0	$1,912,174
	April	90,412	0.88	79,985	$156,122	646,729	$0.00000	$0	$2,068,296
	May	90,706	0.48	43,538	$84,982	354,619	$0.00000	$0	$2,153,278
	June	89,963	0.45	40,763	$79,565	235,298	$0.00000	$0	$2,232,843
	July	90,416	0.04	3,953	$7,716	196,822	$0.00000	$0	$2,240,559
	August	90,555	0.02	1,518	$2,964	160,458	$0.00000	$0	$2,243,523
	September	88,890	0.00	60	$118	166,565	$0.00000	$0	$2,243,641
	October	89,571	0.20	18,007	$35,149	264,790	$0.29443	$0	$2,278,790
	November	89,866	0.01	631	$1,232	455,722	$0.29443	$134,179	$2,145,843
	December	90,491	(2.50)	(226,378)	($441,867)	1,231,318	$0.29443	$362,540	$1,341,436
2001	January	91,025	(2.27)	(206,311)	($402,699)	1,642,888	$0.29443	$483,719	$455,018
	February	90,483	0.30	27,280	$53,249	1,257,143	$0.29443	$370,143	$138,123
	March	91,137	(1.23)	(112,405)	($219,402)	1,183,556	$0.29443	$348,477	-$429,756
	April	90,746	(0.30)	(27,542)	($53,759)	712,776	$0.29443	$209,864	-$693,379
	May	90,526	1.41	127,815	$249,482	312,575	$0.29443	$92,032	-$535,930
	June	88,763	0.39	34,776	$67,879	212,674	$0.29443	$62,618	-$530,668
	July	89,238	0.01	1,289	$2,515	176,137	$0.29443	$51,860	-$580,013
	August	89,540	0.02	1,491	$2,910	154,861	$0.29443	$45,596	-$622,699
	September	89,253	0.10	9,319	$18,190	155,616	$0.29443	$45,818	-$650,328
	October	89,289	0.21	18,313	$35,745	194,787	-$0.10046	$57,352	-$671,934
	November	89,873	1.04	93,081	$181,686	324,100	-$0.10046	-$32,558	-$457,690
	December	91,038	2.93	266,754	$520,678	695,380	-$0.10046	-$69,856	$132,844
2002	January	91,829	2.63	241,812	$471,993	1,274,639	-$0.10046	-$128,047	$732,884
	February	91,640	2.00	183,471	$358,117	1,173,225	-$0.10046	-$117,859	$1,208,860
	March	91,923	(0.01)	(689)	($1,345)	1,078,772	-$0.10046	-$108,371	$1,315,886
	April	92,062	(0.82)	(75,652)	($147,665)	762,529	-$0.10046	-$76,602	$1,244,822
	May	91,828	0.72	66,078	$128,977	342,133	-$0.10046	-$34,370	$1,408,170
	June	91,251	(0.01)	(476)	($928)	223,849	-$0.10046	-$22,487	$1,429,728
	July	90,943	0.10	8,884	$17,342	167,612	-$0.10046	-$16,838	$1,463,908
	August	91,637	0.01	1,354	$2,643	158,305	-$0.10046	-$15,903	$1,482,454
	September	90,477	0.16	14,731	$28,753	160,248	-$0.10046	-$16,098	$1,527,305
	October	90,552	(0.50)	(45,571)	($88,949)	196,914	$0.18914	-$19,781	$1,458,137

SMALL COMMERCIAL CLASSES

MARGIN RATE (MR) = $2.0500

Year	Month	Number of Customers	Volumetric Adjustment/ Customer	Sales Deficiency/ (Excess)	Revenue Deficiency/ (Excess)	Volumes	WNA Factor (F)=(J(Oct))/	Collections	Account Balance (H)=H(t-1)+(D)-
		(A)	(B)	(C)=(A)*(B)	(D)=MR*(C)	(E)	(E)	(G)=(E)*(F)	(G)
1999	October	7,116	(0.67)	(4,783)	($9,805)	31,190	$0.00000	$0	-$9,805
	November	7,189	2.25	16,144	$33,094	50,004	$0.00000	$0	$23,290
	December	7,350	6.74	49,566	$101,610	124,180	$0.00000	$0	$124,899
2000	January	7,351	4.46	32,773	$67,186	216,336	$0.00000	$0	$192,085
	February	7,428	4.72	35,064	$71,881	212,783	$0.00000	$0	$263,966
	March	7,439	4.58	34,087	$69,877	160,868	$0.00000	$0	$333,843
	April	7,389	1.77	13,058	$26,770	97,504	$0.00000	$0	$360,613
	May	7,347	0.95	6,986	$14,322	45,606	$0.00000	$0	$374,935
	June	7,297	0.95	6,932	$14,211	28,127	$0.00000	$0	$389,145
	July	7,200	0.11	802	$1,645	34,473	$0.00000	$0	$390,790
	August	7,243	0.03	225	$461	21,857	$0.00000	$0	$391,251
	September	7,204	0.01	78	$161	23,267	$0.00000	$0	$391,412
	October	7,321	0.29	2,110	$4,326	34,110	$0.29443	$0	$395,738
	November	7,413	0.27	2,009	$4,119	67,710	$0.29443	$19,936	$379,922
	December	7,580	(5.10)	(38,636)	($79,204)	216,126	$0.29443	$63,635	$237,083
2001	January	7,923	(4.74)	(37,517)	($76,909)	325,277	$0.29443	$95,772	$64,401
	February	7,801	0.84	6,514	$13,354	251,663	$0.29443	$74,098	$3,658
	March	7,895	(2.64)	(20,860)	($42,762)	229,357	$0.29443	$67,530	-$106,634
	April	7,758	(0.76)	(5,887)	($12,069)	120,601	$0.29443	$35,509	-$154,212
	May	7,691	3.08	23,702	$48,590	47,549	$0.29443	$14,000	-$119,622
	June	7,512	0.87	6,505	$13,336	30,988	$0.29443	$9,124	-$115,409
	July	7,543	0.05	364	$745	26,890	$0.29443	$7,917	-$122,581
	August	7,530	0.03	228	$467	22,801	$0.29443	$6,713	-$128,827
	September	7,624	0.21	1,568	$3,214	28,652	$0.29443	$8,436	-$134,049
	October	7,695	0.45	3,499	$7,172	29,083	-$0.10046	$8,563	-$135,440
	November	7,722	1.89	14,603	$29,937	47,078	-$0.10046	-$4,729	-$100,774
	December	7,802	6.00	46,795	$95,929	116,265	-$0.10046	-$11,680	$6,834
2002	January	8,047	5.20	41,856	$85,805	240,800	-$0.10046	-$24,190	$116,830
	February	7,947	4.00	31,822	$65,236	221,280	-$0.10046	-$22,229	$204,295
	March	8,079	(0.02)	(189)	($388)	209,394	-$0.10046	-$21,035	$224,942
	April	8,058	(2.06)	(16,596)	($34,021)	138,376	-$0.10046	-$13,901	$204,822
	May	7,953	1.68	13,368	$27,405	51,639	-$0.10046	-$5,188	$237,414
	June	7,892	0.04	280	$574	30,542	-$0.10046	-$3,068	$241,056
	July	7,818	0.25	1,933	$3,964	24,289	-$0.10046	-$2,440	$247,460
	August	7,770	0.03	206	$423	24,182	-$0.10046	-$2,429	$250,312
	September	7,748	0.31	2,382	$4,883	23,171	-$0.10046	-$2,328	$257,523
	October	7,827	(0.80)	(6,283)	($12,879)	27,865	$0.18914	-$2,799	$247,443

SMALL VOLUME CLASSES

MARGIN RATE (MR) = $1.2000

Year	Month	Number of Customers	Volumetric Adjustment/ Customer	Sales Deficiency/ (Excess)	Revenue Deficiency/ (Excess)	Volumes	WNA Factor (F)=(J(Oct))/	Collections	Account Balance (H)=H(t-1)+(D)-
		(A)	(B)	(C)=(A)*(B)	(D)=MR*(C)	(E)	(E)	(G)=(E)*(F)	(G)
1999	October	1,643	(3.04)	(4,991)	($5,989)	77,351	$0.00000	$0	-$5,989
	November	1,631	10.74	17,523	$21,027	112,338	$0.00000	$0	$15,039
	December	1,651	32.99	54,471	$65,365	176,118	$0.00000	$0	$80,404
2000	January	1,635	20.92	34,210	$41,052	330,745	$0.00000	$0	$121,455
	February	1,633	22.14	36,150	$43,380	248,854	$0.00000	$0	$164,835
	March	1,625	21.90	35,581	$42,697	216,869	$0.00000	$0	$207,533
	April	1,638	8.43	13,806	$16,567	169,140	$0.00000	$0	$224,100
	May	1,622	4.38	7,112	$8,535	99,843	$0.00000	$0	$232,634
	June	1,613	4.59	7,404	$8,884	60,976	$0.00000	$0	$241,519
	July	1,578	0.48	765	$918	57,446	$0.00000	$0	$242,437
	August	1,592	0.13	199	$239	57,606	$0.00000	$0	$242,676
	September	1,591	0.05	85	$102	61,906	$0.00000	$0	$242,778
	October	1,597	1.49	2,376	$2,851	101,026	$0.29443	$0	$245,630
	November	1,565	1.85	2,897	$3,476	91,129	$0.29443	$26,831	$222,275
	December	1,581	(24.69)	(39,035)	($46,842)	177,633	$0.29443	$52,301	$123,132
2001	January	1,640	(23.43)	(38,429)	($46,115)	265,196	$0.29443	$78,082	-$1,066
	February	1,574	4.46	7,022	$8,427	259,945	$0.29443	$76,536	-$69,175
	March	1,637	(12.62)	(20,659)	($24,791)	203,783	$0.29443	$60,000	-$153,967
	April	1,618	(3.83)	(6,195)	($7,434)	146,651	$0.29443	$43,179	-$204,580
	May	1,579	15.28	24,120	$28,944	73,844	$0.29443	$21,742	-$197,378
	June	1,584	4.25	6,733	$8,079	59,474	$0.29443	$17,511	-$206,810
	July	1,587	0.27	433	$520	57,954	$0.29443	$17,063	-$223,353
	August	1,555	0.13	196	$235	50,063	$0.29443	$14,740	-$237,859
	September	1,579	1.07	1,683	$2,019	54,087	$0.29443	$15,925	-$251,765
	October	1,581	2.70	4,264	$5,117	63,044	-$0.10046	$18,562	-$265,210
	November	1,592	9.30	14,806	$17,767	93,402	-$0.10046	-$9,383	-$238,060
	December	1,597	28.64	45,746	$54,895	230,393	-$0.10046	-$23,145	-$160,020
2002	January	1,595	25.11	40,053	$48,064	244,155	-$0.10046	-$24,527	-$87,429
	February	1,598	19.81	31,651	$37,981	231,729	-$0.10046	-$23,279	-$26,169
	March	1,618	0.02	38	$46	217,750	-$0.10046	-$21,875	-$4,249
	April	1,579	(10.54)	(16,647)	($19,977)	152,152	-$0.10046	-$15,285	-$8,941
	May	1,591	7.82	12,436	$14,924	70,455	-$0.10046	-$7,078	$13,060
	June	1,592	(0.19)	(295)	($354)	56,552	-$0.10046	-$5,681	$18,387
	July	1,594	1.11	1,772	$2,126	37,227	-$0.10046	-$3,740	$24,253
	August	1,567	0.11	173	$208	42,376	-$0.10046	-$4,257	$28,718
	September	1,561	1.51	2,363	$2,835	41,796	-$0.10046	-$4,199	$35,752
	October	1,589	(3.59)	(5,703)	($6,844)	52,572	$0.18914	-$5,281	$34,189

LARGE VOLUME CLASSES

MARGIN RATE (MR) = $0.5300

Year	Month	Number of Customers	Volumetric Adjustment/ Customer	Sales Deficiency/ (Excess)	Revenue Deficiency/ (Excess)	Volumes	WNA Factor (F)=(J(Oct))/	Collections	Account Balance (H)=H(t-1)+(D)-
		(A)	(B)	(C)=(A)*(B)	(D)=MR*(C)	(E)	(E)	(G)=(E)*(F)	(G)
1999	October	47	(20.33)	(956)	($506)	36,676	$0.00000	$0	-$506
	November	47	46.92	2,205	$1,169	26,483	$0.00000	$0	$662
	December	46	204.27	9,396	$4,980	39,129	$0.00000	$0	$5,643
2000	January	49	118.98	5,830	$3,090	48,562	$0.00000	$0	$8,732
	February	47	128.43	6,036	$3,199	45,158	$0.00000	$0	$11,932
	March	44	141.38	6,221	$3,297	37,216	$0.00000	$0	$15,229
	April	45	61.00	2,745	$1,455	24,908	$0.00000	$0	$16,683
	May	46	27.84	1,280	$679	17,270	$0.00000	$0	$17,362
	June	46	34.37	1,581	$838	14,090	$0.00000	$0	$18,200
	July	45	1.97	89	$47	10,356	$0.00000	$0	$18,247
	August	44	0.81	36	$19	10,274	$0.00000	$0	$18,266
	September	45	0.36	16	$9	12,449	$0.00000	$0	$18,274
	October	46	9.86	453	$240	15,875	$0.29443	$0	$18,515
	November	47	12.93	608	$322	18,098	$0.29443	$5,329	$13,508
	December	48	(99.01)	(4,753)	($2,519)	36,817	$0.29443	$10,840	$149
2001	January	53	(174.30)	(9,238)	($4,896)	50,291	$0.29443	$14,807	-$19,554
	February	52	22.34	1,161	$616	43,368	$0.29443	$12,769	-$31,708
	March	54	(53.50)	(2,889)	($1,531)	43,198	$0.29443	$12,719	-$45,958
	April	55	(43.58)	(2,397)	($1,271)	26,559	$0.29443	$7,820	-$55,048
	May	54	82.62	4,462	$2,365	15,243	$0.29443	$4,488	-$57,171
	June	55	24.75	1,361	$721	12,422	$0.29443	$3,657	-$60,107
	July	53	(0.16)	(8)	($4)	8,494	$0.29443	$2,501	-$62,613
	August	55	0.94	52	$27	8,223	$0.29443	$2,421	-$65,006
	September	54	4.38	236	$125	10,904	$0.29443	$3,210	-$68,092
	October	51	8.78	448	$237	18,445	-$0.10046	$5,431	-$73,285
	November	53	42.06	2,229	$1,182	15,580	-$0.10046	-$1,565	-$70,538
	December	47	146.98	6,908	$3,661	26,877	-$0.10046	-$2,700	-$64,177
2002	January	54	157.00	8,478	$4,493	40,381	-$0.10046	-$4,057	-$55,627
	February	51	119.52	6,095	$3,231	34,177	-$0.10046	-$3,433	-$48,963
	March	58	28.79	1,670	$885	13,299	-$0.10046	-$1,336	-$46,742
	April	51	(45.33)	(2,312)	($1,225)	25,613	-$0.10046	-$2,573	-$45,394
	May	56	43.41	2,431	$1,288	15,359	-$0.10046	-$1,543	-$42,563
	June	54	(3.22)	(174)	($92)	12,164	-$0.10046	-$1,222	-$41,433
	July	57	3.89	221	$117	8,830	-$0.10046	-$887	-$40,429
	August	52	0.67	35	$18	9,614	-$0.10046	-$966	-$39,445
	September	50	4.08	204	$108	9,509	-$0.10046	-$955	-$38,381
	October	52	(4.89)	(254)	($135)	16,852	$0.18914	-$1,693	-$36,823

ALL CLASSES

Year	Month	Number of Customers (A)	Volumetric Adjustment/ Customer (B)	Sales Deficiency/ (Excess) (C)	Revenue Deficiency/ (Excess) (D)	Volumes (E)	WNA Factor (E)	Collections (F)	Account Balance (G)
1999	October	97,064	-	-33,630	($61,000)	437,366	$0.00000	$0	($61,000)
	November	97,804	-	149,275	$276,641	565,914	$0.00000	$0	$215,641
	December	98,859	-	402,672	$736,521	1,166,919	$0.00000	$0	$952,163
2000	January	99,297	-	266,795	$489,960	1,880,378	$0.00000	$0	$1,442,123
	February	99,616	-	287,262	$528,383	1,791,830	$0.00000	$0	$1,970,506
	March	99,630	-	271,801	$498,273	1,386,239	$0.00000	$0	$2,468,779
	April	99,484	-	109,594	$200,913	938,281	$0.00000	$0	$2,669,692
	May	99,721	-	58,917	$108,517	517,337	$0.00000	$0	$2,778,209
	June	98,919	-	56,680	$103,498	338,490	$0.00000	$0	$2,881,707
	July	99,239	-	5,609	$10,326	299,097	$0.00000	$0	$2,892,033
	August	99,434	-	1,978	$3,682	250,196	$0.00000	$0	$2,895,716
	September	97,730	-	240	$390	264,187	$0.00000	$0	$2,896,105
	October	98,535	-	22,947	$42,566	415,801	$0.29443	$0	$2,938,672
	November	98,891	-	6,145	$9,150	632,658	$0.29443	$186,275	$2,761,547
	December	99,700	-	-308,802	($570,432)	1,661,894	$0.29443	$489,315	$1,701,800
2001	January	100,641	-	-291,496	($530,620)	2,283,652	$0.29443	$672,381	$498,799
	February	99,910	-	41,978	$75,645	1,812,119	$0.29443	$533,546	$40,898
	March	100,723	-	-156,812	($288,487)	1,659,894	$0.29443	$488,726	($736,315)
	April	100,177	-	-42,021	($74,532)	1,006,587	$0.29443	$296,372	($1,107,219)
	May	99,850	-	180,099	$329,380	449,211	$0.29443	$132,262	($910,101)
	June	97,914	-	49,375	$90,016	315,558	$0.29443	$92,910	($912,995)
	July	98,421	-	2,077	$3,776	269,474	$0.29443	$79,342	($988,561)
	August	98,680	-	1,966	$3,640	235,948	$0.29443	$69,471	($1,054,391)
	September	98,510	-	12,806	$23,548	249,260	$0.29443	$73,390	($1,104,234)
	October	98,616	-	26,524	$48,272	305,358	-$0.10046	$89,907	($1,145,869)
	November	99,240	-	124,720	$230,571	480,160	-$0.10046	($48,236)	($867,062)
	December	100,484	-	366,203	$675,163	1,068,914	-$0.10046	($107,380)	($84,518)
2002	January	101,525	-	332,199	$610,355	1,799,975	-$0.10046	($180,821)	$706,658
	February	101,236	-	253,039	$464,564	1,660,411	-$0.10046	($166,801)	$1,338,022
	March	101,678	-	830	($802)	1,519,215	-$0.10046	($152,616)	$1,489,836
	April	101,750	-	-111,207	($202,888)	1,078,669	-$0.10046	($108,360)	$1,395,309
	May	101,428	-	94,313	$172,594	479,585	-$0.10046	($48,178)	$1,616,081
	June	100,789	-	-664	($801)	323,107	-$0.10046	($32,459)	$1,647,739
	July	100,412	-	12,811	$23,549	237,958	-$0.10046	($23,905)	$1,695,192
	August	101,026	-	1,768	$3,292	234,476	-$0.10046	($23,555)	$1,722,040
	September	99,836	-	19,679	$36,579	234,723	-$0.10046	($23,580)	$1,782,198
	October	100,020	-	-57,811	($108,807)	294,203	$0.18914	($29,555)	$1,702,946

WEATHER NORMALIZATION ADJUSTMENT RIDER

APPLICABILITY

This rider is applicable to all service provided under rate schedules RS-1, SC-1, SVF, and LVF. Service is subject to the DEFINITIONS AND CONDITIONS section below.

NET ANNUAL CHARGE

A Weather Normalization Adjustment (WNA) factor shall be applied to each monthly bill to refund revenue excesses or collect revenue deficiencies that occur as a result of deviations from normal weather. The WNA factor shall be calculated by the formula:

WNA = [RevenueDev / aSalesTot] + Adjustment

Where:

RevenueDev	=	SalesDev times the Margin Rate for the current WNA calculation period
SalesDev	=	the sum of (nSales - aSales) for each month of the current WNA calculation period
nSales	=	aSales + [{(nHDD - aHDD) x HSF + (npHDD - apHDD) x pHSF} x Customers]
aSales	=	actual monthly sales volumes
nHDD	=	normal Heating Degree Days for the current month, according to the parameters approved in KCC Docket No.
aHDD	=	actual Heating Degree Days for the current month, according to the parameters approved in KCC Docket No.
HSF	=	Heat Sensitive Factor for the current month. Usage per degree day calculation that is specific to the applicable weather station and

Company service schedule, as approved in KCC Docket No.

npHDD = normal Heating Degree Days for the prior month, according to the parameters approved in KCC Docket No.

apHDD = actual Heating Degree Days for the prior month, according to the parameters approved in KCC Docket No.

pHSF = Heat Sensitive Factor for the prior month. Usage per degree day calculation that is specific to the applicable weather station and Company service schedule, as approved in KCC Docket No.

Customers = number of customers served during the current month.

Margin Rate = the per-Mcf rate on the applicable service schedule for the delivery of natural gas

aSalesTot = the sum of monthly aSales volumes for the current WNA Calculation Period

Adjustment = (RevenueDev – Collections) divided by aSalesTot

Collections = WNA times the monthly aSales volumes

DEFINITIONS AND CONDITIONS

1. All provisions set forth in the rate schedule under which a customer takes service shall apply to the extent they are not superseded by provisions of this rider.

2. WNA factors shall be calculated to the nearest $0.0001/Mcf.

3. The WNA Collection Year, consisting of the annual twelve-month period ending October 31, shall define the period during which a WNA factor is collected. Upon termination of the WNA Pilot

Program authorized in KCC Docket No. , the Company shall cease to accrue revenue excesses or deficiencies and shall amortize the remaining balance over one additional WNA collection year beyond the then-current WNA Calculation Period.

4. The WNA Calculation Period, consisting of the annual twelve-month period ending September 30, shall define the period over which the revenue excess or deficiency is calculated.

5. The WNA Account Balance may be periodically reviewed by the Company, and the monthly installment may be revised if it appears at any time on review that the WNA Account Balance at the end of the WNA Collection Year will be substantial

6. Company shall file a report with the Commission by October 25 of each year detailing the calculations deriving the WNA factors authorized by this rider to be applied during the subsequent WNA Collection Year.