State of Indiana
Indiana Utility Regulatory Commission

PETITION OF INDIANA GAS COMPANY, INC. d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC. ("VECTREN NORTH") FOR (1) AUTHORITY TO INCREASE ITS RATES AND CHARGES FOR GAS UTILITY SERVICE; (2) APPROVAL OF NEW SCHEDULES OF RATES AND CHARGES APPLICABLE THERETO; (3) AUTHORITY, TO THE EXTENT NECESSARY AS AN ALTERNATIVE REGULATORY PLAN, TO TRACK ITS UNACCOUNTED FOR GAS COSTS AND THE GAS COST COMPONENT OF ITS BAD DEBT EXPENSE IN ITS GAS COST ADJUSTMENT FILINGS; (4) APPROVAL OF A DISTRIBUTION REPLACEMENT ADJUSTMENT TO RECOVER THE COSTS OF A PROGRAM FOR THE ACCELERATED REPLACEMENT OF CAST IRON MAINS AND BARE STEEL MAINS AND SERVICE LINES; (5) APPROVAL OF REVISIONS TO THE SALES RECONCILIATION COMPONENT OF THE ENERGY EFFICIENCY RIDER APPROVED IN CAUSE NOS. 42943 AND 43046 TO PROVIDE FOR RECOVERY OF 100% OF THE DIFFERENCE BETWEEN ACTUAL AND APPROVED MARGINS; (6) APPROVAL OF VARIOUS CHANGES TO ITS TARIFF FOR GAS SERVICE, INCLUDING INCREASES IN CERTAIN NON-RECURRING CHARGES; AND (7) CONSIDERATION AND APPROVAL IN PHASE II OF THE PROCEEDING OF AN ALTERNATIVE REGULATORY PLAN FOR A REVENUE STABILIZATION PLAN	)	CAUSE NO. 43298

FILED

MAY 18 2007

INDIANA UTILITY
REGULATORY COMMISSION

VECTREN

Prepared Direct Testimony and Exhibits
of
Indiana Gas Company, Inc.
D/B/A VECTREN ENERGY DELIVERY OF INDIANA, INC.
(Vectren North)

Book 2 of 3

WS Doty, EJ Schach, JM Francis, JP Kelly,
TL Bailey, ES Redd, RB Keeping

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INDIANA GAS COMPANY, INC.
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY

OF

WILLIAM S. DOTY

PRESIDENT

ON

AGING WORKFORCE

GAS EMPLOYEE TRAINING, SAFETY, AND EMERGENCY PREPAREDNESS

CUSTOMER CONTACT CENTER

REVENUE ASSURANCE

CUSTOMER BILLING COSTS

CONTRACTING

UTILITY PLANT IN SERVICE

SPONSORING PETITIONER'S EXHIBITS WSD-1 THROUGH WSD-4

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I.

INTRODUCTION

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

A. My name is William S. Doty. My business address is One Vectren Square, Evansville, Indiana 47708. I am the President of Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren North"). I also am the Executive Vice President of Utility Operations for Vectren Corporation ("Vectren"), which is Vectren North's ultimate corporate parent.

Q. What are your duties in your present position?

A. As President, I have overall responsibility for the operation of Vectren North facilities and the provision of utility service for our customers.

Q. How long have you been employed by Vectren North?

A. I have been employed by Vectren North since the March 31, 2000 merger of Indiana Energy, Inc. and SIGCORP, Inc. into Vectren. My career in the utility industry began in 1993 with Southern Indiana Gas and Electric Company ("SIGECO" or Vectren South), which was the principal subsidiary of SIGCORP, Inc. prior to the Vectren merger. Since that time, and prior to my current role, I held a variety of positions including Director of Gas Operations, Vice President of Energy Delivery, and Senior Vice President of Customer Relationship Management. Prior to joining SIGECO, I was employed for 16 years with ALCOA and 2 years with Ford Motor Company. At those companies, I had various responsibilities in operations management, maintenance, engineering, and product development.

Q. What is your educational background?

A. I received a Bachelor of Science degree in mechanical engineering from Rensselaer Polytechnic Institute in 1972 and a master's degree in civil engineering and urban planning from the University of Michigan in 1976. I am a registered professional engineer in Pennsylvania.

Q. Have you previously testified before this commission?

A. Yes. I provided testimony in Vectren North's last rate case (Cause No. 42598) regarding plant in service and certain operational issues. I also provided testimony in Cause Nos. 42027/42032 regarding Vectren South's proposed transfer of operational control of its electric transmission facilities to the Midwest Independent System Operator and in Vectren South's most recent gas and electric rate cases (Cause Nos. 43111/43112). Vectren South is also a subsidiary of Vectren Corporation.

Q. What is the purpose of your testimony?

A. In my testimony, I will describe the challenges Vectren North faces as the highly qualified and experienced baby boom segment of our work force all reach retirement age within a brief span of time and begin to leave our company. I describe our proactive efforts for dealing with this aging workforce phenomenon and the resulting costs. I will discuss additional expenditures for gas training programs designed to support our less experienced workforce. I will describe our Customer Contact Center operations, including the fact that high energy costs have caused an increased volume of customer contact. I will also describe other increased operating costs, including meter reading cost increases. I will describe Vectren North's utility plant in service and the change to utility plant in service since the last rate case.

II.

VECTREN NORTH'S AGING WORKFORCE

BACKGROUND

Q. Does Vectren North have any significant changes occurring in its workforce?

A. Yes. Nationally, as baby boomers reach retirement age, a large number of long time skilled and experienced employees are preparing to retire over the next fifteen years. This is reflective of a generally aging workforce. The sheer magnitude of the anticipated retirements has drawn great attention to the issue

and as a result, a heightened level of human resource planning has commenced as companies are focusing on their recruiting and training programs to assure that business productivity will not suffer. Vectren North is keenly aware of this potentially critical business problem, and has engaged in a planning process, inclusive of senior management, to enable the Company to address the issue before it threatens the reliability of the service we provide to our customers.

Q. Have you personally been involved in this planning effort?

A. Yes. I am the executive sponsor of a team consisting of operations and human resources personnel who have devoted significant time to setting out the dimensions of the problem as it pertains directly to Vectren, and have made recommendations to management on how to timely respond to the aging of our workforce.

Q. Does the utility industry face the same dilemma as its counterparts in other industries?

A. Yes. According to Bureau of Labor statistics, over 30% of the existing utility workforce will be eligible for retirement over the next 5 years, and by 2012 there may be 10,000 more utility jobs than available workers. A number of such studies indicate that the looming percentage of retirements in the utility industry makes the issue even more acute than in other industries.

As Vectren North has approached this issue, it has collected and referred to a great deal of data being reviewed by the industry. A recent article, entitled, "Brain Drain: Our Graying Utilities," cited data that "the median age for workers in the utility sector (including telecom) is 3.3 years higher than the national average, with nearly half of the utility workforce currently over the age of 45." Energybiz Magazine November/December 2004, by Arthur O'Donnell. Some are referring to this situation as a "demographic time bomb," and Dominion Resources has labeled the phenomenon "The Wave" as it braces to face the fact that 45% of its workers will be eligible to retire by 2012. Exacerbating the situation is the time line involved in training new replacement employees.

The American Public Power Association (APPA) surveyed its members and produced a report on the aging workforce defining this as the "new challenge to its members." The findings were that half the companies project the potential loss of somewhere between 21-50% of their workforce over the next five years. The companies indicated that knowledge loss would be the single greatest problem resulting from the retirements, with finding replacements also a great challenge. The APPA outlined steps for its members to take to address the retirement onslaught, including identifying gaps in terms of ongoing productivity needs and investing in training resources. The emphasis is to be proactive in order to commence the necessary development of a new workforce before the wave of retirements hit.

Q. What specific steps has the utility industry begun to take to address the aging workforce issue?

A. Approaches will differ by company, but core strategies have focused on hiring now in areas that will experience significant attrition in order to commence training and knowledge transfer, and beefing up current training efforts. There is also a general recognition that the available labor pool is finite and competition for the new workforce could be significant as all industries face replacement needs.

Preparation includes figuring out how to recruit and train the future workforce. For example, the Midwest Independent System Operator or "MISO" has established relationships with colleges to begin developing skilled workers, and First Energy has partnered with five universities to create degree programs for future line and substation crews. (Energybiz Magazine, p. 24).

Q. Does Vectren have workforce aging issues similar to the rest of the utility industry?

A. Yes. Over the next 15 years retirements are expected to impact the Vectren workforce as follows:

	Bargaining Unit			Non-Bargaining Unit			Total		
Year	Potential Retirements	Current Employment	%	Potential Retirements	Current Employment	%	Potential Retirements	Current Employment	%
2007-2011	133	872	15.3%	70	889	7.9%	203	1761	11.5%
2012-2016	159	872	18.2%	115	889	12.9%	274	1761	15.6%
2017-2021	210	872	24.1%	148	889	16.6%	358	1761	20.3%
Cumulative	502	872	57.6%	333	889	37.5%	835	1761	47.4%

These tables suggest that over 47% of Vectren North's current workforce will retire by the year 2021. This is especially critical in the bargaining unit employee group where retirements will be nearly 58% of the current workforce. In addition, these amounts assume that potential retirements will occur, on average, when employees reach age 62. At Vectren North, actual eligibility for retirement with benefits occurs at age 55. Our actual experience over the past three years indicates an average retirement age for the bargaining unit at Vectren North of 62. Thus, the assumption of 62 as the average retirement age is supported by recent actual Vectren data. As described hereafter, the wave of retirements will pose particularly serious challenges in certain areas of the bargaining workforce where trained technical Energy Delivery workers are essential to providing gas services to Vectren North's customers.

Q. How certain are you that these workers will retire in the numbers and time frames you describe?

A. The age of the employees is a fact known with certainty. The eligible retirement age and the historical average age of retirement for Vectren North employees are again facts known with certainty. Therefore, I conclude that the tables shown herein and the conclusion that this is a critical problem for Vectren North and its customers is very real, and must be dealt with on a proactive basis to ensure continuity of good customer service at the lowest possible cost. Our knowledge of these statistics caused us to invest time in the study and planning process I described earlier.

Q. Can Vectren North do anything now to prepare for this inevitable loss of experienced workers?

A. Yes, we must take action now to avoid a future shortage of skilled employees. For Vectren North, an approach of waiting to hire replacement workers as employees actually retire would leave us unable to maintain work levels and customer service levels because of the lengthy required apprenticeship training process new bargaining unit employees must go through. Rather, we must implement a plan that brings on new employees in advance of retirements so that they can begin the up to four year apprenticeship training and be prepared to fill the role of employees retiring with decades of utility experience.

VECTREN'S PLANNING APPROACH

Q. Has Vectren North developed a plan to effectively manage the impact of the aging workforce problem so sufficient resources remain available to maintain reliable service?

A. Yes. Several years ago Vectren North realized that this was a growing problem. In 2005 Vectren management established a "Workforce Planning Team" comprised of representatives from the Human Resources and Operations Departments. The Team began by breaking the problem into four major components:

Workforce Strategy – Determining the workforce requirements to achieve our business objectives and establish plans outlining how these workforce requirements will be met.

Workforce Planning – Analyze business requirements and plan the workforce to develop and maintain skills/competencies required to meet Vectren's objectives.

Training Development – Establish training priorities and evaluate program effectiveness relative to developing skills and competencies.

Knowledge Capture – Identify tools and methods used to capture the knowledge and experience of the workforce.

Q. What progress has the workforce planning team made since its formation?

A. The Workforce Planning Team ("Team") determined that a critical need exists to hire significant numbers of new apprenticeship employees in the near term in order to have sufficient skilled employees in later years.

As background, in 2005 the focus of the Workforce Strategy effort was on building alliances with Midwest Universities to provide critical training at a reasonable cost. Work also included the establishment of an intern program. The Workforce Planning effort upgraded bargaining unit hiring standards, and built succession plans below the manager level. The Training Development effort included collaboration with IVY Tech regarding annual training grants, evaluation of a variety of training proposals, and enhancement of in-house training programs. The Knowledge Capture effort included initiation of contacts with AGA, MEA, and EEI to begin a benchmarking program. Additionally, the Team began prioritizing and capturing knowledge in Energy Delivery.

In 2006, the Workforce Strategy effort began focusing on identifying competition for its workforce and determining what Vectren must do to stay ahead of the competition. The Workforce Planning effort gathered data related to historical average retirement dates, existing employee potential retirement dates, and specific critical skill gaps by classification. Additionally, they established plans for dealing with potential skill gaps. The Training Development effort continued to identify effective and low cost training alliances, and began identifying and improving internal training process opportunities. The Knowledge Capture effort focused on developing a process for the identification, capture, and communication of knowledge retention needs.

The team then reviewed each job classification to determine how retirements would impact performance. It became apparent that in many areas, the retirements could be managed over time without significant incremental effort, but that in certain areas, the turnover in the next 5-10 years would impact performance absent incremental effort.

Q. Has the team developed replacement strategies for both bargaining and non-bargaining employees?

A. Yes. Generally, the Team has focused on improved processes for recruiting, training and employee development. While key non-bargaining employees will be lost and the approach to replacing such employees will be critical, it will be more individualized in nature. The Team has identified the need to aggressively hire a large group of bargaining unit replacements for two reasons. First, the exposure in numbers of employees the Company is at risk of losing is much higher. Also, Vectren North has recognized that the training requirements and years needed to move employees from the apprentice level to a fully productive journeyman level in various job classifications is well defined.

AGING WORKFORCE IMPACT ON VECTREN NORTH

Q. How will bargaining unit retirements impact the Vectren North employee classifications?

A. The pro forma adjustment I propose will address the aging workforce issues for bargaining unit employees in the Gas Fitter position and the Service Specialist position. This strategy recognizes that the Gas Fitter performs many important field activities, and that once experienced, these employees often move into other roles in the Energy Delivery Operations. The Service Specialist responds to the direct customer inquiries received through our contact center and provides a key customer interfacing role. It is in these job classifications that we expect the near term effect of retirements to be most noticeable. The Aging Workforce pro forma includes costs to hire apprentices in these categories, minus the average salaries of the expected retirements in the same time period.

Q. Could you describe the process associated with filling the openings within these two job classifications with qualified employees?

A. Yes. The specific skills required to become qualified to perform these job functions must be developed through an apprenticeship program. These apprenticeship programs typically take 4 years to complete. This lag-time

between hiring and completion of the apprenticeship program means that the productivity of each new hire rises gradually over this period, both due to time dedicated to training activities and the natural learning curve. These apprenticeship programs are designed with competency checkpoints every 6 months.

Q. Please describe the Gas Apprenticeship Program more fully.

A. The apprentice program for both fitters and service specialists is a four year long combination of classroom, laboratory and field training. Over the course of the program the apprentice will learn, practice and then demonstrate actual application of the appropriate skills. This is done under the observation and tutelage of professional trainers and journeymen. The program covers the major aspects required to carry out the day to day responsibilities of service, construction, operation and maintenance of a gas distribution system. In addition to the physical skill training, other key areas such as the attributes of natural gas, work safety, customer service, company policy, and equipment operation are all interwoven in the program.

The main elements are taught at the Company's training center or other locations where classroom and controlled laboratory conditions are available. The field work is completed in the apprentice's home area using local journeymen as their mentors and field trainers. The classroom work is grouped in sections and when the candidates successfully complete the session, they return to their home base to gain the actual field experience in the trained areas. Typical apprentices spend four years in this program before graduating to a qualified journeyman type job classification.

Q. How many future retirements are expected within the Fitter and Service Specialist positions?

A. Vectren North had 200 Gas Fitters at the end of the Test Year which includes the following job classifications:

Job Classification	# of BU Employees
Fitter Equipment Operator	27
Fitter Welder	20
Fitter	104
Fitter Storage Field	8
Work Coordinator A	34
Work Coordinator B	7
Total Gas Fitters	**200**

Using a projected retirement age of 62 years Vectren North will lose 88 of these Fitters over the next 12 years (3 four year apprenticeship cycles). Thus, in a 12 year planning period, we will lose 44% of this workforce. Just focusing on the number of retirements that will occur over one apprenticeship period (2007-2010) indicates that Vectren North will lose 33 Gas Fitters.

Similarly, at the end of the Test Year Vectren North had 92 Service Specialists. Again, using a projected retirement age of 62 years, Vectren North will lose 48 of these Service Specialists over the next 12 years (3 four year apprenticeship cycles). Thus, in a 12 year planning period, we will lose 52% of this workforce. Just focusing on the number of retirements that will occur over one apprenticeship period (2007-2010) indicates that Vectren North will lose 22 Service Specialists.

Petitioner's Exhibit WSD-2 is a table showing the number of active employees and eligible retirements in the years 2006–2026 in certain job categories. The Gas Fitter and Service Specialist positions discussed above have been highlighted in this table to show the magnitude of the Aging Workforce issue relative to Vectren North. In all, over the planning horizon we can get a picture of what the company faces:

	Total # of Gas Fitter and Service Specialist Retirements
2007-2010	55
2011-2014	38
2015-2018	43
2019-2022	63
2023-2026	29
Total over 20 Years	228

Vectren North must stage hiring to train groups of new employees to offset these retirements. These replacements will need to be hired in the near term, so that by the time the existing employees retire the new apprentices will be at or near the point where they are fully trained.

Variables related to the plan include the actual timing of retirements, the speed with which the trainees gain skills, the number of apprentices that can be effectively trained simultaneously, and the number of apprentices who successfully complete the program.

Q. How does Vectren North plan to manage the staffing requirements of the Gas Fitter and Service Specialist positions given the large amount of future retirements?

A. Ideally, Vectren North's planning approach would call for hiring all of the replacements required to cover retirements over each four year planning period during the first year of that same period. For example, looking at 2007-1010, this would mean hiring 55 replacements now so they would be fully trained by 2010 to replace all of the projected retirees. However, with our study results projecting 228 retirements over the next 20 years Vectren North would require apprenticeship class sizes averaging 46 apprentices every four years. Specifically, during the 2007-2010 and 2019-2022 planning periods, class sizes would be 55 apprentices or more. Apprenticeship classes of this size are just not practical without making major changes to our training processes and training facilities. With much of the apprenticeship training being hands on and

competency based, the alternative planning approach had to consider existing equipment and space limitations, as well as the ability for instructors to provide the necessary individual attention required. Given these constraints, alternative approaches were considered.

The alternative planning approach chosen by Vectren North is to plan for new apprenticeship classes every two years instead of every four years. Using this approach, the largest class would not exceed the constraints previously discussed. Therefore, the calculations utilized to develop this pro forma use a two year timeframe with a class size at approximately half the number of the retirements over the next 4 years.

Q. Please further discuss the apprentice hiring for the Gas Fitter and Service Specialist positions.

A. As previously noted, the impact of aging workforce is most evident in the Gas Fitter and Service Specialist positions for Vectren North operations. We have focused on these two positions since both require a significant amount of training and apprenticeship time to fully develop the skills required and both are significantly impacted by upcoming retirements.

Gas Fitters are responsible for all aspects of installing gas pipe in the ground. They do the trenching, lay the steel or PVC piping, join piping sections at joints and unions, and perform testing and verification to make certain the newly installed pipe is safe and ready to be pressurized and placed into service. Once trained and experienced these employees then move up to other jobs in the Company. Without a sufficient number of these employees, we will be hard pressed to maintain sufficient staffing in other job areas.

Service Specialists perform a wide variety of meter orders that are scheduled and assigned to them through a mobile work deployment process. This work includes meter sets, turn ons, turn offs, rereads, emergency leak response, move-ins, move outs, and many other order types. They have close contact with our customers since most of the work they do is centered on the service and meter assets. As first responders to emergency situations, effective safety and

operational training is critical to this position and forms a large portion of the apprenticeship program.

Moreover, Vectren North must replace the retiring employees to maintain adequate numbers of employees needed to perform essential distribution system work activities such as leak repairs, line inspections, regulator inspections and maintenance, valve inspection and maintenance, meter orders, emergency response, and numerous other operations tasks. These tasks are essential to maintain a safe, reliable distribution system and good customer service.

Q. Are there other reasons why the additional employees must be added in absence of the retirements?

A. Yes. Vectren North anticipates challenges in maintaining its necessary workforce in the future due to two related but separate issues. First, we anticipate an overall worker shortage as the effects of the retiring baby boomers are increasingly felt in the labor market. It is generally agreed upon by experts in the labor market that such shortages will occur and may significantly compromise Vectren North's ability to hire employees when they are needed. Second, the numbers of future workers electing to pursue the craft trades and become trained Gas Fitters or Service Specialist are even more reduced than the overall constrained future labor pool. We anticipate a very competitive market in the future for these positions. Vectren North does not want to risk compromises in customer service and safe field operations due to worker shortages in the future and believe we should proactively hire these needed replacements now so they will be fully trained and in place as fully productive employees as they are needed.

Q. Is Vectren North's current training program capable of handling this large influx of new hires?

A. No. As discussed further, in conjunction with hiring the next generation of workers, we must anticipate their training needs and increase our resources to assure the apprenticeship program yields well trained, skilled employees. Vectren North's request for three full-time Gas Technical Trainers is in direct support of the apprentice programs as well as the need to have resources that

will also assist in performing actual refresher training and performance evaluations to existing qualified employees throughout the Vectren North divisions to meet mandated Operator Qualification activities. These positions will provide face to face training, performance evaluations and status oversight, while ensuring a consistent approach throughout Energy Delivery. This will improve employee education, consistency of performance and the level of training needed to replace our experienced retirees.

AGING WORKFORCE PROFORMA ADJUSTMENT

Q. What is the impact of the aging workforce adjustment for Vectren North operations as shown in Petitioner's Exhibit MSH-2 Adjustment A19?

A. Petitioner's Exhibit WSD-3 is a summary of the Vectren North Operations Aging Workforce pro forma adjustment. Utilizing the two year planning approach previously discussed, Vectren North plans to add eighteen Fitter apprentices (initially), ten Service Specialists (initially), and three Gas Technical Trainers. These new employees result in additional labor costs of $1,437,518. The Fitter component of this cost is $638,455 and is based on properly loaded contractual bargaining unit rates with 55% charged to O&M. The Service Specialist component of this cost is $515,923 and is based on properly loaded contractual bargaining unit rates with 80% charged to O&M. The properly loaded cost of three Gas Technical Trainers contributes to $283,140 of this total additional cost and assumes 100% of their time is charged to O&M.

We have included an offset to that adjustment amount of $(988,645) reflecting a reduction in labor costs due to the anticipated retirements over the two year planning period. In addition, Vectren North proposes to include Apprenticeship training costs of $80,000 as a pro forma adjustment in the test year. These training costs cover consulting expenses to design and develop a training program based on industry best practices and miscellaneous materials and tools to stock the mobile training trailer for hands-on training.

I have also included the costs of an Engineering Cooperative to provide cost effective engineering expertise to Vectren North and also identify excellent prospective engineering employees in the future. The cost associated with the Engineering Cooperative is $6,814. The total impact of the items noted above is $535,687 and is included in the aging workforce pro forma adjustment A19 of Petitioner's Exhibit MSH-2.

Q. What are the foreseeable consequences if you fail to fill the Energy Delivery positions?

A. The Gas Fitter positions are front-line positions that interface directly with the gas system and provide critical operational and maintenance functions that are essential for good system performance. The Service Specialist position provides essential emergency support and customer service. It is my judgment, and a reasonable conclusion, that customer service levels will decline if effective knowledge transfer and skills development do not keep pace with the anticipated retirements within these key front-line positions. The areas most affected by these employees in Vectren North's Energy Delivery operations involve system leaks and repair, as well as new business gas service connections. These tasks directly affect reliable and timely customer service.

Q. Why is this adjustment reasonable?

A. The aging workforce issue cannot be ignored. We need to respond to changing conditions and make sure workforce levels meet the requirements of the gas delivery system and Vectren North customers. While these additional employees and training costs result in cost increases, adding the employees now and having them in place as retirements occur is a prudent, necessary, and reasonable approach resulting in the lowest possible cost of operations and good customer service levels. The need for and benefits of planning for competent replacement employees make this a necessary and reasonable adjustment.

III.

TRAINING AND SAFETY PROGRAMS

Q. Please describe the components of the proposed incremental training expense.

A. Vectren North is proposing to implement the following training programs:

Gas Emergency Training	$240,591
General Safety Training	$ 85,750
Self Contained Breathing Apparatus (SCBA)	$ 37,603
Engineer Training	$ 24,800

The total incremental training expense is $388,741 and are reflected in Petitioner's Exhibit MSH-2, Adjustment A16. Each of the proposed programs will be described in detail. In addition to the program costs listed above, I will discuss employee additions, which are related to the proposed programs, which are reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (Lines 23, 24, and 28). At the conclusion of this section, I will also describe the proposed customer safety education program.

Gas Emergency Training

Q. Does Vectren North propose to expand its training for its field gas employees?

A. Yes. In addition to the apprenticeship and other on the job training to be provided to new gas field employees, Vectren North will implement a new emergency response and safety continuing education program for existing field employees. This will ensure that they are up to date and aware of current procedures to safely address emergency situations such as the odor of gas, actual gas leaks, building fires, accidents involving gas meters, severed underground gas lines, and other situations of risk of fire or explosion from natural gas. They will receive more frequent and recurring training in activities such as evacuating the area, assessing area risk, determining the nature and location of risk, coordinating contact and action with other company representatives and emergency responders, preservation of the scene, and other actions to protect the public safety. This will include recurring updated training on emergency procedures. The emphasis will be on customer and employee

safety in situations of emergency response. This training occurs to some extent already; however, we believe that our employees and the public will benefit from greater repetition and enhancement of these programs.

Q. Is the gas employee training you have described a reasonable and necessary expense?

A. Yes. This training is necessary to increase our employees understanding and compliance with procedures and safety requirements relating to emergency field operations. Safe and effective response to emergencies requires employees to go beyond mere compliance with procedures and make effective judgments and interpretations regarding circumstances they face. This additional training is important to developing the skills to make appropriate decisions in emergencies and reduce the risk of customer and employee injuries.

Q. As part of worker safety efforts, does Vectren North participate in disaster simulations?

A. Yes. Our employees participate in emergency and disaster simulations as part of their ongoing training. In addition, we conduct "mock" emergencies to verify our ability to promptly and correctly respond to field emergencies. Although we have a good working relationship with the various local emergency first responders such as police departments, fire departments, Homeland Security, and local Emergency Management Agencies, we plan to include these agencies more extensively in our future emergency simulations.

Q. How do these activities benefit Vectren North's customers?

A. These activities help protect the safety of emergency responders, construction workers, and all individuals who may be in the vicinity of an emergency situation. Participants at these emergency simulations learn how to effectively communicate and coordinate their activities so as not to impede each other and to work as a team. Vectren North employees learn necessary information and refine their skills in coordinating their utility expertise and efforts with the objectives and skills of other emergency personnel. Similarly, non-utility emergency personnel learn from Vectren employees what must be done to avoid

injury from utility services such as natural gas and how emergency responders can accommodate efforts at service restoration. Through the increased knowledge and enhanced coordination of all participants, these activities result in more prompt restoration of utility service. Excavation activities have increased over time, creating greater potential for damage to buried gas pipes. Devoting more time and resources to being prepared for these situations helps to protect the public and our employees.

Q. What is the annual cost of this continuing training and these safety programs?

A. The additional annual cost of this training is $240,591 and is included in Petitioner's Exhibit MSH-2, Adjustment A16.

General Safety Training

Q. Do you have other plans to address worker safety in the near future?

A. Yes. Vectren North plans to add a Safety and Training Employee Relations Consultant and a Safety/Hygiene Consultant to enhance Vectren North's existing safety program. It is Vectren's objective to achieve best in class safety performance on a timely basis. Hiring and deployment of these two employees will assist in accomplishing that objective. Employee safety has always been a focal point for Vectren North. In fact, the Company's Safety performance is used as a measurement in the employee incentive plan.

Q. What will be the duties of these new employees?

A. The Safety and Training Employee Relations Consultant will support and ensure regulatory compliance with safety training and safe operating procedures mandated by OSHA and DOT. New hires will also receive general safety orientation training from this employee.

The Safety/Hygiene Consultant will conduct field safety audits and facilitate the enhancement of field "tailgate" worker training sessions which focus on use of protective equipment and safe work practices. The new employee will also lead

safety compliance reporting, conduct audits to ensure required training is completed on a comprehensive and timely basis, develop safety training materials, conduct safety presentations, and act as the liaison with medical facilities in the event of employee injuries and return to work physicals. The new employee will also coordinate drug and alcohol testing, and determine cost effective ways Vectren North may reduce job induced routine physical and emotional stress on employees.

With the addition of these positions, combined with the additional training described, our goal is to obtain "excellent" performance. We plan to compare our OSHA recordable incidents to peer companies' numbers in order to judge whether or not we consistently perform as one of the better companies in terms of employee safety. This type of benchmarking will drive better performance. This is also a cost issue, because we limit non-productive employee time by having fewer injury incidents. At the same time, we are aware through benchmarking efforts that our current safety staff is lean compared to other companies. The new hires and escalated training efforts will assure compliance and create a record of great performance in this area.

Q. What is the pro forma expense associated with the additional safety employees and related programs?

A. The pro forma expense associated with the Safety and Training Employee Relations Consultant is $63,369. In addition, $85,750 will be spent for safety programs managed by this position. The pro forma expense associated with the Safety/Hygiene Consultant is $61,251. The safety program is included in Petitioner's Exhibit MSH-2, Adjustment 16, and the two incremental employees, which equal $124,620, are included in Petitioner's Exhibit MSH-3, Adjustment 17, Page 2 of 2 (Lines 23 and 24).

Self-Contained Breathing Apparatus (SCBA)

Q. Will Vectren North be incurring any other costs relating to employee safety on a going forward basis?

A. Yes. Vectren North will be incurring additional O & M costs associated with training, fitting and medical qualification costs associated with the use of required SCBA Equipment.

Q. Why are these costs incremental to the Test Year?

A. Vectren North currently administers the SCBA program on a voluntary basis and this does not provide predictable coverage of all geographic areas. Therefore, the SCBA program is being expanded and applied to all eligible employees within the Vectren North divisions. Some of the equipment currently being utilized is no longer supported by the manufacturer. Vectren North plans to replace this equipment with new supported units. Additionally, Vectren North plans to order enough new units to properly equip all geographic areas. All of this is incremental to the dollars spent in the Test Year.

Q. Why are these costs reasonable and necessary?

A. Through the course of business, occasions arise where employees are faced with blowing gas situations as a result of planned work, equipment failure, human error or damage to underground facilities. The ideal method for protecting employees in these situations is to eliminate all hazards when possible. However, in some instances it is not always viable to eliminate or shut off the gas supply and employees must therefore enter the area of blowing gas to perform work. In these situations there are two primary concerns regarding employee safety – flammable atmospheres and oxygen deficiency.

The Department of Transportation Pipeline Safety Regulations (192.605) require the Operator to take adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapor or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and, a rescue harness and line.

To address employee safety and compliance with applicable DOT regulations, Vectren has developed a Gaseous Atmosphere Policy outlining safe work practices for instances when blowing gas situations arise where employees must

enter to perform work. The gaseous atmosphere policy addresses flammable atmospheres by requiring the wearing of fire retardant suits when entering a blowing gas situation and when an oxygen deficient atmosphere exists, the wearing of a supplied air system. In order to wear a supplied air system, such as a Self Contained Breathing Apparatus (SCBA), employees must be medically qualified, fit-tested, and trained.

From a public safety as well as employee safety standpoint it is imperative that Vectren North is able to provide a timely response to blowing gas situations. In order to ensure a timely response, Vectren North should train all gas operations employees in the Work Coordinator, Fitter, and Service Specialist job classifications and maintain strategically placed supplied air units throughout its territory.

Q. What are the total annual costs associated with this additional training, fitting and medical certification?

A. The total annual cost would be $37,603 as set forth in Petitioner's Exhibit MSH-2, Adjustment A16. The training costs includes initial training to review OSHA standards, fit testing each individual, and train on the properly inspecting and use of the SCBA equipment. Annual refreshers are an OSHA requirement. Medical qualifications begin with each employee taking an eight page medical questionnaire that is reviewed by a doctor. Some answers may warrant additional medical testing such as a general exam, chest X-ray, or pulmonary function test. Typically 15% to 20% of the employees disqualified are disqualified for medical reasons. For those qualified, the doctor will establish a 1 to 5 year review depending on the health condition and age of the employee. An additional cost is incurred for special kits required for employees with prescription glasses. These special kits cost an average of $150 to $200 each to make lens that are inserted into a frame designed to fit inside the SCBA mask.

Engineer Training

Q. Are there any other training costs that Vectren North is seeking to recover in this proceeding?

A. Yes. As we bring new engineering staff into the organization there are significant engineering training requirements for these positions that must be provided through external resources. As an example, personnel responsible for the design of new distribution facilities, selection of material, or system planning will be expected to complete some basic engineering design courses, such as those offered at the Gas Technology Institute. These courses are designed to provide a course attendee with basics on system and equipment operations, engineering design, material selection, and system planning. Once the basic design concepts are developed, further education through participation in corrosion courses offered by the National Association of Corrosion Engineers ("NACE") through the University of Purdue, equipment training through select product vendors and participation in various conferences and application training through vendor offered courses will follow. Other positions will require a similar training and development program but would be more specific to their job requirements.

Q. Will these courses all be completed within one year's time of an engineer starting the training?

A. No. This training will occur over several years.

Q. Is the Vectren North training center capable of providing this training?

A. The training center can provide some of the basic industry and operational training; and any new engineer would be expected to attend some of these courses as well. However, they are neither the experts, nor do they have the curriculum to train the engineering staff. Vectren North does not bring enough engineers into the organization at one time to warrant having an internal engineering training program.

Q. How many new Engineer hires will be in need of this additional training?

A. Approximately seven new hires will be in need of this additional training. Specifically, Vectren North will be hiring two Compliance Engineers, an Encroachment Engineer, two additional staff Engineers, a standards Engineer and an Engineering Applications supervisor.

Q. Why are these new engineers required at this time?

A. The Compliance Engineers will be responsible for monitoring and responding to any work associated with DOT, IURC or company code compliance standards. They will be heavily involved with our engineering and operating personnel as well as contract personnel to ensure compliance with standards. This has become increasingly more critical as the amount of additional regulation has increased tremendously in the past few years with the addition of such programs as Operator Qualification, Public Awareness and Transmission Pipeline Integrity Management. This activity will continue for the near future as Distribution Integrity Management evolves. In addition to the regulatory activity, the Pipeline Safety Division of the IURC has become increasingly more active in performing more regular field inspections. It is important that we are able to provide a point of contact to these inspectors rather than having our local supervision and field personnel responsible for the coordination of this activity and any follow-up if necessary.

The Encroachment Engineer's purpose is to provide a single point responsible for the protection of our pipelines. They will evaluate encroachments identified by field personnel and determine the best course of action to remediate these encroachments before they become a problem. A focused effort to protect Vectren North's easements will help protect our pipelines from damage. Third party damage in particular is a leading cause of serious incident in the natural gas industry. This position will work with our Public Awareness Coordinator, Integrity Management department, and local engineering personnel to establish policies, programs and practices to maintain the integrity of our pipeline systems as well as providing a proactive response to those entities potentially encroaching on our facilities.

The staff Engineers will work as part of the local engineering staffs in our Vectren North divisions. They will provide technical guidance to the local design staffs on items such as main sizing, regulator selection or other equipment. They will work with customers on the service and technical issues associated with their service. They will work closely with state, county, and city engineering divisions on public improvement projects that require relocation of Vectren North facilities. These personnel will also provide some continuity for Vectren North as the aging workforce begins to affect the current engineering staff.

The standards Engineer will be responsible for the development and maintenance of the company O&M, engineering, design, and material standards. This position will work with field personnel on issues associated with existing standards to ensure they meet any code requirements but are also updated as new or modified regulations or new technology is being implemented. This will include working with Technical Training to implement changes to our existing training program.

Finally, the Engineering Application Supervisor will supervise the staff responsible for the maintenance and upkeep of the numerous engineering systems used in Energy Delivery by Vectren North. This includes ensuring the applications are working correctly, the data used in these applications is maintained and available to support Vectren's business processes, and responding to user issues in a timely manner. The major applications supported by this position include the Geographic Information System, compliance system, work and asset management system, design application, and numerous other applications and systems used throughout Energy Delivery. This position is also responsible for the implementation of new applications or improvements to existing applications. As we prepare for Distribution Integrity Management requirements, this position will perform a critical role in ensuring the applications are available to support Energy Delivery's daily business processes.

The impact of hiring the seven engineers described above is $304,189 and is included in adjustment A17, Page 2 of 2 (Line 28) of Petitioner's Exhibit MSH-3.

Q. What are the costs associated with this additional training of the seven new Engineers?

A. The individual cost for this training is approximately $5,000 annually per employee which includes the training course as well as travel expenses. In total, the total annual cost of this new engineering training is $35,000 and the Vectren North allocated amount of this is $24,800 and is included in Petitioner's Exhibit MSH-2, Adjustment A16.

Q. Are the costs associated with this additional engineering training you have described a reasonable and necessary expense?

A. Yes. This training is necessary to develop the proficiency of these Engineers. The training will also allow these required skills to be developed quickly. The skills and knowledge they will receive through the completion of these courses are foundational for the engineering staff.

Customer Safety Education

Q. Is Vectren North proposing any additional programs geared toward safety?

A. Vectren North is proposing to launch a new Customer Safety Education Program.

Q. Why is it necessary to provide customer safety education?

A. It has become increasingly difficult to reach and educate our busy customers. Unfortunately we see incidents on a regular basis both in our service territory and around the country that demonstrate customers do not always understand what to do when they smell gas or encounter a gas leak in their home or business. We must continue to grow education opportunities to prevent serious injury or death, improve reliability and customer service.

Q. What is the total annual cost of this Program?

A. The total annual cost of this program is $750,000.

Q. Please summarize the $750,000 education pro forma.

A. Vectren North uses a variety of media to reach customers with safety messages. It is anticipated that $250,000 of the pro forma would be used to create a new safety education to reach schools in the 55 counties served by Vectren North. Included in the $250,000 education program is a new communications specialist to handle the creation and administration of the school-aged program. The loaded labor expense for this position is $62,400 and the Vectren North allocated amount is $30,576. The remaining $500,000 is to educate all customers through public relations and advertising throughout our widespread territory. The labor expense, $30,576, is included in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (Line 38) and the remaining program costs, $719,424, is reflected in Petitioner's Exhibit MSH-2, Adjustment A29.

The chart below further details the $500,000 request broken down among over 4 main Vectren North operating areas.

	Indianapolis (central Indiana) MSA	Terre Haute MSA	Clarksville	Lafayette
Public relations	$5,000	$5,000	$5,000	$5,000
Television	$250,000	$75,000	$30,000	25,000
Radio	$20,000	$10,000	$10,000	$10,000
print	$25,000	$10,000	$10,000	$5,000

Q. What will the $500,000 be used for and how will it be measured?

A. It is clear that education research is needed and will be performed to measure awareness, messages and safety knowledge among our customers. Experience with other campaigns demonstrates that pre-and post-testing education efforts allows Vectren North to adjust messages and be confident with certain levels of customer knowledge. The $500,000 campaign will follow the following outline.

Vectren safety education campaign		
Research	Establish baseline safety knowledge and test following education	Before new education and following campaign
Television	Safety education	November – March and May – September
Radio	Reinforcement of safety and reliability messages	November – March and May – September
Print	Reinforcement of safety and reliability messages	November – March and May – September

Q. Are these costs reasonable and necessary expenses?

A. Yes. These costs are essential in both educating customers and increasing the quality of service. Additional dollars will be dedicated to disseminate these messages, measure results and provide year-round education.

IV.
CUSTOMER CONTACT CENTER

Q. Please describe the Vectren customer contact center.

A. Constructed in 2001, Vectren's customer contact center in Evansville is the telephone call center for all Vectren Energy utility operations. There are over 180 customer representatives located in Evansville. Vectren has contracted with an outside contractor who provides another 70 call handlers. The contact center handles customer calls and on-line inquiries regarding emergencies, power outages, billing, service, disconnection, payment arrangements, and information inquiries. The contact center also handles inquiries from assistance agencies,

township trustees, and other support services groups in coordinating assistance for their constituents that are Vectren customers. The contact center has a special assistance group to handle calls from and promptly provide information to the Indiana Utility Regulatory Commission's Consumer Affairs Division.

Q. Has the level of customer calls increased?

A. Yes. From 1,981,735 in 2002, the number of annual customer calls has increased over time. Call volume for 2006 was 2,544,817. These increases in call volume have been driven in part by volatile gas costs which are likely to continue.

Q. How has Vectren managed to handle these increased calls?

A. Vectren hired a vendor (IRMC) to provide call overflow support for the Customer Contact Center. The contract between Vectren and IRMC required that a specific number of trained agents be available to provide coverage when needed. Vectren was billed $3,984 for each agent that handled our account each month.

Q. Has Vectren taken any action in an effort to mitigate the costs associated with this Contract?

A. Yes. Vectren worked with the vendor to determine ways to reduce the monthly fees. A new contract was signed in March 2007. The previous contract was based on a cost per full-time equivalent employee while the new contract is per transaction (per Call) which provides the opportunity to obtain savings. This contract allows the vendor to share agents as needed. Each agent will be trained to assist multiple call center client accounts, so Vectren will no longer need to cover the full cost of the agents. This contract change was a cooperative effort based on previous contract language that encouraged savings opportunities.

Q. What type of cost-savings does Vectren expect to realize as a result of this Contract amendment?

A. Vectren expects to reduce costs by $(115,889) for the total company, which is a credit of $(56,786) to Vectren North. This is reflected in Petitioner's Exhibit MSH-2, Adjustment A28.

Q. Are there any other adjustments related to this Contract?

A. Yes. In 2006, 13 payments were made to IRMC. The additional invoice was $(280,788) of which $(137,581) was allocated to Vectren North. As such, Vectren North is subtracting this from the test year. This adjustment is reflected in Petitioner's Exhibit MSH-2, Adjustment A28.

Q. What is the total proposed adjustment related to the contact center?

A. As reflected in Petitioner's Exhibit MSH-2, Adjustment A28, the reduction to test year contact center expenses is $(194,367). As discussed above, this amount is comprised of Vectren North's allocated portion of IRMC related expenses.

V.

REVENUE ASSURANCE

MISCELLANEOUS BILLING EXPENSE

Q. **Please describe the components of the proposed increase in miscellaneous billing expense.**

A Vectren North is proposing an increase in miscellaneous billing expenses of $221,990 as set forth in Petitioner's Exhibit MSH-2, Adjustment A27. This increase is comprised of two items:

Meter Reading $109,290

- Contractual Changes
- Eliminate Soft Close Process

Customer Billing Costs $112,700

Each of the proposed expenses will be described in detail.

Meter Reading

Q. Please describe the adjustments that Vectren North proposes to be approved for meter reading costs.

A. Every month approximately 599,656 Vectren North gas meters are read and the readings are processed for billing. These meter reads include both active and inactive meters. The inactive meters are read to protect against diversion, ensure the meter is in working order and to validate that there are no safety issues. Vectren North uses contract meter readers for 93% of its meters and Company personnel for the remaining 7%. Vectren North currently utilizes three different contract meter reading companies. Vectren North entered into two of these contracts that took effect in July 2006. By doing so it was able to achieve a reduction of meter reading costs that reduced the cost per read from $0.505 to $0.50 per meter. However, Vectren North will still see an increase in meter reading costs due to an approximate 1.73% annual increase in the number of meters read. This increase in the number of meters is the result of new construction. As such, Vectren North expects an annual expense increase associated with these increased meter reading costs of $5,160.

Q: Does Vectren North propose any other changes to the meter reading process?

A. Yes, Vectren North will be transitioning from the soft close process in October, 2007. A root cause analysis to determine the primary reasons behind billing adjustments was completed in 2006. This analysis determined that one of the main reasons for billing adjustments is the soft close process whereby Vectren North estimates the reading at the time of a service transfer. In fact, the analysis found that approximately 18% of these soft closes were later adjusted. In the interest of enhancing customer satisfaction and improving billing accuracy, Vectren North will transition to an actual meter read when services are being transferred.

Q. What are the annual costs associated with this process change?

A. There were 59,325 soft closes completed in the test year for Vectren North. The cost to have a contractor complete an off-cycle meter read is $2.75, so the additional cost will be $148,313.

Q. Does Vectren North expect to reduce costs by making this change?

A. While the primary focus of this program is to improve customer satisfaction, Vectren North does expect to reduce customer service expenses. The analysis determined that Vectren North spent $44,182 in 2006 to handle customer complaints, complete courtesy billing adjustments and respond to Commission complaints regarding the soft close process. This estimated savings has been deducted from the additional cost.

Q. What is the total annual cost that Vectren North is seeking for the cessation of the soft close process?

A. The total proposed annual cost for this program is $104,130, and is included in Petitioner's Exhibit MSH-2, Adjustment A27.

Customer Billing Costs

Q. Please generally describe the work process of Vectren North's billing center.

A. Our billing system design and function is intended to operate efficiently and accurately. Each month 599,656 meter reads are received at our billing center. Meter readings are received electronically from throughout our service territory. Once received, the meter reads are entered into the billing system. Consumption is calculated and compared with established parameters, and usage outside those parameters results in an exception report. The billing group researches the exceptions and must clear them before a bill is generated. Once the bills are generated, they must be processed for mailing and mailed. All of this must be accomplished within a two-day window in order to provide the bills to customers on a timely basis.

Q. What changes in the customer billing department have occurred that should be addressed in this proceeding?

A. The U.S. Postal Service has released an official announcement that they will be increasing postage again this year. A 5% increase of first-class stamps will go

into effect on May 14, 2007. This will impact approximately 11,500,000 pieces of mail per year, and will cost the company an additional $230,000 per year. This requires an annual adjustment of $112,700 as allocated to Vectren North. This covers the increased cost of mailing bills to customers. This increase of $112,700 is reflected in Petitioner's Exhibit MSH-2 Adjustment A27.

METER MAINTENANCE

Q. Is Vectren North proposing any other operational changes that may enhance customer satisfaction through improved billing accuracy?

A. Yes, Vectren North proposes to implement a new program to review residential (Group 1) meter pressure factors in the billing system. For a small amount of residential customer accounts we have found that the delivery pressure multipliers in the billing system do not reflect the actual delivery pressure. Vectren North's Customer Service Policy Team reviewed the process in 2006 and established a plan to review and correct the billing factors.

Q. Please describe the proposed Delivery Pressure Audit process.

A: The Customer Service Policy Team completed a small sample review of the pressure factors in the billing system compared to the service records documented by field personnel. It was determined that the majority of delivery pressure factor errors were in areas with a high level of new construction activity. The utilization of the elevated pressure has developed over the last 15 years as builders have shifted from standard pressure services to elevated pressure gas service. Vectren North is proposing to extend this review to include all areas with high levels of new construction or a high concentration of elevated pressure factors. Administrative personnel would review the multiplier in the billing system compared to the service records to isolate the meters where the two sources of data were inconsistent. When an inconsistency is identified, Vectren North would send field personnel to complete a physical verification of the pressure factor, which will result in a billing correction.

Q. What is the annual cost of this program?

A. Vectren North would review 173,600 service records at a rate of 20 per hour and a cost of $191,394. It is estimated that 10% of these accounts will require a field investigation which can be completed at a speed of 3 per hour and a cost of $238,714.

Q. Does Vectren North expect to increase revenue as a result of this program?

A. Based on the results of the sample test, Vectren North expects to increase margin by $76,120 and is proposing to reduce the program costs by this benefit.

Q. What is the total aggregate cost of the program?

A. The residential (Group 1) meter audit will cost $430,108 to complete and will be offset by $76,120 in increased margin. The total aggregate cost of the program is $353,988.

Q. Does Vectren North intend to complete a similar program for Commercial/Industrial (Group II and Group III) gas meters?

A. Yes, Vectren North proposes to complete a field audit of all gas meters in this group with a pressure factor of 1.

Q. What is the annual cost of this program?

A. The Commercial/Industrial (Group II and III) meter audit will cost $134,335 to complete and will be offset by $8,611 in increased margin. The total aggregate cost of the program is $125,724.

Q. What is the total cost for the proposed meter audit program?

A. The net expense for the Vectren North Group I, II and III meter audit program is $479,712, which is included in Petitioner's Exhibit MSH-2, Adjustment A25. The remaining $795,500 of this adjustment related to meter set painting is discussed in detail by Vectren North Witness Eric J. Schach.

Q: Are the programs being performed mainly to increase revenue?

A: No. We believe that billing should be accurate. Because of different delivery procedures in the field, this audit is needed to be completely accurate going forward.

Q. Does Vectren North need to add staff to its meter reading department?

A. Yes. Vectren North has added a Meter Reading Specialist which is necessary due to taking a more aggressive action to reduce the number of North accounts with multiple consecutive estimates. In the past, we have mailed letters when the estimate count reached 6 months and then attempted contact again when the estimate count reached 12 months. Our current plan is to gain access prior to the estimate count reaching 6 months. To accomplish this, we will need an additional resource to mail letters and attempt phone contact to arrange access for actual reads. Vectren hired this employee on May 14, 2007.

Q. What is the pro forma expense associated with adding the Meter Reading Specialist?

A. This position is dedicated to Vectren North at an annual cost impact is $39,000 and is included in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (Line 43).

Q. Are there any adjustments proposed related to improving Vectren North's billing process?

A. Yes. Vectren North plans to add six additional employees to improve its billing process. These include the addition of a Billing Quality Coordinator, two Billing Representatives, a Collections Representative, and two CRM System Support Analysts.

The Billing Quality Coordinator will function as a Quality Specialist and Trainer with responsibilities including (1) training new hires, (2) perform personal performance audits, (3) writing and updating department processes/procedures and (4) performing other coordination tasks. Due to constant changes in processes, a dedicated trainer/quality assurance specialist is needed to ensure

that the Billing group is operating efficiently. This position is also responsible for coordinating personal performance audits.

One Billing Representative will assist with managing inquiries from landlords associated with Automatic Transfer Orders (ATO's) and processing new contracts. The volume of ATO's has increased along with other department activities. With more large Apartment owners utilizing the ATO service, the numbers of contracts along with the number of services covered by the contract have increased. Numerous accounts on one contract also require more processing time. As a result, additional staffing is required to process the ATO's in a timely manner.

The second Billing Representative will focus on fraud and theft billing. During 2006, Vectren's Credit and Collections group added additional staff to investigate fraud & theft accounts. With two additional resources completing cases, Billing Representatives are unable to bill these accounts in a timely manner. Also, most fraud & theft cases require manual bills which are labor intensive. This requires the addition of one Billing Representative.

The Collections Representative will be added to manage incomplete disconnects for non-payment (DNP). Currently, Vectren's Receivables Management group has difficulty managing the volume of incomplete DNP service orders. Incomplete DNP's can potentially create billing accuracy issues and generate additional phone calls into the Contact Center.

Vectren North also plans to add two Customer Relationship Management (CRM) System Support Analysts. These analysts in the CRM System Support group are responsible for billing system issue resolution, analyzing business requirements, defining system functionality and code development/testing. They are also responsible for user set up and security including ownership of Sarbanes Oxley compliance. The workload associated with supporting Vectren's Billing systems has continued to grow and requires the addition of the two Analysts.

Q. What is the pro forma expense associated with adding the additional positions required to support improvements in the billing process?

A. The Vectren North operations allocated annual costs from the Billing Quality Coordinator, two Billing Representatives and the Collections Representative totals $81,730. The Billing Quality Coordinator contributes $22,933 annually and the three Billing and Collection Representatives each contribute $19,599 annually. The two CRM System Support Analysts are dedicated to supporting Vectren North at an annual cost of $58,656 each. The total annual cost impact required to support the billing process totals $199,042 and is included in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (Lines 44 and 45).

VI.
CONTRACTING

Q. Are there any adjustments proposed related to improving Vectren's strategic procurement process?

A. Yes. Vectren currently manages approximately 300 open contracts per year. These are contracts that are entirely new, require renegotiations or in some form are being adjusted to reflect new terms. In addition there are hundreds of existing contracts that must be monitored on an ongoing basis. Examples of monitoring include periodically updating fixed pricing agreements and auditing contract escalators to ensure increases are reflected appropriately. Currently, Vectren has no particular employees dedicated to overseeing these tasks.

Vectren plans to add a Contract Administration Manager and Clerk to establish a Contract Administrations group which will have the task of ensuring contracts entered into by Vectren North are being properly executed as per the contract preparation guidelines developed by the Strategic Procurement and Legal departments. According to these guidelines, all contracts entered into by Vectren are required to be reviewed by numerous departments including legal, strategic sourcing, credit and risk management. The Contract Administration group will ensure that contracts are being properly prepared, reviewed, approved, filed and monitored.

Vectren also plans to add a Buyer to its Procurement group. To support the extensive build out of the company's gas and electric infrastructure over the next few years, many materials and services will need to be procured, expedited and managed in order to keep projects within budget and within timeline completion requirements. The expediting of materials and services to ensure their delivery is timely is becoming more and more critical to successful project completions and the current procurement staffing levels are inadequate to accommodate the need going forward.

Finally, Vectren plans to add a Contract Analyst who will work within the Operations Support organization of Energy Delivery and be responsible for managing all Energy Delivery operational contracts. This analyst will be responsible for proper completion and enforcement of contracts and will provide analyses of vendor performance against the contract terms and specific performance criteria. This centralized knowledge of vendor contracts will allow greater uniformity with the ability to recommend contract changes favorable to the company.

Q. What is the pro forma expense associated with adding the additional positions required to support Vectren's strategic procurement process?

A. The Vectren North operations allocated annual cost for the Contract Administration Manager and Clerk is $64,838, the Buyer is $30,030, and the Contract Analyst is $11,466. The total annual cost impact required to support the strategic procurement process totals $106,334 and is included in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (Lines 25-27).

VII.
UTILITY PLANT IN SERVICE

Q. Please describe Vectren North's gas facilities that are used in connection with the provision of service to the public.

A. Vectren North's gas system facilities at December 31, 2006, consisted of approximately 13,000 miles of mains and 611,000 service lines. There are measurement and regulation stations, meters of various sizes, buildings and other plant, gas in storage, fleet vehicles, and various other items such as land, easements, materials, supplies and working capital.

Q. Please describe the overall condition of Vectren North's utility plant.

A. I am personally familiar with the property, particularly the larger items. In my opinion, the property is well maintained, in good condition, and is reasonably necessary for Vectren North's provision of gas utility service in it service area.

Q. What procedures are in place to ensure that the amount reflected as utility plant in service as of December 31, 2006 on Vectren North's books and records represents the actual cost of utility plant in service as of that date?

A. Vectren North maintains continuing property records based on a capital work order procedure. Capital projects must be authorized by management before any costs are incurred and construction begins. Capital investment is also controlled by an investment budget schedule approved and maintained by the Company's officers and Board of Directors. The construction work order procedure assures that the cost of new construction is not transferred to utility plant in service until verification that the work is completed and in service. This verification is accomplished when field operating personnel submit to plant accounting a report listing the actual quantities of the property units installed. Similarly, Vectren North has a retirement work order procedure that assures property is removed from utility plant in service when the corporate accounting department, upon receipt from field operations, processes documentation that the retirement work is completed.

Q. Have you reviewed the current calculation for Vectren North's Rate Base?

A. Yes. Petitioner's Exhibit MSH-3, Adjustment 45, page 2 of 3 demonstrates that Vectren North's Total Rate Base as of December 31, 2006 is 790,507,009.

Q. How does the current plant in service compare to the plant in service at the time of Vectren North's last rate case?

A. Petitioner's Exhibit WSD–4 demonstrates that since March 31, 2004, Vectren North's' plant in service has increased by approximately $82.7 million. This change has been primarily driven by increases in facilities required to serve new customers, the replacement of exiting facilities to ensure the continued provision of reliable service to existing customers, and the installation of system enhancements to ensure capacity for increasing customer loads and to ensure ongoing service quality and reliability.

Q. Are there on-going large capital projects that will be completed in 2007 and included in rate base?

A. Yes. The two projects have been included in Line 4, Transmission Plant, of Petitioner's Exhibit WSD-4. The Greencastle, $8.9 million, and Greensburg, $25.8 million, projects are pipeline projects that will be completed this year. Vectren North Witnesses James M. Francis and Thomas L. Bailey will describe these respective projects.

Q. Does this conclude your testimony?

A. Yes.

VEDN Energy Delivery - Bargaining Unit Workforce

Retirement Schedule Based On Age 62

Job Classification	# of Active BU Employees as of 12/31/06	# Eligible for Retirement (Age >= 62)									
		2007 - 2010		2011 - 2014		2015 - 2018		2019 - 2022		2023 - 2026	
		# Retiring	%	# Retiring	%	# Retiring	%	# Retiring	%	# Retiring	%
Field Supervisor Total	19	1	5%	5	26%	3	16%	3	16%	4	21%
Fitter Equipment Operator Total	27	4	15%	3	11%	7	26%	7	26%	4	15%
Fitter Welder & Apprentice Total	20	4	20%	3	15%	0	0%	5	25%	1	5%
Fitter & Apprentice Total	104	13	13%	10	10%	10	10%	25	24%	11	11%
Fitter Storage Field Total	8	1	13%	1	13%	2	25%	3	38%	0	0%
Work Coordinator A Total	34	8	24%	10	29%	6	18%	5	15%	3	9%
Work Coordinator B Total	7	3	43%	1	14%	2	29%	1	14%	0	0%
Locator Total	3	0	0%	2	67%	0	0%	0	0%	1	33%
Material Distribution Specialist Total	10	2	20%	0	0%	1	10%	4	40%	1	10%
Measurement Specialist & ApprenticeTotal	8	1	13%	1	13%	1	13%	4	50%	0	0%
CNG Mechanic Total	1	0	0%	1	100%	0	0%	0	0%	0	0%
Meter Mechanic Total	3	2	67%	1	33%	0	0%	0	0%	0	0%
Meter Reader Total	9	3	33%	1	11%	2	22%	1	11%	1	11%
Service Specialist & Apprentice Total	92	22	24%	10	11%	16	17%	17	18%	10	11%
Utility Specialist Total	2	0	0%	1	50%	0	0%	0	0%	1	50%
Vectren North BU Retirements	**328**	**63**	**19%**	**45**	**14%**	**47**	**14%**	**72**	**22%**	**33**	**10%**

Note: The highlighted Bargaining Unit Job Classifications are considered in the Aging Workforce Proforma

Vectren North
Aging Workforce Pro Forma Calculation

LineNo.	Fitter-Employee Count by Job Classification	2007	2008
1	Fitter Retirements	8	0
2	Fitter Welder Retirements	1	1
3	Fitter Equipment Operator Retirements	2	0
4	Fitter Storage Field Retirements	0	1
5	Work Coordinator A Retirements	1	4
6	Work Coordinator B Retirements	0	0
7	Fitter Apprentices	18	18

	Fitter- Expense by Job Classification	2007	2008	Two- Year Average
8	Fitter Retirements	($631,827)	$0	($631,827)
9	Fitter Welder Retirements	($82,548)	($82,548)	($123,822)
10	Fitter Equipment Operator Retirements	($160,358)	$0	($160,358)
11	Fitter Storage Field Retirements	$0	($78,978)	($39,489)
12	Work Coordinator A Retirements	($84,754)	($339,017)	($254,263)
13	Work Coordinator B Retirements	$0	$0	
14	Fitter Apprentices	$1,126,075	$1,195,579	$1,160,827
15		Average Retirement ((Sum Line 8 - Line 13)*45% O&M)		($544,391)
16		Average Apprentice (Line 14 * 55% O&M)		$638,455
17	**Net Impact for Fitters (Line 15 + Line 16)**			**$94,064**

	Service Specialist-Employee Count by Job Classification	2007	2008
18	Service Specialist Retirements	5	5
19	Service Specialist Apprentices	10	10

	Service Specialist- Expense by Job Classification	2007	2008	Two- Year Average
20	Service Specialist Retirements	($394,892)	($394,892)	($592,338)
21	Service Specialist Apprentices	$625,597	$664,211	$644,904
22		Average Retirement (Line 20*75% O&M)		($444,254)
23		Average Apprentice (Line 21*80% O&M)		$515,923
24	**Net Impact for Service Specialist (Line 22 + Line 23)**			**$71,670**

	Other Related Expenses	Annual
25	Gas Technical Training Consultants (3)	$283,140
26	Engineering Co-op (2) **	$6,814
27	Apprenticeship Training Program	$80,000
		$369,954

** - Allocated cost - 35% to Vectren North of total $19,469

Total Aging Workforce Pro Forma (Line 17+Line 24+Line 28) **$535,687**

VECTREN NORTH
RATE BASE CHANGE
MARCH 31, 2004 TO DECEMBER 31, 2006

Line No.	Utility Plant	March 31, 2004	December 31, 2006	Increase/Decrease
1	Intangible Plant	$ 1,014,077	$ 1,271,504	$ 257,427
2	Natural Gas Production Plant	11,008,006	11,095,844	87,838
3	Underground Storage Plant	34,920,393	35,206,246	285,853
4	Transmission Plant	22,950,846	67,850,409	44,899,563
5	Distribution Plant	1,038,608,644	1,141,907,070	103,298,426
6	General Plant	49,581,005	57,202,949	7,621,944
7	Cushion Gas	9,071,584	8,581,320	(490,264)
8	Gross Utility Plant	$ 1,167,154,555	$ 1,323,115,342	$ 155,960,787
9	Total Gas Depreciation Reserve	$ (520,663,740)	$ (621,741,619)	$ (101,077,879)
10		$ 646,490,815	$ 701,373,723	$ 54,882,908
11	Acquisition Adjustment (Westport, Terre Haute and Richmond)	$ 20,299,804	$ 20,299,804	$ -
12	Accumulated Depreciation Acquisition Adjustment	(6,907,565)	(8,295,578)	(1,388,013)
13		$ 13,392,239	$ 12,004,226	$ (1,388,013)
14	Net Utility Plant (Line 10 + Line 13)	$ 659,883,054	$ 713,377,949	$ 53,494,895
	Other Rate Base Components			
15	Material and Supplies	$ 608,222	$ 2,209,704	$ 1,601,482
16	Underground Storage & Gas Inventory	46,897,165	74,687,821	27,790,656
17	Stores Expense	391,714	231,535	(160,179)
18	Total Other Rate Base Components	$ 47,897,101	$ 77,129,060	$ 29,231,959
19	**Total Rate Base (Line 14 + Line 18)**	$ 707,780,155	$ 790,507,009	$ 82,726,854

INDIANA GAS COMPANY, INC.
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY

OF

ERIC J. SCHACH
VICE PRESIDENT, ENERGY DELIVERY

ON

GAS DISTRIBUTION MAINTENANCE PROGRAMS
GAS STORAGE FACILITY IMPROVEMENT PROGRAMS
AND
ASSET MANAGEMENT TRANSFORMATION

Direct Testimony of Eric J. Schach

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

A. My name is Eric J. Schach. My business address is One Vectren Square, Evansville, Indiana 47708. I am the Vice President of Energy Delivery for Vectren Energy Delivery of Indiana, Inc. (Vectren North) which includes the gas operations for the Vectren North service territory.

Q. What are your duties in your present position?

A. As Vice President of Vectren North, I have overall responsibility for the operation and maintenance of Vectren North gas transmission and distribution systems.

Q. How long have you been employed by Vectren North?

A. I have been employed by Vectren North since the March 31, 2000 merger of Indiana Energy, Inc. and SIGCORP, Inc. My career in the utility industry began in 1993 with Indiana Energy, Inc. I joined Indiana Energy as Director of Application Development and in 1995 became the Vice President of Information Technology. Prior to joining Indiana Energy, I was employed by IBM for 10 years.

In 2000, during the merger of Indiana Energy, Inc. and SIGCORP, Inc., I became Vectren's Chief Information Officer. In 2003, I became Vice President of Energy Delivery which is my current role.

Q. What is your educational background?

A. I received a Bachelor of Science degree in Quantitative Business Analysis from Indiana University in 1983.

Q. Have you previously testified before this Commission?

A. Yes. I recently testified in the most recent rate case for Vectren Energy Delivery of Indiana, Inc. ("Vectren South"), Cause No. 43111 on the issues of electric service reliability enhancement initiatives and support for pro forma related adjustments.

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

A. My testimony will cover various regulator station maintenance programs as well as various painting programs. This testimony will also describe a number of maintenance programs to improve the condition and operation of our facilities, including our pipeline right of way clearance program. I will discuss a new automated crew call-out program we are proposing which will improve emergency response I will also discuss several programs that we are proposing to implement relating to our gas storage facilities. These programs are designed to ensure the on-going integrity of these facilities as well as improve public safety. Finally, I will describe the Company's start of a multi-year effort to contain costs through our Asset Management Transformation ("AMT") program.

I.

MAINTENANCE PROGRAM DEVELOPMENT

Q. Please provide background on what Vectren North has been doing to improve, maintain and enhance operations and maintenance activities.

A. Vectren North has undertaken a multifaceted approach toward maintaining and improving the operations and maintenance of our gas system. There have been organizational enhancements focused on bringing specific skill-sets into key processes and positions in gas engineering and gas dispatching. There have been key capital investments in both distribution and transmission infrastructure and a move toward greater emphasis on preventative maintenance programs.

Our efforts in gas operations and maintenance have been focused and diligent; however, after engaging in a self critical process to find any gaps in our processes and determine how we can provide better service, we have determined that we can improve certain operational practices. This will require modifications to existing programs, the expansion of program scope, and the addition of new programs.

Q. Please describe how Vectren North assessed current utility industry practices related to maintenance and reliability improvement programs.

A. In addition to staying abreast of industry strategies via utility conferences and American Gas Association (AGA) group committee networking, Vectren North hosted a series of industry consultants and solution providers to provide presentations and discussion on engagements underway across the industry. This six month process was then followed by a number of utility site visits where our key operations management team visited their peers at utilities that appeared to be further along on preventative maintenance strategies. The combined results of these efforts solidified and corroborated our transition towards an increased preventative and proactive operations and maintenance approach, with the first phase being the development and proposed implementation of the maintenance programs described herein. The long term focus will be to improve our managerial efficiency via our AMT program based on investment in new technology and systems to be implemented in 2008/2009.

Q. Why does Vectren North believe it is important to enhance its current maintenance program and practices?

A. The assessment showed that, like many utilities within Indiana and around the country, Vectren North is increasingly sensitive to the age of its facilities. Operating philosophies and practices for our aging equipment and infrastructure need to be more structured, proactive and prevention focused. Going forward, periodic maintenance will be used to deal with the age of the facilities.

II.

GAS DISTRIBUTION MAINTENANCE PROGRAMS

Q. Please provide a brief overview of Vectren North's gas system and service territory.

A. Vectren North is largely comprised of many independent gas distribution systems feeding customers throughout much of the State of Indiana and linked through a series of gas transmission systems. Vectren North's territory ranges as far

south as Clarksville, on the Indiana – Kentucky border, as far North as Huntington, as far east as Richmond and as far west as Terre Haute. Many of the communities served by Vectren North are small to medium sized towns located throughout the territory. Vectren North operates and maintains approximately 13,000 miles of transmission and distribution pipelines, 1400 regulator stations, 4 storage fields, 3 liquid propane facilities and 611,000 customer services. My testimony sets forth programs designed to systematically address needs throughout the expansive territory.

Q. What is Vectren North's overall objective in implementing the preventative programs described below?

A. Every one of these programs will accomplish at least one of the following purposes: (1) preservation of existing facilities through greater maintenance; (2) enhanced reliability through activities that reduce the likelihood of facility failures; and/or (3) improved public and employee safety.

<u>Regulator Station Maintenance</u>

Q. Please describe Vectren North's proposed regulator station maintenance activities.

A. A regulator station is generally designed to provide pressure and flow control from a high pressure pipeline or main into a lower pressure pipeline or main. In functional terms, a regulator station reduces gas pressure in conjunction with distributing gas flow in a manner that meets downstream customer demand. As such, regulator stations are critical assets to the safe movement of natural gas throughout the transmission and distribution systems.

Based on many factors, such as frequency of operation and maintenance functions, historical operating experience, location, security requirements and size, regulator stations may be fenced and need to have the ground covered with rock. Over time, the fencing and rocked grounds are subject to weather conditions and damage from equipment, traffic, and workers. Therefore, on-going maintenance must be performed to ensure facility performance as well as

continued access and security. A review of our current regulator stations indicates we have approximately 1,400 total regulator stations, of which 332 are fenced. In total, there is 64,257 lineal feet of fencing. Likewise, there are 566 regulator stations that are rocked, totaling 1,630,010 square feet.

Vectren is proposing to implement more formal preventative maintenance programs associated with rock and fence maintenance within regulator stations. The rock maintenance program will include a scheduled approach to repair erosion, fill holes, protect pipe, and ensure adequate coverage. The fence maintenance program will utilize a similar approach to repair damaged mesh, paint, and repair any other structural problems.

In addition to fencing and rock maintenance at regulator station facilities, Vectren North is also proposing to implement a formal program for the maintenance and repair of buildings within regulator stations which would include repairs to the roofs, gutters, doors, asphalt and other general building repairs. Our review of our regulator stations indicated there are 135 stations with facilities that need this type of routine maintenance. These stations vary in size and the decision to install buildings is typically driven by the need for noise control, weather conditions, or security issues. The proposed programs place greater emphasis on planned preventative maintenance which targets periodic preventative maintenance tasks that have the effect of increasing the life expectancy of the buildings and over time should reduce future maintenance costs.

Q. What is the total additional annual cost of these regulator station maintenance activities?

A. Maintaining the rock and fencing at these facilities will be performed on a ten-year cycle. The total annual cost of this portion of the program is $333,830. Additionally, the building repair and other maintenance activities will be performed at the 135 station buildings on a five-year cycle at a cost of $5,765 per station. As such, the total annual cost of this portion of the program is $155,655.

Q. Will Vectren North perform any other type of regulator station maintenance activities?

A. Yes. Vectren North is establishing a program to sandblast and repaint regulator station assets to maintain the equipment integrity and extend useful life.

Q. Please describe this program.

A. While generally designed and built to withstand all types of weather, the regulator station assembly is subject to atmospheric corrosion associated with prevailing weather conditions. In some cases, nearby commercial and/or industrial processes may worsen the effect by introducing airborne contaminants that can result in an even greater corrosive environment.

Because regulator stations require significant initial capital investment, the industry has developed various methods to maintain their structural integrity by mitigating the effects of atmospheric corrosion. Painting the entire assembly is the most widely used method to provide effective corrosion control. Current remediation consists of "spot" cleaning and painting of problem areas found during inspections.

Vectren North, based on its own experience, believes that, on average, regulator station paint will last 10 to 15 years between painting cycles. By establishing a phased program to sandblast and repaint these assets, this program will allow Vectren North to reduce atmospheric corrosion and thereby defer (or even avoid) future capital costs associated with rebuilding these large assets.

Q. What is the cost associated with this program?

A. Currently, Vectren North has 217 large regulator stations and 1,186 small regulator stations. The average cost to sandblast and paint the 217 large regulator stations is $20,000 each, and the average cost to paint the 1,186 small regulator stations is $6,000 each. Vectren North is proposing to sandblast and paint these regulator stations on a 15 year cycle. The approximate yearly cost of this program is $763,733.

Q. What is the total incremental expense associated with these Regulator Station Maintenance programs?

A. As reflected in Petitioner's Exhibit MSH-2, Adjustment A24, the total cost of these programs is $1,253,218.

Pipeline Inspection, Right of Way Maintenance, and Automated Call-Out Programs

Q. Please describe the additional pipeline inspection activities Vectren North will perform to protect the condition of its facilities.

A. Consistent with good utility practices, Vectren North will also implement a routine practice of flyover inspections for its gas transmission system. Flyover inspections would be conducted for approximately 565 miles of natural gas transmission pipelines. Flyover inspections permit visual evaluation of right-of-way conditions. These inspections assist in evaluating development, construction and other public activities adjacent to our lines that must be assessed as part of our pipeline safety programs. Unlike other Vectren territories, the lay-out of these pipelines is more geographically dispersed. As such, the Flyover inspections will require a five-day helicopter patrol in order to cover the pipelines to review them for encroachments, third party activity near a pipeline, vegetation or environmental changes and other facility-related inspections. This would be completed twice a year.

Q. What is the total annual cost of this program?

A. The cost of the Flyover Inspection is $2,500 per day. Because it will take approximately 5 days to complete each inspection, and this will be performed twice a year, the total cost for the program is $25,000.

Q. Please describe Vectren North's proposed right of way maintenance program.

A. Vectren North is proposing to implement a right-of-way maintenance program similar to what it is currently practicing as a part of the transmission integrity management program, with some modification. The program will consist of identifying pipelines, both non-integrity management transmission pipe and

distribution pipe that reside within a utility defined or obtained easement that is not maintained regularly by the property owner, and after researching the easement boundaries, clearing any heavy growth within these areas and maintaining any previously cleared areas through an annual mowing and spraying program.

The program will be separated into a non-integrity management transmission right-of-way maintenance program and a distribution right-of-way maintenance program.

Q. Why is a right-of-way maintenance program necessary?

A. A right-of-way maintenance program is necessary because it allows Vectren North to more efficiently maintain its facilities, enhance safety by providing easier access in case of an emergency, makes the identification of leakage easier, increases the reliability of service through more efficient surveys, patrols and supports public awareness requirements through better pipeline identification.

Q. What is the cost for the distribution pipeline right-of-way maintenance program?

A. Vectren North has approximately 12,000 miles of gas distribution pipelines throughout its territory. A majority of these pipelines reside within an existing road right-of-way or on a maintained residential or commercial property. Vectren North estimates based on operational experience that only 5% of its total distribution pipeline facilities will require annual right-of-way maintenance. Vectren North proposes to implement a 20 year maintenance cycle. Vectren North incurred $135,448 in costs associated with right-of-way maintenance during the test year. There were expenses associated with spraying of bare ground surfaces at regulator stations. To achieve this increased level of activity, the annual right-of-way maintenance cost for the gas distribution pipelines will increase by $769,453.

Q. What is the cost for the non-integrity management transmission pipeline right-of-way maintenance program?

A. Vectren North has 498.5 miles of gas transmission pipelines that are not included in the integrity management program. These pipelines are not within a high consequence area (HCA) and therefore do not require the assessments that are a part of the integrity management program and therefore have not had the same level of right-of-way maintenance. Because these pipelines are not in HCA's, they are almost entirely in rural, less maintained areas. Vectren North has proposed a 10 year maintenance cycle on these transmission pipelines. The average annual cost to maintain the transmission pipelines not covered by the integrity management program will require an annual cost increase of $1,339,391.

Q. Why has Vectren North proposed a 10 year cycle for transmission pipelines and a 20 year cycle program for the distribution pipelines?

A. Generally, the transmission pipelines have significantly higher pressures and greater consequence of failure. Additionally, the transmission pipelines are required to be more frequently patrolled and surveyed. The 10 year maintenance cycle is consistent with the program developed on the pipelines maintained by the integrity management program.

Q. Please describe Vectren North's current crew call-out process.

A. Currently, the processes around emergency crew callout are time consuming and manually intensive. Administrators in the field offices are responsible for updating and prioritizing call rosters as well as ensuring that these rosters are communicated to the appropriate on-call personnel on a weekly or bi-weekly interval. In the event of an emergency, all calls are manually generated until the appropriate crews are assembled.

Q. Please describe Vectren North's proposed automated crew call-out program.

A. The purpose of this program is to implement an automated emergency crew callout system. This technology automatically calls in crews in a manner that is consistent with bargaining unit agreements and allows the crews to be mobilized much faster than the current manual call process. It has greater accuracy, can

track response history, and allows calls to be placed to crew members simultaneously.

Q. What customer and company benefits will be achieved as a result of this program?

A. By automating this process, Vectren North will be able to achieve the following objectives:

- Improves time required to dispatch emergency response crew(s)
- Improve overtime response rates for after-hour emergencies
- Decrease grievances associated with after-hour emergency call outs
- Provide management with reports to continually improve the process
- Improve compliance with the business rules as defined by multiple bargaining units.

Q. What are the costs associated with this program?

A. The total annual Vectren company-wide cost of this program is $102,000, which consists of annual technology maintenance fees and contractual user fees. Additionally, there will be a $20,000 one-time start-up cost associated with this program which Vectren North is proposing be amortized over a 4 year period. As such, the Vectren North's allocated annual cost of this program is $35,310.

Q. What is the total additional expense associated with pipeline maintenance and call out programs?

A. As reflected in Petitioner's Exhibit MSH-2, Adjustment A23, the total additional expense is $2,169,154.

Meter Maintenance

Q. Please describe Vectren North's proposed large commercial/industrial meter set maintenance program.

A. A large commercial/industrial meter set, which consists of the meter and related piping, is generally designed to provide pressure control and accurate

measurement for customers using large natural gas volumes. While generally designed and built to withstand all types of weather, the meter set assembly is subject to atmospheric corrosion associated with prevailing weather conditions. In some cases, nearby commercial and/or industrial processes may worsen the effect by introducing airborne contaminants that can result in an even greater corrosive environment.

Because large commercial/industrial meter sets require significant initial capital investment, the industry has developed various methods to maintain their structural integrity by mitigating the effects of atmospheric corrosion. Painting the entire assembly is the most widely used method to provide effective corrosion control. Current remediation consists of "spot" cleaning and painting of problem areas found during inspections. Vectren North proposes to implement a program to sandblast and paint large commercial/industrial meter sets on a routine basis.

The sandblast and paint meter set program would be performed in conjunction with the scheduled replacement of large commercial and industrial meters to meet the IURC sampling requirement, as well as large commercial and industrial meter replacements due to non-registering (NR), leaking, and damage. There are approximately 330 large commercial and industrial meters routinely replaced due to sample testing every year. The estimated annual number of large commercial and industrial meters replaced due to NR, leaking, and damage is about 170, so we anticipate the program will address approximately 500 meters per year.

Q. What is the cost associated with this program?

A. Vectren North estimates that it costs approximately $1,591 to paint a meter set. As such, the annual cost to paint 500 meter sets is $795,500 and is a component of Petitioner's Exhibit MSH-2, Adjustment A25. The remaining portion of this adjustment which relates to meter audits for billing purposes is discussed in detail by Vectren North Witness William S. Doty.

Field Management

Q. Will Vectren enhance its management staffing within the three Divisions that make up Vectren North?

Yes. An Operations Manager will be assigned to each of the three Vectren North divisions and will provide support to the Division Manager and to Division operations. The Operations Managers will be primarily responsible to support the Division Manager acting in an assistant Divisional Manager role, providing additional oversight of operations, and acting as the community liaison for the division with local officials and Emergency Management Agencies. With the implementation of the proposed programs and the aging workforce issues, adding these managerial positions will allow better oversight of employees and improved interaction with customers and communities on local projects.

Q. What is the pro forma expense associated with the three Operations Manager additions?

A. These three Operations Managers are dedicated to Vectren North at an annual cost of $117,000 each. Also, we have filled a Division Manager role that was vacant during the test year. These four positions total $484,037. See Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 35).

III.

GAS STORAGE FACILITY IMPROVEMENT PROGRAMS

Q. Is Vectren North proposing to engage in maintenance programs relating to its Gas Storage facilities?

A. Yes. Vectren North is proposing to add three programs relating to its gas storage facilities. These programs are as follows and will be described below:

- Gas Well Logging Program
- Field Storage Station/Wells and Propane Air Stations/Tank Painting Programs
- Hindustan Sulfatreat Replacement

Q. What is Gas Well Logging?

A. Gas well logging is a technique used in the natural gas industry for recording rock and fluid properties in geological formations. It refers to down-hole measurements made by instrument sensors on a logging tool lowered into a gas well and pulled out of the hole by a cable. The measurements are interpreted to locate and quantify potential zones containing natural gas, identify the migration of gas from existing zones, or to assess the integrity of the well casing. The log data is compared to a historical baseline log to determine if the gas is contained within the expected storage zone and the casing thickness is not compromised by corrosion.

Q. Why is it important for Vectren North to implement this program?

A. A gas well logging program is important to Vectren North because of the important role stored gas plays related to gas supply reliability and cost. Lost gas is costly. Non-performing wells diminish field output.

Q. Will Vectren North's customers benefit from this program?

A. Yes. If Vectren North does not maintain its gas wells and monitor their integrity, the gas deliverability may be reduced from sedimentary buildup on the well bore surfaces. Additionally, gas inventory can be lost if casing integrity is compromised and not properly repaired or mitigated. This could result in the potential loss of significant inventory dollars and increased costs passed on to the customer. Moreover, customer safety may be put at risk. If a corrosion leak in a casing allows gas out into an upper zone, it has the possibility of migrating to the surface under communities or individual structures which could at some point ignite. Because the path is unpredictable, it is important to monitor the condition of our gas wells to prevent this from occurring.

Q. What are the costs associated with this program?

A. Vectren North has four storage fields: Wolcott, Unionville, Hindustan, & Sellersburg. These fields store a total inventory of up to 19,661,709 Mcf of gas. Within these storage fields, there are a total of 156 wells and each of them will have a suite of logs run at a cost of $14,230 each. This program will be

performed over a 10 year cycle. As such, the total annual program cost is $221,988.

Q. Please describe the Field Storage Station/Wells and Propane-Air Stations/Tank Painting Programs that Vectren North proposes to implement?

A. Vectren proposes to paint all of its field station equipment, piping and gas storage wells, including all propane air stations, air equipment, piping and bulk storage tanks, every five years.

Q. Why is it important for Vectren North to implement this program?

A. It is important for Vectren North to implement this program because of the potential for atmospheric corrosion on above ground facilities. Regulations require that pipeline facilities exposed to the atmosphere must be cleaned and coated with a material suitable for the prevention of atmospheric corrosion. This painting program is necessary to prevent atmospheric corrosion and extend the useful life of this equipment.

Q. What are the costs associated with these painting programs?

A. With respect to painting Vectren North's storage facilities, the total annual cost is $65,500 per year. This cost includes the cost of contract labor, materials and environmental costs for disposal of the paint. With respect to painting Vectren North's propane air station and tanks, the total annual cost is $46,000 per year. This cost includes the cost of contract labor, materials and environmental costs for disposal of the paint. These facilities will be painted on a five-year cycle. The total combined annual cost of these two painting programs is $111,500.

Q. Please explain the Hindustan Sulfatreat Replacement pro forma?

A. Vectren North owns the Hindustan Storage Field which is located in Monroe County. This storage field has anaerobic bacterial colonies growing within the storage reservoir, which is common for limestone formations. Hydrogen sulfide (H2S) is a by-product from the colonies which contaminates the natural gas stored in the reservoir which must be removed using Sulfatreat towers. Vectren

North installed two Sulfatreat towers in 1999. As gas flows through the towers the Sulfatreat has an affinity for H2S and its molecular structure neutralizes and traps it, making it inert. Sulfatreat does not regenerate itself so it must be replaced after it absorbs its maximum capacity. The periodic replacement of the Sulfatreat is necessary to effectively remove the contamination in the natural gas. The test year did not include this periodic expense.

Q. What are the costs associated with this replacement?

A. The replacement cost of 80,000 pounds of Sulfatreat is $39,000. Dumpster rental is approximately $200/ month per dumpster. At least three dumpsters will be required to hold the Sulfatreat, and it may take approximately three months for the slurry to dry out. The total dumpster rental is anticipated to cost $1,800. There will be a transportation charge of $2,000 to haul the spent product to a licensed landfill. Disposal costs will be approximately $30/ton for a dry landfill compatible product; therefore, the disposal cost for 80,000 pounds of Sulfatreat is approximately $1,200. Additionally, there will be a dumping fee of approximately $6,000. A crane will be needed to lift the 2000 pound sacks of Sulfatreat to replenish the tower. The cost is $150/ hr and it will be needed for two hours. The total cost to replace the Sulfatreat in one tower at Hindustan and properly dispose of the waste is $50,000, and this process will be performed every five years. This yields an annualized cost of $10,000.

Q. What is the total expense adjustment related to these Gas Storage Facility Programs?

A. As reflected in Petitioner's Exhibit MSH-2, Adjustment A22, the total of these programs is $343,488.

IV.

ASSET MANAGEMENT TRANSFORMATION

Q. Please describe Vectren's Asset Management Transformation initiative.

A. AMT is a long-term program to more efficiently manage Vectren's gas facilities and people. The goal of AMT is sustainable cost control via four tracks: capital investment planning and budgeting; project design standardization; work

execution initiatives; and, performance management techniques to measure success.

The primary reason for undertaking AMT is to implement a more consistent and structured set of processes across Vectren's organization. Using available technology, Vectren will create or modify certain work practices. The new practices will utilize an asset information-based approach to move our processes toward a preventative maintenance focus. Benefits will be achieved by standardizing engineering design processes and from more efficient work execution. As the program progresses, each "track" will further allow Vectren to target capital investment decisions on infrastructure to achieve objectives with the lowest capital and O&M costs. Over time, this approach will result in enhanced reliability, safety, service delivery and overall efficiency.

Currently, the project is in the middle of its life cycle. Most of the Vectren North benefits associated with the AMT project should occur during the 2009 – 2010 timeframe. Because the project remains in progress, the projected larger term costs and savings were not included in this case. The anticipated cost savings will occur well beyond the pro forma period, and therefore are very speculative as to both timing and amount. The potential cost savings are linked to the expenditure of significant capital costs and other expenses. All told, Vectren projects that it will incur over $26 million of capital costs in technology which has not yet become used and useful. The new systems will likely go in service sometime in 2008-2009. There will then follow a training and implementation process, and the success of that process will dictate the timing and amount of subsequent cost savings.

Q. Does this complete your testimony?

A. Yes, it does.

INDIANA GAS COMPANY, INC.
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY
OF
JAMES M. FRANCIS
DIRECTOR OF ENGINEERING & ASSET MANAGEMENT

ON

THE BARE STEEL AND CAST IRON REPLACEMENT PROGRAM,
INTEGRITY MANAGEMENT PROGRAM EXPENSES INCURRED TO DATE AND PROJECTED AND
THE GREENCASTLE PIPELINE PROJECT

SPONSORING PETITIONER'S EXHIBITS JMF-1 THROUGH JMF-14

INTRODUCTION

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

A. My name is James M. Francis. My address is One Vectren Square, Evansville, Indiana, and I am Director of Engineering & Asset Management for Vectren Utility Holdings, Inc. ("VUHI"), the parent company of Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren North" or "the Company").

Q. What are your duties in your present position?

A. I have responsibility for engineering and technical support for Vectren North utility operations. My specific responsibilities include System Design and Planning, Engineering Systems Support, Corrosion Control, Project Engineering, Compliance, Standards, Land Services, Asset Management, Pipeline Integrity Management, and Capital Planning and Management. Additionally, I am responsible for identifying and implementing many of Vectren North's asset management programs.

Q. Please describe your work experience.

A. I have been employed by Vectren North since April 8, 2004 when I became the Director of Technical Services. My title has subsequently been changed to Director of Engineering & Asset Management. Prior to my current position, I was employed with Vectren Energy Delivery of Ohio ("Vectren Ohio") since its purchase of the gas assets of the Dayton Power & Light Company in 2000. Most recently, I was the Regional Manager of the Troy Operating Region with responsibility for field operations. I also held other positions at Vectren Ohio including Planning Manager and Measurement Supervisor. Prior to my employment with Vectren, in 1991, I became an employee of Dayton Power & Light, serving as a Project Engineer, System Planner and Measurement Supervisor.

Q. What is your educational background?

A. I received a Bachelor of Science in mechanical engineering from the University of Dayton in 1993. I received a Masters in Business Administration from The Ohio State University in 2000.

Q. Are you involved in any gas industry association activities?

A. Yes. I am active in the American Gas Association's ("AGA") Operating Section. I am currently a member of the AGA's Distribution and Transmission Engineering Committee. I am also a member of two Indiana Energy Association committees. I am an active member of the Distribution Integrity Management Steering Group ("DIMSG") which is coordinated through the AGA.

Q. Have you previously testified before this Commission?

A. Yes. I have provided testimony in support of the Distribution Replacement Adjustment for Southern Indiana Gas and Electric Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren South") and the recovery of Pipeline Safety expenses for both Vectren South and Vectren North.

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

A. First, I will provide an explanation of a proposed bare steel and cast iron pipeline replacement program ("Program") for Vectren North. I will provide a general history on the use of bare steel and cast iron mains in the natural gas utility industry and discuss Vectren North's current situation. I will provide some comparative data between Vectren North and industry peers regarding the amount of remaining bare steel and cast iron pipelines as well as pipeline condition based information such as leak performance. I will provide some information on recent industry practices relative to similar replacement programs. I will identify the capital requirements for the Program and will discuss the benefits of pursuing the Program. Finally, I will discuss generally how Vectren North will manage the Program.

Second, I will provide a description of the incremental work performed by Vectren North under its Integrity Management Program to meet the requirements of the

Pipeline Safety Improvement Act of 2002 ("Safety Act") and the subsequent Federal Department of Transportation Integrity Management rulemaking pursuant to the Safety Act ("DOT Rule"). I will quantify the incremental Program expenses that Vectren North has prudently incurred for the period between July 1, 2005 through December 31, 2007 as a result of the Safety Act and the DOT Rule. These types of expenses were authorized for recovery by the Commission in its Order in Cause No. 42598. I will also provide an estimate of incremental expenses expected to be incurred from April 1, 2007 through December 31, 2007 associated with Vectren North's Integrity Management activities.

Third, I will provide a description of our ongoing Greensburg Pipeline Project which will be added to rate base in this case.

Q. What Exhibits are you sponsoring in this proceeding?

A. I am sponsoring the following exhibits:

- JMF-2- Vectren North Distribution Pipeline Mileage by Material Type
- JMF-3- Annual Report Distribution Main Mileage Summary.
- JMF-4-Main Leakage Rates
- JMF-5- Leakage Rate Comparisons
- JMF-6-Bare Steel and Cast Iron Leak Repairs by Hazard and by Class
- JMF-7- Bare Steel and Cast Iron Leakage Rates by Operating Center
- JMF-8-Vectren North Estimated Capital Requirements
- JMF-9-Independent Review of Cast Iron and Bare Steel Pipe Replacement Program
- JMF-10- Vectren North Potential Maintenance Expense Reduction
- JMF-11- Pipeline Safety Act – Actual Deferred Expenses August 1, 2005 – December 31, 2006
- JMF-12- 2005 Integrity Management Program Estimate compared to Period Ending July 31, 2006 Actuals
- JMF-13- Integrity Management Program Expenses by Work Category
- JMF-14- Integrity Management Program Estimate for Period January 1, 2007 through December 31, 2007

I. Bare Steel and Cast Iron Replacement Program

History

Q. Please provide an overview of the history of the use of bare steel and cast iron mains in the natural gas utility industry within the United States.

A. When natural gas distribution systems originated in the 1800's, the majority of the pipelines were constructed of cast iron. In the 1920's, local distribution companies ("LDCs") transitioned to using bare steel pipelines because of the superior joining methods through welding, although there were other methods of joining such as coupling and screw fittings. During the Great Depression and World War II, LDCs reverted to using cast iron distribution mains more often when steel supplies became scarce and as steel transmission pipelines began their expanse across the continental United States. Installation of new cast iron mains was generally non-existent after the 1940's when steel pipelines became the material of choice from the 1950's into the 1970's, until the introduction of plastic pipelines. In the 1950's transitioning from bare steel pipelines to coated steel pipelines began to occur, although bare steel was allowed for use until 1971. In 1971, the Department of Transportation (DOT) introduced the original minimum safety standards, Title 49 Code of Federal Regulations Part 192, stipulating the materials approved for use in natural gas transmission and distribution systems. The regulations eliminated cast iron and bare steel mains and fittings from the approved materials list for construction of new distribution systems.

Q. Please describe how the use of different pipe materials evolved in the Vectren North system.

A. Vectren North's predecessor companies used different pipe materials in their distribution systems. Throughout the territory, cast iron mains were used to distribute gas to its first customers throughout the early 1900's. Cast iron mains were the distribution pipe of choice into the 1940's, at which time there was a transition to bare steel mains. Bare steel mains were introduced into the Vectren North system in the late 1910's and 1920's with a significant increase in usage in

the 1930's. Bare steel was used extensively in the 1940's through the early 1950's when the company transitioned to wrapped coating on steel mains.

Current System

Q. What percentage of Vectren North's distribution mains is bare steel and cast iron?

A. As of the end of 2006, Vectren North had a total of 12,134 miles of distribution main. As of the end of 2006, there were 579 (4.8%) miles of bare steel and 177 (1.5%) miles of cast iron mains throughout the Vectren North territory. The majority of these pipelines reside within more urban and heavily populated areas of the numerous cities being served by Vectren North.

Q. At what rate is Vectren North currently replacing its bare steel and cast iron mains and how does this rate compare to others in the industry?

A. During the past five years Vectren North has replaced an average of nearly five miles of bare steel and three miles of cast iron main annually. Petitioner's Exhibit JMF–2 shows in detail how Vectren North's bare steel and cast iron mains inventory has changed since 2000. This replacement rate, if continued, would result in the replacement of the remaining bare steel and cast iron mains in about 95 years or an annual replacement rate of 1.0%. This compares to the three year industry average bare steel and cast iron replacement rate of 4.8%, as reported annually to the Department of Transportation ("DOT"). Petitioner's Exhibit JMF-3 provides a summary of the industry data derived from the annual DOT reports of all natural gas utilities in the United States.

Q. How does Vectren North's gas distribution system compare to those of other gas utilities?

A. As of 2005, the industry average percentage of bare steel mileage to total mileage is 4.7% compared to 2.8% for Indiana Utility averages, and 4.8% of the Vectren North system as of 2006, while the percentage of cast iron mileage to total mileage is 3.4% compared to 1.1% of the Indiana utility averages and 1.6% of the Vectren North system. This includes all entities who report information to

the DOT. Petitioner's Exhibit JMF–3 provides a comparison of Vectren North to the industry and Indiana utility averages.

Poor Pipe Condition, Reliability and Safety

Q. What operational issues result from continued use of bare steel and cast iron mains?

A. Cast iron mains have more failure modes for leaks as compared to other pipe materials. Cast iron pipe sections are joined together using couplings or bell and spigot joints, increasing the pipe's susceptibility to pulling apart or separating at the joints given outside forces – tree roots, excavating activity around the main, freeze/thaw or simply decay of the compression fitting material over time in the bell and spigot joints. Cast iron mains have neither coating nor utilize cathodic protection systems, and are therefore prone to corrosion in the form of graphitization. The manufacturing process used to create cast iron pipe produced a brittle material that is susceptible to circumferential and longitudinal fractures. Elevated natural gas system pressures also contribute to greater hoop stresses on the interior diameter of the cast iron mains leading to fractures at weak points in the pipe walls. The brittleness and susceptibility to cracking of the cast iron material make it more difficult to maintain than steel or plastic pipe, making repair or replacement sometimes very challenging and costly. Extra care is needed particularly during excavation and backfill to avoid unintended damage. Cast iron mains are particularly susceptible to damage when there is active construction work in their vicinity. This becomes a particular problem when road construction occurs. A road construction crew may damage a cast iron pipeline by simply working around it, and a utility may not discover that a leak has occurred until well after the work has been completed. Vectren North and contractor crews hired by Vectren North are very aware of the special precautions, such as support and blocking, that are necessary to protect a cast iron main while working around it with heavy equipment. Vectren North generally experiences cast iron failures in the form of leaks at unknown stubs, hub leaks, low operating pressures and cracking, resulting in low operating pressures and/or water infiltration.

Bare steel provided some benefit over cast iron in that it allowed for a more permanent joining method of welding, when utilized. Alternative joining methods for mains, such as threaded or compression coupled connections, were also used as they enabled time and cost savings in the installation process since the skilled labor of a welder was not required. However, because these pipelines do not have coating and are not cathodically protected, corrosion on these pipe systems has become a problem over time. In addition to the corrosion driven leakage, material failures as a result of aging and the absence of coating or cathodic protection have led to a significant amount of leakage. These failures occur on various components of the system such as service tees, valves, couplings, and bell and spigot joints. Corrosion, material defects and aging failures account for approximately 95% of Vectren North's below ground bare steel and cast iron leaks repaired since 2003.

Q. Is there a difference in the operational performance of bare steel and cast iron mains from that of protected steel or plastic mains?

A. Yes. Bare steel and cast iron mains have significantly higher leakage rates than do protected steel and plastic mains. This leads to higher operating and maintenance expenses, greater line losses and safety and reliability risks. Vectren North's 2006 leakage rate, which Vectren North defines as the number of main leaks repaired per mile of main, caused by corrosion, material defects, or other, for the various material types is as follows: Bare Steel – 0.31, Cast Iron - 0.45, Protected Steel - 0.04, and Plastic - 0.01. Petitioner's Exhibit JMF–4 charts the leakage rate for Vectren North from 2003 through 2006. Additionally, the bare steel leak rate would increase to 0.63 if the service line leaks were included.

The repaired leakage information is only one indicator of the operational performance. New leaks found each year either contribute to the number of leaks repaired or are managed as active, open leaks. Throughout 2006, Vectren North identified 6,063 new leaks, 2,100 of which are estimated to be on a bare steel main or service or a cast iron main. Additionally, Vectren North typically monitors a level of minor, non-threatening leaks and manages those through

standard industry leak management practices. At the end of 2006, Vectren North had 3,378 active, open leaks remaining in its system. It is estimated that at least 1,350 of these leaks are located on bare steel or cast iron infrastructure. Often for a specific leak, particularly if the cause was corrosion, the severity of the leakage will change over time and progress from a minor leak, a class 3 leak, to a leak in need of repair, either a class 2 or class 1 leak. As shown above, about one-third of all leaks are occurring on about 5.5% of our system.

Q. Does the increased likelihood of leakage on a bare steel or cast iron main create potentially serious issues for Vectren North and its customers?

A. When considering only those leaks repaired since 2003 that are directly attributable to bare steel or cast iron mains, 27% of those leaks were identified as being hazardous to public or employee safety, requiring immediate repair. Petitioner's Exhibit JMF–6 provides a count of the leaks repaired by hazard type. To date, Vectren North has not had any serious personal injury or property damage incidents related to such pipes. However, as these pipes age, the leakage rates will continue to worsen. As we gradually replace these pipes over time, we still have many miles of pipe that drive higher maintenance costs, and pose a threat to reliable service and public safety. Ultimately, the bare steel and cast iron mains must be replaced by better materials and technology. Recognizing this situation, we have conducted an analysis of our system, considered current industry practice, reviewed recent DOT initiatives in terms of integrity improvements, and designed a proposed replacement program that will cost effectively address this issue and provide our customers with better service.

Q. Have other utilities implemented or proposed similar replacement programs?

A. Yes. Vectren North Witness Scott E. Albertson provides a list of utilities with similar replacement programs. In a recent study conducted by the American Gas Foundation on the integrity of natural gas distribution systems, 17 of 23 companies surveyed have a formal program for the replacement of bare steel, cast iron and/or even some types of plastic pipe. The study concluded that there

has been an increase in the number of proactive replacement programs in the gas industry.

Replacement Program

Q. How does Vectren North propose to structure the Program?

A. Vectren North is proposing to replace its remaining bare steel and cast iron infrastructure over a 20 year period. The Program will target the poorest performing mains or those pipe segments identified as being the highest risk when possible, but will in general plan the replacement to optimize the capital spend, minimize the inconvenience to customers and our communities while improving the reliability and safety of our systems. The Program will generally target the replacement of larger sections of main which will allow for an increase in system pressures while minimizing material costs. When possible, we will coordinate construction activities with public improvement projects to minimize inconveniences to property owners as well as take advantage of synergies gained through less surface restoration. Additionally, the Program will attempt to optimize the use of contract resources which will minimize construction costs. Given the geographic diversity of the Vectren North system, replacement planning will be directed toward the areas of the system experiencing the highest leakage rates while maximizing resource utilization to more efficiently complete the replacements. Petitioner's Exhibit JMF-7 identifies different leak rates in the cities served by Vectren North. The Program will likely start with the replacement of mains and services in the cities of Anderson, Marion and Elwood and progress through the remainder of the territory until completed.

Q: Is it possible for Vectren North to structure the Program so that replacements are done more gradually instead of within 20 years?

A: Yes. The replacement could be done more gradually. However, Vectren North believes that a more systematic approach that annually identifies significant segments of this pipe for planned replacement and completes replacement in 20 years or perhaps sooner is a better approach from a cost, reliability, and safety perspective. The accelerated pace has a number of advantages, but requires a much larger commitment of capital during this shorter time period. Completing

the Program over a 20 year period is certainly beyond the ordinary course of business.

Q. What is the capital requirement associated with Vectren North's Program?

A. The expected Program cost is approximately $345,000,000, or an annual capital requirement of approximately $17,250,000 over a 20 year period. Petitioner's Exhibit JMF–8 details the expected annual and total capital requirement. Program costs are based on historical costs per mile of main replaced ($45.00 per foot) during the last four years on projects throughout Vectren's North and South territories. The costs may vary from year to year depending on the project sizes and changes in the availability and cost of labor, equipment and materials over the next 20 years. Based on potential economies of scale that may result from larger planned replacement projects performed as part of this program, it is possible that Vectren North's costs may be less that these estimates. Additionally included in the program is the protection of 328 miles of currently unprotected coated steel systems. It is possible for us to protect these systems at an average cost of $0.50 per foot of main through the installation of cathodic protection. We have successfully used this approach in parts of our system and have improved the performance of those pipe segments. Ultimately, absent this program a larger amount of capital would be spent over a longer time period to replace the pipe.

Q. What has Vectren North done to ensure that the proposed Program is prudent?

A. Vectren North has had discussions with industry peers from Duke Ohio (formerly known as Cincinnati Gas & Electric Company), AmerenUE, and the American Gas Association to identify and study similarly purposed programs as well as to identify pertinent information that would help substantiate our program. Research into recently performed studies, such as the American Gas Foundation's study on the integrity of natural gas distribution systems as well as participation in the industry organizations assisting in the development of forthcoming Distribution Integrity Management rules, has provided Vectren North with a considerable amount of supportive information. Vectren North also

engaged Stone & Webster Management Consultants Inc., a division of the Shaw Group ("Stone & Webster"), to perform an independent review of Vectren North's distribution system and performance history. Stone & Webster used our existing pipeline data and performance history to complete a review of the Program. They provided analysis and observations of trends that are occurring in the industry and provided some comparative analysis of Vectren North's system against the industry in general.

Q. Why did Vectren North choose Stone & Webster to perform this study?

A. Based on Stone & Webster's knowledge of the industry, their practical experience in performing such an analysis (they completed a similar analysis of the Duke Energy Ohio system for their accelerated replacement program in the late 1990's), as well as their understanding of the issues associated with bare steel and cast iron mains, Vectren North concluded that Stone & Webster was best suited to complete the analysis.

Q. What conclusion did Stone & Webster reach as a result of their independent analysis of Vectren North's distribution system?

A. After reviewing our pipeline data and leak history, as well as conducting industry research and drawing on their extensive experience and knowledge of the issues that generally exist with bare steel and cast iron mains, Stone & Webster recommended that Vectren North pursue the Program. Specifically their conclusions point to many of the issues created by bare steel and cast iron mains, of which the significant differences in leakage rates, compared to protected steel and plastic mains, is a significant factor supporting an expedited replacement program. While a relatively small portion of the distribution system infrastructure, bare steel and cast iron accounted for 48% of the total leakage repairs on pipe segments included in the Stone & Webster report, Petitioner's Exhibit JMF-9.

Program Benefits

Q. Why does Vectren North believe it is prudent to pursue the Program at this time?

A. There are numerous benefits to the Program beyond the replacement of our most aged assets. First, the Program will replace the pipes that contribute most to system leaks. The resulting benefits to service reliability and safety are clear. Second, from a workforce efficiency standpoint, replacing this pipe based on a planned schedule versus smaller projects to remediate leaks will be beneficial, especially as we address the loss of more experienced employees associated with the aging workforce. There should also be some significant benefits relative to the optimization of our capital spending. This Program to replace leak prone materials will also improve customer satisfaction as leaks and outages are avoided. Once underway, as we retire leaking pipes we will be able to reduce maintenance expenses. Over time, we expect the Program to contribute to a lower level of lost and unaccounted for gas. As the Program will be extensive, we also believe that there will be long term benefits to those communities impacted by the replacements. Finally, there will be benefits associated with improving this part of the system as the anticipated Federal Distribution Integrity Management Program ("DIMP") requirements become effective.

Q. How does Vectren North believe this Program will impact its workforce?

A. Like many utilities in the industry, Vectren North currently faces the challenges of an aging workforce. Work associated with poor conditioned mains is typically very demanding. An aging workforce is much more challenged to complete this work without injury. However, this work is also typically more complex than when working with other materials such as plastic and requires seasoned skills and knowledge. By replacing the mains that cause much of the unscheduled activities, such as leak repairs, we will eliminate the primary sources of this work and thus have the opportunity to redirect our internal resources to other activities. And, as our experienced workforce exits and new employees are hired to take their place, the reduction in the variety of materials to be maintained will simplify future job requirements which should reduce training needs.

Q. How will the Program allow Vectren North to improve its use of financial capital?

A. Whether we pursue this Program or continue with our current rate of replacement, all of these mains and services will eventually be replaced. The current rate and cost of replacement is a result of the combination of planned replacement projects and unplanned projects. Generally, the unplanned replacement projects are short segments to complete specific leak repairs. These shorter projects (less than 300') are more costly per foot of main installed than larger-scale projects. The blend of planned and unplanned projects yields a fairly consistent overall average cost per foot which was used as a basis for establishing the Program costs. The Program will reduce (in number) and eventually eliminate the shorter unplanned replacement projects and will minimize our longer term capital needs. The Program presents a tremendous opportunity for improved capital utilization for a number of reasons. By increasing the average size of the projects, we will improve our average installed cost per foot of main to replace the bare steel and cast iron facilities. Our contract resources will be able to generate some economies of scale which will allow us to see reduced installation costs versus what we typically see today as a result of smaller replacement projects. Most of the bare steel and cast iron mains are operating at a standard operating pressure of approximately ¼ pound per square inch ("psi"). Given the lower operating pressures, this requires main sizes to be larger than if designed to operate at elevated pressures, which is typical of newer distribution systems. The larger projects will allow us to install smaller diameter mains, which are less costly from both a material and labor perspective and allow us to operate the distribution systems at higher pressures, which in turn will also reduce the material costs associated with service line replacements for the same reasons. While Vectren North has estimated the Program costs at historical average costs for similar work, we expect efficiencies may be offset to some extent by future increases in the cost of labor and materials or any location challenges that are presented when working in a more urban setting. Of course, absent the proposed program, cost increases will impact the cost of replacements even more since we will perform such replacement of the pipe over a longer time period.

Q. Will the additional capital invested under the Program produce additional revenue?

A. No. The affected mains are typically in older, well established areas of the communities we serve and are essentially saturated with customers, allowing no room for additional customers. Individual customer decisions to replace existing electric appliances with natural gas are always a possibility, but in and of itself, the Program is not expected to produce incremental customers or load.

Q. How will Vectren North's customers benefit from this Program?

A. It is not uncommon for customers who are served by bare steel or cast iron mains that operate at lower pressures (and are therefore susceptible to leakage and water infiltration problems) to experience outages or call Vectren North to investigate a gas odor, which drives a significant amount of meter order work. This type of work requires interaction of our customers with our contact center, requires customers to be at home and available for our service technicians to assess the problem, and generally causes disruption to their daily routines. By eliminating the cause of many of these events and by increasing system operating pressures, we will be able to reduce the number of asset condition related orders such as outside leak calls and no gas calls, and thus reduce the inconveniences to the customer. Additionally, by not having to work to repair the source of the problem, such as a leak repair, our customers will not be impacted by crews digging in their streets and yards.

Q. How will the Program improve public safety?

A. Any time there is substantial leakage there exists the possibility of an incident. Our leakage information from 2003 through 2006 indicates that 27% of the total leaks on the bare steel and cast iron mains resulted in a potentially hazardous condition. This means that gas was found in a confined space, migrating into sewers or within or near building walls, or the gas main resided under a hard surface, such as a road, and its most likely escape path would place gas near an occupied building. Additionally, 72% of all of the bare steel and cast iron leaks repaired in that same timeframe required immediate repair (class 1) or repair within 6 months of discovery (class 2). Petitioner's Exhibit JMF-6 provides a

breakdown of the hazard and class of the bare steel and cast iron leaks repaired. This analysis only considered below ground leaks. The replacement of bare steel services will also result in a reduction of above ground leaks. The above ground meter settings were installed at the same time as the services. These assets, too, are much more susceptible to leakage caused by corrosion or aged equipment and material than are new installations. The replacement of these mains and services would eliminate a considerable portion of Vectren North's total leakage. This is not only a benefit to public safety, but also to the safety of our employees and contractors.

Another positive impact to public safety will result from the materials used for new construction. Plastic mains will be primarily used for the new installation. Plastic mains allow us to more easily isolate a damaged area and minimize the impact to our customers. Additionally, all replaced customer service line installations will include an excess flow valve. This is a device that will shut off the flow of gas automatically if a customer's service line is severed and experiences a significant loss of gas. This reduces the amount of gas that would be lost and unaccounted for but also minimizes the amount of gas released, thus reducing the likelihood of an incident.

There is an additional aspect of safety that is not associated with leakage. There will be less leak repair activity thus reducing the possibility of property damages as well as people working or playing near a construction site. Vectren North does not typically experience safety incidents during its construction activity, but because of the nature of the work, it does pose a threat to public safety. Such threats are dramatically reduced when construction can be planned well in advance, as the Program contemplates.

Q. Will the Program have any impact on unaccounted for gas?

A. Over time we would expect to see our unaccounted for gas percentage improve, but the impact is difficult to quantify. Any time we can reduce leakage, we will reduce unaccounted for gas volumes. However, since the volume of gas lost with any given leak is not known and the lost gas is impossible to measure,

reduced unaccounted for gas is more of an intuitive benefit. Over time, any reduction in unaccounted for gas will translate to gas cost savings for sales customers and will reduce volumes retained from gas transportation customers as well.

Q. Given the amount of additional replacement work, how will Vectren North work with the impacted communities to make this effort less disruptive and of benefit to its customers in these communities?

A. The Program will certainly have a significant impact on the communities Vectren North serves because there will be more significant construction activity. However, because we will have better long range replacement plans and will have identified opportunities to remove our pipelines from under the streets, we will be able to better coordinate our replacement strategy with the affected cities. This will improve the cities' abilities to plan for paving restoration and sidewalk replacements. Too often, a city will repave a road only to have a utility dig into it to gain access to its cables, wires or pipes. As much as practicable, we will place our facilities in locations that will eliminate these disturbances in the future. This will further improve the positive relationships we have with our cities today. In the long term, this should result in reduced costs to the cities as well as to Vectren North. Further, rather than deal with many unscheduled leak repairs at various locations with less advance notice to the communities, we will have the opportunity to coordinate the plans and engage in larger more focused projects, expecting that we will not need to return to fix leaks, absent third party damage to the new pipe.

Q. With all of the benefits of the Program, can you quantify any potential reduction in maintenance expenses?

A. I can provide an approximation of costs that Vectren North has historically incurred as a result of work associated with the bare steel and cast iron mains and services and will use this as a basis to determine the potential future cost reductions. I arrived at this estimate by investigating our more recent maintenance expenses and work activities. These activities were tied to the associated costs and summed to generate a total potential cost reduction. The

total expected reduction in annual maintenance expenses, once all bare steel and cast iron pipelines have been replaced, is approximately $890,700. Petitioner's Exhibit JMF-10 provides a breakdown of this estimate. Vectren North assumes that these savings will be realized incrementally based on miles of main replaced throughout the 20 year replacement period, and will continue to be realized for many years thereafter.

Q: Does Vectren North require cost recovery to complete the accelerated project?

A: Yes. Recently, "in the ordinary course of business," approximately 3% of Vectren North's annual capital budget has been spent to gradually replace this pipe. Because that activity does not generate revenue, this already represents a drain on company resources. To engage in this proposed accelerated program and devote such a significant portion of the capital budget to replacement, we must have financial support. Thus, the issue is, do the benefits of removal in half the time or less justify approval of the cost recovery mechanism? To engage in an accelerated replacement program without cost recovery, Vectren North would dedicate 25% of the $67 million capital budget to this effort. That is too significant a burden to place on the utility for a program that produces no revenue. Vectren North Witness Albertson covers the cost recovery mechanism that is designed to support this effort.

Q. Are there additional resources Vectren North needs to accomplish this task?

A: Yes. Vectren North plans to add a Program/Project Manager in its Engineering group. This employee will be responsible for providing project management expertise to key initiatives, large projects, and programs. They would work with key business leads to establish project plans, budgets, securing funding, create presentations, report progress and other standard project management tasks. Examples of projects that this position may work on are: bare steel/cast iron replacement program, AMR build out, and standards development.

Q. What is the pro forma expense associated with this additional position?

A. The Program/Project Manager works primarily on Capital projects but has a Vectren North allocated annual O&M cost of $6,770. This is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 29).

Distribution Integrity

Q. Presently the Pipeline and Hazardous Materials Safety Administration ("PHMSA") is pursuing the implementation of DIMP. Could you provide a brief summary of DIMP?

A. DIMP is a program intended to heighten the integrity of a company's distribution pipeline system. Vectren North already has an integrity management program in place for its transmission pipelines as required by existing federal pipeline safety standards. However this addresses only a very small portion of our total pipeline system. Based upon a report generated by a joint work/study group comprised of representatives of the stakeholder public, the gas distribution pipeline industry, state pipeline safety organizations, and PHMSA, DIMP appears to be generally targeting four areas: risk assessment and mitigation, leak management, damage prevention, and excess flow valves. Risk assessment is a process of knowing your system, in detail, identifying the threats to your system and mitigating those threats. Aged assets, such as bare steel and cast iron mains and services arguably pose a higher risk and thus will require some mitigation measure. Mitigation could come in many forms, some of which will be additional maintenance activities such as leak surveys, patrols, additional communications and a number of others, including replacement. Leak management is being standardized across the industry so that the classification process is consistent and comparative analysis and performance measures can be derived and used to monitor system improvements relative to leakage. Implementing an expanded damage prevention program will likely be a primary prevention and mitigation measure. This will increase required communication and education efforts to a number of target audiences. DIMP is also likely to include more integration of our work processes, particularly with our locating activities, as we will have more timely identification of potential threats and will need to react appropriately to minimize risk to our pipelines. Finally, the recent Pipeline Safety Reauthorization Act of 2006 requires that all operators install excess flow valves, which was

originally assumed to be a DIMP risk mitigation measure. Vectren North already installs these valves on new services, but the Program will expand the use of these to existing customers on the pipelines and services being replaced.

Q. How do you see DIMP impacting Vectren North?

A. DIMP will result in additional required O&M activities regardless of the type and condition of utility's assets. However, it is expected that a significant amount of additional requirements will be highly dependent on the types of assets, condition of those assets and the identified threats. Most of the risk mitigation measures are O&M activities, such as additional leak surveys, patrols, job site inspections and others. One potential mitigation measure could well be an accelerated bare steel and cast iron replacement program. It is likely that because of the age and typical performance of bare steel and cast iron mains in the industry, these facilities will drive more additional O&M activities than will protected steel or plastic mains. As such, a replacement program may be the most appropriate risk mitigation measure. It is fair to assume that some Program expenses will be required under DIMP, and still other DIMP related costs can be avoided if the Program is pursued diligently.

Q. Do you have any expectation of the costs of DIMP?

A. It is too early in the development of a DIMP program for Vectren North to understand the financial impact. However, approximately 96% of Vectren North's pipeline mileage will be impacted by DIMP and as such it is highly likely that DIMP will drive significant additional costs. Prudent capital improvements, such as those contemplated in the Program, will not only allow us to adhere to the DIMP requirements, but also minimize future maintenance costs. Therefore, apart from the maintenance cost savings estimated above, there is an aspect of avoided costs due to DIMP that add to the benefits of the Program.

Q. Do you have any expectation as to when the DIMP rules will go into effect?

A. PHMSA is currently working toward finalizing and submitting a notice of proposed rulemaking. The current timeline calls for a final rule to be in place by December, 2007. It is presently estimated that operators will be given 12 to 18 months to

develop and implement a DIMP plan. This is based on information obtained via participation in the Distribution Integrity Management Steering Group ("DIMSG") which is coordinated through the AGA.

II. Integrity Management Program ("IM Program") Expenses.

History

Q. Is Vectren North seeking to include its deferred IM Program expenses in base rates?

A. Yes. In its Order in Cause No. 42598, the Commission approved a tracking mechanism that allows Vectren North to recover its annual expenses that are prudently-incurred, incremental, non-capital expenses caused by the requirements of the federal Pipeline Safety Improvement Act of 2002 ("Safety Act"). Annual recovery is subject to certain caps. Since the tracker mechanism inception, Vectren North's annual recovery of these expenses was capped at $2,500,000. In that Order, the Commission also authorized Vectren North to defer pipeline safety expenses that exceed the cap each year and recover those expenses in its next base rate case.

Q. Has Vectren North filed annual applications with the Commission to update the tracker unit rates?

A. Vectren North filed the application to recover these costs for the period ending July 31, 2005. Vectren North Witness Scott E. Albertson discusses that filing in his testimony.

Q. Can you briefly describe the Safety Act's assessment requirement?

A. Yes. The Safety Act requires each operator to complete an assessment of its entire transmission system in high consequence areas ("HCAs") by December 17, 2012. An "assessment" is an inspection that must be performed on the segments of Vectren North's transmission pipeline system in HCAs to evaluate the integrity of each segment. Examples of assessments include internal inspections, pressure testing, direct assessments, or alternative methods that the Secretary of Transportation determines would provide an equal or greater level of

safety as appropriate assessment methodologies. Because of the design and operating characteristics of our system, the majority of the Vectren North pipelines will be assessed with the direct assessment method, with perhaps a small amount of pressure testing where possible. Because of a lack of redundancy in much of its system, pressure testing as a primary means of assessment would hinder Vectren North's ability to provide reliable service to its customers because large segments of its system would have to be shut down to perform the tests. Additionally, in-line inspection methodology is not appropriate because prior to mid-1994, the Vectren North transmission system was not, nor was it required to be, designed to accommodate the passage of internal inspection devices. As such, significant capital investment would be required to retrofit the pipeline segments. Therefore, direct assessments are required to be performed in order for Vectren North to comply with the Safety Act's assessment requirements.

Expenses Incurred

Q. Please explain the work that Vectren North accomplished between August 1, 2005 and December 31, 2006 relating to its IM Program.

A. Vectren North completed numerous activities included in its IM Program during the seventeen months ending December 31, 2006, and is on schedule to have its baseline integrity assessment of all applicable facilities completed by December 17, 2012 (with the "highest risk" 50 percent of those facilities being assessed by December 17, 2007). During the time period in question, Vectren North was focused on completing the assessments necessary to meet the December 17, 2007 deadline set forth in the Safety Act while minimizing the impacts to its customers. Specifically, direct assessment corrosion surveys were completed on 87 miles of pipeline, and assessments of 9 pipeline casings were completed. Direct examinations were completed as required and remedial repairs were made as needed. Capital projects were identified from the results of the assessments. In addition to the assessment work described above, Vectren North completed its Public Awareness requirements. Vectren North also continued to pursue the improvement and integration of its data into its GIS.

The annual update of the National Pipeline Mapping System ("NPMS") was completed as required. Field activities included the maintenance of our rights-of way along approximately 87 miles of high consequence area pipeline. As a result of the foregoing actions, Vectren North is achieving the objectives of the Safety Act by discovering and repairing anomalies on its system, which in turn is creating a safer and more reliable system for its customers and the general public.

Q. What total incremental IM Program costs were incurred from August 1, 2005 through December 31, 2006?

A. The total incremental IM Program costs for Vectren North during this period are $5,440,418. The actual costs by month are listed in Petitioner's Exhibit JMF-11, and agrees to the total listed on Petitioner's Exhibit MSH-3, Adjustment A33, Page 2 of 2 (line 4). Additionally, Petitioner's Exhibit JMF-12 compares the costs incurred to the estimate for 2005 as submitted by Witness Albertson in Cause No. 42598. Vectren North's actual costs for this time period were fairly close to the previous estimates for 2005. These costs have been deferred for recovery under the Pipeline Safety Adjustment Tracker authorized in Cause No. 42598.

Q. Can you provide a detailed explanation of these costs?

A. Yes. Petitioner's Exhibit JMF-12 provides the detailed breakdown of the IM Program costs by the primary IM Program requirements. These requirements are identified and grouped into four categories: Assessments, Data, Data Integration and Program Management. As discussed previously, because of the requirement to complete half of the required baseline assessments by December 2007, Vectren North's focus has been on the completion of assessments. Petitioner's Exhibit JMF-13 summarizes these costs into the primary work categories. Of the $5,440,418 expended on the Vectren North IM Program, $4,222,432 was directly attributable to the completion of assessments. This work included the research and preparation of the rights-of-way, the direct assessment of the pipelines, the direct examination of the pipelines and the inspection of casings on those pipelines. Data integration accounted for $443,152. This work included an extensive effort to gather and improve the data in the GIS,

production of maps and documents used in the IM Program as well as resources to manage and store the data received during inspections. The remaining costs, $774,834, were associated with the general IM program management. This included management oversight, updating processes and procedures, execution of the public awareness requirements and training.

Q. What is meant by "Data Integration"?

A. The Safety Act requires operators such as Vectren North to engage in a continuous improvement process by taking system data obtained about its pipelines during the assessment process, during typical maintenance activities, as well as during other activities and integrate that data into its existing plans so that they continue to evolve as Vectren North's system evolves. "Data Integration" refers to this process.

Q. Please describe the Data Integration activities performed by Vectren North during this time period and how they support the requirements of the Safety Act?

A. During the applicable time period, Vectren North completed the implementation of applications that are run within or in conjunction with its GIS system to support the activities required by the Safety Act. The implementation of these applications will allow the IM personnel to integrate the extensive amount of data that was being collected about its pipelines. The data collection effort gathered all applicable pipeline data from each of its operating locations in accordance with the appropriate standards. The new applications will allow Vectren North to manage the extensive data that is generated from this program, generate the appropriate paperwork to facilitate the associated assessment work and complete the various analyses to evaluate risk.

The Safety Act has a requirement that the program is a continuous improvement initiative to ensure that high consequence areas are properly identified, as they may change over time, new threats to the pipeline are identified and new data is integrated to maintain an accurate risk model. Throughout much of 2005 and 2006 Vectren North received new assessment data and other information which

needed to be managed in preparation for data integration. Efforts to improve data, produce documents to aid in IM Program management and assessment processes, and to manage and store data has been ongoing. The implementation of the GIS applications provides Vectren North with tools to efficiently manage the IM Program. Additionally, these applications will allow Vectren North to complete the data integration requirements of the Safety Act.

Q. Are all of the costs incurred by Vectren North reasonable and necessary costs?

A. Yes. As described above, all of the costs incurred by Vectren North were incurred as a direct result of the Safety Act's requirements and were necessary to ensure compliance with the Safety Act.

Pro Forma Year Expenses

Q. What are the estimated IM Program costs that Vectren North will incur from January 1, 2007 through December 31, 2007?

A. The estimated costs for the IM Program for Vectren North over this period are $3,538,302. Petitioner's Exhibit JMF-14 provides the details behind this estimate.

Q. Does Vectren North propose recovery of any deferred IM Program costs outside the tracker mechanism approved in Cause No. 42598?

A. Yes. Witness Albertson and Witness Hardwick further discuss the Company's proposal.

IM Program Audit

Q. Has Vectren North's Integrity Management Program been audited?

A. Yes. PHMSA and the IURC Pipeline Safety Division participated in an audit of Vectren North's Integrity Management Program in May 2006.

Q. Have the results of the audit been finalized?

A. To date, PHMSA has issued a Notice of Amendment and the IURC has issued an Inspection Report. Initially, PHMSA provided an Integrity Management

Inspection Summary Report, to which Vectren North was to work from to remediate any items identified during the audit.

Q. Could you briefly describe the Notice of Amendment and the actions Vectren North has taken in response?

A. The Notice of Amendment detailed specific areas of Vectren North's IM procedures that required modification to comply with the expectations of the PHMSA audit team and the requirements of the Safety Act. Primarily, the requested changes to the procedures were to add significant detail to (1) ensure that all applicable standards and requirements were being followed, (2) identify that there was a process owner and (3) ensure that generally the who, what, when, where, why, and how often were identified on each procedure.

Vectren North completed the modification of all of its procedures, validated those procedures against the specific recommendations identified in the audit report as well as validated the procedures against the audit protocols used by the audit team. Vectren North submitted these procedures to PHMSA and to the IURC on March 31, 2007.

Q. Is Vectren North the only utility to receive a Notice of Amendment?

A. No. Notices of Amendments on IM procedures have been fairly commonplace. Through participation in various conferences, conference calls, and industry teams working through the AGA, it is very apparent that Vectren North's procedures, prior to the audit, were not considerably different from those of other utilities. The requirement of the rule (192.907) states that an "operator's initial integrity management program begins with a framework and evolves into a more detailed and comprehensive integrity management program." Particularly given that this rule was new and that the level of detail required was not something typical within the industry, some very common themes surfaced through these discussions, particularly around procedural detail and documentation expectations.

Q. Could you briefly describe the Inspection Report issued by the IURC and Vectren North's response requirements?

A. The Inspection Report referred to the items identified in the initial Integrity Management Summary Report provided to Vectren North at the exit of the audit. Additionally, three follow-up requirements were identified. Vectren North is to provide monthly updates as to the program's progress. Vectren North is working from a project plan that has been provided to the IURC pipeline safety staff at various meetings since the audit and will be providing updates on the progress on many of the items in the plan. Secondly, Vectren North will be providing monthly updates as to the progress of the assessment work. This will provide the IURC with insight into Vectren North achieving the assessment of 50% of the HCA pipelines. Lastly, the IURC has requested follow-up inspections which will be conducted at their request.

Q. Could you briefly describe any findings set forth in the Integrity Management Summary Report that have not been discussed previously?

A. In the report, PHMSA correctly noted that Vectren North's focus to date had been on completing assessments, and PHMSA did not take issue with the assessments that have been completed to date. Those assessments, as well as all other work performed to date, have been useful and necessary to implement our Program and are required under the Safety Act.

PHMSA identified several areas where it believed that Vectren North could improve upon its program. PHMSA suggested that Vectren North increase the number of personnel devoted exclusively to carrying out the Program. Vectren North has added personnel to implement the Program and continues to use contract resources to supplement staffing needs. Vectren North has completed most of the outstanding items identified in the audit report and should complete the remaining, non-assessment items near the middle of May, 2007. From this point forward, the focus will be implementing the new procedures and completing the required assessments to meet the 50% requirement. Vectren North's project plan identifies all remaining field work to be completed by September, 2007 with the remainder of the year spent completing post assessment activities.

Q. Do the actual costs set forth above for IM program expenses from August 1, 2005 through December 31, 2006 and the estimate from January 1, 2007 through December 31, 2007 include costs of addressing the concerns raised by the audit team?

A. Yes, the actual costs incurred since the May 2006 audit includes costs for the additional personnel requirements as recommended by the audit team. These resources along with some contract resources were necessary to improve Vectren North's IM program. To date, Vectren North has endeavored to prudently manage expenses under the IM program, and it will continue to do so in the future.

Q. Are these costs reasonable and necessary in order to ensure compliance with the Safety Act?

A. Yes. The costs relate primarily to assessments of pipeline that have been completed. As to the documentation, we have kept in mind the guiding principle of the Safety Act is that continuous improvement of the IM Program is required. Section §192.907 of the DOT Rule states "The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a timeline for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program." All of the costs to date have been incurred as Vectren North ramped up its IM Program, improved its processes, procedures and data and performed assessments to meet the Safety Act deadlines. We will continue to improve the Program and will continue to meet regulatory requirements for completing assessments.

<u>Greencastle Pipeline Project</u>

Q. Are there on-going large capital projects that will be completed in 2007?

A. Yes. In addition to the Greensburg Project discussed by Vectren North Witness Thomas L. Bailey, Vectren North is also constructing a 12" pipeline to serve its Greencastle system.

Q. Please describe the reason for the Greencastle Pipeline Project.

A. The Greencastle Project results from an integrity management evaluation of an existing pipeline. Presently, there is a 51 mile pipeline from Terre Haute to Martinsville that the integrity management department determined would need to be replaced. The pipeline is a 1929 vintage line that was purchased a number of years ago from an interstate pipeline. It has a history of corrosion, cracking in welds and has had a number of repairs made to it. The Greencastle system is currently supplied via this old pipeline. This 51 mile pipeline operates at a pressure of 375 psi, making it subject to the integrity management requirements. As we began to conduct the "IM" evaluation, it became clear that this old line required replacement or some other solution to reduce operating pressure. The replacement cost of the 51 miles would have been approximately $24,000,000. As an alternative, a new pipeline from an existing purchase point north of Greencastle to the existing town border station is being constructed. This project consists of a 15 mile, 12" pipeline and a station modification that will cost approximately $8,900,000. This estimate is included in the rate base in Petitioner's Exhibit MSH-3, Adjustment A45, Page 2 of 3Upon completion of the Greencastle pipeline, the 51 mile pipeline will be de-rated to a 60 psi distribution line and can be safely operated at this reduced pressure. Not only are capital costs reduced, but the derating will avoid future integrity management expenses related to the old 51 mile pipeline.

Q. When is the Greencastle Pipeline expected to be constructed?

A. The Greencastle pipeline project is expected to have construction activity starting in June and is estimated to be completed in October, 2007. To date, all engineering is completed, material procurement is in progress and there remain only a few parcels left to secure all necessary easements. Preparation of the right-of-way is expected to commence in June with heavy construction activity to follow.

Q. How will the Company keep the Commission and parties apprised of the status and cost of this project during this proceeding?

A. Each month after the filing of Vectren North's case-in-chief, the Company will file with the Commission a monthly investment report regarding the status of the project and the costs incurred as of that time.

Q. Does this conclude your testimony?

A. Yes.

VECTREN NORTH
Distribution Pipeline Mileage
by Material Type

Year	Bare Steel	Cast Iron/Ductile	Coated Steel	Plastic	Total
2000	618	212	4905	5042	10777
2001	607	210	4895	5270	10982
2002	596	208	4889	5462	11155
2003	592	205	4889	5651	11337
2004	587	202	4874	5891	11554
2005	582	199	4862	6298	11941
2006	579	195	4836	6524	12134

ANNUAL REPORT
DISTRIBUTION MAIN MILEAGE SUMMARY

Industry Averages

DOT INDUSTRY DATA	2002	2003	2004	2005
Total Bare Steel	61664	56315	57336	51783
Total Cast Iron	42025	41091	40600	37319
Total Main Mileage	1136732	1107363	1154763	1092788

Replacement Rates	2002	2003	2004	2005	Average
Total Bare Steel		8.7%	-1.8%	9.7%	**5.5%**
Total Cast Iron		2.2%	1.2%	8.1%	**3.8%**
Total Bare Steel & Cast Iron		6.1%	-0.5%	9.0%	**4.8%**

Percentage of System	2002	2003	2004	2005
Total Bare Steel	5.4%	5.1%	5.0%	4.7%
Total Cast Iron	3.7%	3.7%	3.5%	3.4%

Indiana Utility Averages

DOT INDUSTRY DATA	2002	2003	2004	2005
Total Bare Steel	1225	1210	1138	1066
Total Cast Iron	507	491	455	428
Total Main Mileage	35854	35707	37324	37980

Replacement Rates	2002	2003	2004	2005	Average
Total Bare Steel		1.2%	6.0%	6.3%	**4.5%**
Total Cast Iron		3.2%	7.3%	5.9%	**5.5%**
Total Bare Steel & Cast Iron		1.8%	6.3%	6.2%	**4.8%**

Percentage of System	2002	2003	2004	2005
Total Bare Steel	3.4%	3.4%	3.0%	2.8%
Total Cast Iron	1.4%	1.4%	1.2%	1.1%

VECTREN NORTH Averages

VECTREN NORTH DATA	2002	2003	2004	2005	2006
Total Bare Steel	596	592	587	582	579
Total Cast & Ductile Iron	208	205	202	199	195
Total Main Mileage	11155	11337	11554	11941	12134

Replacement Rates	2002	2003	2004	2005	2006	Average
Total Bare Steel		0.7%	0.8%	0.9%	0.5%	**0.8%**
Total Cast Iron		1.4%	1.5%	1.5%	2.0%	**1.5%**
Total Bare Steel & Cast Iron		0.9%	1.0%	1.0%	0.9%	**1.0%**

Percentage of System	2002	2003	2004	2005	2006
Total Bare Steel	5.3%	5.2%	5.1%	4.9%	4.8%
Total Cast Iron	1.9%	1.8%	1.7%	1.7%	1.6%

Petitioner's Exhibit No. JMF-3
Vectren North
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Main Leakage Rates
Main Leaks Caused by
Corrosion, Material & Welds, Natural Forces & Other

Main Leaks Repaired	2003	2004	2005	2006
Bare Steel	225	180	208	180
Cast Iron	119	111	75	87
Coated Steel	258	194	164	215
Plastic	49	76	73	72

Miles of Main	2003	2004	2005	2006
Bare Steel	592	587	582	579
Cast Iron	205	202	199	195
Coated Steel	4889	4874	4862	4836
Plastic	5651	5891	6298	6524

Leak Rate	2003	2004	2005	2006
Bare Steel	0.38	0.31	0.36	0.31
Cast Iron	0.58	0.55	0.38	0.45
Coated Steel	0.05	0.04	0.03	0.04
Plastic	0.01	0.01	0.01	0.01

Leakage Rate Comparisons

Industry Averages

	2003	2004	2005
Corrosion Leaks/Mile BS	2.47	2.62	2.55
(Corr+Matl+Other)/Mile BS & CI	3.12	3.36	3.34
Total Leaks/Total Mileage	0.67	0.46	0.45

* Source data from Annual DOT Report forms PHMSA 7100.1.1

Indiana Utility Averages

	2003	2004	2005
Corrosion Leaks/Mile BS	1.20	1.46	1.10
(Corr+Matl+NatForce+Other)/Mile BS & CI	4.47	5.87	5.38
Total Leaks/Total Mileage	0.54	0.45	0.42

VECTREN NORTH Averages

	2003	2004	2005
Corrosion Leaks/Mile BS	1.07	1.05	0.40
(Corr+Matl+Other)/Mile BS & CI	3.67	4.18	3.42
Total Leaks/Total Mileage	0.78	0.54	0.52

Petitioner's Exhibit No. JMF-5
Vectren North
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Bare Steel & Cast Iron Leak Repairs
by Leak Hazard

As Found Hazard	2003	2004	2005	2006	Total	% of Total
CONFINED SPACE (VAULT, PIT)	6	7	8	6	27	1%
INSIDE BUILDING	13	4	4	7	28	1%
MANHOLE, CATCH BASIN, SEWER, ETC.	47	46	42	43	178	9%
NEAR BUILDING WALL	39	52	84	73	248	13%
PAVING TO BUILDING WALL	8	6	23	17	54	3%
Minimal to No Hazard	429	331	341	316	1417	73%
Total BS&CI Leaks Repaired	542	446	502	462	1952	100%

# of Hazardous Leaks represents 27% of BS & CI Leaks Repaired from 2003 through 2006

Bare Steel & Cast Iron Leak Repairs
by Leak Class

Leak Classification	2003	2004	2005	2006	Total	% of Total
Class 1	141	116	142	108	507	26%
Class 2	231	213	224	226	894	46%
Class 3	170	117	136	128	551	28%
Total BS&CI Leaks Repaired	542	446	502	462	1952	

Petitioner's Exhibit No. JMF-6
Vectren North
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Bare Steel & Cast Iron Main Leakage Rates by Operating Center All Below Grade Leaks Caused by Corrosion, Material & Welds, Natural Forces & Other

	Leak Rate				
Operating Center	2003	2004	2005	2006	Average
ANDERSON	4.8	3.7	4.4	5.0	4.5
MARION	3.1	1.7	4.5	3.7	3.3
ELWOOD	2.3	2.6	4.5	1.7	2.8
GREENSBURG	1.1	0.0	4.8	1.1	1.7
LEBANON	1.3	1.3	1.1	0.4	1.1
CLARKSVILLE	0.6	1.2	1.2	0.9	1.0
SHELBYVILLE	0.5	1.0	0.4	1.5	0.8
HUNTINGTON	1.4	0.2	0.8	0.3	0.7
MADISON	1.0	0.0	0.0	1.5	0.6
TERRE HAUTE	0.7	0.6	0.6	0.5	0.6
SEYMOUR	0.2	0.2	0.0	2.0	0.6
LAFAYETTE	1.1	0.4	0.3	0.3	0.5
MUNCIE	0.4	0.6	0.4	0.6	0.5
BLOOMINGTON	0.6	0.4	0.5	0.3	0.5
ROCKVILLE	0.5	0.3	0.7	0.3	0.4
NOBLESVILLE	0.6	0.1	0.5	0.3	0.3
BEDFORD	0.4	0.2	0.4	0.3	0.3
RICHMOND	0.5	0.4	0.3	0.2	0.3
FRANKFORT	0.2	0.2	0.4	0.4	0.3
NEW CASTLE	0.3	0.3	0.3	0.3	0.3
ATTICA	0.5	0.0	0.0	0.5	0.3
CRAWFORDSVILLE	0.3	0.4	0.1	0.1	0.2
MARTINSVILLE	0.0	0.3	0.3	0.2	0.2
GREENFIELD IN	0.3	0.2	0.2	0.1	0.2
GREENCASTLE	0.1	0.1	0.1	0.2	0.1
RUSHVILLE	0.1	0.0	0.2	0.2	0.1
COLUMBUS	0.1	0.1	0.1	0.1	0.1
VEDN Average	**0.7**	**0.6**	**0.6**	**0.6**	**0.6**

Vectren North Estimated Capital Requirements

			Replacement Cost	Capital Requirements
MILES OF DISTRIBUTION MAIN	**Mileage**	**Footage**	**$45/foot**	**20 Year**
Unprotected Bare Steel	579	3057120	$ 137,570,400	$ 6,878,520
Unprotected Coated Steel **	328	1731840	$ 865,920	$ 43,296
Cast Iron	177	934560	$ 42,055,200	$ 2,102,760
Ductile Iron	18	95040	$ 4,276,800	$ 213,840
Galvanized	0	0	$ -	$ -
TOTAL DISTRIBUTION MAIN	**1102**	**5818560**	**$ 184,768,320**	**$ 9,238,416**
			Replacement Cost	**Capital Requirements**
NUMBER OF SERVICES	**Count**		**$2400/Service**	**20 Year**
Unprotected Bare Steel	32897		$ 78,952,800	$ 3,947,640
Unprotected Coated Steel	25293		$ 60,703,200	$ 3,035,160
Protected Bare Steel	0		$ -	$ -
Galvanized	0		$ -	$ -
Copper	147		$ 352,800	$ 17,640
Service Tie-Overs ($600 EA)	33538		$ 20,122,800	$ 1,006,140
TOTAL SERVICES	**91875**		**$ 160,131,600**	**$ 8,006,580**
Total Replacement Cost			**$ 344,899,920**	**$ 17,244,996**

* Replacement Costs assumed to be in present Dollars

* Cost Averages arrived at from historical averages

** Program includes cathodically protecting unprotected coated steel systems

Independent Review of Cast Iron and Bare Steel Pipe Replacement Program

Submitted to

VECTREN

Vectren Energy Delivery

April 17, 2007

Shaw® Stone & Webster Management Consultants, Inc.

DRAFT

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1 EXECUTIVE SUMMARY

1.1 Introduction

Stone & Webster Management Consultants, Inc. ("Stone & Webster Consultants") was selected by Vectren Energy Delivery ("Vectren") to provide engineering consulting expertise and services in analysis of the need for the replacement of aged bare steel and cast iron mains and services. Vectren is an energy holding company headquartered in Evansville, Indiana. Through its wholly owned subsidiary, Vectren Utility Holdings, Inc. it holds three operating utilities, Vectren Energy Delivery of Indiana - North ("VEDI-N") (formerly Indiana Gas), Vectren Energy Delivery of Indiana - South ("Vectren South" or "VEDI-S") (includes the customers of former Hoosier Gas Corp and Southern Indiana Gas and Electric Company ("SIGECO")), and Vectren Energy Delivery of Ohio ("VEDO") (the former natural gas assets of Dayton Power and Light Company). The focus of this report is on Vectren's wholly owned subsidiary, VEDI-N.

VEDI-N provides energy delivery services to approximately 570,000 gas customers located in central Indiana. As part of its distribution system, VEDI-N has continued to rely upon some 756 miles of gas mains, which are comprised of bare steel ("BS") and cast iron ("CI") material dating back to the early 1900's. The aged BS and CI piping components continue to be the predominant source of gas leaks on the distribution system. Either corrosion of the pipe or failing couplings are the main problems found to result in leaks. As practiced by most natural gas distribution companies, efforts have been undertaken to replace these problem causing and potentially dangerous system components with updated piping material. The replacement program currently in-place by VEDI-N is an informal program that is more opportunistic than proactive, resulting in investments of about $1.7 million per year, which includes the replacement of BS services. Using this approach, VEDI-N will only very gradually replace the old piping over time.

To mitigate the risks for future leak events and to approach the replacement program in a more deliberate, economic and accelerated manner, Vectren engaged Stone & Webster Consultants to review its asset information, leak and system performance history in order to provide an independent assessment on the need for a proposed BS and CI accelerated replacement program. This report documents the results of our review and analysis.

1.2 Analysis

The purpose of our analyses was to statistically analyze and summarize the historical leak records and evaluate the condition of the existing BS and CI piping to qualify the need for the expedient prioritized replacement of the degrading BS and CI mains and services.

The data required for the study of the BS and CI mains and services was provided by VEDI-N and the DOT, the latter as reported by VEDI-N.

1.3 Findings and Considerations

Considering that the linear footage of BS and CI mains represents only 4.8% and 1.4%, respectively, of the VEDI-N system mains, and that these mains contributed to 35% of the system repaired leaks from 1999 to 2006, it is obvious that attention must be given to this portion of the system in order to improve upon the safe and efficient operation. When comparing BS and CI to other system mains comprised of

coated steel and plastic, the leak numbers dramatically show how problematic the older piping material is. For the period from 1999 to 2006, for every 100 miles of BS and CI mains there were 9 times as many leaks than found on every 100 miles of coated steel and plastic mains. The numbers indicate that the replacement of a relatively small percentage of the system can have an inordinately large impact on the number of system leaks and thus the overall system safety and the resources consumed by the leaks.

Our review found a total of 32,897 BS services on the VEDI-N system in operation in 2006. This number of BS services represents 5.4% of the total system services, contributing to roughly 7.5% of the system-wide service leaks repaired during the time period from 1999 to 2006. Over the same time period 734 BS services had been replaced. While the BS service leaks are relatively close in proportion to BS services on the system, the numbers do not reflect the considerable leaks occurring on the additional 25,293 coated/unprotected steel services. A program to replace the BS services should continue to include a program to cathodically protect the coated/unprotected services on VEDI-N to reduce the sizeable leakage numbers.

Stone & Webster Consultants also reviewed leak data for VEDI-N from the DOT Office of Pipeline Safety ("OPS"). Based on our findings we conclude that the current opportunistic replacement program at VED-N is generally not keeping pace with the increasing rate of leaks. Particularly when individual service areas are considered, the predecessor company replacement practices have resulted in the current status of system integrity.

While it is important to immediately focus on the most problematic BS and CI piping components, a plan should be progressed that addresses all BS and CI, as the aging mains and services continue to degrade, presenting an ongoing burden to the system. Such a plan should consider the service areas most at risk for leaks with an accelerated BS and CI replacement program. VEDI-N has recognized the urgent need to replace the remaining BS and CI components of its distribution system. By planning to implement an expedited replacement program, similar to other utilities, VEDI-N is operating proactively in the elimination of problematic system components.

Based on our experience with other utilities experiencing like problems with BS and CI, Stone & Webster Consultants recommends the implementation of an expedited BS and CI main and services replacement program.

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2 INTRODUCTION

To deliver natural gas to its customers VEDI-N has remaining in its distribution system some 756 miles of gas mains which are comprised of bare steel and cast iron material, some dating back to the early 1900's. VEDI-N used cast iron for its mains during its early development until the 1940's. Bare Steel was introduced into use in the 1910's and 1920's, with much heavier use starting in the 1930's. A transition to using only bare steel main occurred during the 1940's when cast iron was discontinued for new installations. The installation of these unprotected pipe systems was practiced until the 1950s, when coated steel pipe was introduced into the system. In the early 1970s plastic services began to be used as the natural gas distribution piping of choice. Current replacement practices for old metallic distribution mains use plastic pipe and epoxy coated cathodically protected steel pipe with less sensitivity to age degradation.

Bare steel and cast iron mains on the system range in size from 1.25 inch to 16 inch. Gas pressure on some points of the distribution system is as high as 130 psig while the majority of the system operates at standard pressure. The aged cast iron mains with their bell and spigot coupling, and the bare steel mains, mechanically coupled or with threaded/welded joints, have been the predominant source of gas leaks on the distribution system. The corrosion of the pipe and/or failing couplings is the primary contributors of integrity compromise that have resulted in leaks.

Similarly with the service lines on VEDI-N we found that approximately 33,000 bare steel services are currently in use, ranging in diameter of 0.5 inch to 2 inches in diameter. Depending on the customer to whom the service line is connected, the pressure utilization ranges from 7" w.c. to 130 psig. Bare steel services were installed as early as 1900 and were discontinued as a medium for gas conduit in the 1950's when replaced by coated steel piping. There are no cast iron services on the VEDI-N system.

Natural gas leaks are treated as serious events with potential elevated severity as these older metallic mains continue to degrade. Depending on the gas escape rate, a leak may often require reporting to the Department of Transportation ("DOT"). The decision to repair or replace a leaking main involves the consideration of many variables. Vectren uses their Optimain program to assist the engineering personnel in making the determination of whether to repair or replace a segment of main piping.

Recognizing the potential for continuing deterioration of the BS and CI components of the system, VEDI-N and its predecessor companies have followed varied replacement practices in the 1970's. Replacement has generally proceeded under the following guidelines:

- Mains in need of immediate replacement from active and prominent leakage.
- general convenience and opportunity to replace mains as a result of necessary pressure upgrades or where relocation was required for a municipality's street replacements.
- replacement in areas where high water tables were causing problems
- periodic planned replacement where conditions suggested replacement as the prudent course of action.

Presently, Vectren North's replacement program is a combination of planned replacement projects with need based replacement projects. Generally, from the year 2002 through 2006, the annual average cost related to bare steel and cast iron main replacement program was $1,047,500, with additional dollars spent on service replacement amounting to approximately $700,000 per year. Approximately 40% of the

projects completed over this timeframe were planned replacement projects, while the remainder were done out of necessity or opportunity.

Vectren engaged Stone & Webster Consultants to review the leak history of VEDI-N and perform statistical analyses to evaluate the leak rate severity and service integrity of the bare steel and cast iron mains and services. This undertaking is intended to ultimately implement measures, if necessary, to mitigate the risks for future leak events by identifying the need to adopt a replacement program more deliberate, scientific and economic in execution.

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3 VEDI-N DATA

The data utilized in our analyses was provided by Vectren from their Gas Compliance System, which contains the leak and repair history for the BS and CI components. The pipe facility data is stored in Vectren's Gas Facility Information Database. Additional data for our review was taken from the data bases of the DOT.

The pipeline segment data used for the analysis was extracted from the Gas Compliance System indicating that the VEDI-N natural gas distribution network is comprised of 12,134 miles of mains, which includes 579 miles of BS mains and 177 miles of CI mains. Additionally, roughly 33,000 of BS services were included in our analysis of VEDI-N. Vectren has records of installed CI and BS mains dating to the early 1900's. The transition to wrapped steel mains was made in the mid 1950s. The leak data available for our analysis is listed below.

- Pipe Segment Length – the length of pipe segment, which can be an arbitrary assignment made up of multiple pipe joints or simply a valve, regulator or replaced pipe section. Segments lengths vary from one foot to thousands of feet. This data is not a factor causative of leaks, and is used only in the segment data base.
- Pipe Material Type – either BS or CI, for this study
- Pipe Burial Depth – the measure of feet below the surface at which the pipe is buried
- Coverage Type – the type of coverage at the surface over the pipe, including grass, gravel, asphalt or concrete.
- Pressure – the maximum pressure at which the pipe is operated
- Risk Class – the classification related to the population density housed within the structures up to 100 feet from the distribution line. This parameter is used in consideration outside of the regression analysis.
- Pipe Diameter – the nominal diameter of the pipe in inches.
- Joint Type – the mechanism by which piping is joined. Joints include bell and spigot, mechanical, threaded or welded.
- Leak Cause –only leaks that are caused by corrosion or joint failure were considered
- Year of Installation – the year in which the pipe was installed.

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4 APPROACH TO IDENTIFYING THE NEED FOR A BS AND CI REPLACEMENT PROGRAM

Our approach to identifying the need for a formal BS and CI replacement program is a matter of collecting, sorting and analyzing the data and drawing conclusions. Through analyzing the data provided by VEDI-N and the DOT, and by comparison to replacement programs of similar utilities, meaningful conclusions can often be formulated. Ongoing practice to prevent and mitigate the risks associated with BS and CI mains/services, should be among the top priorities of VEDI-N.

Stone & Webster Consultants assessed the characteristics of the BS and CI segments of the system to identify the level of continuing risk to the aged unprotected metal components and consequently the need for an accelerated replacement program. Stone & Webster Consultants recommends that the results of this assessment be utilized by VEDI-N in their planning for a BS/CI Main/Services Replacement Program. Directly inspecting the condition of distribution piping in-situ cannot be carried out in the great majority of cases, so most information about the condition of mains and services is derived from data collected when repairing, replacing or surveying pipe segments. Evaluating the condition, remaining life and the serviceability of underground utility assets is a challenging and a difficult task. Unlike aboveground assets that are available for direct inspection, underground assets remain hidden from view. There are only bits of information that are available for the evaluator to glean and peer into the asset conditions. Therefore, Stone & Webster Consultants based its assessment on experience with other utilities, and our knowledge on causative leak conditions, in addition to the trending of leak and repair data in statistical review.

Data available on gas distribution systems can vary significantly both in quality and quantity depending on the utility. The data must be carefully evaluated and assessed before using it in analyses. Often assumptions are necessary to fill in the missing pieces of data. As in any analytical exercise, the assessment/evaluation of the distribution system remains based on the quantity and quality of data. This data is subjected to statistical analysis techniques in order to make inferences on the whole of the system. Data reported by VEDI-N to the DOT, the recent history of VEDI-N gas mains inventory, is shown in Table 1 and Figure 1, below.

The data confirms that plastic pipe has been used over the past 10 years to meet the system growth and replacement needs. Over the same period, even though replacement of BS and CI mains has been slowly declining, the proportion of the system comprised of BS and CI is still above 6.0%. This is illustrated in the pie chart, Figure 1, below.

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Table 1

Total VEDI-N Miles of Mains						
Year	Cast Iron	Bare Steel	Prot Steel /DI	Plastic	Total	% BS/CI
1999	192	624	4,952	4,827	10,595	7.7%
2000	189	618	4,928	5,042	10,777	7.5%
2001	188	607	4,917	5,270	10,982	7.2%
2002	188	596	4,909	5,462	11,155	7.0%
2003	185	592	4,909	5,651	11,337	6.9%
2004	182	587	4,894	5,891	11,554	6.7%
2005	178	582	4,883	6,298	11,941	6.4%
2006	177	579	4,853	6,524	12,133	6.2%

Figure 1

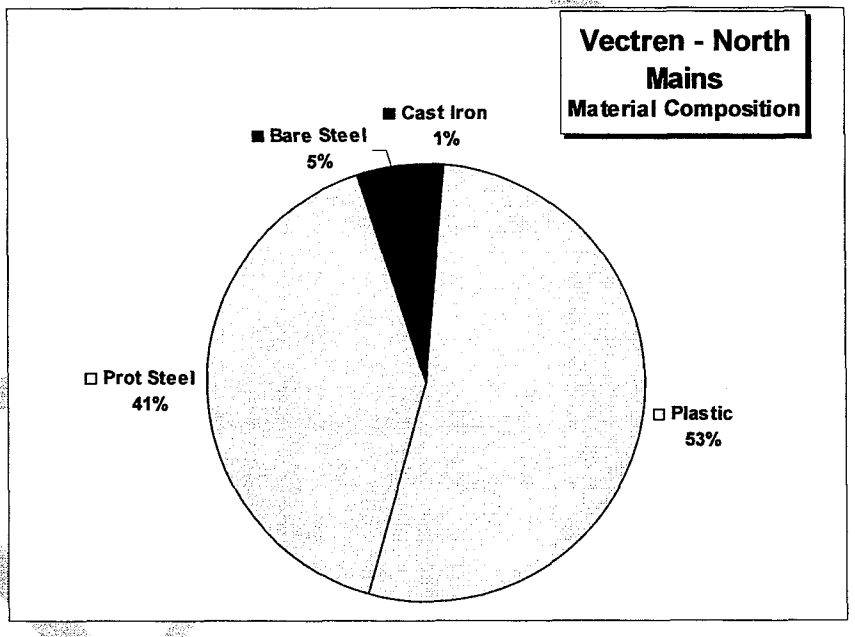


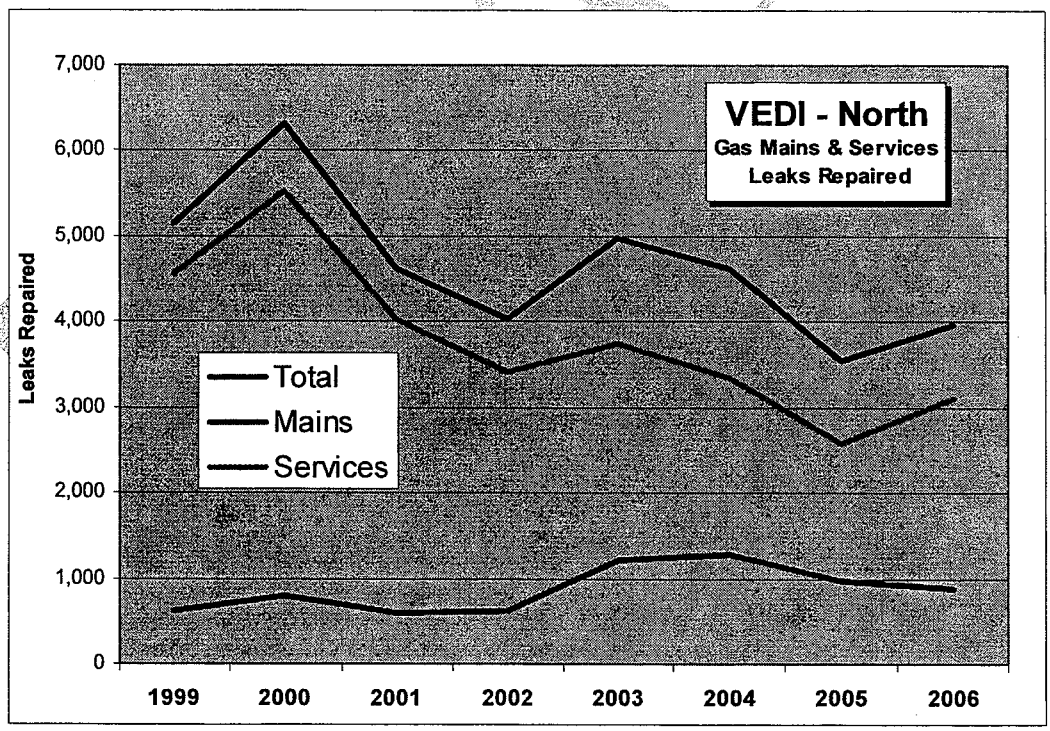
Table 2 and accompanying Figure 2, below, highlight the mains and services leak history due to corrosion, material defects, welds or other causes (the latter category used for leaks that are not formally categorized) on the VEDI-N system. The data shows a general decline in service leaks, which is indicative of not only repairs and replacement, but also the efforts to cathodically protect the unprotected coated pipe.

Leaks on the system mains peaked in 2004 and has since been on the decline, but only when considered at the VEDI-N system total level. As describer further herein, certain distinct areas of the system exhibit leak rates that are unusually high.

Table 2

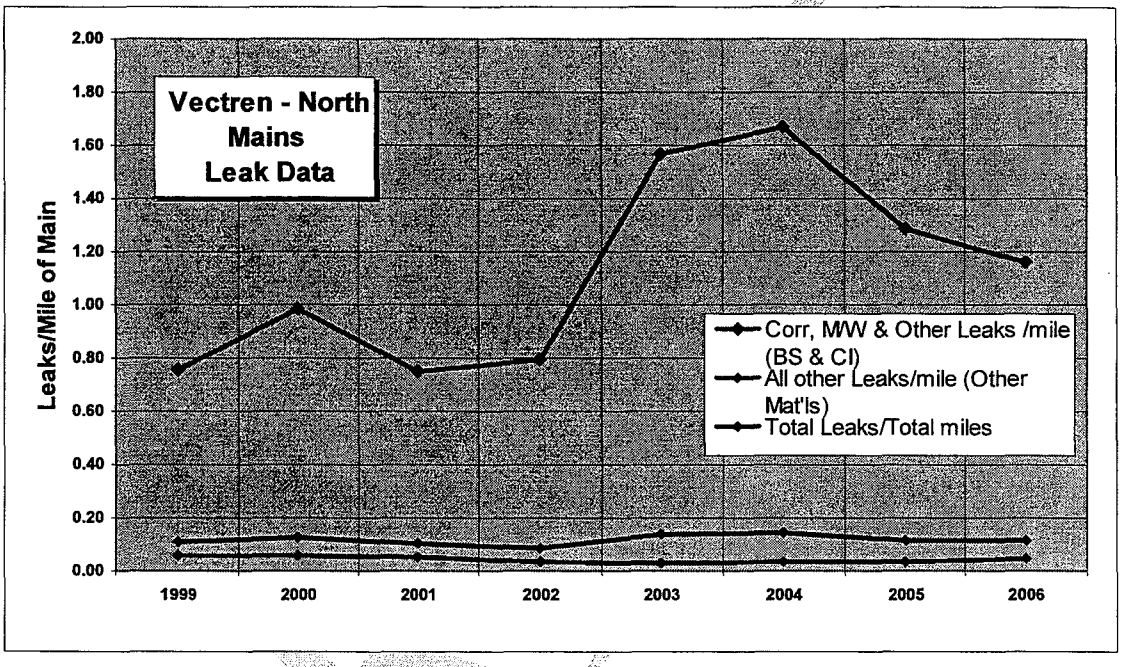
VEDI - North - Mains & Services Leaks Repaired Corrosion, Mat'l or Weld, & Other			
	Mains	Services	Total
1999	614	4,546	5,160
2000	792	5,518	6,310
2001	596	4,023	4,619
2002	624	3,410	4,034
2003	1,216	3,749	4,965
2004	1,281	3,347	4,628
2005	975	2,579	3,554
2006	875	3,097	3,972

Figure 2
Gas Leaks for all Mains and Services from Corrosion, Material or Weld, & Other Causes



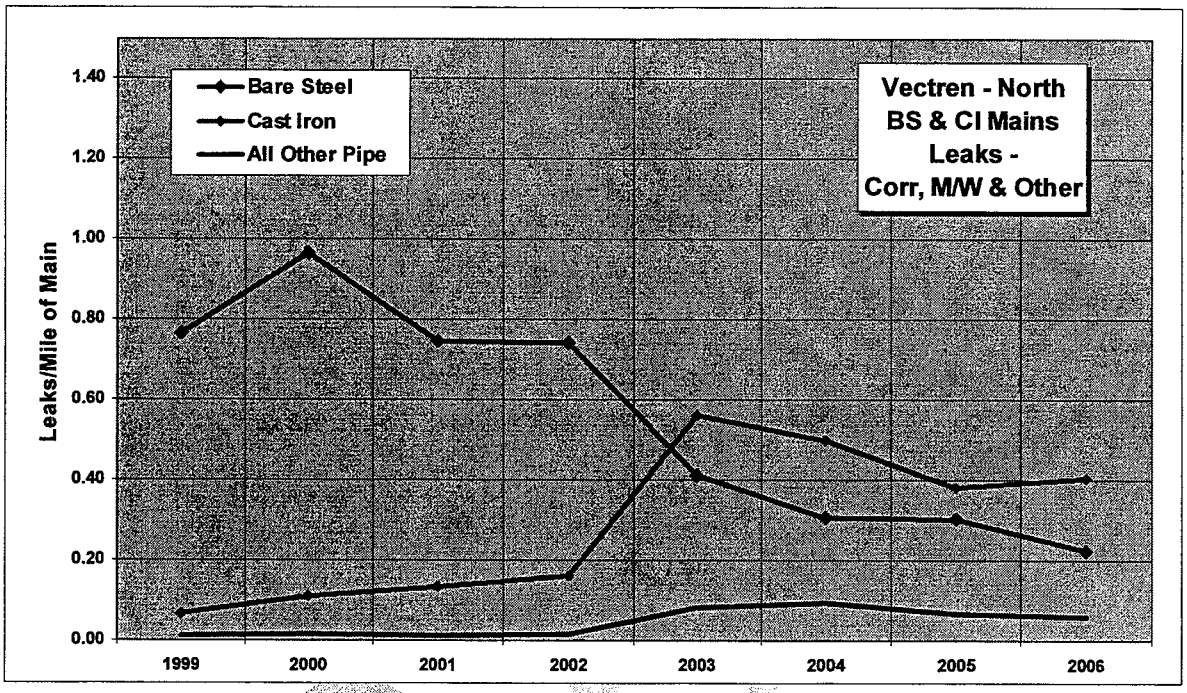
As mains segments of unprotected (BS and CI) pipe are removed from the system, the corrosion leaks per mile of unprotected pipe show a declining trend in the last two years, 2005 and 2006, however the overall trend since 1999 shows an increase in leak rate per mile. In comparison, the leaks due to all other causes per mile of non BS/CI pipe is relatively steady and considerably lower than on BS/CI. These trends can be seen in Figure 3.

Figure 3
Leaks per Mile from Unprotected Gas Mains



Leaks due to corrosion, material defects, welds and other are presented in Figure 4 for both types of unprotected mains, BS and CI, on a unitized basis. Note that the older mains of CI exhibit a higher rate of leaks than BS mains, and both BS and CI mains contribute considerably greater to similar leaks than all other pipe on the system. It is clear from Figure 4, that BS and CI remain a problematic component of the system when compared to protected pipe.

Figure 4
Gas Main Leaks - Bare Steel & Cast Iron
Comparison to Other Mains



As represented in Figure 4, while varying from year to year, the leaks per mile on BS and CI are currently (in 2006) four times and seven times, respectively, more frequent than leaks found on other pipe. These figures are more dramatic when compared against plastic, which will likely be the replacement material of choice. The leaks per mile on BS and CI are currently (in 2006) 22 times and 40 times, respectively, more frequent than leaks found on plastic. VEDI-N however is comprised of 31 distinct operating service areas, each unique in its quantity and composition of unprotected mains and services. When compared individually, the unitized leak rates are alarmingly high in some areas. In Anderson for example, the 2006 figure for leaks per mile of BS and CI is roughly 50 times the leak rate per mile of protected pipe. Table 3 shows a listing of service areas ranked by the average leak rate per mile of BS and CI. These numbers compare with an average leak rate of .05 per mile for all other type of pipe in the system.

Notable in Table 3 are the four areas (Anderson, Elwood, Marion and Huntington) with the highest leak rates per mile. These areas are located in a contiguous group in the northeastern part of the VEDI-N territory. The areas with the lower leak rates occur in a band across the mid section of the VEDI-N territory in central Indiana. Some of the leak trends within these different cities and areas are indicative of predecessor company replacement practices. As VEDI-N has expanded and acquired surrounding service territories the results of prior replacement practices appear evident in the figures seen in the table.

Table 3

Vectren North Bare Steel & Cast Iron Mains By Service Area									
	Leaks(Corr,M/W &Other) / Mile						Miles of Mains		
OSA	2002	2003	2004	2005	2006	5 yr Ave	Total BS/CI	Bare Steel	Cast Iron
Anderson	6.4	3.5	2.6	2.8	2.4	3.53	14.5	13.6	0.9
Elwood	5.1	1.4	1.2	2.0	0.4	2.02	9.4	8.7	0.7
Marion	1.9	1.9	1.4	2.2	1.8	1.82	19.2	18.2	1.0
Huntington	1.4	1.2	0.3	0.4	0.1	0.71	9.1	9.0	0.1
Lebanon	1.0	1.2	0.4	0.6	0.2	0.67	5.1	1.8	3.2
Shelbyville	0.5	0.5	0.9	0.4	1.1	0.67	8.1	2.8	5.3
Clarksville	0.6	0.5	1.0	0.6	0.6	0.66	48.7	18.0	30.6
Lafayette	0.5	1.0	0.1	0.2	0.1	0.39	54.5	26.1	28.3
Terre Haute	0.1	0.4	0.4	0.3	0.3	0.32	75.1	4.3	70.8
Seymour	0.9	0.2	0.2	0.0	0.2	0.29	5.6	1.0	4.6
Bloomington	0.3	0.4	0.3	0.3	0.2	0.28	26.4	9.4	17.0
Bedford	0.5	0.3	0.1	0.2	0.1	0.26	40.3	29.9	10.5
Rockville	0.8	0.4	0.0	0.0	0.0	0.25	7.3	7.3	0.0
Noblesville	0.7	0.3	0.0	0.1	0.1	0.24	14.3	14.3	0.0
Muncie	0.4	0.2	0.3	0.1	0.2	0.24	153.3	152.5	0.7
New Castle	0.4	0.2	0.2	0.2	0.1	0.23	23.1	22.1	1.0
Martinsville	0.6	0.0	0.1	0.2	0.2	0.20	11.8	11.8	0.0
Crawfordsville	0.2	0.2	0.4	0.1	0.1	0.18	16.9	12.8	4.1
Richmond	0.2	0.2	0.3	0.1	0.0	0.15	37.6	36.1	1.5
Frankfort	0.2	0.1	0.0	0.2	0.2	0.13	25.6	17.2	8.5
Greenfield	0.2	0.2	0.1	0.1	0.1	0.13	57.3	57.3	0.0
Columbus	0.2	0.1	0.1	0.0	0.0	0.10	48.9	42.9	6.0
Rushville	0.0	0.1	0.0	0.2	0.0	0.07	47.3	47.3	0.0
Greencastle	0.1	0.1	0.0	0.0	0.0	0.05	8.6	8.6	0.0

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5 FINDINGS AND CONSIDERATIONS

Many utilities nationwide and internationally have and continue to recognize the need for the replacement of ageing unprotected metallic system mains. As found on other systems, VEDI-N is experiencing a moderate percentage of leaks from its BS and CI mains as they continue to fail, predominantly due to corrosion. From 1999 to 2006 fully 35% of the leaks repaired on VEDI-N's system were on BS and CI mains, which represent only 4.8% and 1.4%, respectively, of mains in place. Additionally, as these mains age, they continue to corrode and degrade and represent an ever increasing risk to the system.

The contribution to leaks by BS and CI on the VEDI-N distribution system becomes more apparent when compared to coated steel and plastic mains on the system. From 1999 to 2006, BS has contributed 72 leaks per 100 miles of BS mains, while CI has burdened the system with 47 leaks per 100 miles of CI mains. In comparison, protected coated steel and plastic pipe have contributed only seven leaks per 100 miles. Given the significant differences in operational performance history, the expeditious replacement of the remaining BS and CI mains would substantially improve the safety and integrity of the VEDI-N system.

Since VEDI-N is comprised of 31 distinct service areas, each with unique conditions of unprotected pipe, attention should be given to replacing the BS and CI pipe in those areas evidencing elevated leak rates. As a recommendation, an accelerated and prioritized program should begin with the most risk prone area, followed in sequence with the next area contributing to the most leaks. In addition, a program to replace the BS services should include a program to cathodically protect the coated/unprotected services on VEDI-N to reduce the sizeable leakage numbers.

A recent study prepared for the American Gas Foundation titled "Safety Performance and Integrity of the Natural Gas Distribution Infrastructure" found that of the distribution companies surveyed, 65% have a planned replacement program for their CI mains and 74% have a planned replacement program for their BS mains system. The operators of these companies have identified higher risk segments of their distribution infrastructure in their BS and CI mains and are taking prevention and mitigation measures to insure the safety and integrity of their systems. In our telephone survey of distribution companies implementing BS and CI replacement programs, we have found those engaged in such to include Missouri Gas Energy, CenterPoint Energy Arkla, Northern Utilities, Inc., New York State Electric and Gas Corp., Rochester Gas and Electric Corp., Elizabethtown Gas, and Atlanta Gas Light Company, to name a few.

Our experience with other utilities in the area of BS and CI replacement programs has provided much insight into the importance other utilities and regulatory agencies place on the need to upgrade distribution systems. BS and CI replacement programs have resulted in significant reduction of corrosion related leaks. Over the four years since Stone & Webster Consultants completed the recommended replacement program for Duke Energy Ohio (formerly CINERGY), their leak rate due to corrosion has declined by 44 percent (as per DOT OPS information). In the case of VEDI-N, it is plain to see, that the replacement of just 6.2% of the system mains can result in the elimination of 35% of the system leaks. The elimination of 35% of the system leaks has a tremendous impact on the improvement in safety, system integrity and operating economics. Stone & Webster Consultants recommends the implementation of an accelerated BS and CI mains replacement program.

Vectren North Potential Maintenance Expense Reduction

Meter Order Management

Meter Orders	2003	2004	2005	2006	Average
Outside Leaks	7653	7427	7618	7391	7522
Investigate Gas Emergency	2012	2316	2911	1856	2274
No Gas	2325	2371	2563	1772	2258
Water in Service	55	57	65	31	52
Total	12045	12171	13157	11050	12106
Orders applicable to BS/CI	4216	4260	5131	3868	4369

* Used actual percentage of BS/CI leaks to total leaks repaired (35% - 2003, 35% - 2004, 39% - 2005, 35% - 2006)

Maintenance Expenses	2003	2004	2005	2006	Average
Total Meter Orders	260195	255017	275989	279181	267595.5
Meter Order Mgmt Actuals	$ 7,907,822	$ 8,179,670	$ 8,029,271	$ 7,598,103	$ 7,928,717
Average Cost per Order	30.39	32.07	29.09	27.22	29.69
Average cost per Asset Condition based Order	60.78	64.15	58.19	54.43	59.39

* Leak Investigation order averages approximately 2x's longer than average meter order

Maintenance Expenses Reduction Opportunity	2003	2004	2005	2006	Average
Orders Applicable to BS/CI x Average Order Cost per Asset Condition based Order	**$ 256,249**	**$ 273,269**	**$ 298,563**	**$ 210,513**	**$ 259,649**

Leak Repair & Management

Service Leaks Maintenance Expenses	2003	2004	2005	2006	Average
Service Leak Repair Actuals	$ 238,981	$ 455,468	$ 572,079	$ 598,599	$ 466,282
% of Service BS/CI Leak Repairs	23%	23%	28%	27%	25%
Service O&M Expenses attributable to BS/CI	$ 54,966	$ 104,758	$ 160,182	$ 161,622	$ 120,382

Main Leaks Maintenance Expenses	2003	2004	2005	2006	Average
Total Main Leak Repair Actuals	$ 843,180	$ 892,815	$ 1,141,400	$ 1,025,161	$ 975,639
Cost Associated with Soft Surface Repairs	$ 252,954	$ 267,845	$ 342,420	$ 307,548	$ 292,692
% of BS/CI Leak Repairs in Soft Surface	25%	29%	34%	29%	29%
Cost Associated with Hard Surface Repairs	$ 590,226	$ 624,971	$ 798,980	$ 717,613	$ 682,947
% of Below Ground Main BS/CI Leak Repairs	62%	62%	65%	59%	62%
Main O&M Expenses attributable to BS/CI	$ 429,179	$ 465,157	$ 635,760	$ 512,581	$ 510,669

O&M Expenses Reduction Opportunity	2003	2004	2005	2006	Average
Total Main Leak Reduction Opportunity	**$ 484,144**	**$ 569,914**	**$ 795,942**	**$ 674,202**	**$ 631,051**

TOTAL POTENTIAL MAINTENANCE SAVINGS	**$ 740,394**	**$ 843,184**	**$ 1,094,505**	**$ 884,716**	**$ 890,699**

* Expected Annual Savings reflects savings incurred when all mileage has been replaced.
* Work units and costs generated from historical actuals

Petitioner's Exhibit No. JMF-10
Vectren North
Page 1 of 1

Vectren North
Pipeline Safety Adjustment - Actual Deferred Expenses
August 1, 2005 - December 31, 2006

Line No.	(A) Month	(B) Actual Deferred Incremental Expenses
1	August 2005	$ 98,962
2	September 2005	$ 118,679
3	October 2005	$ 104,197
4	November 2005	$ 196,230
5	December 2005	$ 423,224
6	January 2006	$ 211,102
7	February 2006	$ 153,111
8	March 2006	$ 172,772
9	April 2006	$ 129,231
10	May 2006	$ 323,945
11	June 2006	$ 374,119
12	July 2006	$ 376,732
13	August 2006	$ 238,129
14	September 2006	$ 441,780
15	October 2006	$ 384,972
16	November 2006	$ 907,932
17	December 2006	$ 785,301
18	Total Expenses	$ 5,440,418

Pipeline Safety Improvement Act of 2002
2005 Integrity Management Program Estimate compared to Period Ending July 31, 2006 Actuals
Vectren North

Item	Category	Estimate 2005	Actuals Period August 1, 2005 - July 31, 2006	Actuals Period August 1, 2006 - December 31, 2006
Corrosion Surveys/Direct Exams/Confirmatory Direct Assessment (CDA)	Assessment	$359,498	$688,830	$621,833
Data Integration	Data Integration	$18,095	$210,695	$232,457
DA-Verification Digs	Assessment	$755,195	$556,262	$724,785
Data Storage				
Annual Costs-O&M	Data	$52,912	$0	$0
Program Audits/Review	Program Management	$10,607	$36,600	$6,712
HCA Identification-Maint.	Data Integration	$12,033	$0	$0
Risk Assessment-Maint.	Program Management	$11,925	$0	$0
Training/Data Interpretation - 5-year intervals	Program Management	$0	$11,782	$4,098
Enhanced Prev. &Mit. Program	Assessment	$163,131	$3,621	$3,621
IMP Crew Training/Annual Refresher	Program Management	$7,513	$0	$0
Material Identification (ATC & Lab Costs)	Data	$193,213	$0	$0
Qualification Programs	Program Management	$23,858	$0	$0
Materials and Supplies	Program Management	$2,449	$0	$0
Remediation	Assessment	$59,617	$14,003	$25,025
Engineering - Project Coordination	Program Management	$119,149	$126,589	$434,865
ROW Maintenance	Assessment	$411,703	$976,789	$607,663
Maps - NPMS-Maint	Program Management	$6,402	$0	$0
Public Awareness Programs	Program Management	$590,033	$57,133	$97,055
Total Costs		**$2,797,333**	**$2,682,304**	**$2,758,114**

Petitioner's Exhibit No. JMF-12
Vectren North
Page 1 of 1

Pipeline Safety Improvement Act of 2002
Integrity Management Program Expenses by Work Category
Vectren North

Category	Actuals
Assessments	$ 4,222,432
Data Integration	$ 443,152
Program Management	$ 774,834
August 1, 2005 through December 31, 2006 Actual Expenses	$ 5,440,418

Pipeline Safety Improvement Act of 2002
Integrity Management Program Estimate for Period January 1, 2007 through December 31, 2007
Vectren North

	Estimate
Item	**Period Ending December 31, 2007**
Corrosion Surveys/Direct Exams/Confirmatory Direct Assessment (CDA)	$404,813
Data Integration	$221,765
DA-Verification Digs	$633,240
ICDA Digs	$750,000
Data Storage & Application Maintenance	$132,391
Program Audits/Review	$32,042
HCA Identification-Maint.	$60,462
Risk Assessment-Maint.	$32,531
Training/Data Interpretation - 5-year intervals	$24,450
Enhanced Prev. &Mit. Program	$66,726
IMP Crew Training/Annual Refresher	$13,836
Material Identification (ATC & Lab Costs)	$278,674
Qualification Programs	$25,311
Materials and Supplies	$2,233
Engineering & Program Management	$519,981
ROW Maintenance	$237,622
Maps - NPMS-Maint	$6,925
Public Awareness Programs	$95,300
Total Costs	**$3,538,302**

INDIANA GAS COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY
OF
JOHN P. KELLY

ON

REPLACEMENT COST VALUATION

SPONSORING PETITIONER'S EXHIBITS JPK-1 THROUGH JPK-3

Direct Testimony of John P. Kelly

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

A. My name is John P. Kelly. I am an Executive Advisor for Concentric Energy Advisors ("CEA"), located at 313 Boston Post Road West, Marlborough, Massachusetts, 01752. I am a registered professional engineer, a certified real estate appraiser and a specialist in asset valuation.

Q. On whose behalf are you submitting this direct testimony?

A. I am submitting this testimony on behalf of Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren North" or the "Company"). CEA was engaged by Vectren North to perform a study of the current value of its gas utility assets.

Q. Please describe the nature of the services provided by CEA.

A. CEA provides consulting services to utilities, energy producers, major energy consumers, project developers, and governmental authorities throughout North America. The firm specializes in transaction-related financial advisory services, valuation studies, economic feasibility studies, energy market and regulatory strategies, market assessments, energy commodity contracting and procurement, regulatory and litigation support, and capital market analyses and negotiations.

Q. Please describe your professional experience.

A. Prior to my current position at CEA, I was a Director of Navigant Consulting, Inc. I was employed at Stone & Webster, Inc., most recently serving as Vice President and Director of Stone & Webster Management Consultants and Assistant Vice President of Stone & Webster Engineering Corporation. I have over 40 years of experience in valuations and studies of public utility and industrial properties for rate-making, purchase and sale considerations, eminent domain/condemnation, ad valorem tax assessments, insurance, accounting and

financial purposes. I have provided expert testimony on valuation matters in more than 50 cases before state utility commissions, federal and state courts, and administrative bodies throughout the United States. A summary of my professional experience and educational background is attached as Petitioner's Exhibit JPK-2.

Q. What are your responsibilities as an Executive Advisor at CEA?

A. I manage projects involving the valuation of utility property.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to express my opinion as to the current value of Vectren North's gas utility assets and to describe the valuation study upon which my opinion is based.

Q. What conclusion have you reached regarding the current value of Vectren North's gas utility assets?

A. In my opinion, the value of Vectren North's gas utility assets, as of December 31, 2006, is approximately $1,365.1 million, as measured by the replacement cost of the property less depreciation and $915 million after making a special adjustment for technological change.

Q. Please describe Vectren North's gas utility assets.

A. Vectren North has four underground gas storage fields with an estimated ready delivery from storage capability of 4.2 Bcf of gas with daily delivery capabilities of 119,160 Mcf. Vectren North also owns and operates three liquefied petroleum (propane) air-gas manufacturing plants with the ability to store 1.5 million gallons of propane and manufacture for delivery 31,000 Mcf of manufactured gas per day. The transmission and distribution system is comprised of approximately 13,000 miles of mains and approximately 611,000 services. Vectren North's general plant accounts include those assets that are not defined by the FERC Uniform System of Accounts as includable in other plant accounts.

More specifically, the general plant accounts contain the following categories of assets not elsewhere classified:

- Land and land rights
- Structures and improvements
- Transportation equipment including automobiles, trucks and appurtenant equipment
- Stores, shop and laboratory equipment
- Power operated equipment that is self-propelled or mounted on moveable equipment
- Communication equipment

Q. What gas in underground storage have you indicated included in your valuation?

A. I have included non-recoverable natural gas included within Account 352.3. This is cushion gas in underground storage that would not be recoverable if use of the storage field were to be discontinued. Under the Uniform System of Accounts this gas is capitalized and considered to be part of utility plant in service. Nonrecoverable gas was included at its original cost which is a conservative estimate of the value of this asset since the current cost of natural gas is significantly greater than the original cost.

Q. What are some of the records about Vectren North's gas utility assets that you reviewed in order to develop an opinion as to their value?

A. I reviewed an extensive amount of information about Vectren North's gas utility assets including the Company's continuing property records, annual reports to the U.S. Department of Transportation for both the transmission and distribution systems, leak reports to the Indiana Utility Regulatory Commission, and Vectren Annual Reports to shareholders.

Q. Have you physically inspected the assets?

A. Yes. I have physically inspected Vectren North's facilities from the standpoint of preparing an estimated valuation of the facility based on the general operating

characteristics of the facilities. As part of the valuation, I have discussed the operations of the facilities with Company personnel to determine whether there are any material factors that would need to be considered as part the overall valuation.

Q. Please indicate when you inspected Vectren North's facilities and your observations regarding the condition and usefulness of the facilities.

A. Physical inspections were conducted during the week of March 5, 2007. It is my general conclusion that the physical plant and properties in service are well designed and consist of modern equipment and quality material, that the properties are being maintained and operated on a coordinated and highly efficient basis, and that for the foreseeable future, the properties can continue to operate effectively for the purposes for which they have been designed and constructed.

Q. Have you had any experience in the past with the evaluation of Vectren North's assets?

A. Yes. I testified on behalf of Vectren North in prior gas rate proceedings.

Q. In your opinion have you studied Vectren North's gas utility assets in sufficient detail to render an opinion as to their value?

A. Yes.

Q. What approach did you use to value Vectren North's gas utility assets?

A. I determined the value of Vectren North's assets using the Current Cost Approach.

Q. Please explain the Current Cost Approach used to value assets.

A. There are generally two ways in which the Current Cost Approach can be conducted, i.e., (i) determining the cost of reproducing a duplicate asset using

the same material and design at current prices, less loss in value from depreciation ("Reproduction Cost Method") or (ii) determining the cost of replacing the subject asset at current prices with an economical and efficient present day functional equivalent, less loss in value from depreciation ("Replacement Cost Method").

Q. The Reproduction Cost Method and the Replacement Cost Method both use costs at current prices. Would either gross original cost or original cost less accounting depreciation (i.e., net original cost) be a valid measure of the value of Vectren North's gas utility assets?

A. No. Original cost represents the historical cost incurred when the assets were originally constructed or acquired. Due to inflation, the cost to reproduce or replace assets today will be substantially different. Vectren North's gas utility system has been constructed over many years, and the original cost of the gas utility assets is well below the value of the assets today.

Q. Will the Reproduction Cost Method and Replacement Cost Method ever produce the same result?

A. Yes. If an asset would be replaced today in substantially the same form as currently exists, the reproduction cost and replacement cost will be the same.

Q. How did you apply the Current Cost Approach in valuing Vectren North's gas utility assets?

A. I sought to determine the replacement cost less depreciation of Vectren North's gas utility properties. To the extent I concluded the assets would be replaced today in substantially the same form, I utilized the Reproduction Cost Method because that method would also derive the replacement cost. In cases where I concluded assets would be replaced in a different form, I have made adjustments to the reproduction cost results to derive a reasonable replacement cost.

Q. Please explain how the Reproduction Cost Method is applied.

A. The Reproduction Cost Method takes the original cost, by vintage, of each gas utility plant account and then applies an adjustment factor (or multiplier) to each vintage of each account to determine the cost to reproduce those assets in today's dollars. This value is commonly referred to as the Reproduction Cost New of the assets. The adjustment factor or multiplier is utilized to account for the cost of those gas utility assets that a third party would have to expend currently if it were to reproduce the gas utility system as it was originally constructed.

Q. How have you determined the replacement cost of Vectren North's gas utility assets?

A. Once the Reproduction Cost New was calculated for each account, by vintage, for all of the gas utility assets, a downward adjustment was made to reflect any loss in service value due to the age and the condition of the assets. As part of this adjustment, I considered what assets would be replaced today with functionally-equivalent but different assets. I also made a special technology adjustment recommended by Vectren North Witness Paul R. Moul. This results in the Replacement Cost New Less Depreciation value for the assets.

Q. Please describe Petitioner's Exhibit JPK-3.

A. Petitioner's Exhibit JPK-3 provides the results of and supporting calculations for the Replacement Cost Study I made of Vectren North's gas utility assets. Page 1 of Petitioner's Exhibit JPK-3 is a summary of the results of this study. The first page of the exhibit shows, by FERC plant account, the total gross original cost of the assets, the Reproduction Cost New of the assets, the percent condition of the assets (which has been adjusted to reflect the replacement of certain assets with different but functionally equivalent assets), and the Replacement Cost New Less Depreciation of the assets with and without the technology adjustment. The remaining pages of Petitioner's Exhibit JPK-3 provide the original cost and adjustment factor, by vintage year, utilized to calculate the Reproduction Cost New for each of Vectren North's gas utility accounts.

Q. To determine the Reproduction Cost New, you need original cost information for each plant account by vintage year. Does Vectren North have such plant account information in sufficient detail?

A. Yes. Vectren North maintains its gas plant property records according to the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission, by vintage year. These records are the source of the original cost information used in my valuation and were sufficient to conduct my Reproduction Cost Study of Vectren North's gas utility assets.

Q. How are the adjustment factors or multipliers determined that are applied to the original costs, by vintage year, in each account?

A. For the majority of Vectren North's gas utility asset accounts, I utilized the Handy-Whitman Index of Public Utility Construction Costs ("Handy-Whitman Index") to determine the present day reproduction costs for each vintage of assets. The Handy-Whitman Index is a generally accepted industry standard for conducting reproduction cost studies, is considered an accurate and reliable resource for valuation experts, has a long history of providing dependable data, and has been published continuously since 1924 by Whitman, Requardt and Associates, an engineering firm.

Q. For what purposes is the Handy-Whitman Index commonly used?

A. The Handy-Whitman Index has been used and is generally accepted for rate setting purposes, as well as for many other purposes. For example, it has been used to value utility property for sale purposes, perform stock valuations, and for ad valorem tax calculations. In addition, the Handy-Whitman Index has been used for insurance purposes and for engineering estimates of new construction project costs.

Q. How long have you used the Handy-Whitman Index to value utility property?

A. I have utilized the Handy-Whitman Index throughout my career as part of my valuation assignments. Based on my experience, the Handy-Whitman Index is a reliable tool to use in valuing utility property, including Vectren North's gas utility system.

Q. How does the Handy-Whitman Index account for changes in construction costs over time?

A. The Handy-Whitman Index has tracked utility labor, materials and equipment costs over time and has developed indices that reflect the percentage change in the cost of goods in most utility plant accounts for every year from 1912 through the present. Specifically, the Handy-Whitman Index provides a cost index for every year for different types of utility assets as compared to a base year of 1973. For example, if certain assets purchased in 1973 had an index cost of 100, assets purchased in 1923 may have an index of 20, while assets purchased in 2002 may have any index of 220. Using the Handy-Whitman Index, the adjustment factor is calculated by dividing the index for the most recent period by the index for the vintage of the property in question. Therefore, in this example, the adjustment factor for the assets installed in 1923 would be 11 (i.e., the 2002 index of 220 divided by the 1923 index of 20). For property installed in 1973, the adjustment factor would be 2.2 (220 divided by 100).

Q. As an example, please explain how you used the Handy-Whitman Index to calculate the Reproduction Cost New of the assets in Account No. 367 – Transmission Plant - Mains.

A. As shown in Petitioner's Exhibit JPK-3, page 10, Vectren North installed Account No. 367 property in years spanning 1950 through 2006. First, the vintage and original cost of this property is shown in columns (c) and (d), respectively. These figures are taken directly from Vectren North's property records. Second, the adjustment factor for each vintage of each account is shown in column (e). The adjustment factors for Account No. 367 are calculated as I have described. For example, the Handy-Whitman Index provides a 1950 cost index for Account No. 367 property of 36, and a July 1, 2006 cost index for the same property of 444.

The adjustment factor for the Account No. 367 property installed in 1950, of 12.333, is calculated by dividing the July 1, 2006 cost index by the 1950 cost index (444 divided by 36). Lastly, the Reproduction Cost New value for each vintage of Account No. 367 is found in column (f) and is calculated by multiplying the original cost by the adjustment factor.

Q. Do the adjustment factors from the Handy-Whitman Index you used apply to the area in which Vectren North's gas utility assets are located?

A. Yes. The Handy-Whitman Index provides separate adjustment factors for various parts of the United States in order to reflect the differences in regional cost changes. As such, I have utilized the figures from the Handy-Whitman Index for the North Central region of the United States, which includes Indiana.

Q. What is the date as of which the Handy-Whitman Index used in your study is applicable?

A. The data I used from the Handy-Whitman Index is as of July 1, 2006. The July 1, 2006 published numbers were adopted as being reflective of the price levels at December 31, 2006.

Q. Did you utilize the Handy-Whitman Index for all of Vectren North's accounts?

A. No. There were two (2) primary instances in which the Handy-Whitman Index did not provide me the necessary information. First, the Handy-Whitman Index does not provide data on the value of land or easements. For land, land rights and easements, I utilized index numbers of Indiana farm real estate compiled by the United States Department of Agriculture.

Second, the Handy-Whitman Index does not have reproduction cost information covering all of Vectren North's general asset accounts. In those few instances, I have utilized the percent changes stated in the Bureau of Labor Statistics' Producer Price Index ("PPI") as a proxy for the cost changes in those assets over time. Similar to the Handy-Whitman Index, the Bureau of Labor Statistics tracks price changes for various asset categories, including those assets for which there

was no information available from the Handy-Whitman Index. The Bureau of Labor Statistics does not calculate PPI back far enough to cover all vintages of Vectren North's assets. Therefore, I used the PPI information for the vintages for which there was data, and utilized the percent changes in Gross Domestic Product ("GDP") as a proxy for those vintages for which there was no information available from PPI. Finally, I included non-recoverable gas at original cost.

Q. Did the use of the PPI and GDP adjusted figures to calculate the percent changes in the cost of certain vintages of general plant assets have a significant impact on the overall results?

A. No. First, there were very few accounts that the Handy-Whitman Index did not cover. Secondly, the amount of dollars in the accounts for which I utilized PPI and/or GDP were small compared to the dollars in accounts covered by the Handy-Whitman Index. Therefore, these assumptions had a relatively small impact on the overall results of my study.

Q. Once you adjusted each account, by vintage, to reflect the present day reproduction cost for those assets (i.e., Reproduction Cost New), why was it necessary to calculate the loss in value of those assets due to age and condition?

A. Property is desired because of the useful service obtainable from it. The value of property, therefore, is affected by its ability to produce some kind of useful service during its expected future life in service. This requires an adjustment to the Reproduction Cost New for the age and condition of property being valued.

Q. How was the adjustment calculated to reflect the age and condition of the gas utility assets?

A. The necessary adjustment to reflect the age and condition of the assets was essentially conducted in three steps. The first step was to determine the average service life for each asset account. I based the average service life for each asset account on the depreciation rates utilized by Vectren North.

The second step was to calculate the estimated remaining useful life of the assets in each account. After obtaining the average service life for each account, I then calculated an average weighted age of the assets in each account based on the present dollars of those assets by vintage as calculated in the Reproduction Cost Study described above.

For the third step, I determined the condition percent of the assets in each account. This determination is based on the "Condition-Percent Tables for Depreciation of Unit and Group Properties" by Robley Winfrey. These tables are published by Iowa State University. The condition percent of the assets in each account is calculated by dividing (i) the present value of the benefits of those same assets based on their remaining useful life by (ii) the present value of the benefits of the assets in each account based on their full average service life.

Q. What adjustments did you make for assets that would be reflected today by different but functionally equivalent assets?

A. From my analysis of Vectren North's property, I concluded that the system would be replaced today in substantially the same manner, with two exceptions. First, Vectren North's system includes some low-pressure mains that would be replaced today with small diameter pipe. Second, Vectren North's system includes some steel mains and services that would be replaced today with plastic pipe. Therefore, adjustments were made to Acct. 376 – Mains and Acct. 380 - Services to reflect these forms of functional depreciation.

Q. Please describe the adjustments that you made to these two accounts?

A. Approximately 7% of the distribution mains are low-pressure. This pipe would be replaced today at an intermediate pressure resulting in smaller diameter pipe. I was able to calculate the equivalent length of pipe that would be represented by the replacement. This translated to a functional depreciation of 50% for the low pressure mains. Steel main, 6" in diameter and less, would be replaced today by plastic mains. These mains comprise 40% of the distribution mains. It is estimated that the cost of the material and labor to install steel mains is approximately two times the cost for plastic mains. This translates into a

functional depreciation of 50%. The resultant weighted functional condition for the distribution mains was calculated to be 77%, or 23% functional depreciation. A similar adjustment was made to the services account to recognize that steel services less than 1" in diameter would be replaced with plastic services. These services comprise 22% of the services. Like the mains the functional condition of these services is 50%. The resultant functional condition of the account is 89%, or 11% functional depreciation.

Q. Are any other adjustments reflected in the condition percent figures shown in Petitioner's Exhibit JPK-3?

A. Yes. I made an allowance for piecemeal construction for distribution mains and services. Construction of property in installments as compared to a continuous single construction effort is considered to be piecemeal construction. The unit cost for a major construction effort tends to be less because of the decreased mobilization cost per unit. To account for this decreased cost, I made a 10% downward adjustment to the distribution mains account and a 5% downward adjustment to the services account.

Q. How did you then calculate the Replacement Cost New Less Depreciation?

A. The last step was to multiply the total Reproduction Cost New of the assets in each account by the percent condition of those assets to arrive at the Replacement Cost New Less Depreciation value.

Q. What are the results of your Replacement Cost Study?

A. The results of my Replacement Cost Study of Vectren North's gas utility assets are shown in Petitioner's Exhibit JPK-3. As shown in Petitioner's Exhibit JPK-3, I have calculated a Reproduction Cost New value of approximately $2,610.7 million, a Reproduction Cost New Less Depreciation value of approximately $1,365.1 million.

Q. Did you make any other adjustments to your results?

A. Yes. As discussed in Vectren North Witness Paul R. Moul's testimony, to make sure the effect of technological change on the value of the assets was not understated, I made a further adjustment to reduce the RCNLD balances for the property plant and equipment, excluding land, of 2.1% per year from the date of installation. This additional adjustment results in an RCNLD value of $915 million as shown in the far right hand column of Petitioner's Exhibit JPK-3.

Q. Does this conclude your direct testimony in this proceeding?

A. Yes.

Résumé and Testimony List of John P. Kelly

John P. Kelly
Executive Advisor

Mr. Kelly is a Valuation Consultant with over 35 years of wide experience in valuations and studies of public utility and industrial properties for rate-making, purchase and sale considerations, eminent domain/condemnation, ad valorem tax assessments, insurance, accounting, and financial purposes.

Mr. Kelly has been responsible for the development of value for electric, gas, telephone, water and steam utilities, and for many types of industrial properties. He has testified before utility commissions, federal and state courts, and before administrative bodies on more than 45 occasions. In addition to his valuation experience, he has also been appointed and approved to prepare independent engineer's certificates relative to valuation matters by numerous utility companies, trustees, and banks.

These assignments have been carried out throughout the United States, Puerto Rico, the U.S. Virgin Islands, and in the following foreign countries: Brazil, Canada, India, New Zealand, Peru and Venezuela.

Prior to his valuation experience, Mr. Kelly was responsible for reviewing for approval, the proposed construction of outside plant by New England Telephone Company. As an undergraduate, he was employed by New England Power Service Company and Doble Engineering Company.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2003 – Present)
Executive Advisor

Navigant Consulting, Inc. (2000 - 2003)
Director

Stone & Webster Management Consultants, Inc. (1964 – 2000)
Senior Vice President
Vice President
Senior Appraisal Engineer
Appraisal Engineer

New England Telephone Company (1963 – 1964)
Supervisory Assistant – Outside Plant

Doble Engineering Company (1959-1963)
Intern – Research & Development

New England Power Service Company (1958-1959)

Intern – Transmission Engineering

PROFESSIONAL LICENSE

Registered Professional Engineer – State of Maine, License No. 5148
Certified General Real Estate Appraiser:

- Commonwealth of Massachusetts, License No. 209
- State of Maine, Certificate No. CG 1342
- State of Michigan, Permanent I.D. No. 1201071037
- State of New York, I.D. No. 4600003621

ASSOCIATION MEMBERSHIPS

American Society of Appraisers, Accredited Member
Eta Kappu Nu – Electrical Engineering Honor Society
American Water Works Association

EDUCATION

Northeastern University, BS, Electrical Engineering, 1963
Northeastern University, Graduate School of Engineering, 1968
University of Southern Maine – Uniform Standards of Professional Appraisal Practice
Appraisal Institute – Real Estate Appraisal Principles
Appraisal Institute – Basic Valuation Procedures
Appraisal Institute – Capitalization Theory and Techniques, Part A
Appraisal Institute – Capitalization Theory and Techniques, Part B
Appraisal Institute – Case Studies in Real Estate Valuation
Appraisal Institute – Standards of Professional Practice Parts A and B
Appraisal Institute – Highest & Best Use and Market Analysis
American Society of Appraisers – National Uniform Standards of Professional Appraisal Practice
Appraisal Institute – General Applications
Appraisal Institute – Standards of Professional Practice, Part C

EXPERT TESTIMONY OF JOHN P. KELLY

YEAR	CASE	PURPOSE	HEARD BY
1975	Indianapolis Power & Light Co.	Valuation and Rate Base	P.U.C. (IN)
1976	Indianapolis Power & Light Co.	Valuation and Rate Base	P.U.C. (IN)
1978	Indianapolis Power & Light Co.	Valuation and Rate Base	P.U.C. (IN)
1978	Montaup Electric Co.	Ad Valorem Taxes City of Fall River	Appellate Tax Board (MA)
1979	Niagara Mohawk Power Corp.	Condemnation Town of Massena	St. Lawrence County Supreme Court (NY)
1980	Niagara Mohawk Power Corp.	Condemnation Town of Massena	St. Lawrence County Supreme Court (NY)
1981	Boston Edison Co.	Ad Valorem Taxes City of Somerville	Appellate Tax Board (MA)
1981	Indianapolis Power & Light Co.	Valuation and Rate Base	P.U.C. (IN)
1982	Southern Indiana Gas & Electric Co.	Valuation and Rate Base	P.U.C. (IN)
1982	Indianapolis Power & Electric Co.	Valuation and Rate Base	P.U.C. (IN)
1982	Southern Indiana Gas & Electric Co.	Valuation and Rate Base	P.U.C. (IN)
1983	Massachusetts Electric Company	Ad Valorem TaxesCity of Quincy	Appellate Tax Board (MA)
1983	New England Power Company	Ad Valorem Taxes City of Quincy	Appellate Tax Board (MA)
1983	Boston Edison Company	Ad Valorem Taxes City of Watertown	Appellate Tax Board (MA)
1984	Automatic Comfort Corporation	Stockholders' Suit	Board of Arbitration (Hartford, CT)
1984	Seabrook Station	Ad Valorem Taxes Town of Seabrook	Superior Court (NH)
1984	Boston Edison Company	Ad Valorem Taxes City of Boston	Appellate Tax Board (MA)
1985	Granite State Gas Transmission Company	Ad Valorem Taxes Town of East Kingston	Board of Land and Tax Appeals (NH)
1985	Hunt Energy Company	Bankruptcy	U.S. Bankruptcy Court for Northern Ohio

YEAR	CASE	PURPOSE	HEARD BY
1985	Indianapolis Power & Light Co.	Valuation and Rate Base	P.U.C. (IN)
1986	New England Power Company	Ad Valorem Taxes Town of Hartford	Windsor County Superior Court (VT)
1986	Seabrook Station	Ad Valorem Taxes Town of Seabrook	Superior Court (NH)
1986	Ohio Edison Co.	Condemnation	Public Hearing (Marion, OH)
1986	Northern Indiana Public Service Co.	Valuation and Rate Base	P.U.C. (IN)
1986	Clarkston General Water Supply, Inc.	Condemnation	Asotin County Superior Court (WA)
1987	Dow Chemical Co.	Ad Valorem Taxes	Louisiana Tax Commission
1987	Orange & Rockland Utilities Company	Ad Valorem Taxes Town of Ramapo	Rockland County Supreme Court (NY)
1987	Public Service Company of New Hampshire	Ad Valorem Taxes Town of Londonderry	Board of Land and Tax Appeals (NH)
1987	Northern Indiana Public Service Company	Valuation and Rate Base	Indiana Utility Regulatory Commission
1987	Cooper Industries Crouse-Hinds Division	Ad Valorem Taxes Town of Salina	Onondaga County Supreme Court (NY)
1988	Seabrook Station	Ad Valorem Taxes Town of Seabrook	Rockingham County Superior Court (NH)
1989	Pacific Power & Light Company	Condemnation Alturas, California	U.S. District Court Eastern District of California
1989	Iowa Public Service Company	Condemnation Sheldon, Iowa	Iowa Public Utilities Board
1990	San Diego Gas & Electric Company	Condemnation San Juan Capistrano, California	Orange County Superior Court (CA)
1991	Peoples Natural Gas	Condemnation, Hartley, Iowa	O'Brien County District Court
1991	Peoples Natural Gas	Condemnation, Everly, Iowa	Clay County District Court
1991	Boston Edison Company	Ad Valorem Taxes City of Everett	Appellate Tax Board (MA)

YEAR	CASE	PURPOSE	HEARD BY
1992	Indianapolis Power & Light Company	Valuation and Rate Base	Indiana Utility Regulatory Commission
1993	Southern New Hampshire Water Company	Ad Valorem Taxes Town of Hudson	Hillsborough County Superior Court (NH)
1993	San Diego Gas & Electric Co.	Condemnation Oceanside, California	San Diego County Superior Court (CA)
1995	Ebensburg Power Company	Contract Dispute	Board of Arbitration (Pittsburgh, PA)
1996	Connecticut Yankee Atomic Power Company	Ad Valorem Taxes Town of Haddam	Middlesex County Superior Court (CT)
1998	Turners Falls Cogeneration Plant	Ad Valorem Taxes Town of Montague	Appellate Tax Board (MA)
1998	Public Service Company of Colorado	Asset Transfer	Public Utility Commission of Colorado
1998	Ohio Edison Company Perry Nuclear Plant	Ad Valorem Taxes	Board of Tax Appeals (OH)
1999	Pennsylvania Power Company	Ad Valorem Taxes	Lawrence County Board of Assessment Appeals (PA)
1999	Beaver Valley Nuclear Power Station & Bruce Mansfield Power Plant	Ad Valorem Taxes	Beaver County Board Of Assessment Appeals (PA)
2001	Northern Indiana Public Service Company	Valuation and Rate Base	Indiana Utility Regulatory Commission
2004	Indiana Gas Company, Inc.	Valuation and Rate Base	Indiana Utility Regulatory Commission
2004	Southern Indiana Gas and Electric Co., Inc.	Valuation and Rate Base	Indiana Utility Regulatory Commission
2004	Frank R. Phillips Power Plant	Ad Valorem Taxes	Court of Common Pleas (Allegheny County, PA)
2006	Belle River and St. Clair Power Plans	Ad Valorem Taxes	Michigan Tax Tribunal
2006	Southern Indiana Gas and Electric Co., Inc. (Electric)	Valuation and Rate Base	Indiana Utility Regulatory Commission
2006	Southern Indiana Gas and Electric Co., Inc. (Gas)	Valuation and Rate Base	Indiana Utility Regulatory Commission

Reproduction Cost Analysis

As of December 31, 2006

Ferc Account	Account Description	Original Cost	Reproduction Cost New	Percent Condition	RCNLD	Technologically Adjusted RCN	Technologically Adjusted RCNLD
301	Organization	$ 34,216	$ 34,216	100%	$ 34,216	$ 34,216	$ 34,216
302	Franchises and consents	$ 2,266	$ 2,266	100%	$ 2,266	$ 2,266	$ 2,266
303	Miscellaneous Intangible Plant	$ 977,595	$ 977,595	100%	$ 977,595	$ 977,595	$ 977,595
		$ 1,014,077	$ 1,014,077		$ 1,014,077	$ 1,014,077	$ 1,014,077
	Natural Gas Production and Gathering Plant						
304	Land Rights	$ 207,282	$ 795,984	100%	$ 795,984	$ 795,984	$ 795,984
305	Structures and Improvements	$ 1,269,072	$ 2,948,893	47%	$ 1,378,106	$ 1,834,829	$ 857,471
311	Liquefied Petroleum Gas Equipment	$ 9,789,081	$ 20,709,511	45%	$ 9,390,520	$ 13,455,789	$ 6,101,393
332	Field Lines	$ 87,838	$ 88,495	97%	$ 86,196	$ 88,495	$ 86,196
		$ 11,353,273	$ 24,542,883		$ 11,650,808	$ 16,175,097	$ 7,841,044
	Underground Storage Plant						
350.1	Land	$ 208,076	$ 1,188,965	100%	$ 1,188,965	$ 1,188,965	$ 1,188,965
350.2	Rights of Way	$ 243,290	$ 1,606,684	100%	$ 1,606,684	$ 1,606,684	$ 1,606,684
351	Compressor Station Structures	$ 1,601,960	$ 7,968,121	73%	$ 5,806,171	$ 6,232,831	$ 4,541,708
352	Wells	$ 9,744,846	$ 32,159,737	54%	$ 17,482,998	$ 17,142,605	$ 9,319,235
352.1	Storage Leaseholds and Rights	$ 613,626	$ 4,625,192	100%	$ 4,625,192	$ 4,625,192	$ 4,625,192
352.2	Reservoirs	$ 1,787,682	$ 4,921,208	46%	$ 2,284,474	$ 2,833,652	$ 1,315,410
352.3	Nonrecoverable Natural Gas	$ 2,034,067	$ 2,034,067	100%	$ 2,034,067	$ 2,034,067	$ 2,034,067
353	Lines	$ 3,388,222	$ 13,452,293	46%	$ 6,147,832	$ 6,932,652	$ 3,168,291
354	Compressor Station Equipment	$ 3,834,461	$ 6,785,047	22%	$ 1,461,533	$ 4,605,673	$ 992,085
355	Measuring and Regulating Equipment	$ 1,321,663	$ 2,621,521	53%	$ 1,399,777	$ 1,844,522	$ 984,893
356	Purification Equipment	$ 10,428,350	$ 17,653,593	60%	$ 10,620,931	$ 14,059,033	$ 8,458,336
		$ 35,206,243	$ 95,016,428		$ 54,658,623	$ 63,105,876	$ 38,234,865
	Transmission Plant						
365.1	Land	$ 81,843	$ 81,843	100%	$ 81,843	$ 81,843	$ 81,843
365.2	Rights-of-Way	$ 2,718,048	$ 4,804,405	100%	$ 4,804,405	$ 4,804,405	$ 4,804,405
366	Measuring and Regulating Station Structures	$ 22,485	$ 61,058	41%	$ 25,057	$ 32,851	$ 13,482
367	Mains	$ 26,690,591	$ 39,204,448	91%	$ 35,757,214	$ 32,048,071	$ 29,230,095
369	Measuring and Regulating Equipment	$ 3,631,057	$ 4,241,262	91%	$ 3,849,497	$ 4,038,890	$ 3,665,818
370	Communication Equipment	$ 6,386	$ 19,982	19%	$ 3,830	$ 7,920	$ 1,518
		$ 33,150,410	$ 48,412,999		$ 44,521,847	$ 41,013,981	$ 37,797,161
	Distribution Plant						
374	Land and Land Rights	$ 11,259,002	$ 46,737,963	100%	$ 46,737,963	$ 46,737,963	$ 46,737,963
375	Structures and Improvements	$ 2,537,414	$ 8,386,322	40%	$ 3,334,150	$ 4,207,116	$ 1,672,623
376	Mains	$ 508,132,069	$ 1,140,569,591	53%	$ 605,753,195	$ 676,872,756	$ 359,485,154
377	Compressor Station Equipment	$ 1,562,593	$ 5,285,974	16%	$ 849,245	$ 3,149,150	$ 505,942
378	Measuring and Regulating Sta. Equip. - General	$ 25,817,772	$ 53,917,070	63%	$ 34,094,729	$ 36,911,456	$ 23,341,144
379	Measuring and Regulating Sta. Equip. - City Gate	$ 10,325,930	$ 28,692,594	67%	$ 19,361,189	$ 20,680,516	$ 13,954,799
380	Services	$ 407,672,833	$ 727,803,771	44%	$ 323,238,845	$ 515,287,286	$ 228,854,086
381	Meters	$ 67,157,247	$ 77,220,807	49%	$ 37,477,574	$ 58,361,970	$ 28,324,815
382	Meter Installations	$ 49,901,317	$ 139,117,777	48%	$ 66,788,497	$ 93,722,326	$ 44,994,777
383	House Regulators	$ 19,044,438	$ 26,799,645	46%	$ 12,410,755	$ 19,789,681	$ 9,164,482
385	Industrial Measuring and Regulating Station Equipment	$ 38,342,787	$ 75,851,260	55%	$ 41,507,327	$ 53,940,490	$ 29,517,315
387	Other Equipment	$ 153,668	$ 160,862	95%	$ 152,819	$ 157,779	$ 149,890
		$ 1,141,907,070	$ 2,330,543,637		$ 1,191,706,288	$ 1,529,818,488	$ 786,702,990
	General Plant						
389	Land and Land Rights	$ 1,194,506	$ 9,861,088	100%	$ 9,861,088	$ 9,861,088	$ 9,861,088
390	Structures and Improvements	$ 24,710,234	$ 61,287,839	57%	$ 34,922,423	$ 36,316,267	$ 20,693,372
391	Office Furniture and Equipment	$ 2,427,703	$ 4,026,205	43%	$ 1,726,517	$ 2,787,812	$ 1,195,470
392	Transportation Equipment	$ 9,054,987	$ 10,009,447	31%	$ 3,071,697	$ 8,855,502	$ 2,717,574
393	Stores Equipment	$ 1,826,727	$ 2,503,973	67%	$ 1,672,642	$ 1,850,108	$ 1,235,863
394	Tools, Shop and Garage Equipment	$ 5,583,588	$ 7,796,000	41%	$ 3,213,667	$ 5,741,175	$ 2,366,627
395	Laboratory Equipment	$ 2,880,289	$ 4,341,727	55%	$ 2,392,908	$ 3,246,940	$ 1,789,525
396	Power Operated Equipment	$ 5,108,457	$ 7,022,838	38%	$ 2,635,847	$ 5,584,602	$ 2,096,041
397	Communication Equipment	$ 4,161,267	$ 3,767,999	49%	$ 1,860,600	$ 2,823,609	$ 1,394,270
398	Miscellaneous Equipment	$ 255,191	$ 557,123	38%	$ 210,347	$ 323,365	$ 122,090
		$ 57,202,950	$ 111,174,239		$ 61,567,736	$ 77,390,467	$ 43,471,919
	Total Gas Plant	$ 1,279,834,023	$ 2,610,704,263		$ 1,365,119,379	$ 1,728,517,986	$ 915,062,057

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1	Organization	301	1940	$ 9,379	1	$ 9,379
2		301	1941	$ 1,002	1	$ 1,002
3		301	1945	$ 23,101	1	$ 23,101
4		301	1971	$ 734	1	$ 734
5				**$ 34,216**		**$ 34,216**
6						
7	Franchises and Consents	302	1937	$ 1,241	1	$ 1,241
8		302	1950	$ 44	1	$ 44
9		302	1964	$ 194	1	$ 194
10		302	1965	$ 68	1	$ 68
11		302	1966	$ 624	1	$ 624
12		302	1968	$ 95	1	$ 95
13				**$ 2,266**		**$ 2,266**
14						
15	Miscellaneous Intangible Plant	303	1997	$ 819,908	1	$ 819,908
16		303	1999	$ 62,490	1	$ 62,490
17		303	2000	$ 62,081	1	$ 62,081
18		303	2003	$ 33,116	1	$ 33,116
19				**$ 977,595**		**$ 977,595**
20						
21	**Natural Gas Production and Gathering Plant**					
22	Land Rights	304	1927	$ 45	42.432	$ 1,909
23		304	1928	$ 200	43.014	$ 8,603
24		304	1929	$ 1,639	43.014	$ 70,499
25		304	1937	$ 3,079	51.475	$ 158,493
26		304	1973	$ 18,192	6.356	$ 115,633
27		304	1974	$ 1,295	5.304	$ 6,869
28		304	1977	$ 36,828	2.643	$ 97,340
29		304	1978	$ 107,206	2.314	$ 248,067
30		304	1980	$ 2,497	1.685	$ 4,209
31		304	1992	$ 22,449	2.370	$ 53,200
32		304	1993	$ 13,831	2.251	$ 31,132
33		304	1999	$ 21	1.447	$ 30
34				**$ 207,282**		**$ 795,984**
35						
36	Structures and Improvements	305	1927	$ 974	23.758	$ 23,140
37		305	1936	$ 242	26.727	$ 6,468
38		305	1941	$ 2,139	23.758	$ 50,817
39		305	1948	$ 2,601	13.625	$ 35,439
40		305	1967	$ 639	6.813	$ 4,353
41		305	1969	$ 1,509	5.892	$ 8,891
42		305	1970	$ 83,376	5.383	$ 448,789
43		305	1974	$ 137,697	3.893	$ 536,035
44		305	1978	$ 34,789	2.868	$ 99,790
45		305	1980	$ 122,542	2.491	$ 305,305
46		305	1983	$ 2,701	2.086	$ 5,635
47		305	1985	$ 116,554	2.028	$ 236,361
48		305	1992	$ 183,962	1.630	$ 299,841
49		305	1993	$ 18,302	1.594	$ 29,176
50		305	1994	$ 512,793	1.545	$ 792,127
51		305	1996	$ 14,646	1.475	$ 21,610
52		305	2000	$ 33,606	1.343	$ 45,118
53				**$ 1,269,072**		**$ 2,948,893**
54						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
55	Liquefied Petroleum Gas Equipment	311	1946	$ 9,002	17.818	$ 160,399
56		311	1948	$ 53,937	13.625	$ 734,892
57		311	1949	$ 13,190	12.824	$ 169,142
58		311	1950	$ 3,191	12.457	$ 39,751
59		311	1951	$ 42,380	11.474	$ 486,255
60		311	1957	$ 2,174	8.549	$ 18,586
61		311	1962	$ 2,339	7.927	$ 18,542
62		311	1963	$ 6,326	7.649	$ 48,388
63		311	1964	$ 1,017	7.390	$ 7,515
64		311	1965	$ 749	7.148	$ 5,354
65		311	1968	$ 129,176	6.319	$ 816,243
66		311	1969	$ 36,447	5.892	$ 214,742
67		311	1970	$ 37,016	5.383	$ 199,247
68		311	1974	$ 723,007	3.893	$ 2,814,563
69		311	1975	$ 118,674	3.603	$ 427,619
70		311	1976	$ 23,729	3.433	$ 81,463
71		311	1977	$ 95	3.049	$ 290
72		311	1978	$ 26,623	2.868	$ 76,366
73		311	1979	$ 19,816	2.691	$ 53,332
74		311	1980	$ 1,254,917	2.491	$ 3,126,536
75		311	1981	$ 9,185	2.247	$ 20,643
76		311	1982	$ 2,138	2.117	$ 4,525
77		311	1983	$ 3,741	2.086	$ 7,804
78		311	1984	$ 6,224	2.066	$ 12,861
79		311	1985	$ 164,460	2.028	$ 333,510
80		311	1987	$ 17,782	1.938	$ 34,458
81		311	1988	$ 6,459	1.832	$ 11,832
82		311	1989	$ 6,649	1.751	$ 11,642
83		311	1991	$ 137,335	1.675	$ 230,079
84		311	1992	$ 1,932,161	1.630	$ 3,149,242
85		311	1994	$ 3,285,686	1.545	$ 5,075,497
86		311	1996	$ 357,811	1.475	$ 527,938
87		311	1997	$ 16,550	1.435	$ 23,756
88		311	1998	$ 832,770	1.409	$ 1,173,143
89		311	1999	$ 188,022	1.384	$ 260,246
90		311	2000	$ 2,454	1.343	$ 3,295
91		311	2003	$ 58,421	1.226	$ 71,600
92		311	2006	$ 238,298	1.003	$ 239,029
93		311	2006	$ 19,130	1.003	$ 19,189
94				**$ 9,789,081**		**$ 20,709,511**
95						
96	Field Lines	332	2006	$ 87,838	1.007	$ 88,495
97				**$ 87,838**		**$ 88,495**
98						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
99	**Underground Storage Plant**					
100	Land	350.1	1963	$ 2,434	11.336	$ 27,591
101		350.1	1966	$ 93,020	8.626	$ 802,425
102		350.1	1968	$ 20,746	7.566	$ 156,970
103		350.1	1986	$ 19,494	2.691	$ 52,452
104		350.1	1992	$ 11,043	2.370	$ 26,170
105		350.1	1994	$ 54,171	2.093	$ 113,398
106		350.1	2000	$ 7,168	1.389	$ 9,959
107				**$ 208,076**		**$ 1,188,965**
108						
109	Rights of Way	350.2	1915	$ 345	38.765	$ 13,374
110		350.2	1942	$ 196	43.014	$ 8,431
111		350.2	1953	$ 1,169	16.791	$ 19,629
112		350.2	1955	$ 533	15.859	$ 8,453
113		350.2	1956	$ 828	14.952	$ 12,381
114		350.2	1957	$ 40	13.652	$ 546
115		350.2	1958	$ 27	12.975	$ 350
116		350.2	1959	$ 1,883	12.218	$ 23,006
117		350.2	1960	$ 1,766	11.894	$ 21,005
118		350.2	1963	$ 989	11.336	$ 11,211
119		350.2	1965	$ 249	9.874	$ 2,459
120		350.2	1966	$ 3,864	8.626	$ 33,332
121		350.2	1967	$ 3,788	7.990	$ 30,265
122		350.2	1968	$ 148,931	7.566	$ 1,126,851
123		350.2	1969	$ 2,410	7.530	$ 18,147
124		350.2	1970	$ 5,923	7.734	$ 45,808
125		350.2	1971	$ 1,567	7.441	$ 11,660
126		350.2	1972	$ 1,614	7.218	$ 11,650
127		350.2	1973	$ 5,381	6.356	$ 34,203
128		350.2	1974	$ 13,284	5.304	$ 70,459
129		350.2	1975	$ 2	5.304	$ 70,459
130		350.2	1976	$ 4,455	4.361	$ 9
131		350.2	1977	$ 4,677	3.536	$ 15,753
132		350.2	1978	$ 179	2.643	$ 12,362
133		350.2	1980	$ 798	2.314	$ 414
134		350.2	1981	$ 208	1.685	$ 1,345
135		350.2	1982	$ 1,608	1.546	$ 322
136		350.2	1994	$ 36,576	1.741	$ 2,799
137				**$ 243,290**		**$ 1,606,684**
138						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
139	Compressor Station Structures	351	1953	$ 4,375	10.390	$ 45,457
140		351	1954	$ 2,316	10.143	$ 44,375
141		351	1956	$ 2,263	9.682	$ 22,423
142		351	1964	$ 636	3.252	$ 7,359
143		351	1965	$ 2,311	8.875	$ 5,645
144		351	1967	$ 2,563	6.984	$ 16,139
145		351	1968	$ 28,429	6.762	$ 17,331
146		351	1969	$ 260	6.358	$ 180,758
147		351	1970	$ 2,707	5.836	$ 1,517
148		351	1971	$ 1,514	8.520	$ 23,064
149		351	1971	$ 14,768	5.392	$ 8,164
150		351	1972	$ 3,714	4.841	$ 71,491
151		351	1974	$ 1,108	4.581	$ 17,013
152		351	1975	$ 1,981	4.260	$ 4,720
153		351	1975	$ 47,022	3.109	$ 6,160
154		351	1976	$ 2,442	3.641	$ 171,208
155		351	1976	$ 655	2.859	$ 6,982
156		351	1978	$ 900	2.566	$ 1,681
157		351	1980	$ 531	8.192	$ 7,373
158		351	1980	$ 4,287	2.367	$ 1,257
159		351	1981	$ 59,928	7.889	$ 33,820
160		351	1983	$ 13,538	7.745	$ 464,170
161		351	1986	$ 291,513	7.889	$ 106,800
162		351	1987	$ 208,350	2.266	$ 660,556
163		351	1988	$ 2,348	2.162	$ 450,544
164		351	1989	$ 17,165	2.088	$ 4,903
165		351	1991	$ 64,203	1.991	$ 34,170
166		351	1992	$ 3,225	7.745	$ 497,281
167		351	1992	$ 7,230	1.936	$ 6,245
168		351	1993	$ 47,095	1.893	$ 13,689
169		351	1994	$ 16,193	1.836	$ 86,476
170		351	1995	$ 3,967	7.607	$ 123,182
171		351	1996	$ 428,758	1.766	$ 7,005
172		351	1997	$ 127,599	7.474	$ 3,204,402
173		351	1998	$ 16,515	3.328	$ 424,665
174		351	1999	$ 158,786	1.732	$ 28,599
175		351	2006	$ 8,774	7.220	$ 1,146,489
176		351	2006	$ 1,991	1.711	$ 15,011
177				**$ 1,601,960**		**$ 7,968,121**
178						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
179	Wells	352	1948	$ 611	14.323	$ 8,751
180		352	1953	$ 38,956	10.829	$ 421,865
181		352	1954	$ 20,171	10.326	$ 208,277
182		352	1955	$ 33,294	10.091	$ 335,967
183		352	1956	$ 8,017	9.447	$ 75,735
184		352	1958	$ 14,939	8.538	$ 127,556
185		352	1959	$ 118,523	8.222	$ 974,522
186		352	1960	$ 39,225	8.073	$ 316,653
187		352	1961	$ 58,766	7.789	$ 457,756
188		352	1963	$ 9,450	7.525	$ 71,115
189		352	1965	$ 70,853	7.048	$ 499,345
190		352	1966	$ 16,670	6.938	$ 115,648
191		352	1967	$ 262,903	6.831	$ 1,795,830
192		352	1968	$ 475,190	6.529	$ 3,102,711
193		352	1969	$ 61,311	6.000	$ 367,866
194		352	1970	$ 113,836	5.550	$ 631,790
195		352	1971	$ 225,766	4.989	$ 1,126,293
196		352	1972	$ 449,477	4.625	$ 2,078,831
197		352	1973	$ 313,491	4.440	$ 1,391,900
198		352	1974	$ 89,535	3.861	$ 345,683
199		352	1975	$ 2,615,829	3.389	$ 8,865,863
200		352	1976	$ 57,798	3.020	$ 174,574
201		352	1977	$ 423,121	2.810	$ 1,189,024
202		352	1978	$ 131,387	2.537	$ 333,348
203		352	1979	$ 95,098	2.387	$ 227,008
204		352	1980	$ 310,558	2.155	$ 669,358
205		352	1981	$ 154,040	1.922	$ 296,077
206		352	1982	$ 406,671	1.755	$ 713,683
207		352	1983	$ 102,070	1.858	$ 189,620
208		352	1984	$ 205,065	1.858	$ 380,958
209		352	1985	$ 98,608	1.866	$ 183,958
210		352	1986	$ 84,143	1.805	$ 151,868
211		352	1988	$ 29,093	1.649	$ 47,975
212		352	1989	$ 30,900	1.640	$ 50,673
213		352	1990	$ 94,600	1.696	$ 160,468
214		352	1991	$ 677,732	1.731	$ 1,173,150
215		352	1992	$ 128,608	1.736	$ 223,273
216		352	1993	$ 360,404	1.718	$ 619,030
217		352	1994	$ 330,111	1.679	$ 554,137
218		352	1995	$ 290,774	1.634	$ 475,082
219		352	1996	$ 236,221	1.539	$ 363,543
220		352	1997	$ 15,609	1.505	$ 23,493
221		352	1998	$ 341,736	1.473	$ 503,253
222		352	1999	$ 10,175	1.459	$ 14,849
223		352	2003	$ 75,437	1.364	$ 102,900
224		352	2005	$ 11,886	1.030	$ 12,245
225		352	2006	$ 6,188	1.008	$ 6,235
226				**$ 9,744,846**		**$ 32,159,737**
227						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
228	Storage Leaseholds and Rights	352.1	1948	$ 13,266	23.088	$ 306,289
229		352.1	1953	$ 7,704	16.791	$ 129,361
230		352.1	1959	$ 125,962	12.218	$ 1,538,991
231		352.1	1960	$ 5,149	11.894	$ 61,242
232		352.1	1961	$ 3,646	12.266	$ 44,720
233		352.1	1965	$ 1,440	9.874	$ 14,219
234		352.1	1967	$ 142,591	7.990	$ 1,139,277
235		352.1	1968	$ 52,973	7.566	$ 400,808
236		352.1	1970	$ 37,771	7.734	$ 292,121
237		352.1	1972	$ 333	7.218	$ 2,404
238		352.1	1973	$ 43,550	6.356	$ 276,816
239		352.1	1974	$ 7,756	5.304	$ 41,138
240		352.1	1975	$ 31,770	4.361	$ 138,553
241		352.1	1977	$ 9,917	2.643	$ 26,212
242		352.1	1978	$ 26,305	2.314	$ 60,868
243		352.1	1979	$ 113	1.976	$ 223
244		352.1	1980	$ 1,102	1.685	$ 1,857
245		352.1	1981	$ 4,601	1.546	$ 7,113
246		352.1	1982	$ 302	1.741	$ 526
247		352.1	1986	$ 2,461	2.691	$ 6,622
248		352.1	1989	$ 167	2.514	$ 420
249		352.1	1991	$ 3,619	2.432	$ 8,802
250		352.1	2000	$ 91,128	1.389	$ 126,611
251				**$ 613,626**		**$ 4,625,192**
252						
253	Reservoirs	352.2	1968	$ 4,723	6.507	$ 30,734
254		352.2	1971	$ 55,068	5.102	$ 280,972
255		352.2	1973	$ 39,490	4.490	$ 177,310
256		352.2	1974	$ 311,540	3.904	$ 1,216,361
257		352.2	1975	$ 111,707	3.402	$ 379,973
258		352.2	1976	$ 371,017	3.075	$ 1,141,004
259		352.2	1977	$ 21,212	2.878	$ 61,052
260		352.2	1978	$ 72,493	2.595	$ 188,147
261		352.2	1979	$ 167,776	2.427	$ 407,197
262		352.2	1980	$ 82,161	2.190	$ 179,953
263		352.2	1982	$ 2,352	1.803	$ 4,241
264		352.2	1983	$ 7,546	1.887	$ 14,236
265		352.2	1985	$ 5,402	1.871	$ 10,106
266		352.2	1986	$ 3,960	1.825	$ 7,228
267		352.2	1991	$ 283,963	1.701	$ 482,952
268		352.2	1992	$ 3,005	1.691	$ 5,082
269		352.2	1999	$ 115,352	1.424	$ 164,292
270		352.2	2003	$ 128,915	1.322	$ 170,369
271				**$ 1,787,682**		**$ 4,921,208**
272						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
273	Nonrecoverable Natural Gas	352.3	2004	$ 2,034,067		$ 2,034,067
274				**$ 2,034,067**		**$ 2,034,067**
275						
276	Lines	353	1950	$ 1,842	12.333	$ 22,718
277		353	1953	$ 4,378	10.829	$ 47,411
278		353	1954	$ 32,142	10.326	$ 331,885
279		353	1956	$ 2,911	9.447	$ 27,500
280		353	1958	$ 1,756	8.538	$ 14,994
281		353	1961	$ 536	7.789	$ 4,175
282		353	1963	$ 12,566	7.525	$ 94,564
283		353	1965	$ 17,613	7.048	$ 124,130
284		353	1967	$ 962,224	6.831	$ 6,572,730
285		353	1968	$ 87,206	6.529	$ 569,404
286		353	1969	$ 3,244	6.000	$ 19,464
287		353	1970	$ 43,546	5.550	$ 241,680
288		353	1971	$ 106,127	4.989	$ 529,443
289		353	1972	$ 211,348	4.625	$ 977,485
290		353	1973	$ 89,677	4.440	$ 398,166
291		353	1974	$ 100,839	3.861	$ 389,326
292		353	1975	$ 15,548	3.389	$ 52,697
293		353	1976	$ 99,238	3.020	$ 299,739
294		353	1977	$ 63,338	2.810	$ 177,988
295		353	1978	$ 18,777	2.537	$ 47,640
296		353	1979	$ 7,716	2.387	$ 18,419
297		353	1981	$ 62,087	1.922	$ 119,336
298		353	1982	$ 21,316	1.755	$ 37,408
299		353	1984	$ 3,853	1.858	$ 7,158
300		353	1987	$ 2,723	1.755	$ 4,779
301		353	1989	$ 11,489	1.640	$ 18,841
302		353	1991	$ 167,140	1.731	$ 289,318
303		353	1992	$ 20,049	1.736	$ 34,806
304		353	1993	$ 668,756	1.718	$ 1,148,656
305		353	1994	$ 126,982	1.679	$ 213,157
306		353	1995	$ 43,474	1.634	$ 71,030
307		353	1996	$ 49,864	1.539	$ 76,740
308		353	1998	$ 43,784	1.473	$ 64,478
309		353	1999	$ 228,174	1.459	$ 332,980
310		353	2000	$ 34,677	1.439	$ 49,908
311		353	2004	$ 5,069	1.145	$ 5,804
312		353	2006	$ 16,213	1.008	$ 16,336
313				**$ 3,388,222**		**$ 13,452,293**
314						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
315	Compressor Station Equipment	354	1953	$ 1,591	11.881	$ 18,903
316		354	1954	$ 274	11.341	$ 3,107
317		354	1957	$ 1,591	9.241	$ 14,702
318		354	1961	$ 4,541	8.317	$ 37,766
319		354	1964	$ 12,910	7.677	$ 99,109
320		354	1965	$ 7,884	7.338	$ 57,855
321		354	1969	$ 91,286	6.160	$ 562,367
322		354	1977	$ 5,621	3.158	$ 17,752
323		354	1980	$ 212,684	2.354	$ 500,610
324		354	1981	$ 42,950	2.132	$ 91,590
325		354	1982	$ 954	1.988	$ 1,897
326		354	1985	$ 5,340	1.890	$ 10,093
327		354	1986	$ 1,203,317	1.883	$ 2,265,869
328		354	1989	$ 12,982	1.603	$ 20,813
329		354	1992	$ 3,218	1.436	$ 4,621
330		354	1993	$ 1,932,443	1.399	$ 2,702,983
331		354	1994	$ 63,924	1.368	$ 87,452
332		354	1996	$ 135,348	1.310	$ 177,267
333		354	1997	$ 40,471	1.284	$ 51,982
334		354	1999	$ 11,696	1.250	$ 14,618
335		354	2000	$ 103	1.230	$ 127
336		354	2006	$ 43,333	1.005	$ 43,566
337				**$ 3,834,461**		**$ 6,785,047**
338						
339	Measuring and Regulating Equipment	355	1954	$ 4,416	11.638	$ 51,395
340		355	1957	$ 230	10.321	$ 2,374
341		355	1958	$ 892	9.945	$ 8,871
342		355	1959	$ 955	9.596	$ 9,165
343		355	1961	$ 3,190	9.271	$ 29,575
344		355	1965	$ 7,861	8.683	$ 68,253
345		355	1967	$ 1,111	8.288	$ 9,208
346		355	1968	$ 15,146	7.928	$ 120,070
347		355	1969	$ 1,745	7.392	$ 12,899
348		355	1970	$ 6,857	6.753	$ 46,306
349		355	1971	$ 7,656	6.146	$ 47,054
350		355	1972	$ 2,732	5.698	$ 15,567
351		355	1973	$ 6,965	5.470	$ 38,099
352		355	1974	$ 31,027	4.757	$ 147,581
353		355	1975	$ 16,236	4.144	$ 67,281
354		355	1976	$ 3,690	3.799	$ 14,017
355		355	1977	$ 4,066	3.575	$ 14,537
356		355	1978	$ 20,253	3.256	$ 65,943
357		355	1980	$ 13,467	2.763	$ 37,204
358		355	1981	$ 13,315	2.453	$ 32,661
359		355	1982	$ 5,387	2.298	$ 12,381
360		355	1983	$ 2,030	2.308	$ 4,685
361		355	1984	$ 2,039	2.251	$ 4,590
362		355	1985	$ 2,481	2.224	$ 5,517
363		355	1986	$ 32,140	2.188	$ 70,322
364		355	1988	$ 48,026	1.955	$ 93,906
365		355	1989	$ 6,523	1.859	$ 12,126
366		355	1990	$ 89,759	1.854	$ 166,434
367		355	1991	$ 28,409	1.819	$ 51,670
368		355	1993	$ 92,035	1.680	$ 154,664
369		355	1994	$ 34,030	1.610	$ 54,789
370		355	1995	$ 13,643	1.568	$ 21,398
371		355	1998	$ 742,742	1.439	$ 1,068,455
372		355	1999	$ 1,239	1.417	$ 1,756
373		355	2003	$ 265	1.357	$ 360
374		355	2004	$ 265	1.188	$ 315
375		355	2005	$ 17,263	1.053	$ 18,186
376		355	2006	$ 41,577	1.008	$ 41,909
377				**$ 1,321,663**		**$ 2,621,521**
378						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
379	Purification Equipment	356	1956	$ 769	10.940	$ 8,413
380		356	1961	$ 428	9.271	$ 3,968
381		356	1965	$ 8,935	8.683	$ 77,578
382		356	1967	$ 17,799	8.288	$ 147,516
383		356	1968	$ 114,362	7.928	$ 906,609
384		356	1969	$ 202	7.392	$ 1,493
385		356	1970	$ 63,531	6.753	$ 429,030
386		356	1971	$ 47,019	6.146	$ 288,982
387		356	1972	$ 39,384	5.698	$ 224,407
388		356	1973	$ 63,161	5.470	$ 345,491
389		356	1974	$ 38,191	4.757	$ 181,656
390		356	1975	$ 34,921	4.144	$ 144,711
391		356	1976	$ 32,074	3.799	$ 121,837
392		356	1977	$ 32,525	3.575	$ 116,282
393		356	1978	$ 11,458	3.256	$ 37,307
394		356	1979	$ 2,245	3.022	$ 6,785
395		356	1981	$ 38,223	2.453	$ 93,758
396		356	1982	$ 803	2.298	$ 1,846
397		356	1983	$ 15,458	2.308	$ 35,677
398		356	1984	$ 25,676	2.251	$ 57,797
399		356	1985	$ 7,832	2.224	$ 17,415
400		356	1986	$ 491,712	2.188	$ 1,075,866
401		356	1987	$ 35,045	2.104	$ 73,729
402		356	1988	$ 48,355	1.955	$ 94,549
403		356	1989	$ 17,531	1.859	$ 32,589
404		356	1991	$ 189,332	1.819	$ 344,354
405		356	1992	$ 72,045	1.720	$ 123,926
406		356	1993	$ 76,798	1.680	$ 129,058
407		356	1996	$ 2,095,870	1.523	$ 3,191,206
408		356	1998	$ 162,669	1.439	$ 234,004
409		356	1999	$ 1,616,985	1.417	$ 2,291,427
410		356	2003	$ 4,986,503	1.357	$ 6,768,281
411		356	2004	$ 24,958	1.188	$ 29,662
412		356	2005	$ 15,551	1.053	$ 16,382
413				**$ 10,428,350**		**$ 17,853,593**
414						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
415	**Transmission Plant**					
416	Land & Land Rights	365.1	2006	$ 81,843	1.000	$ 81,843
417				**$ 81,843**		**$ 81,843**
418						
419	Rights-of-Way	365.2	1953	$ 104,704	16.791	$ 1,758,131
420		365.2	1954	$ 557	16.973	$ 9,454
421		365.2	1974	$ 1,764	5.304	$ 9,356
422		365.2	1980	$ 72,150	1.685	$ 121,605
423		365.2	2001	$ 10	1.336	$ 13
424		365.2	2002	$ 43,563	1.276	$ 55,605
425		365.2	2003	$ 566,861	1.222	$ 692,585
426		365.2	2004	$ 1,716,023	1.134	$ 1,945,239
427		365.2	2005	$ 14,794	1.000	$ 14,794
428		365.2	2006	$ 197,622	1.000	$ 197,622
429				**$ 2,718,048**		**$ 4,804,405**
430						
431	Measuring and Regulating Station Structures	366	1953	$ 2,763	11.025	$ 30,462
432		366	1954	$ 333	10.500	$ 3,497
433		366	1959	$ 48	8.321	$ 399
434		366	1963	$ 97	8.018	$ 778
435		366	1983	$ 6,108	2.090	$ 12,766
436		366	2006	$ 13,136	1.002	$ 13,156
437				**$ 22,485**		**$ 61,058**
438						
439	Mains	367	1950	$ 4,471	12.333	$ 55,142
440		367	1953	$ 437,632	10.829	$ 4,739,234
441		367	1954	$ 3,066	10.326	$ 31,658
442		367	1955	$ 5,438	10.091	$ 54,874
443		367	1958	$ 14,576	8.538	$ 124,457
444		367	1968	$ 2,076	6.529	$ 13,555
445		367	1969	$ 11,926	6.000	$ 71,556
446		367	1970	$ 68,534	5.550	$ 380,364
447		367	1971	$ 53,337	4.989	$ 266,086
448		367	1972	$ 12,844	4.625	$ 59,404
449		367	1973	$ 26,903	4.440	$ 119,449
450		367	1974	$ 36,589	3.861	$ 141,265
451		367	1975	$ 1,452	3.389	$ 4,921
452		367	1976	$ 25,760	3.020	$ 77,806
453		367	1978	$ 100	2.537	$ 254
454		367	1981	$ 2,157,250	1.922	$ 4,146,403
455		367	1982	$ 140,162	1.755	$ 245,976
456		367	1984	$ 8,798	1.858	$ 16,344
457		367	1986	$ 6,768	1.805	$ 12,215
458		367	1989	$ 8,800	1.640	$ 14,431
459		367	2001	$ 73,393	1.420	$ 104,193
460		367	2002	$ 5,379,928	1.389	$ 7,470,486
461		367	2003	$ 3,140,492	1.364	$ 4,283,805
462		367	2004	$ 10,993,183	1.145	$ 12,587,939
463		367	2005	$ 3,304,527	1.030	$ 3,404,200
464		367	2006	$ 772,586	1.008	$ 778,430
465				**$ 26,690,591**		**$ 39,204,448**
466						
467	Measuring and Regulating Equipment	369	1953	$ 1,765	12.156	$ 21,455
468		369	1954	$ 26	11.638	$ 303
469		369	1956	$ 210	10.940	$ 2,297
470		369	1959	$ 346	9.596	$ 3,320
471		369	1967	$ 2,276	8.288	$ 18,863
472		369	1971	$ 2,270	6.146	$ 13,952
473		369	1973	$ 8	5.470	$ 44
474		369	1974	$ 11,774	4.757	$ 56,003
475		369	1979	$ 1,928	3.022	$ 5,827
476		369	1981	$ 3,615	2.453	$ 8,867
477		369	1984	$ 1,151	2.251	$ 2,591
478		369	2002	$ 192,566	1.336	$ 257,225
479		369	2003	$ 824,453	1.357	$ 1,119,047
480		369	2004	$ 372,795	1.188	$ 443,061
481		369	2005	$ 1,206,408	1.053	$ 1,270,881
482		369	2006	$ 1,009,466	1.008	$ 1,017,527
483				**$ 3,631,057**		**$ 4,241,262**
484						
485	Communication Equipment	370	1959	$ 2,428	3.225	$ 7,831
486		370	1963	$ 3,958	3.070	$ 12,152
487				**$ 6,386**		**$ 19,982**
488						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
489	**Distribution Plant**					
490	Land and Land Rights	374	1915	$ 557	38.765	$ 21,592
491		374	1918	$ 98	31.089	$ 3,047
492		374	1919	$ 50	29.623	$ 1,481
493		374	1920	$ 53	24.921	$ 1,321
494		374	1924	$ 25	35.281	$ 882
495		374	1925	$ 6,896	36.941	$ 254,746
496		374	1929	$ 5,471	43.014	$ 235,328
497		374	1930	$ 4,351	43.611	$ 189,752
498		374	1931	$ 23,269	48.308	$ 1,124,072
499		374	1932	$ 3,712	58.148	$ 215,846
500		374	1934	$ 96	62.800	$ 6,029
501		374	1935	$ 1,434	58.148	$ 83,384
502		374	1936	$ 157	54.138	$ 8,500
503		374	1937	$ 24,927	51.475	$ 1,283,128
504		374	1938	$ 525	49.841	$ 26,167
505		374	1939	$ 23,950	50.645	$ 1,212,952
506		374	1940	$ 474	49.841	$ 23,625
507		374	1941	$ 2,094	48.308	$ 101,156
508		374	1942	$ 14,570	43.014	$ 626,710
509		374	1943	$ 2,847	39.250	$ 111,745
510		374	1944	$ 4,751	34.505	$ 163,936
511		374	1945	$ 6,468	31.400	$ 203,095
512		374	1946	$ 30,197	27.069	$ 817,402
513		374	1947	$ 4,667	24.921	$ 116,305
514		374	1948	$ 55,318	23.088	$ 1,277,195
515		374	1949	$ 6,503	22.590	$ 146,902
516		374	1950	$ 23,457	22.920	$ 537,628
517		374	1951	$ 48,634	19.030	$ 925,520
518		374	1952	$ 69,112	17.253	$ 1,192,372
519		374	1953	$ 65,348	16.791	$ 1,097,287
520		374	1954	$ 29,679	16.973	$ 503,741
521		374	1955	$ 50,457	15.859	$ 800,177
522		374	1956	$ 28,120	14.952	$ 420,461
523		374	1957	$ 25,246	13.652	$ 344,663
524		374	1958	$ 16,215	12.975	$ 210,393
525		374	1959	$ 62,056	12.218	$ 758,316
526		374	1960	$ 26,627	11.894	$ 316,700
527		374	1961	$ 74,280	12.266	$ 911,091
528		374	1962	$ 57,105	11.894	$ 679,203
529		374	1963	$ 17,652	11.336	$ 200,098
530		374	1964	$ 129,998	10.537	$ 1,369,778
531		374	1965	$ 61,900	9.874	$ 611,214
532		374	1966	$ 250,997	8.626	$ 2,165,194
533		374	1967	$ 154,575	7.990	$ 1,235,027
534		374	1968	$ 126,994	7.566	$ 960,870
535		374	1969	$ 182,498	7.530	$ 1,374,206
536		374	1970	$ 60,545	7.734	$ 468,254
537		374	1971	$ 69,484	7.441	$ 517,014
538		374	1972	$ 139,608	7.218	$ 1,007,745
539		374	1973	$ 27,688	6.356	$ 175,993
540		374	1974	$ 153,622	5.304	$ 814,819
541		374	1975	$ 270,957	4.361	$ 1,181,674
542		374	1976	$ 44,512	3.536	$ 157,396
543		374	1977	$ 82,637	2.643	$ 218,418
544		374	1978	$ 120,850	2.314	$ 279,638
545		374	1979	$ 203,160	1.976	$ 401,462
546		374	1980	$ 152,877	1.685	$ 257,667
547		374	1981	$ 149,297	1.546	$ 230,819
548		374	1982	$ 173,534	1.741	$ 302,049
549		374	1983	$ 311,841	1.950	$ 608,187
550		374	1984	$ 132,436	1.906	$ 252,489
551		374	1985	$ 298,515	2.336	$ 697,423
552		374	1986	$ 518,274	2.691	$ 1,394,499
553		374	1987	$ 173,709	2.959	$ 514,087
554		374	1988	$ 230,769	2.712	$ 625,747
555		374	1989	$ 95,907	2.514	$ 241,111
556		374	1990	$ 184,637	2.504	$ 462,329
557		374	1991	$ 572,726	2.432	$ 1,392,997
558		374	1992	$ 619,742	2.370	$ 1,468,672
559		374	1993	$ 1,109,583	2.251	$ 2,497,556
560		374	1994	$ 325,472	2.093	$ 681,321
561		374	1995	$ 372,961	1.938	$ 722,900
562		374	1996	$ 1,088,643	1.805	$ 1,964,563
563		374	1997	$ 137,811	1.679	$ 231,405
564		374	1998	$ 45,206	1.524	$ 68,906
565		374	1999	$ 318,574	1.447	$ 460,978
566		374	2000	$ 406,304	1.389	$ 564,511
567		374	2001	$ 1,780	1.336	$ 2,378
568		374	2002	$ 69,118	1.276	$ 88,224
569		374	2003	$ 190,897	1.222	$ 233,236
570		374	2004	$ 2,690	1.134	$ 3,049
571		374	2005	$ 576,852	1.000	$ 576,852
572		374	2006	$ 101,364	1.000	$ 101,364
573				**$ 11,259,002**		**$ 46,737,963**
574						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
575	Structures and Improvements	375	1915	$ 6,431	49.000	$ 315,119
576		375	1917	$ 18	27.563	$ 496
577		375	1918	$ 18	25.941	$ 467
578		375	1919	$ 252	24.500	$ 6,174
579		375	1923	$ 578	24.500	$ 14,161
580		375	1925	$ 384	24.500	$ 9,408
581		375	1927	$ 1,947	24.500	$ 47,702
582		375	1928	$ 290	25.941	$ 7,523
583		375	1929	$ 103	25.941	$ 2,672
584		375	1930	$ 1,136	25.941	$ 29,469
585		375	1931	$ 6,072	27.563	$ 167,360
586		375	1935	$ 524	27.563	$ 14,443
587		375	1936	$ 411	27.563	$ 11,328
588		375	1937	$ 1,320	25.941	$ 34,242
589		375	1938	$ 279	25.941	$ 7,238
590		375	1939	$ 1,175	25.941	$ 30,481
591		375	1940	$ 11,602	24.500	$ 284,249
592		375	1941	$ 557	24.500	$ 13,647
593		375	1942	$ 565	22.050	$ 12,458
594		375	1943	$ 1,039	22.050	$ 22,910
595		375	1944	$ 1,398	22.050	$ 30,826
596		375	1945	$ 826	21.000	$ 17,346
597		375	1946	$ 1,529	18.375	$ 28,095
598		375	1947	$ 841	15.750	$ 13,246
599		375	1948	$ 9,484	14.226	$ 134,918
600		375	1949	$ 5,350	13.364	$ 71,495
601		375	1950	$ 6,584	12.600	$ 82,958
602		375	1951	$ 10,081	11.919	$ 120,155
603		375	1952	$ 27,602	11.605	$ 320,328
604		375	1953	$ 17,541	11.025	$ 193,390
605		375	1954	$ 9,021	10.500	$ 94,721
606		375	1955	$ 26,378	10.023	$ 264,380
607		375	1956	$ 17,525	9.383	$ 164,437
608		375	1957	$ 12,081	8.820	$ 106,554
609		375	1958	$ 18,359	8.481	$ 155,698
610		375	1959	$ 10,491	8.321	$ 87,293
611		375	1960	$ 16,073	8.167	$ 131,263
612		375	1961	$ 10,792	8.167	$ 88,135
613		375	1962	$ 16,276	8.018	$ 130,504
614		375	1963	$ 6,589	8.018	$ 52,832
615		375	1964	$ 32,826	7.875	$ 258,505
616		375	1965	$ 23,702	7.603	$ 180,217
617		375	1966	$ 20,453	7.350	$ 150,330
618		375	1967	$ 7,193	7.113	$ 51,163
619		375	1968	$ 38,282	6.682	$ 255,793
620		375	1969	$ 12,183	6.211	$ 75,672
621		375	1970	$ 19,154	5.727	$ 109,700
622		375	1971	$ 61,170	5.128	$ 313,674
623		375	1972	$ 4,150	4.846	$ 20,112
624		375	1973	$ 5,672	4.410	$ 25,014
625		375	1974	$ 13,680	3.729	$ 51,018
626		375	1975	$ 35,436	3.405	$ 120,674
627		375	1976	$ 9,352	3.303	$ 30,893
628		375	1977	$ 6,416	3.117	$ 19,996
629		375	1978	$ 117,630	2.818	$ 331,469
630		375	1979	$ 61,327	2.583	$ 158,391
631		375	1980	$ 10,847	2.374	$ 25,753
632		375	1981	$ 38,545	2.233	$ 86,068
633		375	1982	$ 35,134	2.164	$ 76,045
634		375	1983	$ 37,569	2.090	$ 78,521
635		375	1984	$ 14,868	1.991	$ 29,602
636		375	1985	$ 38,600	1.932	$ 74,579
637		375	1986	$ 347,386	1.883	$ 653,990
638		375	1987	$ 465	1.836	$ 854
639		375	1988	$ 2,399	1.757	$ 4,215
640		375	1989	$ 66,280	1.683	$ 111,563
641		375	1990	$ 60,924	1.669	$ 101,674
642		375	1991	$ 147,166	1.686	$ 248,184
643		375	1992	$ 112,411	1.678	$ 188,671
644		375	1993	$ 251,226	1.596	$ 401,052
645		375	1994	$ 11,645	1.510	$ 17,587
646		375	1995	$ 75,043	1.449	$ 108,772
647		375	1996	$ 62,662	1.401	$ 87,796
648		375	1997	$ 85,898	1.372	$ 117,826
649		375	1998	$ 199,457	1.346	$ 268,377
650		375	1999	$ 52,306	1.301	$ 68,044
651		375	2000	$ 1,598	1.255	$ 2,005
652		375	2003	$ 36,393	1.137	$ 41,391
653		375	2005	$ 12,714	1.032	$ 13,123
654		375	2006	$ 107,730	1.002	$ 107,893
655				**$ 2,537,414**		**$ 8,386,322**
656						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
657	Mains	376	1915	$ 248,848	42.600	$ 10,600,925
658		376	1920	$ 60,830	15.778	$ 959,762
659		376	1925	$ 183,510	17.750	$ 3,257,303
660		376	1928	$ 65	21.300	$ 1,385
661		376	1929	$ 13	21.300	$ 277
662		376	1930	$ 732,610	20.286	$ 14,861,517
663		376	1935	$ 1,038,343	20.286	$ 21,063,529
664		376	1940	$ 867,056	17.750	$ 15,390,244
665		376	1941	$ 104,021	17.040	$ 1,772,518
666		376	1943	$ 672	15.778	$ 10,603
667		376	1944	$ 945	15.778	$ 14,910
668		376	1945	$ 749,987	15.214	$ 11,410,517
669		376	1946	$ 6,466	13.313	$ 86,079
670		376	1947	$ 26,562	10.650	$ 282,885
671		376	1948	$ 25,304	9.064	$ 229,351
672		376	1949	$ 29,575	8.875	$ 262,478
673		376	1950	$ 4,487,575	8.694	$ 39,014,428
674		376	1951	$ 81,837	8.192	$ 670,434
675		376	1952	$ 96,640	7.889	$ 762,382
676		376	1953	$ 1,308,790	7.474	$ 9,781,483
677		376	1954	$ 1,338,982	7.100	$ 9,506,772
678		376	1955	$ 1,644,546	6.871	$ 11,299,623
679		376	1956	$ 1,565,888	6.455	$ 10,107,095
680		376	1957	$ 1,130,598	6.174	$ 6,980,214
681		376	1958	$ 1,407,741	6.000	$ 8,446,446
682		376	1959	$ 1,679,398	5.757	$ 9,667,886
683		376	1960	$ 2,162,983	5.680	$ 12,285,743
684		376	1961	$ 2,370,227	5.532	$ 13,113,204
685		376	1962	$ 3,456,436	5.462	$ 18,877,458
686		376	1963	$ 2,738,061	5.325	$ 14,580,175
687		376	1964	$ 4,036,295	5.195	$ 20,969,045
688		376	1965	$ 4,301,311	5.133	$ 22,076,608
689		376	1966	$ 6,271,364	5.071	$ 31,804,775
690		376	1967	$ 6,915,036	5.012	$ 34,656,533
691		376	1968	$ 5,732,665	4.953	$ 28,396,689
692		376	1969	$ 6,497,344	4.787	$ 31,099,647
693		376	1970	$ 4,812,304	4.630	$ 22,283,060
694		376	1971	$ 4,909,919	4.392	$ 21,563,149
695		376	1972	$ 4,670,949	4.303	$ 20,099,235
696		376	1973	$ 3,620,546	4.260	$ 15,423,526
697		376	1974	$ 3,968,358	3.839	$ 15,235,660
698		376	1975	$ 4,841,298	3.386	$ 16,391,796
699		376	1976	$ 1,859,442	3.185	$ 5,922,667
700		376	1977	$ 2,844,231	2.986	$ 8,493,190
701		376	1978	$ 5,671,247	2.774	$ 15,733,137
702		376	1979	$ 3,475,124	2.544	$ 8,842,031
703		376	1980	$ 6,357,245	2.299	$ 14,618,264
704		376	1981	$ 7,800,283	2.108	$ 16,441,773
705		376	1982	$ 9,907,777	1.955	$ 19,365,201
706		376	1983	$ 10,657,814	1.886	$ 20,100,263
707		376	1984	$ 7,616,985	1.845	$ 14,057,097
708		376	1985	$ 12,059,188	1.830	$ 22,065,748
709		376	1986	$ 20,366,913	1.799	$ 36,643,400
710		376	1987	$ 11,932,514	1.748	$ 20,857,646
711		376	1988	$ 11,278,392	1.663	$ 18,760,962
712		376	1989	$ 9,168,936	1.566	$ 14,362,996
713		376	1990	$ 10,057,615	1.521	$ 15,295,400
714		376	1991	$ 12,496,475	1.489	$ 18,609,469
715		376	1992	$ 17,155,774	1.469	$ 25,198,917
716		376	1993	$ 24,007,823	1.436	$ 34,468,661
717		376	1994	$ 17,373,162	1.403	$ 24,373,441
718		376	1995	$ 14,871,308	1.373	$ 20,413,926
719		376	1996	$ 21,574,341	1.342	$ 28,945,294
720		376	1997	$ 18,935,485	1.314	$ 24,880,851
721		376	1998	$ 14,127,725	1.284	$ 18,134,095
722		376	1999	$ 20,627,240	1.260	$ 25,991,834
723		376	2000	$ 19,162,382	1.235	$ 23,660,658
724		376	2001	$ 6,325,939	1.205	$ 7,624,818
725		376	2002	$ 20,413,139	1.179	$ 24,064,838
726		376	2003	$ 18,941,171	1.155	$ 21,879,660
727		376	2004	$ 35,343,092	1.114	$ 39,371,838
728		376	2005	$ 8,271,620	1.048	$ 8,669,827
729		376	2006	$ 17,329,789	1.005	$ 17,424,340
730				**$ 508,132,069**		**$ 1,140,569,591**
731						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
732	Compressor Station Equipment	377	1970	$ 735	4.942	$ 3,632
733		377	1971	$ 771	4.722	$ 3,641
734		377	1972	$ 852	4.570	$ 3,894
735		377	1978	$ 419,418	4.250	$ 1,782,527
736		377	1979	$ 722,697	3.696	$ 2,670,837
737		377	1980	$ 21,213	3.102	$ 65,807
738		377	1981	$ 1,572	2.891	$ 4,545
739		377	1984	$ 977	2.690	$ 2,628
740		377	1985	$ 11,358	2.443	$ 27,742
741		377	1988	$ 2,122	2.191	$ 4,649
742		377	1991	$ 238,706	2.005	$ 478,538
743		377	1997	$ 4,018	1.816	$ 7,298
744		377	1998	$ 75,145	1.693	$ 127,238
745		377	1999	$ 24,152	1.680	$ 40,572
746		377	2000	$ 14	1.635	$ 23
747		377	2003	$ 18,212	1.610	$ 29,319
748		377	2006	$ 20,631	1.604	$ 33,087
749				**$ 1,562,593**		**$ 5,285,974**
750						
751	Measuring and Regulating Sta. Equip. - General	378	1915	$ 266	43.833	$ 11,660
752		378	1917	$ 525	30.941	$ 16,244
753		378	1920	$ 2,184	23.909	$ 52,217
754		378	1925	$ 1,229	23.909	$ 29,384
755		378	1927	$ 232	23.909	$ 5,547
756		378	1929	$ 1,515	23.909	$ 36,222
757		378	1930	$ 2,919	23.909	$ 69,791
758		378	1931	$ 1,417	23.909	$ 33,879
759		378	1935	$ 584	26.300	$ 15,359
760		378	1936	$ 909	26.300	$ 23,907
761		378	1938	$ 96	23.909	$ 2,295
762		378	1939	$ 212	23.909	$ 5,069
763		378	1940	$ 5,200	21.917	$ 113,967
764		378	1941	$ 637	21.917	$ 13,961
765		378	1942	$ 385	21.917	$ 8,438
766		378	1943	$ 134	21.917	$ 2,937
767		378	1944	$ 392	21.917	$ 8,591
768		378	1945	$ 3,878	21.917	$ 84,993
769		378	1946	$ 1,128	19.481	$ 21,975
770		378	1947	$ 1,397	16.438	$ 22,963
771		378	1948	$ 6,274	15.471	$ 97,062
772		378	1949	$ 6,555	14.611	$ 95,776
773		378	1950	$ 37,274	14.216	$ 529,895
774		378	1951	$ 11,951	12.829	$ 153,323
775		378	1952	$ 20,375	12.524	$ 255,173
776		378	1953	$ 19,993	12.524	$ 250,389
777		378	1954	$ 35,994	11.955	$ 430,292
778		378	1955	$ 41,050	11.435	$ 469,398
779		378	1956	$ 23,872	10.520	$ 251,133
780		378	1957	$ 31,911	9.741	$ 310,837
781		378	1958	$ 45,860	9.393	$ 430,756
782		378	1959	$ 32,881	9.069	$ 298,197
783		378	1960	$ 37,687	8.915	$ 335,989
784		378	1961	$ 42,027	8.767	$ 368,437
785		378	1962	$ 34,842	8.484	$ 295,595
786		378	1963	$ 50,731	8.484	$ 430,395
787		378	1964	$ 56,079	8.349	$ 468,215
788		378	1965	$ 60,433	8.219	$ 496,684
789		378	1966	$ 66,023	7.970	$ 526,183
790		378	1967	$ 122,406	7.851	$ 960,978
791		378	1968	$ 106,787	7.623	$ 814,057
792		378	1969	$ 90,353	7.205	$ 651,037
793		378	1970	$ 145,185	6.494	$ 942,806
794		378	1971	$ 136,088	5.910	$ 804,295
795		378	1972	$ 105,759	5.479	$ 579,471
796		378	1973	$ 108,648	5.260	$ 571,488
797		378	1974	$ 74,385	4.614	$ 343,215
798		378	1975	$ 98,069	4.109	$ 403,002
799		378	1976	$ 126,247	3.757	$ 474,328
800		378	1977	$ 119,474	3.530	$ 421,767
801		378	1978	$ 226,521	3.227	$ 730,982
802		378	1979	$ 103,695	3.006	$ 311,678
803		378	1980	$ 156,808	2.754	$ 431,838
804		378	1981	$ 172,852	2.469	$ 426,855
805		378	1982	$ 314,163	2.277	$ 715,367
806		378	1983	$ 341,994	2.277	$ 778,740
807		378	1984	$ 460,446	2.210	$ 1,061,826
808		378	1985	$ 392,309	2.192	$ 859,811
809		378	1986	$ 781,956	2.165	$ 1,692,629
810		378	1987	$ 606,382	2.096	$ 1,270,745
811		378	1988	$ 732,803	1.955	$ 1,432,916
812		378	1989	$ 518,113	1.884	$ 975,926
813		378	1990	$ 189,290	1.880	$ 355,913
814		378	1991	$ 794,083	1.865	$ 1,481,162
815		378	1992	$ 1,430,094	1.792	$ 2,562,962
816		378	1993	$ 2,177,747	1.739	$ 3,786,760
817		378	1994	$ 2,482,039	1.662	$ 4,124,968
818		378	1995	$ 1,284,315	1.620	$ 2,080,215
819		378	1996	$ 1,561,688	1.574	$ 2,457,585
820		378	1997	$ 1,101,093	1.527	$ 1,681,204
821		378	1998	$ 1,971,844	1.494	$ 2,946,562
822		378	1999	$ 852,439	1.470	$ 1,253,341
823		378	2000	$ 626,734	1.420	$ 889,776
824		378	2001	$ 111,244	1.397	$ 155,417
825		378	2002	$ 323,132	1.371	$ 442,912
826		378	2003	$ 1,372,059	1.361	$ 1,867,278
827		378	2004	$ 1,499,774	1.186	$ 1,778,762
828		378	2005	$ 538,226	1.050	$ 565,084
829		378	2006	$ 753,477	1.006	$ 758,282
830				**$ 25,817,772**		**$ 53,917,070**
831						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
832	Measuring and Regulating Sta. Equip. - City Gate	379	1930	$ 85	17.227	$ 1,464
833		379	1938	$ 1,383	17.227	$ 23,825
834		379	1939	$ 10	18.950	$ 190
835		379	1940	$ 443	18.950	$ 8,395
836		379	1947	$ 1,173	18.950	$ 22,228
837		379	1949	$ 9	18.950	$ 171
838		379	1950	$ 893	18.950	$ 16,922
839		379	1952	$ 4,192	17.227	$ 72,217
840		379	1953	$ 3,997	17.227	$ 68,857
841		379	1954	$ 217	17.227	$ 3,738
842		379	1955	$ 16,409	16.478	$ 270,392
843		379	1956	$ 16,968	16.478	$ 279,603
844		379	1957	$ 3,063	15.792	$ 48,370
845		379	1958	$ 595	15.792	$ 9,396
846		379	1959	$ 6,936	15.792	$ 109,531
847		379	1960	$ 2,815	15.792	$ 44,454
848		379	1961	$ 2,832	14.037	$ 39,753
849		379	1962	$ 988	12.226	$ 12,079
850		379	1963	$ 2,069	11.485	$ 23,762
851		379	1964	$ 22,328	10.528	$ 235,064
852		379	1966	$ 6,265	10.243	$ 64,174
853		379	1967	$ 161	9.475	$ 1,525
854		379	1968	$ 6,939	9.244	$ 64,143
855		379	1969	$ 6,024	8.814	$ 53,095
856		379	1970	$ 12,300	8.614	$ 105,948
857		379	1971	$ 17,580	8.239	$ 144,844
858		379	1972	$ 16,779	7.896	$ 132,484
859		379	1973	$ 13,604	7.288	$ 99,152
860		379	1974	$ 128,962	7.019	$ 905,122
861		379	1975	$ 613	6.768	$ 4,149
862		379	1976	$ 17,482	6.649	$ 116,240
863		379	1977	$ 15,582	6.534	$ 101,820
864		379	1978	$ 6,029	6.424	$ 38,729
865		379	1979	$ 644	6.317	$ 4,068
866		379	1980	$ 1,423	6.213	$ 8,841
867		379	1981	$ 58,121	6.113	$ 355,288
868		379	1982	$ 12,108	5.922	$ 71,702
869		379	1983	$ 11,371	5.742	$ 65,297
870		379	1984	$ 73,970	5.493	$ 406,299
871		379	1985	$ 106,735	5.122	$ 546,656
872		379	1986	$ 933,688	4.679	$ 4,368,738
873		379	1987	$ 57,916	4.258	$ 246,631
874		379	1988	$ 39,721	3.948	$ 156,815
875		379	1989	$ 508,687	3.790	$ 1,927,924
876		379	1990	$ 398,769	3.325	$ 1,325,732
877		379	1991	$ 1,183,165	2.938	$ 3,476,120
878		379	1992	$ 355,948	2.707	$ 963,602
879		379	1993	$ 590,328	2.544	$ 1,501,573
880		379	1994	$ 465,873	2.311	$ 1,076,621
881		379	1995	$ 446,065	2.153	$ 960,560
882		379	1996	$ 935,200	1.974	$ 1,846,046
883		379	1997	$ 1,138,901	1.771	$ 2,017,026
884		379	1998	$ 958,513	1.634	$ 1,565,847
885		379	1999	$ 865,088	1.627	$ 1,407,160
886		379	2000	$ 209,850	1.586	$ 332,775
887		379	2001	$ 1,739	1.566	$ 2,723
888		379	2002	$ 178,654	1.560	$ 278,641
889		379	2003	$ 191,470	1.510	$ 289,112
890		379	2004	$ 151,713	1.409	$ 213,752
891		379	2005	$ 82,795	1.356	$ 112,269
892		379	2006	$ 31,750	1.352	$ 42,938
893				**$ 10,325,930**		**$ 28,692,594**
894						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
895	Services	380	1920	$ 1	38.846	$ 39
896		380	1925	$ 4	36.071	$ 144
897		380	1930	$ 184	36.071	$ 6,637
898		380	1935	$ 15	38.846	$ 583
899		380	1940	$ 81,990	33.667	$ 2,760,330
900		380	1945	$ 7,243	28.056	$ 203,206
901		380	1950	$ 235,942	17.414	$ 4,108,645
902		380	1953	$ 100,910	14.429	$ 1,455,987
903		380	1954	$ 155,485	13.649	$ 2,122,160
904		380	1955	$ 87,692	12.949	$ 1,135,499
905		380	1956	$ 45,146	12.024	$ 542,827
906		380	1957	$ 282,696	11.222	$ 3,172,477
907		380	1958	$ 252,428	10.978	$ 2,771,220
908		380	1959	$ 378,821	10.306	$ 3,904,176
909		380	1960	$ 388,984	9.902	$ 3,851,704
910		380	1961	$ 654,905	9.712	$ 6,360,135
911		380	1962	$ 761,348	9.352	$ 7,120,014
912		380	1963	$ 906,436	9.182	$ 8,322,731
913		380	1964	$ 1,057,908	8.860	$ 9,372,694
914		380	1965	$ 1,168,433	8.559	$ 10,000,994
915		380	1966	$ 1,069,526	8.279	$ 8,854,273
916		380	1967	$ 1,537,592	7.891	$ 12,132,562
917		380	1968	$ 1,615,404	7.537	$ 12,175,806
918		380	1969	$ 1,507,391	6.918	$ 10,427,842
919		380	1970	$ 1,892,631	6.235	$ 11,799,736
920		380	1971	$ 1,992,759	5.611	$ 11,181,592
921		380	1972	$ 2,482,396	5.316	$ 13,195,895
922		380	1973	$ 2,285,654	4.360	$ 9,965,451
923		380	1974	$ 2,033,007	4.000	$ 8,132,028
924		380	1975	$ 1,698,533	3.603	$ 6,120,334
925		380	1976	$ 1,077,297	3.433	$ 3,698,437
926		380	1977	$ 1,023,659	3.230	$ 3,306,039
927		380	1978	$ 814,699	3.028	$ 2,466,728
928		380	1979	$ 3,574,083	2.795	$ 9,989,104
929		380	1980	$ 5,609,567	2.565	$ 14,386,889
930		380	1981	$ 6,500,763	2.357	$ 15,320,717
931		380	1982	$ 5,094,226	2.117	$ 10,781,954
932		380	1983	$ 5,151,961	2.028	$ 10,447,698
933		380	1984	$ 5,300,222	1.973	$ 10,456,547
934		380	1985	$ 8,033,452	1.929	$ 15,498,164
935		380	1986	$ 9,936,306	1.887	$ 18,754,240
936		380	1987	$ 9,766,173	1.832	$ 17,890,972
937		380	1988	$ 13,354,314	1.774	$ 23,692,700
938		380	1989	$ 10,014,933	1.715	$ 17,174,084
939		380	1990	$ 10,873,872	1.666	$ 18,112,734
940		380	1991	$ 11,797,646	1.627	$ 19,193,185
941		380	1992	$ 12,968,546	1.581	$ 20,505,117
942		380	1993	$ 11,566,483	1.541	$ 17,819,741
943		380	1994	$ 18,099,885	1.486	$ 26,887,734
944		380	1995	$ 13,438,211	1.450	$ 19,481,496
945		380	1996	$ 12,822,895	1.412	$ 18,107,797
946		380	1997	$ 18,217,978	1.378	$ 25,096,488
947		380	1998	$ 16,125,506	1.333	$ 21,500,675
948		380	1999	$ 19,310,663	1.298	$ 25,057,884
949		380	2000	$ 16,565,350	1.258	$ 20,844,134
950		380	2001	$ 541,333	1.214	$ 656,983
951		380	2002	$ 41,196,439	1.172	$ 48,283,998
952		380	2003	$ 25,038,975	1.141	$ 28,559,825
953		380	2004	$ 25,985,899	1.094	$ 28,431,247
954		380	2005	$ 23,114,453	1.042	$ 24,081,007
955		380	2006	$ 20,075,580	1.002	$ 20,121,731
956				**$ 407,672,833**		**$ 727,803,771**
957						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
958	Meters	381	1920	$ 10	6.156	$ 62
959		381	1925	$ 408	7.296	$ 2,977
960		381	1930	$ 1,282	7.296	$ 9,354
961		381	1935	$ 3,179	7.880	$ 25,051
962		381	1940	$ 4,120	7.577	$ 31,217
963		381	1945	$ 12,745	7.577	$ 96,568
964		381	1950	$ 46,300	4.104	$ 190,023
965		381	1953	$ 17,011	3.582	$ 60,930
966		381	1954	$ 12,130	3.582	$ 43,447
967		381	1955	$ 37,881	3.518	$ 133,260
968		381	1956	$ 31,175	3.127	$ 97,484
969		381	1957	$ 45,511	2.985	$ 135,843
970		381	1958	$ 16,212	2.775	$ 44,983
971		381	1959	$ 8,457	2.775	$ 23,465
972		381	1960	$ 7,744	2.775	$ 21,487
973		381	1961	$ 9,060	2.699	$ 24,450
974		381	1962	$ 48,824	2.494	$ 121,751
975		381	1963	$ 159,314	2.494	$ 397,277
976		381	1964	$ 134,874	2.494	$ 336,331
977		381	1965	$ 157,788	2.494	$ 393,471
978		381	1966	$ 217,339	2.291	$ 497,858
979		381	1967	$ 351,652	2.239	$ 787,221
980		381	1968	$ 334,588	2.239	$ 749,021
981		381	1969	$ 379,372	2.213	$ 839,734
982		381	1970	$ 408,758	2.096	$ 856,652
983		381	1971	$ 419,701	1.970	$ 826,811
984		381	1972	$ 470,092	1.970	$ 926,081
985		381	1973	$ 546,035	1.970	$ 1,075,689
986		381	1974	$ 502,285	1.775	$ 891,443
987		381	1975	$ 528,470	1.539	$ 813,348
988		381	1976	$ 510,168	1.504	$ 767,199
989		381	1977	$ 481,305	1.449	$ 697,184
990		381	1978	$ 1,000,808	1.417	$ 1,418,411
991		381	1979	$ 478,028	1.378	$ 658,542
992		381	1980	$ 488,403	1.322	$ 645,741
993		381	1981	$ 1,133,044	1.247	$ 1,412,719
994		381	1982	$ 767,090	1.247	$ 956,435
995		381	1983	$ 491,211	1.349	$ 662,798
996		381	1984	$ 611,183	1.340	$ 819,068
997		381	1985	$ 758,698	1.247	$ 945,972
998		381	1986	$ 871,909	1.187	$ 1,034,735
999		381	1987	$ 1,256,933	1.194	$ 1,500,702
1000		381	1988	$ 3,115,123	1.157	$ 3,604,577
1001		381	1989	$ 1,832,079	1.115	$ 2,041,978
1002		381	1990	$ 2,237,827	1.065	$ 2,382,983
1003		381	1991	$ 1,987,848	1.035	$ 2,058,376
1004		381	1992	$ 1,706,392	1.029	$ 1,755,401
1005		381	1993	$ 1,200,721	1.034	$ 1,241,690
1006		381	1994	$ 2,322,741	1.045	$ 2,427,480
1007		381	1995	$ 2,435,445	1.037	$ 2,525,172
1008		381	1996	$ 4,748,920	1.027	$ 4,878,943
1009		381	1997	$ 4,731,613	1.008	$ 4,767,917
1010		381	1998	$ 4,675,446	1.005	$ 4,699,300
1011		381	1999	$ 3,448,361	1.033	$ 3,561,348
1012		381	2000	$ 3,252,345	0.976	$ 3,175,772
1013		381	2001	$ 126,978	0.941	$ 119,544
1014		381	2002	$ 3,637,741	0.978	$ 3,556,501
1015		381	2003	$ 2,746,532	1.022	$ 2,807,091
1016		381	2004	$ 2,417,359	1.078	$ 2,605,853
1017		381	2005	$ 3,349,884	1.063	$ 3,562,360
1018		381	2006	$ 3,422,795	1.015	$ 3,475,725
1019				**$ 67,157,247**		**$ 77,220,807**
1020						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1021	Meter Installations	382	1940	$ 23,868	34.300	$ 818,672
1022		382	1942	$ 1,343	32.667	$ 43,871
1023		382	1943	$ 479	32.667	$ 15,647
1024		382	1944	$ 544	32.667	$ 17,771
1025		382	1945	$ 517	32.667	$ 16,889
1026		382	1953	$ 14,523	18.541	$ 269,264
1027		382	1954	$ 16,278	17.590	$ 286,326
1028		382	1955	$ 19,594	16.732	$ 327,841
1029		382	1956	$ 19,834	14.913	$ 295,785
1030		382	1957	$ 21,511	13.451	$ 289,344
1031		382	1958	$ 15,343	13.192	$ 202,410
1032		382	1959	$ 23,209	12.704	$ 294,840
1033		382	1960	$ 62,486	12.250	$ 765,454
1034		382	1961	$ 44,676	12.035	$ 537,680
1035		382	1962	$ 64,709	11.828	$ 765,351
1036		382	1963	$ 58,839	11.627	$ 684,128
1037		382	1964	$ 129,425	11.433	$ 1,479,759
1038		382	1965	$ 161,065	11.246	$ 1,811,321
1039		382	1966	$ 135,894	11.065	$ 1,503,601
1040		382	1967	$ 267,882	10.719	$ 2,871,360
1041		382	1968	$ 265,358	10.394	$ 2,758,115
1042		382	1969	$ 256,138	9.528	$ 2,440,426
1043		382	1970	$ 280,857	8.575	$ 2,408,349
1044		382	1971	$ 317,002	7.795	$ 2,471,175
1045		382	1972	$ 355,017	7.221	$ 2,563,596
1046		382	1973	$ 363,315	6.860	$ 2,492,341
1047		382	1974	$ 362,415	5.914	$ 2,143,247
1048		382	1975	$ 223,211	5.359	$ 1,196,271
1049		382	1976	$ 304,281	5.007	$ 1,523,626
1050		382	1977	$ 238,244	4.667	$ 1,111,805
1051		382	1978	$ 315,932	4.183	$ 1,321,520
1052		382	1979	$ 614,411	3.876	$ 2,381,277
1053		382	1980	$ 825,032	3.649	$ 3,010,489
1054		382	1981	$ 1,191,520	3.282	$ 3,910,922
1055		382	1982	$ 1,055,388	3.009	$ 3,175,422
1056		382	1983	$ 1,366,588	2.932	$ 4,006,322
1057		382	1984	$ 1,024,470	2.835	$ 2,904,076
1058		382	1985	$ 1,140,523	2.835	$ 3,233,053
1059		382	1986	$ 1,626,262	2.996	$ 4,871,684
1060		382	1987	$ 1,652,544	2.870	$ 4,743,285
1061		382	1988	$ 2,150,000	2.626	$ 5,645,550
1062		382	1989	$ 1,423,221	2.486	$ 3,537,426
1063		382	1990	$ 1,449,744	2.441	$ 3,539,233
1064		382	1991	$ 1,570,135	2.392	$ 3,756,278
1065		382	1992	$ 1,872,488	2.361	$ 4,421,779
1066		382	1993	$ 1,608,923	2.306	$ 3,709,987
1067		382	1994	$ 2,553,831	2.111	$ 5,390,548
1068		382	1995	$ 1,815,486	2.051	$ 3,723,239
1069		382	1996	$ 3,337,515	2.042	$ 6,814,093
1070		382	1997	$ 4,664,944	1.976	$ 9,215,699
1071		382	1998	$ 1,579,991	1.935	$ 3,057,472
1072		382	1999	$ 3,535,452	1.885	$ 6,662,967
1073		382	2000	$ 5,030,722	1.784	$ 8,975,488
1074		382	2001	$ 65,142	1.753	$ 114,217
1075		382	2002	$ 22,475	1.727	$ 38,811
1076		382	2003	$ 97,439	1.647	$ 160,488
1077		382	2004	$ 147,550	1.331	$ 196,447
1078		382	2005	$ 970,499	1.072	$ 1,040,660
1079		382	2006	$ 1,145,233	1.007	$ 1,153,077
1080				**$ 49,901,317**		**$ 139,117,777**
1081						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1082	House Regulators	383	1964	$ 2,483	4.341	$ 10,780
1083		383	1965	$ 27,729	4.450	$ 123,394
1084		383	1966	$ 41,705	4.450	$ 185,587
1085		383	1967	$ 64,649	4.450	$ 287,688
1086		383	1968	$ 90,886	4.395	$ 399,450
1087		383	1969	$ 102,735	4.289	$ 440,647
1088		383	1970	$ 122,961	3.870	$ 475,806
1089		383	1971	$ 109,354	3.633	$ 397,245
1090		383	1972	$ 126,367	3.560	$ 449,867
1091		383	1973	$ 110,834	3.560	$ 394,569
1092		383	1974	$ 82,038	3.358	$ 275,524
1093		383	1975	$ 82,286	2.848	$ 234,351
1094		383	1976	$ 116,213	2.697	$ 313,423
1095		383	1977	$ 96,211	2.618	$ 251,846
1096		383	1978	$ 111,321	2.472	$ 275,210
1097		383	1979	$ 191,214	2.082	$ 398,083
1098		383	1980	$ 306,107	1.771	$ 542,160
1099		383	1981	$ 273,345	1.695	$ 463,385
1100		383	1982	$ 262,665	1.641	$ 430,916
1101		383	1983	$ 316,757	1.611	$ 510,251
1102		383	1984	$ 274,290	1.548	$ 424,553
1103		383	1985	$ 416,043	1.502	$ 624,942
1104		383	1986	$ 514,902	1.508	$ 776,717
1105		383	1987	$ 378,346	1.465	$ 554,285
1106		383	1988	$ 561,313	1.443	$ 809,838
1107		383	1989	$ 433,943	1.407	$ 610,608
1108		383	1990	$ 613,469	1.325	$ 812,632
1109		383	1991	$ 526,726	1.259	$ 663,181
1110		383	1992	$ 709,459	1.211	$ 859,073
1111		383	1993	$ 745,248	1.198	$ 892,543
1112		383	1994	$ 632,459	1.174	$ 742,475
1113		383	1995	$ 643,924	1.178	$ 758,435
1114		383	1996	$ 1,010,429	1.174	$ 1,186,192
1115		383	1997	$ 579,436	1.176	$ 681,352
1116		383	1998	$ 674,827	1.161	$ 783,173
1117		383	1999	$ 1,486,952	1.165	$ 1,732,749
1118		383	2000	$ 4,688,376	1.166	$ 5,467,852
1119		383	2001	$ 6,800	1.142	$ 7,765
1120		383	2004	$ 7,643	1.103	$ 8,430
1121		383	2005	$ 634,036	1.049	$ 664,851
1122		383	2006	$ 867,957	1.011	$ 877,820
1123				**$ 19,044,438**		**$ 26,799,645**
1124						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1125	Industrial Measuring and Regulating Station Equipment	385	1931	$ 128	23.909	$ 3,060
1126		385	1940	$ 1,612	21.917	$ 35,330
1127		385	1944	$ 88	21.917	$ 1,929
1128		385	1945	$ 789	21.917	$ 17,292
1129		385	1946	$ 1,046	19.481	$ 20,378
1130		385	1948	$ 170	15.471	$ 2,630
1131		385	1949	$ 1,309	14.611	$ 19,126
1132		385	1950	$ 6,884	14.216	$ 97,864
1133		385	1951	$ 7,084	12.829	$ 90,883
1134		385	1952	$ 9,287	12.524	$ 116,309
1135		385	1953	$ 4,473	12.524	$ 56,019
1136		385	1954	$ 13,010	11.955	$ 155,529
1137		385	1955	$ 15,405	11.435	$ 176,153
1138		385	1956	$ 11,269	10.520	$ 118,550
1139		385	1957	$ 8,036	9.741	$ 78,277
1140		385	1958	$ 2,900	9.393	$ 27,239
1141		385	1959	$ 14,466	9.069	$ 131,192
1142		385	1960	$ 33,089	8.915	$ 294,997
1143		385	1961	$ 32,571	8.767	$ 285,539
1144		385	1962	$ 67,619	8.484	$ 573,671
1145		385	1963	$ 66,492	8.484	$ 564,110
1146		385	1964	$ 75,146	8.349	$ 627,409
1147		385	1965	$ 142,203	8.219	$ 1,168,731
1148		385	1966	$ 194,117	7.970	$ 1,547,054
1149		385	1967	$ 162,363	7.851	$ 1,274,671
1150		385	1968	$ 216,319	7.623	$ 1,649,040
1151		385	1969	$ 186,050	7.205	$ 1,340,579
1152		385	1970	$ 235,253	6.494	$ 1,527,692
1153		385	1971	$ 207,524	5.910	$ 1,226,490
1154		385	1972	$ 165,742	5.479	$ 908,128
1155		385	1973	$ 50,637	5.260	$ 266,351
1156		385	1974	$ 24,488	4.614	$ 112,988
1157		385	1975	$ 29,913	4.109	$ 122,924
1158		385	1976	$ 46,124	3.757	$ 173,294
1159		385	1977	$ 35,419	3.530	$ 125,036
1160		385	1978	$ 102,834	3.227	$ 331,845
1161		385	1979	$ 109,809	3.006	$ 330,054
1162		385	1980	$ 439,507	2.754	$ 1,210,370
1163		385	1981	$ 766,511	2.469	$ 1,892,886
1164		385	1982	$ 656,826	2.277	$ 1,495,630
1165		385	1983	$ 654,986	2.277	$ 1,491,440
1166		385	1984	$ 537,617	2.210	$ 1,188,179
1167		385	1985	$ 564,110	2.192	$ 1,236,341
1168		385	1986	$ 687,289	2.165	$ 1,487,712
1169		385	1987	$ 851,171	2.096	$ 1,783,729
1170		385	1988	$ 956,301	1.955	$ 1,869,942
1171		385	1989	$ 1,638,252	1.884	$ 3,085,839
1172		385	1990	$ 903,506	1.880	$ 1,698,817
1173		385	1991	$ 1,491,555	1.865	$ 2,782,120
1174		385	1992	$ 1,546,217	1.792	$ 2,771,074
1175		385	1993	$ 2,141,199	1.739	$ 3,723,209
1176		385	1994	$ 2,247,771	1.662	$ 3,735,632
1177		385	1995	$ 1,704,866	1.620	$ 2,761,384
1178		385	1996	$ 2,096,562	1.574	$ 3,299,302
1179		385	1997	$ 2,232,700	1.527	$ 3,408,999
1180		385	1998	$ 2,841,342	1.494	$ 4,245,869
1181		385	1999	$ 2,341,991	1.470	$ 3,443,431
1182		385	2000	$ 2,263,776	1.420	$ 3,213,890
1183		385	2001	$ 522,561	1.397	$ 730,059
1184		385	2002	$ 2,355,552	1.371	$ 3,228,718
1185		385	2003	$ 1,519,685	1.361	$ 2,068,187
1186		385	2004	$ 1,575,625	1.186	$ 1,868,723
1187		385	2005	$ 101,942	1.050	$ 107,029
1188		385	2006	$ 421,699	1.006	$ 424,388
1189				**$ 38,342,787**		**$ 75,851,260**
1190						
1191	Other Equipment	387	2005	$ 142,774	1.050	$ 149,898
1192		387	2006	$ 10,894	1.006	$ 10,963
1193				**$ 153,668**		**$ 160,862**
1194						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1195	Land and Land Rights	389	1915	$ 8,651	38.765	$ 335,360
1196		389	1916	$ 202	35.682	$ 7,208
1197		389	1917	$ 74	34.130	$ 2,526
1198		389	1918	$ 60	31.089	$ 1,865
1199		389	1919	$ 60	29.623	$ 1,777
1200		389	1920	$ 89	24.921	$ 2,218
1201		389	1921	$ 1,800	26.838	$ 48,308
1202		389	1922	$ 85	33.053	$ 2,809
1203		389	1923	$ 15,138	33.763	$ 511,111
1204		389	1924	$ 2,275	35.281	$ 80,264
1205		389	1925	$ 7,705	36.941	$ 284,632
1206		389	1926	$ 189	38.765	$ 7,327
1207		389	1927	$ 181	42.432	$ 7,680
1208		389	1928	$ 551	43.014	$ 23,701
1209		389	1929	$ 6,740	43.014	$ 289,912
1210		389	1930	$ 65,817	43.611	$ 2,870,353
1211		389	1931	$ 134	48.308	$ 6,473
1212		389	1932	$ 22	58.148	$ 1,279
1213		389	1937	$ 3,459	51.475	$ 178,053
1214		389	1940	$ 13,635	49.841	$ 679,586
1215		389	1944	$ 223	34.505	$ 7,695
1216		389	1946	$ 1	27.069	$ 27
1217		389	1947	$ 583	24.921	$ 14,529
1218		389	1949	$ 4,158	22.590	$ 93,929
1219		389	1952	$ 375	17.253	$ 6,470
1220		389	1954	$ 203	16.973	$ 3,446
1221		389	1961	$ 412	12.266	$ 5,053
1222		389	1962	$ 2,926	11.894	$ 34,802
1223		389	1963	$ 201	11.336	$ 2,278
1224		389	1964	$ 61,077	10.537	$ 643,563
1225		389	1966	$ 7,700	8.626	$ 66,423
1226		389	1967	$ 122,513	7.990	$ 978,857
1227		389	1968	$ 429	7.566	$ 3,246
1228		389	1969	$ 18,777	7.530	$ 141,390
1229		389	1970	$ 75,859	7.734	$ 586,693
1230		389	1971	$ 15,369	7.441	$ 114,357
1231		389	1972	$ 29,799	7.218	$ 215,101
1232		389	1973	$ 23,000	6.356	$ 146,194
1233		389	1976	$ 142,515	3.536	$ 503,938
1234		389	1978	$ 58,121	2.314	$ 134,488
1235		389	1979	$ 79,776	1.976	$ 157,644
1236		389	1981	$ 104,497	1.546	$ 161,556
1237		389	1982	$ 38,447	1.741	$ 66,920
1238		389	1983	$ 2,350	1.950	$ 4,583
1239		389	1985	$ 92,500	2.336	$ 216,109
1240		389	1992	$ 15,827	2.370	$ 37,507
1241		389	2000	$ 4,744	1.389	$ 6,591
1242		389	2006	$ 165,257	1.000	$ 165,257
1243				**$ 1,194,506**		**$ 9,861,088**
1244						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1245	**General Plant**					
1246	Structures and Improvements	390	1915	$ 33,076	49.000	$ 1,620,724
1247		390	1917	$ 2,071	27.563	$ 57,082
1248		390	1921	$ 276	24.500	$ 6,762
1249		390	1923	$ 14,034	24.500	$ 343,833
1250		390	1924	$ 2,759	24.500	$ 67,596
1251		390	1925	$ 863	24.500	$ 21,144
1252		390	1926	$ 7,328	24.500	$ 179,536
1253		390	1927	$ 604	24.500	$ 14,798
1254		390	1928	$ 59	25.941	$ 1,531
1255		390	1930	$ 95	25.941	$ 2,464
1256		390	1931	$ 1,720	27.563	$ 47,408
1257		390	1939	$ 230	25.941	$ 5,966
1258		390	1940	$ 28,363	24.500	$ 694,894
1259		390	1942	$ 328	22.050	$ 7,232
1260		390	1943	$ 30	22.050	$ 662
1261		390	1945	$ 1,915	21.000	$ 40,215
1262		390	1946	$ 822	18.375	$ 15,104
1263		390	1947	$ 5,634	15.750	$ 88,736
1264		390	1948	$ 4,579	14.226	$ 65,140
1265		390	1949	$ 43,770	13.364	$ 584,926
1266		390	1950	$ 2,030	12.600	$ 25,578
1267		390	1951	$ 68,229	11.919	$ 813,216
1268		390	1952	$ 1,770	11.605	$ 20,541
1269		390	1953	$ 21,757	11.025	$ 239,871
1270		390	1954	$ 11,827	10.500	$ 124,184
1271		390	1956	$ 9,570	9.383	$ 89,795
1272		390	1957	$ 7,318	8.820	$ 64,545
1273		390	1959	$ 358	8.321	$ 2,979
1274		390	1960	$ 950	8.167	$ 7,758
1275		390	1961	$ 195	8.167	$ 1,593
1276		390	1963	$ 4,187	8.018	$ 33,572
1277		390	1964	$ 270,766	7.875	$ 2,132,282
1278		390	1965	$ 17,086	7.603	$ 129,913
1279		390	1966	$ 1,490,978	7.350	$ 10,958,688
1280		390	1967	$ 27,936	7.113	$ 198,706
1281		390	1968	$ 389,669	6.682	$ 2,603,697
1282		390	1969	$ 67,489	6.211	$ 419,192
1283		390	1970	$ 391,782	5.727	$ 2,243,842
1284		390	1971	$ 218,884	5.128	$ 1,122,417
1285		390	1972	$ 172,817	4.846	$ 837,498
1286		390	1973	$ 121,726	4.410	$ 536,812
1287		390	1974	$ 19,646	3.729	$ 73,268
1288		390	1975	$ 430,281	3.405	$ 1,465,281
1289		390	1976	$ 286,964	3.303	$ 947,948
1290		390	1977	$ 726,717	3.117	$ 2,264,892
1291		390	1978	$ 49,319	2.818	$ 138,976
1292		390	1979	$ 94,879	2.583	$ 245,046
1293		390	1980	$ 1,765,295	2.374	$ 4,191,091
1294		390	1981	$ 57,694	2.233	$ 128,826
1295		390	1982	$ 1,484,907	2.164	$ 3,213,958
1296		390	1983	$ 488,322	2.090	$ 1,020,616
1297		390	1984	$ 65,846	1.991	$ 131,097
1298		390	1985	$ 235,995	1.932	$ 455,964
1299		390	1986	$ 909,888	1.883	$ 1,712,959
1300		390	1987	$ 140,011	1.836	$ 257,003
1301		390	1988	$ 57,026	1.757	$ 100,193
1302		390	1989	$ 98,405	1.683	$ 165,636
1303		390	1990	$ 123,882	1.669	$ 206,743
1304		390	1991	$ 494,693	1.686	$ 834,262
1305		390	1992	$ 124,020	1.678	$ 208,155
1306		390	1993	$ 272,866	1.596	$ 435,598
1307		390	1994	$ 682,783	1.510	$ 1,031,189
1308		390	1995	$ 980,932	1.449	$ 1,421,827
1309		390	1996	$ 429,012	1.401	$ 601,094
1310		390	1997	$ 3,305,893	1.372	$ 4,534,677
1311		390	1998	$ 302,194	1.346	$ 406,613
1312		390	1999	$ 828,482	1.301	$ 1,077,760
1313		390	2000	$ 730,560	1.255	$ 916,577
1314		390	2002	$ 3,323,747	1.164	$ 3,867,473
1315		390	2004	$ 805	1.074	$ 865
1316		390	2005	$ 76,980	1.032	$ 79,457
1317		390	2006	$ 2,676,310	1.002	$ 2,680,362
1318				**$ 24,710,234**		**$ 61,287,839**
1319						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1320	Office Furniture and Equipment	391	1940	$ 3,683	12.346	$ 45,473
1321		391	1941	$ 541	11.571	$ 6,260
1322		391	1947	$ 7,583	7.809	$ 59,217
1323		391	1948	$ 4,027	7.392	$ 29,766
1324		391	1949	$ 1,046	7.405	$ 7,744
1325		391	1950	$ 7,920	7.325	$ 58,012
1326		391	1951	$ 925	6.834	$ 6,324
1327		391	1952	$ 3,187	6.719	$ 21,412
1328		391	1953	$ 3,135	6.637	$ 20,809
1329		391	1954	$ 2,140	6.575	$ 14,073
1330		391	1955	$ 1,559	6.460	$ 10,072
1331		391	1956	$ 1,356	6.244	$ 8,465
1332		391	1957	$ 941	6.043	$ 5,688
1333		391	1958	$ 378	5.907	$ 2,235
1334		391	1960	$ 1,585	5.755	$ 9,122
1335		391	1961	$ 2,269	5.691	$ 12,910
1336		391	1962	$ 2,717	5.614	$ 15,256
1337		391	1963	$ 6,862	5.555	$ 38,116
1338		391	1965	$ 4,804	5.373	$ 25,814
1339		391	1966	$ 8,100	5.225	$ 42,320
1340		391	1967	$ 8,745	5.068	$ 44,317
1341		391	1968	$ 5,662	4.860	$ 27,520
1342		391	1969	$ 6,772	4.631	$ 31,358
1343		391	1970	$ 8,413	4.398	$ 36,998
1344		391	1971	$ 8,813	4.188	$ 36,909
1345		391	1972	$ 13,199	4.014	$ 52,982
1346		391	1973	$ 33,595	3.802	$ 127,727
1347		391	1974	$ 3,455	3.487	$ 12,049
1348		391	1975	$ 10,321	3.186	$ 32,887
1349		391	1976	$ 6,514	3.012	$ 19,622
1350		391	1977	$ 10,803	2.832	$ 30,598
1351		391	1978	$ 6,233	2.646	$ 16,494
1352		391	1979	$ 16,492	2.444	$ 40,304
1353		391	1980	$ 17,295	2.241	$ 38,751
1354		391	1981	$ 47,369	2.048	$ 97,022
1355		391	1982	$ 29,183	1.930	$ 56,336
1356		391	1983	$ 25,897	1.857	$ 48,091
1357		391	1984	$ 42,879	1.790	$ 76,743
1358		391	1985	$ 56,863	1.737	$ 98,768
1359		391	1986	$ 44,126	1.699	$ 74,992
1360		391	1987	$ 67,084	1.654	$ 110,976
1361		391	1988	$ 57,296	1.600	$ 91,656
1362		391	1989	$ 78,431	1.541	$ 120,895
1363		391	1990	$ 15,543	1.484	$ 23,067
1364		391	1991	$ 22,703	1.434	$ 32,554
1365		391	1992	$ 423,021	1.402	$ 592,958
1366		391	1993	$ 141,060	1.370	$ 193,261
1367		391	1994	$ 63,078	1.342	$ 84,623
1368		391	1995	$ 29,556	1.315	$ 38,856
1369		391	1996	$ 244,807	1.290	$ 315,850
1370		391	1997	$ 31,454	1.269	$ 39,917
1371		391	1998	$ 99,723	1.255	$ 125,168
1372		391	1998	$ 35,315	1.255	$ 44,325
1373		391	1999	$ 111,428	1.237	$ 137,865
1374		391	1999	$ 222,036	1.237	$ 274,716
1375		391	2000	$ 5,467	1.211	$ 6,620
1376		391	2000	$ 786	1.211	$ 952
1377		391	2002	$ 6,164	1.162	$ 7,164
1378		391	2002	$ 233,901	1.162	$ 271,844
1379		391	2003	$ 4,245	1.138	$ 4,831
1380		391	2003	$ 3,900	1.138	$ 4,438
1381		391	2004	$ 6,830	1.083	$ 7,395
1382		391	2005	$ 2,140	1.021	$ 2,184
1383		391	2005	$ 8,926	1.021	$ 9,110
1384		391	2006	$ 1,692	1.000	$ 1,692
1385		391	2006	$ 43,729	1.000	$ 43,729
1386				**$ 2,427,703**		**$ 4,026,205**
1387						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1388	Transportation Equipment	392	1947	$ 1,142	7.075	$ 8,080
1389		392	1948	$ 215	6.697	$ 1,437
1390		392	1955	$ 6	5.853	$ 33
1391		392	1957	$ 848	5.475	$ 4,643
1392		392	1962	$ 361	5.086	$ 1,835
1393		392	1963	$ 130	5.033	$ 657
1394		392	1965	$ 6,063	4.868	$ 29,515
1395		392	1966	$ 1,750	4.733	$ 8,281
1396		392	1966	$ 738	4.733	$ 3,493
1397		392	1967	$ 311	4.591	$ 1,430
1398		392	1968	$ 1,071	4.403	$ 4,716
1399		392	1973	$ 1,990	3.444	$ 6,854
1400		392	1974	$ 3,819	3.159	$ 12,066
1401		392	1976	$ -	2.729	$ -
1402		392	1977	$ 2,588	2.566	$ 6,640
1403		392	1978	$ 1,935	2.398	$ 4,639
1404		392	1979	$ -	2.214	$ -
1405		392	1980	$ 3,313	2.030	$ 6,724
1406		392	1981	$ 10,012	1.856	$ 18,579
1407		392	1982	$ 273	1.749	$ 477
1408		392	1983	$ 1,705	1.682	$ 2,869
1409		392	1984	$ 10,841	1.621	$ 17,579
1410		392	1985	$ 1,652	1.574	$ 2,600
1411		392	1985	$ 15,808	1.574	$ 24,876
1412		392	1987	$ 55,332	1.499	$ 82,929
1413		392	1987	$ 9,152	1.499	$ 13,717
1414		392	1988	$ -	1.449	$ -
1415		392	1989	$ 19,267	1.396	$ 26,906
1416		392	1990	$ 55,438	1.345	$ 74,539
1417		392	1991	$ 17,361	1.299	$ 22,554
1418		392	1992	$ 83,267	1.270	$ 105,743
1419		392	1992	$ 31,764	1.270	$ 40,337
1420		392	1993	$ 233,823	1.241	$ 290,231
1421		392	1993	$ 72,648	1.241	$ 90,174
1422		392	1994	$ 505,727	1.215	$ 614,670
1423		392	1994	$ 99,661	1.215	$ 121,130
1424		392	1995	$ 687,572	1.191	$ 818,931
1425		392	1995	$ 49,992	1.191	$ 59,543
1426		392	1996	$ 1,258,193	1.169	$ 1,470,688
1427		392	1996	$ 101,407	1.169	$ 118,533
1428		392	1997	$ 1,020,556	1.150	$ 1,173,387
1429		392	1998	$ 141,469	1.137	$ 160,870
1430		392	1999	$ 1,717	1.121	$ 1,924
1431		392	2000	$ 92,626	1.097	$ 101,613
1432		392	2003	$ 757	1.031	$ 781
1433		392	2004	$ 70,384	1.022	$ 71,919
1434		392	2006	$ 3,826,876	1.000	$ 3,826,876
1435		392	2006	$ 164,600	1.000	$ 164,600
1436		392	2006	$ 388,828	1.000	$ 388,828
1437				**$ 9,054,987**		**$ 10,009,447**
1438						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1439	Stores Equipment	393	1941	$ 370	10.505	$ 3,887
1440		393	1947	$ 1,640	7.090	$ 11,630
1441		393	1948	$ 690	6.711	$ 4,631
1442		393	1950	$ 327	6.650	$ 2,178
1443		393	1952	$ 2,777	6.100	$ 16,938
1444		393	1953	$ 484	6.026	$ 2,915
1445		393	1954	$ 515	5.969	$ 3,073
1446		393	1956	$ 1,035	5.669	$ 5,865
1447		393	1957	$ 1,285	5.487	$ 7,049
1448		393	1959	$ 1,103	5.298	$ 5,844
1449		393	1961	$ 588	5.167	$ 3,037
1450		393	1962	$ 335	5.097	$ 1,707
1451		393	1964	$ 2,237	4.968	$ 11,113
1452		393	1965	$ 304	4.879	$ 1,483
1453		393	1966	$ 1,141	4.744	$ 5,411
1454		393	1967	$ 2,840	4.601	$ 13,066
1455		393	1968	$ 4,646	4.413	$ 20,501
1456		393	1969	$ 1,652	4.204	$ 6,946
1457		393	1970	$ 7,571	3.993	$ 30,231
1458		393	1971	$ 5,920	3.803	$ 22,511
1459		393	1972	$ 1,671	3.644	$ 6,088
1460		393	1973	$ 6,950	3.452	$ 23,989
1461		393	1974	$ 3,142	3.166	$ 9,947
1462		393	1975	$ 483	2.893	$ 1,397
1463		393	1977	$ 5,294	2.572	$ 13,613
1464		393	1978	$ 1,075	2.403	$ 2,582
1465		393	1979	$ 4,674	2.219	$ 10,372
1466		393	1980	$ 31,159	2.034	$ 63,387
1467		393	1981	$ 4,609	1.860	$ 8,570
1468		393	1982	$ 11,473	1.753	$ 20,109
1469		393	1983	$ 34,272	1.686	$ 57,782
1470		393	1984	$ 2,619	1.625	$ 4,256
1471		393	1985	$ 34,488	1.595	$ 54,997
1472		393	1986	$ 1,736	1.564	$ 2,716
1473		393	1987	$ 5,421	1.527	$ 8,279
1474		393	1988	$ 16,502	1.459	$ 24,071
1475		393	1989	$ 28,671	1.406	$ 40,302
1476		393	1990	$ 786	1.364	$ 1,073
1477		393	1991	$ 14,786	1.336	$ 19,759
1478		393	1992	$ 225,637	1.322	$ 298,340
1479		393	1993	$ 139,875	1.296	$ 181,257
1480		393	1994	$ 314,439	1.253	$ 393,957
1481		393	1995	$ 471,840	1.219	$ 575,199
1482		393	1996	$ 172,357	1.193	$ 205,639
1483		393	1997	$ 129,477	1.176	$ 152,243
1484		393	1999	$ 87,750	1.150	$ 100,915
1485		393	2000	$ 37,399	1.134	$ 42,410
1486		393	2005	$ 687	1.030	$ 708
1487				**$ 1,826,727**		**$ 2,503,973**
1488						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1489	Tools, Shop and Garage Equipment	394	1937	$ 308	10.655	$ 3,282
1490		394	1940	$ 554	10.954	$ 6,068
1491		394	1947	$ 772	6.929	$ 5,351
1492		394	1948	$ 650	6.558	$ 4,266
1493		394	1949	$ 1,356	6.570	$ 8,909
1494		394	1950	$ 2,254	6.499	$ 14,646
1495		394	1951	$ 2,471	6.064	$ 14,983
1496		394	1952	$ 7,143	5.961	$ 42,585
1497		394	1953	$ 1,061	5.889	$ 6,245
1498		394	1954	$ 5,435	5.834	$ 31,707
1499		394	1955	$ 3,448	5.732	$ 19,766
1500		394	1956	$ 3,252	5.540	$ 18,016
1501		394	1957	$ 15,023	5.362	$ 80,549
1502		394	1958	$ 7,889	5.241	$ 41,349
1503		394	1959	$ 17,584	5.177	$ 91,041
1504		394	1960	$ 6,016	5.106	$ 30,720
1505		394	1961	$ 18,631	5.049	$ 94,070
1506		394	1962	$ 11,436	4.981	$ 56,961
1507		394	1963	$ 6,434	4.929	$ 31,712
1508		394	1964	$ 10,265	4.855	$ 49,834
1509		394	1965	$ 3,002	4.768	$ 14,310
1510		394	1966	$ 17,227	4.636	$ 79,859
1511		394	1967	$ 10,117	4.497	$ 45,492
1512		394	1968	$ 18,960	4.312	$ 81,763
1513		394	1969	$ 16,937	4.109	$ 69,587
1514		394	1970	$ 25,008	3.902	$ 97,579
1515		394	1971	$ 18,166	3.716	$ 67,505
1516		394	1972	$ 19,573	3.561	$ 69,709
1517		394	1973	$ 14,298	3.373	$ 48,231
1518		394	1974	$ 13,283	3.094	$ 41,097
1519		394	1975	$ 22,745	2.827	$ 64,302
1520		394	1976	$ 17,902	2.673	$ 47,849
1521		394	1977	$ 40,523	2.513	$ 101,835
1522		394	1978	$ 28,249	2.348	$ 66,329
1523		394	1979	$ 69,769	2.168	$ 151,282
1524		394	1980	$ 70,809	1.988	$ 140,767
1525		394	1981	$ 74,310	1.817	$ 135,043
1526		394	1982	$ 87,576	1.713	$ 149,999
1527		394	1983	$ 111,316	1.648	$ 183,406
1528		394	1984	$ 89,197	1.588	$ 141,645
1529		394	1985	$ 126,712	1.552	$ 196,694
1530		394	1986	$ 146,460	1.510	$ 221,082
1531		394	1987	$ 91,867	1.464	$ 134,455
1532		394	1988	$ 146,361	1.410	$ 206,413
1533		394	1989	$ 77,278	1.351	$ 104,441
1534		394	1990	$ 55,833	1.306	$ 72,913
1535		394	1991	$ 56,940	1.264	$ 71,991
1536		394	1992	$ 112,760	1.237	$ 139,457
1537		394	1993	$ 183,528	1.202	$ 220,623
1538		394	1994	$ 200,851	1.183	$ 237,669
1539		394	1995	$ 165,366	1.157	$ 191,261
1540		394	1996	$ 334,745	1.130	$ 378,345
1541		394	1997	$ 69,200	1.110	$ 76,846
1542		394	1998	$ 301,420	1.092	$ 329,199
1543		394	1999	$ 191,258	1.079	$ 206,330
1544		394	2000	$ 279,208	1.068	$ 298,172
1545		394	2001	$ 147,650	1.059	$ 156,417
1546		394	2002	$ 337,813	1.061	$ 358,587
1547		394	2003	$ 1,209,659	1.058	$ 1,279,772
1548		394	2004	$ 115,243	1.038	$ 119,612
1549		394	2005	$ 192,876	1.019	$ 196,464
1550		394	2006	$ 149,612	1.000	$ 149,612
1551				**$ 5,583,588**		**$ 7,796,000**
1552						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1553	Laboratory Equipment	395	1949	$ 554	7.875	$ 4,363
1554		395	1950	$ 655	7.790	$ 5,102
1555		395	1951	$ 372	7.268	$ 2,707
1556		395	1954	$ 370	6.992	$ 2,587
1557		395	1955	$ 1,603	6.871	$ 11,010
1558		395	1956	$ 316	6.640	$ 2,098
1559		395	1958	$ 1,173	6.282	$ 7,367
1560		395	1963	$ 801	5.908	$ 4,732
1561		395	1965	$ 2,881	5.715	$ 16,464
1562		395	1966	$ 1,607	5.556	$ 8,931
1563		395	1967	$ 1,725	5.390	$ 9,295
1564		395	1968	$ 6,882	5.169	$ 35,575
1565		395	1969	$ 6,711	4.925	$ 33,049
1566		395	1970	$ 13,606	4.677	$ 63,636
1567		395	1971	$ 2,271	4.454	$ 10,114
1568		395	1972	$ 10,199	4.269	$ 43,538
1569		395	1973	$ 7,534	4.043	$ 30,461
1570		395	1974	$ 3,381	3.708	$ 12,538
1571		395	1975	$ 5,197	3.389	$ 17,610
1572		395	1976	$ 16,335	3.204	$ 52,331
1573		395	1977	$ 4,227	3.012	$ 12,732
1574		395	1978	$ 10,763	2.814	$ 30,290
1575		395	1979	$ 9,824	2.599	$ 25,534
1576		395	1980	$ 29,944	2.383	$ 71,352
1577		395	1981	$ 17,731	2.178	$ 38,623
1578		395	1982	$ 37,016	2.053	$ 75,994
1579		395	1983	$ 16,730	1.975	$ 33,040
1580		395	1984	$ 63,950	1.903	$ 121,724
1581		395	1985	$ 81,270	1.847	$ 150,126
1582		395	1986	$ 78,456	1.807	$ 141,801
1583		395	1987	$ 32,916	1.759	$ 57,910
1584		395	1988	$ 129,807	1.701	$ 220,839
1585		395	1989	$ 87,011	1.639	$ 142,637
1586		395	1990	$ 73,831	1.578	$ 116,531
1587		395	1991	$ 147,199	1.525	$ 224,478
1588		395	1992	$ 38,934	1.466	$ 57,091
1589		395	1993	$ 169,667	1.411	$ 239,354
1590		395	1994	$ 191,127	1.378	$ 263,296
1591		395	1995	$ 244,779	1.340	$ 328,021
1592		395	1996	$ 192,930	1.309	$ 252,547
1593		395	1997	$ 171,195	1.277	$ 218,654
1594		395	1998	$ 198,619	1.246	$ 247,463
1595		395	1999	$ 311,708	1.221	$ 380,588
1596		395	2000	$ 104,466	1.200	$ 125,342
1597		395	2001	$ 10,845	1.179	$ 12,781
1598		395	2002	$ 238,281	1.149	$ 273,834
1599		395	2003	$ 10,498	1.111	$ 11,660
1600		395	2004	$ 920	1.080	$ 993
1601		395	2005	$ 50,569	1.030	$ 52,072
1602		395	2006	$ 40,907	1.000	$ 40,907
1603				**$ 2,880,289**		**$ 4,341,727**
1604						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1605	Power Operated Equipment	396	1963	$ 2,548	5.757	$ 14,668
1606		396	1970	$ 535	4.558	$ 2,439
1607		396	1971	$ 4,412	4.341	$ 19,153
1608		396	1977	$ 16,250	2.936	$ 47,702
1609		396	1978	$ 431	2.743	$ 1,183
1610		396	1979	$ 34,237	2.533	$ 86,719
1611		396	1980	$ 83,334	2.322	$ 193,521
1612		396	1981	$ 74,178	2.123	$ 157,468
1613		396	1983	$ 64,579	1.925	$ 124,292
1614		396	1984	$ 4,212	1.855	$ 7,814
1615		396	1985	$ 79,651	1.813	$ 144,431
1616		396	1986	$ 107,262	1.775	$ 190,402
1617		396	1987	$ 58,444	1.745	$ 101,988
1618		396	1988	$ 50,831	1.686	$ 85,719
1619		396	1989	$ 228,182	1.612	$ 367,748
1620		396	1990	$ 69,599	1.559	$ 108,492
1621		396	1991	$ 54,486	1.513	$ 82,440
1622		396	1992	$ 106,820	1.485	$ 158,648
1623		396	1993	$ 125,904	1.448	$ 182,320
1624		396	1994	$ 462,039	1.398	$ 645,880
1625		396	1995	$ 218,647	1.352	$ 295,619
1626		396	1996	$ 709,983	1.314	$ 932,733
1627		396	1997	$ 81,207	1.287	$ 104,537
1628		396	1998	$ 1,153,614	1.262	$ 1,455,751
1629		396	1999	$ 47,109	1.229	$ 57,911
1630		396	2000	$ 739,356	1.219	$ 901,121
1631		396	2001	$ 6,938	1.197	$ 8,304
1632		396	2002	$ 63,357	1.176	$ 74,479
1633		396	2003	$ 43,848	1.160	$ 50,868
1634		396	2004	$ 18,125	1.102	$ 19,966
1635		396	2005	$ 4,342	1.043	$ 4,527
1636		396	2006	$ 393,997	1.000	$ 393,997
1637				**$ 5,108,457**		**$ 7,022,838**
1638						
1639	Communication Equipment	397	1952	$ 4,209	3.713	$ 15,631
1640		397	1953	$ 796	3.669	$ 2,920
1641		397	1958	$ 6,099	3.265	$ 19,914
1642		397	1968	$ 5,493	2.686	$ 14,756
1643		397	1970	$ 646	2.431	$ 1,569
1644		397	1971	$ 3,758	2.315	$ 8,699
1645		397	1972	$ 612	2.219	$ 1,359
1646		397	1973	$ 832	2.101	$ 1,748
1647		397	1974	$ 8,352	1.927	$ 16,097
1648		397	1975	$ 4,452	1.761	$ 7,840
1649		397	1976	$ 1,421	1.665	$ 2,365
1650		397	1977	$ 4,787	1.565	$ 7,494
1651		397	1978	$ 21,095	1.463	$ 30,853
1652		397	1979	$ 2,986	1.351	$ 4,034
1653		397	1980	$ 24,092	1.238	$ 29,834
1654		397	1981	$ 19,505	1.132	$ 22,080
1655		397	1983	$ 123,513	1.026	$ 126,766
1656		397	1984	$ 62,397	0.989	$ 61,723
1657		397	1985	$ 145,245	0.960	$ 139,435
1658		397	1986	$ 49,117	0.942	$ 46,273
1659		397	1987	$ 36,750	0.928	$ 34,087
1660		397	1988	$ 50,575	0.924	$ 46,729
1661		397	1989	$ 312,252	0.907	$ 283,329
1662		397	1990	$ 732,458	0.893	$ 654,102
1663		397	1991	$ 298,210	0.885	$ 263,854
1664		397	1992	$ 218,013	0.875	$ 190,786
1665		397	1993	$ 490,594	0.859	$ 421,639
1666		397	1994	$ 201,318	0.847	$ 170,579
1667		397	1995	$ 152,159	0.843	$ 128,246
1668		397	1996	$ 291,834	0.835	$ 243,618
1669		397	1997	$ 16,947	0.830	$ 14,061
1670		397	1998	$ 112,585	0.835	$ 93,984
1671		397	1999	$ 195,476	0.850	$ 166,068
1672		397	2000	$ 490,888	0.870	$ 426,859
1673		397	2002	$ 5,330	0.914	$ 4,873
1674		397	2003	$ 47,458	0.944	$ 44,798
1675		397	2004	$ 761	0.976	$ 742
1676		397	2006	$ 18,254	1.000	$ 18,254
1677				**$ 4,161,267**		**$ 3,767,999**
1678						

Plant in Service - Gas
As of 12/31/06

Line No.	(a) Description	(b) FERC Account No	(c) Installation Year	(d) Original Cost	(e) Adjustment Factor	(f) Reproduction Cost New
1679	Miscellaneous Equipment	398	1948	$ 723	6.839	$ 4,947
1680		398	1949	$ 2,162	6.852	$ 14,817
1681		398	1952	$ 728	6.217	$ 4,523
1682		398	1953	$ 341	6.142	$ 2,094
1683		398	1958	$ 2,872	5.466	$ 15,699
1684		398	1962	$ 793	5.195	$ 4,119
1685		398	1963	$ 7,027	5.140	$ 36,118
1686		398	1964	$ 7,595	5.063	$ 38,453
1687		398	1966	$ 672	4.834	$ 3,249
1688		398	1967	$ 1,310	4.689	$ 6,143
1689		398	1968	$ 3,437	4.497	$ 15,459
1690		398	1969	$ 10,880	4.285	$ 46,619
1691		398	1970	$ 722	4.069	$ 2,938
1692		398	1971	$ 867	3.875	$ 3,360
1693		398	1972	$ 4,213	3.714	$ 15,649
1694		398	1973	$ 22,451	3.518	$ 78,981
1695		398	1975	$ 1,523	2.948	$ 4,490
1696		398	1977	$ 1,119	2.621	$ 2,932
1697		398	1978	$ 1,904	2.449	$ 4,663
1698		398	1979	$ 524	2.261	$ 1,185
1699		398	1980	$ 12,173	2.073	$ 25,238
1700		398	1981	$ 8,510	1.895	$ 16,128
1701		398	1982	$ 2,657	1.786	$ 4,746
1702		398	1983	$ 361	1.718	$ 620
1703		398	1984	$ 2,448	1.656	$ 4,054
1704		398	1985	$ 6,453	1.607	$ 10,388
1705		398	1987	$ 9,030	1.531	$ 13,823
1706		398	1988	$ 5,246	1.480	$ 7,765
1707		398	1989	$ 36,894	1.426	$ 52,621
1708		398	1990	$ 489	1.373	$ 672
1709		398	1991	$ 12,368	1.327	$ 16,410
1710		398	1992	$ 6,663	1.297	$ 8,642
1711		398	1993	$ 17,029	1.268	$ 21,588
1712		398	1994	$ 7,278	1.241	$ 9,035
1713		398	1995	$ 7,669	1.216	$ 9,329
1714		398	1996	$ 2,927	1.194	$ 3,494
1715		398	2002	$ 3,067	1.075	$ 3,298
1716		398	2003	$ 699	1.053	$ 736
1717		398	2004	$ 615	1.043	$ 641
1718		398	2005	$ 29,498	1.024	$ 30,215
1719		398	2006	$ 11,244	1.000	$ 11,244
1720				**$ 255,191**		**$ 557,123**

INDIANA GAS COMPANY, INC.
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY

OF

THOMAS L. BAILEY
MANAGER OF INDUSTRIAL SALES

ON

GREENSBURG PIPELINE PROJECT

AND LARGE CUSTOMER REVENUE CHANGES

SPONSORING PETITIONER'S EXHIBITS TLB-1 and TLB-2

Introduction

Q. Please state your name and business address.

A. My name is Thomas L. Bailey, and my business address is One Vectren Square Evansville, IN 47708.

Q. What position do you hold with Petitioner Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren Energy" or "Vectren North")?

A. I am Manager of Industrial Sales.

Q. Please describe your educational background.

A. In May of 2000, I graduated from Wabash College, located in Crawfordsville, Indiana, with a Bachelor of Arts Degree in History and English. Presently, I am enrolled at Murray State University in Murray, Kentucky, completing my Masters in Business Administration.

Q. Please describe your professional background.

A. I was hired by Vectren in December of 2000 and began working within the Corporate Communications department. In July of 2001, I moved to the Marketing Department and held the position of Business Service Center Representative. In April of 2003, I was promoted to Marketing Contract Sales Administrator with responsibilities for residential, commercial and industrial contracts. In April of 2004, I moved to the Industrial Development and Sales Department and held the position of Industrial Sales Administrator with job duties including internal sales and marketing functions for Vectren's large industrial customer base. On December 15, 2005 I was promoted to Manager of Industrial Sales.

Q. Please describe the responsibilities of your current position.

A. I oversee the marketing and sales activities for Vectren Energy Delivery relating to the large industrial customer base. This includes interfacing with industrial customers to respond to their energy service needs. Also, I participate in negotiations on behalf of Vectren Energy Delivery with industrial and large volume customers regarding their energy service requirements.

Q. Please summarize the purpose of your testimony in this Cause.

A. The purpose of my testimony is to discuss an important pipeline project and recent developments relating to existing and prospective large customers. First, I will provide an update related to the Greensburg pipeline construction project which, when complete, will serve that community as well as the new Honda plant. In Cause No. 43098, Vectren North obtained pre-approval of the construction project and the estimated costs associated with the Greensburg project. Next, I will cover the pro forma revenue changes associated with our large customers.

Finally, I will discuss the anticipated provision of service to two new ethanol plants in the Vectren North territory.

<u>Greensburg Project</u>

Q. Please describe the Greensburg system project.

A. Vectren North currently has an interconnection with ANR Pipeline Company north of Shelbyville which is used to supply Vectren North's service area in Shelby County and Johnson County. Vectren North has begun preparations to construct a 16" transmission pipeline approximately 21.5 miles in length from this ANR purchase point to the site of the automobile manufacturing facility to be constructed by Honda Manufacturing of Indiana, LLC ("Honda") northwest of Greensburg. Vectren North will also install approximately 2.5 miles of 8" transmission pipe from that point (where the pressure will be reduced to that of the existing Greensburg system) to Greensburg. Vectren North will modify the existing purchase point to accommodate the new 16" pipeline, but will not need

to make a new tap into the ANR pipeline. Instead, the new 16" pipeline will be interconnected with Vectren North's existing 16" pipeline at its existing station.

Q. What is the status of the Greensburg project?

A. The Greensburg project is on schedule to provide natural gas by December 1, 2007. Currently we have acquired 16.89 miles of right of way needed to install the 16" pipeline project. Total right of way needed not including Honda property is 19.78 miles. All applicable permits have been filed and materials including the meter setting and regulator station have been ordered. We expect valves for the project to be delivered by June 15, 2007. All of the 16" pipe has been rolled and is at the coating facility. Boring for the pipeline is tentatively scheduled to begin in June with pipeline construction beginning in August.

Q. What is the estimated cost of the project and how was that estimate developed?

A. Vectren North's project engineering worked on development of the cost estimate. The first step was to identify the location of the Honda facility. Then Vectren North's gas system design engineers determined the pipe sizes and pressure requirements for the new pipeline. Vectren North's land service department and a third party engineering and surveying contractor assisted in determining the best route for the pipeline using aerial photography of the area. The pipeline route was then driven and partially walked to review the actual land conditions. This was necessary to identify any easement or construction challenges. Once a route was selected, we determined the extent of the necessary right-of-way acquisition, the required amount of materials, the length of construction techniques (open trenching or directional drilling), and other obstacles that would affect the estimate. We then consulted with Vectren North's local construction contractor, Miller Pipeline Company ("Miller"), to determine the likelihood of construction challenges such as significant rock or loose soils. Given our experience with similar pipeline construction projects, including some recently completed projects, and our knowledge of current land pricing, we were able to generate a preliminary estimate. Vectren North then contracted with a third party

engineering firm, Novak Engineering, to complete an independent estimate of the project. Upon completion of the Novak estimate, Vectren North's engineering staff finalized the initial estimate to almost $24,687,770. Please see the Petitioner's Exhibit TLB-2 showing a detailed breakdown of the estimated cost of the project as submitted in Cause No. 43098.

Q: Has this initial estimate changed and, if so, how?

A: Yes. The new estimate for the project is $25,800,000 and is included in the rate base in Petitioner's Exhibit MSH-3, Adjustment A45, Page 2 of 3. There are two primary drivers behind the difference from the original estimate for the project: additional directional boring and changes in property values. Upon completion of a more thorough environmental analysis of the pipeline route, a number of additional stream and wetland crossings were identified and the subsequent permitting process required that the pipeline in these areas be installed through directional boring rather than the previously estimated open trench method. Directional boring adds approximately 3,000 feet of pipe to the project and is approximately three times more expensive than the trench method to install. Additionally, the 3,000 feet of pipe must receive an extra layer of coating to protect it during the bore. The additional cost for the directional boring accounts for approximately $1,000,000 of the increase to the estimate.

The remaining cost is associated with an elevation in property values incurred during the easement acquisition process. Initially, easement acquisition costs were estimated based on current market values. However, property values have been increasing regularly throughout the process. The majority of the easements have been obtained; however, there are a few outstanding. The current estimate is based on actual costs incurred to date and includes an estimate for those easements outstanding, which reflects current market values.

Q. Has the Greensburg project been found to be reasonable and necessary?

A: Yes. As determined in Cause No. 43098, the Project will provide a new primary feed into the Greensburg system that will enter the system from the west. This new feed will be capable of supplying all of the gas to the Greensburg system, including anticipated load growth. The current system supply is entirely from the south, which limits system growth occurring north of Greensburg where the Honda site and Interstate 74 are located. It is expected that a majority of the system growth will be in this area. A significant expansion of the high pressure distribution system would be required without the pipeline. The new pipeline will provide a source closer to the vicinity of the expected growth. The new feed into Greensburg will also provide a completely new supply option for the Greensburg customer base. Additionally, we will be maintaining the connection to TETCO. If after the new pipeline is installed, supply is interrupted, we should be able to provide enough gas on an emergency basis to continue service without interruption to hospitals, nursing homes, residential customers, and other customers for whom continuity of supply is most important. As such, the new project will address our prior concerns associated with having an isolated feed. In addition, the displacement of capacity on the TETCO pipeline will allow Vectren North customers to benefit from cost savings associated with lower rates for natural gas commodity pricing via ANR pipeline.

The project also provides service to the new Honda facility. In terms of job creation and Honda's initial investment, the Honda Project is the largest economic development project announced in Indiana in 2006. Honda has stated that it will initially invest $550 million in the facility. It will probably rank among the top ten economic development projects in the United States. Honda has indicated that it will hire over 2,000 employees for the project during the initial phase of production at this facility. Honda intends to grow the production capability of this facility in two additional phases at which direct employment at the plant could grow to over 4,000. The jobs created will increase personal incomes in the area, which should increase the demand for goods or services provided by other businesses. In addition, businesses that seek to supply parts to Honda can also be expected to locate in the area, creating further jobs, more personal income and more growth. All of this growth can then be expected to generate tax revenues for the State and the locality. Increased tax revenues

allow the provision of enhanced governmental services without raising tax rates, making the area and the State more attractive to further development.

Q. Given the project likely will not be completed until December 1, 2007, how does Vectren North propose to provide information to the Commission and parties regarding the cost and status of the Project?

A: Each month after the filing of Vectren North's case-in-chief, the Company will file with the Commission a monthly investment report regarding the status of the project and the costs incurred as of that time. When the project is placed in service, Vectren North will file a verified certification or supplemental testimony confirming the effective date and comparing the actual costs to the estimate.

Large Customer Revenue Changes

Q. In your role as Manager of Industrial Sales, do you interact regularly with Vectren North's largest customers?

A: Yes, I directly meet with our customers and I receive frequent updates regarding communications with our customers from my field personnel.

Q. Based on this customer interaction and other information you obtain in the course of your duties, do you have any general observations regarding the state of Indiana's economy and the future outlook for large customer gas usage?

A: Yes. Indiana's long time manufacturing economy is in the midst of change. This has clearly been recognized by the Governor, who has made economic development a high priority. The struggles of the American automakers are probably the most visible evidence of the decline of certain large employers in our state. Vectren North has also witnessed the loss of non-automotive manufacturers such as Thompson Electronics over the past few years. Some industrial customers have consolidated, while others have migrated jobs to Mexico or other locations with less expensive labor. Cities we serve such as Marion and Anderson have been hit with the departures of large employers. At

the same time, Indiana has aggressively pursued new business to counteract these losses. This ongoing evolution of the economy can be seen in this proceeding.

Q. Please explain how Vectren North's revenues have been impacted by industrial customer usage changes in this case.

A: In this case, we have reflected the loss of 14 large customers due to plant closings. Another large customer has switched most of its load to electric. These losses have been countered by the additions of 3 new plants, most notably Honda's Greensburg operation which should commence production in December 2007. We have reflected an entire year of projected Honda revenue to reduce the revenue losses from the many plant closures. Still, on a net basis annual revenues will decline by ($296,558), as reflected in Petitioner's Exhibit MSH-2, Adjustment A04.

Q. Does the risk remain that Vectren North will continue to experience the loss of large customer load?

A: Yes. Indiana has pursued new business, such as the ethanol plants I discuss below, and the hope is that new businesses will make up for the losses we have witnessed. However, we continue to serve the automotive industry as well as other traditional manufacturers who are experiencing challenges from foreign competitors who have access to cheaper labor, as well as other advantages such as less environmental regulation, less claims liability and lower health care costs.

Q. Does the rate increase proposed in this case pose a significant problem in terms of retaining large customers?

A: No. The dramatic increases in energy costs for large customers over the last few years have been driven by increased fuel costs. The price of gas commodity will continue to be a large, volatile cost that can significantly impact the bottom line of these customers. Many are equally exposed to increases in the cost of electricity

due to compliance with more stringent environmental regulations. The modest increase in distribution cost proposed in this case in order to continue to provide reliable service will not be material to the future success of our customers.

Q. Does Vectren North need to enhance its commercial and industrial sales groups with more resources?

A. Yes. Vectren North plans to add two Account Managers to its Industrial Sales group. The Industrial Sales department strives to provide individualized, quality customer service to Vectren's industrial customer base. Adding two Account Managers dedicated to Vectren North will improve industrial customer relationships and customer service by ensuring Vectren is more accessible to its customers. The staffing additions also allow Account Managers to be on site with the customer answering questions, providing suggestions and maintaining a healthy relationship. Because North serves customers in 49 counties, additional staff will allow us to better cover this territory.

Q. What is the pro forma expense associated with adding these positions?

A. The two Account Manager positions are dedicated to Vectren North at an annual cost of $56,862 each. The total cost impact is $113,724 and is included in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 41).

ETHANOL PLANTS

Q. Please describe the ethanol projects currently under construction in Vectren North's territory.

A. Currently, two ethanol plants are under construction within Vectren North's territory: Central Indiana Ethanol ("CIE") is located in Marion, IN and Cargill ASA ("ASA") is located in Linden, IN. CIE is estimated to produce between 60-80 million gallons of ethanol per year and the natural gas requirements for the facility will exceed 2.1 million dekatherms of natural gas per year. ASA is estimated to produce 100 million gallons of ethanol per year and use approximately 3.2 million dekatherms of natural gas per year.

Q. How will ethanol plants impact the State of Indiana?

A. Ethanol plants bring an economic opportunity of job creation to the state. The potential increase in job growth will include construction, energy related fields and full-time operators. Ethanol plants play an important role in Gov. Daniels Hoosier Homegrown Strategic Energy Plan as he calls for a plan to meet the State's energy needs through the greater use of in-state resources. In the case of ethanol plants, Indiana will transform homegrown corn into motor fuel for in-state use as well as an export fuel to neighboring states. This in turn will help the Midwest reduce the demand of foreign based petroleum needed in the United States. Also, the possibility of increased tax revenues allow the provision of enhanced governmental services without raising tax rates, making the State more attractive to further economic development. Vectren supports the Hoosier Homegrown Energy Plan as well as the start up of ethanol plants across the State.

Q: Has Vectren North entered into negotiated service contracts with each of the ethanol plants?

A: Yes, Vectren North has entered into special contracts with each customer agreeing to provide natural gas service. CIE and ASA will pay Vectren Energy for the delivery service in accordance with the provisions of Rate Schedule No. 260, except for reduced throughput charges negotiated and provided in each contract. Each contract has a term of at least five (5) years and applies the Rate 260 provisions of the tariff including balancing and appendix provisions as the same may be in effect from time to time. The contracts have been filed with the IURC and must be approved prior to becoming effective.

Q: What facility upgrades has Vectren North performed in order to provide service to the ethanol plants?

A: In order to provide distribution service to each customer, Vectren needed to make certain upgrades and extensions to its existing natural gas distribution

infrastructure. To serve CIE, Vectren extended a 6 inch steel line 550 feet along State Route 18. The line is rated at 240 psig and will drop to 60 psig as it enters the facility. The estimated total cost of this extension is $85,000. To serve ASA, Vectren constructed a 3,800 foot line extending from the Panhandle transmission line. A new regulator station was constructed to reduce pressure. Vectren will deliver 60 psig to the ASA facility. The estimated cost of this upgrade and extension is $704,000.

Q. Will the provisions of gas service to CIE and ASA adversely impact the service and cost to other Vectren North customers?

A. No. The contracts agreed to for both parties will not alter any of Vectren North's other existing rates or contracts, and therefore, will not adversely impact the adequacy or reliability of service provided to other Vectren North customers. The reduced rates contained in the contracts support the location of the plants in Indiana.

Q: Have you included adjustments for revenues and rate base with regard to these two ethanol plants?

A: No. In the Midwest, we are aware of approximately 30 proposed ethanol plants. Because there is a potential for market saturation, and because the output of these ethanol plants is directly linked to weather and crop production, and because their economics are directly tied to the cost of foreign oil and the price of corn, the success of these plants will be proven over time. It is very possible that some plants will experience financial problems depending on how these many variables play out, and some may fail. Vectren North has no prior experience with ethanol operations, but the financial uncertainty with these types of plants has been widely and publicly discussed. Because the resulting revenues are very uncertain at this stage, and because the timing of operations and the level of output is also uncertain, we have not included any revenues in this case. Similarly, we are not including expenses associated with providing service to the plants, including the rate base investment.

1

2 **Q: Does this conclude your testimony?**

3 A: Yes it does.

4

Greensburg Gas Pipeline Project

Description	Takeoff Qty	Labor Amt	Material Amt	Equipment Amt	Total Amt
Company Labor					
Bargaining Unit/Company Labor		39,701			39,701
Equipment & Vehicles					
Equipment & Vehicles				9,374	9,374
Contract Labor - Unit					
Install Pipe	113,520	7,001,535			7,001,535
Install M&R Station	1	200,000			200,000
Sub Total		7,201,535			7,201,535
Material					
16" pipe	113,520		4,084,229		4,084,229
16 " ball valve	4		64,000		64,000
Material for customer meter station	1		400,000		400,000
Sub Total			4,548,229		4,548,229
Other					
Purchase Point Modifications	1		500,000		500,000
Weld Inspections	1	70,000			70,000
Environmental Surveys	1	10,000			10,000
ROW - Survey/Acquisition/Damages	113,520	2,859,275			2,859,275
Non Destructive Testing	1	100,000			100,000
Regulator Station	2	180,000	250,000		430,000
2.5 Miles 8" steel pipe	1	462,000	283,000		745,000
Uprate System as Required	1	100,000			100,000
Sub Total		3,781,275	1,033,000		4,814,275

Estimate Summary

Description	Amount	Sub Total	
Expenditure Category			
Company Labor	39,701		
Contract Labor	10,982,810		
Materials	5,581,229		
Equipment	9,374		
Sub Total	16,613,114	16,613,114	
Specific Overheads			
Sales Tax - Non Stock Materials	272,894		
Labor	23,424		
Sub Total	296,317	16,909,431	
Corporate Overheads & Contingency			
Administrative & General	1,014,566		
Engineering and Supervision	5,072,829		
10% Contingency and Omissions	1,690,943		
Sub Total	7,778,338	**24,687,770**	**TOTAL**

INDIANA GAS COMPANY, INC.
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY
OF
ELLIS S. REDD
VICE PRESIDENT, HUMAN RESOURCES

ON

HUMAN RESOURCES AND
CONTINUOUS IMPROVEMENT AND PRODUCTIVITY

SPONSORING PETITIONER'S EXHIBIT ESR-1

I.
INTRODUCTION

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

A. My name is Ellis S. Redd. My business address is One Vectren Square, Evansville, Indiana 47708. I am the Vice President of Human Resources for Vectren Corporation ("Vectren") which is Vectren North's ultimate corporate parent.

Q. What are your duties in your present position?

A. I have overall responsibility for human resources ("HR") and compensation and benefits administration. This includes labor relations, the administration of compensation and benefits for active employees as well as retirees. In addition, HR is responsible for the processes and programs to select, develop, and retain talented employees to effectively and efficiently execute the business processes that deliver safe and reliable energy to our customers.

Q. Please describe your employment experience.

A. I have been employed at Vectren for six years. Over that period I have held the positions of Directors of Purchasing, Buildings and Fleet Operations and Vice President of Strategic Sourcing & Productivity. I was elected to my current position in 2007. Prior to my employment with Vectren, I was employed at Mead Johnson Nutritionals (MJN), a division of Bristol-Myers Squibb Company, for nine years, where I held numerous positions, including Sr. Manager of Production and Maintenance for a 300 person FDA regulated manufacturing plant. Prior to my employment with MJN, I was employed by Alcoa for five years as an Industrial Engineer.

I also serve on the Advisory Board of the Indiana Business Diversity Council, the Dunigan YMCA, St. Mary's Hospital Foundation Board, and the local United Negro College Fund advisory group. I am a former member of the Evansville Redevelopment Commission and currently serve as the chairman of the Supplier Diversity & Development Committee of the Indiana Energy Association.

Q: What is your educational background?

A: I received my B.S. in Industrial Engineering from North Carolina A&T State University in 1986. I also received a Masters of Business Administration from Washington University in St. Louis in 2001.

Q. Have you previously testified before this commission?

A. No.

Q. What is the purpose of your testimony?

A. I will discuss various areas of Vectren North's HR operations and explain certain programs and other activities which are necessary to continue to meet the needs of our customers. In particular, my testimony will describe the challenges Vectren North faces as the highly qualified and experienced baby boom segment of our work force reach retirement age within a brief span of time and begin to leave our company. I will describe our proactive efforts for dealing with this aging workforce phenomenon and the resulting costs. I will also discuss additional expenditures for various training programs, including Recruiting and Employment and Diversity. Finally, I will discuss several proposed new employee positions needed by Vectren North to meet our business requirements.

II.

VECTREN NORTH'S AGING WORKFORCE IMPACT ON HUMAN RESOURCES

Q. Please describe the impact of Vectren North's aging workforce on the HR department.

A. According to Bureau of Labor statistics, over 30% of the existing utility workforce will be eligible for retirement over the next 5 years. This phenomenon will have a significant impact on Vectren. Within my department, we have summarized the circumstance as follows: "We are a highly regulated and technical business that requires talented employees who possess specific competencies and skill sets. In the next few years we are expecting retirements to be at a pace that may double or triple historical levels. Because of that risk we are looking at all of our

key HR and training processes to ensure we will be able to recruit, assimilate and develop new Vectren Colleagues at a more rapid pace than any other time in Vectren's history." The sheer magnitude of the anticipated retirements has drawn great attention to the issue, and, as a result, a heightened level of HR planning has commenced as companies are focusing on their recruiting and training programs to assure that business productivity will not suffer. Not only is internal demand increasing for these services, but external competition is increasing as many companies attempt to recruit new talent.

As described by Vectren North Witness William S. Doty, Vectren North is keenly aware of this potentially critical business problem, and has engaged in a planning process to enable the company to address the issue before it threatens the reliability of the service we provide to our customers. We have determined that HR will manage the loss of non-bargaining personnel through traditional recruiting efforts, although internal succession planning and training efforts will require greater emphasis in an effort to better prepare the existing employees to be prepared to fill vacancies. Thus, the need to have an adequate HR staff in place to recruit, train and oversee employees is critical.

The existing resources in HR that serve Vectren North are very lean. Survey results support the fact that our current HR staffing level is low compared to our peer companies. In fact, we currently have a single Director who oversees the daily needs of over 900 non-bargaining unit employees. These responsibilities include employee evaluations, salaries, and disciplinary actions. This is a consuming challenge which does not allow for incremental duties, much less spending more time on basic employee issues.

Similarly, a single director level employee is charged with administering all non-operations personnel development efforts. These efforts include orienting new employees to the company, developing leadership skills for lower level managers, and coordinating outside professional programs to develop skill sets. Even absent the aging workforce issue, Vectren North requires more resources in these areas to obtain better results from its employees in order to sustain and improve performance to meet increasing demands on the business to deliver

higher customer satisfaction, and safe and reliable service. Our ability to develop leaders also helps us attract and retain the talent required to operate the company in the future. In light of the aging workforce issues, these needs become more pressing.

Q. How does HR propose to address the impact aging workforce challenge has on the department?

A. We will meet this challenge head on. Our strategy includes implementing several new training programs, intensifying our recruitment efforts, diversifying our workforce and expanding our employees' capabilities. To accomplish this, HR needs to add certain employees who will manage various aspects, current and new, of the company's strategy. We have begun this process, having already hired a Manager of Diversity to head our efforts in that area.

Q. Will the focus of these additional employees only be directed at dealing with the aging workforce challenge faced by Vectren?

A. No. Many of the HR costs I will describe are related to the broader employee needs caused by the aging workforce issue at Vectren but their work product will produce benefits experienced all across the company. For instance, the Recruiting and Employment Specialist will be heavily focused on finding replacements for specific positions impacted by our aging workforce. But this person will also be recruiting for other positions in the company that are not directly attributable to the aging workforce. In the end, however, the work of these new employees will have a direct benefit to our customers because our workforce will be more talented, diverse and better trained and therefore able to provide better service.

Q. Please review each of the HR cost categories set forth on <u>Petitioner's Exhibit MSH-3</u>, Adjustment A17 and explain the need for the requested pro forma amount.

A. These cost categories represent incremental employees. In total, there are six positions the Human Resources department needs to fill. The first four are positions whose job functions primarily relate to the aging workforce challenge.

All of these positions have been advertised and some have already been filled. They are:

- Retirement Plans Administrator. This employee will focus on financial planning, insurance issues, and health care concerns for all of Vectren's employees. However, because retirement levels will be 2 – 3 times the present pace, there will be many questions and issues to address specifically for Vectren's retiring workers. Thus, retirement education and training programs will be developed and administered by this employee. This resource will provide support across the organization and the cost is therefore allocated. The Vectren North allocated amount is $31,777 and is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 5).

- Financial Analyst. Currently, HR has no analysts to perform necessary and critical invoice review and processing. These responsibilities are currently handled by two HR Benefits Specialists whose primary missions are responding to questions and claims related to compensation and benefits for 1,800 active employees and over 1,400 retirees. Mixing these responsibilities has resulted in problems in both areas: invoices are not receiving proper attention resulting in mistakes and employees and retirees are receiving untimely responses to their questions. A Financial Analyst will review, sort and analyze HR healthcare related invoices; communicate with vendors to resolve discrepancies; document timing, calculations, and accounts for active employees and retirees; prepare monthly vendor reports for Healthpool; analyze and correct inconsistencies with Accounts Payable; assist in preparation of monthly analysis of entire Benefits pool and Stop Loss claims; analyze and process Business Unit Operating and Maintenance invoices; and, complete monthly Variance Analysis by cost center. A dedicated analyst performing these responsibilities will help control Vectren's healthcare costs. Separating the responsibilities will also improve employee and retiree support and satisfaction and result in increased productivity by allowing our Benefit Specialists to concentrate on their specific job duties. The allocated pro

forma expense associated with this position is $24,952 and is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 4).

- Training Specialist. Since the test year we have hired a Manager of Diversity to focus our hiring efforts, as well as training of our existing workforce, on the need and benefits of a diverse workforce. The Manager of Diversity has taken over responsibility for both this new initiative, as well as training duties previously performed by another HR employee who left the company. Given the consolidation of these roles, and the incremental diversity initiatives including training, the manager will use this new employee to support these broader activities as well as to interface with educational institutions to design job training programs. The allocated pro forma expense associated with this position is $17,345 and is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 3).

- Recruiting and Employment Specialist. To date Vectren North has met increasing recruiting requirements through use of a temporary employee. This cost is reflected in the test year. A permanent employee is now desired to provide continuity and experience to this role. This employee is necessary to assist in filling and recruiting open positions due not only to the increased retirements for the aging workforce, but also to the increased competitive market in the Vectren North service territory. This position will be responsible for filling open requisitions, posting positions internally and externally, and working with hiring managers on the individual position's needs. Adding this employee will also allow the current Recruiting and Employment Specialist to focus more on building relationships with the colleges and universities within Vectren's service territory to better assist the company in filling skill-position and bargaining unit positions that are the bulk of the expected retirements within the next 10-15 years. The allocated pro forma expense associated with this position is $17,325 and is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 2).

The basis for the final two positions are influenced by the aging workforce challenge, but are not directly related to it. Those positions are more fully described below:

- Employee Relations Director: Currently, a Director performs the job functions of employee relations and safety, two areas that are not closely related. Previously, the current Director was only the Safety Director. Because of the company's corporate goal to achieve best-in-class safety performance as measured by the AGA benchmark as well as the two recent fatalities in our company, it is critical we have a dedicated strategic level focus on safety programs and training. Thus, we need to once again separate these two functions. In addition, having these positions combined greatly hinders safety progress and communication with the union. The same person struggles to work effectively when handling controversial labor relations issues and simultaneously conducting friendly discussion regarding employee safety and safety programs. The Employee Relations position will execute the company's labor relations strategy to ensure the company's and employees' continued success. This employee will interact with the leadership of five separate labor agreements representing 900 plus bargaining unit employees. He/she will act as lead negotiator for the company in labor and employment matters. Given the nature of this position, we are recruiting candidates with a strong background in union relations. Recruiting for the position is progressing. The allocated pro forma expense associated with this position is $71,526 and is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 8). Our current Employee Relations Director will be our Safety Director and focus exclusively in that area in the future. Prior to adjusting to cover both areas, this existing director served as Safety Director.

- HR Generalist – Support of Workforce Transformation. Vectren currently has one HR Generalist position which supports 1,800 employees. To effectively administer the following areas of HR policy, it is essential we have incremental resources. This employee would support the single Director that provides support for our entire non-bargaining unit workforce. Additional

responsibilities include assisting with hiring; conducting exit interviews, which include feedback and recommendations to management; compensation approval; performance monitoring such as disciplinary guidance and annual performance evaluations; organizational restructuring such as organizational design and reorganization implementation strategy; EEO, state and federal employment reporting and compliance; and consult management personnel regarding HR policy administration. As described earlier, Vectren North can not continue to effectively manage its workforce going forward with the added burdens associated with aging workforce driven employee turnover absent this resource. Recruiting for the position has begun and the salary is based on market data. The allocated pro forma expense associated with this position is $32,378 and is reflected in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 6).

Q. Why are these adjustments reasonable?

A. Vectren North has made every effort to keep rates low by managing employee numbers to the lowest reasonable level by using attrition and replacing only those jobs that are required. This strategy has worked for several years but we have increasingly seen that HR is falling short in meeting employee and company needs because of lack of resources. Now we need to respond to conditions and match future workforce levels to the requirements of the gas delivery system and Vectren North's customers. While these additional employees result in cost increases, adding the employees now and having them in place as retirements occur is a prudent, necessary, and reasonable approach resulting in the lowest possible cost of operations and good customer service levels. The need for and benefits of planning for competent replacement employees make this is a very reasonable adjustment.

III.

Aging Workforce Implications on HR Training and Recruiting

Q. Please discuss the non-FTE aging workforce-related effects on the HR Department.

A. The American Public Power Association (APPA) surveyed its members and produced a report on the aging workforce defining this as the "new challenge to its members." The findings were that half the companies project the potential loss of somewhere between 21-50% of their workforce over the next five years. The companies indicated that knowledge loss would be the single greatest problem resulting from the retirements, with finding replacements also a great challenge. The APPA outlined steps for its members to take to address the retirement onslaught, including identifying gaps in terms of ongoing productivity needs and investing in training resources. The recommended emphasis is to be proactive in order to commence the necessary development of a new workforce before the retirement wave occurs.

Vectren intends to be proactive to address this challenge. Our entire operation will require significant training and support from HR to manage our way through the aging workforce challenges. As discussed above, HR plans to use additional employees to provide the most cost effective support resources to the Vectren North workforce. To be successful, however, an optimized blend of outside contract services will also be needed. These contract services will be primarily used in the various training and development programs at Vectren North. The programs where these support services will be used include:

- Supervisor Training/Leadership Development. Supervisory training will be driven in part by the aging workforce requirements as they affect both bargaining unit and non-bargaining unit positions. Leadership development relates to existing employees. In this area, there will be significant efforts to identify employees who have potential to replace retiring employees in supervisory jobs, and engaging in skill development for those employees that will prepare them to move into positions that open up as a result of retirements. An example would be identifying key employees to use resources from local universities to provide continued education opportunities. Since we have not included a pro forma adjustment for actually hiring employees to replace supervisory vacancies that will occur in both the bargaining and non-bargaining areas, this exercise is very important to maintain expertise and train the future leaders in the company. The

Vectren North allocated amount for this program is $87,500, as noted in Petitioner's Exhibit MSH-2, Adjustment A18.

- Recruiting Employment Program. In the tight labor market recruiting will be a continuous challenge. Obtaining the best possible individuals for Vectren North's work force is a critical task. To meet this challenge, Vectren must seek additional recruiting assistance from general recruiting and diversification search firms. Also, Vectren believes pre-employment testing provided by professional outside consultants helps ensure the "right-fit" in an effort to limit re-hiring for positions. Finally, to maintain a quality workforce, additional expenses related to relocation and other new employee services are unavoidable. The Vectren North allocated amount for recruiting is $43,750, as noted in Petitioner's Exhibit MSH-2, Adjustment A18.

- Diversity Employment Program. Vectren North realizes it needs to continue its efforts to diversify its workforce. The company must apply additional specialized recruiting techniques and resources to ensure that all qualified candidates are considered for employment in all jobs throughout the company. To do this, Vectren must develop a number of new initiatives including working with external recruiters, developing mentoring programs for current and new employees, establishing relationships and sponsoring successful organizations such as INROADS. We must also expand diversity education/training on a regular and ongoing basis for all levels of employees. In addition to racial and ethnic diversity, Vectren's diversity efforts will need to address gender and inter-generational issues. This includes implementation of diversity awareness and harassment training. The Vectren North allocated diversity amount is $52,500, as noted in Petitioner's Exhibit MSH-2, Adjustment A18.

Q. Do you support the need for these additional HR programs for your department?

A. Yes I do. Prior to becoming Vice President of HR, I worked closely with the HR department and relied on them heavily to help supervise and manage issues related to our workforce. I am confident these programs will aid in building and

maintaining the type of workforce that Vectren North's customers will need in the near future. Also, it is important to note a recent study indicated Vectren fell well below the 50th percentile within the utilities group in average training cost per non-bargaining unit employee. As I mentioned earlier, HR is responsible for designing and implementing processes and programs to recruit, select, develop, and retain talented employees to effectively and efficiently execute the business processes that deliver safe and reliable energy to our customer. In order to provide the best service possible to our customers, Vectren must have the resources necessary to put in place programs that are able to attract, recruit, hire and retain a skilled workforce. Part of this includes developing our current workforce so that newer employees can grow into future leaders of the company. Failure to recruit and keep talented workers and grow future leaders will result in a nonintegrated workforce, prohibits effective knowledge transfer, and ultimately will lead to poor customer service. The adjustments are very reasonable and are clearly needed by the HR area to support Vectren North's operations.

Q. What is the total impact of the Human Resources adjustment?

A. As I have indicated, HR is lean and an area where we could have for some time justified additional resources to better serve our employees. Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 shows the six additional HR FTEs result in a pro forma adjustment for Vectren North of $195,303. The non-labor portion of the HR programs in Petitioner's Exhibit MSH-2, Adjustment A18, consisting of consulting resources and training costs, is $183,750.

IV. Process Improvement

Q: As part of your duties, do you supervise other activities within the company?

A: Yes. Prior to taking over HR, I supervised the company's recently launched Continuous Improvement initiative. I have retained this function. While widely adopted by many companies, the Continuous Improvement approach is probably best known due to GE's pioneering efforts to find efficiencies and improvements in department processes. Essentially, via benchmarking and other studies, the Continuous Improvement department obtains external data to compare to

internal processes and costs for each business function and then evaluates ways to improve performance, reduce costs and along the way, increase employee satisfaction. This effort is relatively new at Vectren, at least at this level of formality, but it is truly the foundation needed to critically assess our operations and improve them. As the name suggests, the process is continuous – as we continue to gather corporate data and train employees to look for improvements results will be seen and the "this is the way we have always done it" philosophy will be replaced by openness to change.

Q. Please describe the Continuous Improvement and Productivity pro formas set forth on <u>Petitioner's Exhibit MSH-3</u>, Adjustment A17.

A. As discussed, Vectren North realizes it needs to continue its efforts to contain and control cost. The company must ensure that all business units are setting stretch, but achievable, goals to become more efficient and effective. This will be accomplished through two new positions in the Continuous Improvement and Productivity department. Both are Productivity Analyst positions which will serve as liaisons between Vectren's business units and senior leadership. Their main task is to independently gather and analyze current processes, procedures and technology to identify and document cross-functional, departmental and divisional dependencies. Working closely with Vectren's business units, alternative approaches for improvements to our business processes will be identified. This will be accomplished utilizing a combination of training, process re-engineering, technology enhancements and electronic document integration.

Q: Can you describe what the Continuous Improvement and Productivity initiative has done at Vectren to date.

A: The initiative has gone from the development stage into creation of a Department that has already performed several projects. It is now ready to be more fully staffed in order to broaden the scope of the efforts. The program has created a benchmarking process along with a pilot project using the Six Sigma continuous improvement methodology. We currently have a Manager who is leading this effort and used the pilot project to become certified as a Six Sigma Black Belt. The scope of the program, however, is too significant for the current Manager

and we need additional resources which can focus on other areas of the company. Adding employees will allow for faster development of action plans based on known best practices which are adapted and modified to fit Vectren's needs. It also facilitates better goal setting and execution leading to improved overall performance including safety, customer satisfaction, and operating results.

Vectren has already joined various external benchmarking groups as an active participant and participates in the strategic development of benchmarking surveys internally. Benchmarking is a continuous exercise working with peer groups and other companies both within and outside the utility industry. Participating in benchmarking allows us to stay abreast of changes in the industry in order to sustain and improve performance relative to those comparison groups. However, the data provided by the studies must be evaluated and applied to our company. This is another area where these incremental employees will be critical.

Q: Can you further describe the pilot project you previously mentioned?

A: The pilot project, using the Six Sigma, involves our billing department. Employees have gathered under the direction of the Continuous Improvement Manager, who shares external benchmarking data. This data provides new numbers as well as concepts on how other companies perform the function. Over the course of months, self-critical analysis and brainstorming have occurred to produce process change ideas and efficiencies. The business unit owns the outcome, and the employees improve their own jobs, with the help of the Continuous Improvement department. The department helps with measuring outcomes over time and revisiting issues. Specifically, this project identified issues around meter reads, estimates of bills, and has recommended ways to improve service. But this is the tip of the iceberg. Benefits flow from the process. We just need to devote more resources to the effort.

Q. What is the total impact of the Continuous Improvement and Productivity component of the overall incremental headcount adjustment?

A: The total pro forma adjustment allocated for Vectren North is $60,840 as referred to in Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (line 7).

Q. Does this conclude your testimony?

A. Yes.

INDIANA GAS COMPANY, INC.
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
(VECTREN NORTH)

IURC CAUSE NO. 43298

DIRECT TESTIMONY
OF
RONALD B. KEEPING
DIRECTOR

ON

ECONOMIC DEVELOPMENT AND MARKET RESEARCH

SPONSORING PETITIONER'S EXHIBIT RBK-1

I. INTRODUCTION

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

A: My name is Ronald B. Keeping. My address is One Vectren Square, 211 N.W. Riverside Drive, Evansville, Indiana, and I am the Director of Economic Development and Market Research for Vectren Corporation. ("Vectren").

Q: What are your duties in your present position?

A: I am responsible for coordinating the efforts of Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren North") in promoting the economic development of the Vectren North service territory. I also supervise the Market Research function for Vectren.

Q: Please describe your work experience.

A: From 1987 to 1999, I was the Manager of Area and Industrial Development for Southern Indiana Gas & Electric Company ("SIGECO"). From 1999 to 2002, I was Director of Economic Development for SIGECO and then Vectren. From 2002 to 2005, I held the position of Director of Industrial Development for Vectren. I assumed my present position in 2006.

Q: What is your educational background?

A: In 1973, I obtained a Bachelor of Arts degree in Economics from the University of Evansville. In 1978, I obtained a Master of Business Administration degree from the University of Evansville. I am a graduate of the Economic Development Institute program of the University of Oklahoma, and obtained the professional designation, Certified Economic Developer (CEcD) in 1996.

Q: Have you previously testified before this Commission?

A: Yes. I testified before the Commission in Cause No. 43098 where I discussed the economic development benefits that are reasonably anticipated to flow from the proposed automobile manufacturing facility (the "Honda Project") to be constructed by Honda Manufacturing of Indiana, LLC ("Honda") in Decatur County near Greensburg, Indiana. I also testified in Causes 43111 and 43112.

In those cases, I discussed the benefits of certain economic development riders, and discussed several pro forma adjustments related to economic development and market research.

Q: What is the purpose of your testimony?

A: My testimony will generally discuss the economic development philosophy at Vectren. I will then discuss plans and activities in the Economic Development Department and the need for additional employees. Finally, I will discuss the Market Research Department at Vectren and the need for additional resources in that department.

II. ECONOMIC DEVELOPMENT EFFORTS

Q: You have testified that you are the Director of Economic Development for Vectren and received a Certified Economic Developer designation. What does economic development mean and what do economic developers do?

A: In broad terms, "Economic Development" can be defined as the development of the economic wealth of a region for the well-being of its inhabitants. Economic development is a sustainable increase in living standards resulting in increased per capita income, better education and health. In more specific terms, as it is generally understood, "economic development" refers to a set of activities whose objective or result is the increase of employment and / or income in a region. Professional "economic developers" are responsible for planning and carrying out such job and income enhancement activities. Such activities can be very broadly defined. However, in a narrow sense, and as generally understood, these activities revolve around helping a community or region get prepared for economic growth, and then helping that community or region attract or retain employers whose payroll, local expenditures, and local tax payments will grow the economy. An economic developer will work to create developable places for such new or expanding employers to locate. In doing so, the economic developer must be conversant in the infrastructure needs of particular employers and the means by which such needs are met, and the regulatory requirements

for doing so. The economic developer will act as a sales person for a community or region, selling prospective employers on a community or region's particular assets. The economic developer will be a facilitator during the period when an employer is locating in or expanding in a community or region, and as such, becomes an "ombudsman", cutting red tape and helping the employer overcome obstacles. In order to receive the Certified Economic Developer designation, I have received training in nearly all of the foregoing subject matter.

Q. How does Vectren North participate in Indiana's economic development efforts?

A. Vectren North's Economic Development Department work with industrial and commercial entities that are interested in starting a business, finding a new location for their business or expanding their existing business. We work with those entities, the Indiana Economic Development Corporation, with state and local officials, and local economic development agencies to develop a package of incentives and services that will meet the needs of and encourage those industrial and commercial customers to locate or expand in Indiana.

Our economic development efforts not only require coordinating efforts with prospective businesses, economic development entities and state and local government but also require coordinating technical input and evaluation of Vectren's engineering, operations, rates, and legal department. These very time consuming economic development efforts are very important to the financial well being of Indiana and her citizens.

Q: Has Vectren been successful in economic development efforts?

A: Yes. Vectren and its predecessor companies have been involved in a variety of economic development projects in the Vectren North territory. We were part of the team that developed the incentives that attracted Qualitech (now SDI) to Hendricks County in the late 1990s (300 jobs). We helped attract another SDI facility to the Clark Maritime Centre in 2004, and have continued to assist SDI as they expanded in Hendricks County in 2005, adding 55 jobs. We provided assistance to the state and local development officials who worked to locate two

large distribution facilities in Grant County (WalMart and Dollar General), resulting in over 1,000 jobs for that area. We helped facilitate the expansion of Knauf in Shelbyville with special rates, helping to retain 300 jobs. Finally, we were a major player in the state's efforts to attract the Honda assembly plant to Greensburg, bringing 2,000 jobs to the state.

Q. Does Vectren North have a proactive strategy for building upon and improving its economic development efforts?

A. Yes. We want to increase Vectren's economic development capabilities and increase our efforts to attract new business and to retain opportunities for customer expansion here in Indiana. Vectren North proposes to strengthen and more tightly unify our internal resources. We will work to further strengthen and develop new alliances in Indiana and elsewhere to help retain and attract new economic development opportunities. We will continually and critically re-evaluate what more Vectren can do to maximize Indiana's economic development potential. Vectren will also develop a process to "prospect" for economic development opportunities inside and outside of Indiana. However, to make these expanded efforts a reality, Vectren North needs additional personnel.

III. ECONOMIC DEVELOPMENT DEPARTMENT AND COMMUNITY SUPPORT

Economic Development Department

Q. Please describe how Vectren's Economic Development Department is currently configured.

A. Currently Vectren North's Economic Development function is overseen by a single Director, of whose time approximately 50 percent is spent on economic development activities throughout the state. Assisting that Director is one employee, a coordinator. Approximately 50 percent of this coordinator's time is also spent on economic development, with the balance spent on clerical duties.

Q. Is the current staffing of Vectren's Economic Development Department sufficient to engage in a level of activity that achieves as much as possible given Vectren's natural role in helping attract and retain businesses?

A. No. The Economic Development Department is stretched too thin. It needs additional resources. With additional personnel, this department will be much more able to bring available benefits of economic development to our customers and to Indiana's economy. In 2005, Vectren commissioned a study by a national consulting firm, Ticknor & Associates, to evaluate the staffing levels of its economic development function. That study characterized Vectren's economic development efforts as having "very limited direct resources", and consisting of "limited reactive tactics" and "limited project involvement". Ticknor noted that Cinergy's large presence (staffing) in Indiana makes Vectren's "absence all the more conspicuous", and notes that the other investor owned utilities in Indiana are rebuilding their economic development efforts.

Q. What additional employees does Vectren propose for its Economic Development Department?

A. Vectren North proposes to hire an Economic Development Manager and an Economic Development Representative. These employees will increase Vectren's capabilities in the recruitment of large industrial and commercial customers.

The Economic Development Manager will manage Vectren's activities which are intended to improve the economic health of Vectren's service territory. In particular, the person will work to retain and expand Vectren's large customer base, and to attract new large employers. He or she will develop the plans and programs to carry out these objectives. They will interact with state and local economic development organizations, and serve as Vectren's primary contact with such organizations.

The Economic Development Representative, on the other hand, will be primarily an implementer of the plans developed by the Manager. He or she will be Vectren's primary contact with economic development prospects and site location consultants, and the key day-to-day contact with state development agency officials. They will be expected to manage leads and prospects and convert them to economic development successes.

Q. Are these new positions essential to Vectren North's economic development efforts?

A. Yes. The level of work to be done and the time commitment required mandates the additional employees in economic development. Current staffing has limited its efforts to a more reactive approach. Unfortunately, Indiana's economy has been in decline. Despite Indiana's relatively low unemployment rates and occasional large economic development successes, our state has suffered for the past forty years from a steady erosion in average personal income. Only much stronger success in economic development can remedy this. Furthermore, there are local areas, several of which are in Vectren North's territory, that are truly in bad shape, and in particular need of economic development. Local and state efforts notwithstanding, it is often the local utility's economic development effort that make the difference between average and exemplary economic development success.

Q. What is the pro forma amount for these two positions?

A. The Vectren North allocated pro forma for the Economic Development Manager is $61,152. The allocated pro forma for the Economic Development Representative is $35,927. These items are reflected on Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (lines 16 and 19).

Economic Development Programs

Q. Please describe Vectren's practice with respect to financial support for economic development.

A. Vectren North has traditionally provided financial support to economic development organizations throughout its service territory. This support generally takes the form of annual membership dues, or as an investment in or contribution to particular organizations. Vectren North provides such financial support to over 25 county-level organizations in its Vectren North territory, to three regional (multi-county) organizations, and to one state wide organization.

Q. How does financially supporting organizations in the community have an impact on Vectren North's economic development efforts?

A. The funding that we provide allows local organizations to build each county's capacity to support economic growth, while the financial support that we provide to regional and state level organizations allows each of them to engage in meaningful marketing activities, whose objective is to attract or retain jobs, and raise personal income. These organizations rely on the support of utilities such as Vectren, while Vectren relies on these organizations to take the lead in growing our state's economy.

Q. How does Vectren decide which organizations to support and the level of such support?

A. Vectren attempts to match the financial commitment to an organization with the level of benefit the organization provides to Vectren and its customers. Consequently, we tend to provide more substantial support in counties where we have a greater presence. Generally, we rely on the recommendations of our local employees in an area to determine whether and to what extent we should support an organization.

The costs of providing this financial support are increasing. First, organizations that we already support have, over time, increasing need for support. Second, organizations that have not received support from us before are finding their way to us. It is generally difficult to justify not providing requested support to such organizations when they can demonstrate that they have done a good job. Third, new organizations are being formed to supplement and enhance the efforts of existing economic development organizations. These new organizations also merit our support. While we look upon this as increased opportunity for success as these organizations improve their own resources, it does mean that Vectren's financial support will increase as well.

Q. What is the pro forma adjustment for this expense?

A. For 2007, Vectren will provide $483,800 of support throughout the state. The annual cost will be increased by $156,475 for Vectren North. This is a component of Petitioner's Exhibit MSH-2, Adjustment A30.

IV. MARKET RESEARCH DEPARTMENT

Q. Please describe how Vectren's Market Research Department work force is currently configured.

A. Currently Vectren North's Market Research Department is overseen by a single Manager. One employee reports to that Manager, and the Manager reports to me.

Q. Please describe Vectren's market research efforts.

A. A major element of our market research effort is the measurement of customer satisfaction. The Market Research Department determines the extent to which customers are satisfied with the services they receive and how those services can be improved. Vectren wants to continually satisfy the needs and meet the expectations of our customers. To do this we must better understand our customers' needs and their perception of energy services and costs.

Our primary technique for improving our understanding of our customers' needs is through the use of surveys. At present, we are conducting six distinct types of satisfaction surveys. Three of these are externally administered. Three are administered by the use of a combination of external and internal resources. The national customer satisfaction measurement company, JD Power, administers two residential surveys and one business survey annually. With the assistance of an external survey company, Vectren's market research group conducts a limited customer satisfaction survey (monthly), an extensive perception and transactional survey (quarterly), and a "peer utility" customer satisfaction survey (annually).

Other customer related research includes conducting focus groups, and analyzing the reasons causing inactive services, an area of great concern given the increase in inactive residential locations.

Another element of Market Research is assessing our position in the "market". Our efforts in this area include the conducting of a competitive cost analysis (among utilities), and competitive fuel analysis.

Another element of Market Research should consist of determining what new products and services customers may want and benefit from. Our efforts in this area have been lacking to date, and this is one of the activities that we plan on expanding with additional staff.

Q. What is the pro forma amount for these activities?

A. The annual expense to Vectren North Gas is $88,884 of the total reflected in Petitioner's Exhibit MSH-2, Adjustment A30.

Q. Are additional personnel needed for Vectren North's Market Research Department?

A. Yes. The Market Research Department plans to hire a Market Research Analyst and a Conservation Analyst. Both positions would perform research and analysis duties under the direction of the Manager of Market Research and Analysis. Job descriptions include:

- Marketing Research Analyst. This position is necessary to perform the expanded market research functions. Responsibilities include: analyzing changes in customers' ability to pay their gas bills based on changes in the economy; analyzing customer satisfaction results to help pinpoint improvement areas for better meeting the needs and concerns of our customer; conducting research to understand the communication needs of our customers, including needs for safety information, conservation tips, and general understanding of rates; and updating a demographic analysis of Vectren's customer base to help better understand customer's needs and segments of our customer base.

- Conservation Analyst. This position will include analyzing the attributes of homes in our service territory (size, heating fuel used, age of home, age of heating unit, condition of home) to help identify possible conservation initiatives and their projected impact and using demographic analysis to help pinpoint target areas for conservation initiatives. This position will also oversee research and related outreach to try to understand the reason for inactive service and to recapture past customers so their contribution to fixed costs can be regained to the benefit of all customers.

Q. What is the pro forma amount associated with these new positions?

A. The annual cost to Vectren North Gas for the analyst positions to Vectren North is $97,844. These are shown on Petitioner's Exhibit MSH-3, Adjustment A17, Page 2 of 2 (lines 17-18).

Q. Will Vectren North hire a marketing research consultant?

A. As discussed above, Economic Development and Market Research plans to use additional employees to provide the most cost effective support resources to the Vectren North workforce. To be successful, however, an optimized blend of outside contract services will also be needed. These contract services will be primarily used for the various surveys we perform at Vectren.

Specifically, we will hire a market research consultant to help interpret market research data and help develop programs that are suggested by that research data. The research consultant's activities will augment the Market Research Department's efforts. The allocated North cost of using this outside consultant is $42,904 of the annual amount reflected in Petitioner's Exhibit MSH-2, Adjustment A30.

Q. What is the total incremental expense associated with these Econcomic Development and marketing research programs?

A. As reflected in Petitioner's Exhibit MSH-2, Adjustment A30, the total incremental expense for these programs discussed is $288,263.

Q: Does this conclude your testimony?

A: Yes, at this time it does.