State of North Dakota
Before the North Dakota Public Service Commission

In the Matter of
Application and Notice of Change in Natural Gas Rates of
MONTANA-DAKOTA UTILITIES CO.
Case No. PU-20-379

Direct Testimony of
Scott J. Rubin

on behalf of
AARP

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Pre-filed Direct Testimony of Scott Rubin
AARP North Dakota
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Introduction

Q. Please state your name and business address.

A. My name is Scott J. Rubin. My business address is 333 Oak Lane, Bloomsburg, PA.

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

A. I am an independent consultant and an attorney. My practice is limited to matters affecting the public utility industry.

Q. What is the purpose of your testimony in this case?

A. I have been asked by AARP to review the Application for an increase in natural gas rates filed by Montana-Dakota Utilities Company ("MDU" or "Company"). AARP has more than 50,000 members in North Dakota many of whom are natural gas customers of MDU.

Q. What are your qualifications to provide this testimony in this case?

A. I have testified as an expert witness before utility commissions or courts in the District of Columbia; the province of Nova Scotia; and the states of Alaska, Arizona, California, Connecticut, Delaware, Illinois, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, South Carolina, and West Virginia. I also have testified as an expert witness before various federal, state, and local legislative committees. I have served as a consultant to the staffs of four state utility commissions, as well as to several national utility trade associations, and state and local governments throughout the country. Prior to establishing my own consulting and law practice, I was employed by the Pennsylvania Office of Consumer Advocate from 1983 through January 1994 in increasingly responsible positions. From 1990 until I left state government, I was one of two senior

attorneys in that office. Among my other responsibilities in that position, I had a major role in setting its policy positions on water and electric matters. In addition, I was responsible for supervising the technical staff of the office. I also testified as an expert witness for that office on rate design and cost of service issues.

Throughout my career, I developed substantial expertise in matters relating to the economic regulation of public utilities. I have published articles, contributed to books, written speeches, and delivered numerous presentations, on both the national and state level, relating to regulatory issues. I have attended numerous continuing education courses involving the utility industry. I also have participated as a faculty member in utility-related educational programs for the Institute for Public Utilities at Michigan State University, the American Water Works Association, and the Pennsylvania Bar Institute.

Q. Do you have any experience that is particularly relevant to the issues in this case?

A. Yes, I do. I have testified on numerous occasions as a rate design and cost of service expert. For example, since I testified in MDU's last rate case in 2018, I have testified as an expert witness on cost-of-service studies, rate design, or other tariff issues in natural gas distribution utility rate cases in Arizona (Southwest Gas), Illinois (Nicor Gas), Maryland (Washington Gas Light), Massachusetts (Boston Gas), Nova Scotia (Heritage Gas), and Washington (Northwest Natural Gas). I also have testified on similar issues in numerous cases involving utilities providing electricity, water, or wastewater service.

In addition, during the past year I have testified in several regulatory proceedings concerning an appropriate regulatory response to utility ratemaking during a major public

health and economic crisis. I have testified on those issues in cases before the Nova Scotia Utility and Review Board and the Pennsylvania Public Utility Commission.

Q. Have you prepared an exhibit summarizing your experience?

A. Yes. My curriculum vitae is attached to my testimony as Appendix A.

Summary

Q. What is the primary focus of your direct testimony?

A. My review focuses on four issues: (1) the effect of the COVID-19 pandemic on this case, (2) the cost-of-service study ("COSS") prepared by MDU, (3) the allocation of any increase among the customer classes, and (4) the design of residential rates.

Q. Please summarize your recommendations.

A. Briefly, I recommend that the Commission should decline to increase rates at this time unless it finds that a modest increase is needed to ensure MDU's financial viability. As everyone knows, we are in the midst of a pandemic. I explain below that this is not the time to increase rates for an essential service like natural gas.

If, however, the Commission decides to establish new rates for MDU, I recommend there should be no increase in the Basic Service Charge ("BSC") for the residential class and that the rate increase for the residential class should be only slightly greater than the system-average percentage increase in distribution revenues. In particular, I recommend the following:

- MDU's COSS contains significant errors in the classification of distribution mains. A properly performed analysis would conclude that, at most, the customer-related portion of distribution mains is 13%, not 30% as MDU proposed.

- The Company's class revenue allocation over-collects revenues from the Residential class.

- If the Commission finds that the revenue requirement is lower than that proposed by MDU, I recommend that the revenue allocation to each customer class should be reduced proportionately.

- The residential BSC should not be increased in this case. Any rate increase allocated to the residential class should be collected solely through a consumption charge. This would provide rates consistent with the COSS and enable a much smoother transition of Wahpeton customers (Rate 63) onto the main system's residential rates (Rate 60).

Background

Principles of Utility Rate Design

Q. Are there basic principles that should guide the design of utility rates?

A. Yes. A reasonable rate design should be developed to meet several goals. Sixty years ago, Professor James Bonbright outlined those goals and they remain valid today. Professor Bonbright posited that there were eight attributes of a sound rate design which could be grouped together into the following "primary criteria": (a) collection of the revenue requirement, (b) fairly apportioning the revenue requirement among different types of customers, and (c) encouraging the efficient use of the utility service (or, conversely, discouraging inefficient consumption).[1]

Q. What are the fairness and efficiency principles?

A. Professor Bonbright described fairness as follows: "the principle that the burden of meeting total revenue requirements must be distributed fairly among the beneficiaries of the service."[2] He described efficiency as rates being designed to "discourage the

[1] James C. Bonbright, *Principles of Public Utility Rates* (Columbia Univ. Press, 1961), pp. 290-292.
[2] Id., p. 292.

wasteful use of public utility services while promoting all use that is economically justified in view of the relationships between costs incurred and benefits received."[3]

Also included within the fairness principle is the attribute that the rates themselves should be stable, "with a minimum of unexpected changes seriously adverse to existing customers."[4] Regulators and witnesses often refer to this as the principle of gradualism or rate continuity. That is, changes in the rate design should be made slowly so that customers' expectations about utility pricing are not violated. This is important because customers make decisions about energy consumption that cannot be reversed for many years. For example, if an MDU customer needs a new water heater or clothes dryer, the customer will need to make decisions that are directly or indirectly influenced by the utility rate design. These may include whether to purchase a gas or electric appliance and whether the customer is willing to pay more money for a more efficient appliance.

As Professor Bonbright cautioned: "Indeed, unless rate-making policies are sufficiently stable to permit a consumer to predict with some confidence what his charges will be *if he decides* to equip his home or his factory to take the contemplated service and then to buy the service, the cost-price system of rate making will be self-defeating when viewed as a means of securing a rational control of demand."[5] In other words, it is important for the structure of utility rates to exhibit both a strong relationship to the cost of providing service (to encourage efficiency and fairness) and to remain stable (to avoid

[3] Id.
[4] Id., p. 291.
[5] Id., p. 297 (emphasis in original).

unintended consequences to customers who have made expensive decisions based on the rate design).

Obviously, some of these goals compete with one another. For example, if the only purpose of the rate design were to collect the revenue requirement, each customer could be charged the same amount every month, regardless of energy usage or any other factor. The utility would be assured of receiving almost exactly the same amount of money each month, and that amount would recover the revenue requirement. But that would ignore other important goals, including encouraging the efficient use of the resource and being fair to all customers. A reasonable rate design, therefore, must achieve a balance of these goals.

Q. Is there a way to quantitatively evaluate the ability of a rate design to be fair to customers and encourage efficiency?

A. Yes. The most direct way to evaluate the fairness and efficiency of a rate design is to compare the revenues that would be collected from each customer to the cost to serve the customer. When differences in customers' bills are primarily based on differences in the cost to serve the customers, the rate design can be considered fair to all customers. Similarly, when bills increase roughly in proportion to changes in the cost to provide service to customers, the rate design encourages the efficient use of utility service, as the incremental charge to the customer is approximately equal to the incremental cost to the utility. When the charge to the customer is approximately equal to the cost to the utility to provide the service, then the customer will make economically efficient decisions about using the service (increased consumption will cause an increased bill that is approximately equal to the increased cost of providing the service). Thus, determining

the cost of serving a customer is an important component of evaluating both the fairness and efficiency of a rate design.

Q. In your experience, are similar rate design principles commonly used throughout the United States and Canada in designing utility rates?

A. Yes. While different jurisdictions may emphasize certain principles over others, similar rate design principles are commonly used in designing utility rates in nearly every jurisdiction in which I have appeared.

Q. To the best of your knowledge, are these types of principles used by this Commission?

A. I have not conducted exhaustive research into this, but I did locate a 2002 decision in an MDU natural gas case where the Commission discussed the principle of rate continuity. Based on that principle and other factors, the Commission concluded that increases in residential and small commercial customer charges should be moderated even if it resulted in the charges being less than the cost of service.[6]

Other Preliminary Matters

Q. Do you have any other preliminary matters to address?

A. Yes. My review of the Company's cost-of-service study, class revenue allocation, and rate design are all based on the use of the Company's proposed revenue requirement. I do this so that my recommendations can be compared on an apples-to-apples basis with the Company's proposals. This should not be taken as an endorsement by me or AARP of the Company's revenue requirement claims.

[6] *Montana-Dakota Utilities Co.*, 222 P.U.R.4th 36, (ND PSC 2002).

In addition, a portion of my testimony discusses regulatory policy issues. Given the nature of public utility regulation, much of the public policy in this field is contained in decisions by regulatory agencies and courts; or in statutes, ordinances, or regulations. If I cite to these types of sources, it should not be taken as a legal opinion, but rather as sources supporting my expert opinion concerning appropriate public policy and regulatory practice.

Utility Ratemaking During a Pandemic

Q. What is your understanding of the purpose of this proceeding?

A. As I understand it, the purpose of this case is to determine whether existing rates are "unjust and unreasonable" and, if so, to establish the "reasonable rates" for MDU to charge its customers.[7]

Q. In your more than 35 years of experience with utility rate-setting, are there standards or criteria used to determine whether a rate is just and reasonable?

A. Yes. There are thousands of administrative and judicial decisions throughout the United States that interpret the phrase "just and reasonable" as it relates to utility rates. Without going into all of the nuances and jurisdictional differences that arise from those decisions, and without providing a legal opinion, I will provide my general understanding of how that phrase is used in the field of public utility ratemaking.

In general, we regulate the rates (and other terms of service) of public utilities because they are natural monopolies, meaning that it would be economically inefficient (more expensive) to have competing enterprises provide the service. It is often stated that

[7] N.D.C.C. § 49-02-03.

regulation is a substitute for competitive market forces. At its core, regulation is designed to protect utility consumers from what otherwise would be the unfettered power of a monopoly to set prices and the conditions of service. In protecting consumers, however, regulators cannot confiscate the property of the utility's investors. That is, regulators cannot tilt the scale so far in favor of consumers (for example by providing free service) that the utility's investors are deprived of an opportunity to earn a reasonable return on their investment.

Importantly, though, regulation is not designed to insulate the utility or its investors from normal market forces, technological improvements, or general economic conditions. If market forces (such as technological change) result in significant reductions in the demand for service, then the utility may not be able to recover its costs. That is not a failure of regulation, but a natural evolution of the market -- businesses fail if they cannot keep up with changes in consumers' preferences or respond to technological innovations.

Similarly, if economic conditions change such that rates become unaffordable to many customers, rates may need to be reduced in order to remain just and reasonable from the perspective of customers.

Determining "Just and Reasonable" Rates at This Time

Q. Are there special circumstances that may affect the determination of reasonable rates in this case?

A. Yes. The Company filed this case in August 2020 when its service area -- indeed the entire world -- was being devastated with the worst pandemic in a century. While I

understand that it takes time to prepare a rate filing, and that MDU may have prepared this case assuming "business as usual," there was nothing that compelled it to actually file the case. **To state the obvious, life and business in the Company's service territory are now anything but normal.**

In particular, I am very concerned about the impact that significant rate increases would have on the Company's customers at this time. To be blunt, this is not the time to impose higher costs on either people or businesses.

If regulation is supposed to be a substitute for market forces, then we must recognize that, except for those commodities experiencing significant imbalances of supply and demand due to the pandemic, competitive businesses cannot sustainably raise prices when their customers' incomes have decreased significantly. We're seeing supply gluts of necessities such as gasoline, certain types of food, significant unemployment, and a significant reduction in hours for many people who are still employed. All of these economic factors can affect whether a rate is just and reasonable.

Q. Has the pandemic had a significant impact on North Dakotans?

A. Yes. More than 1,300 people in North Dakota have died from the virus.[8] More than 11% of the State's population has tested positive for COVID-19.[9] Beyond the public health consequences of the pandemic, more than one-third of North Dakotans have suffered

[8] North Dakota Department of Health COVID-19 Dashboard as of Jan. 14, 2021, https://www.health.nd.gov/diseases-conditions/coronavirus/north-dakota-coronavirus-cases.
[9] Id.

significant losses of income,[10] and more than three out of every four small businesses in the State have suffered severe losses (with many at risk of permanently closing)[11].

Q. Has there been an overall assessment of the pandemic's effects on North Dakota's economy?

A. Yes. Each month, the Federal Reserve Bank calculates a "coincident index" for each state and the country as a whole. The index is described as follows: "The coincident indexes combine four state-level indicators to summarize current economic conditions in a single statistic. The four state-level variables in each coincident index are nonfarm payroll employment, average hours worked in manufacturing by production workers, the unemployment rate, and wage and salary disbursements plus proprietors' income deflated by the consumer price index (U.S. city average)."[12] The index is set so that the level of economic activity in 2007 is equal to 100.

Between March and April 2020, North Dakota's coincident index plunged from 145.88 to 115.84, a decline of more than 20% in a single month. It fell even further in May to 108.78 -- the lowest level seen in the State since February 2011. Since then the index has recovered to 131.94 (as of November 2020), or about where it was in February 2017. In other words, the pandemic has taken almost four years of economic progress from the State.

[10] The U.S. Census Bureau's Household Pulse Survey (two weeks ending Dec. 21, 2020), https://www.census.gov/data/tables/2020/demo/hhp/hhp21.html, reported that 39% of North Dakota households experienced a loss of employment income during the pandemic, with 22% expecting further loss of income during the next month. The losses are much more severe for people with less than a high-school education (more than half expect further income losses during the next month).

[11] The U.S. Census Bureau's Small Business Pulse Survey (week ending Jan. 3, 2021), https://portal.census.gov/pulse/data/, reported that 76% of North Dakota small businesses suffered a moderate or large negative effect from the pandemic, and 44% of small businesses in the State estimate it would take more than six months to return to a normal level of operations.

[12] Federal Reserve Bank of Philadelphia, State Coincident Indexes, (last updated Dec. 23, 2020), https://www.philadelphiafed.org/research-and-data/regional-economy/indexes/coincident

Regulatory Response

Q. How does this affect the decisions the Commission must make in this case?

A. Faced with this unprecedented public health and economic crisis, I respectfully submit that the Commission cannot treat this case as "business as usual." Almost no other business in North Dakota is conducting business as usual; residential consumers are using the Company's services differently than they do during normal circumstances (few if any people are usually at home 24 hours per day, 7 days a week, preparing every meal at home, and so on).

Respectfully, the Commission cannot focus on MDU's historic costs, or on cost projections prepared before the pandemic, and assume that the resulting rates will be just and reasonable. The Commission must focus on what rates are reasonable for consumers to pay under these extraordinary conditions.

Q. Are you aware of any regulatory precedents that discuss ratemaking during a pandemic or other severe economic downturn?

A. While the research is difficult (especially with most libraries closed), there is some precedent from regulatory commissions during the last nationwide pandemic, the influenza pandemic in 1918 and 1919. From these early days of utility regulation in this country, it was recognized that circumstances in the economy (including disease outbreaks) could affect utilities in the same way that other businesses were affected. When that occurred, regulation would <u>not</u> protect utilities from the adverse consequences.

I have not conducted exhaustive research, but I did locate a case decided by the Supreme Judicial Court of Massachusetts in 1919 where the owner of a streetcar service

challenged a public service commission ratemaking order.[13] Among the challenges faced by the business in 1918 were increases in the cost of raw materials (presumably due to the war effort), reduction in ridership, and "the wide prevalence of the epidemic known as influenza, a factor seriously affecting receipts during October and November, 1918."[14]

The Massachusetts court cited with approval a federal appellate decision that held as follows:

> To be just and reasonable, within the meaning of the constitutional guaranty, the rates must be prescribed with reasonable regard for the cost to the carrier of the service rendered and for the value of the property employed therein; but this does not mean that regard is to be had only for the interests of the carrier, or that the rates must necessarily be such as to render its business profitable, for reasonable regard must also be had for the value of the service to the public. And where the cost to the carrier is not kept within reasonable limits, or where for any reasons its business cannot reasonably be so conducted as to render it profitable the misfortune must fall upon the carrier, as would be the case if it were engaged in any other line of business.[15]

The court went on to uphold the regulatory commission's ratesetting order that was not expected to result in the utility earning a profit. The court reasoned that "the times are recognized as abnormal," but that did not deprive the commission of its regulatory responsibility to "exercise its judgment for the protection of the public interests when it does not reduce substantially the revenue proposed to be exacted from the public by the owners of the public utility."[16] The court also emphasized that the rates were "likely to be impermanent and experimental."[17]

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[13] *Donham v. Public Service Commission*, 232 Mass. 309, 122 N.E. 397 (1919).
[14] Id., 232 Mass. at 315, 122 N.E. at 400.
[15] Id., 232 Mass. at 317, 122 N.E. at 401 (emphases added; quoting from *Missouri, Kansas & Topeka Railway Co. v. Interstate Commerce Commission*, 164 Fed. 645 (1908)).
[16] Id., 232 Mass. at 326, 122 N.E. at 405.
[17] Id.

In other words, the idea that ratemaking must adapt to extraordinary conditions is neither new nor novel. A century ago during another serious pandemic, regulators adapted, took actions that provided relief to the public, and did not inflict long-term harm on the utility.

Q. How are other utilities and regulators addressing these unprecedented circumstances?

A. I have not conducted exhaustive research to try to identify every regulatory and utility response to ratesetting during the pandemic. I can, however, provide a few examples.

Hydro One, a large electric utility in Ontario, Canada, temporarily modified its rate structure to eliminate peak-period pricing, recognizing that people are at home 24-hours per day and cannot avoid peak-period usage. The utility estimated this would reduce a typical customer's bills by more than 14%.[18]

The Halifax (Nova Scotia) Regional Water Commission withdrew its request to increase water rates. It also delayed and significantly reduced its proposed increase in wastewater rates.[19]

Utilities throughout the United States also are deferring rate increases or implementing rate reductions during this period. These actions provide some relief to customers who are facing a horrible confluence of events: an increase in home utility bills (as they are home essentially 24 hours per day, 7 days per week) coupled with declines in income. A few examples are summarized as follows:

[18] Corporate Information, Hydro One (last visited Nov. 2, 2020), https://www.hydroone.com/about/corporate-information/rate-relief.

[19] *In the Matter of an Application by Halifax Regional Water Commission*, Decision No. 2020 NSUARB 113 (Aug. 27, 2020). https://nsuarb.novascotia.ca/sites/default/files/M09589%20-%20Board%20Decision.pdf

- Dominion Energy in South Carolina originally agreed to push back the effective date for its rate increase to March 1, 2021, instead of January 1, 2021.[20] In the past week, that utility agreed to a further six-month delay in its pending rate case because of the pandemic.[21]

- Minnesota Power significantly reduced its requested rate increase and is refunding more than $12 million to customers to help alleviate pandemic-related financial concerns.[22]

- California Water Service Co. eliminated all scheduled rate increases during 2020.[23]

- Chelan County (Washington) Public Utility District postponed previously approved increases in electric, water, and wastewater rates by six months to provide customers some relief during the pandemic.[24]

- The City of Austin (Texas) reduced its electricity rates by about 4%, eliminated the residential price increment for usage in excess of 1,000 kilowatt-hours per month, and reduced rates for residential water and wastewater consumption by 10%.[25] Subsequently, the city delayed a planned increase in electricity rates by a full year.

- PEPCO, the electric utility serving the District of Columbia and surrounding areas, announced on June 1st that it would forego a $25 million rate increase scheduled for 2020 in D.C., make a shareholder donation to its low-income assistance fund, and take other actions to assist customers during the pandemic.[26]

[20] Dominion Energy wants rate increase pushed back, trying to help customers during pandemic, NBC - 2 WCBD (Charleston, South Carolina), April 2, 2020; see letter filed by Dominion with the South Carolina Public Service Commission at https://dms.psc.sc.gov/Attachments/Matter/eb126cd9-68IV-47de-8b7d-775984d8a4e5.

[21] Dominion puts SC rate increase on hold for at least 6 months, *The State* (Columbia, SC), Jan. 11, 2021, https://www.thestate.com/news/article248427075.html.

[22] Minnesota Power Proposes Plan to Resolve Rate Request in Response to Economic Challenges of COVID-19; Customers will receive refund on bills and lower rates under proposal to state regulators, Business Wire, April 23, 2020.

[23] Utility; Cal Water requests a delay in rate changes, Oroville Mercury Register (California), April 30, 2020.

[24] Chelan PUD delays rate increase by 6 months, S&P Global Market Intelligence, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/chelan-pud-delays-rate-increase-by-6-months-58041707.

[25] https://austinenergy.com/ae/rates/residential-rates/residential-electric-rates-and-line-items.

[26] PEPCO press release, PEPCO Proposes to Freeze DC Customer Energy Delivery Rates Until 2022, https://www.pepco.com/News/Pages/PepcoProposestoFreezeDCCustomerEnergyDeliveryRatesUntil2022andAssistCustomerswithPandemicEconomicRecovery.aspx.

- A report by Moody's Investors Service expects similar delays in numerous electric, gas, and water utility rate proceedings throughout the U.S. as a way of providing some relief to consumers during the pandemic.[27]

- Philadelphia Water Department withdrew its pending request for increases in water, wastewater, and stormwater rates that would have become effective in September 2020 and September 2021. In a June 2020 filing, the utility cited "the on-going pandemic and the uncertainty over the anticipated duration of continuing emergency measures."[28]

Q. What do you recommend?

A. I recommend that the Commission decline to increase rates at this time unless it finds that a modest increase is needed to ensure MDU's financial viability. By that I mean that the Company should have rates sufficient to recover its expenses, make all required payments on its debt, and provide a modest return to stockholders. Essentially every business and household in North Dakota has had to adjust its expectations during the pandemic -- finding ways to try to survive on less than "normal" levels of income. MDU's stockholders should not be exempt from these impacts and should not expect to prosper while customers tighten their belts and wonder where the next meal will come from.

Q. If the Commission decides that MDU's rates should be modified, do you have recommendations concerning how those rates should be set?

A. Yes, I do. I address those more traditional ratemaking issues in the remainder of my testimony.

[27] Moody's Investors Service, Coronavirus outbreak delays rate cases, but regulatory support remains intact, April 6, 2020, https://www.eenews.net/assets/2020/04/09/document_ew_04.pdf.
[28] Water, Sewer & Storm Water Rate Board, City of Phila. (June 18, 2020), https://www.phila.gov/departments/water-sewer-storm-water-rate-board/rate-proceedings/2020-rate-proceeding/.

Cost-of-Service Study ("COSS")

Q. Has MDU prepared a COSS reflecting its revenue requirement claims?

A. Yes. Statement K of the Company's filing contains an embedded class COSS for the projected test year (2021).

Q. Please summarize your understanding of the results of the Company's COSS.

A. I have prepared Table 1, below, to summarize the results of the Company's COSS. The table shows the cost to serve each customer class excluding the cost of gas, which I will refer to as the distribution costs. It also shows revenues under present rates, excluding the gas commodity revenues but including each class's share of miscellaneous revenues, which I will refer to as distribution revenues. Finally, it shows the difference between distribution costs and revenues. This column is calculated as revenues minus costs so that a negative number means that an increase in distribution revenues would be required to have a class's revenues precisely equal the cost of serving the class.

Table 1: Cost of Service (Company Filed) Compared to Class Distribution Revenues (Including Allocated Other Revenues) Under Present Rates

Class	Cost of Service (Company Filed)	Distribution Revenues	Difference
Residential	$ 32,725,297	$ 26,181,805	$ (6,543,492)
Small Firm General	5,340,964	4,854,434	(486,530)
Large Firm General	9,590,977	9,594,657	3,680
Air Force Delivery	139,664	112,880	(26,784)
Small Interruptible	1,776,988	1,863,214	86,226
Large Interruptible	1,065,967	1,792,496	726,529
Minot AFB Distrib.	217,937	456,000	238,063
Total	$ 50,857,774	$ 44,855,486	$ (6,002,308)

Source: MDU Statement K, Schedule K-1 (Net Distribution Cost of Service; Projected Revenue Before Increase - Projected Cost of Gas)

Q. Before you continue, what rates did the Company use to determine distribution revenues?

A. The distribution revenues under present rates, or what the Company terms "projected revenue before increase" represents the existing permanent distribution rates multiplied by projected billing determinants for the 2021 test year. When I use the phrase "present rates" or "existing rates" I also will be referring to the permanent rates that were in effect when the Company filed this case. As the Commission knows, interim rates are subject to modification and do not have the same legal force and effect as Commission-made rates determined after a rate case.

Q. Other than the cost to serve each customer class, does the Company's COSS provide any other useful information?

A. Yes. The Company's COSS also calculates the unit costs of service for each customer class. The calculation of unit costs takes the three primary categories of cost causation -- demand-related costs, energy-related costs, and customer-related costs -- and divides them by the number of relevant units. For the residential class, those units are energy consumption for demand- and energy-related costs and the number of customers for customer-related costs. For example, the Company's COSS concludes that the residential class has demand-related costs of $8,388,419. MDU Statement K, Sch. K-1, p. 1. This figure is then divided by the residential class's projected energy consumption of 8,619,479 dekatherms ("Dk") to calculate a unit demand cost per Dk of $0.970, as shown at the bottom of MDU Statement K, Sch. K-1, p. 1. The unit costs of service are important pieces of information to consider when designing rates, and I will discuss them in the rate design portion of my testimony.

Q. Do you agree with the Company's COSS?

A. No, I do not. While there are various assumptions and methodologies in the COSS with which I disagree, most of them do not have a significant effect on the results of the study. There is, however, one issue where the Company's COSS contains a significant error that does affect the study's results.

Q. What is that issue?

A. The Company's allocation of distribution mains must be corrected. The issue is significant because distribution mains represent more than 50% of the Company's rate base: $96.38 million in net plant out of a total rate base of $184.67 million.[29] In addition, the allocation of distribution mains affects the allocation of other types of plant and expenses that are based on plant or rate base allocators.

Q. How did the Company classify distribution mains?

A. MDU classified distribution mains as being 30% customer-related and 70% demand-related.

Q. How does that compare to MDU's classification of distribution mains in its last rate case?

A. In its last case, MDU classified distribution mains as 25% customer-related and 75% demand-related.

Q. Did the Commission accept MDU's COSS in the last case?

A. In its Order in MDU's last case, the Commission did not discuss any specific aspects of the COSS. The Commission explained, however, that it did not make decisions about

[29] MDU Statement K, Sch. K-2, pp. 1-9.

revenue allocation or rate design based solely on the results of a COSS. Specifically, the Order states:

> A class cost of service study can be performed in different ways, potentially reaching a variety of conclusions. The Commission has traditionally avoided mechanical application of the results of any class cost of service study, applying its own judgment after considering the evidence, arguments, and public policy to reach an appropriate rate design in a particular case.[30]

Q. For the sake of illustration, if all of MDU's other claims and assumptions are accepted, what is the impact on class revenue allocation of classifying mains as 30% customer-related rather than 25% customer-related as MDU did in the last case?

A. The effect of making only this one change in the COSS was to increase costs allocated to the Residential class by approximately $486,000, as shown in the Table 2.

Table 2: Effect on Company COSS of Changing Allocation of Distribution Mains from 25% Customer-Related to 30% Customer-Related

Class	25% Customer Related	30% Customer Related	Difference
Residential	$32,239,517	$ 32,725,297	$ 485,780
Small Firm General	5,370,867	5,340,964	(29,903)
Large Firm General	9,943,297	9,590,977	(352,320)
Air Force Delivery	139,673	139,664	(9)
Small Interruptible	1,855,766	1,776,988	(78,778)
Large Interruptible	1,090,735	1,065,967	(24,768)
Minot AFB Distrib.	217,939	217,937	(2)
Total	$50,857,794	$ 50,857,794	$ 0

Q. How did the Company estimate that 30% of the cost of distribution mains is customer-related?

A. Mr. Amen explains that the Company performed two analyses and averaged the results. The first is a statistical analysis known as the zero-intercept method, which uses a linear

[30] Findings of Fact, Conclusions of Law and Order, Case No. PU-17-295 (Sept. 26, 2018), Finding of Fact no. 9.

regression analysis. Mr. Amen claims that this analysis yielded a result showing that 25.9% of distribution mains costs are customer-related. The second is a minimum-system analysis that evaluates the cost of building a system that consists only of the smallest size main installed on the MDU system. He states that this analysis resulted in an estimate that 35.4% of mains costs are customer-related. The average of the two methods is approximately 30%, so the Company used that as the estimate of the customer-related portion of distribution mains costs.

Q. Did Mr. Amen perform the zero-intercept analysis properly?

A. No, he did not. The NARUC *Gas Distribution Rate Design Manual* published in 1989 mentions the zero-intercept method, but does not describe how to conduct the analysis. The zero-intercept method is described in the NARUC *Electric Utility Cost Allocation Manual* published in 1992. I rely, therefore, on the description in the NARUC electric manual. That manual explains that a zero-intercept analysis is to be conducted by calculating the "average installed book cost per foot" for each size of property (in the case of gas distribution mains, the diameter of the main), weighting the data by the number of feet of each size and material, then calculating a linear regression for each different type of material. The results are then weighted by material type.

Mr. Amen did not follow this procedure. He used the square of the diameter of the pipe size, rather than the diameter and a trended cost (in 2019 dollars) rather than the book cost. Further, I cannot determine if his calculations were weighted by the number of feet of each size of main. In other words, the analysis performed by Mr. Amen has nothing to do with the zero-intercept analysis described in the NARUC manuals.

Q. Do these changes make a significant difference in the results?

A. Yes, absolutely. I performed two corrected analyses, one using trended costs and one using actual book costs.

Using trended costs, as Mr. Amen did, and pipe diameter (rather than the square of the pipe diameter), and weighting each pipe size by the number of feet of main, yields a negative intercept. That is, the customer-related cost is zero. Further, this result has an R-squared in excess of 0.9, meaning that the pipe diameter explains more than 90% of the cost per foot. I performed a similar analysis for steel pipe with essentially the same result (though the model is less robust). The intercept is again negative, meaning zero customer-related cost.

I then reproduced both analyses using actual book costs rather than trended costs. While the specific numbers differed, the overall result is the same -- both analyses had a negative intercept, meaning that there is zero customer-related cost.

That is, a properly performed zero-intercept analysis shows that there is no customer-related cost. I provide the output of the statistical analyses I performed using SPSS statistical analysis software as Exhibit ___ (SJR-1).

Q. Is it reasonable to consider none of the cost of mains be customer-related?

A. Yes. The classification of distribution mains is one of the most controversial aspects of a cost-of-service study and different jurisdictions handle the costs differently. Some jurisdictions use a “basic customer” or “basic system” approach that treats as customer-related only costs associated with metering, the service line, billing, and customer service. I generally support this method.

Further, the NARUC gas manual recognizes that the use of any type of minimum system analysis is controversial. That manual states: "A portion of customer costs associated with the distribution system may be included as customer costs. However, the inclusion of such costs can be controversial."[31] The manual also noted that although a minimum-size analysis could estimate a customer-related portion of the distribution system, "[t]he contra argument to the inclusion of certain distribution costs as customer costs is that mains and services are installed to serve demands of the consumers and should be allocated to that function."[32]

Thus, I do not find it surprising that a properly performed zero-intercept analysis would show that there is no customer-related component of distribution mains on the MDU system. Mr. Amen's result to the contrary is based on his use of an unusual, non-standard approach (one that I have not seen before in my more than 35 years of experience) that subverts the entire purpose of the analysis.

Q. Are there also problems with the minimum-sized-system analysis performed by Mr. Amen?

A. Yes, there are. Mr. Amen's minimum-size analysis uses a 2-inch main as the minimum-sized system. In fact, though, MDU's data and Mr. Amen's workpapers show that the minimum-sized main on MDU's system is 1.25 inches in diameter. Using Mr. Amen's methodology with trended costs, but with a 1.25-inch main as the minimum, results in 28.0% of distribution mains costs being customer-related under the minimum-size

[31] *NARUC Gas Manual*, p. 22.
[32] Id., p. 23.

method. The analysis using actual book costs (which are the data recommended in the NARUC Gas manual) yields a result of 25.4% of mains costs being customer-related.

Q. What do you recommend?

A. Based on the results of properly performed zero-intercept and minimum-sized system analyses, I recommend that the COSS be modified to set the customer-related portion of distribution mains as the average of the two methods using actual cost data, which rounds to 13%.[33]

Q. Have you prepared a COSS that does that?

A. Yes, I have. The results of the study are provided in Exhibit ___ (SJR-2). On Table 3, below, I compare the results of my COSS with the Company's COSS. The results of the properly performed classification of distribution mains reduces the cost of serving the Residential class by approximately $1.65 million, as shown in the table.

Table 3: Class Cost of Service Under Company COSS and Corrected COSS

Class	Company COSS	Corrected COSS	Difference
Residential	$ 32,725,297	$31,073,693	$(1,651,604)
Small Firm General	5,340,964	5,442,643	101,679
Large Firm General	9,590,977	10,788,876	1,197,899
Air Force Delivery	139,664	139,658	(6)
Small Interruptible	1,776,988	2,044,810	267,822
Large Interruptible	1,065,967	1,150,177	84,210
Minot AFB Distrib.	217,937	217,937	0
Total	$ 50,857,794	$50,857,794	$ 0

Source: MDU Statement K, Sch. K-1, pp. 1-4 (Net Distribution Cost of Service); Exhibit ___ (SJR-2), pp. 1 (Total revenue at equalized rates of return)

[33] Zero-intercept result: 0%; minimum-sized result: 25.4%, which average to 12.7%. I round that result to 13%.

Q. How does each class's cost of service under your revised COSS compare to revenues from each class under present rates?

A. I show this comparison in Table 4, below. The table shows the revenue deficiency, or required rate increase, for each customer class when comparing present-rate revenues (including miscellaneous service revenues) to the class cost of service using my corrected methodology.

Table 4: Corrected Cost of Service Compared to Class Distribution Revenues Under Present Rates

Class	Corrected Cost of Service	Distribution Revenues	Difference
Residential	$31,073,693	$ 26,181,805	(4,891,888)
Small Firm General	5,442,643	4,854,434	(588,209)
Large Firm General	10,788,876	9,594,657	(1,194,219)
Air Force Delivery	139,658	112,880	(26,778)
Small Interruptible	2,044,810	1,863,214	(181,596)
Large Interruptible	1,150,177	1,792,496	642,319
Minot AFB Distrib.	217,937	456,000	238,063
Total	$50,857,794	$ 44,855,486	(6,002,308)

Source: Exhibit ___ (SJR-2), pp. 3-6 (Net Distribution Cost of Service; Projected Revenue Before Increase - Projected Cost of Gas)

That is, under MDU's proposed revenue requirement, the revenue deficiency for the Residential class is not $6.5 million as MDU proposed, but $4.9 million under a properly performed COSS.

Class Revenue Allocation

Q. How did the Company propose allocating its proposed rate increase among the customer classes?

A. The Company proposed allocating most of the proposed revenue increase to the Residential customer class, as I summarize in Table 5, below.

Table 5: MDU Proposed Class Revenue Allocation for Base Rate Increase			
Class	**Present Distribution Revenues (Excluding Other Revenues)**	**MDU Proposed**	
		$ Increase	**% Increase**
Residential	$ 24,093,777	$7,232,601	30.0%
Residential - Wahpeton	659,967	111,423	48.3%
Firm General	4,448,897	800,551	18.0%
Firm General - Wahpeton	68,526	22,990	33.5%
Large Firm General	8,875,137	635,910	7.2%
Lg. Firm Gen. - Wahpeton	72,444	7,486	10.3%
Air Force Delivery	110,373	29,292	26.5%
Small Interruptible	1,562,795	87,045	5.6%
Small Interrupt - Wahpeton	180,012	10,026	5.6%
Large Interruptible	1,786,509	35,100	2.0%
Total	**$41,429,371**	**$8,972,424**	**21.7%**
Source: MDU Statement L, pp. 2-3.			

Q. Why is there a difference between the revenues shown in Table 5 and present revenues from the COSS that you use in Table 4?

A. I took both sets of figures directly from the Company's exhibits and workpapers. As I understand it, present revenues used in the COSS include miscellaneous service revenues (such as returned check fees or charges for other services that are allocated among the customer classes). The revenues shown in MDU Statement L, which are reproduced in Table 5, are the revenues from the tariffed rates for each customer class, excluding any allocation of miscellaneous revenues.

Q. Assuming, for the sake of this question, that the Company's COSS is accurate, are these class allocations reasonable?

A. No, even if the Company's COSS were accurate, the Company's proposed class revenue allocation is neither reasonable nor consistent with industry practice.

Q. Please explain what you find to be unreasonable about the Company's proposal.

A. Mr. Amen and I both recognize that the rate design principles of gradualism and fairness are important principles for the Commission to consider when allocating revenues and designing rates. I have recommended in numerous rate cases throughout the country that a reasonable way to operationalize these principles is to ensure that every customer class receives a revenue increase within the range of 50% to 150% of the system-average percentage increase. For instance, if the system-average increase were 10%, this approach would ensure that each customer class received an increase in the range of 5% to 15%.

In this case, the Company does not suggest an upper limit on the magnitude of a class revenue increase, which I consider to be unreasonable on its face. The result is a proposed increase to Wahpeton residential customers of 48.3%, which is more than more than double the system-average increase of 21.7%. Further, Mr. Amen uses a low-end increase (excluding the Large Interruptible class) of only 25% of the system-average percentage increase. In my opinion, the minimum class increase should be 50% of the system-average percentage increase.

Q. You have explained why you did not consider the Company's COSS to be reasonable or accurate. If the Commission adopts your recommended COSS, would it change the class revenue allocation?

A. Yes. Under my COSS, fewer costs would be allocated to the Residential class. This would lessen the amount by which the cost of service exceeds existing revenues from the class. Further, I recommend limiting the increase to any customer class (except the Large Interruptible class) to no less than 50% of the system-average increase (10.8% under

MDU's proposed revenue requirement) and no more than 150% of the average (32.6% under the Company's proposed revenues). Taking into account those limits and the results of my COSS, I recommend the class revenue allocation summarized in Table 6.

Table 6: AARP Proposed Class Revenue Allocation for Base Rate Increase Under MDU Proposed Revenue Requirement

Class	Present Distribution Revenues (Excluding Other Revenues)	AARP Proposed	
		$ Increase	% Increase
Residential	$ 24,093,777	$6,055,950	25.1%
Residential - Wahpeton	659,967	67,992	29.4%
Firm General	4,448,897	820,366	18.4%
Firm General - Wahpeton	68,526	20,178	29.4%
Large Firm General	8,875,137	1,649,688	18.6%
Lg. Firm Gen. - Wahpeton	72,444	21,332	29.4%
Air Force Delivery	110,373	26,545	24.1%
Small Interruptible	1,562,795	256,079	16.4%
Small Interrupt - Wahpeton	180,012	19,493	10.8%
Large Interruptible	1,786,509	34,801	1.9%
Total	**$41,429,371**	**$8,972,424**	**21.7%**

Q. How do you recommend the Commission should adjust the revenue allocation to reflect a different revenue requirement?

A. If the Commission determines that MDU should receive a lower increase than requested, I recommend that the increases shown in Table 6 should be scaled back proportionately.

Residential Rate Design

Q. Did you review the Company's proposed design of residential rates?

A. Yes.

Q. Please summarize your understanding of the Company's residential rate design proposals.

A. MDU's existing (permanent) residential rate is a flat charge of $0.6860 per day, or $20.58 for a 30-day billing period. There is no element of the distribution rate that is based on the amount of gas consumed or demanded by the customer. Under proposed rates, MDU proposes to increase the flat charge to $0.8919 per day ($26.76 for a 30-day month), an increase of 30.0%. MDU proposes to continue the practice of having no consumption-based distribution charge.

Q. Do you agree with the Company's proposed design of residential rates?

A. No. The Company's proposed residential rate design is not consistent with the results of its cost-of-service study, does not reflect a fair allocation of costs among residential customers with different demand and consumption characteristics, and does nothing to encourage the efficient use of natural gas (or to discourage the inefficient use of gas). As such, the proposed rate design violates two of Professor Bonbright's fundamental principles of rate design: the fairness and efficiency principles.

Q. What is the effect of the Company's proposed rate design on different types of residential customers?

A. The Company's COSS calculates that the customer-related cost is $20.48 per month, demand-related costs are $0.97 per Dk, and energy-related costs are $0.03 per Dk.[34] Yet the Company proposes a customer charge that would average $26.76 per month. This charge is $6.28 per month, or $75.36 per year, more than the customer-related cost. The proposed rates, therefore, would result in charging lower-usage customers (such as

[34] MDU Statement K, Sch. K-1, p. 1.

customers in small dwelling units or those who do not use natural gas for both space heating and water heating) significantly more than the cost of service, while higher-use residential customers would pay significantly less than the cost to serve them.

Importantly, the existing customer charge (averaging $20.58 per month) is approximately equal to the customer-related cost ($20.48 per month) under the Company's proposed revenue requirement. Consequently, there is no justification for increasing the customer charge at this time.

Q. Do these figures change under your preferred COSS methodology or your alternative that corrects the minimum system calculation?

A. Yes, they do. Table 7 show the unit costs for the residential class under the different COSS options.

Table 7: Unit Costs for Residential Class Under Different COSS Options

COSS Option	Customer Cost per Month	Demand Cost per Dk	Energy Cost per Dk
MDU	$ 20.48	$ 0.97	$ 0.03
Corrected	$ 17.22	$ 1.23	$ 0.03

Sources: MDU Statement K, Sch. K-1, p. 1; Exhibit ___(SJR-2), p. 3.

Q. You stated that the Company's proposal would result in charging lower-use residential customers more than the cost to serve them, and higher-use residential customers less than the cost of service. Can you quantify this concern?

A. Yes. As I described earlier, the Company's COSS calculates a unit energy-related cost of $0.03 per Dk and a unit demand-related cost of $0.97 per Dk, or a total of $1.00 per Dk incurred by the Company to serve customers, in addition to customer-related costs. The

average residential customer uses approximately 88 Dk per year.[35] Thus, to serve a higher-use customer that uses 50 Dk more than the average customer, MDU would incur an additional $50 per year in costs. Under the Company's proposal, however, that customer would pay the identical amount as a lower-use customer who uses 50 Dk less than the average customer (and who should be paying $50 per year less than average).

Q. Are there residential customers with such diverse usage?

A. Yes. According to the billing data provided by the Company in response to AARP set 1 no. 9, the Company has more than 12,000 customers who use at least 138 Dk per year, and more than 4,500 customers who use 38 Dk or less per year. Indeed, at the extremes, MDU has approximately 2,900 customers who use 200 Dk per year or more, and approximately the same number of customers who use 30 Dk per year or less. It is essentially impossible for these customers to place the same peak demands on the system. These customers should not all be paying the same rates for distribution service.

Q. Why is it important to understand the diversity of consumption within the residential class?

A. If all customers were roughly the same, then the specific rate design selected would not make much difference in customers' bill on an annual basis. While a rate design could shift revenues among seasons (higher consumption charges would result in higher winter bills and lower summer bills, for example), on an annual basis an average customer will come out about the same.

[35] Average residential customer usage: 8,619,479 Dk ÷ 98,125 customers from MDU Statement L, p. 1.

Where there is significant diversity within the class, however, the rate design will have very real consequences for customers. In the real world, residential customers differ significantly from the class average. Customers who use much less than the class-average amount of gas would pay higher bills if revenues are collected through fixed charges and lower bills if revenues are collected through a combination of fixed charges and consumption charges; and the reverse is true for higher-use customers.

Q. Under present rates, all residential distribution costs are collected through a fixed charge. Is it reasonable, in your opinion, to continue that type of rate design for MDU?

A. No. The evidence demonstrates that the Company has significant demand- and energy-related costs that vary with the amount of gas a customer uses during peak periods -- approximately $1.00 to $1.25 per Dk as shown in the Company's and my COSS, respectively.

Q. How should demand-related costs be collected from customers who do not have demand meters, like residential customers?

A. When demand meters are not present, it is necessary to use energy consumption as a proxy for demand.

Q. Why is it important to charge demand-related costs based on a measure of gas usage rather than assuming that they are the same for all customers?

A. In the cost-of-service study, certain costs are allocated among customer classes based on each class's contribution to demand. If a customer's demand increases, then costs allocated to the customer's class will increase (all else being equal); and if a customer

decreases its demand, then costs allocated to the class will decrease. Thus, charging demand-related costs to customers based on their consumption of gas sends an important price signal to customers: if you increase your demand it will increase the level of costs allocated to the class. As a matter of fairness and efficiency, the customer who causes those increased costs to be allocated to the class (the customer with higher demand) should be charged for those costs.

Q. What do you recommend?

A. I recommend that the residential customer charge should not be increased in this case. Under the Company's COSS, the existing customer charge fully recovers all customer-related costs. Under my COSS, the existing customer charge collects more than $3 per month in excess of the total customer-related costs. Thus, under either study there is no justification for increasing the customer charge. Any rate increase allocated to the residential class, therefore, should be collected solely through a consumption charge.

Q. Would any other benefits occur if residential distribution rates had a consumption charge?

A. Yes, in addition to the benefits associated with having rates more accurately reflect the cost of providing service, implementing a residential consumption charge would facilitate the ultimate consolidation of the Wahpeton system residential rates (Rate 63) with the main system residential rates (Rate 60). Existing rates in Wahpeton are structured very differently from MDU's main system rates.

Specifically, the Wahpeton residential rates have a lower customer charge of $3.50 per month and a two-block consumption charge ($1.0720 per Dk for the first 10 Dk

per month; $0.8220 per Dk for usage in excess of 10 Dk per month). MDU is proposing to move Wahpeton rates toward main-system rates by making dramatic increases in the customer charge and dramatic decreases in the consumption charges.

In contrast, if main-system rates are modified in this case to include a consumption charge, the same consumption charge can be levied on all residential customers (Rates 60, 90, and 63), with Wahpeton customers paying a lower customer charge during a transition period. I show on Exhibit ___ (SJR-3) that this would result in Wahpeton revenues increasing by approximately the main-system residential percentage increase, rather than the exorbitant 43% increase for Wahpeton proposed by the Company.[36] This exhibit is prepared using the Company's COSS and proposed revenue allocation, so there is no change in class revenues.

Q. Have you prepared a similar schedule showing the residential rates that would result from your proposed change in class revenue allocation?

A. Yes. Exhibit ___ (SJR-4) shows residential rates under MDU's proposed overall revenue requirement and my proposed class revenue allocation and residential rate design.

Q. If the Commission determines that MDU's revenue requirement should be lower than the Company requested, what do you recommend?

A. If that occurs, I recommend that the rates shown in Exhibit ___ (SJR-4) should be reduced proportionately to result in collecting the residential class's share of the finally determined revenue requirement.

[36] MDU had a target increase of 48% for Wahpeton residential customers, as discussed above, but MDU designed rates that resulted in an increase of 43% to that customer class.

Conclusion

Q. Does this conclude your direct testimony?

A. Yes.

Appendix A

Scott J. Rubin
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Current Position

Public Utility Attorney and Consultant. 1994 to present. I provide legal, consulting, and expert witness services to various organizations interested in the regulation of public utilities.

Previous Positions

Lecturer in Computer Science, Susquehanna University, Selinsgrove, PA. 1993 to 2000.

Senior Assistant Consumer Advocate, Office of Consumer Advocate, Harrisburg, PA. 1990 to 1994. I supervised the administrative and technical staff and shared with one other senior attorney the supervision of a legal staff of 14 attorneys.

Assistant Consumer Advocate, Office of Consumer Advocate, Harrisburg, PA. 1983 to 1990.

Associate, Laws and Staruch, Harrisburg, PA. 1981 to 1983.

Law Clerk, U.S. Environmental Protection Agency, Washington, DC. 1980 to 1981.

Research Assistant, Rockville Consulting Group, Washington, DC. 1979.

Current Professional Activities

Member, American Bar Association, Infrastructure and Regulated Industries Section.

Member, American Water Works Association.

Admitted to practice law before the Supreme Court of Pennsylvania, the New York State Court of Appeals, the United States District Court for the Middle District of Pennsylvania, the United States Court of Appeals for the Third Circuit, and the Supreme Court of the United States.

Served as peer reviewer for *Electricity Journal*, J*ournal American Water Works Association*, *Journal of Benefit-Cost Analysis*, and *Utilities Policy*.

Previous Professional Activities

Member, American Water Works Association, Rates and Charges Subcommittee, 1998-2001.

Member, Federal Advisory Committee on Disinfectants and Disinfection By-Products in Drinking Water, U.S. Environmental Protection Agency, Washington, DC. 1992 to 1994.

Chair, Water Committee, National Association of State Utility Consumer Advocates, Washington, DC. 1990 to 1994; member of committee from 1988 to 1990.

Member, Board of Directors, Pennsylvania Energy Development Authority, Harrisburg, PA. 1990 to 1994.

Member, Small Water Systems Advisory Committee, Pennsylvania Department of Environmental Resources, Harrisburg, PA. 1990 to 1992.

Member, Ad Hoc Committee on Emissions Control and Acid Rain Compliance, National Association of State Utility Consumer Advocates, 1991.

Member, Nitrogen Oxides Subcommittee of the Acid Rain Advisory Committee, U.S. Environmental Protection Agency, Washington DC. 1991.

Education

J.D. with Honors, George Washington University, Washington, DC. 1981.

B.A. with Distinction in Political Science, Pennsylvania State University, University Park, PA. 1978.

Publications and Presentations (* denotes peer-reviewed publications)

1. "Quality of Service Issues," a speech to the Pennsylvania Public Utility Commission Consumer Conference, State College, PA. 1988.

2. K.L. Pape and S.J. Rubin, "Current Developments in Water Utility Law," in *Pennsylvania Public Utility Law* (Pennsylvania Bar Institute). 1990.

3. Presentation on Water Utility Holding Companies to the Annual Meeting of the National Association of State Utility Consumer Advocates, Orlando, FL. 1990.

4. "How the OCA Approaches Quality of Service Issues," a speech to the Pennsylvania Chapter of the National Association of Water Companies. 1991.

5. Presentation on the Safe Drinking Water Act to the Mid-Year Meeting of the National Association of State Utility Consumer Advocates, Seattle, WA. 1991.

6. "A Consumer Advocate's View of Federal Pre-emption in Electric Utility Cases," a speech to the Pennsylvania Public Utility Commission Electricity Conference. 1991.

7. Workshop on Safe Drinking Water Act Compliance Issues at the Mid-Year Meeting of the National Association of State Utility Consumer Advocates, Washington, DC. 1992.

8. Formal Discussant, Regional Acid Rain Workshop, U.S. Environmental Protection Agency and National Regulatory Research Institute, Charlotte, NC. 1992.

9. S.J. Rubin and S.P. O'Neal, "A Quantitative Assessment of the Viability of Small Water Systems in Pennsylvania," *Proceedings of the Eighth NARUC Biennial Regulatory Information Conference*, National Regulatory Research Institute (Columbus, OH 1992), IV:79-97.

10. "The OCA's Concerns About Drinking Water," a speech to the Pennsylvania Public Utility Commission Water Conference. 1992.

11. Member, Technical Horizons Panel, Annual Meeting of the National Association of Water Companies, Hilton Head, SC. 1992.

12. M.D. Klein and S.J. Rubin, "Water and Sewer -- Update on Clean Streams, Safe Drinking Water, Waste Disposal and Pennvest," *Pennsylvania Public Utility Law Conference* (Pennsylvania Bar Institute). 1992.

13. Presentation on Small Water System Viability to the Technical Assistance Center for Small Water Companies, Pa. Department of Environmental Resources, Harrisburg, PA. 1993

14. "The Results Through a Public Service Commission Lens," speaker and participant in panel discussion at Symposium: "Impact of EPA's Allowance Auction," Washington, DC, sponsored by AER*X. 1993.

15. "The Hottest Legislative Issue of Today -- Reauthorization of the Safe Drinking Water Act," speaker and participant in panel discussion at the Annual Conference of the American Water Works Association, San Antonio, TX. 1993.

16. "Water Service in the Year 2000," a speech to the Conference: "Utilities and Public Policy III: The Challenges of Change," sponsored by the Pennsylvania Public Utility Commission and the Pennsylvania State University, University Park, PA. 1993.

17. "Government Regulation of the Drinking Water Supply: Is it Properly Focused?," speaker and participant in panel discussion at the National Consumers League's Forum on Drinking Water Safety and Quality, Washington, DC. 1993. Reprinted in *Rural Water*, Vol. 15 No. 1 (Spring 1994), pages 13-16.

18. "Telephone Penetration Rates for Renters in Pennsylvania," a study prepared for the Pennsylvania Office of Consumer Advocate. 1993.

19. "Zealous Advocacy, Ethical Limitations and Considerations," participant in panel discussion at "Continuing Legal Education in Ethics for Pennsylvania Lawyers," sponsored by the Office of General Counsel, Commonwealth of Pennsylvania, State College, PA. 1993.

20. "Serving the Customer," participant in panel discussion at the Annual Conference of the National Association of Water Companies, Williamsburg, VA. 1993.

21. "A Simple, Inexpensive, Quantitative Method to Assess the Viability of Small Water Systems," a speech to the Water Supply Symposium, New York Section of the American Water Works Association, Syracuse, NY. 1993.

22. * S.J. Rubin, "Are Water Rates Becoming Unaffordable?," *Journal American Water Works Association*, Vol. 86, No. 2 (February 1994), pages 79-86.

23. "Why Water Rates Will Double (If We're Lucky): Federal Drinking Water Policy and Its Effect on New England," a briefing for the New England Conference of Public Utilities Commissioners, Andover, MA. 1994.

24. "Are Water Rates Becoming Unaffordable?," a speech to the Legislative and Regulatory Conference, Association of Metropolitan Water Agencies, Washington, DC. 1994.

25. "Relationships: Drinking Water, Health, Risk and Affordability," speaker and participant in panel discussion at the Annual Meeting of the Southeastern Association of Regulatory Commissioners, Charleston, SC. 1994.

26. "Small System Viability: Assessment Methods and Implementation Issues," speaker and participant in panel discussion at the Annual Conference of the American Water Works Association, New York, NY. 1994.

27. S.J. Rubin, "How much should we spend to save a life?," *Seattle Journal of Commerce*, August 18, 1994 (Protecting the Environment Supplement), pages B-4 to B-5.

28. S. Rubin, S. Bernow, M. Fulmer, J. Goldstein, and I. Peters, *An Evaluation of Kentucky-American Water Company's Long-Range Planning*, prepared for the Utility and Rate Intervention Division, Kentucky Office of the Attorney General (Tellus Institute 1994).

29. S.J. Rubin, "Small System Monitoring: What Does It Mean?," *Impacts of Monitoring for Phase II/V Drinking Water Regulations on Rural and Small Communities* (National Rural Water Association 1994), pages 6-12.

30. "Surviving the Safe Drinking Water Act," speaker at the Annual Meeting of the National Association of State Utility Consumer Advocates, Reno, NV. 1994.

31. "Safe Drinking Water Act Compliance -- Ratemaking Implications," speaker at the National Conference of Regulatory Attorneys, Scottsdale, AZ. 1995. Reprinted in *Water*, Vol. 36, No. 2 (Summer 1995), pages 28-29.

32. S.J. Rubin, "Water: Why Isn't it Free? The Case of Small Utilities in Pennsylvania," *Utilities, Consumers & Public Policy: Issues of Quality, Affordability, and Competition, Proceedings of the Fourth Utilities, Consumers and Public Policy Conference* (Pennsylvania State University 1995), pages 177-183.

33. S.J. Rubin, "Water Rates: An Affordable Housing Issue?," *Home Energy*, Vol. 12 No. 4 (July/August 1995), page 37.

34. Speaker and participant in the Water Policy Forum, sponsored by the National Association of Water Companies, Naples, FL. 1995.

35. Participant in panel discussion on "The Efficient and Effective Maintenance and Delivery of Potable Water at Affordable Rates to the People of New Jersey," at The New Advocacy: Protecting Consumers in the Emerging Era of Utility Competition, a conference sponsored by the New Jersey Division of the Ratepayer Advocate, Newark, NJ. 1995.

36. J.E. Cromwell III, and S.J. Rubin, *Development of Benchmark Measures for Viability Assessment* (Pa. Department of Environmental Protection 1995).

37. S. Rubin, "A Nationwide Practice from a Small Town in Pa.," *Lawyers & the Internet – a Supplement to the Legal Intelligencer and Pa. Law Weekly* (February 12, 1996), page S6.

38. "Changing Customers' Expectations in the Water Industry," speaker at the Mid-America Regulatory Commissioners Conference, Chicago, IL. 1996, reprinted in *Water* Vol. 37 No. 3 (Winter 1997), pages 12-14.

39. "Recent Federal Legislation Affecting Drinking Water Utilities," speaker at Pennsylvania Public Utility Law Conference, Pennsylvania Bar Institute, Hershey, PA. 1996.

40. "Clean Water at Affordable Rates: A Ratepayers Conference," moderator at symposium sponsored by the New Jersey Division of Ratepayer Advocate, Trenton, NJ. 1996.

41. "Water Workshop: How New Laws Will Affect the Economic Regulation of the Water Industry," speaker at the Annual Meeting of the National Association of State Utility Consumer Advocates, San Francisco, CA. 1996.

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48. "Capacity Development in the Water Industry," speaker at the Annual Meeting of the National Association of Regulatory Utility Commissioners, Boston, MA. 1997.

49. "The Ticking Bomb: Competitive Electric Metering, Billing, and Collection," speaker at the Annual Meeting of the National Association of State Utility Consumer Advocates, Boston, MA. 1997.

50. Scott J. Rubin, "A Nationwide Look at the Affordability of Water Service," *Proceedings of the 1998 Annual Conference of the American Water Works Association*, Water Research, Vol. C, No. 3, pages 113-129 (American Water Works Association, 1998).

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53. Scott J. Rubin, *The Challenges and Changing Mission of Utility Consumer Advocates* (American Association of Retired Persons, 1999).

54. "Consumer Advocacy for the Future," speaker at the Age of Awareness Conference, Changes and Choices: Utilities in the New Millennium, Carlisle, PA. 1999.

55. Keynote Address, $1 Energy Fund, Inc., Annual Membership Meeting, Monroeville, PA. 1999.

56. Scott J. Rubin, "Assessing the Effect of the Proposed Radon Rule on the Affordability of Water Service," prepared for the American Water Works Association. 1999.

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59. Janice A. Beecher and Scott J. Rubin, presentation on "Special Topics in Rate Design: Affordability" at the Annual Conference and Exhibition of the American Water Works Association, Denver, CO. 2000.

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82. Scott J. Rubin, Regulatory Options for Water Utilities, NARUC Annual Regulatory Studies Program, East Lansing, MI. 2002.

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84. Scott J. Rubin, Defining Affordability and Low-Income Household Tradeoffs, presentation to National Drinking Water Advisory Council Small Systems Affordability Working Group, Washington, DC. 2002.

85. Scott J. Rubin, "Thinking Outside the Hearing Room," *Pennsylvania Public Utility Law Conference*, Pennsylvania Bar Institute, Harrisburg, PA. 2002.

86. Scott J. Rubin, "Update of Affordability Database," White Paper, National Rural Water Association. 2003.

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88. Scott J. Rubin, *The Cost of Water and Wastewater Service in the United States*, National Rural Water Association, 2003.

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90. George M. Aman, III, Jeffrey P. Garton, Eric Petersen, and Scott J. Rubin, Challenges and Opportunities for Improving Water Supply Institutional Arrangements, *Water Law Conference*, Pennsylvania Bar Institute, Mechanicsburg, PA. 2004.

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111. Scott J. Rubin, Water Reliability and Resilience Standards, *Pennsylvania Public Utility Law Conference* (Pennsylvania Bar Institute). 2011.

112. Member of Expert Panel, Leadership Forum: Business Management for the Future, Annual Conference and Exposition of the American Water Works Association, Washington, DC. 2011.

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2. *Pa. Public Utility Commission v. Shenango Valley Water Co.*, Pa. Public Utility Commission, Docket R-00922420. 1992. Concerning cost allocation, on behalf of the Pa. Office of Consumer Advocate

3. *Pa. Public Utility Commission v. Pennsylvania Gas and Water Co. - Water Division*, Pa. Public Utility Commission, Docket R-00922482. 1993. Concerning rate design, on behalf of the Pa. Office of Consumer Advocate

4. *Pa. Public Utility Commission v. Colony Water Co.*, Pa. Public Utility Commission, Docket R-00922375. 1993. Concerning rate design, on behalf of the Pa. Office of Consumer Advocate

5. *Pa. Public Utility Commission v. Dauphin Consolidated Water Supply Co. and General Waterworks of Pennsylvania, Inc.*, Pa. Public Utility Commission, Docket R-00932604. 1993. Concerning rate design and cost of service, on behalf of the Pa. Office of Consumer Advocate

6. *West Penn Power Co. v. State Tax Department of West Virginia*, Circuit Court of Kanawha County, West Virginia, Civil Action No. 89-C-3056. 1993. Concerning regulatory policy and the effects of a taxation statute on out-of-state utility ratepayers, on behalf of the Pa. Office of Consumer Advocate

7. *Pa. Public Utility Commission v. Pennsylvania Gas and Water Co. - Water Division*, Pa. Public Utility Commission, Docket R-00932667. 1993. Concerning rate design and affordability of service, on behalf of the Pa. Office of Consumer Advocate

8. *Pa. Public Utility Commission v. National Utilities, Inc.*, Pa. Public Utility Commission, Docket R-00932828. 1994. Concerning rate design, on behalf of the Pa. Office of Consumer Advocate

9. *An Investigation of the Sources of Supply and Future Demand of Kentucky-American Water Company*, Ky. Public Service Commission, Case No. 93-434. 1994. Concerning supply and demand planning, on behalf of the Kentucky Office of Attorney General, Utility and Rate Intervention Division.

10. *The Petition on Behalf of Gordon's Corner Water Company for an Increase in Rates*, New Jersey Board of Public Utilities, Docket No. WR94020037. 1994. Concerning revenue requirements and rate design, on behalf of the New Jersey Division of Ratepayer Advocate.

11. *Re Consumers Maine Water Company Request for Approval of Contracts with Consumers Water Company and with Ohio Water Service Company*, Me. Public Utilities Commission, Docket No. 94-352. 1994. Concerning affiliated interest agreements, on behalf of the Maine Public Advocate.

12. *In the Matter of the Application of Potomac Electric Power Company for Approval of its Third Least-Cost Plan*, D.C. Public Service Commission, Formal Case No. 917, Phase II. 1995. Concerning Clean Air Act implementation and environmental externalities, on behalf of the District of Columbia Office of the People's Counsel.

13. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of the Dayton Power and Light Company and Related Matters*, Ohio Public Utilities Commission, Case No. 94-105-EL-EFC. 1995. Concerning Clean Air Act implementation (case settled before testimony was filed), on behalf of the Office of the Ohio Consumers' Counsel.

14. *Kennebec Water District Proposed Increase in Rates*, Maine Public Utilities Commission, Docket No. 95-091. 1995. Concerning the reasonableness of planning decisions and the relationship between a publicly owned water district and a very large industrial customer, on behalf of the Maine Public Advocate.

15. *Winter Harbor Water Company, Proposed Schedule Revisions to Introduce a Readiness-to-Serve Charge*, Maine Public Utilities Commission, Docket No. 95-271. 1995 and 1996. Concerning standards for, and the reasonableness of, imposing a readiness to serve charge and/or exit fee on the customers of a small investor-owned water utility, on behalf of the Maine Public Advocate.

16. *In the Matter of the 1995 Long-Term Electric Forecast Report of the Cincinnati Gas & Electric Company*, Public Utilities Commission of Ohio, Case No. 95-203-EL-FOR, and *In the Matter of the Two-Year Review of the Cincinnati Gas & Electric Company's Environmental Compliance Plan Pursuant to Section 4913.05, Revised Cost*, Case No. 95-747-EL-ECP. 1996. Concerning the reasonableness of the utility's long-range supply and demand-management plans, the reasonableness of its plan for complying with the Clean Air Act Amendments of 1990, and discussing methods to ensure the provision of utility service to low-income customers, on behalf of the Office of the Ohio Consumers' Counsel..

17. *In the Matter of Notice of the Adjustment of the Rates of Kentucky-American Water Company*, Kentucky Public Service Commission, Case No. 95-554. 1996. Concerning rate design, cost of service, and sales forecast issues, on behalf of the Kentucky Office of Attorney General.

18. *In the Matter of the Application of Citizens Utilities Company for a Hearing to Determine the Fair Value of its Properties for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon, and to Approve Rate Schedules Designed to Provide such Rate of Return*, Arizona Corporation Commission, Docket Nos. E-1032-95-417, *et al.* 1996. Concerning rate design, cost of service, and the price elasticity of water demand, on behalf of the Arizona Residential Utility Consumer Office.

19. *Cochrane v. Bangor Hydro-Electric Company*, Maine Public Utilities Commission, Docket No. 96-053. 1996. Concerning regulatory requirements for an electric utility to engage in unregulated business enterprises, on behalf of the Maine Public Advocate.

20. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Monongahela Power Company and Related Matters*, Public Utilities Commission of Ohio, Case No. 96-106-EL-EFC. 1996. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

21. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Cleveland Electric Illuminating Company and Toledo Edison Company and Related Matters*, Public Utilities Commission of Ohio, Case Nos. 96-107-EL-EFC and 96-108-EL-EFC. 1996. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

22. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Ohio Power Company and Columbus Southern Power Company and Related Matters*, Public Utilities Commission of Ohio, Case Nos. 96-101-EL-EFC and 96-102-EL-EFC. 1997. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

23. *An Investigation of the Sources of Supply and Future Demand of Kentucky-American Water Company (Phase II)*, Kentucky Public Service Commission, Docket No. 93-434. 1997. Concerning supply and demand planning, on behalf of the Kentucky Office of Attorney General, Public Service Litigation Branch.

24. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Cincinnati Gas and Electric Co. and Related Matters*, Public Utilities Commission of Ohio, Case No. 96-103-EL-EFC. 1997. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

25. *Bangor Hydro-Electric Company Petition for Temporary Rate Increase*, Maine Public Utilities Commission, Docket No. 97-201. 1997. Concerning the reasonableness of granting an electric utility's request for emergency rate relief, and related issues, on behalf of the Maine Public Advocate.

26. *Testimony concerning H.B. 1068 Relating to Restructuring of the Natural Gas Utility Industry*, Consumer Affairs Committee, Pennsylvania House of Representatives. 1997. Concerning the provisions of proposed legislation to restructure the natural gas utility industry in Pennsylvania, on behalf of the Pennsylvania AFL-CIO Gas Utility Caucus.

27. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Cleveland Electric Illuminating Company and Toledo Edison Company and Related Matters*, Public Utilities Commission of Ohio, Case Nos. 97-107-EL-EFC and 97-108-EL-EFC. 1997. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

28. *In the Matter of the Petition of Valley Road Sewerage Company for a Revision in Rates and Charges for Water Service*, New Jersey Board of Public Utilities, Docket No. WR92080846J. 1997. Concerning the revenue requirements and rate design for a wastewater treatment utility, on behalf of the New Jersey Division of Ratepayer Advocate.

29. *Bangor Gas Company, L.L.C., Petition for Approval to Furnish Gas Service in the State of Maine*, Maine Public Utilities Commission, Docket No. 97-795. 1998. Concerning the standards and public policy

concerns involved in issuing a certificate of public convenience and necessity for a new natural gas utility, and related ratemaking issues, on behalf of the Maine Public Advocate.

30. *In the Matter of the Investigation on Motion of the Commission into the Adequacy of the Public Utility Water Service Provided by Tidewater Utilities, Inc., in Areas in Southern New Castle County, Delaware*, Delaware Public Service Commission, Docket No. 309-97. 1998. Concerning the standards for the provision of efficient, sufficient, and adequate water service, and the application of those standards to a water utility, on behalf of the Delaware Division of the Public Advocate.

31. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Cincinnati Gas and Electric Co. and Related Matters*, Public Utilities Commission of Ohio, Case No. 97-103-EL-EFC. 1998. Concerning fuel-related transactions with affiliated companies and the appropriate ratemaking treatment and regulatory safeguards involving such transactions, on behalf of the Ohio Consumers' Counsel.

32. *Olde Port Mariner Fleet, Inc. Complaint Regarding Casco Bay Island Transit District's Tour and Charter Service*, Maine Public Utilities Commission, Docket No. 98-161. 1998. Concerning the standards and requirements for allocating costs and separating operations between regulated and unregulated operations of a transportation utility, on behalf of the Maine Public Advocate and Olde Port Mariner Fleet, Inc.

33. *Central Maine Power Company Investigation of Stranded Costs, Transmission and Distribution Utility Revenue Requirements, and Rate Design*, Maine Public Utilities Commission, Docket No. 97-580. 1998. Concerning the treatment of existing rate discounts when designing rates for a transmission and distribution electric utility, on behalf of the Maine Public Advocate.

34. *Pa. Public Utility Commission v. Manufacturers Water Company*, Pennsylvania Public Utility Commission, Docket No. R-00984275. 1998. Concerning rate design on behalf of the Manufacturers Water Industrial Users.

35. *In the Matter of Petition of Pennsgrove Water Supply Company for an Increase in Rates for Water Service*, New Jersey Board of Public Utilities, Docket No. WR98030147. 1998. Concerning the revenue requirements, level of affiliated charges, and rate design for a water utility, on behalf of the New Jersey Division of Ratepayer Advocate.

36. *In the Matter of Petition of Seaview Water Company for an Increase in Rates for Water Service*, New Jersey Board of Public Utilities, Docket No. WR98040193. 1999. Concerning the revenue requirements and rate design for a water utility, on behalf of the New Jersey Division of Ratepayer Advocate.

37. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Ohio Power Company and Columbus Southern Power Company and Related Matters*, Public Utilities Commission of Ohio, Case Nos. 98-101-EL-EFC and 98-102-EL-EFC. 1999. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

38. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Dayton Power and Light Company and Related Matters*, Public Utilities Commission of Ohio, Case No. 98-105-EL-EFC. 1999. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

39. *In the Matter of the Regulation of the Electric Fuel Component Contained within the Rate Schedules of Monongahela Power Company and Related Matters*, Public Utilities Commission of Ohio, Case No. 99-106-EL-EFC. 1999. Concerning the costs and procedures associated with the implementation of the Clean Air Act Amendments of 1990, on behalf of the Ohio Consumers' Counsel.

40. *County of Suffolk, et al. v. Long Island Lighting Company, et al.*, U.S. District Court for the Eastern District of New York, Case No. 87-CV-0646. 2000. Submitted two affidavits concerning the calculation and collection of court-ordered refunds to utility customers, on behalf of counsel for the plaintiffs.

41. *Northern Utilities, Inc., Petition for Waivers from Chapter 820*, Maine Public Utilities Commission, Docket No. 99-254. 2000. Concerning the standards and requirements for defining and separating a natural gas utility's core and non-core business functions, on behalf of the Maine Public Advocate.

42. *Notice of Adjustment of the Rates of Kentucky-American Water Company*, Kentucky Public Service Commission, Case No. 2000-120. 2000. Concerning the appropriate methods for allocating costs and designing rates, on behalf of the Kentucky Office of Attorney General.

43. *In the Matter of the Petition of Gordon's Corner Water Company for an Increase in Rates and Charges for Water Service*, New Jersey Board of Public Utilities, Docket No. WR00050304. 2000. Concerning the revenue requirements and rate design for a water utility, on behalf of the New Jersey Division of Ratepayer Advocate.

44. *Testimony concerning Arsenic in Drinking Water: An Update on the Science, Benefits, and Costs*, Committee on Science, United States House of Representatives. 2001. Concerning the effects on low-income households and small communities from a more stringent regulation of arsenic in drinking water.

45. *In the Matter of the Application of The Cincinnati Gas & Electric Company for an Increase in Gas Rates in its Service Territory*, Public Utilities Commission of Ohio, Case No. 01-1228-GA-AIR, *et al.* 2002. Concerning the need for and structure of a special rider and alternative form of regulation for an accelerated main replacement program, on behalf of the Ohio Consumers' Counsel.

46. *Pennsylvania State Treasurer's Hearing on Enron and Corporate Governance Issues*. 2002. Concerning Enron's role in Pennsylvania's electricity market and related issues, on behalf of the Pennsylvania AFL-CIO.

47. *An Investigation into the Feasibility and Advisability of Kentucky-American Water Company's Proposed Solution to its Water Supply Deficit*, Kentucky Public Service Commission, Case No. 2001-00117. 2002. Concerning water supply planning, regulatory oversight, and related issue, on behalf of the Kentucky Office of Attorney General.

48. *Joint Application of Pennsylvania-American Water Company and Thames Water Aqua Holdings GmbH*, Pennsylvania Public Utility Commission, Docket Nos. A-212285F0096 and A-230073F0004. 2002. Concerning the risks and benefits associated with the proposed acquisition of a water utility, on behalf of the Pennsylvania Office of Consumer Advocate.

49. *Application for Approval of the Transfer of Control of Kentucky-American Water Company to RWE AG and Thames Water Aqua Holdings GmbH*, Kentucky Public Service Commission, Case No. 2002-00018. 2002. Concerning the risks and benefits associated with the proposed acquisition of a water utility, on behalf of the Kentucky Office of Attorney General.

50. *Joint Petition for the Consent and Approval of the Acquisition of the Outstanding Common Stock of American Water Works Company, Inc., the Parent Company and Controlling Shareholder of West Virginia-American Water Company*, West Virginia Public Service Commission, Case No. 01-1691-W-PC. 2002. Concerning the risks and benefits associated with the proposed acquisition of a water utility, on behalf of the Consumer Advocate Division of the West Virginia Public Service Commission.

51. *Joint Petition of New Jersey-American Water Company, Inc. and Thames Water Aqua Holdings GmbH for Approval of Change in Control of New Jersey-American Water Company, Inc.*, New Jersey Board of Public Utilities, Docket No. WM01120833. 2002. Concerning the risks and benefits associated with the proposed acquisition of a water utility, on behalf of the New Jersey Division of Ratepayer Advocate.

52. *Illinois-American Water Company, Proposed General Increase in Water Rates*, Illinois Commerce Commission, Docket No. 02-0690. 2003. Concerning rate design and cost of service issues, on behalf of the Illinois Office of the Attorney General.

53. *Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company*, Pennsylvania Public Utility Commission, Docket No. R-00038304. 2003. Concerning rate design and cost of service issues, on behalf of the Pennsylvania Office of Consumer Advocate.

54. *West Virginia-American Water Company*, West Virginia Public Service Commission, Case No. 03-0353-W-42T. 2003. Concerning affordability, rate design, and cost of service issues, on behalf of the West Virginia Consumer Advocate Division.

55. *Petition of Seabrook Water Corp. for an Increase in Rates and Charges for Water Service*, New Jersey Board of Public Utilities, Docket No. WR3010054. 2003. Concerning revenue requirements, rate design, prudence, and regulatory policy, on behalf of the New Jersey Division of Ratepayer Advocate.

56. *Chesapeake Ranch Water Co. v. Board of Commissioners of Calvert County*, U.S. District Court for Southern District of Maryland, Civil Action No. 8:03-cv-02527-AW. 2004. Submitted expert report concerning the expected level of rates under various options for serving new commercial development, on behalf of the plaintiff.

57. *Testimony concerning Lead in Drinking Water*, Committee on Government Reform, United States House of Representatives. 2004. Concerning the trade-offs faced by low-income households when drinking water costs increase, including an analysis of H.R. 4268.

58. *West Virginia-American Water Company*, West Virginia Public Service Commission, Case No. 04-0373-W-42T. 2004. Concerning affordability and rate comparisons, on behalf of the West Virginia Consumer Advocate Division.

59. *West Virginia-American Water Company*, West Virginia Public Service Commission, Case No. 04-0358-W-PC. 2004. Concerning costs, benefits, and risks associated with a wholesale water sales contract, on behalf of the West Virginia Consumer Advocate Division.

60. *Kentucky-American Water Company*, Kentucky Public Service Commission, Case No. 2004-00103. 2004. Concerning rate design and tariff issues, on behalf of the Kentucky Office of Attorney General.

61. *New Landing Utility, Inc.*, Illinois Commerce Commission, Docket No. 04-0610. 2005. Concerning the adequacy of service provided by, and standards of performance for, a water and wastewater utility, on behalf of the Illinois Office of Attorney General.

62. *People of the State of Illinois v. New Landing Utility, Inc.*, Circuit Court of the 15th Judicial District, Ogle County, Illinois, No. 00-CH-97. 2005. Concerning the standards of performance for a water and wastewater utility, including whether a receiver should be appointed to manage the utility's operations, on behalf of the Illinois Office of Attorney General.

63. *Hope Gas, Inc. d/b/a Dominion Hope*, West Virginia Public Service Commission, Case No. 05-0304-G-42T. 2005. Concerning the utility's relationships with affiliated companies, including an appropriate level of revenues and expenses associated with services provided to and received from affiliates, on behalf of the West Virginia Consumer Advocate Division.

64. *Monongahela Power Co. and The Potomac Edison Co.*, West Virginia Public Service Commission, Case Nos. 05-0402-E-CN and 05-0750-E-PC. 2005. Concerning review of a plan to finance the construction of pollution control facilities and related issues, on behalf of the West Virginia Consumer Advocate Division.

65. *Joint Application of Duke Energy Corp., et al., for Approval of a Transfer and Acquisition of Control*, Case Kentucky Public Service Commission, No. 2005-00228. 2005. Concerning the risks and benefits associated with the proposed acquisition of an energy utility, on behalf of the Kentucky Office of the Attorney General.

66. *Commonwealth Edison Company proposed general revision of rates, restructuring and price unbundling of bundled service rates, and revision of other terms and conditions of service*, Illinois Commerce Commission, Docket No. 05-0597. 2005. Concerning rate design and cost of service, on behalf of the Illinois Office of Attorney General.

67. *Pennsylvania Public Utility Commission v. Aqua Pennsylvania, Inc.*, Pennsylvania Public Utility Commission, Docket No. R-00051030. 2006. Concerning rate design and cost of service, on behalf of the Pennsylvania Office of Consumer Advocate.

68. *Central Illinois Light Company d/b/a AmerenCILCO, Central Illinois Public Service Company d/b/a AmerenCIPS, and Illinois Power Company d/b/a AmerenIP, proposed general increases in rates for delivery service*, Illinois Commerce Commission, Docket Nos. 06-0070, et al. 2006. Concerning rate design and cost of service, on behalf of the Illinois Office of Attorney General.

69. *Grens, et al., v. Illinois-American Water Co.*, Illinois Commerce Commission, Docket Nos. 5-0681, et al. 2006. Concerning utility billing, metering, meter reading, and customer service practices, on behalf of the Illinois Office of Attorney General and the Village of Homer Glen, Illinois.

70. *Commonwealth Edison Company Petition for Approval of Tariffs Implementing ComEd's Proposed Residential Rate Stabilization Program*, Illinois Commerce Commission, Docket No. 06-0411. 2006. Concerning a utility's proposed purchased power phase-in proposal, in behalf of the Illinois Office of Attorney General.

71. *Illinois-American Water Company, Application for Approval of its Annual Reconciliation of Purchased Water and Purchased Sewage Treatment Surcharges Pursuant to 83 Ill. Adm. Code 655*, Illinois Commerce

Commission, Docket No. 06-0196. 2006. Concerning the reconciliation of purchased water and sewer charges, on behalf of the Illinois Office of Attorney General and the Village of Homer Glen, Illinois.

72. *Illinois-American Water Company, et al.*, Illinois Commerce Commission, Docket No. 06-0336. 2006. Concerning the risks and benefits associated with the proposed divestiture of a water utility, on behalf of the Illinois Office of Attorney General.

73. *Joint Petition of Kentucky-American Water Company, et al.*, Kentucky Public Service Commission, Docket No. 2006-00197. 2006. Concerning the risks and benefits associated with the proposed divestiture of a water utility, on behalf of the Kentucky Office of Attorney General.

74. *Aqua Illinois, Inc. Proposed Increase in Water Rates for the Kankakee Division*, Illinois Commerce Commission, Docket No. 06-0285. 2006. Concerning various revenue requirement, rate design, and tariff issues, on behalf of the County of Kankakee.

75. *Housing Authority for the City of Pottsville v. Schuylkill County Municipal Authority*, Court of Common Pleas of Schuylkill County, Pennsylvania, No. S-789-2000. 2006. Concerning the reasonableness and uniformity of rates charged by a municipal water authority, on behalf of the Pottsville Housing Authority.

76. *Application of Pennsylvania-American Water Company for Approval of a Change in Control*, Pennsylvania Public Utility Commission, Docket No. A-212285F0136. 2006. Concerning the risks and benefits associated with the proposed divestiture of a water utility, on behalf of the Pennsylvania Office of Consumer Advocate.

77. *Application of Artesian Water Company, Inc., for an Increase in Water Rates*, Delaware Public Service Commission, Docket No. 06-158. 2006. Concerning rate design and cost of service, on behalf of the Staff of the Delaware Public Service Commission.

78. *Central Illinois Light Company, Central Illinois Public Service Company, and Illinois Power Company: Petition Requesting Approval of Deferral and Securitization of Power Costs*, Illinois Commerce Commission, Docket No. 06-0448. 2006. Concerning a utility's proposed purchased power phase-in proposal, in behalf of the Illinois Office of Attorney General.

79. *Petition of Pennsylvania-American Water Company for Approval to Implement a Tariff Supplement Revising the Distribution System Improvement Charge*, Pennsylvania Public Utility Commission, Docket No. P-00062241. 2007. Concerning the reasonableness of a water utility's proposal to increase the cap on a statutorily authorized distribution system surcharge, on behalf of the Pennsylvania Office of Consumer Advocate.

80. *Adjustment of the Rates of Kentucky-American Water Company*, Kentucky Public Service Commission, Case No. 2007-00143. 2007. Concerning rate design and cost of service, on behalf of the Kentucky Office of Attorney General.

81. *Application of Kentucky-American Water Company for a Certificate of Convenience and Necessity Authorizing the Construction of Kentucky River Station II, Associated Facilities and Transmission Main*, Kentucky Public Service Commission, Case No. 2007-00134. 2007. Concerning the life-cycle costs of a planned water supply source and the imposition of conditions on the construction of that project, on behalf of the Kentucky Office of Attorney General.

82. *Pa. Public Utility Commission v. Pennsylvania-American Water Company*, Pennsylvania Public Utility Commission, Docket No. R-00072229. 2007. Concerning rate design and cost of service, on behalf of the Pennsylvania Office of Consumer Advocate.

83. *Illinois-American Water Company Application for Approval of its Annual Reconciliation of Purchased Water and Purchased Sewage Treatment Surcharges*, Illinois Commerce Commission, Docket No. 07-0195. 2007. Concerning the reconciliation of purchased water and sewer charges, on behalf of the Illinois Office of Attorney General.

84. *In the Matter of the Application of Aqua Ohio, Inc. to Increase Its Rates for Water Service Provided in the Lake Erie Division*, Public Utilities Commission of Ohio, Case No.07-0564-WW-AIR. 2007. Concerning rate design and cost of service, on behalf of the Office of the Ohio Consumers' Counsel.

85. *Pa. Public Utility Commission v. Aqua Pennsylvania Inc.*, Pennsylvania Public Utility Commission, Docket No. R-00072711. 2008. Concerning rate design, on behalf of the Masthope Property Owners Council.

86. *Illinois-American Water Company Proposed increase in water and sewer rates*, Illinois Commerce Commission, Docket No. 07-0507. 2008. Concerning rate design and demand studies, on behalf of the Illinois Office of Attorney General.

87. *Central Illinois Light Company, d/b/a AmerenCILCO; Central Illinois Public Service Company, d/b/a AmerenCIPS; Illinois Power Company, d/b/a AmerenIP: Proposed general increase in rates for electric delivery service*, Illinois Commerce Commission Docket Nos. 07-0585, 07-0586, 07-0587. 2008. Concerning rate design and cost of service studies, on behalf of the Illinois Office of Attorney General.

88. *Commonwealth Edison Company: Proposed general increase in electric rates*, Illinois Commerce Commission Docket No. 07-0566. 2008. Concerning rate design and cost of service studies, on behalf of the Illinois Office of Attorney General.

89. *In the Matter of Application of Ohio American Water Co. to Increase Its Rates*, Public Utilities Commission of Ohio, Case No. 07-1112-WS-AIR. 2008. Concerning rate design and cost of service, on behalf of the Office of the Ohio Consumers' Counsel.

90. *In the Matter of the Application of The East Ohio Gas Company d/b/a Dominion East Ohio for Authority to Increase Rates for its Gas Service*, Public Utilities Commission of Ohio, Case Nos. 07-829-GA-AIR, et al. 2008. Concerning the need for, and structure of, an accelerated infrastructure replacement program and rate surcharge, on behalf of the Office of the Ohio Consumers' Counsel.

91. *Pa. Public Utility Commission v. Pennsylvania American Water Company*, Pennsylvania Public Utility Commission, Docket No. R-2008-2032689. 2008. Concerning rate design, cost of service study, and other tariff issues, on behalf of the Pennsylvania Office of Consumer Advocate.

92. *Pa. Public Utility Commission v. York Water Company*, Pennsylvania Public Utility Commission, Docket No. R-2008-2023067. 2008. Concerning rate design, cost of service study, and other tariff issues, on behalf of the Pennsylvania Office of Consumer Advocate.

93. *Northern Illinois Gas Company d/b/a Nicor Gas Company*, Illinois Commerce Commission, Docket No. 08-0363. 2008. Concerning rate design, cost of service, and automatic rate adjustments, on behalf of the Illinois Office of Attorney General.

94. *West Virginia American Water Company*, West Virginia Public Service Commission, Case No. 08-0900-W-42T. 2008. Concerning affiliated interest charges and relationships, on behalf of the Consumer Advocate Division of the Public Service Commission of West Virginia.

95. *Illinois-American Water Company Application for Approval of its Annual Reconciliation of Purchased Water and Purchased Sewage Treatment Surcharges*, Illinois Commerce Commission, Docket No. 08-0218. 2008. Concerning the reconciliation of purchased water and sewer charges, on behalf of the Illinois Office of Attorney General.

96. *In the Matter of Application of Duke Energy Ohio, Inc. for an Increase in Electric Rates*, Public Utilities Commission of Ohio, Case No. 08-0709-EL-AIR. 2009. Concerning rate design and cost of service, on behalf of the Office of the Ohio Consumers' Counsel.

97. *The Peoples Gas Light and Coke Company and North Shore Gas Company Proposed General Increase in Rates for Gas Service*, Illinois Commerce Commission, Docket Nos. 09-0166 and 09-0167. 2009. Concerning rate design and automatic rate adjustments on behalf of the Illinois Office of Attorney General, Citizens Utility Board, and City of Chicago.

98. *Illinois-American Water Company Proposed Increase in Water and Sewer Rates*, Illinois Commerce Commission, Docket No. 09-0319. 2009. Concerning rate design and cost of service on behalf of the Illinois Office of Attorney General and Citizens Utility Board.

99. *Pa. Public Utility Commission v. Aqua Pennsylvania Inc.*, Pennsylvania Public Utility Commission, Docket No. R-2009-2132019. 2010. Concerning rate design, cost of service, and automatic adjustment tariffs, on behalf of the Pennsylvania Office of Consumer Advocate.

100. *Apple Canyon Utility Company and Lake Wildwood Utilities Corporation Proposed General Increases in Water Rates*, Illinois Commerce Commission, Docket Nos. 09-0548 and 09-0549. 2010. Concerning parent-company charges, quality of service, and other matters, on behalf of Apple Canyon Lake Property Owners' Association and Lake Wildwood Association, Inc.

101. *Application of Aquarion Water Company of Connecticut to Amend its Rate Schedules*, Connecticut Department of Public Utility Control, Docket No. 10-02-13. 2010. Concerning rate design, proof of revenues, and other tariff issues, on behalf of the Connecticut Office of Consumer Counsel.

102. *Illinois-American Water Company Annual Reconciliation of Purchased Water and Sewage Treatment Surcharges*, Illinois Commerce Commission, Docket No. 09-0151. 2010. Concerning the reconciliation of purchased water and sewer charges, on behalf of the Illinois Office of Attorney General.

103. *Pa. Public Utility Commission v. Pennsylvania-American Water Co.*, Pennsylvania Public Utility Commission, Docket Nos. R-2010-2166212, et al. 2010. Concerning rate design and cost of service study for four wastewater utility districts, on behalf of the Pennsylvania Office of Consumer Advocate.

104. *Central Illinois Light Company d/b/a AmerenCILCO, Central Illinois Public Service Company d/b/a AmerenCIPS, Illinois Power Company d/b/a AmerenIP Petition for accounting order*, Illinois Commerce

Commission, Docket No. 10-0517. 2010. Concerning ratemaking procedures for a multi-district electric and natural gas utility, on behalf of the Illinois Office of Attorney General.

105. *Commonwealth Edison Company Petition for General Increase in Delivery Service Rates*, Illinois Commerce Commission Docket No. 10-0467. 2010. Concerning rate design and cost of service study, on behalf of the Illinois Office of Attorney General.

106. *Pa. Public Utility Commission v. City of Lancaster Bureau of Water*, Pennsylvania Public Utility Commission, Docket No. R-2010-2179103. 2010. Concerning rate design, cost of service, and cost allocation, on behalf of the Pennsylvania Office of Consumer Advocate.

107. *Application of Yankee Gas Services Company for Amended Rate Schedules*, Connecticut Department of Public Utility Control, Docket No. 10-12-02. 2011. Concerning rate design and cost of service for a natural gas utility, on behalf of the Connecticut Office of Consumers' Counsel.

108. *California-American Water Company*, California Public Utilities Commission, Application 10-07-007. 2011. Concerning rate design and cost of service for multiple water-utility service areas, on behalf of The Utility Reform Network.

109. *Little Washington Wastewater Company, Inc., Masthope Wastewater Division*, Pennsylvania Public Utility Commission Docket No. R-2010-2207833. 2011. Concerning rate design and various revenue requirements issues, on behalf of the Masthope Property Owners Council.

110. *In the matter of Pittsfield Aqueduct Company, Inc.*, New Hampshire Public Utilities Commission Case No. DW 10-090. 2011. Concerning rate design and cost of service on behalf of the New Hampshire Office of the Consumer Advocate.

111. *In the matters of Pennichuck Water Works, Inc. Permanent Rate Case and Petition for Approval of Special Contract with Anheuser-Busch, Inc.*, New Hampshire Public Utilities Commission Case Nos. DW 10-091 and DW 11-014. 2011. Concerning rate design, cost of service, and contract interpretation on behalf of the New Hampshire Office of the Consumer Advocate.

112. *Artesian Water Co., Inc. v. Chester Water Authority*, U.S. District Court for the Eastern District of Pennsylvania Case No. 10-CV-07453-JP. 2011. Concerning cost of service, ratemaking methods, and contract interpretation on behalf of Chester Water Authority.

113. *North Shore Gas Company and The Peoples Gas Light and Coke Company Proposed General Increases in Rates for Gas Service*, Illinois Commerce Commission, Docket Nos. 11-0280 and 11-0281. 2011. Concerning rate design and cost of service on behalf of the Illinois Office of Attorney General, the Citizens Utility Board, and the City of Chicago.

114. *Ameren Illinois Company: Proposed general increase in electric delivery service rates and gas delivery service rates*, Illinois Commerce Commission, Docket Nos. 11-0279 and 11-0282. 2011. Concerning rate design and cost of service for natural gas and electric distribution service, on behalf of the Illinois Office of Attorney General and the Citizens Utility Board.

115. *Pa. Public Utility Commission v. Pennsylvania-American Water Co.*, Pennsylvania Public Utility Commission, Docket No. R-2011-2232243. 2011. Concerning rate design, cost of service, sales forecast,

and automatic rate adjustments on behalf of the Pennsylvania Office of Consumer Advocate.

116. *Aqua Illinois, Inc. Proposed General Increase in Water and Sewer Rates*, Illinois Commerce Commission, Docket No. 11-0436. 2011. Concerning rate design and cost of service on behalf of the Illinois Office of Attorney General.

117. *City of Nashua Acquisition of Pennichuck Corporation*, New Hampshire Public Utilities Commission, Docket No. DW 11-026. 2011. Concerning the proposed acquisition of an investor-owned utility holding company by a municipality, including appropriate ratemaking methodologies, on behalf of the New Hampshire Office of Consumer Advocate.

118. *An Application by Heritage Gas Limited for the Approval of a Schedule of Rates, Tolls and Charges*, Nova Scotia Utility and Review Board, Case NSUARB-NG-HG-R-11. 2011. Concerning rate design and cost of service, on behalf of the Nova Scotia Consumer Advocate.

119. *An Application of Halifax Regional Water Commission for Approval of a Cost of Service and Rate Design Methodology*, Nova Scotia Utility and Review Board , Case NSUARB-W-HRWC-R-11. 2011. Concerning rate design and cost of service, on behalf of the Nova Scotia Consumer Advocate.

120. *National Grid USA and Liberty Energy Utilities Corp.*, New Hampshire Public Utilities Commission, Docket No. DG 11-040. 2011. Concerning the costs and benefits of a proposed merger and related conditions, on behalf of the New Hampshire Office of Consumer Advocate.

121. *Great Northern Utilities, Inc., et al.*, Illinois Commerce Commission, Docket Nos. 11-0059, et al. 2012. Concerning options for mitigating rate impacts and consolidating small water and wastewater utilities for ratemaking purposes, on behalf of the Illinois Office of Attorney General.

122. *Pa. Public Utility Commission v. Aqua Pennsylvania, Inc.*, Pennsylvania Public Utility Commission, Docket No. R-2011-2267958. 2012. Concerning rate design, cost of service, and automatic rate adjustment mechanisms, on behalf of the Pennsylvania Office of Consumer Advocate.

123. *Golden State Water Company*, California Public Utilities Commission, Application 11-07-017. 2012. Concerning rate design and quality of service, on behalf of The Utility Reform Network.

124. *Golden Heart Utilities, Inc. and College Utilities Corporation*, Regulatory Commission of Alaska, Case Nos. U-11-77 and U-11-78. 2012. Concerning rate design and cost of service, on behalf of the Alaska Office of the Attorney General.

125. *Illinois-American Water Company*, Illinois Commerce Commission, Docket No. 11-0767. 2012. Concerning rate design, cost of service, and automatic rate adjustment mechanisms, on behalf of the Illinois Office of Attorney General.

126. *Application of Tidewater Utilities, Inc., for a General Rate Increase in Water Base Rates and Tariff Revisions*, Delaware Public Service Commission, Docket No. 11-397. 2012. Concerning rate design and cost of service study, on behalf of the Staff of the Delaware Public Service Commission.

127. *In the Matter of the Philadelphia Water Department's Proposed Increase in Rates for Water and Wastewater Utility Services*, Philadelphia Water Commissioner, FY 2013-2016. 2012. Concerning rate

design and related issues for storm water service, on behalf of Citizens for Pennsylvania's Future.

128. *Corix Utilities (Illinois) LLC, Hydro Star LLC, and Utilities Inc. Joint Application for Approval of a Proposed Reorganization*, Illinois Commerce Commission, Docket No. 12-0279. 2012. Concerning merger-related synergy savings and appropriate ratemaking treatment of the same, on behalf of the Illinois Office of Attorney General.

129. *North Shore Gas Company and The Peoples Gas Light and Coke Company*, Illinois Commerce Commission, Docket Nos. 12-0511 and 12-0512. 2012. Concerning rate design, cost of service study, and automatic rate adjustment tariff on behalf of the Illinois Office of Attorney General.

130. *Pa. Public Utility Commission v. City of Lancaster Sewer Fund*, Pennsylvania Public Utility Commission, Docket No. R-2012-2310366. 2012. Concerning rate design, cost of service, and cost allocation, on behalf of the Pennsylvania Office of Consumer Advocate.

131. *Aquarion Water Company of New Hampshire*, New Hampshire Public Utilities Commission, Docket No. DW 12-085. 2013. Concerning tariff issues, including an automatic adjustment clause for infrastructure improvement, on behalf of the New Hampshire Office of Consumer Advocate.

132. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates*, Public Utilities Commission of Ohio, Case No. 12-1682-EL-AIR, et al. 2013. Concerning rate design and tariff issues, on behalf of the Office of the Ohio Consumers' Counsel.

133. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Natural Gas Distribution Rates*, Public Utilities Commission of Ohio, Case No. 12-1685-GA-AIR, et al. 2013. Concerning cost-of-service study, rate design, and tariff issues, on behalf of the Office of the Ohio Consumers' Counsel.

134. *In the Matter of the Application of The Dayton Power and Light Company to Establish a Standard Service Offer in the Form of an Electric Security Plan*, Public Utilities Commission of Ohio, Case No. 12-426-EL-SSO, et al. 2013. Concerning rate design, on behalf of the Office of the Ohio Consumers' Counsel.

135. *Application of the Halifax Regional Water Commission, for Approval of Amendments to its Schedule of Rates and Charges and Schedule of Rules and Regulations for the delivery of water, public and private fire protection, wastewater and stormwater services*, Nova Scotia Utility and Review Board, Matter No. M05463. 2013. Concerning rate design, cost-of-service study, and miscellaneous tariff provisions, on behalf of the Consumer Advocate of Nova Scotia.

136. *California Water Service Co. General Rate Case Application* , California Public Utilities Commission, Docket No. A.12-07-007. 2013. Concerning rate design, phase-in plans, low-income programs, and other tariff issues, on behalf of The Utility Reform Network.

137. *Application of The United Illuminating Company to Amend its Rate Schedules*, Connecticut Public Utility Regulatory Authority, Docket No. 13-01-19. 2013. Concerning sales forecast, rate design, and other tariff issues, on behalf of the Connecticut Office of Consumer Counsel.

138. *Application of Aquarion Water Company of Connecticut to Amend its Rate Schedules*, Connecticut Public Utility Regulatory Authority, Docket No. 13-02-20. 2013. Concerning sales forecast and rate design on

behalf of the Connecticut Office of Consumer Counsel.

139. *Ameren Illinois Company, Proposed General Increase in Natural Gas Delivery Service Rates*, Illinois Commerce Commission, Docket No. 13-0192. 2013. Concerning rate design and revenue allocation, on behalf of the Illinois Office of Attorney General and Citizens Utility Board.

140. *Commonwealth Edison Company, Tariff filing to present the Illinois Commerce Commission with an opportunity to consider revenue neutral tariff changes related to rate design*, Docket No. 13-0387. 2013. Concerning rate design and cost of service study issues, on behalf of the Illinois Office of Attorney General.

141. *In the Matter of the Potomac Electric Power Company for Authority to Increase Existing Retail Rates and Charges for Electric Distribution Service*, District of Columbia Public Service Commission, Formal Case No. 1103. 2013. Concerning rate design, revenue allocation, and cost-of-service study issues, on behalf of the District of Columbia Office of Peoples' Counsel.

142. *Pa. Public Utility Commission v. Pennsylvania-American Water Co.*, Pennsylvania Public Utility Commission, Docket No. R-2013-2355276. 2013. Concerning rate design, revenue allocation, and regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

143. *In the Matter of the Revenue Requirement and Transmission Tariff Designated as TA364-*8 *filed by Chugach Electric Association, Inc.*, Regulatory Commission of Alaska, U-13-007. 2013. Concerning rate design and cost-of-service study issues, on behalf of the Alaska Office of the Attorney General.

144. *Ameren Illinois Company: Tariff filing to present the Illinois Commerce Commission with an opportunity to consider revenue neutral tariff changes related to rate design*, Docket No. 13-0476. 2013. Concerning rate design and cost of service study issues, on behalf of the Illinois Office of Attorney General.

145. *Pa. Public Utility Commission v. City of Bethlehem Bureau of Water*, Pennsylvania Public Utility Commission, Docket No. R-2013-2390244. 2014. Concerning rate design, cost of service study, and revenue allocation on behalf of the Pennsylvania Office of Consumer Advocate.

146. *In the Matter of the Tariff Revision Designated as TA332-121 filed by the Municipality of Anchorage d/b/a Municipal Light and Power Department*, Regulatory Commission of Alaska, U-13-184. 2014. Concerning rate design and cost-of-service study issues, on behalf of the Alaska Office of the Attorney General.

147. *Pa. Public Utility Commission v. Pike County Light and Power Co. - Gas*, Pennsylvania Public Utility Commission, Docket No. R-2013-2397353. 2014. Concerning rate design and revenue allocation on behalf of the Pennsylvania Office of Consumer Advocate.

148. *Pa. Public Utility Commission v. Pike County Light and Power Co. - Electric*, Pennsylvania Public Utility Commission, Docket No. R-2013-2397237. 2014. Concerning rate design, cost of service study, and revenue allocation on behalf of the Pennsylvania Office of Consumer Advocate.

149. *The Peoples Gas Light and Coke Company North Shore Gas Company Proposed General Increase in Rates for Gas Service*, Illinois Commerce Commission, Docket Nos. 14-0224 and 14-0225. 2014. Concerning rate design on behalf of the Illinois Office of the Attorney General and the Environmental

Law and Policy Center.

150. *Apple Valley Ranchos Water Company*, California Public Utilities Commission, Docket No. A.14-01-002. 2014. Concerning rate design and automatic rate adjustment mechanisms on behalf of the Town of Apple Valley.

151. *Application by Heritage Gas Limited for Approval to Amend its Franchise Area*, Nova Scotia Utility and Review Board, Matter No. M06271. 2014. Concerning criteria, terms, and conditions for expanding a utility's service area and using transported compressed natural gas to serve small retail customers, on behalf of the Nova Scotia Consumer Advocate.

152. *Notice of Intent of Entergy Mississippi, Inc. to Modernize Rates to Support Economic Development, Power Procurement, and Continued Investment*, Mississippi Public Service Commission Docket No. 2014-UN-132. 2014. Concerning rate design and tariff issues, on behalf of the Mississippi Public Utilities Staff.

153. *Pa. Public Utility Commission v. City of Lancaster Bureau of Water*, Pennsylvania Public Utility Commission, Docket No. R-2014-2418872. 2014. Concerning rate design, cost of service study, and revenue allocation on behalf of the Pennsylvania Office of Consumer Advocate.

154. *Pa. Public Utility Commission v. Borough of Hanover Municipal Water Works*, Pennsylvania Public Utility Commission, Docket No. R-2014-2428304. 2014. Concerning rate design, cost of service study, and revenue allocation on behalf of the Pennsylvania Office of Consumer Advocate.

155. *Investigation of Commonwealth Edison Company's Cost of Service for Low-Use Customers in Each Residential Class*, Illinois Commerce Commission, Docket No. 14-0384. 2014. Concerning rate design on behalf of the Illinois Office of Attorney General.

156. *Application of the Halifax Regional Water Commission, for Approval of its Schedule of Rates and Charges and Schedule of Rules and Regulations for the Provision of Water, Public and Private Fire Protection, Wastewater and Stormwater Services*, Nova Scotia Utility and Review Board, Matter No. M06540. 2015. Concerning rate design, cost of service study, and tariff issues on behalf of the Nova Scotia Consumer Advocate.

157. *Testimony concerning organization and regulation of Philadelphia Gas Works*, Philadelphia City Council's Special Committee on Energy Opportunities. 2015.

158. *Testimony concerning proposed telecommunications legislation*, Maine Joint Standing Committee on Energy, Utilities, and Technology. 2015.

159. *Pa. Public Utility Commission v. United Water Pennsylvania, Inc.*, Pennsylvania Public Utility Commission, Docket No. R-2015-2462723. 2015. Concerning rate design, cost of service study, and revenue allocation on behalf of the Pennsylvania Office of Consumer Advocate.

160. *Ameren Illinois Company Proposed General Increase in Gas Delivery Service Rates*, Illinois Commerce Commission, Docket No. 15-0142. 2015. Concerning rate design on behalf of the Illinois Office of Attorney General.

161. *Maine Natural Gas Company Request for Multi-Year Rate Plan*, Maine Public Utilities Commission, Docket No. 2015-00005. 2015. Concerning rate design and automatic rate adjustment tariffs on behalf of the Maine Office of the Public Advocate.

162. *Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide for a Standard Service Offer*, Public Utilities Commission of Ohio, Case No. 14-1297-EL-SSO. 2015. Concerning rate design and proposed rate discounts on behalf of the Office of the Ohio Consumers' Counsel.

163. *An Application of the Halifax Regional Water Commission, for approval of revisions to its Cost of Service Manual and Rate Design for Stormwater Service*, Nova Scotia Utility and Review Board, Matter No. M07147. 2016. Concerning stormwater rate design and cost of service, on behalf of the Nova Scotia Consumer Advocate.

164. *In the Matter of An Application by Heritage Gas Limited for Enhancement to Its Existing Residential Retro-Fit Assistance Fund*, Nova Scotia Utility and Review Board, Matter No. M07146. 2016. Concerning costs and benefits associated with utility system expansion, on behalf of the Nova Scotia Consumer Advocate.

165. *In the Matter of the Application of UNS Electric, Inc. for the Establishment of Just and Reasonable Rates and Charges*, Arizona Corporation Commission, Docket No. E-04204A-15-0142. 2016. Concerning rate design and residential demand charges on behalf of Arizona Utility Ratepayer Alliance.

166. *In the Matter of Application of Water Service Corporation of Kentucky for a General Adjustment in Existing Rates*, Kentucky Public Service Commission, Case No. 2015-00382. 2016. Concerning rate design and service area consolidation on behalf of the Kentucky Office of the Attorney General.

167. *Massachusetts Electric Company and Nantucket Electric Company*, Massachusetts Department of Public Utilities, Docket No. DPU 15-155. 2016. Concerning rate design and cost-of-service studies on behalf of the Massachusetts Office of Attorney General.

168. *In the Matter of Abenaki Water Company*, New Hampshire Public Utilities Commission, Docket No. DW 15-199. 2016. Concerning rate design on behalf of the New Hampshire Office of the Consumer Advocate.

169. *In the Matter of an Application by Heritage Gas Limited for Approval of its Customer Retention Program*, Nova Scotia Utility and Review Board Matter No. M07346. 2016. Concerning a regulatory response to competition and potential business failure on behalf of the Nova Scotia Consumer Advocate.

170. *Joint Application of Pennsylvania-American Water Company and the Sewer Authority of the City of Scranton*, Pennsylvania Public Utility Commission Docket No. A-2016-2537209. 2016. Concerning the lawfulness, costs and benefits, and ratemaking treatment of a proposed acquisition of a combined wastewater and storm water utility on behalf of the Pennsylvania Office of Consumer Advocate.

171. *Application of The United Illuminating Company to Amend its Rate Schedules*, Connecticut Public Utility Regulatory Authority Docket No. 16-06-04. 2016. Concerning rate design, cost-of-service study, and other tariff issues on behalf of the Connecticut Office of Consumer Counsel.

172. *Ameren Illinois Company Tariff filing to present the Illinois Commerce Commission with an opportunity to consider revenue neutral tariff changes related to rate design*, Illinois Commerce Commission Docket No. 16-0387. 2016. Concerning rate design and cost-of-service study on behalf of the Illinois Office of the Attorney General.

173. *Unitil Energy Systems, Inc.*, New Hampshire Public Utilities Commission Docket No. 16-384. 2016. Concerning rate design and cost-of-service study on behalf of the New Hampshire Office of Consumer Advocate.

174. *Liberty Utilities (Granite State Electric) Corp.*, New Hampshire Public Utilities Commission Docket No. 16-383. 2016. Concerning rate design and cost-of-service study on behalf of the New Hampshire Office of Consumer Advocate.

175. *Arizona Public Service Co.*, Arizona Corporation Commission Docket No. E-01345A-16-0123. 2017. Concerning rate design and cost-of-service study on behalf of the Arizona Utility Ratepayer Alliance.

176. *Commonwealth Edison Company, Tariff filing to present the Illinois Commerce Commission with an opportunity to consider revenue neutral tariff changes related to rate design*, Illinois Commerce Commission Docket No. 17-0049. 2017. Concerning rate design and cost of service study issues, on behalf of the Illinois Office of Attorney General.

177. *NSTAR Electric Company and Western Massachusetts Electric Company*, Massachusetts Department of Public Utilities Docket No. D.P.U. 17-05. 2017. Concerning rate design and cost of service study issues, on behalf of the Massachusetts Office of Attorney General.

178. *In the Matter of the Tariff Revision Designated as TA857-2 Filed by Alaska Power Company*, Regulatory Commission of Alaska No. U-16-078. 2017. Concerning rate design and cost of service study issues on behalf of the Alaska Office of the Attorney General.

179. *In the Matter of the Application of Minnesota Power for Authority to Increase Rates for Electric Utility Service in Minnesota*, Minnesota Public Utilities Commission Docket No. E015/GR-16-664. 2017. Concerning rate design and cost of service study issues on behalf of AARP.

180. *Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company*, Pennsylvania Public Utility Commission, Docket No. R-2017-2595853. 2017. Concerning rate design, cost of service, and policy issues, on behalf of the Pennsylvania Office of Consumer Advocate.

181. *Aqua Illinois, Inc. Proposed Rate Increases for Water and Sewer Services*, Illinois Commerce Commission, Docket No. 17-0259. 2017. Concerning rate design and single-tariff pricing, on behalf of the Illinois Office of Attorney General.

182. *Petition of Pennsylvania-American Water Company for Approval of Tariff Changes and Accounting and Rate Treatment Related to Replacement of Lead Customer-Owned Service Pipes*, Pennsylvania Public Utility Commission, Docket No. P-2017-2606100. 2017. Concerning public policy and ratemaking issues associated with the replacement of customer-owned lead service lines, on behalf of the Pennsylvania Office of Consumer Advocate.

183. *In the Matter of Application and Notice of Change in Natural Gas Rates of Montana-Dakota Utilities Co.*, North Dakota Public Service Commission, Case No. PU-17-295. 2017. Concerning rate design and cost

of service study issues, on behalf of AARP.

184. *Aqua Illinois, Inc. Petition for the Issuance of a Certificate of Public Convenience and Necessity to Operate a Water and Wastewater System in the Village of Peotone*, Illinois Commerce Commission, Docket No. 17-0314. 2018. Concerning rate consolidation and rate design, on behalf of the Illinois Office of Attorney General.

185. *Application of the Connecticut Light and Power Company d/b/a Eversource Energy to Amend its Rate Schedules, Connecticut Public Utilities Regulatory Authority*, Docket No. 17-10-46. 2018. Concerning rate design issues, on behalf of the Connecticut Office of Consumer Counsel.

186. *Application by Heritage Gas for Approval of a Long-Term Natural Gas Transportation Contract and Cost Recovery Mechanism*, Nova Scotia Utility and Review Board, Matter M08473. 2018. Concerning evaluation of costs, benefits, and risks of a long-term natural gas pipeline contract, on behalf of the Consumer Advocate of Nova Scotia.

187. *Boston Gas Company and Colonial Gas Company*, Massachusetts Department of Public Utilities, D.P.U. 17-170. 2018. Concerning class revenue allocation and rate design, on behalf of the Massachusetts Office of Attorney General.

188. *In the Matter of the Application of Maryland-American Water Company for Authority to Adjust its Existing Schedule of Tariffs and Rates*, Maryland Public Service Commission, Case No. 9487. 2018. Concerning cost-of-service study, on behalf of the Staff of the Maryland Public Service Commission.

189. *Joint Application and Petition of South Carolina Electric & Gas Company and Dominion Energy, Inc. for review and approval of a proposed business combination between SCANA Corporation and Dominion Energy, Inc., as may be required, and for a prudency determination regarding the abandonment of the V.C. Summer Units 2 & 3 Project and associated merger benefits and cost recovery plans*, South Carolina Public Service Commission, Docket No. 2017-370-E. 2018. Concerning regulatory policy, prudency of decision-making, and cost sharing, on behalf of AARP.

190. *Application of Transource Pennsylvania, LLC for approval of the Siting and Construction of the 230 kV Transmission Line Associated with the Independence Energy Connection - East and West Projects in portions of York and Franklin Counties, Pennsylvania*, Pennsylvania Public Utility Commission, Docket Nos. A-2017-2640195, et al. 2018. Concerning regulatory policy and benefit-cost analysis for a proposed high-voltage electric transmission line, on behalf of the Pennsylvania Office of Consumer Advocate.

191. *Pa. Public Utility Commission v. Pittsburgh Water and Sewer Authority*, Pennsylvania Public Utility Commission, Docket Nos. R-2018-3002645, et al. 2018. Concerning cost-of-service study and rate design for a water and wastewater utility, on behalf of the Pennsylvania Office of Consumer Advocate.

192. *West Virginia-American Water Company Rule 42T Tariff Filing to Increase Rates and Charges*, West Virginia Public Service Commission, Case No. 18-0573-W-42T, et al. 2018. Concerning revenue decoupling, on behalf of the Consumer Advocate Division.

193. *Philadelphia Gas Works and Philadelphia Facilities Management Corporation Petition for Approval and Recommendation for Approval of Certain Transactions and Contracts for the Purchase, Storage, Distribution and/or Transmission of Natural and Other Gas, and also Certain Transactions and Contracts Respecting Real Property Owned by the City of Philadelphia and Operated by the Philadelphia*

Gas Works, Philadelphia Gas Commission. 2018. Concerning regulatory policy and cost-benefit analysis for a proposed public-private partnership, on behalf of the Philadelphia Public Advocate.

194. *Pa. Public Utility Commission v. Aqua Pennsylvania, Inc., and Aqua Pennsylvania Wastewater, Inc.*, Pennsylvania Public Utility Commission, Docket Nos. R-2018-3003558, et al. 2018. Concerning rate design, class revenue allocation, and automatic rate adjustment mechanism, on behalf of the Pennsylvania Office of Consumer Advocate.

195. *In the Matter of Commission Initiated Investigation into Rates and Revenue Requirements and Customer Service and Communication Issues Pertaining to Central Maine Power Company,* Maine Public Utilities Commission, Docket No. 2018-00194. 2019. Concerning cost-of-service studies and rate design, on behalf of the Maine Office of Public Advocate.

196. *Northern Illinois Gas Company d/b/a Nicor Gas Company: Proposed general increase in gas rates,* Illinois Commerce Commission, Docket No. 18-1775. 2019. Concerning rate design, cost-of-service study, class revenue allocation, and automatic rate adjustment mechanisms, on behalf of the Illinois Office of the Attorney General.

197. *Massachusetts Electric Co. and Nantucket Electric Co., d/b/a/ National Grid*, Massachusetts Department of Public Utilities, D.P.U. 18-150. 2019. Concerning rate design, cost-of-service study, class revenue allocation, and time-of-use rates, on behalf of the Massachusetts Office of Attorney General.

198. *Implementation of Chapter 32 of the Public Utility Code Regarding Pittsburgh Water and Sewer Authority – Stage 1,* Pennsylvania Public Utility Commission, Docket Nos. M-2018-2640802 and M-2018-2640803. 2019. Concerning billing, metering, rate design, and other compliance issues for a municipal water authority, on behalf of the Pennsylvania Office of Consumer Advocate.

199. *Commonwealth Edison Company Petition for approval of a Revision to Integrated Distribution Company Implementation Plan. Creation of Rate Residential Time of Use Pricing Pilot ("Rate RTOUPP").* Illinois Commerce Commission, Docket Nos. 18-1725/18-1824 (Cons.). Concerning time-of-use rates, on behalf of the Illinois Office of Attorney General.

200. *Washington Utilities and Transportation Commission v. Northwest Natural Gas Co.*, Washington Utilities and Transportation Commission, Docket UG-181053. 2019. Concerning a proposed revenue decoupling automatic rate adjustment mechanism, on behalf of the Washington Office of Attorney General, Public Counsel Unit.

201. *In the Matter of the Application of Washington Gas Light Company for Authority to Increase Existing Rates and Charges and to Revise its Terms and Conditions for Gas Service*, Maryland Public Service Commission, Case No. 9605. 2019. Concerning cost-of-service study on behalf of the Staff of the Maryland Public Service Commission.

202. *Public Service Company of New Hampshire, d/b/a Eversource Energy*, New Hampshire Public Utilities Commission, Docket No. DE 19-057. 2019. Concerning class revenue allocation, rate design, revenue decoupling, other automatic rate adjustment mechanisms, and miscellaneous tariff issues on behalf of AARP.

203. *In the Matter of the Application of Southwest Gas Corporation for the Establishment of Just and Reasonable Rates and Charges Designed to Realize a Reasonable Rate of Return on the Fair Value of the*

Properties of Southwest Gas Corporation Devoted to its Arizona Operations, Arizona Corporation Commission, Docket No. G-01551A-19-0055. 2020. Concerning certain relationships with affiliates, premature pipe replacement, revenue decoupling, automatic rate adjustment mechanisms, and rate design on behalf of Arizona Grain, Inc.

204. *Petition of NSTAR Gas Company d/b/a Eversource Energy for Approval of an Increase in Base Distribution Rates*, Massachusetts Department of Public Utilities, Docket No. D.P.U. 19-120. 2020. Concerning cost-of-service study, class revenue allocation, surcharges, and miscellaneous tariff provisions, on behalf of the Massachusetts Office of Attorney General.

205. In the Matter of an Application of the Halifax Regional Water Commission for Approval of a Schedule of Rates and Charges, Nova Scotia Utility and Review Board, Matter M09589. 2020. Concerning regulatory policy, cost-of-service study, and rate design, on behalf of the Nova Scotia Consumer Advocate.

206. Pa. Public Utility Commission v. UGI Utilities Inc. - Gas Division, Pennsylvania Public Utility Commission, Docket No. R-2019-3015162. 2020. Concerning regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

207. *Pa. Public Utility Commission v. Philadelphia Gas Works*, Pennsylvania Public Utility Commission, Docket No. R-2020-3017206. 2020. Concerning regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

208. *Pa. Public Utility Commission v. Pittsburgh Water and Sewer Authority*, Pennsylvania Public Utility Commission, Docket Nos. R-2020-3017951, *et al.* 2020. Concerning regulatory policy, cost-of-service study, and rate design, on behalf of the Pennsylvania Office of Consumer Advocate.

209. *Pa. Public Utility Commission v. Columbia Gas of Pa.*, Pennsylvania Public Utility Commission, Docket No. R-2020-3018835. 2020. Concerning regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

210. *Pa. Public Utility Commission v. Pennsylvania-American Water Co.*, Pennsylvania Public Utility Commission, Docket No. R-2020-3019369. 2020. Concerning regulatory policy, cost-of-service studies, rate design, and tariff issues, on behalf of the Pennsylvania Office of Consumer Advocate.

211. *In the Matter of the Application of Arizona Public Service Company*, Arizona Corporation Commission, Docket No. E-01345A-19-0236. 2020. Concerning residential rate design, on behalf of AARP.

212. *Pa. Public Utility Commission v. City of Bethlehem - Water Department*, Pennsylvania Public Utility Commission, Docket No. R-2020-3020256. 2020. Concerning regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

213. *Tyson Fellman, et al. v. Public Utility District No. 1 of Franklin County*, Superior Court of Franklin County (Washington), Case No. 18-2-50589-11. 2020. Expert declaration concerning cost-of-service studies and rate design, on behalf of the plaintiffs.

214. *Application of Dominion Energy South Carolina, Inc. for Adjustment of Rates and Charges*, South Carolina Public Service Commission, Docket No. 2020-125-E. 2020. Concerning residential rate design, on behalf of AARP.

215. *Pa. Public Utility Commission v. Audubon Water Co.*, Pennsylvania Public Utility Commission, Docket No. R-2020-3020919. 2020. Concerning regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

216. *Pa. Public Utility Commission v. PECO Energy Co. - Gas Division*, Pennsylvania Public Utility Commission, Docket No. R-2020-3018929. 2020. Concerning regulatory policy, on behalf of the Pennsylvania Office of Consumer Advocate.

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Regression - Plastic Using Diameter and Trended Cost

```
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-21 rate case\Work\MDU zero intercept.sav
```

Variables Entered/Removed[a,b,c]

Model	Variables Entered	Variables Removed	Method
1	Diameter[d]	.	Enter

a. Dependent Variable: Cost2019_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Models are based only on cases for which Material = Plastic

d. All requested variables entered.

Model Summary

Model	R Material = Plastic (Selected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.973[a]	.946	.933	1550.69415

a. Predictors: (Constant), Diameter

ANOVA[a,b,c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	169067494.0	1	169067494.0	70.308	.001[d]
	Residual	9618609.432	4	2404652.358		
	Total	178686103.4	5			

a. Dependent Variable: Cost2019_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Plastic

d. Predictors: (Constant), Diameter

Coefficients[a,b,c]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.018	1.480		-.012	.991
	Diameter	3.945	.470	.973	8.385	.001

a. Dependent Variable: Cost2019_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Plastic

```
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  /NOORIGIN
  /DEPENDENT Cost2019_per_foot
  /METHOD=ENTER Diameter.
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Regression - Steel Using Diameter and Trended Cost

```
[DataSet1] C:\Users\Scott\ShareFile\Personal Folders\current\AARP\ND MDU 2020
-21 rate case\Work\MDU zero intercept.sav
```

Variables Entered/Removed[a,b,c]

Model	Variables Entered	Variables Removed	Method
1	Diameter[d]	.	Enter

a. Dependent Variable: Cost2019_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Models are based only on cases for which Material = Steel

d. All requested variables entered.

Model Summary

Model	R Material = Steel (Selected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860[a]	.740	.675	2474.41683

a. Predictors: (Constant), Diameter

ANOVA[a,b,c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69737350.10	1	69737350.10	11.390	.028[d]
	Residual	24490954.62	4	6122738.656		
	Total	94228304.72	5			

a. Dependent Variable: Cost2019_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Steel

d. Predictors: (Constant), Diameter

Coefficients[a,b,c]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-5.064	10.659		-.475	.660
	Diameter	7.190	2.130	.860	3.375	.028

a. Dependent Variable: Cost2019_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Steel

```
REGRESSION
```

```
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Regression - Plastic Using Diameter and Actual Book Cost

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```

Variables Entered/Removed[a,b,c]

Model	Variables Entered	Variables Removed	Method
1	Diameter[d]	.	Enter

a. Dependent Variable: Cost_actual_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Models are based only on cases for which Material = Plastic

d. All requested variables entered.

Model Summary

Model	R Material = Plastic (Selected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.967[a]	.935	.918	1596.51166

a. Predictors: (Constant), Diameter

ANOVA[a,b,c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	146110481.6	1	146110481.6	57.324	.002[d]
	Residual	10195397.92	4	2548849.479		
	Total	156305879.5	5			

a. Dependent Variable: Cost_actual_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Plastic

d. Predictors: (Constant), Diameter

Coefficients[a,b,c]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.557	1.524		-.365	.733
	Diameter	3.667	.484	.967	7.571	.002

a. Dependent Variable: Cost_actual_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Plastic

```
REGRESSION
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  /DEPENDENT Cost_actual_per_foot
  /METHOD=ENTER Diameter.
```

Regression - Steel Using Diameter and Actual Book Cost

```
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-21 rate case\Work\MDU zero intercept.sav
```

Variables Entered/Removed[a,b,c]

Model	Variables Entered	Variables Removed	Method
1	Diameter[d]	.	Enter

a. Dependent Variable: Cost_actual_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Models are based only on cases for which Material = Steel

d. All requested variables entered.

Model Summary

Model	R Material = Steel (Selected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.861[a]	.741	.677	1637.11507

a. Predictors: (Constant), Diameter

ANOVA[a,b,c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30706039.32	1	30706039.32	11.457	.028[d]
	Residual	10720583.07	4	2680145.767		
	Total	41426622.39	5			

a. Dependent Variable: Cost_actual_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Steel

d. Predictors: (Constant), Diameter

Coefficients[a,b,c]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.449	7.052		-.206	.847
	Diameter	4.771	1.410	.861	3.385	.028

a. Dependent Variable: Cost_actual_per_foot

b. Weighted Least Squares Regression - Weighted by Feet

c. Selecting only cases for which Material = Steel

	Total North Dakota	Total Residential	Total Small Firm General	Total Large Firm General	Total Air Force Delivery	Total Small Interruptible	Total Large Interruptible	Total MAFB Distribution
Revenue to Cost Ratio Under Current Rates	0.82	0.78	0.83	0.83	0.79	0.85	1.55	2.09
Revenues at Equalized Rates of Return								
Revenue Increase	8,972,435	6,749,028	925,220	1,841,295	29,285	302,003	(636,331)	(238,063)
Total revenue at equalized rates of return	50,857,807	31,073,706	5,442,643	10,788,876	139,658	2,044,810	1,150,177	217,937
Parity Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Secnario A: Equal Percentage Increase								
Revenue Increase	8,972,435	5,210,688	967,695	1,916,698	23,643	373,334	382,695	97,682
Total revenue at equalized rates of return	50,857,807	29,535,366	5,485,118	10,864,279	134,016	2,116,141	2,169,203	553,682
Percent Increase	21.42%	21.42%	21.42%	21.42%	21.42%	21.42%	21.42%	21.42%
Parity Ratio	1.00	0.95	1.01	1.01	0.96	1.03	1.89	2.54
Secnario B: No Class Increase Above Parity								
Revenue Increase	8,972,435	6,176,635	925,220	1841295	29285	0	0	0
Total revenue with no increase to classes above Parity	50,857,807	30,501,313	5,442,643	10,788,876	139,658	1,742,807	1,786,508	456,000
Percent Increase	21.42%	25.39%	20.48%	20.58%	26.53%	0.00%	0.00%	0.00%
Parity Ratio	1.00	0.98	1.00	1.00	1.00	0.85	1.55	2.09
Secnario C: Minimum Class Increase of 25% of System Average								
minimum 25% of system average increase (to elegible customers 1/)						5.57%	5.57%	
Revenue Increase	8,972,435	6,044,466	925,220	1,841,295	29,285	97,070	35,099	0
Total revenue at 25% system average minimum	50,857,807	30,369,144	5,442,643	10,788,876	139,658	1,839,877	1,821,607	456,000
Percent Increase	21.42%	24.85%	20.48%	20.58%	26.53%	5.57%	1.96%	0.00%
Parity Ratio	1.00	0.98	1.00	1.00	1.00	0.90	1.58	2.09

1/ "eligible customers" excludes contract rate customers

Source: Statement L

	Operating Income	Rate Base	Op Inc Required
Residential	2,834,229	108,655,047	5,101,934
Firm General Small	818,538	20,782,582	699,421
Firm General Large	1,618,992	41,222,898	1,391,929
Air Force	2,264	334,107	22,139
Small IT	299,895	7,231,591	228,300
Large IT	842,694	4,951,514	(481,035)
MAFB Distribution	288,638	1,487,874	(179,964)
	6,705,250	184,665,613	6,782,724
Double Check	0	0	0

	Total North Dakota	Residential Demand	Residential Energy	Residential Customer	Total Residential
Projected Rate Base	184,665,613	49,844,092	14,802	58,796,153	108,655,047
Operating Income for Proposed Return	13,487,974	3,640,612	1,081	4,294,470	7,936,163
Projected Operating Income	6,705,250	(4,350,942)	(166,473)	7,351,644	2,834,229
Increase in Operating Income	6,782,724	7,991,554	167,554	(3,057,174)	5,101,934
Related Taxes for Increase					
Federal Income	2,189,713	2,579,970	54,093	(986,969)	1,647,094
Total Increase in Revenue	8,972,437	10,571,524	221,647	(4,044,143)	6,749,028
Projected Revenue Before Increase	118,220,721	17,520,348	17,768,926	25,246,799	60,536,073
Total Cost of Service Required from Rates:	124,177,092	27,199,003	17,987,894	20,280,535	65,467,432
Less Projected Cost of Gas	73,319,285	16,627,479	17,766,247	0	34,393,726
Net Distribution Cost of Service	50,857,807	10,571,524	221,647	20,280,535	31,073,706
Return on Rate Base Before Increase	3.631%				2.608%
Projected Billing Units	115,014			98,125	
Bills	1,380,168			1,177,500	
Dk	25,761,347	8,619,479	8,619,479		
Unit Cost of Service					
Energy cost per Dk			$0.03		
Demand cost per Dk		$1.230			
Customer Cost Per Month				$17.22	
Cust and Demand cost per month				$26.20	

	Small Firm General			Total Small Firm General	Large Firm General			Total Large Firm General
	Demand	Energy	Customer		Demand	Energy	Customer	
Projected Rate Base	13,025,388	9,548	7,747,646	20,782,582	31,650,514	10,848	9,561,536	41,222,898
Operating Income for Proposed Return	951,374	697	565,888	1,517,959	2,311,754	792	698,375	3,010,921
Projected Operating Income	(1,098,273)	(38,900)	1,955,711	818,538	(2,807,749)	(125,657)	4,552,398	1,618,992
Increase in Operating Income	2,049,647	39,597	(1,389,823)	699,421	5,119,503	126,449	(3,854,023)	1,391,929
Related Taxes for Increase								
Federal Income	661,702	12,783	(448,686)	225,799	1,652,765	40,822	(1,244,221)	449,366
Total Increase in Revenue	2,711,349	52,380	(1,838,509)	925,220	6,772,268	167,271	(5,098,244)	1,841,295
Projected Revenue Before Increase	4,422,504	3,852,986	4,630,858	12,906,348	11,246,156	15,009,107	9,047,738	35,303,001
Total Cost of Service Required from Rates:	6,908,475	3,904,740	2,678,914	13,492,129	17,444,908	15,174,356	3,849,337	36,468,601
Less Projected Cost of Gas	4,197,126	3,852,360	0	8,049,486	10,672,640	15,007,085	0	25,679,725
Net Distribution Cost of Service	2,711,349	52,380	2,678,914	5,442,643	6,772,268	167,271	3,849,337	10,788,876
Return on Rate Base Before Increase				3.939%				3.927%
Projected Billing Units			11,499				5,204	
Bills			137,988				62,448	
Dk	2,014,211	2,014,211			6,505,434	6,505,434		
Unit Cost of Service								
Energy cost per Dk		$0.03				$0.03		
Demand cost per Dk	$1.350				$1.040			
Customer Cost Per Month			$19.41				$61.64	
Cust and Demand cost per month								

	Air Force Delivery			Total Air Force Delivery	Small Interruptible			Total Small Interruptible
	Demand	Energy	Customer		Demand	Energy	Customer	
Projected Rate Base	269,240	0	64,867	334,107	6,344,143	0	887,448	7,231,591
Operating Income for Proposed Return	19,665	0	4,738	24,403	463,376	0	64,819	528,195
Projected Operating Income	(58,210)	(8,362)	68,837	2,264	(699,636)	(18,289)	1,017,820	299,895
Increase in Operating Income	77,875	8,362	(64,099)	22,139	1,163,012	18,289	(953,001)	228,300
Related Taxes for Increase								
Federal Income	25,141	2,700	(20,694)	7,146	375,463	5,904	(307,664)	73,703
Total Increase in Revenue	103,016	11,062	(84,793)	29,285	1,538,475	24,193	(1,260,665)	302,003
Projected Revenue Before Increase	219,420	969,004	110,838	1,299,262	490,464	1,751,465	1,752,626	3,994,555
Total Cost of Service Required from Rates:	320,529	979,931	25,580	1,326,040	1,912,246	1,775,364	482,142	4,169,752
Less Projected Cost of Gas	217,513	968,869	0	1,186,382	373,771	1,751,171	0	2,124,942
Net Distribution Cost of Service	103,016	11,062	25,580	139,658	1,538,475	24,193	482,142	2,044,810
Return on Rate Base Before Increase				0.678%				4.147%
Projected Billing Units			3				165	
Bills			36				1,980	
Dk	432,975	432,975			1,759,109	1,759,109		
Unit Cost of Service								
Energy cost per Dk		$0.03				$0.01		
Demand cost per Dk	$0.240				$0.870			
Customer Cost Per Month			$710.56				$243.51	
Cust and Demand cost per month								

	Large Interruptible			Total Large Interruptible	Minot Air Force Base Distribution			Total MAFB Distribution
	Demand	Energy	Customer		Demand	Energy	Customer	
Projected Rate Base	4,749,506	0	202,008	4,951,514	871,647	0	616,227	1,487,874
Operating Income for Proposed Return	346,904	0	14,755	361,659	63,665	0	45,009	108,674
Projected Operating Income	(405,116)	(33,521)	1,281,331	842,694	(22,144)	0	310,782	288,638
Increase in Operating Income	752,020	33,521	(1,266,576)	(481,035)	85,809	0	(265,773)	(179,964)
Related Taxes for Increase								
Federal Income	242,780	10,822	(408,898)	(155,296)	27,702	0	(85,801)	(58,099)
Total Increase in Revenue	994,800	44,343	(1,675,474)	(636,331)	113,511	0	(351,574)	(238,063)
Projected Revenue Before Increase	1,179,598	756,916	1,788,968	3,725,482	0	0	456,000	456,000
Total Cost of Service Required from Rates:	2,123,448	800,719	111,034	3,035,201	113,511	0	104,426	217,937
Less Projected Cost of Gas	1,128,648	756,376	0	1,885,024	0	0	0	0
Net Distribution Cost of Service	994,800	44,343	111,034	1,150,177	113,511	0	104,426	217,937
Return on Rate Base Before Increase				17.019%				19.399%
Projected Billing Units			18					0
Bills			216					12
Dk	6,430,139	6,430,139						
Unit Cost of Service								
Energy cost per Dk		$0.01						
Demand cost per Dk	$0.150							
Customer Cost Per Month			$514.05					$18,161.42
Cust and Demand cost per month								

	Allocation Factor	Total North Dakota	Residential Demand	Residential Energy	Residential Customer	Total Residential	Firm General-Meter < 5(Demand	Firm General-Meter < 5(Energy
Rate Base-Projected								
Gas Plant in Service								
Transmission Plant	2	2,000,051	971,553	0	0	971,553	245,240	0
Land	13	922,303	384,046	0	100,801	484,847	96,941	0
Heskett Pipeline - Demand Related	2	39,150	19,018	0	0	19,018	4,800	0
Heskett Pipeline - Customer Related Related	8	5,850	0	0	4,992	4,992	0	0
Rights of Way	13	493,986	205,695	0	53,988	259,683	51,922	0
Structures & Improvements	40	524,062	221,476	0	58,133	279,609	55,905	0
Directly Assigned	Direct	99,490	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	202,068	98,157	0	0	98,157	24,777	0
Heskett Pipeline - Customer Related Related	8	30,194	0	0	25,764	25,764	0	0
Mains								
Demand Related 87%	2	105,720,724	51,355,311	0	0	51,355,311	12,963,162	0
Customer Related 13%	8	15,797,349	0	0	13,479,260	13,479,260	0	0
Directly Assigned Demand Related 87%	Direct	2,314,769	0	0	0	0	0	0
Directly Assigned Customer Related 13%	Direct	345,885	0	0	0	0	0	0
Heskett Pipeline								
Demand Related 87%	2	17,867,715	8,679,491	0	0	8,679,491	2,190,886	0
Customer Related 13%	8	2,669,889	0	0	2,278,113	2,278,113	0	0
Meas. & Reg. Equip. - General	40	2,639,185	1,115,358	0	292,748	1,408,106	281,540	0
Directly Assigned	Direct	406,688	0	0	0	0	0	0
Meas. & Reg. Equip. - City Gate	13	8,183,765	3,407,708	0	894,422	4,302,130	860,177	0
Directly Assigned	Direct	239,904	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	537,918	261,301	0	0	261,301	65,958	0
Heskett Pipeline - Customer Related Related	8	80,379	0	0	68,584	68,584	0	0
Services	37	61,055,263	0	0	49,743,420	49,743,420	0	0
Directly Assigned	Direct	509,310	0	0	0	0	0	0
Meters	9	35,728,039	0	0	22,588,571	22,588,571	0	0
Directly Assigned	Direct	54,980	0	0	0	0	0	0
Service Regulators	9	5,258,995	0	0	3,324,928	3,324,928	0	0
Directly Assigned	Direct	14,733	0	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	40	779,338	329,360	0	86,447	415,807	83,137	0
Directly Assigned	Direct	630,496	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	645,343	313,483	0	0	313,483	79,130	0
Heskett Pipeline - Customer Related Related	8	96,430	0	0	82,280	82,280	0	0
Property on Customer Premise	13	1,667	694	0	183	877	175	0
Cathodic Protection & Other Equipment	40	2,314,704	978,228	0	256,756	1,234,984	246,925	0
Directly Assigned	Direct	50,296	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	93,519	45,429	0	0	45,429	11,467	0
Heskett Pipeline - Customer Related Related	8	13,974	0	0	11,923	11,923	0	0
Distribution Plant - includes Heskett		266,368,360	67,414,755	0	93,351,313	160,766,068	17,016,902	0
Distribution Plant - Heskett Pipeline Plant		22,282,429	9,416,879	0	2,471,656	11,888,535	2,377,018	0
Distribution Plant Excluding Direct Assignments		261,701,809	67,414,755	0	93,351,313	160,766,068	17,016,902	0
General Plant	38	14,616,870	3,765,326	0	5,213,963	8,979,289	950,448	0
Directly Assigned - MAFB	Direct	186,068	0	0	0	0	0	0
Intangible Plant - General	15	4,514,131	1,072,614	0	1,680,731	2,753,345	270,750	0
Directly Assigned	Direct	2,192,696	0	0	0	0	0	0
Common Plant	15	18,810,018	4,469,496	0	7,003,468	11,472,964	1,128,195	0
Intangible Common (Excluding CC&B)	15	8,257,296	1,962,037	0	3,074,409	5,036,446	495,259	0
Intangible Common (CC&B)	4	8,885,985	0	0	7,581,140	7,581,140	0	0
Acquisition Adjustment	15	97,266	23,112	0	36,214	59,326	5,834	0
Total Gas Plant in Service including Heskett		325,928,741	79,678,893	0	117,941,238	197,620,131	20,112,628	0
Less: Accumulated Depreciation								
Transmission Plant	2	594,763	288,914	0	0	288,914	72,928	0
Distribution Plant								
Rights of Way	13	110,823	46,147	0	12,112	58,259	11,648	0
Structures & Improvements	23	229,858	81,642	0	21,430	103,072	20,608	0
Heskett Pipeline - Demand Related	2	26,833	13,035	0	0	13,035	3,290	0
Heskett Pipeline - Customer Related Related	8	11,500	0	0	9,813	9,813	0	0
Mains	40	44,833,699	18,947,375	0	4,973,130	23,920,505	4,782,716	0
Direct	Direct	56,502	0	0	0	0	0	0
Heskett Pipeline -								
Demand Related 70%	2	2,411,055	1,171,203	0	0	1,171,203	295,636	0
Customer Related 30%	8	1,033,310	0	0	881,682	881,682	0	0
Meas. & Reg. Equip. - General	18	803,132	294,096	0	77,192	371,288	74,236	0
Meas. & Reg. Equip. - City Gate	19	1,196,722	484,122	0	127,069	611,191	122,202	0
Heskett Pipeline - Demand Related	2	92,399	44,883	0	0	44,883	11,330	0
Heskett Pipeline - Customer Related Related	8	39,600	0	0	33,789	33,789	0	0
Services	37	38,571,272	0	0	31,425,087	31,425,087	0	0
Direct	Direct	99,871	0	0	0	0	0	0
Meters	5	13,168,600	0	0	8,307,576	8,307,576	0	0

	Allocation Factor	Total North Dakota	Residential Demand	Residential Energy	Residential Customer	Total Residential	Firm General-Meter < 5(Demand	Firm General-Meter < 5(Energy
Direct	Direct	17,067	0	0	0	0	0	0
Service Regulators	9	1,639,932	0	0	1,036,824	1,036,824	0	0
Direct	Direct	2,352	0	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	21	398,173	93,020	0	24,416	117,436	23,480	0
Heskett Pipeline - Demand Related	2	88,502	42,991	0	0	42,991	10,852	0
Heskett Pipeline - Customer Related Related	8	37,929	0	0	32,364	32,364	0	0
Property on Customer Premise	13	1,753	730	0	192	922	184	0
Cathodic Protection & Other Equipment	13	966,161	402,308	0	105,594	507,902	101,551	0
Heskett Pipeline - Demand Related	2	12,994	6,313	0	0	6,313	1,593	0
Heskett Pipeline - Customer Related Related	8	5,569	0	0	4,752	4,752	0	0
Distribution Plant		105,855,608	21,627,865	0	47,073,022	68,700,887	5,459,326	0
General Plant	38	748,600	192,841	0	267,032	459,873	48,677	0
Direct	Direct	51,676	0	0	0	0	0	0
Intangible Plant - General	15	1,656,460	393,596	0	616,744	1,010,340	99,352	0
Intangible Plant - General - Direct	Direct	729,742	0	0	0	0	0	0
Common Plant	15	5,583,831	1,326,788	0	2,079,008	3,405,796	334,909	0
Intangible Plant - Common	15	4,914,734	1,167,802	0	1,829,886	2,997,688	294,778	0
Intangible Plant - Common-CC&B	4	4,593,157	0	0	3,918,684	3,918,684	0	0
Acquisition Adjustment	15	79,183	18,815	0	29,481	48,296	4,749	0
Less: Total Accumulated Reserve for Depreciation		124,807,754	25,016,621	0	55,813,857	80,830,478	6,314,719	0
Net Gas Plant in Service including Heskett		201,120,987	54,662,272	0	62,127,381	116,789,653	13,797,909	0

	Allocation Factor	Total North Dakota	Residential			Total Residential	Firm General-Meter < 50	
			Demand	Energy	Customer		Demand	Energy
Additions								
Materials & Supplies	15	2,538,800	603,251	0	945,262	1,548,513	152,273	0
Fuel Stocks	10	35,198	0	14,802	0	14,802	0	9,548
Prepayments	25	276,676	67,638	0	100,118	167,756	17,073	0
Unamortized Loss on Debt	24	298,810	81,213	0	92,303	173,516	20,500	0
Unamortized Redumption Cost of Preferred Stock	24	47,407	12,885	0	14,643	27,528	3,252	0
Gain/Loss on Sale	24	467,967	127,188	0	144,560	271,748	32,105	0
Provision for Pension & Benefits	24	16,296,452	4,429,180	0	5,034,063	9,463,243	1,118,018	0
Provision for Post Retirement	24	542,497	147,444	0	167,581	315,025	37,218	0
Total Additions		20,503,807	5,468,799	14,802	6,498,530	11,982,131	1,380,439	9,548
Total Before Deductions		221,624,794	60,131,071	14,802	68,625,911	128,771,784	15,178,348	9,548
Deductions								
Accumulated Deferred Income Tax	24	(28,172,298)	(7,656,893)	0	(8,702,578)	(16,359,471)	(1,932,761)	0
Accumulated Investment Tax Credit	24	0	0	0	0	0	0	0
Customer Advances For Construction	Direct	(8,786,871)	(2,630,086)	0	(1,127,180)	(3,757,266)	(220,199)	0
Total Deductions		(36,959,169)	##########	0	(9,829,758)	(20,116,737)	(2,152,960)	0
Total Rate Base		184,665,625	49,844,092	14,802	58,796,153	108,655,047	13,025,388	9,548

	Allocation Factor	Total North Dakota	Residential			Total Residential	Firm General-Meter < 50	
			Demand	Energy	Customer		Demand	Energy
Income Statement								
Gas Operating Revenues								
Retail Sales & Transportation								
Residential	Direct	58,718,404	16,627,479	17,766,247	24,324,678	58,718,404	0	0
Firm General	Direct	47,194,215	0	0	0	0	4,197,126	3,852,360
Air Force Delivery	Direct	1,296,755	0	0	0	0	0	0
Small Interruptible	Direct	3,867,749	0	0	0	0	0	0
Large Interruptible	Direct	3,671,532	0	0	0	0	0	0
Total Sales & Transportation Revenues		114,748,655	16,627,479	17,766,247	24,324,678	58,718,404	4,197,126	3,852,360
Other Operating Revenue								
Miscellaneous								
Reconnect Fees	6	48,660	0	0	41,582	41,582	0	0
Minot Maintenance Fee Rate 65	Direct	456,000	0	0	0	0	0	0
NSF Check Fees & Other	6	34,029	0	0	29,079	29,079	0	0
Miscellaneous	41	2,769	758	0	865	1,623	191	0
Rent From Gas Property	41	565,349	154,850	0	176,000	330,850	39,087	0
Other Gas Revenues								
Miscellaneous	42	300,407	49,499	2,679	134,023	186,201	12,495	626
Heskett Pipeline Revenue								
Demand Related 70%	2	1,293,411	628,292	0	0	628,292	158,594	0
Customer Related 30%	8	554,319	0	0	472,979	472,979	0	0
Transport and Penalty Revenue - Net	41	217,120	59,470	0	67,593	127,063	15,011	0
Total Other Operating Revenue		3,472,064	892,869	2,679	922,121	1,817,669	225,378	626
		3,016,064	892,869	2,679	922,121	1,817,669	225,378	626
Unbilled Revenue	26	0	0	0	0	0	0	0
Total Operating Revenues		118,220,719	17,520,348	17,768,926	25,246,799	60,536,073	4,422,504	3,852,986
Operation & Maintenance Expenses								
Cost of Purchased Gas	Direct	73,319,285	16,627,479	17,766,247	0	34,393,726	4,197,126	3,852,360
Transmission Expenses	3	10,523	0	4,804	0	4,804	0	1,123
Other Gas Supply Expenses	3	363,936	0	166,158	0	166,158	0	38,828
Distribution Expenses								
Operation								
Load Dispatch	1	31,727	0	10,616	0	10,616	0	2,481
Mains and Services	22	2,197,546	612,057	0	753,494	1,365,551	154,496	0
Measuring Stations - General	18	173,439	63,511	0	16,670	80,181	16,032	0
Measuring Stations - Industrial	21	92,007	21,494	0	5,642	27,136	5,426	0
Measuring Stations - City Gate	19	142,770	57,756	0	15,159	72,915	14,579	0
Meters & House Regulators	16	431,482	0	0	272,797	272,797	0	0
Customer Installations	5	791,051	0	0	499,044	499,044	0	0
Other Gas Distribution	27	2,276,915	445,245	6,262	921,855	1,373,362	112,390	1,463
Rents	27	41,245	8,065	113	16,698	24,876	2,036	27
Supervision & Engineering	27	1,881,390	367,901	5,174	761,717	1,134,792	92,867	1,209
Direct -Minot AFB Distribution System	Direct	53	0	0	0	0	0	0
Total Operation Expense		8,059,625	1,576,029	22,165	3,263,076	4,861,270	397,826	5,180

	Allocation Factor	Total North Dakota	Residential			Total Residential	Firm General-Meter < 5(	
			Demand	Energy	Customer		Demand	Energy
Maintenance								
Structures & Improvements	13	39,129	16,293	0	4,276	20,569	4,113	0
Mains	13	268,600	111,845	0	29,356	141,201	28,232	0
Measuring Stations - General	18	175,554	64,286	0	16,873	81,159	16,227	0
Measuring Stations - Industrial	21	82,489	19,271	0	5,059	24,330	4,864	0
Measuring Stations - City Gate	19	106,813	43,210	0	11,340	54,550	10,907	0
Services	5	281,310	0	0	177,467	177,467	0	0
Meters & House Regulators	16	407,159	0	0	257,421	257,421	0	0
Other Equipment	28	355,338	66,550	0	131,006	197,556	16,798	0
Supervision & Engineering	28	799,511	149,737	0	294,765	444,502	37,796	0
Direct -Minot AFB Distribution System	Direct	19	0	0	0	0	0	0
Total Maintenance Expense		2,515,922	471,192	0	927,563	1,398,755	118,937	0
Total Distribution Expenses		10,575,547	2,047,221	22,165	4,190,639	6,260,025	516,763	5,180
Customer Accounts	4	147,005	0	0	125,419	125,419	0	0
Meter Reading	5	331,176	0	0	208,927	208,927	0	0
Customer Records & Collection	43	1,830,622	0	0	1,520,280	1,520,280	0	0
Uncollectible Accounts	6	324,519	0	0	277,314	277,314	0	0
Miscellaneous Customer Accounts	4	140,348	0	0	119,739	119,739	0	0
Customer Service & Information	4	269,021	0	0	229,518	229,518	0	0
Sales Expenses	4	149,928	0	0	127,912	127,912	0	0
Administration & General Expenses	30	9,826,077	1,902,138	20,594	3,893,658	5,816,390	480,141	4,813
Total Gas O&M Expenses		97,287,987	20,576,838	17,979,968	10,693,406	49,250,212	5,194,030	3,902,304
O&M Excl. Cost of Gas and A&G		14,142,625	2,047,221	193,127	6,799,748	9,040,096	516,763	45,131
O&M Excl. Cost of Gas		23,968,702	3,949,359	213,721	10,693,406	14,856,486	996,904	49,944
Depreciation Expense								
Transmission Plant	2	42,401	20,597	0	0	20,597	5,199	0
Distribution Plant								
Rights of Way	13	16,993	7,076	0	1,859	8,935	1,786	0
Structures & Improvements	23	21,450	7,619	0	1,999	9,618	1,923	0
Heskett Pipeline - Demand Related	2	5,593	2,716	0	0	2,716	686	0
Heskett Pipeline - Customer Related Related	8	2,397	0	0	2,045	2,045	0	0
Mains	40	4,283,656	1,810,335	0	475,161	2,285,496	456,967	0
Direct -Minot AFB Distribution System	Direct	21,369	0	0	0	0	0	0
Heskett Pipeline								
Demand Related 70%	2	494,546	240,232	0	0	240,232	60,640	0
Customer Related 30%	8	211,948	0	0	180,847	180,847	0	0
Meas. & Reg. Equip. - General	18	104,778	38,368	0	10,073	48,441	9,685	0
Meas. & Reg. Equip. - City Gate	19	289,774	117,225	0	30,769	147,994	29,590	0
Heskett Pipeline - Demand Related	2	14,888	7,231	0	0	7,231	1,826	0
Heskett Pipeline - Customer Related Related	8	6,381	0	0	5,445	5,445	0	0
Services	17	2,085,659	0	0	1,698,582	1,698,582	0	0
Direct	Direct	32,162	0	0	0	0	0	0
Meters	5	1,229,061	0	0	775,368	775,368	0	0
Direct	Direct	1,875	0	0	0	0	0	0
Service Regulators	20	181,199	0	0	114,241	114,241	0	0
Direct		217	0	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	21	48,498	11,330	0	2,973	14,303	2,860	0
Heskett Pipeline - Demand Related	2	17,862	8,677	0	0	8,677	2,190	0
Heskett Pipeline - Customer Related Related	8	7,655	0	0	6,533	6,533	0	0
Property on Customer Premise	13	57	24	0	7	31	6	0
Cathodic Protection & Other Equipment	13	80,574	33,551	0	8,807	42,358	8,469	0
Direct		782	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	2,589	1,258	0	0	1,258	317	0
Heskett Pipeline - Customer Related Related	8	1,109	0	0	946	946	0	0
Total Distribution Plant		9,163,072	2,285,642	0	3,315,655	5,601,297	576,945	0
General Plant	38	247,213	63,682	0	88,183	151,865	16,075	0
Direct -Minot AFB Distribution System	Direct	5,664	0	0	0	0	0	0
Amort. of Intangible Plant - General	15	270,719	64,326	0	100,797	165,123	16,237	0
Direct	Direct	56,099	0	0	0	0	0	0
Common Plant	15	513,578	122,033	0	191,220	313,253	30,804	0
Intangible Plant - Common (Excluding CC&B)	15	624,667	148,429	0	232,583	381,012	37,467	0
Intangible Plant - Common (CC&B)	4	591,341	0	0	504,507	504,507	0	0
Amortization of Gain/Preferred Stock	15	26,421	6,278	0	9,838	16,116	1,585	0
Acquisition Adjustment	15	2,821	670	0	1,053	1,723	169	0
Total Depreciation Expense		11,543,996	2,711,657	0	4,443,836	7,155,493	684,481	0

	Allocation Factor	Total North Dakota	Residential			Total Residential	Firm General-Meter < 50	
			Demand	Energy	Customer		Demand	Energy
Taxes Other Than Income								
Ad Valorem Taxes-Transmission	2	13,464	6,540	0	0	6,540	1,651	0
Heskett Pipeline - Demand Related	2	81,794	39,733	0	0	39,733	10,029	0
Heskett Pipeline - Customer Related Related	8	35,055	0	0	29,912	29,912	0	0
Ad Valorem Taxes-Other	15	1,572,317	373,603	0	585,416	959,019	94,305	0
Other Taxes - Payroll, Franchise, Other	31	1,006,825	165,896	8,978	449,185	624,059	41,876	2,098
Other Taxes - Minot AFB Distribution- Direct	Direct	0	0	0	0	0	0	0
Other Taxes - Revenue	26	1,264	183	196	269	648	46	42
Total Taxes Other Than Income Taxes		2,710,719	585,955	9,174	1,064,782	1,659,911	147,907	2,140
Total Operating Expense		111,542,702	23,874,450	17,989,142	16,202,024	58,065,616	6,026,418	3,904,444
Interest Expense/AFUDC Equity Add Back	36	4,055,345	1,110,766	0	1,262,461	2,373,227	280,381	0
Direct -Minot AFB Distribution System	Direct	0	0	0	0	0	0	0
Taxable Income		2,622,672	(7,464,868)	(220,216)	7,782,314	97,230	(1,884,295)	(51,458)
Income Taxes	24.4049%	640,056	(1,821,794)	(53,743)	1,899,265	23,728	(459,860)	(12,558)
Full Normalization/ARAM	24	(667,307)	(181,366)	0	(206,135)	(387,501)	(45,781)	0
Total Income Taxes		(27,251)	(2,003,160)	(53,743)	1,693,130	(363,773)	(505,641)	(12,558)
Total Operating Expense		111,515,451	21,871,290	17,935,399	17,895,154	57,701,843	5,520,777	3,891,886
Operating Income:		6,705,268	(4,350,942)	(166,473)	7,351,645	2,834,230	(1,098,273)	(38,900)

	Allocation Factor	Total North Dakota	)0 cubic feet Customer	Total Small Firm General
Rate Base-Projected				
Gas Plant in Service				
Transmission Plant	2	2,000,051	0	245,240
Land	13	922,303	11,813	108,754
Heskett Pipeline - Demand Related	2	39,150	0	4,800
Heskett Pipeline - Customer Related Related	8	5,850	585	585
Rights of Way	13	493,986	6,327	58,249
Structures & Improvements	40	524,062	6,812	62,717
Directly Assigned	Direct	99,490	0	0
Heskett Pipeline - Demand Related	2	202,068	0	24,777
Heskett Pipeline - Customer Related Related	8	30,194	3,019	3,019
Mains				
Demand Related 87%	2	105,720,724	0	12,963,162
Customer Related 13%	8	15,797,349	1,579,597	1,579,597
Directly Assigned Demand Related 87%	Direct	2,314,769	0	0
Directly Assigned Customer Related 13%	Direct	345,885	0	0
Heskett Pipeline				
Demand Related 87%	2	17,867,715	0	2,190,886
Customer Related 13%	8	2,669,889	266,966	266,966
Meas. & Reg. Equip. - General	40	2,639,185	34,306	315,846
Directly Assigned	Direct	406,688	0	0
Meas. & Reg. Equip. - City Gate	13	8,183,765	104,815	964,992
Directly Assigned	Direct	239,904	0	0
Heskett Pipeline - Demand Related	2	537,918	0	65,958
Heskett Pipeline - Customer Related Related	8	80,379	8,037	8,037
Services	37	61,055,263	6,587,169	6,587,169
Directly Assigned	Direct	509,310	0	0
Meters	9	35,728,039	3,176,557	3,176,557
Directly Assigned	Direct	54,980	0	0
Service Regulators	9	5,258,995	467,574	467,574
Directly Assigned	Direct	14,733	0	0
Ind. Meas. & Reg. Station Equipment	40	779,338	10,131	93,268
Directly Assigned	Direct	630,496	0	0
Heskett Pipeline - Demand Related	2	645,343	0	79,130
Heskett Pipeline - Customer Related Related	8	96,430	9,642	9,642
Property on Customer Premise	13	1,667	21	196
Cathodic Protection & Other Equipment	40	2,314,704	30,089	277,014
Directly Assigned	Direct	50,296	0	0
Heskett Pipeline - Demand Related	2	93,519	0	11,467
Heskett Pipeline - Customer Related Related	8	13,974	1,397	1,397
Distribution Plant - includes Heskett		266,368,360	12,304,857	29,321,759
Distribution Plant - Heskett Pipeline Plant		22,282,429	289,646	2,666,664
Distribution Plant Excluding Direct Assignments		261,701,809	12,304,857	29,321,759
General Plant	38	14,616,870	687,265	1,637,713
Directly Assigned - MAFB	Direct	186,068	0	0
Intangible Plant - General	15	4,514,131	222,210	492,960
Directly Assigned	Direct	2,192,696	0	0
Common Plant	15	18,810,018	925,929	2,054,124
Intangible Common (Excluding CC&B)	15	8,257,296	406,468	901,727
Intangible Common (CC&B)	4	8,885,985	888,413	888,413
Acquisition Adjustment	15	97,266	4,788	10,622
Total Gas Plant in Service including Heskett		325,928,741	15,439,930	35,552,558
Less: Accumulated Depreciation				
Transmission Plant	2	594,763	0	72,928
Distribution Plant				
Rights of Way	13	110,823	1,419	13,067
Structures & Improvements	23	229,858	2,511	23,119
Heskett Pipeline - Demand Related	2	26,833	0	3,290
Heskett Pipeline - Customer Related Related	8	11,500	1,150	1,150
Mains	40	44,833,699	582,787	5,365,503
Direct	Direct	56,502	0	0
Heskett Pipeline -				
Demand Related 70%	2	2,411,055	0	295,636
Customer Related 30%	8	1,033,310	103,322	103,322
Meas. & Reg. Equip. - General	18	803,132	9,046	83,282
Meas. & Reg. Equip. - City Gate	19	1,196,722	14,891	137,093
Heskett Pipeline - Demand Related	2	92,399	0	11,330
Heskett Pipeline - Customer Related Related	8	39,600	3,960	3,960
Services	37	38,571,272	4,161,402	4,161,402
Direct	Direct	99,871	0	0
Meters	5	13,168,600	1,168,268	1,168,268

	Allocation Factor	Total North Dakota	)0 cubic feet Customer	Total Small Firm General
Direct	Direct	17,067	0	0
Service Regulators	9	1,639,932	145,805	145,805
Direct	Direct	2,352	0	0
Ind. Meas. & Reg. Station Equipment	21	398,173	2,861	26,341
Heskett Pipeline - Demand Related	2	88,502	0	10,852
Heskett Pipeline - Customer Related Related	8	37,929	3,793	3,793
Property on Customer Premise	13	1,753	22	206
Cathodic Protection & Other Equipment	13	966,161	12,374	113,925
Heskett Pipeline - Demand Related	2	12,994	0	1,593
Heskett Pipeline - Customer Related Related	8	5,569	557	557
Distribution Plant		105,855,608	6,214,168	11,673,494
General Plant	38	748,600	35,198	83,875
Direct	Direct	51,676	0	0
Intangible Plant - General	15	1,656,460	81,540	180,892
Intangible Plant - General - Direct	Direct	729,742	0	0
Common Plant	15	5,583,831	274,866	609,775
Intangible Plant - Common	15	4,914,734	241,929	536,707
Intangible Plant - Common-CC&B	4	4,593,157	459,220	459,220
Acquisition Adjustment	15	79,183	3,898	8,647
Less: Total Accumulated Reserve for Depreciation		124,807,754	7,310,819	13,625,538
Net Gas Plant in Service including Heskett		201,120,987	8,129,111	21,927,020

	Allocation Factor	Total North Dakota	)0 cubic feet Customer	Total Small Firm General
Additions				
Materials & Supplies	15	2,538,800	124,973	277,246
Fuel Stocks	10	35,198	0	9,548
Prepayments	25	276,676	13,107	30,180
Unamortized Loss on Debt	24	298,810	12,078	32,578
Unamortized Redumption Cost of Preferred Stock	24	47,407	1,916	5,168
Gain/Loss on Sale	24	467,967	18,915	51,020
Provision for Pension & Benefits	24	16,296,452	658,686	1,776,704
Provision for Post Retirement	24	542,497	21,927	59,145
Total Additions		20,503,807	851,602	2,241,589
Total Before Deductions		221,624,794	8,980,713	24,168,609
Deductions				
Accumulated Deferred Income Tax	24	(28,172,298)	(1,138,696)	(3,071,457)
Accumulated Investment Tax Credit	24	0	0	0
Customer Advances For Construction	Direct	(8,786,871)	(94,371)	(314,570)
Total Deductions		(36,959,169)	(1,233,067)	(3,386,027)
Total Rate Base		184,665,625	7,747,646	20,782,582

	Allocation Factor	Total North Dakota	)0 cubic feet Customer	Total Small Firm General
Income Statement				
Gas Operating Revenues				
Retail Sales & Transportation				
Residential	Direct	58,718,404	0	0
Firm General	Direct	47,194,215	4,517,423	12,566,909
Air Force Delivery	Direct	1,296,755	0	0
Small Interruptible	Direct	3,867,749	0	0
Large Interruptible	Direct	3,671,532	0	0
Total Sales & Transportation Revenues		114,748,655	4,517,423	12,566,909
Other Operating Revenue				
Miscellaneous				
Reconnect Fees	6	48,660	4,873	4,873
Minot Maintenance Fee Rate 65	Direct	456,000	0	0
NSF Check Fees & Other	6	34,029	3,408	3,408
Miscellaneous	41	2,769	113	304
Rent From Gas Property	41	565,349	23,029	62,116
Other Gas Revenues				
Miscellaneous	42	300,407	17,741	30,862
Heskett Pipeline Revenue				
Demand Related 70%	2	1,293,411	0	158,594
Customer Related 30%	8	554,319	55,427	55,427
Transport and Penalty Revenue - Net	41	217,120	8,844	23,855
Total Other Operating Revenue		3,472,064	113,435	339,439
		3,016,064	113,435	339,439
Unbilled Revenue	26	0	0	0
Total Operating Revenues		118,220,719	4,630,858	12,906,348
Operation & Maintenance Expenses				
Cost of Purchased Gas	Direct	73,319,285	0	8,049,486
Transmission Expenses	3	10,523	0	1,123
Other Gas Supply Expenses	3	363,936	0	38,828
Distribution Expenses				
Operation				
Load Dispatch	1	31,727	0	2,481
Mains and Services	22	2,197,546	97,332	251,828
Measuring Stations - General	18	173,439	1,953	17,985
Measuring Stations - Industrial	21	92,007	661	6,087
Measuring Stations - City Gate	19	142,770	1,776	16,355
Meters & House Regulators	16	431,482	38,363	38,363
Customer Installations	5	791,051	70,179	70,179
Other Gas Distribution	27	2,276,915	124,029	237,882
Rents	27	41,245	2,247	4,310
Supervision & Engineering	27	1,881,390	102,484	196,560
Direct -Minot AFB Distribution System	Direct	53	0	0
Total Operation Expense		8,059,625	439,024	842,030

	Allocation Factor	Total North Dakota	)0 cubic feet Customer	Total Small Firm General
Maintenance				
Structures & Improvements	13	39,129	501	4,614
Mains	13	268,600	3,440	31,672
Measuring Stations - General	18	175,554	1,977	18,204
Measuring Stations - Industrial	21	82,489	593	5,457
Measuring Stations - City Gate	19	106,813	1,329	12,236
Services	5	281,310	24,957	24,957
Meters & House Regulators	16	407,159	36,200	36,200
Other Equipment	28	355,338	18,013	34,811
Supervision & Engineering	28	799,511	40,530	78,326
Direct -Minot AFB Distribution System	Direct	19	0	0
Total Maintenance Expense		2,515,922	127,540	246,477
Total Distribution Expenses		10,575,547	566,564	1,088,507
Customer Accounts	4	147,005	14,697	14,697
Meter Reading	5	331,176	29,381	29,381
Customer Records & Collection	43	1,830,622	190,067	190,067
Uncollectible Accounts	6	324,519	32,498	32,498
Miscellaneous Customer Accounts	4	140,348	14,032	14,032
Customer Service & Information	4	269,021	26,896	26,896
Sales Expenses	4	149,928	14,990	14,990
Administration & General Expenses	30	9,826,077	526,413	1,011,367
Total Gas O&M Expenses		97,287,987	1,415,538	10,511,872
O&M Excl. Cost of Gas and A&G		14,142,625	889,125	1,451,019
O&M Excl. Cost of Gas		23,968,702	1,415,538	2,462,386
Depreciation Expense				
Transmission Plant	2	42,401	0	5,199
Distribution Plant				
Rights of Way	13	16,993	218	2,004
Structures & Improvements	23	21,450	234	2,157
Heskett Pipeline - Demand Related	2	5,593	0	686
Heskett Pipeline - Customer Related Related	8	2,397	240	240
Mains	40	4,283,656	55,683	512,650
Direct -Minot AFB Distribution System	Direct	21,369	0	0
Heskett Pipeline				
Demand Related 70%	2	494,546	0	60,640
Customer Related 30%	8	211,948	21,193	21,193
Meas. & Reg. Equip. - General	18	104,778	1,180	10,865
Meas. & Reg. Equip. - City Gate	19	289,774	3,606	33,196
Heskett Pipeline - Demand Related	2	14,888	0	1,826
Heskett Pipeline - Customer Related Related	8	6,381	638	638
Services	17	2,085,659	224,931	224,931
Direct	Direct	32,162	0	0
Meters	5	1,229,061	109,038	109,038
Direct	Direct	1,875	0	0
Service Regulators	20	181,199	16,065	16,065
Direct		217	0	0
Ind. Meas. & Reg. Station Equipment	21	48,498	349	3,209
Heskett Pipeline - Demand Related	2	17,862	0	2,190
Heskett Pipeline - Customer Related Related	8	7,655	765	765
Property on Customer Premise	13	57	1	7
Cathodic Protection & Other Equipment	13	80,574	1,032	9,501
Direct		782	0	0
Heskett Pipeline - Demand Related	2	2,589	0	317
Heskett Pipeline - Customer Related Related	8	1,109	111	111
Total Distribution Plant		9,163,072	435,284	1,012,229
General Plant	38	247,213	11,624	27,699
Direct -Minot AFB Distribution System	Direct	5,664	0	0
Amort. of Intangible Plant - General	15	270,719	13,326	29,563
Direct	Direct	56,099	0	0
Common Plant	15	513,578	25,281	56,085
Intangible Plant - Common (Excluding CC&B)	15	624,667	30,749	68,216
Intangible Plant - Common (CC&B)	4	591,341	59,122	59,122
Amortization of Gain/Preferred Stock	15	26,421	1,301	2,886
Acquisition Adjustment	15	2,821	139	308
Total Depreciation Expense		11,543,996	576,826	1,261,307

	Allocation Factor	Total North Dakota	)0 cubic feet Customer	Total Small Firm General
Taxes Other Than Income				
Ad Valorem Taxes-Transmission	2	13,464	0	1,651
Heskett Pipeline - Demand Related	2	81,794	0	10,029
Heskett Pipeline - Customer Related Related	8	35,055	3,505	3,505
Ad Valorem Taxes-Other	15	1,572,317	77,398	171,703
Other Taxes - Payroll, Franchise, Other	31	1,006,825	59,461	103,435
Other Taxes - Minot AFB Distribution- Direct	Direct	0	0	0
Other Taxes - Revenue	26	1,264	50	138
Total Taxes Other Than Income Taxes		2,710,719	140,414	290,461
Total Operating Expense		111,542,702	2,132,778	12,063,640
Interest Expense/AFUDC Equity Add Back	36	4,055,345	165,188	445,569
Direct -Minot AFB Distribution System	Direct	0	0	0
Taxable Income		2,622,672	2,332,892	397,139
Income Taxes	24.4049%	640,056	569,341	96,923
Full Normalization/ARAM	24	(667,307)	(26,972)	(72,753)
Total Income Taxes		(27,251)	542,369	24,170
Total Operating Expense		111,515,451	2,675,147	12,087,810
Operating Income:		6,705,268	1,955,711	818,538

	Allocation Factor	Total North Dakota	Firm General > 500 cubic feet			Total Large Firm General	Air Force Delivery		
			Demand	Energy	Customer		Demand	Energy	Customer
Rate Base-Projected									
Gas Plant in Service									
Transmission Plant	2	2,000,051	623,608	0	0	623,608	0	0	0
Land	13	922,303	246,506	0	5,346	251,852	0	0	0
Heskett Pipeline - Demand Related	2	39,150	12,207	0	0	12,207	0	0	0
Heskett Pipeline - Customer Related Related	8	5,850	0	0	265	265	0	0	0
Rights of Way	13	493,986	132,029	0	2,863	134,892	0	0	0
Structures & Improvements	40	524,062	142,158	0	3,083	145,241	0	0	0
Directly Assigned	Direct	99,490	25,048	0	3,743	28,791	22,054	0	3,295
Heskett Pipeline - Demand Related	2	202,068	63,004	0	0	63,004	0	0	0
Heskett Pipeline - Customer Related Related	8	30,194	0	0	1,366	1,366	0	0	0
Mains									
Demand Related 87%	2	105,720,724	32,963,309	0	0	32,963,309	0	0	0
Customer Related 13%	8	15,797,349	0	0	714,864	714,864	0	0	0
Directly Assigned Demand Related 87%	Direct	2,314,769	0	0	0	0	0	0	0
Directly Assigned Customer Related 13%	Direct	345,885	0	0	0	0	0	0	0
Heskett Pipeline									
Demand Related 87%	2	17,867,715	5,571,084	0	0	5,571,084	0	0	0
Customer Related 13%	8	2,669,889	0	0	120,818	120,818	0	0	0
Meas. & Reg. Equip. - General	40	2,639,185	715,912	0	15,526	731,438	0	0	0
Directly Assigned	Direct	406,688	39,318	0	5,875	45,193	0	0	0
Meas. & Reg. Equip. - City Gate	13	8,183,765	2,187,297	0	47,435	2,234,732	0	0	0
Directly Assigned	Direct	239,904	0	0	0	0	208,716	0	31,188
Heskett Pipeline - Demand Related	2	537,918	167,721	0	0	167,721	0	0	0
Heskett Pipeline - Customer Related Related	8	80,379	0	0	3,637	3,637	0	0	0
Services	37	61,055,263	0	0	4,353,088	4,353,088	0	0	0
Directly Assigned	Direct	509,310	0	0	0	0	0	0	0
Meters	9	35,728,039	0	0	8,745,143	8,745,143	0	0	28,775
Directly Assigned	Direct	54,980	0	0	0	0	0	0	0
Service Regulators	9	5,258,995	0	0	1,287,243	1,287,243	0	0	4,236
Directly Assigned	Direct	14,733	0	0	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	40	779,338	211,405	0	4,585	215,990	0	0	0
Directly Assigned	Direct	630,496	0	0	0	0	86,455	0	12,919
Heskett Pipeline - Demand Related	2	645,343	201,215	0	0	201,215	0	0	0
Heskett Pipeline - Customer Related Related	8	96,430	0	0	4,364	4,364	0	0	0
Property on Customer Premise	13	1,667	446	0	10	456	0	0	0
Cathodic Protection & Other Equipment	40	2,314,704	627,893	0	13,617	641,510	0	0	0
Directly Assigned	Direct	50,296	0	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	93,519	29,159	0	0	29,159	0	0	0
Heskett Pipeline - Customer Related Related	8	13,974	0	0	632	632	0	0	0
Distribution Plant - includes Heskett		266,368,360	43,335,711	0	15,333,503	58,669,214	317,225	0	80,413
Distribution Plant - Heskett Pipeline Plant		22,282,429	6,044,390	0	131,082	6,175,472	0	0	0
Distribution Plant Excluding Direct Assignments		261,701,809	43,271,345	0	15,323,885	58,595,230	0	0	33,011
General Plant	38	14,616,870	2,416,841	0	855,887	3,272,728	0	0	1,844
Directly Assigned - MAFB	Direct	186,068	0	0	0	0	0	0	0
Intangible Plant - General	15	4,514,131	689,667	0	281,154	970,821	5,867	0	1,487
Directly Assigned	Direct	2,192,696	0	0	0	0	0	0	0
Common Plant	15	18,810,018	2,873,785	0	1,171,546	4,045,331	24,446	0	6,197
Intangible Common (Excluding CC&B)	15	8,257,296	1,261,545	0	514,290	1,775,835	10,732	0	2,720
Intangible Common (CC&B)	4	8,885,985	0	0	402,061	402,061	0	0	232
Acquisition Adjustment	15	97,266	14,860	0	6,058	20,918	126	0	32
Total Gas Plant in Service including Heskett		325,928,741	51,216,017	0	18,564,499	69,780,516	358,396	0	92,925
Less: Accumulated Depreciation									
Transmission Plant	2	594,763	185,445	0	0	185,445	0	0	0
Distribution Plant									
Rights of Way	13	110,823	29,620	0	642	30,262	0	0	0
Structures & Improvements	23	229,858	61,636	0	2,516	64,152	8,130	0	1,215
Heskett Pipeline - Demand Related	2	26,833	8,366	0	0	8,366	0	0	0
Heskett Pipeline - Customer Related Related	8	11,500	0	0	520	520	0	0	0
Mains	40	44,833,699	12,161,706	0	263,747	12,425,453	0	0	0
Direct	Direct	56,502	0	0	0	0	0	0	0
Heskett Pipeline -									
Demand Related 70%	2	2,411,055	751,758	0	0	751,758	0	0	0
Customer Related 30%	8	1,033,310	0	0	46,760	46,760	0	0	0
Meas. & Reg. Equip. - General	18	803,132	199,138	0	5,643	204,781	0	0	0
Meas. & Reg. Equip. - City Gate	19	1,196,722	310,742	0	6,739	317,481	29,652	0	4,431
Heskett Pipeline - Demand Related	2	92,399	28,810	0	0	28,810	0	0	0
Heskett Pipeline - Customer Related Related	8	39,600	0	0	1,792	1,792	0	0	0
Services	37	38,571,272	0	0	2,750,035	2,750,035	0	0	0
Direct	Direct	99,871	0	0	0	0	0	0	0
Meters	5	13,168,600	0	0	3,216,271	3,216,271	0	0	10,583

	Allocation Factor	Total North Dakota	Firm General > 500 cubic feet			Total Large Firm General	Air Force Delivery		
			Demand	Energy	Customer		Demand	Energy	Customer
Direct	Direct	17,067	0	0	0	0	0	0	0
Service Regulators	9	1,639,932	0	0	401,406	401,406	0	0	1,321
Direct	Direct	2,352	0	0	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	21	398,173	59,706	0	1,295	61,001	24,417	0	3,649
Heskett Pipeline - Demand Related	2	88,502	27,595	0	0	27,595	0	0	0
Heskett Pipeline - Customer Related Related	8	37,929	0	0	1,716	1,716	0	0	0
Property on Customer Premise	13	1,753	469	0	10	479	0	0	0
Cathodic Protection & Other Equipment	13	966,161	258,229	0	5,600	263,829	0	0	0
Heskett Pipeline - Demand Related	2	12,994	4,051	0	0	4,051	0	0	0
Heskett Pipeline - Customer Related Related	8	5,569	0	0	252	252	0	0	0
Distribution Plant		105,855,608	13,901,826	0	6,704,944	20,606,770	62,199	0	21,199
General Plant	38	748,600	123,778	0	43,834	167,612	0	0	94
Direct	Direct	51,676	0	0	0	0	0	0	0
Intangible Plant - General	15	1,656,460	253,073	0	103,169	356,242	2,153	0	546
Intangible Plant - General - Direct	Direct	729,742	0	0	0	0	0	0	0
Common Plant	15	5,583,831	853,095	0	347,778	1,200,873	7,257	0	1,840
Intangible Plant - Common	15	4,914,734	750,871	0	306,105	1,056,976	6,387	0	1,619
Intangible Plant - Common-CC&B	4	4,593,157	0	0	207,825	207,825	0	0	120
Acquisition Adjustment	15	79,183	12,098	0	4,932	17,030	103	0	26
Less: Total Accumulated Reserve for Depreciation		124,807,754	16,080,186	0	7,718,587	23,798,773	78,099	0	25,444
Net Gas Plant in Service including Heskett		201,120,987	35,135,831	0	10,845,912	45,981,743	280,297	0	67,481

	Allocation Factor	Total North Dakota	Firm General > 500 cubic feet			Total Large Firm General	Air Force Delivery		
			Demand	Energy	Customer		Demand	Energy	Customer
Additions									
Materials & Supplies	15	2,538,800	387,877	0	158,124	546,001	3,300	0	836
Fuel Stocks	10	35,198	0	10,848	0	10,848	0	0	0
Prepayments	25	276,676	43,477	0	15,759	59,236	304	0	79
Unamortized Loss on Debt	24	298,810	52,202	0	16,114	68,316	416	0	100
Unamortized Redumption Cost of Preferred Stock	24	47,407	8,282	0	2,557	10,839	66	0	16
Gain/Loss on Sale	24	467,967	81,754	0	25,236	106,990	652	0	157
Provision for Pension & Benefits	24	16,296,452	2,846,990	0	878,824	3,725,814	22,712	0	5,468
Provision for Post Retirement	24	542,497	94,774	0	29,255	124,029	756	0	182
Total Additions		20,503,807	3,515,356	10,848	1,125,869	4,652,073	28,206	0	6,838
Total Before Deductions		221,624,794	38,651,187	10,848	11,971,781	50,633,816	308,503	0	74,319
Deductions									
Accumulated Deferred Income Tax	24	(28,172,298)	(4,921,700)	0	(1,519,256)	(6,440,956)	(39,263)	0	(9,452)
Accumulated Investment Tax Credit	24	0	0	0	0	0	0	0	0
Customer Advances For Construction	Direct	(8,786,871)	(2,078,973)	0	(890,989)	(2,969,962)	0	0	0
Total Deductions		(36,959,169)	(7,000,673)	0	(2,410,245)	(9,410,918)	(39,263)	0	(9,452)
Total Rate Base		184,665,625	31,650,514	10,848	9,561,536	41,222,898	269,240	0	64,867

	Allocation Factor	Total North Dakota	Firm General > 500 cubic feet Demand	Energy	Customer	Total Large Firm General	Air Force Delivery Demand	Energy	Customer
Income Statement									
Gas Operating Revenues									
Retail Sales & Transportation									
Residential	Direct	58,718,404	0	0	0	0	0	0	0
Firm General	Direct	47,194,215	10,672,640	15,007,085	8,947,581	34,627,306	0	0	0
Air Force Delivery	Direct	1,296,755	0	0	0	0	217,513	968,869	110,373
Small Interruptible	Direct	3,867,749	0	0	0	0	0	0	0
Large Interruptible	Direct	3,671,532	0	0	0	0	0	0	0
Total Sales & Transportation Revenues		114,748,655	10,672,640	15,007,085	8,947,581	34,627,306	217,513	968,869	110,373
Other Operating Revenue									
Miscellaneous									
Reconnect Fees	6	48,660	0	0	2,205	2,205	0	0	0
Minot Maintenance Fee Rate 65	Direct	456,000	0	0	0	0	0	0	0
NSF Check Fees & Other	6	34,029	0	0	1,542	1,542	0	0	0
Miscellaneous	41	2,769	488	0	150	638	0	0	0
Rent From Gas Property	41	565,349	99,535	0	30,725	130,260	794	0	191
Other Gas Revenues									
Miscellaneous	42	300,407	31,986	2,022	28,651	62,659	808	135	201
Heskett Pipeline Revenue									
Demand Related 70%	2	1,293,411	403,281	0	0	403,281	0	0	0
Customer Related 30%	8	554,319	0	0	25,084	25,084	0	0	0
Transport and Penalty Revenue - Net	41	217,120	38,226	0	11,800	50,026	305	0	73
Total Other Operating Revenue		3,472,064	573,516	2,022	100,157	675,695	1,907	135	465
		3,016,064	573,516	2,022	100,157	675,695	1,907	135	465
Unbilled Revenue	26	0	0	0	0	0	0	0	0
Total Operating Revenues		118,220,719	11,246,156	15,009,107	9,047,738	35,303,001	219,420	969,004	110,838
Operation & Maintenance Expenses									
Cost of Purchased Gas	Direct	73,319,285	10,672,640	15,007,085	0	25,679,725	217,513	968,869	0
Transmission Expenses	3	10,523	0	3,626	0	3,626	0	241	0
Other Gas Supply Expenses	3	363,936	0	125,406	0	125,406	0	8,347	0
Distribution Expenses									
Operation									
Load Dispatch	1	31,727	0	8,012	0	8,012	0	533	0
Mains and Services	22	2,197,546	392,860	0	60,400	453,260	0	0	0
Measuring Stations - General	18	173,439	43,005	0	1,219	44,224	0	0	0
Measuring Stations - Industrial	21	92,007	13,796	0	299	14,095	5,642	0	843
Measuring Stations - City Gate	19	142,770	37,072	0	804	37,876	3,537	0	529
Meters & House Regulators	16	431,482	0	0	105,614	105,614	0	0	348
Customer Installations	5	791,051	0	0	193,205	193,205	0	0	636
Other Gas Distribution	27	2,276,915	287,110	4,726	213,263	505,099	5,414	314	1,390
Rents	27	41,245	5,201	86	3,863	9,150	98	6	25
Supervision & Engineering	27	1,881,390	237,236	3,905	176,217	417,358	4,474	260	1,148
Direct -Minot AFB Distribution System	Direct	53	0	0	0	0	0	0	0
Total Operation Expense		8,059,625	1,016,280	16,729	754,884	1,787,893	19,165	1,113	4,919

	Allocation Factor	Total North Dakota	Firm General > 500 cubic feet Demand	Energy	Customer	Total Large Firm General	Air Force Delivery Demand	Energy	Customer
Maintenance									
Structures & Improvements	13	39,129	10,458	0	227	10,685	0	0	0
Mains	13	268,600	71,789	0	1,557	73,346	0	0	0
Measuring Stations - General	18	175,554	43,529	0	1,233	44,762	0	0	0
Measuring Stations - Industrial	21	82,489	12,369	0	268	12,637	5,058	0	756
Measuring Stations - City Gate	19	106,813	27,735	0	601	28,336	2,647	0	395
Services	5	281,310	0	0	68,707	68,707	0	0	226
Meters & House Regulators	16	407,159	0	0	99,660	99,660	0	0	328
Other Equipment	28	355,338	43,307	0	44,971	88,278	2,012	0	445
Supervision & Engineering	28	799,511	97,442	0	101,185	198,627	4,526	0	1,002
Direct -Minot AFB Distribution System	Direct	19	0	0	0	0	0	0	0
Total Maintenance Expense		2,515,922	306,629	0	318,409	625,038	14,243	0	3,152
Total Distribution Expenses		10,575,547	1,322,909	16,729	1,073,293	2,412,931	33,408	1,113	8,071
Customer Accounts	4	147,005	0	0	6,651	6,651	0	0	4
Meter Reading	5	331,176	0	0	80,886	80,886	0	0	266
Customer Records & Collection	43	1,830,622	0	0	87,924	87,924	0	0	185
Uncollectible Accounts	6	324,519	0	0	14,707	14,707	0	0	0
Miscellaneous Customer Accounts	4	140,348	0	0	6,350	6,350	0	0	4
Customer Service & Information	4	269,021	0	0	12,172	12,172	0	0	7
Sales Expenses	4	149,928	0	0	6,784	6,784	0	0	4
Administration & General Expenses	30	9,826,077	1,229,157	15,543	997,231	2,241,931	31,040	1,034	7,499
Total Gas O&M Expenses		97,287,987	13,224,706	15,168,389	2,285,998	30,679,093	281,961	979,604	16,040
O&M Excl. Cost of Gas and A&G		14,142,625	1,322,909	145,761	1,288,767	2,757,437	33,408	9,701	8,541
O&M Excl. Cost of Gas		23,968,702	2,552,066	161,304	2,285,998	4,999,368	64,448	10,735	16,040
Depreciation Expense									
Transmission Plant	2	42,401	13,220	0	0	13,220	0	0	0
Distribution Plant									
Rights of Way	13	16,993	4,542	0	98	4,640	0	0	0
Structures & Improvements	23	21,450	5,752	0	236	5,988	759	0	113
Heskett Pipeline - Demand Related	2	5,593	1,744	0	1	1,745	0	0	0
Heskett Pipeline - Customer Related Related	8	2,397	0	0	109	109	0	0	0
Mains	40	4,283,656	1,161,996	0	25,200	1,187,196	0	0	0
Direct -Minot AFB Distribution System	Direct	21,369	0	0	0	0	0	0	0
Heskett Pipeline									
Demand Related 70%	2	494,546	154,198	0	0	154,198	0	0	0
Customer Related 30%	8	211,948	0	0	9,591	9,591	0	0	0
Meas. & Reg. Equip. - General	18	104,778	25,980	0	736	26,716	0	0	0
Meas. & Reg. Equip. - City Gate	19	289,774	75,243	0	1,632	76,875	7,180	0	1,073
Heskett Pipeline - Demand Related	2	14,888	4,642	0	0	4,642	0	0	0
Heskett Pipeline - Customer Related Related	8	6,381	0	0	289	289	0	0	0
Services	17	2,085,659	0	0	148,644	148,644	0	0	0
Direct	Direct	32,162	0	0	0	0	0	0	0
Meters	5	1,229,061	0	0	300,183	300,183	0	0	988
Direct	Direct	1,875	0	0	0	0	0	0	0
Service Regulators	20	181,199	0	0	44,228	44,228	0	0	146
Direct		217	0	0	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	21	48,498	7,272	0	158	7,430	2,974	0	444
Heskett Pipeline - Demand Related	2	17,862	5,569	0	0	5,569	0	0	0
Heskett Pipeline - Customer Related Related	8	7,655	0	0	346	346	0	0	0
Property on Customer Premise	13	57	15	0	0	15	0	0	0
Cathodic Protection & Other Equipment	13	80,574	21,535	0	467	22,002	0	0	0
Direct		782	0	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	2,589	807	0	0	807	0	0	0
Heskett Pipeline - Customer Related Related	8	1,109	0	0	50	50	0	0	0
Total Distribution Plant		9,163,072	1,469,295	0	531,968	2,001,263	10,913	0	2,764
General Plant	38	247,213	40,876	0	14,475	55,351	0	0	31
Direct -Minot AFB Distribution System	Direct	5,664	0	0	0	0	0	0	0
Amort. of Intangible Plant - General	15	270,719	41,360	0	16,861	58,221	352	0	89
Direct	Direct	56,099	0	0	0	0	0	0	0
Common Plant	15	513,578	78,464	0	31,987	110,451	667	0	169
Intangible Plant - Common (Excluding CC&B)	15	624,667	95,436	0	38,906	134,342	812	0	206
Intangible Plant - Common (CC&B)	4	591,341	0	0	26,756	26,756	0	0	15
Amortization of Gain/Preferred Stock	15	26,421	4,037	0	1,646	5,683	34	0	9
Acquisition Adjustment	15	2,821	431	0	176	607	1	0	1
Total Depreciation Expense		11,543,996	1,743,119	0	662,775	2,405,894	12,779	0	3,284

	Allocation Factor	Total North Dakota	Firm General > 500 cubic feet			Total Large Firm General	Air Force Delivery		
			Demand	Energy	Customer		Demand	Energy	Customer
Taxes Other Than Income									
Ad Valorem Taxes-Transmission	2	13,464	4,198	0	0	4,198	0	0	0
Heskett Pipeline - Demand Related	2	81,794	25,503	0	0	25,503	0	0	0
Heskett Pipeline - Customer Related Related	8	35,055	0	0	1,586	1,586	0	0	0
Ad Valorem Taxes-Other	15	1,572,317	240,218	0	97,929	338,147	2,043	0	518
Other Taxes - Payroll, Franchise, Other	31	1,006,825	107,202	6,776	96,025	210,003	2,707	451	674
Other Taxes - Minot AFB Distribution- Direct	Direct	0	0	0	0	0	0	0	0
Other Taxes - Revenue	26	1,264	118	165	99	382	2	11	1
Total Taxes Other Than Income Taxes		2,710,719	377,239	6,941	195,639	579,819	4,752	462	1,193
Total Operating Expense		111,542,702	15,345,064	15,175,330	3,144,412	33,664,806	299,492	980,066	20,517
Interest Expense/AFUDC Equity Add Back	36	4,055,345	713,979	0	220,395	934,374	5,696	0	1,371
Direct -Minot AFB Distribution System	Direct	0	0	0	0	0	0	0	0
Taxable Income		2,622,672	(4,812,887)	(166,223)	5,682,931	703,821	(85,768)	(11,062)	88,950
Income Taxes	24.4049%	640,056	(1,174,580)	(40,566)	1,386,914	171,768	(20,932)	(2,700)	21,708
Full Normalization/ARAM	24	(667,307)	(116,579)	0	(35,986)	(152,565)	(930)	0	(224)
Total Income Taxes		(27,251)	(1,291,159)	(40,566)	1,350,928	19,203	(21,862)	(2,700)	21,484
Total Operating Expense		111,515,451	14,053,905	15,134,764	4,495,340	33,684,009	277,630	977,366	42,001
Operating Income:		6,705,268	(2,807,749)	(125,657)	4,552,398	1,618,992	(58,210)	(8,362)	68,837

	Allocation Factor	Total North Dakota	Total Air Force Delivery	Small Interruptible Demand	Small Interruptible Energy	Small Interruptible Customer	Total Small Interruptible
Rate Base-Projected							
Gas Plant in Service							
Transmission Plant	2	2,000,051	0	122,058	0	0	122,058
Land	13	922,303	0	48,248	0	170	48,418
Heskett Pipeline - Demand Related	2	39,150	0	2,389	0	0	2,389
Heskett Pipeline - Customer Related Related	8	5,850	0	0	0	8	8
Rights of Way	13	493,986	0	25,842	0	91	25,933
Structures & Improvements	40	524,062	0	27,824	0	98	27,922
Directly Assigned	Direct	99,490	25,349	0	0	0	0
Heskett Pipeline - Demand Related	2	202,068	0	12,332	0	0	12,332
Heskett Pipeline - Customer Related Related	8	30,194	0	0	0	43	43
Mains							
Demand Related 87%	2	105,720,724	0	6,451,843	0	0	6,451,843
Customer Related 13%	8	15,797,349	0	0	0	22,666	22,666
Directly Assigned Demand Related 87%	Direct	2,314,769	0	0	0	0	0
Directly Assigned Customer Related 13%	Direct	345,885	0	0	0	0	0
Heskett Pipeline							
Demand Related 87%	2	17,867,715	0	1,090,417	0	0	1,090,417
Customer Related 13%	8	2,669,889	0	0	0	3,831	3,831
Meas. & Reg. Equip. - General	40	2,639,185	0	140,124	0	492	140,616
Directly Assigned	Direct	406,688	0	68,789	0	10,279	79,068
Meas. & Reg. Equip. - City Gate	13	8,183,765	0	428,115	0	1,504	429,619
Directly Assigned	Direct	239,904	239,904	0	0	0	0
Heskett Pipeline - Demand Related	2	537,918	0	32,828	0	0	32,828
Heskett Pipeline - Customer Related Related	8	80,379	0	0	0	115	115
Services	37	61,055,263	0	0	0	357,899	357,899
Directly Assigned	Direct	509,310	0	0	0	0	0
Meters	9	35,728,039	28,775	0	0	1,139,500	1,139,500
Directly Assigned	Direct	54,980	0	0	0	0	0
Service Regulators	9	5,258,995	4,236	0	0	167,729	167,729
Directly Assigned	Direct	14,733	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	40	779,338	0	41,378	0	145	41,523
Directly Assigned	Direct	630,496	99,374	318,575	0	47,603	366,178
Heskett Pipeline - Demand Related	2	645,343	0	39,383	0	0	39,383
Heskett Pipeline - Customer Related Related	8	96,430	0	0	0	138	138
Property on Customer Premise	13	1,667	0	87	0	0	87
Cathodic Protection & Other Equipment	40	2,314,704	0	122,896	0	432	123,328
Directly Assigned	Direct	50,296	0	0	0	0	0
Heskett Pipeline - Demand Related	2	93,519	0	5,707	0	0	5,707
Heskett Pipeline - Customer Related Related	8	13,974	0	0	0	20	20
Distribution Plant - includes Heskett		266,368,360	397,638	8,856,777	0	1,752,763	10,609,540
Distribution Plant - Heskett Pipeline Plant		22,282,429	0	1,183,056	0	4,155	1,187,211
Distribution Plant Excluding Direct Assignments		261,701,809	33,011	8,469,413	0	1,694,881	10,164,294
General Plant	38	14,616,870	1,844	473,043	0	94,664	567,707
Directly Assigned - MAFB	Direct	186,068	0	0	0	0	0
Intangible Plant - General	15	4,514,131	7,354	141,918	0	32,339	174,257
Directly Assigned	Direct	2,192,696	0	362,451	0	54,160	416,611
Common Plant	15	18,810,018	30,643	591,361	0	134,753	726,114
Intangible Common (Excluding CC&B)	15	8,257,296	13,452	259,598	0	59,154	318,752
Intangible Common (CC&B)	4	8,885,985	232	0	0	12,748	12,748
Acquisition Adjustment	15	97,266	158	3,058	0	697	3,755
Total Gas Plant in Service including Heskett		325,928,741	451,321	10,810,264	0	2,141,278	12,951,542
Less: Accumulated Depreciation							
Transmission Plant	2	594,763	0	36,297	0	0	36,297
Distribution Plant							
Rights of Way	13	110,823	0	5,797	0	20	5,817
Structures & Improvements	23	229,858	9,345	10,257	0	36	10,293
Heskett Pipeline - Demand Related	2	26,833	0	1,638	0	0	1,638
Heskett Pipeline - Customer Related Related	8	11,500	0	0	0	16	16
Mains	40	44,833,699	0	2,380,387	0	8,362	2,388,749
Direct	Direct	56,502	0	0	0	0	0
Heskett Pipeline -							
Demand Related 70%	2	2,411,055	0	147,140	0	0	147,140
Customer Related 30%	8	1,033,310	0	0	0	1,483	1,483
Meas. & Reg. Equip. - General	18	803,132	0	55,086	0	2,840	57,926
Meas. & Reg. Equip. - City Gate	19	1,196,722	34,083	60,821	0	214	61,035
Heskett Pipeline - Demand Related	2	92,399	0	5,639	0	0	5,639
Heskett Pipeline - Customer Related Related	8	39,600	0	0	0	57	57
Services	37	38,571,272	0	0	0	226,101	226,101
Direct	Direct	99,871	0	0	0	0	0
Meters	5	13,168,600	10,583	0	0	419,083	419,083

	Allocation Factor	Total North Dakota	Total Air Force Delivery	Small Interruptible			Total Small Interruptible
				Demand	Energy	Customer	
Direct	Direct	17,067	0	0	0	0	0
Service Regulators	9	1,639,932	1,321	0	0	52,304	52,304
Direct	Direct	2,352	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	21	398,173	28,066	101,660	0	13,485	115,145
Heskett Pipeline - Demand Related	2	88,502	0	5,401	0	0	5,401
Heskett Pipeline - Customer Related Related	8	37,929	0	0	0	54	54
Property on Customer Premise	13	1,753	0	92	0	0	92
Cathodic Protection & Other Equipment	13	966,161	0	50,543	0	178	50,721
Heskett Pipeline - Demand Related	2	12,994	0	793	0	0	793
Heskett Pipeline - Customer Related Related	8	5,569	0	0	0	8	8
Distribution Plant		105,855,608	83,398	2,825,254	0	724,241	3,549,495
General Plant	38	748,600	94	24,227	0	4,848	29,075
Direct	Direct	51,676	0	0	0	0	0
Intangible Plant - General	15	1,656,460	2,699	52,077	0	11,867	63,944
Intangible Plant - General - Direct	Direct	729,742	0	97,056	0	41,595	138,651
Common Plant	15	5,583,831	9,097	175,548	0	40,002	215,550
Intangible Plant - Common	15	4,914,734	8,006	154,512	0	35,209	189,721
Intangible Plant - Common-CC&B	4	4,593,157	120	0	0	6,589	6,589
Acquisition Adjustment	15	79,183	129	2,489	0	567	3,056
Less: Total Accumulated Reserve for Depreciation		124,807,754	103,543	3,367,460	0	864,918	4,232,378
Net Gas Plant in Service including Heskett		201,120,987	347,778	7,442,804	0	1,276,360	8,719,164

	Allocation Factor	Total North Dakota	Total Air Force Delivery	Small Interruptible			Total Small Interruptible
				Demand	Energy	Customer	
Additions							
Materials & Supplies	15	2,538,800	4,136	79,816	0	18,188	98,004
Fuel Stocks	10	35,198	0	0	0	0	0
Prepayments	25	276,676	383	9,177	0	1,818	10,995
Unamortized Loss on Debt	24	298,810	516	11,058	0	1,896	12,954
Unamortized Redumption Cost of Preferred Stock	24	47,407	82	1,754	0	301	2,055
Gain/Loss on Sale	24	467,967	809	17,318	0	2,970	20,288
Provision for Pension & Benefits	24	16,296,452	28,180	603,076	0	103,421	706,497
Provision for Post Retirement	24	542,497	938	20,076	0	3,443	23,519
Total Additions		20,503,807	35,044	742,275	0	132,037	874,312
Total Before Deductions		221,624,794	382,822	8,185,079	0	1,408,397	9,593,476
Deductions							
Accumulated Deferred Income Tax	24	(28,172,298)	(48,715)	(1,042,561)	0	(178,788)	(1,221,349)
Accumulated Investment Tax Credit	24	0	0	0	0	0	0
Customer Advances For Construction	Direct	(8,786,871)	0	(798,375)	0	(342,161)	(1,140,536)
Total Deductions		(36,959,169)	(48,715)	(1,840,936)	0	(520,949)	(2,361,885)
Total Rate Base		184,665,625	334,107	6,344,143	0	887,448	7,231,591

	Allocation Factor	Total North Dakota	Total Air Force Delivery	Small Interruptible			Total Small Interruptible
				Demand	Energy	Customer	
Income Statement							
Gas Operating Revenues							
Retail Sales & Transportation							
Residential	Direct	58,718,404	0	0	0	0	0
Firm General	Direct	47,194,215	0	0	0	0	0
Air Force Delivery	Direct	1,296,755	1,296,755	0	0	0	0
Small Interruptible	Direct	3,867,749	0	373,771	1,751,171	1,742,807	3,867,749
Large Interruptible	Direct	3,671,532	0	0	0	0	0
Total Sales & Transportation Revenues		114,748,655	1,296,755	373,771	1,751,171	1,742,807	3,867,749
Other Operating Revenue							
Miscellaneous							
Reconnect Fees	6	48,660	0	0	0	0	0
Minot Maintenance Fee Rate 65	Direct	456,000	0	0	0	0	0
NSF Check Fees & Other	6	34,029	0	0	0	0	0
Miscellaneous	41	2,769	0	103	0	18	121
Rent From Gas Property	41	565,349	985	21,084	0	3,616	24,700
Other Gas Revenues							
Miscellaneous	42	300,407	1,144	8,476	294	4,001	12,771
Heskett Pipeline Revenue							
Demand Related 70%	2	1,293,411	0	78,933	0	0	78,933
Customer Related 30%	8	554,319	0	0	0	795	795
Transport and Penalty Revenue - Net	41	217,120	378	8,097	0	1,389	9,486
Total Other Operating Revenue		3,472,064	2,507	116,693	294	9,819	126,806
		3,016,064	2,507	116,693	294	9,819	126,806
Unbilled Revenue	26	0	0	0	0	0	0
Total Operating Revenues		118,220,719	1,299,262	490,464	1,751,465	1,752,626	3,994,555
Operation & Maintenance Expenses							
Cost of Purchased Gas	Direct	73,319,285	1,186,382	373,771	1,751,171	0	2,124,942
Transmission Expenses	3	10,523	241	0	415	0	415
Other Gas Supply Expenses	3	363,936	8,347	0	14,343	0	14,343
Distribution Expenses							
Operation							
Load Dispatch	1	31,727	533	0	2,166	0	2,166
Mains and Services	22	2,197,546	0	76,894	0	4,536	81,430
Measuring Stations - General	18	173,439	0	11,896	0	613	12,509
Measuring Stations - Industrial	21	92,007	6,485	23,491	0	3,116	26,607
Measuring Stations - City Gate	19	142,770	4,066	7,256	0	25	7,281
Meters & House Regulators	16	431,482	348	0	0	13,762	13,762
Customer Installations	5	791,051	636	0	0	25,175	25,175
Other Gas Distribution	27	2,276,915	7,118	70,511	1,278	27,858	99,647
Rents	27	41,245	129	1,277	23	505	1,805
Supervision & Engineering	27	1,881,390	5,882	58,263	1,056	23,019	82,338
Direct -Minot AFB Distribution System	Direct	53	0	0	0	0	0
Total Operation Expense		8,059,625	25,197	249,588	4,523	98,609	352,720

	Allocation Factor	Total North Dakota	Total Air Force Delivery	Small Interruptible			Total Small Interruptible
				Demand	Energy	Customer	
Maintenance							
Structures & Improvements	13	39,129	0	2,047	0	7	2,054
Mains	13	268,600	0	14,051	0	49	14,100
Measuring Stations - General	18	175,554	0	12,041	0	621	12,662
Measuring Stations - Industrial	21	82,489	5,814	21,061	0	2,794	23,855
Measuring Stations - City Gate	19	106,813	3,042	5,429	0	19	5,448
Services	5	281,310	226	0	0	8,953	8,953
Meters & House Regulators	16	407,159	328	0	0	12,986	12,986
Other Equipment	28	355,338	2,457	14,262	0	6,639	20,901
Supervision & Engineering	28	799,511	5,528	32,090	0	14,938	47,028
Direct -Minot AFB Distribution System	Direct	19	0	0	0	0	0
Total Maintenance Expense		2,515,922	17,395	100,981	0	47,006	147,987
Total Distribution Expenses		10,575,547	42,592	350,569	4,523	145,615	500,707
Customer Accounts	4	147,005	4	0	0	211	211
Meter Reading	5	331,176	266	0	0	10,539	10,539
Customer Records & Collection	43	1,830,622	185	0	0	26,726	26,726
Uncollectible Accounts	6	324,519	0	0	0	0	0
Miscellaneous Customer Accounts	4	140,348	4	0	0	201	201
Customer Service & Information	4	269,021	7	0	0	386	386
Sales Expenses	4	149,928	4	0	0	215	215
Administration & General Expenses	30	9,826,077	39,573	325,725	4,202	135,296	465,223
Total Gas O&M Expenses		97,287,987	1,277,605	1,050,065	1,774,654	319,189	3,143,908
O&M Excl. Cost of Gas and A&G		14,142,625	51,650	350,569	19,281	183,893	553,743
O&M Excl. Cost of Gas		23,968,702	91,223	676,294	23,483	319,189	1,018,966
Depreciation Expense							
Transmission Plant	2	42,401	0	2,588	0	0	2,588
Distribution Plant							
Rights of Way	13	16,993	0	889	0	3	892
Structures & Improvements	23	21,450	872	957	0	3	960
Heskett Pipeline - Demand Related	2	5,593	0	341	0	0	341
Heskett Pipeline - Customer Related Related	8	2,397	0	0	0	3	3
Mains	40	4,283,656	0	227,435	0	799	228,234
Direct -Minot AFB Distribution System	Direct	21,369	0	0	0	0	0
Heskett Pipeline							
Demand Related 70%	2	494,546	0	30,181	0	0	30,181
Customer Related 30%	8	211,948	0	0	0	304	304
Meas. & Reg. Equip. - General	18	104,778	0	7,187	0	371	7,558
Meas. & Reg. Equip. - City Gate	19	289,774	8,253	14,727	0	52	14,779
Heskett Pipeline - Demand Related	2	14,888	0	909	0	0	909
Heskett Pipeline - Customer Related Related	8	6,381	0	0	0	9	9
Services	17	2,085,659	0	0	0	12,221	12,221
Direct	Direct	32,162	0	0	0	0	0
Meters	5	1,229,061	988	0	0	39,114	39,114
Direct	Direct	1,875	0	0	0	0	0
Service Regulators	20	181,199	146	0	0	5,763	5,763
Direct		217	0	0	0	0	0
Ind. Meas. & Reg. Station Equipment	21	48,498	3,418	12,382	0	1,643	14,025
Heskett Pipeline - Demand Related	2	17,862	0	1,090	0	0	1,090
Heskett Pipeline - Customer Related Related	8	7,655	0	0	0	11	11
Property on Customer Premise	13	57	0	3	0	0	3
Cathodic Protection & Other Equipment	13	80,574	0	4,215	0	15	4,230
Direct		782	0	0	0	0	0
Heskett Pipeline - Demand Related	2	2,589	0	158	0	0	158
Heskett Pipeline - Customer Related Related	8	1,109	0	0	0	2	2
Total Distribution Plant		9,163,072	13,677	300,474	0	60,313	360,787
General Plant	38	247,213	31	8,001	0	1,601	9,602
Direct -Minot AFB Distribution System	Direct	5,664	0	0	0	0	0
Amort. of Intangible Plant - General	15	270,719	441	8,511	0	1,939	10,450
Direct	Direct	56,099	0	7,462	0	3,197	10,659
Common Plant	15	513,578	836	16,146	0	3,679	19,825
Intangible Plant - Common (Excluding CC&B)	15	624,667	1,018	19,639	0	4,475	24,114
Intangible Plant - Common (CC&B)	4	591,341	15	0	0	848	848
Amortization of Gain/Preferred Stock	15	26,421	43	831	0	189	1,020
Acquisition Adjustment	15	2,821	2	89	0	20	109
Total Depreciation Expense		11,543,996	16,063	363,741	0	76,261	440,002

	Allocation Factor	Total North Dakota	Total Air Force Delivery	Small Interruptible			Total Small Interruptible
				Demand	Energy	Customer	
Taxes Other Than Income							
Ad Valorem Taxes-Transmission	2	13,464	0	822	0	0	822
Heskett Pipeline - Demand Related	2	81,794	0	4,992	0	0	4,992
Heskett Pipeline - Customer Related Related	8	35,055	0	0	0	50	50
Ad Valorem Taxes-Other	15	1,572,317	2,561	49,431	0	11,264	60,695
Other Taxes - Payroll, Franchise, Other	31	1,006,825	3,832	28,408	986	13,408	42,802
Other Taxes - Minot AFB Distribution- Direct	Direct	0	0	0	0	0	0
Other Taxes - Revenue	26	1,264	14	4	19	19	42
Total Taxes Other Than Income Taxes		2,710,719	6,407	83,657	1,005	24,741	109,403
Total Operating Expense		111,542,702	1,300,075	1,497,463	1,775,659	420,191	3,693,313
Interest Expense/AFUDC Equity Add Back	36	4,055,345	7,067	151,242	0	25,936	177,178
Direct -Minot AFB Distribution System	Direct	0	0	0	0	0	0
Taxable Income		2,622,672	(7,880)	(1,158,241)	(24,194)	1,306,499	124,064
Income Taxes	24.4049%	640,056	(1,923)	(282,668)	(5,905)	318,850	30,277
Full Normalization/ARAM	24	(667,307)	(1,154)	(24,695)	0	(4,235)	(28,930)
Total Income Taxes		(27,251)	(3,077)	(307,363)	(5,905)	314,615	1,347
Total Operating Expense		111,515,451	1,296,998	1,190,100	1,769,754	734,806	3,694,660
Operating Income:		6,705,268	2,264	(699,636)	(18,289)	1,017,820	299,895

	Allocation Factor	Total North Dakota	Large Interruptible Demand	Large Interruptible Energy	Large Interruptible Customer	Total Large Interruptible	Minot Air Force Base Distribution Demand	Minot Air Force Base Distribution Energy	Minot Air Force Base Distribution Customer
Rate Base-Projected									
Gas Plant in Service									
Transmission Plant	2	2,000,051	37,592	0	0	37,592	0	0	0
Land	13	922,303	26,662	0	1,771	28,433	0	0	0
Heskett Pipeline - Demand Related	2	39,150	736	0	0	736	0	0	0
Heskett Pipeline - Customer Related Related	8	5,850	0	0	0	0	0	0	0
Rights of Way	13	493,986	14,280	0	948	15,228	0	0	0
Structures & Improvements	40	524,062	8,570	0	4	8,574	0	0	0
Directly Assigned	Direct	99,490	39,455	0	5,896	45,351	0	0	0
Heskett Pipeline - Demand Related	2	202,068	3,798	0	0	3,798	0	0	0
Heskett Pipeline - Customer Related Related	8	30,194	0	0	2	2	0	0	0
Mains									
Demand Related 87%	2	105,720,724	1,987,099	0	0	1,987,099	0	0	0
Customer Related 13%	8	15,797,349	0	0	962	962	0	0	0
Directly Assigned Demand Related 87%	Direct	2,314,769	1,578,199	0	0	1,578,199	736,570	0	0
Directly Assigned Customer Related 13%	Direct	345,885	0	0	235,823	235,823	0	0	110,062
Heskett Pipeline									
Demand Related 87%	2	17,867,715	335,837	0	0	335,837	0	0	0
Customer Related 13%	8	2,669,889	0	0	163	163	0	0	0
Meas. & Reg. Equip. - General	40	2,639,185	43,157	0	21	43,178	0	0	0
Directly Assigned	Direct	406,688	245,711	0	36,715	282,426	0	0	0
Meas. & Reg. Equip. - City Gate	13	8,183,765	236,577	0	15,712	252,289	0	0	0
Directly Assigned	Direct	239,904	0	0	0	0	0	0	0
Heskett Pipeline - Demand Related	2	537,918	10,111	0	0	10,111	0	0	0
Heskett Pipeline - Customer Related Related	8	80,379	0	0	5	5	0	0	0
Services	37	61,055,263	0	0	13,687	13,687	0	0	0
Directly Assigned	Direct	509,310	0	0	0	0	0	0	509,310
Meters	9	35,728,039	0	0	49,493	49,493	0	0	0
Directly Assigned	Direct	54,980	0	0	0	0	0	0	54,980
Service Regulators	9	5,258,995	0	0	7,285	7,285	0	0	0
Directly Assigned	Direct	14,733	0	0	0	0	0	0	14,733
Ind. Meas. & Reg. Station Equipment	40	779,338	12,744	0	6	12,750	0	0	0
Directly Assigned	Direct	630,496	143,501	0	21,443	164,944	0	0	0
Heskett Pipeline - Demand Related	2	645,343	12,130	0	0	12,130	0	0	0
Heskett Pipeline - Customer Related Related	8	96,430	0	0	6	6	0	0	0
Property on Customer Premise	13	1,667	48	0	3	51	0	0	0
Cathodic Protection & Other Equipment	40	2,314,704	37,851	0	18	37,869	0	0	0
Directly Assigned	Direct	50,296	0	0	0	0	43,758	0	6,538
Heskett Pipeline - Demand Related	2	93,519	1,758	0	0	1,758	0	0	0
Heskett Pipeline - Customer Related Related	8	13,974	0	0	1	1	0	0	0
Distribution Plant - includes Heskett		266,368,360	4,738,224	0	389,964	5,128,188	780,328	0	695,623
Distribution Plant - Heskett Pipeline Plant		22,282,429	364,370	0	177	364,547	0	0	0
Distribution Plant Excluding Direct Assignments		261,701,809	2,731,358	0	90,087	2,821,445	0	0	0
General Plant	38	14,616,870	152,555	0	5,032	157,587	0	0	0
Directly Assigned - MAFB	Direct	186,068	0	0	0	0	161,879	0	24,190
Intangible Plant - General	15	4,514,131	80,890	0	7,209	88,099	14,431	0	12,865
Directly Assigned	Direct	2,192,696	1,545,193	0	230,891	1,776,084	0	0	0
Common Plant	15	18,810,018	337,063	0	30,038	367,101	60,134	0	53,607
Intangible Common (Excluding CC&B)	15	8,257,296	147,965	0	13,186	161,151	26,398	0	23,533
Intangible Common (CC&B)	4	8,885,985	0	0	1,391	1,391	0	0	0
Acquisition Adjustment	15	97,266	1,743	0	155	1,898	311	0	277
Total Gas Plant in Service including Heskett		325,928,741	7,041,225	0	677,866	7,719,091	########	0	810,095
Less: Accumulated Depreciation									
Transmission Plant	2	594,763	11,179	0	0	11,179	0	0	0
Distribution Plant									
Rights of Way	13	110,823	3,204	0	213	3,417	0	0	0
Structures & Improvements	23	229,858	17,703	0	2,175	19,878	0	0	0
Heskett Pipeline - Demand Related	2	26,833	504	0	0	504	0	0	0
Heskett Pipeline - Customer Related Related	8	11,500	0	0	1	1	0	0	0
Mains	40	44,833,699	733,134	0	355	733,489	0	0	0
Direct	Direct	56,502	0	0	0	0	49,157	0	7,344
Heskett Pipeline -									
Demand Related 70%	2	2,411,055	45,318	0	0	45,318	0	0	0
Customer Related 30%	8	1,033,310	0	0	63	63	0	0	0
Meas. & Reg. Equip. - General	18	803,132	76,168	0	9,687	85,855	0	0	0
Meas. & Reg. Equip. - City Gate	19	1,196,722	33,610	0	2,232	35,842	0	0	0
Heskett Pipeline - Demand Related	2	92,399	1,737	0	0	1,737	0	0	0
Heskett Pipeline - Customer Related Related	8	39,600	0	0	2	2	0	0	0
Services	37	38,571,272	0	0	8,647	8,647	0	0	0
Direct	Direct	99,871	0	0	0	0	0	0	99,871
Meters	5	13,168,600	0	0	46,819	46,819	0	0	0

	Allocation Factor	Total North Dakota	Large Interruptible Demand	Large Interruptible Energy	Large Interruptible Customer	Total Large Interruptible	Minot Air Force Base Distributio Demand	Minot Air Force Base Distributio Energy	Minot Air Force Base Distributio Customer
Direct	Direct	17,067	0	0	0	0	0	0	17,067
Service Regulators	9	1,639,932	0	0	2,272	2,272	0	0	0
Direct	Direct	2,352	0	0	0	0	0	0	2,352
Ind. Meas. & Reg. Station Equipment	21	398,173	44,128	0	6,058	50,186	0	0	0
Heskett Pipeline - Demand Related	2	88,502	1,663	0	0	1,663	0	0	0
Heskett Pipeline - Customer Related Related	8	37,929	0	0	2	2	0	0	0
Property on Customer Premise	13	1,753	51	0	3	54	0	0	0
Cathodic Protection & Other Equipment	13	966,161	27,930	0	1,855	29,785	0	0	0
Heskett Pipeline - Demand Related	2	12,994	244	0	0	244	0	0	0
Heskett Pipeline - Customer Related Related	8	5,569	0	0	0	0	0	0	0
Distribution Plant		105,855,608	985,394	0	80,384	1,065,778	49,157	0	126,634
General Plant	38	748,600	7,813	0	258	8,071	0	0	0
Direct	Direct	51,676	0	0	0	0	44,958	0	6,718
Intangible Plant - General	15	1,656,460	29,683	0	2,645	32,328	5,296	0	4,721
Intangible Plant - General - Direct	Direct	729,742	413,764	0	177,327	591,091	0	0	0
Common Plant	15	5,583,831	100,058	0	8,917	108,975	17,851	0	15,913
Intangible Plant - Common	15	4,914,734	88,069	0	7,848	95,917	15,712	0	14,007
Intangible Plant - Common-CC&B	4	4,593,157	0	0	719	719	0	0	0
Acquisition Adjustment	15	79,183	1,419	0	126	1,545	253	0	226
Less: Total Accumulated Reserve for Depreciation		124,807,754	1,637,379	0	278,224	1,915,603	133,227	0	168,219
Net Gas Plant in Service including Heskett		201,120,987	5,403,846	0	399,642	5,803,488	910,254	0	641,876

	Allocation Factor	Total North Dakota	Large Interruptible Demand	Large Interruptible Energy	Large Interruptible Customer	Total Large Interruptible	Minot Air Force Base Distributio Demand	Minot Air Force Base Distributio Energy	Minot Air Force Base Distributio Customer
Additions									
Materials & Supplies	15	2,538,800	45,494	0	4,054	49,548	8,116	0	7,235
Fuel Stocks	10	35,198	0	0	0	0	0	0	0
Prepayments	25	276,676	5,977	0	575	6,552	886	0	688
Unamortized Loss on Debt	24	298,810	8,029	0	594	8,623	1,352	0	954
Unamortized Redumption Cost of Preferred Stock	24	47,407	1,274	0	94	1,368	215	0	151
Gain/Loss on Sale	24	467,967	12,574	0	930	13,504	2,118	0	1,494
Provision for Pension & Benefits	24	16,296,452	437,863	0	32,382	470,245	73,756	0	52,010
Provision for Post Retirement	24	542,497	14,576	0	1,078	15,654	2,455	0	1,731
Total Additions		20,503,807	525,787	0	39,707	565,494	88,898	0	64,263
Total Before Deductions		221,624,794	5,929,633	0	439,349	6,368,982	999,152	0	706,139
Deductions									
Accumulated Deferred Income Tax	24	(28,172,298)	(756,951)	0	(55,980)	(812,931)	(127,505)	0	(89,912)
Accumulated Investment Tax Credit	24	0	0	0	0	0	0	0	0
Customer Advances For Construction	Direct	(8,786,871)	(423,176)	0	(181,361)	(604,537)	0	0	0
Total Deductions		(36,959,169)	(1,180,127)	0	(237,341)	(1,417,468)	(127,505)	0	(89,912)
Total Rate Base		184,665,625	4,749,506	0	202,008	4,951,514	871,647	0	616,227

	Allocation Factor	Total North Dakota	Large Interruptible Demand	Large Interruptible Energy	Large Interruptible Customer	Total Large Interruptible	Minot Air Force Base Distribution Demand	Minot Air Force Base Distribution Energy	Minot Air Force Base Distribution Customer
Income Statement									
Gas Operating Revenues									
Retail Sales & Transportation									
Residential	Direct	58,718,404	0	0	0	0	0	0	0
Firm General	Direct	47,194,215	0	0	0	0	0	0	0
Air Force Delivery	Direct	1,296,755	0	0	0	0	0	0	0
Small Interruptible	Direct	3,867,749	0	0	0	0	0	0	0
Large Interruptible	Direct	3,671,532	1,128,648	756,376	1,786,508	3,671,532	0	0	0
Total Sales & Transportation Revenues		114,748,655	1,128,648	756,376	1,786,508	3,671,532	0	0	0
Other Operating Revenue									
Miscellaneous									
Reconnect Fees	6	48,660	0	0	0	0	0	0	0
Minot Maintenance Fee Rate 65	Direct	456,000	0	0	0	0	0	0	456,000
NSF Check Fees & Other	6	34,029	0	0	0	0	0	0	0
Miscellaneous	41	2,769	75	0	6	81	0	0	0
Rent From Gas Property	41	565,349	15,308	0	1,132	16,440	0	0	0
Other Gas Revenues									
Miscellaneous	42	300,407	5,377	540	853	6,770	0	0	0
Heskett Pipeline Revenue									
Demand Related 70%	2	1,293,411	24,311	0	0	24,311	0	0	0
Customer Related 30%	8	554,319	0	0	34	34	0	0	0
Transport and Penalty Revenue - Net	41	217,120	5,879	0	435	6,314	0	0	0
Total Other Operating Revenue		3,472,064	50,950	540	2,460	53,950	0	0	456,000
		3,016,064	50,950	540	2,460	53,950	0	0	0
Unbilled Revenue	26	0	0	0	0	0	0	0	0
Total Operating Revenues		118,220,719	1,179,598	756,916	1,788,968	3,725,482	0	0	456,000
Operation & Maintenance Expenses									
Cost of Purchased Gas	Direct	73,319,285	1,128,648	756,376	0	1,885,024	0	0	0
Transmission Expenses	3	10,523	0	314	0	314	0	0	0
Other Gas Supply Expenses	3	363,936	0	10,854	0	10,854	0	0	0
Distribution Expenses									
Operation									
Load Dispatch	1	31,727	0	7,919	0	7,919	0	0	0
Mains and Services	22	2,197,546	42,492	0	2,985	45,477	0	0	0
Measuring Stations - General	18	173,439	16,449	0	2,092	18,541	0	0	0
Measuring Stations - Industrial	21	92,007	10,197	0	1,400	11,597	0	0	0
Measuring Stations - City Gate	19	142,770	4,010	0	266	4,276	0	0	0
Meters & House Regulators	16	431,482	0	0	598	598	0	0	0
Customer Installations	5	791,051	0	0	2,812	2,812	0	0	0
Other Gas Distribution	27	2,276,915	43,148	4,671	5,989	53,808	0	0	0
Rents	27	41,245	782	85	108	975	0	0	0
Supervision & Engineering	27	1,881,390	35,653	3,860	4,949	44,462	0	0	0
Direct -Minot AFB Distribution System	Direct	53	0	0	0	0	53	0	0
Total Operation Expense		8,059,625	152,731	16,535	21,199	190,465	53	0	0

	Allocation Factor	Total North Dakota	Large Interruptible Demand	Large Interruptible Energy	Large Interruptible Customer	Total Large Interruptible	Minot Air Force Base Distribution Demand	Minot Air Force Base Distribution Energy	Minot Air Force Base Distribution Customer
Maintenance									
Structures & Improvements	13	39,129	1,131	0	75	1,206	0	0	0
Mains	13	268,600	7,765	0	516	8,281	0	0	0
Measuring Stations - General	18	175,554	16,649	0	2,117	18,766	0	0	0
Measuring Stations - Industrial	21	82,489	9,142	0	1,255	10,397	0	0	0
Measuring Stations - City Gate	19	106,813	3,000	0	199	3,199	0	0	0
Services	5	281,310	0	0	1,000	1,000	0	0	0
Meters & House Regulators	16	407,159	0	0	564	564	0	0	0
Other Equipment	28	355,338	9,839	0	1,495	11,334	0	0	0
Supervision & Engineering	28	799,511	22,138	0	3,364	25,502	0	0	0
Direct -Minot AFB Distribution System	Direct	19	0	0	0	0	19	0	0
Total Maintenance Expense		2,515,922	69,664	0	10,585	80,249	19	0	0
Total Distribution Expenses		10,575,547	222,395	16,535	31,784	270,714	72	0	0
Customer Accounts	4	147,005	0	0	23	23	0	0	0
Meter Reading	5	331,176	0	0	1,177	1,177	0	0	0
Customer Records & Collection	43	1,830,622	0	0	5,440	5,440	0	0	0
Uncollectible Accounts	6	324,519	0	0	0	0	0	0	0
Miscellaneous Customer Accounts	4	140,348	0	0	22	22	0	0	0
Customer Service & Information	4	269,021	0	0	42	42	0	0	0
Sales Expenses	4	149,928	0	0	23	23	0	0	0
Administration & General Expenses	30	9,826,077	206,634	15,363	29,531	251,528	67	0	0
Total Gas O&M Expenses		97,287,987	1,557,677	799,442	68,042	2,425,161	139	0	0
O&M Excl. Cost of Gas and A&G		14,142,625	222,395	27,703	38,511	288,609	72	0	0
O&M Excl. Cost of Gas		23,968,702	429,029	43,066	68,042	540,137	139	0	0
Depreciation Expense									
Transmission Plant	2	42,401	797	0	0	797	0	0	0
Distribution Plant									
Rights of Way	13	16,993	491	0	33	524	0	0	0
Structures & Improvements	23	21,450	1,652	0	203	1,855	0	0	0
Heskett Pipeline - Demand Related	2	5,593	105	0	0	105	0	0	0
Heskett Pipeline - Customer Related Related	8	2,397	0	0	0	0	0	0	0
Mains	40	4,283,656	70,048	0	34	70,082	0	0	0
Direct -Minot AFB Distribution System	Direct	21,369	0	0	0	0	18,591	0	2,778
Heskett Pipeline									
Demand Related 70%	2	494,546	9,295	0	0	9,295	0	0	0
Customer Related 30%	8	211,948	0	0	13	13	0	0	0
Meas. & Reg. Equip. - General	18	104,778	9,937	0	1,264	11,201	0	0	0
Meas. & Reg. Equip. - City Gate	19	289,774	8,138	0	540	8,678	0	0	0
Heskett Pipeline - Demand Related	2	14,888	280	0	0	280	0	0	0
Heskett Pipeline - Customer Related Related	8	6,381	0	0	0	0	0	0	0
Services	17	2,085,659	0	0	1,212	1,212	0	0	69
Direct	Direct	32,162	0	0	0	0	0	0	32,162
Meters	5	1,229,061	0	0	4,370	4,370	0	0	0
Direct	Direct	1,875	0	0	0	0	0	0	1,875
Service Regulators	20	181,199	0	0	250	250	0	0	506
Direct		217	0	0	0	0	0	0	217
Ind. Meas. & Reg. Station Equipment	21	48,498	5,375	0	738	6,113	0	0	0
Heskett Pipeline - Demand Related	2	17,862	336	0	0	336	0	0	0
Heskett Pipeline - Customer Related Related	8	7,655	0	0	0	0	0	0	0
Property on Customer Premise	13	57	2	0	0	2	0	0	0
Cathodic Protection & Other Equipment	13	80,574	2,329	0	155	2,484	0	0	0
Direct		782	0	0	0	0	0	0	782
Heskett Pipeline - Demand Related	2	2,589	49	0	0	49	0	0	0
Heskett Pipeline - Customer Related Related	8	1,109	0	0	0	0	0	0	0
Total Distribution Plant		9,163,072	108,037	0	8,812	116,849	18,591	0	38,388
General Plant	38	247,213	2,580	0	85	2,665	0	0	0
Direct -Minot AFB Distribution System	Direct	5,664	0	0	0	0	4,928	0	736
Amort. of Intangible Plant - General	15	270,719	4,851	0	432	5,283	865	0	772
Direct	Direct	56,099	31,808	0	13,632	45,440	0	0	0
Common Plant	15	513,578	9,203	0	820	10,023	1,642	0	1,464
Intangible Plant - Common (Excluding CC&B)	15	624,667	11,194	0	998	12,192	1,997	0	1,780
Intangible Plant - Common (CC&B)	4	591,341	0	0	93	93	0	0	0
Amortization of Gain/Preferred Stock	15	26,421	473	0	42	515	84	0	75
Acquisition Adjustment	15	2,821	51	0	5	56	9	0	8
Total Depreciation Expense		11,543,996	168,994	0	24,919	193,913	28,116	0	43,223

	Allocation Factor	Total North Dakota	Large Interruptible Demand	Large Interruptible Energy	Large Interruptible Customer	Total Large Interruptible	Minot Air Force Base Distribution Demand	Minot Air Force Base Distribution Energy	Minot Air Force Base Distribution Customer
Taxes Other Than Income									
Ad Valorem Taxes-Transmission	2	13,464	253	0	0	253	0	0	0
Heskett Pipeline - Demand Related	2	81,794	1,537	0	0	1,537	0	0	0
Heskett Pipeline - Customer Related Related	8	35,055	0	0	2	2	0	0	0
Ad Valorem Taxes-Other	15	1,572,317	28,175	0	2,511	30,686	5,027	0	4,481
Other Taxes - Payroll, Franchise, Other	31	1,006,825	18,022	1,809	2,858	22,689	6	0	0
Other Taxes - Minot AFB Distribution- Direct	Direct	0	0	0	0	0	0	0	0
Other Taxes - Revenue	26	1,264	12	8	20	40	0	0	0
Total Taxes Other Than Income Taxes		2,710,719	47,999	1,817	5,391	55,207	5,033	0	4,481
Total Operating Expense		111,542,702	1,774,670	801,259	98,352	2,674,281	33,288	0	47,704
Interest Expense/AFUDC Equity Add Back	36	4,055,345	109,809	0	8,121	117,930	0	0	0
Direct -Minot AFB Distribution System	Direct	0	0	0	0	0	0	0	0
Taxable Income		2,622,672	(704,881)	(44,343)	1,682,495	933,271	(33,288)	0	408,296
Income Taxes	24.4049%	640,056	(172,026)	(10,822)	410,611	227,763	(8,124)	0	99,644
Full Normalization/ARAM	24	(667,307)	(17,930)	0	(1,326)	(19,256)	(3,020)	0	(2,130)
Total Income Taxes		(27,251)	(189,956)	(10,822)	409,285	208,507	(11,144)	0	97,514
Total Operating Expense		111,515,451	1,584,714	790,437	507,637	2,882,788	22,144	0	145,218
Operating Income:		6,705,268	(405,116)	(33,521)	1,281,331	842,694	(22,144)	0	310,782

	Allocation Factor	Total North Dakota	Total Minot Air Force
Rate Base-Projected			
Gas Plant in Service			
Transmission Plant	2	2,000,051	0
Land	13	922,303	0
Heskett Pipeline - Demand Related	2	39,150	0
Heskett Pipeline - Customer Related Related	8	5,850	0
Rights of Way	13	493,986	0
Structures & Improvements	40	524,062	0
Directly Assigned	Direct	99,490	0
Heskett Pipeline - Demand Related	2	202,068	0
Heskett Pipeline - Customer Related Related	8	30,194	0
Mains			
Demand Related 87%	2	105,720,724	0
Customer Related 13%	8	15,797,349	0
Directly Assigned Demand Related 87%	Direct	2,314,769	736,570
Directly Assigned Customer Related 13%	Direct	345,885	110,062
Heskett Pipeline			
Demand Related 87%	2	17,867,715	0
Customer Related 13%	8	2,669,889	0
Meas. & Reg. Equip. - General	40	2,639,185	0
Directly Assigned	Direct	406,688	0
Meas. & Reg. Equip. - City Gate	13	8,183,765	0
Directly Assigned	Direct	239,904	0
Heskett Pipeline - Demand Related	2	537,918	0
Heskett Pipeline - Customer Related Related	8	80,379	0
Services	37	61,055,263	0
Directly Assigned	Direct	509,310	509,310
Meters	9	35,728,039	0
Directly Assigned	Direct	54,980	54,980
Service Regulators	9	5,258,995	0
Directly Assigned	Direct	14,733	14,733
Ind. Meas. & Reg. Station Equipment	40	779,338	0
Directly Assigned	Direct	630,496	0
Heskett Pipeline - Demand Related	2	645,343	0
Heskett Pipeline - Customer Related Related	8	96,430	0
Property on Customer Premise	13	1,667	0
Cathodic Protection & Other Equipment	40	2,314,704	0
Directly Assigned	Direct	50,296	50,296
Heskett Pipeline - Demand Related	2	93,519	0
Heskett Pipeline - Customer Related Related	8	13,974	0
Distribution Plant - includes Heskett		266,368,360	1,475,951
Distribution Plant - Heskett Pipeline Plant		22,282,429	0
Distribution Plant Excluding Direct Assignments		261,701,809	(0)
General Plant	38	14,616,870	0
Directly Assigned - MAFB	Direct	186,068	186,069
Intangible Plant - General	15	4,514,131	27,296
Directly Assigned	Direct	2,192,696	0
Common Plant	15	18,810,018	113,741
Intangible Common (Excluding CC&B)	15	8,257,296	49,931
Intangible Common (CC&B)	4	8,885,985	0
Acquisition Adjustment	15	97,266	588
Total Gas Plant in Service including Heskett		325,928,741	1,853,576
Less: Accumulated Depreciation			
Transmission Plant	2	594,763	0
Distribution Plant			
Rights of Way	13	110,823	0
Structures & Improvements	23	229,858	0
Heskett Pipeline - Demand Related	2	26,833	0
Heskett Pipeline - Customer Related Related	8	11,500	0
Mains	40	44,833,699	0
Direct	Direct	56,502	56,501
Heskett Pipeline -			
Demand Related 70%	2	2,411,055	0
Customer Related 30%	8	1,033,310	0
Meas. & Reg. Equip. - General	18	803,132	0
Meas. & Reg. Equip. - City Gate	19	1,196,722	0
Heskett Pipeline - Demand Related	2	92,399	0
Heskett Pipeline - Customer Related Related	8	39,600	0
Services	37	38,571,272	0
Direct	Direct	99,871	99,871
Meters	5	13,168,600	0

	Allocation Factor	Total North Dakota	Total Minot Air Force
Direct	Direct	17,067	17,067
Service Regulators	9	1,639,932	0
Direct	Direct	2,352	2,352
Ind. Meas. & Reg. Station Equipment	21	398,173	0
Heskett Pipeline - Demand Related	2	88,502	0
Heskett Pipeline - Customer Related Related	8	37,929	0
Property on Customer Premise	13	1,753	0
Cathodic Protection & Other Equipment	13	966,161	0
Heskett Pipeline - Demand Related	2	12,994	0
Heskett Pipeline - Customer Related Related	8	5,569	0
Distribution Plant		105,855,608	175,791
General Plant	38	748,600	0
Direct	Direct	51,676	51,676
Intangible Plant - General	15	1,656,460	10,017
Intangible Plant - General - Direct	Direct	729,742	0
Common Plant	15	5,583,831	33,764
Intangible Plant - Common	15	4,914,734	29,719
Intangible Plant - Common-CC&B	4	4,593,157	0
Acquisition Adjustment	15	79,183	479
Less: Total Accumulated Reserve for Depreciation		124,807,754	301,446
Net Gas Plant in Service including Heskett		201,120,987	1,552,130

	Allocation Factor	Total North Dakota	Total Minot Air Force
Additions			
Materials & Supplies	15	2,538,800	15,351
Fuel Stocks	10	35,198	0
Prepayments	25	276,676	1,574
Unamortized Loss on Debt	24	298,810	2,306
Unamortized Redumption Cost of Preferred Stock	24	47,407	366
Gain/Loss on Sale	24	467,967	3,612
Provision for Pension & Benefits	24	16,296,452	125,766
Provision for Post Retirement	24	542,497	4,186
Total Additions		20,503,807	153,161
Total Before Deductions		221,624,794	1,705,291
Deductions			
Accumulated Deferred Income Tax	24	(28,172,298)	(217,417)
Accumulated Investment Tax Credit	24	0	0
Customer Advances For Construction	Direct	(8,786,871)	0
Total Deductions		(36,959,169)	(217,417)
Total Rate Base		184,665,625	1,487,874

	Allocation Factor	Total North Dakota	Total Minot Air Force
Income Statement			
Gas Operating Revenues			
Retail Sales & Transportation			
Residential	Direct	58,718,404	0
Firm General	Direct	47,194,215	0
Air Force Delivery	Direct	1,296,755	0
Small Interruptible	Direct	3,867,749	0
Large Interruptible	Direct	3,671,532	0
Total Sales & Transportation Revenues		114,748,655	0
Other Operating Revenue			
Miscellaneous			
Reconnect Fees	6	48,660	0
Minot Maintenance Fee Rate 65	Direct	456,000	456,000
NSF Check Fees & Other	6	34,029	0
Miscellaneous	41	2,769	0
Rent From Gas Property	41	565,349	0
Other Gas Revenues			
Miscellaneous	42	300,407	0
Heskett Pipeline Revenue			
Demand Related 70%	2	1,293,411	0
Customer Related 30%	8	554,319	0
Transport and Penalty Revenue - Net	41	217,120	0
Total Other Operating Revenue		3,472,064	456,000
		3,016,064	0
Unbilled Revenue	26	0	0
Total Operating Revenues		118,220,719	456,000
Operation & Maintenance Expenses			
Cost of Purchased Gas	Direct	73,319,285	0
Transmission Expenses	3	10,523	0
Other Gas Supply Expenses	3	363,936	0
Distribution Expenses			
Operation			
Load Dispatch	1	31,727	0
Mains and Services	22	2,197,546	0
Measuring Stations - General	18	173,439	0
Measuring Stations - Industrial	21	92,007	0
Measuring Stations - City Gate	19	142,770	0
Meters & House Regulators	16	431,482	0
Customer Installations	5	791,051	0
Other Gas Distribution	27	2,276,915	0
Rents	27	41,245	0
Supervision & Engineering	27	1,881,390	0
Direct -Minot AFB Distribution System	Direct	53	53
Total Operation Expense		8,059,625	53

	Allocation Factor	Total North Dakota	Total Minot Air Force
Maintenance			
Structures & Improvements	13	39,129	0
Mains	13	268,600	0
Measuring Stations - General	18	175,554	0
Measuring Stations - Industrial	21	82,489	0
Measuring Stations - City Gate	19	106,813	0
Services	5	281,310	0
Meters & House Regulators	16	407,159	0
Other Equipment	28	355,338	0
Supervision & Engineering	28	799,511	0
Direct -Minot AFB Distribution System	Direct	19	19
Total Maintenance Expense		2,515,922	19
Total Distribution Expenses		10,575,547	72
Customer Accounts	4	147,005	0
Meter Reading	5	331,176	0
Customer Records & Collection	43	1,830,622	0
Uncollectible Accounts	6	324,519	0
Miscellaneous Customer Accounts	4	140,348	0
Customer Service & Information	4	269,021	0
Sales Expenses	4	149,928	0
Administration & General Expenses	30	9,826,077	67
Total Gas O&M Expenses		97,287,987	139
O&M Excl. Cost of Gas and A&G		14,142,625	72
O&M Excl. Cost of Gas		23,968,702	139
Depreciation Expense			
Transmission Plant	2	42,401	0
Distribution Plant			
Rights of Way	13	16,993	0
Structures & Improvements	23	21,450	0
Heskett Pipeline - Demand Related	2	5,593	0
Heskett Pipeline - Customer Related Related	8	2,397	0
Mains	40	4,283,656	0
Direct -Minot AFB Distribution System	Direct	21,369	21,369
Heskett Pipeline			
Demand Related 70%	2	494,546	0
Customer Related 30%	8	211,948	0
Meas. & Reg. Equip. - General	18	104,778	0
Meas. & Reg. Equip. - City Gate	19	289,774	0
Heskett Pipeline - Demand Related	2	14,888	0
Heskett Pipeline - Customer Related Related	8	6,381	0
Services	17	2,085,659	69
Direct	Direct	32,162	32,162
Meters	5	1,229,061	0
Direct	Direct	1,875	1,875
Service Regulators	20	181,199	506
Direct		217	217
Ind. Meas. & Reg. Station Equipment	21	48,498	0
Heskett Pipeline - Demand Related	2	17,862	0
Heskett Pipeline - Customer Related Related	8	7,655	0
Property on Customer Premise	13	57	0
Cathodic Protection & Other Equipment	13	80,574	0
Direct		782	782
Heskett Pipeline - Demand Related	2	2,589	0
Heskett Pipeline - Customer Related Related	8	1,109	0
Total Distribution Plant		9,163,072	56,979
General Plant	38	247,213	0
Direct -Minot AFB Distribution System	Direct	5,664	5,664
Amort. of Intangible Plant - General	15	270,719	1,637
Direct	Direct	56,099	0
Common Plant	15	513,578	3,106
Intangible Plant - Common (Excluding CC&B)	15	624,667	3,777
Intangible Plant - Common (CC&B)	4	591,341	0
Amortization of Gain/Preferred Stock	15	26,421	159
Acquisition Adjustment	15	2,821	17
Total Depreciation Expense		11,543,996	71,339

	Allocation Factor	Total North Dakota	Total Minot Air Force
Taxes Other Than Income			
Ad Valorem Taxes-Transmission	2	13,464	0
Heskett Pipeline - Demand Related	2	81,794	0
Heskett Pipeline - Customer Related Related	8	35,055	0
Ad Valorem Taxes-Other	15	1,572,317	9,508
Other Taxes - Payroll, Franchise, Other	31	1,006,825	6
Other Taxes - Minot AFB Distribution- Direct	Direct	0	0
Other Taxes - Revenue	26	1,264	0
Total Taxes Other Than Income Taxes		2,710,719	9,514
Total Operating Expense		111,542,702	80,992
Interest Expense/AFUDC Equity Add Back	36	4,055,345	0
Direct -Minot AFB Distribution System	Direct	0	0
Taxable Income		2,622,672	375,008
Income Taxes	24.4049%	640,056	91,520
Full Normalization/ARAM	24	(667,307)	(5,150)
Total Income Taxes		(27,251)	86,370
Total Operating Expense		111,515,451	167,362
Operating Income:		6,705,268	288,638

		Total	Residential			Small Firm Genera	
		North Dakota	Demand	Energy	Customer	Demand	Energy
		25,761,347	0	8,619,479	0	0	2,014,211
1	Dk Throughput Projected	100.000000%	0.000000%	33.458960%	0.000000%	0.000000%	7.818733%
		186,638	90,662	0	0	22,885	0
2	Peak Design Day @ Distribution	100.000000%	48.576389%	0.000000%	0.000000%	12.261704%	0.000000%
		18,879,154	0	8,619,479	0	0	2,014,211
3	Dk Sales Projected	100.000000%	0.000000%	45.656065%	0.000000%	0.000000%	10.668969%
		115,014	0	0	98,125	0	0
4	Average Customers	100.000000%	0.000000%	0.000000%	85.315701%	0.000000%	0.000000%
		155,541	0	0	98,125	0	0
5	Total Weighted Customers	100.000000%	0.000000%	0.000000%	63.086260%	0.000000%	0.000000%
		114,828	0	0	98,125	0	0
6	Average Res. & Firm General Cust.	100.000000%	0.000000%	0.000000%	85.453896%	0.000000%	0.000000%
		115,000	0	0	98,125	0	0
8	Average Customers @ Distribution	100.000000%	0.000000%	0.000000%	85.326088%	0.000000%	0.000000%
	Total Weighted Customers Excluding	155,203	0	0	98,125	0	0
9	Large IT - Transmission Customers	100.000000%	0.000000%	0.000000%	63.223650%	0.000000%	0.000000%
		50,826	0	21,374	0	0	13,787
10	Residential & Firm General Propane Sales	100.000000%	0.000000%	42.053280%	0.000000%	0.000000%	27.125880%
		123,332,095	51,355,311	0	13,479,260	12,963,162	0
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	41.639859%	0.000000%	10.929238%	10.510777%	0.000000%
		244,085,929	57,997,876	0	90,879,657	14,639,884	0
15	Distribution Plant excluding Heskett	99.999998%	23.761253%	0.000000%	37.232648%	5.997840%	0.000000%
		40,987,034	0	0	25,913,499	0	0
16	Meters & Regulators Excl AF Distribution	100.000000%	0.000000%	0.000000%	63.223650%	0.000000%	0.000000%
		120,486	0	0	98,125	0	0
17	Weighted Services	100.000000%	0.000000%	0.000000%	81.440998%	0.000000%	0.000000%
		3,045,871	1,115,358	0	292,748	281,540	0
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	36.618688%	0.000000%	9.611307%	9.243333%	0.000000%
		8,423,666	3,407,708	0	894,422	860,177	0
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	40.453978%	0.000000%	10.617967%	10.211433%	0.000000%
		5,273,728	0	0	3,324,928	0	0
20	Service Regulators	100.000000%	0.000000%	0.000000%	63.047016%	0.000000%	0.000000%
		1,409,834	329,360	0	86,447	83,137	0
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	23.361616%	0.000000%	6.131715%	5.896935%	0.000000%
		184,387,358	51,355,311	0	63,222,680	12,963,162	0
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	27.851861%	0.000000%	34.287968%	7.030396%	0.000000%
		623,554	221,476	0	58,133	55,905	0
23	Structures and Improvements	99.999998%	35.518335%	0.000000%	9.322847%	8.965543%	0.000000%
		201,120,976	54,662,272	0	62,127,381	13,797,909	0
24	Net Gas Plant in Service	99.999996%	27.178802%	0.000000%	30.890552%	6.860502%	0.000000%
		325,928,735	79,678,893	0	117,941,238	20,112,628	0
25	Total Gas Plant in Service	99.999997%	24.446722%	0.000000%	36.186202%	6.170867%	0.000000%
		114,748,655	16,627,479	17,766,247	24,324,678	4,197,126	3,852,360
26	Projected Operating Revenue	100.000000%	14.490348%	15.482750%	21.198223%	3.657669%	3.357216%
		3,860,022	754,818	10,616	1,562,806	190,533	2,481
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	19.554759%	0.275024%	40.486971%	4.936060%	0.064274%
		1,361,051	254,905	0	501,792	64,343	0
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	18.728541%	0.000000%	36.867978%	4.727450%	0.000000%
		10,575,548	2,047,221	22,165	4,190,639	516,763	5,180
30	Distribution O&M	100.000000%	19.358060%	0.209587%	39.625740%	4.886394%	0.048981%
		23,968,705	3,949,359	213,721	10,693,406	996,904	49,944
31	O&M Excl. Cost of Gas	100.000001%	16.477148%	0.891667%	44.614031%	4.159190%	0.208372%
		199,568,846	54,662,272	0	62,127,381	13,797,909	0
36	Net Gas Plant in Service Excluding Minot AFB Distribution	100.000000%	27.390183%	0.000000%	31.130801%	6.913859%	0.000000%
		120,439	0	0	98,125	0	0
37	Weighted Services Excluding Transmission Level Customers	100.000000%	0.000000%	0.000000%	81.472779%	0.000000%	0.000000%

		Total	Residential			Small Firm Genera	
		North Dakota	Demand	Energy	Customer	Demand	Energy
		261,701,807	67,414,755	0	93,351,313	17,016,902	0
38	Distribution Plant Less Direct Assignment	99.999999%	25.760141%	0.000000%	35.670870%	6.502401%	0.000000%
		121,518,073	51,355,311	0	13,479,260	12,963,162	0
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	42.261459%	0.000000%	11.092392%	10.667682%	0.000000%
		199,568,846	54,662,272	0	62,127,381	13,797,909	0
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	27.390183%	0.000000%	31.130801%	6.913859%	0.000000%
		23,968,566	3,949,359	213,721	10,693,406	996,904	49,944
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	16.477244%	0.891672%	44.614291%	4.159214%	0.208373%
		1,415,492	0	0	1,175,526	0	0
43	Customer Records and Collections	100.000000%	0.000000%	0.000000%	83.047191%	0.000000%	0.000000%

		Total North Dakota	al Customer
		25,761,347	0
1	Dk Throughput Projected	100.000000%	0.000000%
		186,638	0
2	Peak Design Day @ Distribution	100.000000%	0.000000%
		18,879,154	0
3	Dk Sales Projected	100.000000%	0.000000%
		115,014	11,499
4	Average Customers	100.000000%	9.997913%
		155,541	13,799
5	Total Weighted Customers	100.000000%	8.871616%
		114,828	11,499
6	Average Res. & Firm General Cust.	100.000000%	10.014108%
		115,000	11,499
8	Average Customers @ Distribution	100.000000%	9.999130%
	Total Weighted Customers Excluding	155,203	13,799
9	Large IT - Transmission Customers	100.000000%	8.890936%
		50,826	0
10	Residential & Firm General Propane Sales	100.000000%	0.000000%
		123,332,095	1,579,597
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	1.280767%
		244,085,929	12,015,211
15	Distribution Plant excluding Heskett	99.999998%	4.922533%
		40,987,034	3,644,131
16	Meters & Regulators Excl AF Distribution	100.000000%	8.890936%
		120,486	12,994
17	Weighted Services	100.000000%	10.784655%
		3,045,871	34,306
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	1.126312%
		8,423,666	104,815
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	1.244292%
		5,273,728	467,574
20	Service Regulators	100.000000%	8.866101%
		1,409,834	10,131
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	0.718595%
		184,387,358	8,166,766
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	4.429136%
		623,554	6,812
23	Structures and Improvements	99.999998%	1.092447%
		201,120,976	8,129,111
24	Net Gas Plant in Service	99.999996%	4.041901%
		325,928,735	15,439,930
25	Total Gas Plant in Service	99.999997%	4.737210%
		114,748,655	4,517,423
26	Projected Operating Revenue	100.000000%	3.936798%
		3,860,022	210,264
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	5.447223%
		1,361,051	68,997
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	5.069391%
		10,575,548	566,564
30	Distribution O&M	100.000000%	5.357301%
		23,968,705	1,415,538
31	O&M Excl. Cost of Gas	100.000001%	5.905776%
		199,568,846	8,129,111
36	Net Gas Plant in Service	100.000000%	4.073337%
	Excluding Minot AFB Distribution		
		120,439	12,994
37	Weighted Services Excluding	100.000000%	10.788864%
	Transmission Level Customers		

		Total North Dakota	al Customer
		261,701,807	12,304,857
38	Distribution Plant Less Direct Assignment	99.999999%	4.701862%
		121,518,073	1,579,597
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	1.299886%
		199,568,846	8,129,111
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	4.073337%
		23,968,566	1,415,538
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	5.905810%
		1,415,492	146,965
43	Customer Records and Collections	100.000000%	10.382642%

		Total	Large Firm General			Air Force Delivery	
		North Dakota	Demand	Energy	Customer	Demand	Energy
		25,761,347	0	6,505,434	0	0	432,975
1	Dk Throughput Projected	100.000000%	0.000000%	25.252694%	0.000000%	0.000000%	1.680716%
		186,638	58,193	0	0	0	0
2	Peak Design Day @ Distribution	100.000000%	31.179610%	0.000000%	0.000000%	0.000000%	0.000000%
		18,879,154	0	6,505,434	0	0	432,975
3	Dk Sales Projected	100.000000%	0.000000%	34.458292%	0.000000%	0.000000%	2.293403%
		115,014	0	0	5,204	0	0
4	Average Customers	100.000000%	0.000000%	0.000000%	4.524667%	0.000000%	0.000000%
		155,541	0	0	37,989	0	0
5	Total Weighted Customers	100.000000%	0.000000%	0.000000%	24.423785%	0.000000%	0.000000%
		114,828	0	0	5,204	0	0
6	Average Res. & Firm General Cust.	100.000000%	0.000000%	0.000000%	4.531996%	0.000000%	0.000000%
		115,000	0	0	5,204	0	0
8	Average Customers @ Distribution	100.000000%	0.000000%	0.000000%	4.525217%	0.000000%	0.000000%
	Total Weighted Customers Excluding	155,203	0	0	37,989	0	0
9	Large IT - Transmission Customers	100.000000%	0.000000%	0.000000%	24.476975%	0.000000%	0.000000%
		50,826	0	15,665	0	0	0
10	Residential & Firm General Propane Sales	100.000000%	0.000000%	30.820840%	0.000000%	0.000000%	0.000000%
		123,332,095	32,963,309	0	714,864	0	0
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	26.727276%	0.000000%	0.579625%	0.000000%	0.000000%
		244,085,929	37,291,321	0	15,202,421	317,225	0
15	Distribution Plant excluding Heskett	99.999998%	15.277948%	0.000000%	6.228307%	0.129964%	0.000000%
		40,987,034	0	0	10,032,386	0	0
16	Meters & Regulators Excl AF Distribution	100.000000%	0.000000%	0.000000%	24.476975%	0.000000%	0.000000%
		120,486	0	0	8,587	0	0
17	Weighted Services	100.000000%	0.000000%	0.000000%	7.126969%	0.000000%	0.000000%
		3,045,871	755,230	0	21,401	0	0
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	24.795206%	0.000000%	0.702623%	0.000000%	0.000000%
		8,423,666	2,187,297	0	47,435	208,716	0
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	25.966094%	0.000000%	0.563116%	2.477734%	0.000000%
		5,273,728	0	0	1,287,243	0	0
20	Service Regulators	100.000000%	0.000000%	0.000000%	24.408598%	0.000000%	0.000000%
		1,409,834	211,405	0	4,585	86,455	0
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	14.995028%	0.000000%	0.325216%	6.132282%	0.000000%
		184,387,358	32,963,309	0	5,067,952	0	0
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	17.877207%	0.000000%	2.748536%	0.000000%	0.000000%
		623,554	167,206	0	6,826	22,054	0
23	Structures and Improvements	99.999998%	26.814999%	0.000000%	1.094693%	3.536823%	0.000000%
		201,120,976	35,135,831	0	10,845,912	280,297	0
24	Net Gas Plant in Service	99.999996%	17.469998%	0.000000%	5.392730%	0.139367%	0.000000%
		325,928,735	51,216,017	0	18,564,499	358,396	0
25	Total Gas Plant in Service	99.999997%	15.713870%	0.000000%	5.695877%	0.109961%	0.000000%
		114,748,655	10,672,640	15,007,085	8,947,581	217,513	968,869
26	Projected Operating Revenue	100.000000%	9.300885%	13.078223%	7.797548%	0.189556%	0.844340%
		3,860,022	486,733	8,012	361,541	9,179	533
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	12.609591%	0.207564%	9.366294%	0.237797%	0.013808%
		1,361,051	165,880	0	172,253	7,705	0
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	12.187640%	0.000000%	12.655881%	0.566107%	0.000000%
		10,575,548	1,322,909	16,729	1,073,293	33,408	1,113
30	Distribution O&M	100.000000%	12.509129%	0.158186%	10.148817%	0.315899%	0.010524%
		23,968,705	2,552,066	161,304	2,285,998	64,448	10,735
31	O&M Excl. Cost of Gas	100.000001%	10.647492%	0.672978%	9.537428%	0.268884%	0.044788%
		199,568,846	35,135,831	0	10,845,912	280,297	0
36	Net Gas Plant in Service	100.000000%	17.605870%	0.000000%	5.434672%	0.140451%	0.000000%
	Excluding Minot AFB Distribution						
		120,439	0	0	8,587	0	0
37	Weighted Services Excluding	100.000000%	0.000000%	0.000000%	7.129750%	0.000000%	0.000000%
	Transmission Level Customers						

		Total	Large Firm General			Air Force Delivery	
		North Dakota	Demand	Energy	Customer	Demand	Energy
		261,701,807	43,271,345	0	15,323,885	0	0
38	Distribution Plant Less Direct Assignment	99.999999%	16.534599%	0.000000%	5.855475%	0.000000%	0.000000%
		121,518,073	32,963,309	0	714,864	0	0
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	27.126260%	0.000000%	0.588278%	0.000000%	0.000000%
		199,568,846	35,135,831	0	10,845,912	280,297	0
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	17.605870%	0.000000%	5.434672%	0.140451%	0.000000%
		23,968,566	2,552,066	161,304	2,285,998	64,448	10,735
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	10.647554%	0.672981%	9.537483%	0.268886%	0.044788%
		1,415,492	0	0	67,986	0	0
43	Customer Records and Collections	100.000000%	0.000000%	0.000000%	4.802978%	0.000000%	0.000000%

		Total North Dakota	Customer
		25,761,347	0
1	Dk Throughput Projected	100.000000%	0.000000%
		186,638	0
2	Peak Design Day @ Distribution	100.000000%	0.000000%
		18,879,154	0
3	Dk Sales Projected	100.000000%	0.000000%
		115,014	3
4	Average Customers	100.000000%	0.002608%
		155,541	125
5	Total Weighted Customers	100.000000%	0.080365%
		114,828	0
6	Average Res. & Firm General Cust.	100.000000%	0.000000%
		115,000	0
8	Average Customers @ Distribution	100.000000%	0.000000%
	Total Weighted Customers Excluding	155,203	125
9	Large IT - Transmission Customers	100.000000%	0.080540%
		50,826	0
10	Residential & Firm General Propane Sales	100.000000%	0.000000%
		123,332,095	0
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	0.000000%
		244,085,929	80,413
15	Distribution Plant excluding Heskett	99.999998%	0.032945%
		40,987,034	33,011
16	Meters & Regulators Excl AF Distribution	100.000000%	0.080540%
		120,486	0
17	Weighted Services	100.000000%	0.000000%
		3,045,871	0
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	0.000000%
		8,423,666	31,188
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	0.370243%
		5,273,728	4,236
20	Service Regulators	100.000000%	0.080323%
		1,409,834	12,919
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	0.916349%
		184,387,358	0
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	0.000000%
		623,554	3,295
23	Structures and Improvements	99.999998%	0.528423%
		201,120,976	67,481
24	Net Gas Plant in Service	99.999996%	0.033552%
		325,928,735	92,925
25	Total Gas Plant in Service	99.999997%	0.028511%
		114,748,655	110,373
26	Projected Operating Revenue	100.000000%	0.096187%
		3,860,022	2,356
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	0.061036%
		1,361,051	1,705
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	0.125271%
		10,575,548	8,071
30	Distribution O&M	100.000000%	0.076318%
		23,968,705	16,040
31	O&M Excl. Cost of Gas	100.000001%	0.066921%
		199,568,846	67,481
36	Net Gas Plant in Service	100.000000%	0.033813%
	Excluding Minot AFB Distribution		
		120,439	0
37	Weighted Services Excluding	100.000000%	0.000000%
	Transmission Level Customers		

		Total North Dakota	Customer
		261,701,807	33,011
38	Distribution Plant Less Direct Assignment	99.999999%	0.012614%
		121,518,073	0
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	0.000000%
		199,568,846	67,481
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	0.033813%
		23,968,566	16,040
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	0.066921%
		1,415,492	143
43	Customer Records and Collections	100.000000%	0.010098%

		Total	Small Interruptible			Large Interruptible	
		North Dakota	Demand	Energy	Customer	Demand	Energy
		25,761,347	0	1,759,109	0	0	6,430,139
1	Dk Throughput Projected	100.000000%	0.000000%	6.828482%	0.000000%	0.000000%	24.960415%
		186,638	11,390	0	0	3,508	0
2	Peak Design Day @ Distribution	100.000000%	6.102723%	0.000000%	0.000000%	1.879574%	0.000000%
		18,879,154	0	744,025	0	0	563,030
3	Dk Sales Projected	100.000000%	0.000000%	3.940987%	0.000000%	0.000000%	2.982284%
		115,014	0	0	165	0	0
4	Average Customers	100.000000%	0.000000%	0.000000%	0.143461%	0.000000%	0.000000%
		155,541	0	0	4,950	0	0
5	Total Weighted Customers	100.000000%	0.000000%	0.000000%	3.182441%	0.000000%	0.000000%
		114,828	0	0	0	0	0
6	Average Res. & Firm General Cust.	100.000000%	0.000000%	0.000000%	0.000000%	0.000000%	0.000000%
		115,000	0	0	165	0	0
8	Average Customers @ Distribution	100.000000%	0.000000%	0.000000%	0.143478%	0.000000%	0.000000%
	Total Weighted Customers Excluding	155,203	0	0	4,950	0	0
9	Large IT - Transmission Customers	100.000000%	0.000000%	0.000000%	3.189371%	0.000000%	0.000000%
		50,826	0	0	0	0	0
10	Residential & Firm General Propane Sales	100.000000%	0.000000%	0.000000%	0.000000%	0.000000%	0.000000%
		123,332,095	6,451,843	0	22,666	3,565,298	0
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	5.231277%	0.000000%	0.018378%	2.890811%	0.000000%
		244,085,929	7,673,721	0	1,748,608	4,373,854	0
15	Distribution Plant excluding Heskett	99.999998%	3.143860%	0.000000%	0.716390%	1.791932%	0.000000%
		40,987,034	0	0	1,307,229	0	0
16	Meters & Regulators Excl AF Distribution	100.000000%	0.000000%	0.000000%	3.189372%	0.000000%	0.000000%
		120,486	0	0	706	0	0
17	Weighted Services	100.000000%	0.000000%	0.000000%	0.585960%	0.000000%	0.000000%
		3,045,871	208,913	0	10,771	288,868	0
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	6.858892%	0.000000%	0.353626%	9.483921%	0.000000%
		8,423,666	428,115	0	1,504	236,577	0
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	5.082288%	0.000000%	0.017854%	2.808480%	0.000000%
		5,273,728	0	0	167,729	0	0
20	Service Regulators	100.000000%	0.000000%	0.000000%	3.180464%	0.000000%	0.000000%
		1,409,834	359,953	0	47,748	156,245	0
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	25.531587%	0.000000%	3.386782%	11.082510%	0.000000%
		184,387,358	6,451,843	0	380,565	3,565,298	0
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	3.499070%	0.000000%	0.206394%	1.933591%	0.000000%
		623,554	27,824	0	98	48,025	0
23	Structures and Improvements	99.999998%	4.462164%	0.000000%	0.015716%	7.701819%	0.000000%
		201,120,976	7,442,804	0	1,276,360	5,403,846	0
24	Net Gas Plant in Service	99.999996%	3.700660%	0.000000%	0.634623%	2.686863%	0.000000%
		325,928,735	10,810,264	0	2,141,278	7,041,225	0
25	Total Gas Plant in Service	99.999997%	3.316757%	0.000000%	0.656977%	2.160357%	0.000000%
		114,748,655	373,771	1,751,171	1,742,807	1,128,648	756,376
26	Projected Operating Revenue	100.000000%	0.325730%	1.526093%	1.518804%	0.983583%	0.659159%
		3,860,022	119,537	2,166	47,227	73,148	7,919
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	3.096796%	0.056114%	1.223490%	1.895015%	0.205154%
		1,361,051	54,629	0	25,429	37,687	0
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	4.013736%	0.000000%	1.868336%	2.768963%	0.000000%
		10,575,548	350,569	4,523	145,615	222,395	16,535
30	Distribution O&M	100.000000%	3.314901%	0.042768%	1.376903%	2.102917%	0.156351%
		23,968,705	676,294	23,483	319,189	429,029	43,066
31	O&M Excl. Cost of Gas	100.000001%	2.821571%	0.097974%	1.331691%	1.789955%	0.179676%
		199,568,846	7,442,804	0	1,276,360	5,403,846	0
36	Net Gas Plant in Service Excluding Minot AFB Distribution	100.000000%	3.729442%	0.000000%	0.639559%	2.707760%	0.000000%
		120,439	0	0	706	0	0
37	Weighted Services Excluding Transmission Level Customers	100.000000%	0.000000%	0.000000%	0.586189%	0.000000%	0.000000%

		Total	Small Interruptible			Large Interruptible	
		North Dakota	Demand	Energy	Customer	Demand	Energy
		261,701,807	8,469,413	0	1,694,881	2,731,358	0
38	Distribution Plant Less Direct Assignment	99.999999%	3.236284%	0.000000%	0.647638%	1.043691%	0.000000%
		121,518,073	6,451,843	0	22,666	1,987,099	0
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	5.309369%	0.000000%	0.018652%	1.635229%	0.000000%
		199,568,846	7,442,804	0	1,276,360	5,403,846	0
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	3.729442%	0.000000%	0.639559%	2.707760%	0.000000%
		23,968,566	676,294	23,483	319,189	429,029	43,066
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	2.821587%	0.097974%	1.331698%	1.789965%	0.179677%
		1,415,492	0	0	20,665	0	0
43	Customer Records and Collections	100.000000%	0.000000%	0.000000%	1.459929%	0.000000%	0.000000%

		Total North Dakota	Customer
		25,761,347	0
1	Dk Throughput Projected	100.000000%	0.000000%
		186,638	0
2	Peak Design Day @ Distribution	100.000000%	0.000000%
		18,879,154	0
3	Dk Sales Projected	100.000000%	0.000000%
		115,014	18
4	Average Customers	100.000000%	0.015650%
		155,541	553
5	Total Weighted Customers	100.000000%	0.355533%
		114,828	0
6	Average Res. & Firm General Cust.	100.000000%	0.000000%
		115,000	7
8	Average Customers @ Distribution	100.000000%	0.006087%
	Total Weighted Customers Excluding	155,203	215
9	Large IT - Transmission Customers	100.000000%	0.138528%
		50,826	0
10	Residential & Firm General Propane Sales	100.000000%	0.000000%
		123,332,095	236,785
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	0.191990%
		244,085,929	389,787
15	Distribution Plant excluding Heskett	99.999998%	0.159693%
		40,987,034	56,778
16	Meters & Regulators Excl AF Distribution	100.000000%	0.138527%
		120,486	70
17	Weighted Services	100.000000%	0.058098%
		3,045,871	36,736
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	1.206092%
		8,423,666	15,712
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	0.186522%
		5,273,728	7,285
20	Service Regulators	100.000000%	0.138138%
		1,409,834	21,449
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	1.521385%
		184,387,358	250,472
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	0.135840%
		623,554	5,900
23	Structures and Improvements	99.999998%	0.946189%
		201,120,976	399,642
24	Net Gas Plant in Service	99.999996%	0.198707%
		325,928,735	677,866
25	Total Gas Plant in Service	99.999997%	0.207980%
		114,748,655	1,786,508
26	Projected Operating Revenue	100.000000%	1.556888%
		3,860,022	10,153
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	0.263030%
		1,361,051	5,726
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	0.420704%
		10,575,548	31,784
30	Distribution O&M	100.000000%	0.300542%
		23,968,705	68,042
31	O&M Excl. Cost of Gas	100.000001%	0.283878%
		199,568,846	399,642
36	Net Gas Plant in Service	100.000000%	0.200253%
	Excluding Minot AFB Distribution		
		120,439	27
37	Weighted Services Excluding	100.000000%	0.022418%
	Transmission Level Customers		

		Total North Dakota	Customer
		261,701,807	90,087
38	Distribution Plant Less Direct Assignment	99.999999%	0.034424%
		121,518,073	962
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	0.000792%
		199,568,846	399,642
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	0.200253%
		23,968,566	68,042
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	0.283880%
		1,415,492	4,206
43	Customer Records and Collections	100.000000%	0.297162%

		Total North Dakota	Minot Air Force Base Distribution Demand	Energy	Customer
		25,761,347	0	0	0
1	Dk Throughput Projected	100.000000%	0.000000%	0.000000%	0.000000%
		186,638	0	0	0
2	Peak Design Day @ Distribution	100.000000%	0.000000%	0.000000%	0.000000%
		18,879,154	0	0	0
3	Dk Sales Projected	100.000000%	0.000000%	0.000000%	0.000000%
		115,014	0	0	0
4	Average Customers	100.000000%	0.000000%	0.000000%	0.000000%
		155,541	0	0	0
5	Total Weighted Customers	100.000000%	0.000000%	0.000000%	0.000000%
		114,828	0	0	0
6	Average Res. & Firm General Cust.	100.000000%	0.000000%	0.000000%	0.000000%
		115,000	0	0	0
8	Average Customers @ Distribution	100.000000%	0.000000%	0.000000%	0.000000%
	Total Weighted Customers Excluding	155,203	0	0	0
9	Large IT - Transmission Customers	100.000000%	0.000000%	0.000000%	0.000000%
		50,826	0	0	0
10	Residential & Firm General Propane Sales	100.000000%	0.000000%	0.000000%	0.000000%
		123,332,095	0	0	0
13	Distribution Mains excluding Heskett & AF Dist	99.999998%	0.000000%	0.000000%	0.000000%
		244,085,929	780,328	0	695,623
15	Distribution Plant excluding Heskett	99.999998%	0.319694%	0.000000%	0.284991%
		40,987,034	0	0	0
16	Meters & Regulators Excl AF Distribution	100.000000%	0.000000%	0.000000%	0.000000%
		120,486	0	0	4
17	Weighted Services	100.000000%	0.000000%	0.000000%	0.003320%
		3,045,871	0	0	0
18	Meas. & Reg. Sta. Eqpt.- General	100.000000%	0.000000%	0.000000%	0.000000%
		8,423,666	0	0	0
19	Meas. & Reg. Eqpt.- City Gate Excl Heskett	100.000001%	0.000000%	0.000000%	0.000000%
		5,273,728	0	0	14,733
20	Service Regulators	100.000000%	0.000000%	0.000000%	0.279360%
		1,409,834	0	0	0
21	Ind. Meas. & Reg. Sta. Eqpt. Excl Heskett	100.000000%	0.000000%	0.000000%	0.000000%
		184,387,358	0	0	0
22	Mains & Services Excl AF Distribution and Heskett	99.999999%	0.000000%	0.000000%	0.000000%
		623,554	0	0	0
23	Structures and Improvements	99.999998%	0.000000%	0.000000%	0.000000%
		201,120,976	910,254	0	641,876
24	Net Gas Plant in Service	99.999996%	0.452590%	0.000000%	0.319149%
		325,928,735	1,043,481	0	810,095
25	Total Gas Plant in Service	99.999997%	0.320156%	0.000000%	0.248550%
		114,748,655	0	0	0
26	Projected Operating Revenue	100.000000%	0.000000%	0.000000%	0.000000%
		3,860,022	0	0	0
27	All Other Dist. Operation Exp. Excl AF Dist	100.000000%	0.000000%	0.000000%	0.000000%
		1,361,051	0	0	0
28	All Other Dist. Maintenance Exp. Excl AF Dist	99.999998%	0.000000%	0.000000%	0.000000%
		10,575,548	72	0	0
30	Distribution O&M	100.000000%	0.000682%	0.000000%	0.000000%
		23,968,705	139	0	0
31	O&M Excl. Cost of Gas	100.000001%	0.000581%	0.000000%	0.000000%
		199,568,846	0	0	0
36	Net Gas Plant in Service Excluding Minot AFB Distribution	100.000000%	0.000000%	0.000000%	0.000000%
		120,439	0	0	0
37	Weighted Services Excluding Transmission Level Customers	100.000000%	0.000000%	0.000000%	0.000000%

		Total North Dakota	Minot Air Force Base Distribution Demand	Energy	Customer
		261,701,807	0	0	0
38	Distribution Plant Less Direct Assignment	99.999999%	0.000000%	0.000000%	0.000000%
		121,518,073	0	0	0
40	Distribution Mains Excluding Transmission Level Customer-Direct Assigned	99.999999%	0.000000%	0.000000%	0.000000%
		199,568,846			
41	Net Gas Plant in Service Excl AF Distribution	100.000000%	0.000000%	0.000000%	0.000000%
		23,968,566			
42	O&M Excl. AF Distribution and Cost of Gas	99.999998%	0.000000%	0.000000%	0.000000%
		1,415,492	0	0	0
43	Customer Records and Collections	100.000000%	0.000000%	0.000000%	0.000000%

Residential rate design using MDU COSS

From Statement L, p. 4 (Rates 60 & 90) and p. 11 (Rate 63)

		Present		MDU Proposed				AARP Proposed Under MDU COSS			
	Units	Rate	Revenue	Rate	Revenue	$ Increase	% Increase	Rate	Revenue	$ Increase	% Increase
Rates 60 & 90											
Basic service charge	35,122,125	$ 0.6860	$ 24,093,778	$ 0.8919	$ 31,325,423	$ 7,231,646	30.0%	$ 0.6860	$ 24,093,778	$ -	0.0%
Delivery charge	8,467,441	$ -	-	$ -	-	-		$ 0.8571	7,257,444	7,257,444	
Subtotal Rates 60 & 90			$ 24,093,778		$ 31,325,423	$ 7,231,646	30.0%		$ 31,351,221	$ 7,257,444	30.1%
Rate 63 (Wahpoten)											
Basic service charge	693,500	$ 0.1151	$ 79,800	$ 0.2500	$ 173,375	$ 93,575	117.3%	$ 0.2500	$ 173,375	$ 93,575	117.3%
Delivery charge											
First 10 Dk	104,506	$ 1.0720	112,030	$ 1.0280	107,432	(4,598)	-4.1%	$ 0.8571	89,572	(22,458)	-20.0%
Over 10 Dk	47,532	$ 0.8220	39,071	$ 1.0280	48,863	9,792	25.1%	$ 0.8571	40,740	1,668	4.3%
Subtotal Rate 63			$ 230,902		$ 329,670	$ 98,768	42.8%		$ 303,687	$ 72,785	31.5%
Total Residential			$ 24,324,679		$ 31,655,093	$ 7,330,414	30.1%		$ 31,654,908	$ 7,330,229	30.1%

Residential rate design using AARP COSS

From Statement L, p. 4 (Rates 60 & 90) and p. 11 (Rate 63)

		Present		MDU Proposed				AARP Proposed Under AARP COSS			
	Units	Rate	Revenue	Rate	Revenue	$ Increase	% Increase	Rate	Revenue	$ Increase	% Increase
Rates 60 & 90											
Basic service charge	35,122,125	$ 0.6860	$ 24,093,778	$ 0.8919	$ 31,325,423	$ 7,231,646	30.0%	$ 0.6860	$ 24,093,778	$ -	0.0%
Delivery charge	8,467,441	$ -	-	$ -	-	-		$ 0.7172	6,072,849	6,072,849	
Subtotal Rates 60 & 90			$ 24,093,778		$ 31,325,423	$ 7,231,646	30.0%		$ 30,166,626	$ 6,072,849	25.2%
Rate 63 (Wahpoten)											
Basic service charge	693,500	$ 0.1151	$ 79,800	$ 0.2500	$ 173,375	$ 93,575	117.3%	$ 0.2500	$ 173,375	$ 93,575	117.3%
Delivery charge											
First 10 Dk	104,506	$ 1.0720	112,030	$ 1.0280	107,432	(4,598)	-4.1%	$ 0.7172	74,952	(37,079)	-33.1%
Over 10 Dk	47,532	$ 0.8220	39,071	$ 1.0280	48,863	9,792	25.1%	$ 0.7172	34,090	(4,981)	-12.7%
Subtotal Rate 63			$ 230,902		$ 329,670	$ 98,768	42.8%		$ 282,417	$ 51,515	22.3%
Total Residential			$ 24,324,679		$ 31,655,093	$ 7,330,414	30.1%		$ 30,449,043	$ 6,124,364	25.2%