**STATE OF NEW JERSEY**
**OFFICE OF ADMINISTRATIVE LAW**
**BEFORE THE HONORABLE GAIL M. COOKSON, ALJ**

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| **I/M/O THE PETITION OF** | ) | |
| **SOUTH JERSEY GAS FOR APPROVAL** | ) | |
| **OF INCREASED BASE TARIFF RATES** | ) | |
| **AND CHARGES FOR GAS SERVICE** | ) | **BPU DOCKET No. GR10010035** |
| **AND OTHER TARIFF REVISIONS** | ) | **OAL DOCKET No. PUC-01598-2010N** |
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# DIRECT TESTIMONY OF MICHAEL J. MCFADDEN A.E. MIDDENTS AND JOHN N. PETERS ON BEHALF OF THE NEW JERSEY DEPARTMENT OF THE PUBLIC ADVOCATE, DIVISION OF RATE COUNSEL

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## I. INTRODUCTION AND BACKGROUND

**Q. Please state your name, title, and business address.**

A. My name is Michael J. McFadden and I am the president of McFadden Consulting Group, Inc. ("McFadden Consulting"). My business address is 636 South Monroe Way, Denver, Colorado 80209.

My name is A. E. "Pete" Middents and I am an independent Natural Gas Industry Consultant. I am currently retained as a Senior Consultant by McFadden Consulting. My business address is 3 University Lane, Greenwood Village, Colorado 80121.

My name is John N. Peters and I am an independent Natural Gas Industry Consultant. I am currently retained as a Senior Consultant by McFadden Consulting. My business address is 8629 East Pawnee Drive, Parker, CO 80134.

**Q. Please provide a summary of your qualifications and experience.**

A. Copies of our resumes are contained in the Appendix.

**Q. Was this testimony prepared by you or under your direct supervision?**

A. Yes.

## II. PURPOSE OF TESTIMONY

**Q. What is the purpose of your panel's testimony?**

A. The New Jersey Department of the Public Advocate, Division of Rate Counsel ("Rate Counsel') retained the McFadden Consulting Group, Inc. ("McFadden Consulting") to review and evaluate South Jersey Gas Company's ("SJG" or "the Company")

overall management of its gas distribution and transmission infrastructure, as it relates to the Company's requested increase in gas rates.

Rate Counsel also asked McFadden Consulting to review the Company's expenditures associated with the infrastructure acceleration program as approved by the New Jersey Board of Public Utilities ("BPU") in Docket Nos. EO09010049 and GO09010051 as it relates to this rate proceeding.

The two portions of our engagement, i.e., to review the Company's management of the distribution system and to review the impact of the economic stimulus infrastructure program, are inextricably intertwined. For these reasons, McFadden Consulting prepared panel testimony to ensure that the appropriate individual was available to address questions that might be asked during cross-examination.

This testimony addresses our review of the overall management of SJG's gas distribution and transmission infrastructure, and expenditures for projects included in the Company's Capital Investment Recovery Tracker ("CIRT").

**Q. Has this testimony been prepared by you or under your direction?**

A. Yes.

**Q. Please list the exhibits you are sponsoring as part of this testimony.**

A. We are sponsoring four exhibits as follows:

- Exhibit MCGI-1 is a summary of the 2009 and 2010 authorized capital projects included in the infrastructure program and recovered through the capital investment recovery tracker ("CIRT")

- Exhibit MCGI-2 contains the post test year capital expenditures for transmission and production related facilities as contained in Mr. Dippo's direct testimony
- Exhibit MCGI-3 contains the post test year capital expenditures for non-transmission and production related facilities as contained in Mr. Fatzinger's direct testimony
- MCGI-4 contains the Company's average capital budget during the 5 years ending 2008

**Q. Please explain how the Company's management of its distribution and transmission system impacts the rates as filed in this proceeding.**

A. How SJG plans, engineers, and constructs its facilities has a tremendous impact on its rates for service. The cost of constructing the facilities is incorporated into its investment in utility facilities, which then becomes part of its rate base. The Company's allowed earnings are a function of that rate base. Additionally, a significant portion of its expenses relate to operating and maintaining the existing facilities.

In connection with the Company's rate case filing, Rate Counsel wanted an independent evaluation of the Company's management of its gas distribution and transmission infrastructure, particularly:

- engineering & planning processes
- construction programs
- operations & maintenance
- capital expenditure & budget approval process

The Company's CIRT projects have an impact on rates similar to that of normal capital expenditures. The CIRT itself provides an incentive for an investment by reducing the regulatory lag normally associated with capital expenditures. However, once the CIRT projects have been deemed reasonable and prudent, they will be rolled into base rates and the CIRT will be terminated.[1]

Our review of these areas requires a multi-disciplined team of individuals that has experience in system planning & engineering, construction, operations & maintenance, capital budgeting & approval process, and the impacts these functional areas have on customers' rates. For this reason, McFadden Consulting prepared panel testimony to ensure that the appropriate individual was available to address questions that might be asked during cross-examination.

The overall purpose of this testimony is to present the observations, findings, conclusions, and recommendations associated with the Company's management of its gas distribution and transmission system, and the CIRT infrastructure projects. The remaining portion of our testimony is divided into the following sections:

- Summary of Findings, Conclusions, and Recommendations
- Information Reviewed
- Engineering & System Design Processes
- Construction Policies and Practices
- Operations & Maintenance Programs
- SJG's Planning & Capital Budgeting Process

[1] Decision and Order Approving Stipulation dated April 28, 2009 in Docket Nos. EO09010049 and GO09010051.

- Specific Programs or Projects

## III. SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

**Q. Please summarize your findings, conclusions, and recommendations.**

A. The findings, conclusions, and recommendations pertaining to the specific areas identified above are summarized below.

**Engineering and System Design Process.** Overall, McFadden Consulting believes that SJG's engineering and system design have the appropriate balance between maintaining system reliability and over-designing system reinforcements where unnecessary capital expenditures are borne by the customer.

However, we saw a lack of documentation by SJG's System Engineering and Planning group that it had performed in-depth analyses regarding proposed system reinforcements. There also was little evidence that economic or "big picture" analyses were performed regarding alternatives.

**Construction Policies and Practices.** McFadden Consulting believes that the Company's Construction Manual needs to be updated in some areas. Some sections are more than 25 years old. There are some areas of inconsistencies and confusion.

While the Construction Manual needs to be updated, the Material Specification Section appears to be incomplete. Additionally, McFadden Consulting received mixed signals from SJG regarding the process whereby new products are reviewed for use within the Company. The Company indicated that the Engineering Services Department was responsible for reviewing the proposed materials. It also indicated that new products are tested in the field before being "formally adopted,

approved, and accepted for wider use in the organization." However, during the on-site meeting, the Company indicated it outsourced to a storeroom contractor, and relied on the contractor to select products as long as the materials comply with appropriate material codes and specifications. There does not appear to be any formal or informal written documentation of the Company's evaluation processes prior to or after a product's acceptance or approval for use within SJG.

**Operations & Maintenance Programs.** The Operations & Maintenance ("O&M") Manual appears to be more up-to-date than the Construction Manual. However, SJG's O&M Manual does not include the Company's PIM policies and procedures. The Company outsources various routine O&M functions, but there is no evidence of any follow-up studies that examine whether the outsourced programs are cost effective.

McFadden Consulting recommends SJG update the O&M Manual to include the Transmission Pipeline Integrity Management ("PIM") Plan as per DOT Code CFR 49, Part 192.901 – 192.949, Subpart O. It also recommends SJG periodically perform follow-up cost/benefit analyses to determine if outsourcing routine O&M functions is cost effective.

**SJG's Planning & Capital Budgeting Process.** McFadden Consulting is concerned about SJG's lack of documentation of alternatives considered when addressing system problems or enhancements requiring major capital expenditures. McFadden Consulting believes that SJG does consider some alternatives, although such alternatives may be limited to engineering considerations. However, such consideration of alternatives appears informal, undocumented, and undisciplined.

McFadden Consulting recommends SJG perform and document detailed feasibility analyses for major capital projects or programs that exceed $500,000. These analyses should include assumptions, alternatives, cost/benefit analyses, and consequences if the project or program is not done. It also recommends SJG provide economic evaluation training for operations and engineering personnel involved in the planning and capital budgeting process.

**Rockford Eclipse Valve Replacement Program.** SJG did not provide any documentation indicating that it conducted a formal analysis to determine if its proposed valve replacement program was a prudent course of action. Therefore, McFadden Consulting is not able to determine if the proposed program is reasonable or prudent.

McFadden Consulting recommends the Board require the Company to prepare a formal analysis as described above as a part of any such plan submission. However, the appropriateness of the plan submitted to the Board of Public Utilities is irrelevant when considering the recovery of these costs. McFadden Consulting believes investors are responsible for the costs associated with installing faulty assets that the Company failed to adequately assess for installation on its system. Therefore, McFadden Consulting recommends the Board reject SJG's proposal to charge any RE Valve Replacement costs to customers.

**Accelerated Mains Replacement Program.** SJG is proposing to accelerate the pace in which it is replacing mains. However, the Company's proposal is vague. and it has stated that no formal plan has been developed. Furthermore, SJG has not conducted a thorough analysis of the impact including the incremental costs, of an

accelerated replacement program, over and above normal or historical replacement rates. McFadden Consulting recommends the Board reject the Company's proposal.

**Pipeline & Distribution Integrity Management Programs.** The Company is proposing to implement a "tracker" mechanism to earn a return on and a return of expenditures related to the two Integrity Management ("IM") programs, the Pipeline Integrity Management Plan ("PIM") and the Distribution Pipeline Integrity Management Plan ("DIMP"). McFadden Consulting has not observed any concerns regarding the Company's PIM plan. Similarly, SJG's approach to the development of DIMP plan seems reasonable. However, SJG is proposing to recover all expenditures associated with the IM programs, in excess of those approved in the rate base test year, through the IM portion of its proposed Reliability Tracker. Rate Counsel witness, Mr. Richard LeLash, will address the appropriateness of utilizing a tracker mechanism to recover the costs of these two programs.

**Infrastructure Program – Approved CIRT Projects.** Only two of the projects, the Transmission Valve Upgrades and the LNG Plant Generator Install, were shown as completed at the time of the March 31, 2010 CIRT Quarterly Report. While these projects may be completed, costs associated with them continue to accumulate because of the lag time in receiving and processing invoices from various vendors. McFadden Consulting believes it is premature to roll the CIRT projects into base rates at this time. Only two other jobs have been completed at the time this testimony was prepared, although costs of these projects will continue to accumulate. McFadden Consulting is unable to determine that the costs associated with the CIRT projects are "reasonable and prudent" until all the costs are known and analyzed. Furthermore,

the Company will continue to recover the costs associated with the CIRT approved projects through the rider.

Therefore, McFadden Consulting recommends that the Board not permit costs associated with these projects be rolled into base rates until all the projects have been completed, all costs associated with the projects are known, and parties are allowed to review said costs.

**Infrastructure Program Expansion - Proposed CIRT.** SJG proposes to add six projects to the 2010 CIRT and to extend the CIRT to 2011. McFadden Consulting recommends the Board reject SJG's proposal to add projects to the 2010 Infrastructure Program. It also recommends the Board reject SJG's proposal to add an additional year to the Infrastructure Program.

**Post Test Year Capital Expenditures.** The Company is seeking to include in rate base the cost of certain capital expenditures for projects that will not be completed until December 31, 2010. The combined post-test year capital expenditure adjustment that SJG is requesting amounts to $56,508,232.70. McFadden Consulting believes the Board should deny the Company's request for post-test year capital expenditures.

## IV. Information Reviewed

**Q. Please describe the material and data sources you analyzed in assessing the Company's gas distribution and transmission infrastructure.**

A. McFadden Consulting reviewed SJG's Petition in this case, including the testimony and exhibits filed by SJG in support of said petition, with particular emphasis on the testimony of:

- Charles F. Dippo, Vice President, Engineering Services & System Integrity
- Robert F. Fatzinger, Vice President, Customer & Distribution Operations
- Samuel A. Pignatelli, Vice President, Revenue Requirements
- Frank T. DiPalma, Director, Utilities Practice, Jacobs Consultancy

Based on our review of these documents, and our experience and expertise in gas distribution company system planning, engineering, construction, and operations, McFadden Consulting initially prepared 91 data requests seeking additional information and clarification on how SJG manages its physical facilities as well as additional information that pertained to the CIRT.

We also reviewed the Company's responses to the numerous data requests submitted by other consultants retained by Rate Counsel and the Board Staff.

On May 5 and 6, 2010, we conducted an on-site visit of SJG at its Folsom, NJ headquarters during which time we reviewed documents and interviewed key personnel responsible for managing the Company's Gas Delivery facilities.

McFadden Consulting was also retained by Rate Counsel to assist it in reviewing SJG's petition for Approval of a Capital Economic Stimulus Infrastructure Investment Program and An Associated Cost Recovery Mechanism Pursuant to N.J.S.A. 48:2-21 and 48:21.1 filed with the Board of Public Utilities ("BPU") in Docket. No. EO09010050. In that docket, McFadden Consulting reviewed the Company's filing dated January 21, 2009, as well as the Company's supplemental filing dated February 4, 2009.

Subsequent to our review of the Company's Infrastructure filing, we prepared 65 data requests and conducted a detailed review of the Company's responses to said data requests. Additionally, we reviewed the Company's responses to the numerous data requests submitted by other consultants retained by Rate Counsel and the Board Staff. We reviewed the Stipulation in that proceeding, which was subsequently approved by the BPU on April 28, 2009. We also reviewed SJG's Quarterly Infrastructure Reports filed with the BPU for the quarters ending June, September, and December 2009, and March 2010.

The review of this information and material, and the interviews we conducted, provide the basis for our findings.

**Q. Please describe the process you followed in conducting your evaluation.**

A. Generally, our process follows the following steps:

- Review the Company's filing, including all testimony and exhibits supporting the filing
- Prepare initial data requests addressing the issues pertinent to our evaluation
- Review and analyze the Company's responses to original data requests
- Prepare follow up data requests seeking additional information or clarification of responses to initial data requests
- Conduct an on-site visit, interview appropriate Company personnel, review information too voluminous to include in responses to data requests, and discuss issues identified in our analysis of the responses to our data requests

- Prepare our written testimony
- Seek verbal clarification of issues identified in preparing our testimony
- Finalize and file our prepared written testimony

**Q. Is this the process you followed in this case?**

A. No, in this case the process was abbreviated. Responses to our initial data requests took much longer than anticipated. We only received responses to 21 of our 91 data requests in time to review them before the on-site visit. In this case, we were drafting testimony while we were still receiving responses to our initial data requests. Additionally, as we reviewed the responses, there were matters that needed clarification or follow-up questions. However, time was insufficient to develop the questions, receive and analyze the responses, and finalize the testimony. Therefore, we are reserving our right to supplement our testimony.

## IV. ENGINEERING & SYSTEM DESIGN PROCESSES

**Q. Please describe SJG's gas delivery system.**

A. As the Company name suggests, South Jersey Gas Company's service territory is located in the lower third of New Jersey. This service territory is divided into five operating districts – Glassboro, Waterford, Millville, Swainton, and Pleasantville.[2] SJG's gas delivery infrastructure consists of approximately 107 miles of transmission pipelines and 5,867 miles of distribution feeders and mains serving more than 344,000 customers.[3] Natural gas is delivered to SJG at points along the northwest portion of its system by two interstate pipelines – Columbia Gas Transmission

[2] Response to Data Request RCR-GR-006
[3] Response to Data Request RCR-GR-049 – 2009 DOT Annual Report

("Columbia") and Transcontinental Gas Pipeline ("Transco"). The Company has one Liquid Natural Gas ("LNG") Peak Shaving facility at McKee City.

**Q. What processes are used by the Company to model its delivery system for peak day reliability and for future system reinforcements?**

A. SJG utilizes the SynerGEE® (Stoner) network modeling and hydraulic analysis software.[4] The SynerGEE® software is used by SJG to simulate its infrastructure using a computer model of pipe segments and nodes where system supplies and/or loads occur. The system modeling and design is the responsibility of the System Engineering and Planning group.[5] It periodically updates and recalibrates the model as system loads/supplies change and infrastructure improvements are added. Input is also received from the pre- and post-winter meetings, where all of the operating districts are represented. Low pressure problems and potential growth areas are discussed at these meetings. System Engineering and Planning is responsible for publishing the combined "Overall Pre- and Post-Winter Review."[6] During the year, Field Sales Representatives may bring in preliminary Service Applications of major commercial or residential developments to input new load data into the model.

As the model of the existing delivery system is updated, areas of low pressure are identified. On a typical 60 pounds per square inch gauge ("psig") distribution system, a low pressure of 20 to 25 psig will be closely monitored in the field during the next heating season.[7] When the model indicates that the pressure at a point within

[4] Response to Data Request RCR-GR-031
[5] Response to Data Request RCR-GR-002
[6] On-site SJG meeting – May 6, 2010
[7] On-site SJG meeting – May 6, 2010

the system drops to 15 psig under peak hour loading conditions,[8] measures to correct the problem are examined by the engineer. The modeling software allows the engineer to analyze how various alternatives such as reinforcements of different pipe sizes at different locations will impact the system.

**Q. What are the operating pressures throughout SJG's delivery system?**

A. The Company has pipe segments throughout its system that are designed to operate at various Maximum Allowable Operating Pressures ("MAOP").[9] They are classified as follows:

- Transmission (Steel) – 250 pounds psig to 700 psig MAOP
- High Pressure Distribution Feeders (Steel) – 90 to 250 psig MAOP
- High, Intermediate & Low Distribution (Steel & Polyethylene) – ¼ to 60 psig MAOP
- Intermediate and Low Pressure Mains (Cast Iron) – ¼ to 24 psig MAOP

**Q. What are the Company's peak day design assumptions?**

A. SJG uses a 63 Heating Degree Day ("HDD") for its peak day design assumption.[10] A HDD is defined within the industry as 65°F minus the average of the day's high and low temperatures. An example of a 63 HDD might be a low of -6°F with a high of +10°F or an average temperature for that day of +2°F (65°F minus 2°F equals a 63 HDD). Prior to the 1993/1994 heating season, SJG used a 60 HDD (average of 5°F). However, on January 19, 1994, it experienced an average temperature of 2°F. Beginning with the 1994/1995 heating season it began using 63 HDD for its peak day

[8] Response to Data Request RCR-GR-036
[9] Response to Data Request RCR-GR-030
[10] Response to RCR-GR-032

design assumption. The January 19, 1994 average temperature of 2°F is the coldest peak day on record for the last 20 years.[11]

Other peak day assumptions used in SJG's system design and modeling are:[12]

- Delivery pressures from the Columbia and Transco City Gate Stations are assumed to be 550 psig, which is lower than contractual pressures
- McKee Peak Shaving facility output will be held to approximately 66% of existing plant nameplate deliverability
- All Interruptible Tariff system loads will be curtailed
- System model flows are adjusted upward to account for peak hour demand (typically 7:00 to 8:00 AM)
- Additional adjustment may be made to account for wind, although the wind effect is rarely experienced during peak hour

Q. **Does McFadden Consulting have any comments and/or recommendations regarding the Company's engineering and system design processes?**

A. McFadden Consulting has reviewed SJG's engineering and system design practices and processes both through responses to data requests and at the on-site meetings. The peak day and peak hour design assumptions appear to be appropriate. For example, peak day delivery pressures from interstate pipeline suppliers typically drop during peak days since their systems are also running at the maximum. Running the McKee City LNG peak shaving facility at a reduced output rate is designed to conserve the limited LNG tank storage for future use if the weather continues to be

[11] Response to RCR-GR-034
[12] Response to RCR-GR-032

cold.[13] Overall, McFadden Consulting believes that SJG's engineering and system design have the appropriate balance between maintaining system reliability and over-designing system reinforcements where unnecessary capital expenditures are borne by the customer.

McFadden Consulting identified one engineering design process it believes could be improved. Based on our observations, we saw a lack of documentation by SJG's System Engineering and Planning group that it had performed in-depth analyses regarding proposed system reinforcements. McFadden Consulting acknowledges that numerous runs are likely made regarding pipe sizing and locations of pipe reinforcement segments that are quickly reviewed and discarded. However, there was little evidence that economic or "big picture" analyses were performed regarding alternatives. For example, did the Company consider more expensive capital alternatives that might provide longer term solutions or provide an opportunity to connect to another pipeline supplier's system? During the time frame covered by our assessment, the Company provided documentation that it did one thorough assessment of alternative pipeline reinforcements. In 2008, the Company retained Black & Veatch to complete an in-depth analysis of SJG's system looking at various system reinforcement alternatives that resulted in the 24" Malaga – Vineland Pipeline project.[14] The alternative justification and documentation issue is discussed in more detail in Section VII.

[13] On-site SJG Meeting – May 6, 2010
[14] Response to Data Request RC-SJ-IN-P-011 (2009) – Black & Veatch – *Comparative Analysis of Distribution System Reinforcement Alternatives* dated September 9, 2008.

## V. CONSTRUCTION POLICIES AND PRACTICES

**Q. Did McFadden Consulting examine SJG's construction policies and practices?**

A. McFadden Consulting did examine SJG's Construction Manual.[15] For the most part, this manual appears to comply with the Department of Transportation ("DOT") Code 49, CFR Part 192 – "Minimum Federal Safety Standards for the Transportation of Natural and Other Gas by Pipeline." This manual includes sections involving material specifications, steel and polyethylene pipe installation, main and service renewal, record keeping, and corrosion control.

In addition, McFadden Consulting reviewed data relating to construction work performed by outside contractors. During the years 2005 to 2008, the percent of outside contractor construction labor costs declined from 66% to approximately 50%. In 2009, the outside contractor construction labor costs jumped to 75%.[16] This jump is most likely due to the 24" Malaga – Vineland Pipeline construction. SJG's management stated that almost all major pipeline construction jobs are done by outside contractors. Outside contractor work is typically done under blanket contracts for the smaller jobs but the larger jobs are usually performed under a job-specific bid contract.[17] A large percentage (~ 90%) of operation and maintenance work is performed with Company labor.

[15] Response to Data Request RCR-GR-028 – made available at SJG on-site meeting – May 5, 2010
[16] Response to Data Request RCR-GR-044
[17] On-site SJG meeting – May 5, 2006

McFadden Consulting also examined the per foot costs to replace old mains and services, and to install new mains and services over the period of the last five years.[18] These costs appear reasonable in our experience.

**Q. Does McFadden Consulting have any comments and/or recommendations concerning SJG's construction policies and practices?**

A. Yes. McFadden Consulting believes that the Company's Construction Manual needs to be updated in some areas. Some sections are more than 25 years old. There are some areas of inconsistencies and confusion. For example, the Material Specifications Section 3.0 stipulates that Aldyl "A" polyethylene pipe shall be used, but Section 6.0 specifies other brands of medium density polyethylene pipe (MDPE or PE2406/2708) in addition to Aldyl "A"[19]. Most gas companies have stopped using Aldyl "A" pipe for the last 15 or so years because of a DOT Advisory Bulletin regarding this pipe's susceptibility to premature brittle-like cracking on older plastic pipe.[20]

Also, while the Construction Manual needs to be updated, the Material Specification Section appears to be incomplete. It does not have specifications for meters, regulators and other commonly used materials. It does not address the Rockford Eclipse riser valve issue. It does not contain specifications for full-open pipeline valves to allow for internal inspection tools, commonly called "smart pigs," which is a DOT Transmission PIM requirement. Specifications for Excess Flow Valves ("EFVs") for service lines, which SJG has been using for many years, are not

[18] Responses to Data Requests RCR-GR-039, -040, and -041
[19] Response to Data Request RCR-GR-028 – made available at SJG on-site meeting – May 5, 2010
[20] Paper by Dr. Gene Palermo, consulting for Jana Laboratories, Ontario, Canada – *"Correlating Aldyl "A" and Century PE Pipe Rate Process Method Projections With Actual Field Performance"*

specified. EFVs are a requirement in the upcoming DOT Distribution DIMP regulations.

McFadden Consulting has received mixed signals from SJG regarding a process whereby new products are reviewed for use within the Company. In a written response,[21] the Company stated that the Engineering Services Department has the responsibility to review the proposed product for its "applicability, compatibility, and design conformance with required industry specifications." SJG also states that new products will traditionally be tested in the field before being "formally adopted, approved, and accepted for wider use in the organization." On the other hand, when a similar question was asked at the on-site meeting, the response given was that the Company relied on its outsourced storeroom contractor to select products as long as the materials comply with appropriate material codes and specifications such as American Petroleum Institute ("API"), American National Standards Institute ("ANSI"), American Society of Testing and Materials ("ASTM"), and other similar standards and testing organizations. McFadden Consulting was unable to find any formal or informal written documentation of the Company's evaluation processes prior to or after a product's acceptance or approval for use within SJG. The Company's Construction Manual Materials Specifications Section does not include an engineer's approval signature on any of the specification sheets.

The Construction Manual Material Specification Section is where SJG has the opportunity to specifically identify Company approved materials such as regulators, meters, valves, pipe, and fittings by type, size, and manufacturer. Therefore,

[21] Response to Data Request RCR-GR-076

McFadden Consulting recommends that SJG update the Construction Manual and expand the Materials Specifications Section to include more detail on commonly used materials that are evaluated by the Engineering Service Department. It is suggested that the page with the approved material item (the "spec sheet") require a Company engineer's signature and approval date.

Additionally, there does not appear to be a documented process for determining how products are approved for inclusion in the Material Specifications Section. For example, what organization is responsible for testing various types of products, what level in the organization is responsible for signing off on the products, when are such products reviewed on a recurring basis, what are the procedures for removing products from the approved list. These types of policies should be communicated to the appropriate organization and individuals to ensure that the Materials Specifications Section is the guide for ensuring that only appropriately approved materials and products are used in the Company's system.

## VI. OPERATIONS & MAINTENANCE PROGRAMS

**Q. Did McFadden Consulting examine SJG's Operations and Maintenance programs?**

A. McFadden Consulting examined the Company's Operations and Maintenance ("O&M") Manual that covers many topics such as class location determinations, emergency plans, odorization, damage prevention & markouts, line patrolling, leak surveys, regulator maintenance, valve maintenance, record keeping, and similar

tasks.[22] Unlike the SJG Construction Manual, the O&M Manual appears to be more up-to-date. It includes the BPU's Code regarding the "20% Rule"[23] concerned with monitoring leaking services within a defined area and the BPU's recently enacted Regulation that requires that all gas pipelines constructed in New Jersey after March 2, 2009 meet the design standards for a Class 4 location.[24] However, McFadden Consulting is concerned that SJG's O&M Manual does not include the Company's PIM policies and procedures.[25]

The Company has outsourced various routine O&M functions such as markouts, meter reading, leak surveys, vehicle/equipment service & maintenance, meter shop and storeroom activities.[26] SJG maintains that outsourcing allows the Company to reduce O&M costs, while sustaining current staffing levels. While McFadden Consulting did review preliminary cost/benefit analyses for several of these programs, there was no evidence of any follow-up studies that examined if these outsourced O&M programs were truly cost effective.

The Company has implemented new technologies[27] such as:

- 18-inch core drill hole saw for distribution work
- "Spider" plow that trenches, installs pipe and backfills in one operation
- Pipe finders utilizing ground penetrating radar
- GPS remote terminal for field vehicles
- "Smart Pigging" for transmission pipelines

[22] Response to Data Request RCR-GR-028 – made available at SJG on-site meeting – May 5, 2010
[23] New Jersey Administrative Code § 14:7-1.16
[24] New Jersey Administrative Code § 14:7-1.3
[25] DOT CFR 49, Part 192.901 – 192.949, Subpart O
[26] Response to Data Request RCR-GR-087 and the on-site SJG meeting – May 6, 2010
[27] Response to Data Request RCR-GR-089 and the on-site SJG meeting – May 6, 2010

One technology that deserves special mention is the FieldBook, a data system developed by Hatch Mott MacDonald GIS. [28]This data system integrates many record keeping functions and eliminates a significant amount of paperwork. From their vehicles, field personnel are now able to enter data regarding leak surveys, main replacements exposed pipe inspections, and regulator & valve maintenance. In addition, the field personnel can access work orders and as-built drawings.

McFadden Consulting believes the new data system improves productivity. However, SJG apparently did not conduct a cost/benefit analysis either prior to or subsequent to implementing this system. Therefore, it is difficult to determine the impact the system has had on the Company's operations.

**Q. Does McFadden Consulting have any comments and/or recommendations regarding the Company's O&M Programs?**

A. McFadden Consulting has two recommendations:

1) Update the O&M Manual to include the Transmission Pipeline Integrity Management ("PIM") Plan as per DOT Code CFR 49, Part 192.901 – 192.949, Subpart O.
2) Periodically perform follow-up cost/benefit analyses to determine if outsourcing routine O&M functions is truly cost effective.

## VII. SJG'S PLANNING & CAPITAL BUDGETING PROCESS

**Q. Please briefly describe SJG's planning and budgeting process.**

[28] Engineering Information Management Fieldbook GIS/GPS Technologies www.hatchmott/ContentPages/SiteMap.aspx

A. The Company's planning, budgeting and approval process is part of SJG's annual Financial Planning process. SJG prepares a project-specific capital budget for the coming year only, rather than the multi-year project-specific capital budget that many utilities prepare.

SJG assesses capital needs based primarily on its reviews of current physical plant condition and projected system/customer growth. Part of this process involves the pre- and post-winter meetings with the geographic districts.

As the initial capital project and program proposals are developed, Department Managers discuss their recommendations and cost estimates with their Officers. During these reviews and discussions, project proposals are added, rejected, fine-tuned, or delayed. At this point, a preliminary capital budget is submitted to Financial Planning for consideration. After several iterations, the final capital budget is reviewed and approved by the President/CEO of the Company. Typically, in November of each year, the capital budget, as approved by the President/CEO, is presented to the Company's Board of Directors for final approval.[29]

**Q. What are McFadden Consulting's observations concerning the Company's overall planning and capital budgeting process?**

A. Many gas company's have formal planning and budget committees. While the development of SJG's budget is less formal, it appears to be a "bottom-up" process.

Like most utilities, SJG divides capital projects into two main categories – blanket authorizations and special authorizations.[30] Blanket projects are the small

[29] Response to Data Request RCR-GR-010
[30] Response to Data Request RCR-GR-013

day-to-day jobs, whereas special authorizations are larger projects that exceed the following expenditure amounts:

- New Business Mains -$50,000
- Improvement Mains - $50,000
- Replacement Mains - $50,000
- Leak Clamping - $50,000
- Special Meter Installations - $25,000
- Distribution Equipment - $5,000
- Office Furniture & Equipment - $5,000
- New Vehicles - All

McFadden Consulting is concerned about the SJG's lack of documentation of alternatives considered when addressing system problems or enhancements requiring major capital expenditures. Except for the Black & Veatch Malaga – Vineland analysis discussed earlier, and several small outsourcing studies, the Company was unable to provide any detailed feasibility studies examining alternatives for major projects. McFadden Consulting believes that SJG does consider some alternatives, although such alternatives may be limited to engineering considerations, such as pipe size, pressure, pipeline location, and other similar factors. However, such consideration of alternatives appears informal, undocumented, and undisciplined. There are no courses or formal training offered to operations and engineering personnel concerning economic evaluation or cost/benefit analysis of project

alternatives.[31] McFadden Consulting believes that such documentation is an important business practice for both internal and external purposes. Internally, it provides supporting documentation for projects that might be questioned years later by directors, officers, and managers who are new to the organization or were not involved in the decision making process. Externally, it may be needed to justify the decision to regulators, such as the BPU, Rate Counsel, Department of Transportation, Office of Pipeline Safety, or other similar organizations.

**Q. Does McFadden Consulting have any comments and/or recommendations concerning SJG's planning and capital budgeting process?**

A. McFadden Consulting has two recommendations:

1) SJG should perform and document detailed feasibility analyses for major capital projects or programs that exceed $500,000. These analyses should include assumptions, alternatives, cost/benefit analyses, and consequences if the project or program is not done. A short written policy memorandum with a format outline would be beneficial.

2) Provide economic evaluation training for operations and engineering personnel involved in the planning and capital budgeting process.

## VIII. SPECIFIC PROGRAMS OR PROJECTS

### A. Rockford Eclipse Valve Replacement Program

**Q. Please describe the background that led up to SJG's Proposed Rockford Eclipse Valve Replacement Program.**

[31] Response to Data Request RCR-RG-026

A. The Company purchased and installed almost 70,000 Rockford Eclipse ("RE") plug valves (Series 125 and Series 175 Lube-Ring Valves) in the latter part of the 1980s and early part of the 1990s for use as gas service riser valves, which are commonly referred to in the industry as gas meter shut off valves . SJG initially purchased these valves from Rockford Eclipse, Inc., a division of Eclipse, Inc., collectively referred to herein as Eclipse. In or around 1993, Eclipse, Inc. sold its Rockford Eclipse product line to Mueller Company, Ltd and/or Mueller Group, LLC, collectively referred to herein as Mueller.[32]

On February 2, 2005 the Company experienced a gas release and fire incident when an employee responded to a leak call at a residence that had a Rockford Eclipse gas service riser valve installation. When the SJG employee arrived at the residence he smelled a gas odor and heard a hissing noise at the gas meter location. When the employee attempted to shut off the gas service to the residence by operating the RE valve, the employee observed that the valve stem or barrel was very loose and there was a gas leak coming from it. In the attempt to operate the valve, the valve stem blew out, causing the release of gas. The gas ignited, resulting in extensive damage to the residence.[33] McFadden Consulting is unaware of the source of ignition.

Several days prior to the fire incident, on January 29, 2005, another SJG employee performed a gas meter routine change out at this same residence. As part of this meter routine change out procedure, this employee shut off the valve described above, prior to removing the existing gas meter, and turned on the valve after installing the new meter. The Company's "outside expert" and the Camden County

[32] Response to Data Requests RCR-POL-006
[33] Response to Data Request RCR-GR-080

Fire Marshal opined that the valve failed during this gas meter routine change out operation. The SJG employee was unaware that he had twisted off the valve stem, which had "seized up" in the valve body.[34]

Subsequently, South Jersey Gas experienced two other similar failures of Rockford Eclipse gas service riser valves, the first in 2005, and the second in 2008. However, neither failure caused personal injury or property damage.

Because of the gas release and subsequent fire resulting from the 2005 failure, the property owner filed suit against South Jersey Gas Company and the RE valve manufacturer(s). According to SJG, the Court found South Jersey Gas Company and the RE valve manufacturer(s) liable for the damages incurred in this incident, but has not yet determined the ratio of liability.[35]

In 2008, SJG's attorney hired David P. Pope, Ph.D., an expert in these matters, to examine several of the failed RE valves. Dr. Pope found that the "valve failed because of corrosion resulting from intimate contact between dissimilar metals, steel and brass, in the valve." He also found that the valve was "defectively designed for this application."[36]

Subsequent to Dr. Pope's findings, the Company undertook a census of the valves to determine the number and locations installed on its system.[37]

**Q. Please describe procedures the Company uses when deciding to purchase a particular stock purchase item intended for routine or standard use.**

[34] Responses to Data Requests RCR-GR-077 and RCR-GR-080
[35] Information obtained from Messrs. Megdal and Dippo during May 5&6, 2010 site visit.
[36] Responses to Data Requests RCR-GR-077 and RCR-GR-078; also Robert Fatzinger Direct Testimony
[37] Response to Data Request RCR-POL-018

A. The Company stated that it does not have a materials testing facility as do many larger gas distribution companies for testing potential new materials including stock purchase items prior to adding them to an approved materials listing or manual. Currently, according to the Company, new materials proposed for Company use are first reviewed by the Engineering Service Department for their applicability, compatibility, and conformance with required industry specifications. Further consideration is given to the advantages and disadvantages of its operation and maintenance activities as well as product costs and availability.

New products are traditionally field tested in one or more select locations where their performance can be further evaluated in a controlled manner before being formally approved for wider use across the organization. Currently, the Company also will seek the input of other users who have approved the product. McFadden Consulting requested additional information intended to verify that this process is followed, including documentation and controls pertaining to it.

However, according to the Company, none of its current employees knows whether the RE valve in question was tested, studied or approved by an engineer.[38]

**Q. Did the Company identify any problems or concerns with the Rockford Eclipse valves prior to approving its purchase for routine or standard use?**

A. The Company has stated that it did not identify what is now termed a "design defect" in the Rockford Eclipse gas service riser valve prior to the decision to purchase and install approximately 70,000 valves. SJG first concluded that the RE valve had a "design defect" when the Company's attorney hired an expert to examine the failed

[38] Response to Data Request RCR-GR-076

RE valve that was involved in the February 2, 2005 residence fire.[39] Thus, in hindsight, it can be argued that the Company erred in purchasing and installing these valves, without conducting appropriate due diligence.

**Q. Please briefly describe SJG's Rockford Eclipse Valve Replacement Program.**

A. In response to the three failures of Rockford Eclipse gas service riser valves, the Company conducted a survey to identify the location of RE valves throughout its service territory. It then developed a plan to replace all of the valves over a 15 year period with a priority for replacing the valves on gas service risers within business districts over a 3 year period. The Company indicates its plan has been discussed with and found acceptable by the Board of Public Utilities Office of Pipeline Safety.[40] The Company has also indicated that if its proposed Reliability Tracker is not approved, it will still proceed with a RE valve replacement program although the timing of the valve replacements will need to be reviewed.[41]

**Q. Does McFadden Consulting have any comments or recommendations concerning the Company's Rockford Eclipse Valve Replacement Program?**

A. In response to data requests requesting all information related to the RE valve situation, SJG did not provide any documentation indicating that it conducted a formal analysis to determine if its proposed program was a prudent course of action. For example, apparently no analysis was performed to determine:

- The probability of future incidents verses the expenditure involved in making a wholesale replacement of the valves

[39] Responses to Data Requests RCR-GR-077 and RCR-GR-078; also Robert F. Fatzinger's Direct Testimony
[40] Response to Data Request RCR-008
[41] Response to Data Request RCR-GR-081

- The proper timeframe (i.e. the proposed program's 15 years to complete) for any such replacement program

Because the Company did not conduct any such analyses, McFadden Consulting is not able to determine if the proposed program is reasonable or prudent. In other words, McFadden Consulting is unable to either take issue with the Company's proposed Rockford Eclipse gas service riser valve replacement program or to endorse the program as being adequate.

SJG has indicated that it will formalize its plan for prioritizing and replacing all RE valves and provide such plan to the Board of Public Utilities no later than July 31, 2011.[42] McFadden Consulting recommends the Board require the Company to prepare a formal analysis as described above as a part of any such plan submission.

**Q. Has the Company attempted to recover from the valve manufacturer any costs associated with its Valve Replacement Program?**

A. Yes. In July 2009, the Company commenced litigation against the manufactures, i.e., Eclipse and Mueller, of the RE valves to recover the costs associated with the removal and replacement of all of the RE valves. On September 25, 2009, Mueller filed a motion to dismiss the Complaint, or in the alternative, for summary judgment, arguing that the statute of limitations had run. That same day, Eclipse filed a similar motion to dismiss on the same basis. On April 27, 2010, the Court ruled in favor of Mueller's motion for summary judgment that the statute of limitations had run. The Court also ruled at this time to convert Eclipse's motion to dismiss into one for

[42] Line 23, page 12 of Robert F. Fatzinger Direct Testimony

summary judgment and to grant SJG ten days to respond.[43] The outcome of Eclipse's revised motion for summary judgment based on the statute of limitations was not determined at the time this testimony was prepared.

**Q. What costs are the Company proposing to include in the Rockford Eclipse Valve Replacement Program portion of the proposed Reliability Tracker?**

A. SJG is proposing to include the following costs in the Rockford Eclipse Valve Replacement Program portion of the Company's proposed Reliability Tracker:

- All costs associated with the removal and replacement of the RE valves in accordance with the methodology set forth in the testimony of Frank DiPalma.[44]
- $70,000 of the total estimated cost of $150,000 for the Jacobs Consultancy's work being done to support SJG's Rockford Eclipse Valve Replacement Program. The remaining $80,000 is being allocated to the rate case and the Company is proposing to recover this amount as rate case expense.[45]
- All costs associated with litigation along with any recoveries from litigation.[46]

**Q. Does McFadden Consulting have any comments or recommendations concerning the Rockford Eclipse Valve Replacement Program costs that the Company is proposing to recovery through the proposed Reliability Tracker?**

[43] Responses to Data Requests RCR-GR-07 and RCR-POL-006; also Robert F. Fatzinger's Direct Testimony starting at line 22 of page 13
[44] Line 18, page 13 of Robert F. Fatzinger Direct Testimony
[45] Response to Data Request RCR-GR-086
[46] Response to Data Request RCR-GR-086

A. Yes. The appropriateness of the plan SJG is proposing to submit to the Board of Public Utilities by July 31, 2011 is irrelevant when considering the recovery of these costs. McFadden Consulting believes investors are responsible for the costs associated with installing and maintaining assets. Customers simply pay for services, at rate levels that have been deemed just, reasonable, and not unduly discriminatory. Generally, a return on the assets is included in such rates.

However, when there is a problem with assets such as these, customers should not be required to reimburse the shareholders. In situations pertaining to a regulated monopoly, regulatory oversight is intended replace the competitive market place. In a competitive market place, if management makes a poor decision or a mistake, customers are not forced to pay for the error. An example might be Toyota's recent problem with its braking system on certain models. Toyota cannot simply ask its customers to pay for the cost of replacing the brakes. Nor can it simply ignore the problem because, if it is found liable, it will be held accountable for damages, in which case shareholders, not customers will pay. Likewise, as it re-engineers the system, it may not be able to recover the additional costs from customers because the marketplace dictates the price it receives. If the customers have sufficient alternatives at lower prices, it will simply purchase an automobile from another company. In this case, most if not all customers do not have this opportunity.

Therefore, the Board should reject SJG's proposal to charge any RE Valve Replacement costs to customers.

## B. Accelerated Mains Replacement Program

**Q. Please describe SJG's Proposed Accelerated Main Replacement Program.**

A. Presently, SJG has no formal or specific program for replacing cast iron, bare steel, or unprotected coated steel mains. Although SJG has no existing formal main replacement program, it is proposing to implement an *accelerated* plan in this rate case. The intention is to reduce the time required to replace all the cast iron, bare steel, or unprotected coated steel mains in its system in comparison to the pace it is currently experiencing. Since there is no current formal plan, it might be a misnomer to call the proposed plan an accelerated plan. Rather it appears to McFadden Consulting that the proposed plan is SJG's attempt to implement a formal main replacement plan.

The Company's proposal is vague. In fact, it has stated that it has no formal plan, but that a plan will be developed in the next 12 months.[47] Under the proposed Accelerated Mains Replacement Program ("AMRP"), SJG states it will reduce the time to complete the replacement of cast iron, bare steel and unprotected coated steel mains from 46 years, at the pre-CIRT rate level, to 20 years. Likewise, it will reduce the time to complete the replacement of bare steel and unprotected coated steel services from 16 years, at the pre-CIRT rate levels, to 10 years. Under the AMRP, SJG estimates approximately 62 miles of main and 4,102 gas services would be replaced yearly. Total main and service replacement costs over the life of the AMRP are projected to be approximately $550 million.[48]

[47] Response to Data Request RCR-GR-059
[48] Pages 12 & 13 of Charles F. Dippo Direct Testimony

In his direct testimony, Mr. Dippo does not include an estimate of the incremental costs of an accelerated replacement program, over and above normal or historical replacement rates. Likewise, McFadden Consulting has not been able to determine normal or historical replacement costs from the capital budgeting information supplied by SJG.

**Q. How is the Company proposing to recover the costs associated with the AMRP?**

A. SJG is proposing to include the costs associated with the AMRP in its proposed Reliability Tracker. In addition to the AMRP, the proposed Reliability Tracker would include the costs of the RE Valve Replacement Program, the Distribution Integrity Management Program, and the Pipeline Integrity Management Program.[49]

**Q. What justification has the Company provided to rationalize the implementation of an AMRP?**

A. As in the case of the Rockford Eclipse Valve Replacement Program, McFadden Consulting has not been presented with any documentation to indicate that a formal analysis was completed to estimate prudent items such as:

- the probability of future leaks or incidents verses the expenditures involved in making an accelerated replacement of the piping
- the incremental costs of an accelerated replacement program, over and above normal or historical replacement rate
- the proper time frame, i.e. the proposed program's 20 and 10 years to complete, for any such replacement program

[49] Page 2 of Samuel A. Pignatelli Direct Testimony

The only justification SJG has provided to rationalize the implementation of a $550 million AMRP is that it will:

- maintain, for the foreseeable future, jobs created by SJG's CIRT projects
- reduce greenhouse gas emissions from fugitive methane[50]
- accelerate SJG's system upgrade which can only improve the already reliable and efficient system[51]

**Q. Does McFadden Consulting have any comments and/or recommendations concerning the Company's proposed Accelerated Main Replacement Program?**

A. Yes. As indicated above, under the proposed AMRP, SJG alleges that the AMRP will reduce the time required to replace mains from 46 years to 20 years. Likewise, it will reduce the time required to replace services from 16 years to 10 years. Apparently, SJG believed the 46 year and 16 year replacement rate figures were prudent from a safety and customer cost perspective. Accelerating the replacement rates to the 20 and 10 year figures represents the incremental cost attributed to job creation and greenhouse gas emission reductions.

As far as McFadden Consulting is aware, SJG has not conducted a thorough analysis of the impacts, including the incremental costs, of an accelerated replacement program, over and above normal or historical replacement rates. McFadden Consulting believes that such an incremental cost estimate is an essential basis for any formal analyses needed to determine the prudency of this proposed $550 million program. McFadden Consulting believes that SJG has not attempted to justify a $550

[50] Another Rate Counsel witness, Dr. David Nichols, will testify on the issue of reductions in greenhouse gas emissions.
[51] Charles F. Dippo Direct Testimony beginning at line 4 of page 12

million project, other than to propose a continuance of one of the Company's CIRT projects at an accelerated level, in order to accelerate cost recovery, under the guise of creating jobs and reducing greenhouse gas emissions.

Because the Company has failed to conduct any formal analyses to justify the proposed AMRP, McFadden Consulting is unable to determine the reasonableness or prudence of the program. Since the Company bears the burden of proving such reasonableness and prudence, McFadden Consulting recommends the Board reject the Company's proposal. Additionally, McFadden Consulting recommends that the Board not consider such a main replacement program until the Company produces a formal analysis justifying it, including the costs and benefits of the plan.

### C. Pipeline & Distribution Integrity Management Programs

**Q. Please briefly describe SJG's Integrity Management Programs and their proposed cost recovery for these programs.**

A. SJG operates approximately 107 miles of transmission pipelines which are subject to PIM regulations that can be found in the federal pipeline safety regulations at 49 CFR 192 - Subpart O. The Company's capital expenditures associated with complying with the PIM regulations have been absorbed in the Company's annual capital construction budget each year as incurred. Incremental O&M expenses associated with complying with the PIM regulations have been treated as a deferred expense for the years 2006 thru 2009. As of November 30, 2009, these deferred expenses totaled

$1,174,755. As more transmission pipeline segments have integrity assessments performed, these costs will continue to accrue.[52]

On December 4, 2009 the Department of Transportation issued its final rule on Integrity Management for Gas Distribution Pipelines. The compliance deadline for each operator to develop a written DIMP plan is August 2, 2011. SJG is utilizing the Integrity Management Program Framework and User Guide as developed by Structural Integrity Associates, Inc. as the foundation for their DIMP plan. SJG has not yet completed its DIMP plan and therefore has not yet determined the impact on the Company from an operational and financial perspective.[53]

As a part of this rate case, the Company is proposing to implement a "tracker" mechanism to earn a return on and a return of expenditures related to the two programs. This tracker mechanism would be one part of the Company's proposed three part Reliability Tracker.[54]

**Q. Does McFadden Consulting have any comments or recommendations concerning the Company's proposed IM programs?**

A. McFadden Consulting has not observed any concerns regarding the Company's PIM plan. Similarly, SJG's approach to the development of its DIMP plan seems reasonable.

**Q. How is the Company proposing to recover the costs associated with the PIM and DIMP programs?**

[52] Charles F. Dippo Direct Testimony beginning at line 4 of page 12
[53] Response to Data Request RCR-GR-072
[54] Samuel A. Pignatelli Direct Testimony beginning at line 7 of page 7

A. The Company is proposing to recover all expenditures associated with the IM programs, in excess of those approved in the rate base test year, through the IM portion of its proposed Reliability Tracker.

Rate Counsel witness, Mr. LeLash, will address the question as to appropriateness of utilizing a tracker mechanism to recover the costs of these two programs.

### D. Infrastructure Program – Approved CIRT Projects

**Q. Please briefly describe SJG's infrastructure investment program and capital investment recovery tracker.**

A. SJG's original petition for approval to implement and administer an infrastructure investment program ("Infrastructure Program") and simultaneously approve the recovery of costs through the implementation of a capital investment recovery tracker filed on January 20, 2009. SJG proposed eleven projects for inclusion in its Infrastructure Program, seeking to recover, through the CIRT, a revenue requirement for those projects initiated within a period of approximately two years from the date of final Board approval of the infrastructure Program. The total project expenditures in the original petition were estimated to be $103 million.

**Q. Have you prepared a summary of the SJG's Infrastructure Program Projects?**

A. Yes. SJG's Infrastructure Program projects are summarized in the schedule appended hereto as Exhibit MCGI-1. This schedule summarizes the 11 CIRT projects and provides an update status as of the last CIRT Quarterly Report for the period ending March 31, 2010. The summary shows that SJG now estimates the total project

expenditures will be $105,250,000. One project, the 24" Malaga-Vineland Pipeline, is experiencing a significant overrun and SJG's revised estimate shows a $9,450,000 increase for this project. Another project, the 24" Black Horse Pike to Delilah Pipeline, which was originally estimated at $7.5 million, has been postponed and is not included in the revised estimate.

Only two of the projects, the Transmission Valve Upgrades and the LNG Plant Generator Install, were shown as completed at the time of the March 31, 2010 CIRT Quarterly Report. Furthermore, only four additional projects could potentially be completed by the end of the test year, which is the twelve months ending June 30, 2010. These projects are the 24" Malaga-Vineland Pipeline, the 20" Union Road to Route 50 Upgrade, the Swedesboro Station Upgrade, and the 12" Rio Grand to Wildwood Project.

**Q. You previously mentioned that this rate proceeding and the Infrastructure Program are inextricably intertwined. Please explain why.**

A. Paragraph 23 on page 7 of the CIRT Stipulation states:

> The Parties stipulate that the Company shall file a base rate petition on or before April 1, 2011. The Parties further stipulate that, in the context of the Company's next base rate case, the Qualifying Projects and the CIRT rates will be subject to a full and thorough examination. The Parties further stipulate that, if required, full evidentiary hearings concerning Qualifying Project recoveries will take place in that base rate case proceeding. The Parties further stipulate that, by agreeing to this Stipulation, a party does not waive, or in any way prejudice its ability to raise any issue with regard to the base rate petition contemplated by this paragraph.

Paragraph 24 on page 8 states:

> The Parties further stipulate that, during the Company's next base rate case, the net capitalized amounts of the Qualifying Project, if deemed

to be reasonable and prudent, will be rolled in the Company's rate base and related CIRT charges will be terminated. Any Qualifying Project expenditures and CIRT charges not known and measurable at the conclusion of the required base rate case may be considered in a subsequent phase two proceeding, after which time the CIRT rate and tariff will terminate.

Therefore, although the CIRT projects were approved in Docket Nos. EO090110049 and GO09010051, the CIRT Stipulation provided for a "full and thorough examination" in this base rate proceeding or a subsequent phase two proceeding.

**Q. Do you have any concerns about conducting a full and thorough examination of the infrastructure projects in this proceeding?**

A. We have several concerns. First, as previously stated, only two of the projects, the Transmission Valve Upgrades and the LNG Plant Generator Install, were shown as completed at the time of the March 31, 2010 CIRT Quarterly Report. These two projects are relatively straight forward, although the LNG Plant Generator Install does show a $300,000 estimated overrun. While these projects may be completed, costs associated with them continue to accumulate because of the lag time in receiving and process invoices from various vendors. Once the job cost summary for the jobs are closed, the costs can be examined as part of the "full and thorough examination" contemplated in the Infrastructure Stipulation.

Each of the other projects listed above, which could potentially be completed by the end of the test period in this case, is discussed below.

**The 24" Malaga-Vineland Pipeline:** During our on-site visit on May 5 and 6, SJG indicated that the Pipeline was placed in service in April 2010. This project is

experiencing a significant overrun now estimated at $9,450,000 on a $40 million endeavor, which equates to an overrun of 24%. Also, charges against this project will likely continue to accumulate for some additional time.

**The 20" Union Road to Route 50 Upgrade:** During the May 5 and 6 on-site visit, the Company indicated that it is now projecting this project will be placed into service by the end of 2010. This is a relatively small project, estimated at $600,000. Upgrading a pipeline is generally a relatively inexpensive method to increase capacity.

**The Swedesboro Station Upgrade:** During the May 5 and 6 on-site visit, the Company indicated that it is now projecting that this Project will be placed into service by the end of May 2010. This is also a relatively small project estimated at $800,000.

**The 12" Rio Grand to Wildwood Project:** During the May 5 and 6 on-site visit, the Company indicated that the Pipeline was placed in service in April 2010. This $4 million project appears to be at or near budget.

**Q. Please provide your comments and recommendations pertaining to the five remaining CIRT projects. .**

A. McFadden Consulting has the following comments and recommendations pertaining to the remaining five CIRT projects:

**Accelerated Main Replacements:** This is a blanket type budget item, which would replace approximately 42 miles of main and 2,200 services for each year of the two year Infrastructure Program. Pursuant to paragraph 10 of the CIRT Stipulation,

the projects must be "incremental in nature."[55] In order for this type of blanket program to be incremental, these units of replacements must be over and above the amount of similar work the Company had planned in its normal budget. In other words, main and service replacement blanket budget items in SJG's normal 2009 gas construction budget should be considered the baseline or starting point for any blanket type items in its Infrastructure Program. McFadden Consulting has not been able to determine this information either from material supplied in data requests or from the CIRT Quarterly Reports.

It is important to note that SJG represents that this project will assist the Company in providing safe, adequate, and proper service to its customers. Since this project encompasses facility replacements, one cannot take issue with the fact that these projects will broadly provide safe, adequate, and proper service. However, absent the CIRT, the Company apparently believed these existing facilities were safe, adequate, and proper because replacing these facilities was not included in the Company's normal approved budget.

Since this project has a completion date outside the test year for this rate case, McFadden Consulting recommends that the prudency determination be deferred until a subsequent phase two proceeding, or in another proceeding as may be established by the Board. Additionally, as discussed previously, McFadden Consulting is recommending SJG's proposed AMRP be rejected. Therefore, any costs in excess of the expenditures approved in the Infrastructure Program should be rejected.

[55] Paragraph 1-, page 3 of the Stipulation attached to the Decision and Order Approving Stipulation dated April 28, 2009 in Docket Nos. EO09010049 and GO09010051.

**The 10" Atco to Stokes Road Pipeline:** At the on-site visit on May 5 and 6, the Company indicated that this project would be bid this month, constructed this summer, and placed in service this year. Since the in service date is beyond the end of the test year, McFadden Consulting recommends that the prudency determination be deferred to a subsequent phase two proceeding, or in another proceeding as may be established by the Board.

**The 16" Cape May Court House to Burleigh Pipeline:** This project has a revised estimated completion date of 12/31/10. Since the in service date is outside the test year for this rate case, McFadden Consulting recommends that the prudency determination be deferred until a subsequent phase two proceeding, or in another proceeding as may be established by the Board.

**The 24" Black Horse Pike to Delilah Pipeline:** The CIRT Quarterly Report states, "…at this time this project has been postponed to address projects of higher priority". Additionally, at the on-site visit on May 5 and 6, the Company indicated that this project is being dropped. Therefore, McFadden Consulting recommends this project be permanently removed from SJG's Infrastructure Program.

**Install H-6 LNG Vaporizer:** This project has a revised estimated completion date of December 31, 2010. Since the in service date is beyond the end of the test year, McFadden Consulting recommends the prudency determination be deferred until a subsequent phase two proceeding, or in another proceeding as may be established by the Board.

**Q. Is it appropriate to roll in the CIRT projects into base rates at this time?**

A. No. McFadden Consulting believes it is premature to roll the CIRT projects into base rates at this time. Only two of the projects, the Transmission Valve Upgrades and the LNG Plant Generator Install, have been placed into service as of March 31, 2010. According to the CIRT Quarterly Report for the period ending March 31, 2010 these projects were completed December 31, 2009. Costs are still accumulating for these projects, which leads McFadden Consulting to believe that the jobs have not been closed out yet.[56]

None of the other jobs has been completed at the time this testimony was prepared. Even if the approved CIRT projects are completed before the end of the test year, costs will continue to accumulate for several months afterwards. It is impossible to determine that the costs associated with the CIRT projects are "reasonable and prudent" until all the costs are known and analyzed. Furthermore, the Company will continue to recover the costs associated with the CIRT approved projects through the rider.

Therefore, McFadden Consulting recommends that the Board not permit the costs associated with these projects be rolled into base rates until all the projects have been completed, all costs associated with the projects are known, and parties are allowed to review said costs.

### E. Infrastructure Program Expansion - Proposed CIRT

**Q. Please address the Company proposal's to expand the Infrastructure Program or the CIRT in this rate case.**

[56] See Exhibits MCGI-2 and MCGI-3

A. In his testimony, Mr. Charles F. Dippo proposes adding six projects totaling $5,452,103 to the 2010 CIRT. He also proposes an additional six projects totaling $1,865,000 be included in a proposed 2011 CIRT program.

SJG is proposing to include these projects in the Company's post-test year capital expenditures in this rate case. However, if the Board approves adding these projects to the 2010 CIRT program and expanding the CIRT program to include 2011 projects, SJG states it will remove them from the post test year adjustments in this case.

**Q. Please address McFadden Consulting's comments or recommendations concerning the Company's proposal to extend the CIRT program to 2011.**

A. The CIRT program was a direct result of Governor Corzine's Economic Stimulus Plan, which was developed for a two-year period. Additionally, McFadden Consulting is unaware of any other New Jersey utility's receiving authority to extend the infrastructure program.

Additionally, the CIRT projects are accelerated projects. Therefore, such projects are discretionary. If such projects were not deemed discretionary, the Company would already have included them in its capital budget.

McFadden Consulting recommends the Board reject SJG's proposal to add projects to the 2010 Infrastructure Program. It also recommends the Board reject SJG's proposal to add an additional year to the Infrastructure Program.

## F. Post Test Year Capital Expenditures

**Q. Describe the Company's request to include expenditures for post-test year construction projects.**

A. The Company's petition is based on a test year of the twelve months ending June 30, 2010.[57] However, the Company is seeking to include in rate base the cost of certain capital expenditures for projects that will not be completed until December 31, 2010.[58] The Company is requesting recovery of post test year capital expenditures for Transmission & Production as sponsored by Mr. Dippo in his Direct Testimony, and non-Transmission & Production capital expenditures as sponsored by Mr. Fatzinger in his Direct Testimony.

Exhibit MCGI-2 contains the post test year capital expenditures for transmission and production related facilities as contained in Mr. Dippo's direct testimony. We have categorized the projects that we will discuss shortly. Page 1 of Exhibit MCGI-2 contains the information as originally filed in Mr. Dippo's Exhibit CFD-1. Column (d), line 38 contains the originally requested post-test year capital expenditure amount of $24,611,528. Page 2 contains the information as filed in the Company's 9 & 3 update filing dated April 30, 2010. Column (d), line 38 contains the up-dated requested post-test year capital expenditure amount of $20,288,583.

Exhibit MCGI-3 contains the post test year capital expenditures for non-transmission and production related facilities as contained in Mr. Fatzinger's direct testimony. The updated 9 & 3 amounts for the non-transmission and production related facilities did not change from those originally filed. Therefore, Exhibit

[57] Samuel A. Pignatelli Direct Testimony, page 4, lines 19-20
[58] Paragraph 30, South Jersey Gas Company's Petition dated January 15, 2010 in this proceeding

MCGI-3 contains only one page. Column (c), line 32 contains the requested post-test year capital expenditures for the non-transmission and production related facilities, which amounts to $36,219,649.7.

The combined post-test year capital expenditure adjustment that SJG is requesting amounts to $56,508,232.70.

**Q. How does the $56,508,232.70 post-test year capital adjustment compare to SJG's typical capital expenditures?**

A. Based on information provided by SJG in the infrastructure proceeding, the Company's average capital budget during the 5 years ending 2008 was $53.2 million. Actual capital expenditures averaged $61.5 million during this same period. Exhibit MCGI-4 shows the capital budget and actual expenditures by category during this five year period.

**Q. Please describe your observations, findings, conclusions, and recommendations pertaining to the Post Test Year Capital Expenditures.**

A. McFadden Consulting recommends the Company's request to include $56.5 million in post-test year capital expenditures be denied. It appears the Company is doubling its capital budget. Granting the request will inflate SJG's rate base, which will also inflate its return. If the Board does grant the Company's request, the increased return should be reduced by an amount equivalent to the increase in accumulated depreciation it will experience during the post-test year period.

**Q. Exhibit MCGI-2 has projects on page 1 for the updated 9 + 3 amounts and on page 2 for the originally filed 3 + 9 amounts that are labeled 2009 CIRT Added**

**Projects and 2010 CIRT Added projects that are followed by question marks. Please explain the projects in those categories.**

A. There are three projects listed in these categories as follows:

- 2009 CIRT Added Projects
  - Wildwood Regulator Station
  - Union Road Station
- 2010 CIRT Added Projects
  - CMCH to Burleigh Station

In preparing this exhibit, the CIRT projects identified by Mr. Dippo in Exhibit CFD-1 9 & 3 and CFD-1 3& 9, were compared to the CIRT projects contained in the Infrastructure Stipulation, and the CIRT Quarterly Reports. The names of the three projects were very similar to CIRT projects contained in the Infrastructure Stipulation and the CIRT Quarterly Reports.

In response to data requests, SJG stated the Wildwood Regulator Station "is incorporated within the Approved 12" Rio Grande-Wildwood Pipeline project." It stated that Burleigh Station "is incorporated within the Approved 16' Cape May Court House-Burleigh Pipeline project." Finally, it stated that the Union Road Station "is incorporated within the Approved 24" Malaga-Vineland Pipeline project."[59]

McFadden Consulting is uncertain if these projects were part of the cost of the projects agreed to in the Infrastructure Stipulation. The Appendix to the Infrastructure Stipulation indicated that there were no "Breakdown of sub-projects

[59] Response to data requests RCR-GR-067 and RCR-GR-074

within" these projects. Additionally, these projects are not identified separately in any of the CIRT Quarterly Reports.

McFadden Consulting is uncertain if the SJG is recovering the costs associated with these projects via the CIRT, and if it is, are the projects truly CIRT approved projects.

As responses to data requests or discovery requests are received, we will supplement our testimony as appropriate. Regardless, McFadden Consulting recommends that the Board reject including any post-test year expenditures associated with these projects in SJG's base rates.

**Q. Does that conclude your testimony?**

A. Yes. However, as discussed previously, we reserve the right to supplement our testimony based on the Company's responses to any outstanding discovery requests.

# SCHEDULES

South Jersey Gas Company
2009 & 2010 CIRT Projects

| (a) Line No. | (b) Description | (c) Original In-Service Date | (d) Original Estimated Cost | (e) Revised In-Service Date | (f) Revised Estimated Cost | (g) Expenditures Through 3/31/2010 | (h) Notes | (i) Line No. |
|---|---|---|---|---|---|---|---|---|
| 1 | 2009 Qualifying Projects | | | | | | | 1 |
| 2 | Accelerated Main Replacement[1] | 12/31/2009 | $ 13,000,000 | | n/a | $19,455,698 | Note 1 | 2 |
| 3 | 24" Malaga-Vineland Pipeline | 12/31/2009 | $ 40,000,000 | 4/30/2010 | $ 49,450,000 | $45,767,642 | | 3 |
| 4 | Transmission Valve Upgrades | 9/30/2009 | $ 1,800,000 | 12/31/2009 | n/a | $ 1,490,000 | Note 2 | 4 |
| 5 | LNG PLant Generator Install | 9/30/2009 | $ 1,800,000 | 12/31/2009 | $ 2,100,000 | $ 1,988,000 | Note 3 | 5 |
| 6 | 20" Union Rd.-Rt 50 Upgrade | 11/30/2009 | $ 600,000 | 12/31/2010 | n/a | $ 382,000 | | 6 |
| 7 | Swedesboro Station Upgrades | 7/31/2009 | $ 800,000 | 5/31/2010 | n/a | $ 375,000 | | 7 |
| 8 | 12" Ri Grande-Wildwood Pipeline | 12/31/2009 | $ 4,000,000 | 4/30/2010 | n/a | $ 3,824,070 | | 8 |
| 9 | 10" Atco-Stokes Road Pipeline | 12/31/2009 | $ 8,500,000 | 9/30/2010 | n/a | $ 860,062 | | 9 |
| 10 | 2009 Qualifying Estimated Cost | | $ 70,500,000 | | $ 80,250,000 | | | 10 |
| 11 | | | | | | | | 11 |
| 12 | 2010 Qualifying Projects | | | | | | | 12 |
| 13 | Accelerated Main Replacement[1] | 12/31/2010 | $ 13,000,000 | | n/a | $19,455,698 | | 13 |
| 14 | 16" CMCH-Burleigh Pipeline | 6/30/2010 | $ 7,500,000 | 12/31/2010 | n/a | $ 729,138 | | 14 |
| 15 | 24" Black Horse Pike-Delilah | 7/31/2010 | $ 7,500,000 | Postponed | $ 0 | $ 750,741 | | 15 |
| 16 | Install H-6 LNG Vaporizer | 9/30/2010 | $ 4,500,000 | 12/31/2010 | n/a | $ 620,000 | | 16 |
| 17 | 2010 Qualifying Estimated Cost | | $ 32,500,000 | | $ 25,000,000 | | | 17 |
| 18 | | | | | | | | 18 |
| 19 | 2009 & 2010 Estimated Cost | | $ 103,000,000 | | $ 105,250,000 | | | 18 |
| 20 | Note 1: Total Accelerated Main Replacement costs for 2009 and 2010 CIRT projects totaled $19,455,698 | | | | | | | 19 |
| 21 | Note 2: Site restoration & clean-up remain | | | | | | | 20 |
| 22 | Note 3: Completed 12/31/2009 | | | | | | | 21 |

SOURCE: Stipulation attached to the Decision and Order Approving Stipulation dated April 28, 2009 in Docket Nos. EO09010049 and GO09010051 and SJG Capital Investment Recovery Tracker (CIRT) Quarterly Report dated April 29, 2010

South Jersey Gas Company
Summary of Major Construction Projects
Proforma Adjustments and Post Test-Year Adjustments

| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
|---|---|---|---|---|---|---|
| | | Original Filing 3 Months Actual--9 Months Projected | | | | |
| Line No. | | Test Year Projection | Post Test Year Projection | Total Projection | Projected In-Service Date | Line No. |
| 1 | **2009 CIRT Approved Projects** | | | | | 1 |
| 2 | Transmission Valve Upgrades (0795) | $ 1,438,688 | $ 0 | $ 1,438,688 | 12/31/2009 | 2 |
| 3 | Swedesboro Station Upgrade (0798) | $ 1,035,496 | $ 0 | $ 1,035,496 | 12/31/2009 | 3 |
| 4 | 12" Rio Grande - Wildwood PL (0857) | $ 3,520,670 | $ 0 | $ 3,520,670 | 12/31/2009 | 4 |
| 5 | LNG Plant Generator (0796) | $ 2,240,380 | $ 0 | $ 2,240,380 | 1/15/2010 | 5 |
| 6 | 24" Malaga - Vineland Pipeline (0705) | $ 25,735,111 | $ 0 | $ 25,735,111 | 1/31/2010 | 6 |
| 7 | 20" Union Road Rt 50 Upgrade (0797) | $ 726,923 | $ 126,179 | $ 853,103 | 6/30/2010 | 7 |
| 8 | 12" Atco-Stokes Road PL (0859) | $ 5,131,801 | $ 3,343,320 | $ 8,475,121 | 6/30/2010 | 8 |
| 9 | | | | | | 9 |
| 10 | **2009 CIRT Added Projects????** | | | | | 10 |
| 11 | Wildwood Regulator Station (0799) | $ 249,956 | $ 0 | $ 249,956 | 12/31/2009 | 11 |
| 12 | Union Road Station (0783) | $ 1,856,491 | $ 0 | $ 1,856,491 | 1/31/2010 | 12 |
| 13 | | | | | | 13 |
| 14 | **2010 CIRT Approved Projects** | | | | | 14 |
| 15 | CMCH to Burleigh 16 (0989) | $ 1,000,140 | $ 6,160,500 | $ 7,160,640 | 12/31/2010 | 15 |
| 16 | Black Horse Pk - Delilah Rd 24 (1200) | $ 1,106,400 | $ 6,547,013 | $ 7,653,414 | 12/31/2010 | 16 |
| 17 | LNG Vaporizer (1205) | $ 3,094,845 | $ 1,898,838 | $ 4,993,683 | 12/31/2010 | 17 |
| 18 | | | | | | 18 |
| 19 | **2010 CIRT Added Projects????** | | | | | 19 |
| 20 | CMCH to Burliegh Station (1206) | $ (797) | $ 399,156 | $ 398,359 | 12/31/2010 | 20 |
| 21 | | | | | | 21 |
| 22 | **Requested 2010 CIRT Treatment-Pending** | | | | | 22 |
| 23 | Woodbine Regulators | $ 100,563 | $ 99,900 | $ 200,463 | 7/31/2010 | 23 |
| 24 | Malaga Station Heater | $ 0 | $ 500,055 | $ 500,055 | 10/1/2010 | 24 |
| 25 | LNG Pump Skid | $ 2,037,800 | $ 1,712,200 | $ 3,750,000 | 11/1/2010 | 25 |
| 26 | Hardingville Station | $ 0 | $ 500,051 | $ 500,051 | 11/1/2010 | 26 |
| 27 | Deepwater Station | $ 8,294 | $ 242,938 | $ 251,231 | 11/1/2010 | 27 |
| 28 | 8" PP Main - Route 538 | $ 0 | $ 250,303 | $ 250,303 | 12/1/2010 | 28 |
| 29 | | | | | | 29 |
| 30 | **Proposed 2011 CIRT Projects** | | | | | 30 |
| 31 | Beckett Station | $ 0 | $ 200,000 | $ 200,000 | 10/1/2011 | 31 |
| 32 | Harmony Road Scrubber Piping | $ 0 | $ 300,000 | $ 300,000 | 10/1/2011 | 32 |
| 33 | Uprate Ocean Heights Avenue | $ 0 | $ 250,000 | $ 250,000 | 11/1/2011 | 33 |
| 34 | LNG Tank Underground Heater/Sump | $ 0 | $ 675,000 | $ 675,000 | 11/1/2011 | 34 |
| 35 | Patcong Creek Regulators | $ 0 | $ 250,000 | $ 250,000 | 11/1/2011 | 35 |
| 36 | Mickelton Station | $ 0 | $ 190,000 | $ 190,000 | 11/1/2011 | 36 |
| 37 | | | | | | 37 |
| 38 | **Non-CIRT Capital Expenditures** | $ 1,951,646 | $ 966,075 | $ 2,917,721 | 12/31/2010 | 38 |
| 39 | | | | | | 39 |
| 40 | **Total Pro Forma Adjustment** | $ 51,234,407 | $ 24,611,528 | $ 75,845,936 | | 40 |

SOURCE: CIRT Quarterly Report for period ending March 31, 2010 filed April 29, 2010

South Jersey Gas Company
Summary of Major Construction Projects
Proforma Adjustments and Post Test-Year Adjustments

| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
|---|---|---|---|---|---|---|
| | | 9 Months Actual--3 Months Projected | | | | |
| Line No. | | Test Year Projection | Post Test Year Projection | Total Projection | Projected In-Service Date | Line No. |
| 1 | **2009 CIRT Approved Projects** | | | | | 1 |
| 2 | Transmission Valve Upgrades (0795) | $ 1,441,223 | $ 0 | $ 1,441,223 | 12/31/2009 | 2 |
| 3 | Swedesboro Station Upgrade (0798) | $ 542,617 | $ 2,720 | $ 545,337 | 5/31/2010 | 3 |
| 4 | 12" Rio Grande - Wildwood PL (0857) | $ 3,727,289 | $ 0 | $ 3,727,289 | 4/30/2010 | 4 |
| 5 | LNG Plant Generator (0796) | $ 1,973,162 | $ 1,904 | $ 1,975,066 | 12/31/2009 | 5 |
| 6 | 24" Malaga - Vineland Pipeline (0705) | $ 33,566,713 | $ 55,000 | $ 33,621,713 | 4/30/2010 | 6 |
| 7 | 20" Union Road Rt 50 Upgrade (0797) | $ 500,152 | $ 126,179 | $ 626,331 | 12/31/2010 | 7 |
| 8 | 12" Atco-Stokes Road PL (0859) | $ 4,891,130 | $ 3,533,320 | $ 8,424,450 | 11/30/2010 | 8 |
| 9 | | | | | | 9 |
| 10 | **2009 CIRT Added Projects????** | | | | | 10 |
| 11 | Wildwood Regulator Station (0799) | $ 249,217 | $ 0 | $ 249,217 | 4/30/2010 | 11 |
| 12 | Union Road Station (0783) | $ 1,939,407 | $ 61,000 | $ 2,000,407 | 4/30/2010 | 12 |
| 13 | | | | | | 13 |
| 14 | **2010 CIRT Approved Projects** | | | | | 14 |
| 15 | CMCH to Burleigh 16 (0989) | $ 726,071 | $ 6,374,500 | $ 7,100,571 | 12/31/2010 | 15 |
| 16 | Black Horse Pk - Delilah Rd 24 (1200) | $ 0 | $ 0 | $ 0 | | 16 |
| 17 | LNG Vaporizer (1205) | $ 1,151,549 | $ 3,356,838 | $ 4,508,387 | 12/31/2010 | 17 |
| 18 | | | | | | 18 |
| 19 | **2010 CIRT Added Projects????** | | | | | 19 |
| 20 | CMCH to Burliegh Station (1206) | $ 3,067 | $ 397,156 | $ 400,223 | 12/31/2010 | 20 |
| 21 | | | | | | 21 |
| 22 | **Requested 2010 CIRT Treatment-Pending** | | | | | 22 |
| 23 | Woodbine Regulators (1222) | $ 100,563 | $ 99,900 | $ 200,463 | 9/30/2010 | 23 |
| 24 | Malaga Station Heater (1223) | $ 0 | $ 0 | $ 0 | | 24 |
| 25 | LNG Pump Skid (1225) | $ 685,406 | $ 3,079,000 | $ 3,764,406 | 12/31/2010 | 25 |
| 26 | Hardingville Station (1212) | $ 0 | $ 0 | $ 0 | | 26 |
| 27 | Deepwater Station (1227) | $ 4,188 | $ 242,938 | $ 247,125 | 11/30/2010 | 27 |
| 28 | 8" PP Main - Route 538 (1213) | $ 0 | $ 250,303 | $ 250,303 | 11/30/2010 | 28 |
| 29 | | | | | | 29 |
| 30 | **Proposed 2011 CIRT Projects** | | | | | 30 |
| 31 | Beckett Station (1226) | $ 0 | $ 200,000 | $ 200,000 | 10/1/2011 | 31 |
| 32 | Harmony Road Scrubber Piping (1228) | $ 0 | $ 300,000 | $ 300,000 | 10/1/2011 | 32 |
| 33 | Uprate Ocean Heights Avenue (1220) | $ 0 | $ 250,000 | $ 250,000 | 11/1/2011 | 33 |
| 34 | LNG Tank Underground Heater/Sump (1224 | $ 0 | $ 675,000 | $ 675,000 | 11/1/2011 | 34 |
| 35 | Patcong Creek Regulators (1221) | $ 0 | $ 250,000 | $ 250,000 | 11/1/2011 | 35 |
| 36 | Mickelton Station (1230) | $ 0 | $ 190,000 | $ 190,000 | 11/1/2011 | 36 |
| 37 | | | | | | 37 |
| 38 | **Non-CIRT Capital Expenditures** | $ 1,580,843 | $ 842,825 | $ 2,423,667 | 12/31/2010 | 38 |
| 39 | | | | | | 39 |
| 40 | **Total Pro Forma Adjustment** | $ 53,082,597 | $ 20,288,583 | $ 73,371,178 | | 40 |

SOURCE: CIRT Quarterly Report for period ending March 31, 2010 filed April 29, 2010

South Jersey Gas Company
Non-Transmission & Production Facilites Related
Post-Test Year Budget 2010

| (a) Line No. | (b) Description | (c) Amount | (d) Line No. |
|---|---|---|---|
| 1 | **New Business** | | 1 |
| 2 | 1.0 Mains | $ 5,053,671.6 | 2 |
| 3 | 1.1 Services | $ 6,806,306.6 | 3 |
| 4 | 1.2 Meters | $ 405,650.0 | 4 |
| 5 | 1.3 Meter Installations | $ 668,422.3 | 5 |
| 6 | 1.4 Regulators | $ 20,000.0 | 6 |
| 7 | 1.5 Regulator Installations | $ 421,661.5 | 7 |
| 8 | **Total New Business** | $ 13,375,712.0 | 8 |
| 9 | | | 9 |
| 10 | 2.0 Improvement Mains | $ 486,367.1 | 10 |
| 11 | | | 11 |
| 12 | **Replacements** | | 12 |
| 13 | 3.0 Replacement Mains | $ 6,479,414.8 | 13 |
| 14 | 3.1 Replacement Services | $ 7,255,335.4 | 14 |
| 15 | 3.2 Leak Clamping | $ 3,468,391.7 | 15 |
| 16 | 3.3 Replacement Meters Replacement | $ 626,750.0 | 16 |
| 17 | 3.4 Meter Installations | $ 326,526.7 | 17 |
| 18 | 3.5 Replacement Regulators Replacement | $ 2,500.0 | 18 |
| 19 | 3.6 Regulator Installations | $ 132,326.3 | 19 |
| 20 | **Total Replacements** | $ 18,291,244.9 | 20 |
| 21 | | | 21 |
| 22 | 4.0 Land & Buildings | $ 0 | 22 |
| 23 | 5.0 Automotive Equipment | $ 1,527,339.0 | 23 |
| 24 | 6.0 Production Equipment | $ 0 | 24 |
| 25 | 7.0 Transmission Equipment | $ 0 | 25 |
| 26 | 8.0 Distribution Equipment | $ 75,000.0 | 26 |
| 27 | 9.0 Office Furniture & Equipment | $ 1,576,327.2 | 27 |
| 28 | 10.0 Building Improvements | $ 256,300.0 | 28 |
| 29 | 11.0 Cathodic Protection | $ 547,275.1 | 29 |
| 30 | 12.0 Communications Equipment | $ 26,750.0 | 30 |
| 31 | 13.0 Information Technology | $ 57,334.4 | 31 |
| 32 | **TOTAL SJG Capex** | $ 36,219,649.7 | 32 |
| 33 | | | 33 |
| 34 | Retirements | | 34 |
| 35 | Blankets | $ 2,687,437.9 | 35 |
| 36 | Individuals | $ 171,000.0 | 36 |
| 37 | Total Retirements | $ 2,858,437.9 | 37 |

SOURCE: RFF-2 9 & 3

**South Jersey Gas Company**
**Infrastructure Filing**
**Historical Budget v Actual Capital Expenditures**

| (a) Line No. | (b) Description | (c) 2004 Budget | (d) 2004 Actual | (e) 2005 Budget | (f) 2005 Actual | (g) 2006 Budget | (h) 2006 Actual | (i) 2007 Budget | (j) 2007 Actual | (k) 2008 Budget | (l) 2008 Actual | (m) Line No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | New Business | $ 25,309 | $ 31,295 | $ 24,407 | $ 31,711 | $ 22,062 | $ 29,708 | $ 20,713 | $ 23,522 | $ 21,741 | $ 24,259 | 1 |
| 2 | Improvement Mains/ROW | $ 18,953 | $ 15,437 | $ 15,850 | $ 22,316 | $ 1,325 | $ 2,780 | $ 2,509 | $ 2,198 | $ 1,120 | $ 2,240 | 2 |
| 3 | Replacements | $ 13,501 | $ 14,349 | $ 12,305 | $ 12,198 | $ 13,531 | $ 17,454 | $ 14,372 | $ 17,325 | $ 20,272 | $ 20,529 | 3 |
| 4 | Cathodic Protection | $ 1,400 | $ 1,097 | $ 1,150 | $ 1,127 | $ 1,198 | $ 1,371 | $ 1,717 | $ 1,598 | $ 1,668 | $ 1,391 | 4 |
| 5 | Automotive Equipment | $ 800 | $ 900 | $ 1,091 | $ 1,121 | $ 1,000 | $ 946 | $ 956 | $ 1,001 | $ 997 | $ 1,034 | 5 |
| 6 | Prod/T&D Equipment | $ 3,196 | $ 3,043 | $ 2,470 | $ 4,831 | $ 1,305 | $ 1,613 | $ 1,517 | $ 1,515 | $ 1,781 | $ 1,156 | 6 |
| 7 | Office Equipment | $ 542 | $ 1,418 | $ 1,056 | $ 1,171 | $ 1,325 | $ 1,844 | $ 1,620 | $ 1,068 | $ 3,635 | $ 4,042 | 7 |
| 8 | Building Improvements | $ 626 | $ 1,116 | $ 1,431 | $ 1,896 | $ 1,299 | $ 567 | $ 2,794 | $ 1,460 | $ 1,472 | $ 2,037 | 8 |
| 9 | Total | $ 64,327 | $ 68,655 | $ 59,760 | $ 76,371 | $ 43,045 | $ 56,283 | $ 46,198 | $ 49,687 | $ 52,686 | $ 56,688 | 9 |

# APPENDIX

# MICHAEL J. MCFADDEN

## AREAS OF QUALIFICATION

Rates, regulatory affairs, strategic planning, gas and electric utility operations, corporate finance, financial analysis, asset valuation, fuel supply planning and procurement, accounting, and budgeting.

## EMPLOYMENT HISTORY

- President, McFadden Consulting Group, Inc., 1995-present
- Board of Directors, Chairman Audit Committee & Treasurer, Energy Outreach Colorado, formerly the Colorado Energy Assistance Foundation, 2003-present
- Chairman, Colorado Low-Income Energy Assistance Commission, appointed as member by Governor Owens 2005-2008. Commissioner 2002-2008.
- University of Phoenix, Colorado Division, Faculty Member, 1982-2005, Finance Area Chair, 1992-1993, Accounting Area Chair, 2000-2004
- Board of Advisors, Full Power Corporation, Los Angeles, CA, 1998-2000
- Senior Advisor, Hagler Bailly Consulting, Inc., Boulder, CO, 1995-2000
- Metropolitan State College, Denver, CO, Adjunct Faculty Member, 1989-1995
- Principal, Hagler Bailly Consulting, Inc., Boulder, CO, 1993-1995
- Vice President, Treasurer, Secretary and Member of the Board of Directors, WestGas Gathering, Inc., WestGas InterState, Inc., WestGas TransColorado, Inc., 1989-1993
- Manager, Financial Services and Administration, Assistant Treasurer and Assistant Secretary, Western Gas Supply Company, 1989-1993
- Staff Assistant to Senior Vice President, Finance and Chief Financial Officer, Public Service Company of Colorado, 1986-1989
- Regis University, Adjunct Faculty Member, 1981-1982
- Director, Rate Regulatory Services Department, Public Service Company of Colorado, 1974-1986

## EDUCATION

- University of Denver, MBA, Business Administration, 1973
- Regis University, BS, Business Administration, 1972

## PROFESSIONAL EXPERIENCE

**Michael J. McFadden** is a rate, regulatory affairs, finance, strategic planning, and utility operations expert with 35 years experience in the electric utility and natural gas industries. He has appeared as an expert witness and provided testimony in numerous hearing before the Federal Energy Regulatory Commission (FERC), regulatory Commissions in Arkansas, Colorado, Georgia, Indiana, Kansas, New Jersey, Ohio, Texas, Wyoming, Utah, and British Columbia, and the United States District Court. He has also filed testimony in Montana, South Dakata, and Ontario. Mr. McFadden headed a combination gas, electric, and steam

heat utility company's rate regulatory services department where he was responsible for various submittals to regulatory agencies that had jurisdiction over the company's rates, facilities, and services. In addition, he previously served as chief financial officer for a natural transmission, gas gathering, and processing company where he was responsible for rate and regulatory affairs, financial and managerial accounting, financial policy and planning, business opportunity and financial analysis, strategic planning, and information and computer administration. He has dealt with such issues as Order 636 restructuring strategies, customer choice programs, development of gas transportation tariffs, practices and procedures, development and implementation of gas purchasing strategies, development of avoided costs, mains extensions policies, and producer take or pay issues. On the electric side of the business, he has participated in numerous rate cases and regulatory proceedings and has been involved in such issues as the utilization of purchased power, economic dispatching of generating stations, coal inventory measurement and management, generating station performance measures, incentive cost recovery mechanisms for a nuclear generating plant, generating plant maintenance schedules and management, unit coal train economics and management, and the development and administration of electric cost adjustment mechanisms. Mr. McFadden was also on the advisory board of Full Power Corporation, an electric marketing company serving the California markets. He previously served as the accounting area chair and the finance area chair for the University of Phoenix, Colorado Division. He is a past Chair and commissioner of the Colorado Commission on Low-Income Energy Assistance. Mr. McFadden is currently a member of the Board of Directors, Chairman of the Audit Committee, and Treasurer for Energy Outreach Colorado, a non-profit organization helping low-income energy users. He has a BS in business administration from Regis University and an MBA from the University of Denver.

## SPECIAL TRAINING

- Cornell University, Johnson Graduate School of Management. Merger and Acquisitions Forum. 1989.
- Irving Trust Company, New York City. Financial Seminar. 1985. Security analysis, types of securities, method of offering securities, project financing, capital structure and financial policy and others.
- University of Idaho, Moscow, Idaho. Executive Development. 1982. Financing through capital markets, strategic planning and management, managing human resources, financial management and others.

## PRESENTATIONS AND TESTIMONY

Testimony and cross examination on Public Service Company of Colorado and Tri-State Transmission and Generation Association, Inc.'s request for a certificate of public convenience and necessity authorizing it to construct the San Luis Valley to Calumet to Comanche Transmission Project before the Public Utilities Commission of Colorado on

behalf of Blanca Ranch Holdings, LLC and Trinchera Ranch Holdings, LLC. February 2010.

Testimony in Public Service Electric & Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Rate Counsel. Newark, New Jersey. November 2009.

Testimony on Black Hills Power, Inc.'s cost of service and rate design in its Application for an Increase in Electric Rates before the Public Service Commission of Wyoming on behalf of Black Hills Power, Inc. Cheyenne, Wyoming. October 2009.

Testimony on Black Hills Power, Inc.'s cost of service and rate design in its Increase in Electric Rates before the Public Utilities Commission of South Dakota on behalf of Black Hills Power, Inc. Pierre, South Dakota. September 2009.

"Determining Cost of Service for Gas Distribution Companies" New Mexico State University Center for Public Utilities. Basic Utilities Course. September 2009.

Testimony in Elizabethtown Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Rate Counsel. Newark, New Jersey. August 2009.

Testimony on Atmos Energy Corporation's billing determinants, including number of customers and commodity volumes, revenue calculation, rate structure and cost justification of proposed rates in its rate filing for the Mid-Tex division before the Texas Railroad Commission on behalf of the City of Dallas, Texas. Austin, Texas. July 2009.

Expert witness report on Practices, Procedures, and Rates Pertaining to Gas Gathering and Transportation Services on behalf of Riviera Drilling & Exploration Company in Sherman Antitrust litigation filed in the United States District Court for the District of Colorado. June 2009

"Determining Cost of Service for Gas Distribution Companies" New Mexico State University Center for Public Utilities. Basic Utilities Course. May 2009.

"The Difference between Pipelines and Gas Distributors: What You Need to Know." New Mexico State University Center for Public Utilities. Basic Utilities Course. October 2008.

Testimony in New Jersey Natural Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Rate Counsel. Newark, New Jersey. June 2008.

Testimony and cross-examination on the cost impact of Tri-State Transmission and Generation Association, Inc. proposed 115 KV transmission line before the Public Utilities Commission of Colorado. April 2008.

Testimony and cross examination on Columbia Gas of Ohio's gas supply planning and procurement practices before the Ohio Public Utilities Commission. January 2007.

Testimony and cross examination on cost allocation and rate design issues before the Texas Railroad Commission in Atmos Energy Corporation's request to increase rates for its Mid-Tex division in Texas on behalf of the City of Dallas, Texas. Austin, Texas. November 2006.

Testimony in Public Service Electric and Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Ratepayer Advocate. Newark, New Jersey. July 2006.

Testimony and cross examination on electric and gas department revenue requirement, cost allocation, and rate design analyses on behalf of Cheyenne Light, Fuel and Power Company before the Wyoming Public Service Commission. Cheyenne, Wyoming. October 2005.

Testimony and cross examination on decoupling, revenue forecasting and rate design issues before the Georgia Public Service Commission in Atmos Energy Corporation's request to increase rates in Georgia. Atlanta, Georgia. October 2005.

Testimony on revenue forecasting, cost of service, and rate design issues before the Georgia Public Service Commission in Atlanta Gas Light Company's rate application. Atlanta, Georgia. March 2005.

Presentation to the Tennessee Valley Public Power Association, which is comprised of 158 municipal and cooperative distribution system served by the Tennessee Valley Authority on TVA's Cost of Service Methodologies. Franklin, Tennessee. November 2004.

Presentation to the Tennessee Valley Authority Board of Directors on TVA's Cost of Service Methodologies. Knoxville, Tennessee. August, 2004.

Testimony and cross examination before the Arkansas Public Service Commission on Arkansas Oklahoma Gas Corporation's gas supply planning and procurement activities. Little Rock, Arkansas. May 2004.

Testimony and cross examination on cost of service and rate design issues before the Georgia Public Service Commission in Atlanta Gas Light Company's earnings review proceeding. Atlanta, Georgia. April 2002.

Testimony and cross examination before the Public Utilities Commission of Colorado in KN Wattenberg Transmission LLC application for a CPCN to operate facilities it constructed to serve two industrial customers within the city limits of Fort Morgan, Colorado. June 2001.

Testimony and cross examination on behalf of the Colorado Office of Consumer Counsel before the Public Utilities Commission of Colorado in its investigation into price stabilization mechanisms of regulated gas utilities. June 2001.

Testimony and cross examination before the Public Utilities Commission of Colorado in Totem Gas Storage Company, LLC's Application for a Certificate of Public Convenience and Necessity to Construct and Operate a Gas Storage Using Competitive Market-Based Rates. Denver, Colorado. June 2000.

Testimony before the Utah Public Service Commission in Questar Gas Company's Application for an Increase in Rates and Charges in Docket No. 99-057-20. Salt Lake City, Utah. June 2000.

Testimony before the Kansas Corporation Commission on Kansas Gas Service Company's Application for Approval to Restructure Gas Supply Contracts. Topeka, Kansas. March 2000.

Presentation to City Council on Proposed Electric and Gas Department Rate Changes. City of Fort Morgan, Colorado City Council Meeting. Fort Morgan, Colorado. January 2000.

Testimony and cross examination on Questar Gas Company's Application to Recover Costs Associated with Constructing a $CO_2$ Extraction Plant. Salt Lake City, Utah. June 1999.

Presentation to City Council on Proposed Electric and Gas Department Rate Changes. City of Fort Morgan, Colorado City Council Meeting. Fort Morgan, Colorado. October 1998.

"Potholes on the Road to Unbundling" presented to the 57th Annual Western Conference of Public Service Commissioners. Sunriver, Oregon. June 1998.

Testimony and cross examination on Incorporating Riders in Performance-Based Rate Mechanisms for Atlanta Gas Light Company. Atlanta, Georgia. March 1998.

Testimony and cross examination on the Management and Financial Review of Atlanta Gas Light Company's Manufactured Gas Plant Site Environmental Clean-Up Efforts. Atlanta, Georgia. March 1998.

Keynote address on Electric Utility Restructuring at the University of Kansas' 21st Annual Economic Outlook Conference. Lawrence, Kansas. October 1997.

"An Analysis of the Impact of Retail Wheeling on the State of Kansas" presented to the Kansas Legislative Task Force on Retail Wheeling. Topeka, Kansas. August 1997.

A presentation to the Rocky Mountain Natural Gas Strategy Conference and Marketing Fair on restructuring of natural gas and electric utility industries. Denver, Colorado. August 1997.

Testimony on the Public Utilities Commission of Colorado's proposed rules on gas cost adjustments. Denver, Colorado. February 1997.

"Restructuring of the Natural Gas Industry" presented to the Governor's Energy Assistance Reform Task Force. Denver, Colorado. February 1997.

"The Feasibility of Allowing Nondiscriminatory Access to Retail Natural Gas Distribution Services in Colorado" presented to the Colorado Legislative Council. Denver, Colorado. December 1996.

Presentation to Rocky Mountain Natural Gas Association on the issues associated with providing transportation service to residential and small commercial customers. Denver, Colorado. October 1996.

Testimony and cross-examination on the Public Utilities Commission of Colorado's proposed rules on cost allocation between regulated and non-regulated affiliates. Denver, Colorado. July 1996.

"Planning in a Competitive Environment." Power Engineering Society, Institute of Electrical and Electronic Engineers Summer Conference. Denver, Colorado. July 1996.

Presentation to City Council on Proposed Electric Department Rate Changes. City of Fort Morgan, Colorado City Council Meeting. Fort Morgan, Colorado. May 1996.

Testimony and cross examination on East Ohio Gas Company gas planning and procurement practices before the Ohio Public Utilities Commission. December 1995.

"Economic Impact of Fuel Switching at Selected Denver Area Power Plants," presented on behalf of Colorado Oil and Gas Association before the Colorado Air Quality Council and the Regional Air Quality Council. Denver, Colorado. November 1995.

Presentation to City Council on Proposed Gas Department Rate Changes. City of Fort Morgan, Colorado City Council Meeting. Fort Morgan, Colorado. November 1995.

Testimony and cross examination on BC Gas Utility, Ltd. extension policy before the British Columbia Utilities Commission. Vancouver, BC. June 1995.

Testimony and cross examination on BC Gas Utility, Ltd. avoided costs before the British Columbia Utilities Commission. Vancouver, BC. June 1995.

"Development of Long Run Avoided Costs for a Gas Distributor." Gas Research Institute Avoided Cost Conference. Milwaukee, Wisconsin. June 1994.

## PROFESSIONAL AFFILIATIONS

- Board of Directors, Chairman of Audit Committee & Treasurer, Energy Outreach Colorado
- Commissioner, Colorado Commission on Low Income Energy Assistance
- Rocky Mountain Natural Gas Association
- Colorado Association of Commerce and Industry, 50 For Colorado
- American Gas Association, former member
- Interstate Natural Gas Association of America, former member of Rate and Policy Committee
- Regis University Alumni Association
- Former Member, Regis University Business and Industry Group
- University of Denver Alumni Association
- Listed in *Who's Who in America, Who's Who in Executives and Professionals, The National Registry of Who's Who, and Who's Who International*

# A. E. MIDDENTS

## AREAS OF QUALIFICATION

Gas operations, gas industry restructuring, supply planning and procurement, regulatory matters, engineering, marketing, transportation, business development, and strategic planning.

## EMPLOYMENT HISTORY

- Senior Consultant, McFadden Consulting Group, Inc., Denver, CO, 1996-present
- Independent Natural Gas Industry Consultant, Greenwood Village, CO, 1996-present
- Vice President, Technical Services, Northern Pipeline Construction Company, 1995-1996
- Independent Consultant, 1993-1995
- Senior Vice President, Public Service Company of Colorado, 1988-1993
- Vice President Gas Operations, Public Service Company of Colorado, 1986-1988
- Manager, Engineer and Construction, Western Gas Supply Company, 1983-1986
- Engineering Manager, Western Gas Supply Company, 1981-1983
- Assistant to the President, Fuelco, 1981-1983
- Assistant to the Vice President Gas Operations, Public Service Company of Colorado, 1980-1981
- Gas Distribution Operations Manager, Public Service Company of Colorado, 1976-1980
- Superintendent of Gas Utilization, Public Service Company of Colorado, 1976
- Superintendent, Division Gas Distribution, Public Service Company of Colorado, 1972-1976
- Superintendent, Planning and Analysis, Public Service Company of Colorado, 1970-1972
- Supervisor, System Planning, Public Service Company of Colorado, 1966-1970
- Various positions, Public Service Company of Colorado, 1960-1966

## EDUCATION

- Iowa State University, BS, Industrial Engineering
- University of Colorado, Business Courses
- University of Colorado, Executive Education Program for the Gas Industry
- University of Michigan, Public Utility Executive Program

## PROFESSIONAL EXPERIENCE

A. E. "Pete" Middents has 42 years of broad experience in all segments of the natural gas industry. This includes the entire spectrum of technical and economic issues associated with the utilization of natural gas, including engineering and construction, gas supply, gas contracts, transmission and distribution, storage, compression, processing, economic feasibility, regulatory issues, long-range planning, and operations issues.

Mr. Middents was previously employed by Northern Pipeline Construction Company as Vice President, Technical Services. NPL is headquartered in Phoenix, Arizona and was acquired by Southwest Gas Corporation, headquartered in Las Vegas, Nevada in 1996. He was responsible for the overall management of Northern's Technical Services Division as well as marketing and new product development.

Mr. Middents was an independent consultant specializing in the natural gas industry from 1993 to 1995. His consulting assignments have primarily been in the areas of new business development, gas industry restructuring, economic feasibility and evaluation, overall planning and engineering design (pipeline processing and distribution), and natural gas marketing. Recent clients include:

- Utah Committee of Consumer Services
- Questar Pipeline Corporation, Salt Lake City, UT
- New Jersey Rate Counsel
- Arkansas Public Service Commission
- Northern Pipeline Construction Company, Phoenix, AZ
- K & M Engineering and Consulting Corp., Washington, D.C.
- Premier Enterprises, Inc., Englewood, CO
- U.S. Agency for International Development (U.S. State Department), Washington, D.C. and Montevideo, Uruguay
- Benjamin Schlesinger and Associates, Bethesda, Maryland
- Minister of Industry, Energy and Minerals, Government of Uruguay, Montevideo, Uruguay

In 1993 he exercised an early retirement option from Public Service Company of Colorado. As Senior Vice President of Gas Operations for Public Service Company (a combination gas and electric utility serving the majority of the state of Colorado), Mr. Middents had full executive responsibility for the Company's natural gas operations. He was also President and a Director of Western Gas Supply Company (WestGas, a gas gathering, processing, and transmission subsidiary company), President and a Director of Fuel Resources Development Company (Fuelco, a gas and oil exploration and production subsidiary company), Chairman and a Director of Natural Fuels Corporation (a full service natural gas vehicle subsidiary company), and Vice President and a Director of Cheyenne Light, Fuel and Power Company (a combination gas and electric utility serving a portion of Wyoming). Mr. Middents also served as chairman and director of the following companies: WestGas Interstate Gas Company, WestGas Gathering, Inc. and WestGas TransColorado, Inc.

Mr. Middents joined the Public Service Company in 1960 as a gas engineer. He held numerous management positions with WestGas and Public Service Company prior to his election as Vice President in 1986. He was promoted to Senior Vice President in 1988.

## EXPERT WITNESS AND TESTIMONY

Mr. Middents has appeared as an expert witness and provided testimony in hearings before the Federal Energy Regulatory Commission (FERC), the United States District Courts in Colorado, Iowa, South Dakota, and Washington, and state regulatory Commissions in Colorado, New Jersey and Utah. During the past fifteen years, Mr. Middents has:

- Filed testimonies before the State of New Jersey Board of Public Utilities in 2009, regarding Public Service Electric and Gas Company's application for Approval of an Increase in Electric and Gas Rates and for Changes in the Tariff for Electric and Gas Service. (State of New Jersey Board of Public Utilities; BPU Docket No. GR09050422, OAL DKT. NO. PUCRL 07559-2009N). First testimony related to Gas System Reliability and second testimony related to Capital Economic Stimulus Infrastructure Investment Program.
- Filed an expert report and made depositions in the civil case of Riviera Drilling & Exploration Company -vs- Gunnison Energy Corporation, SG Interests I, Ltd., and SG Interests VII, Ltd. in 2009 (United States district Court for the District of Colorado; Civil Action No. 08-cv-02486-REB-CBS).
- Filed testimony before the State of New Jersey Board of Public Utilities in 2009, regarding Pivotal Utility Holdings, Inc. D/B/A Elizabethtown Gas' application for Approval of Increased Base Tariff Rates and Charges for Gas Service and Other Tariff Revisions. (State of New Jersey Board of Public Utilities; BPU Docket No. GR09030195).
- Filed testimony and testified before the State of New Jersey Board of Public Utilities in 2008, regarding New Jersey Natural Gas Company's application for Approval of an Increase in Gas Rates, Depreciation Rates for Gas Property, and for Changes in the Tariff for Gas Service. (State of New Jersey Board of Public Utilities; BPU Docket No. GR07110889).
- Filed testimony and testified before the State of New Jersey Board of Public Utilities in 2006, regarding Public Service Electric and Gas Company's application for Approval of an Increase in Gas Rates, Depreciation Rates for Gas Property, and for Changes in the Tariff for Gas Service. (State of New Jersey Board of Public Utilities; BPU Docket No. GR05100845).
- Filed an expert report and made depositions in the civil case of Northwestern Public Service, a Division of Northwestern Corporation -vs- Union Carbide Corporation in 2002 (United States District Court District of South Dakota, Southern Division; Civil No. 99-4182).
- Filed testimony before the Public Utilities Commission of Utah in 1999, regarding Questar Gas Company's application to recover costs associated with constructing a CO2 extraction plant (Public Service Commission of Utah; Docket No. 98-057-12).
- Filed an expert report and made depositions in the civil case of MidAmerica Energy Company -vs- Union Carbide Corporation in 1998 (United States District Court District for Black Hawk County, Iowa; Case No. LACV076851).
- Filed an expert report and testimony in the civil case of March Point Cogeneration Company -vs- Puget Sound Power & Light Company in 1997 (United States District Court District, State of Washington; specific case number unknown).

Prior to 1997, Mr. Middents' expert witness and testimony experience included the following (specific dates and case numbers are not available):

- Numerous testimonies on gas transmission tariff issues on behalf of Public Service Company before the Public Utilities Commission of Colorado from 1986 thru 1993.
- Numerous testimonies on gas department tariff issues on behalf of Western Gas Supply Company before the Public Utilities Commission of Colorado from 1986 thru 1993.
- Numerous intervening testimonies before the Federal Energy Regulatory Commission regarding gas transmission tariff issues filed by Colorado Interstate Gas Company from 1985 thru 1993.

## PROFESSIONAL AFFILIATIONS

- Past Chairman of the Board, Midwest Gas Association
- American Gas Association
- Board of Directors, Interstate Natural Gas Association of America
- Industrial Technical Advisory Committee, Gas Research Institute
- Board of Directors, Natural Gas Vehicle Coalition
- Past President and Director, Rocky Mountain Gas Association

# JOHN N. PETERS

## AREAS OF QUALIFICATION

Gas operations, supply planning and procurement, engineering design, construction management, bid proposal & contract preparation, permit & ROW acquisition, material specification & procurement, training, and operations support.

## EDUCATION

- University of Colorado, BS, Mechanical Engineering
- University of Colorado, Business Courses
- University of Colorado, Executive Education Program for the Gas Industry
- University of Idaho, Public Utilities Executive Course

## PROFESSIONAL EXPERIENCE

**John N. Peters** has 45 years experience in the natural gas utility industry. He has extensive experience in the engineering, design, construction, and operation of gathering, transmission, and distribution systems, including compressor stations and processing plants. Mr. Peters was division manager of gas operations for a natural gas gathering and transmission company, responsible for 180 employees and an annual O&M budget of $15 million and capital budgets up to $50 million. In addition, Mr. Peters developed a Natural Gas Vehicle (NGV) program and took it through a very critical and successful research, testing, development, and implementation phase, resulting in the conversion of more than 600 fleet vehicles to natural gas and the genesis of a fueling station infrastructure throughout Colorado. In recent years, Mr. Peters has been working as a consultant to the natural gas industry and has been involved in various projects in Arizona, Alaska, Nevada, Maryland, and Wyoming.

## EMPLOYMENT HISTORY

**Consultant to the Natural Gas Industry** 9/94 to present

Independent consultant providing technical support on various projects in Alaska, Arizona, Maryland, Nevada, and Wyoming. Responsibilities include feasibility studies, engineering design, bid proposal & contract preparation, permit & ROW acquisition, material specification & procurement, construction management, training and operations support.

**Manager, Operations Division - WestGas/Public Service Company of Colorado**

3/83 to 9/94

Responsible for the operations and maintenance of natural gas gathering, transmission, processing, and storage facilities including gas plants, $CO_2$ processing plants, meter stations, and more than 2100 miles of pipelines. Also responsible for an operations support staff involved with hazardous material coordination, operations training, and the gas

dispatching function performed at the Gas Load Control Center. Key accomplishments included:

- Served as member of the WestGas senior management team helping develop business plans, marketing plans, supply strategies, and financial forecasts
- Responsible for the operations of six geographic divisions within Colorado with a work force of approximately 180 employees
- Responsible for a $12 - $15 million annual O&M expense and capital budget
- Initiated cost management programs that more than doubled productivity in less than 9 years, saving $8-10 million
- Developed a Products and Services Program that generated revenues approaching $3 million
- Involved in labor union grievance hearings, arbitrations, and negotiations
- Developed an extremely proactive safety team whose programs resulted in significant reduction in the number of accidents
- Responsible for the corporate natural gas vehicle program during a very critical and successful research, development, and implementation phase -- involved with live TV news conferences with the mayor and governor

**Administrative Assistance to the President - WestGas** 12/81 to 3/83

This was a temporary assignment designed to enhance executive management skills. Provided research and support as follows:

- Participated in the design and implementation of new employee evaluation and compensation system
- Assisted with FERC rate hearings in Washington, D.C.
- Assisted attorneys with franchise disputes, law suit investigations, and settlements
- Provided support to the gas exploration subsidiary
- Filled in for gas managers during lengthy vacations and illnesses

**Engineering Manager - Western Slope Gas Co.** 1/78 to 12/81

Responsible for the budgeting, engineering, and construction of all WSG pipelines, plants, and treating facilities. Key accomplishments included:

- Structured a new engineering group to streamline and standardize engineering and design
- Set up policies and procedures to be responsive to changes in gas codes and regulations
- Managed and oversaw the design and installation of a major underground gas storage facility
- Testified as an expert witness in court and at PUC hearings

**Operations Superintendent - Western Slope Gas Company** 1/73 to 1/78

Responsible for the operation and maintenance of gathering and transmission facilities in the Durango division. Oversaw the operation of facilities on the Southern Ute Indian Reservation.

**Senior Engineer - Western Slope Gas Company** 12/70 to 1/73

Responsible for O&M engineering and troubleshooting on Western division facilities, equipment, controls, and telemetering. Also constructed meter stations, plant modifications, well connects, and several hundred miles of pipeline.

**Distribution Engineer - Public Service Company of Colorado** 6/69 to 12/70

Responsible for the design of distribution facilities in the Denver metro area. Constructed 20 miles of 20 & 24-inch intermediate pressure pipeline. Was on call to respond to gas emergencies, explosions, and outages.

**Engineer - Public Service Company of Colorado** 5/68 to 6/69

As Engineer-in-Training, worked in eight different gas departments within Public Service Company. Designed a low cost, one-piece, house meter bracket that is still in use today. Also worked with plastic pipe and plastic/steel transition fittings. Designed a mobile unit for flame ionization gas leak detection.

**Senior Technician - Public Service Company of Colorado** 2/65 to 5/68

Responsible for setting up a gas analysis lab in the Gas Utilization and Standards Department. Conducted gas quality tests using instruments such as the gas chromatograph, supercompressibility apparatus and the specific gravity balance. Also given special projects such as designing an impact tester for plastic pipe. Tested natural gas appliances and gas regulators/meters for performance at high altitude.

**Technician - Public Service Company of Colorado** 3/62 to 2/65

Responsible for the industrial gas customers in the Denver metro area, installing automatic chart changers, testing meters, and conducting gas quality tests.

## PRESENTATIONS AND TESTIMONY

In the last five years, Mr. Peters has testified before various courts and county planning commissions, as follows:

- May 2010 – Joseph Spano v. Public Service Company of Company - Immediate Possession Hearing before the Larimer County (Colorado) regarding a 16-inch high pressure pipeline across landowner's property.
- December 2009 - Testimony in Public Service Electric & Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Rate Counsel.
- September 2009 - Testimony in Elizabethtown Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Rate Counsel.

- June 2009 – Testimony filed in US District Court on behalf of Riviera Drilling & Exploration litigation against Gunnison Energy Company and SG Interests I, Ltd. regarding antitrust and common carrier violations in the Ragged Mountain Gathering System, Ragged Mountain Pipeline and the Bull Mountain Pipeline.
- June 2008 – Testimony in New Jersey Natural Gas Company's rate case proceeding on the management of its gas distribution and transportation infrastructure on behalf of the New Jersey Division of the Rate Counsel. Newark, New Jersey
- Sept. 2007 – Ted Koutsoubos v. Kinder Morgan before the Pitkin County (Colorado) Planning Commission regarding the final route selection and easement of the Snowmass pipeline across landowner's property.
- April 2007 – Six Landowners v. Williams Overland Pass Pipeline - Immediate Possession Hearing before Yuma County.
- May 2006 – Protect Marshall Group v. Xcel Energy (Public Service Co. of Colorado) before Boulder County Planning Commission regarding the proposed site of the Foothills Compressor Station.
- March 2006 – Ted Koutsoubos v. Kinder Morgan - Immediate Possession Hearing before the Pitkin County (Colorado) regarding Snowmass pipeline across landowner's property.