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October 23, 2017

BY E-PORTAL

Ms. Carlotta Stauffer
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: DOCKET NO. 20170179-GU - Petition for rate increase and approval of depreciation study by Florida City Gas.

Dear Ms. Stauffer:

Attached, for electronic filing, please find the testimony of Florida City Gas's witness Ron Muller. (Document 10 of 14)

Sincerely,

Beth Keating
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ATTACHMENTS

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Office of Public Counsel (Kelly)

Before the Florida Public Service Commission

Docket No. 20170179-GU: Petition for rate increase by Florida City Gas.

Prepared Direct Testimony of Ronald Muller

Date of Filing: October 23, 2017

Q. Please state your name and business address.

A. My name is Ronald Muller. My business address is 4180 South Highway 1, Rockledge, Florida 32955.

Q. By whom are you employed and what is your position?

A. I am the Manager of Construction Operations for Florida City Gas ("FCG" or "Company").

Q. What are your responsibilities as Manager of Construction Operations at FCG?

A. I manage the Construction Operations for FCG which includes the engineering and construction of Transmission and Distribution facilities. I oversee the development and implementation of initiatives, goals, and performance indicators. My responsibilities include promoting safety as our number one priority, managing FCG's construction budgets, and ensuring that all of FCG's projects are engineered to provide the most value and service reliability to our customers. In sum, my job is to ensure that the construction of FCG facilities is completed safely, efficiently, on budget, and consistent with applicable construction standards and regulatory requirements so that FCG's customers continue to receive the

safe, high quality service that they deserve and have come to expect from FCG.

Q. Please describe your educational background and professional experience.

A. I joined FCG in February 1994. I have held a variety of positions within FCG including Drafter, Project Engineer, Engineering/Construction Manager and Manager of Construction Operations. I have a Bachelor's of Science degree in Mechanical Engineering from New York Institute of Technology. I am a registered Professional Engineer in the state of Florida and an AWS Certified Weld Inspector.

Q. Are you sponsoring any minimum filing requirements ("MFRs") in this case?

A. Yes, I am sponsoring MFR I-4.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide an overview of the capital investments FCG has undertaken between 2005 and 2017 to ensure that it continues to provide safe and reliable natural gas service to its customers. Specifically, I will discuss the capital investments FCG has made to its pipeline system related to safety and expansion of service, its service center operations, fleet and technology. I will also discuss capital investments we intend to make during the test year 2018. In addition, I will explain our capital expenditure budget process.

Q. Do any other FCG witnesses testify to operational matters and capital expenditure projects?

A. Yes, witnesses Bermudez, Morley, and Igwilo, as well as witnesses Becker and Wassell, who address FCG's proposed liquefied natural gas ("LNG") facility. Witness Bermudez provides an overview of FCG's capital investments, as well as an analysis of the policies and rationale behind those investments. Witness Morley addresses FCG's inclusion of our overall capital expenditures in the calculation of FCG's requested revenue requirement, while witness Igwilo addresses, in greater detail, how certain capital expenditures have been undertaken to improve customer service and how those projects have produced tangible benefits for FCG's customers

Q. What are your primary conclusions with respect to the testimony you offer?

A. Overall, my conclusions are as follows:

1. FCG continues to be a very efficiently operated natural gas utility. However, in the years since our last rate case, our overall cost to serve has increased due in significant part to capital investments designed to address aging infrastructure and changes in regulatory requirements.

2. FCG has taken the appropriate steps to manage costs over the years while maintaining a high level of customer service, and its budgeting and procurement processes associated with gas plant capital expenditures are reasonable.

3. The capital additions to plant included in FCG's 2018 test year rate base, as discussed in my testimony and in that of witness Igwilo are, or will be by the end of the 2018 test year, constructed or acquired and placed into service prior to the end of the 2018 test year at a cost that is reasonable. All of these capital improvements have been and are being made with the customer in mind, because at FCG, the customer is at the center of everything we do. Witness Becker will discuss the need for FCG's proposed LNG plant and witness Wassell will address the construction of and cost for the plant, which is expected to be completed in January 2019.

I. CAPITAL INVESTMENTS AND BUDGET PROCESS

Q. What capital investments has FCG made since its last rate case filed in 2003, Docket No. 20030569-GU ("2003 Rate Case")?

A. To meet FCG's obligation to provide safe and reliable gas service to all customers, FCG must regularly invest in its distribution and transmission system, as well as other general plant, which refers to all other aspects of FCG's physical facilities in service for natural gas service to customers, in order to enhance service quality for our customers. Examples include: Renewal of mains and services, pressure improvements, Service Center improvements, fleet and information technology upgrades. See Table 1, below, for a summary:

Table 1

Capital Summary

Project Category	$
New Business	$ 61,400,000
Area Expansion Program	$ 13,600,000
Miami-Dade CNG	$ 2,300,000
FCG CNG	$ 3,700,000
Fleet	$ 4,200,000
Facilities	$ 10,800,000
Gas Operations	$ 800,000
Cyber Security	$ 200,000
ERTS	$ 11,200,000
Information Technology	$ 7,300,000
Galvanized Replacement Program	$ 19,400,000
Mandatory Service Retirements	$ 5,500,000
Periodic Testing	$ 7,400,000
Public Improvement Relocations	$ 15,500,000
TIMP	$ 7,000,000
Pressure Improvements	$ 9,700,000
Renewals	$ 10,600,000
Cathodic Protection	$ 700,000
SAFE	$ 19,000,000

A. Budget Process.

Q. How does FCG develop and budget for capital expenditures?

A. FCG evaluates capital projects annually and integrates them into a five-year capital expenditure forecast ("Five-Year Forecast"). The Five-Year Forecast reflects the Company's planning of future capital projects, initiatives, and associated expenditures. Each fall, FCG develops a capital budget ("Annual Capital Budget") for projects and initiatives associated with the upcoming calendar year. The Annual Capital Budget and Five-Year Forecast are developed from information submitted by

various departments within the organization, including business development, engineering, field operations, distribution and transmission integrity, fleet and facilities, and information technology. The Annual Capital Budget and the Five-Year Forecast, including all annual updates to that forecast, are subject to the review and approval of senior management. The current year and test year capital expenditures in this filing reflect information contained in the 2017 Annual Capital Budget and the 2017-2021 Five-Year Forecast.

Q. How is the information provided by the various departments used to develop the Annual Capital Budget and Five-Year Forecast?

A. The Business Development department projects new business growth in the residential, commercial, and industrial markets. This data is used to estimate expenditures necessary to serve the forecast of new business. The Engineering department projects replacement expenditures that will be required to maintain and improve the safety, reliability, and integrity of the distribution and transmission systems. The Engineering department's projections are supported by the distribution and transmission integrity organization within Southern Company Gas's shared services company, AGL Services Company ("AGSC"), which is responsible for implementing the Distribution Integrity Management Program ("DIMP") and Transmission Integrity Management Program ("TIMP") developed in accordance with regulations of the U.S. Department of Transportation ("DOT") Pipeline and Hazardous Materials Safety Administration ("PHMSA"). These types of engineering projects include: all main, system

regulators, and service replacements; ongoing replacement of certain types of infrastructure such as vintage steel and plastic pipes; facility and pipe relocations due to public improvements for bridge, roadway, and drainage work; and private developments and system improvement projects.

The Company's Field Operations department, as well as supporting departments from AGSC, analyze and establish the budgets for tools and equipment, and meters and regulators. AGSC also assists Fleet to develop budgets for vehicles and assists Facilities to develop budgets for property improvements and plant improvements. Technology capital expenditures are analyzed and budgeted by AGSC with input from affected Florida City Gas departments.

The president and vice president of Operations for FCG, as well as the vice presidents, directors and managers of the above-mentioned departments who provide support to FCG through AGSC, carefully review the proposed capital expenditures for reasonableness and conformity to the Company's objectives. Once approved by this group, the Annual Capital Budget and Five-Year Forecast are submitted to senior executive management for review and approval. Following formal adoption of the Annual Capital Budget, actual expenditures are monitored against the budget and variances are presented and discussed monthly with the utility presidents, functional vice presidents, and other senior leaders within Southern Company Gas. Revisions to the adopted budget are made from time to time when necessitated by changing circumstances with review and support of the appropriate utility president. In addition, as noted

earlier, the Five Year Forecast is updated annually to reflect current conditions.

Q. How are projects and expenditures prioritized in the Annual Capital Budget?

A. Projects and expenditures that are required for the continued provision of safe and reliable natural gas delivery service, or those that are otherwise mandated by state or federal regulation, are given the highest priority in the Annual Capital Budget. Bringing natural gas service to new customers is also given high priority because the revenue generated from these projects helps offset our cost to serve and also promotes economic development within the state. Being a part of a large organization gives FCG more access to capital for these projects and others that exceed minimum compliance requirements to assure our system performs as our customers would expect.

B. Cost Controls

Q. What steps does FCG take to ensure the reasonableness of its capital project expenditures?

A. FCG follows a number of practices to ensure that its capital expenditures are reasonable. These include competitive bidding, contractor quality assurance, and cost tracking. With respect to competitive bidding, FCG awards pipeline installation contracts for common work as blanket agreements covering a three-year term based upon competitive bids. Larger or unique pipeline projects and other capital work are advertised

separately for bids. In addition, these projects and other smaller services are all obtained using established Southern Company Gas supply chain policies to mitigate risk and deliver value. Contractor bids are evaluated utilizing a scorecard that measures the overall strength of a bidder's proposal by weighing a combination of criteria including cost, contractor quality, supplier diversity, past performance, experience, availability, timing, and safety. This traditional approach is easily validated and ensures that customers are delivered market-driven value through a selection process that involves multiple criteria. Utilizing this scorecard approach, Florida City Gas has the flexibility to adjust the ranking of criteria as customer service expectations and the Company's business needs evolve.

Q. Are there circumstances in which FCG adjusts its ranking of scorecard criteria?

A. Yes. FCG may find it appropriate to adjust its ranking of scorecard criteria in a variety of situations, depending upon the project and FCG's overall objectives for the project. For instance, FCG may adjust the scorecard criteria to account for experience, project deadlines, and the specialized capabilities required.

Q. Has FCG taken additional steps to expand and diversify its vendor pool?

A. Yes. Consistent with the Company's commitment to find ways to expand and diversify its vendor pool, FCG has participated in diversity supplier events that would further enhance the scope and diversity of FCG's

vendor pool. As a result of this focus, FCG continues to demonstrate significant year-over-year progress with its commitment to expanding the inclusion, development, and utilization of diverse businesses and believes that diverse businesses bring innovation, quality, and overall competitive value to the Company.

FCG provides service in a narrowly specialized area of the energy market, which means that FCG seeks vendors and contractors with specialized capabilities. This tends to result in a limited pool of qualified suppliers. Experience has demonstrated that FCG needs to expand its vendor selection process and pool to mitigate the risk of vendor departure. An abundance of diverse, qualified vendors builds resiliency and sustainability to ensure that we have the resources available to perform the work we need. Additionally, increasing competition among potential vendors helps control costs and offers FCG a wider range of options for services.

Q. What other steps does FCG take to monitor and control expenditures on capital projects?

A. FCG closely tracks its capital expenditures after projects commence to monitor the financial performance of our capital projects. Specifically, FCG examines projects monthly to review original cost estimates in relation to actual costs to determine the existence of any variances. If there are significant variances, we undertake a review to determine root causes, identify potential cost mitigation solutions and/or modify the scope of the project as appropriate. FCG uses this same process to review and address variances to budget for broad categories of capital expenditures.

FCG also uses other methods in its efforts to get the best value for the money in the procurement of materials and supplies, including electronic processing and strategic alliances.

C. Quality Assurance

Q. How does FCG ensure that capital projects are completed by qualified personnel who share FCG's focus on quality for the customer?

A. FCG has a comprehensive quality assurance program that allows it to monitor and maintain a record of contractor performance. Contractors are given feedback as to necessary areas of improvement so that they can manage their crews accordingly and so customers can trust in the quality of workmanship and safety of all FCG installations. Underperforming crews are disciplined by days off, retraining or decertification of tasks. The contractors can also be subject to penalty in accordance with the performance mechanisms in their contracts.

II. EXPANSIONS TO SERVE

Q. What efforts has FCG undertaken to make sure new customers who desire natural gas service are able to receive it?

A. FCG has been able to make sure we are able to bring natural gas service to customers using the same rates for 13 years through the use of competitive pipeline installation contract bids, large-scale standardized material purchases, trenchless installation methods and engineering analysis and planning prior to the start of construction to minimize the risk of change orders. In particular, with regard to trenchless installation

methods, these methods allow us to reduce restoration costs and increase productivity rates because it is a faster method of trenching. FCG also implemented a program, which I will discuss below, that has enhanced the Company's ability to extend service to customers in defined geographic areas more economically. FCG has spent $61.4 million since 2004 adding new customers.

Q. How has FCG enhanced the ability to serve customers desiring natural gas service that might otherwise have been unable to do so due to the requirement to pay part of the costs associated with the installation of facilities to service them?

A. When the maximum allowable construction costs or "MACC" for a project or extension to serve a customer is exceeded, the customer is required by FCG's tariff, consistent with Florida Public Service Commission ("FPSC") Rules, to pay a contribution in aid of construction ("CIAC").

For many customers, this CIAC can be cost prohibitive and thus, serves as a barrier to obtaining natural gas service. FCG's Area Expansion Program ("AEP"), however, enhances FCG's ability to expand its facilities to serve new customers economically, while protecting FCG's other customers. The mechanism is available when the MACC is less than the cost of extending facilities into a new geographical area identified as a likely area for economic growth. The mechanism allows the customers in the defined geographic area to finance any CIAC over a period of 10 years. This better facilitates the financial ability of customers in those growth areas to gain access to an efficient and cost effective fuel source

on an affordable basis, which FCG ultimately expects will spur economic development and growth.

Q. Has AEP and the investments made thereunder proven to be an effective means to expand service to new areas?

A. Yes. FCG has invested in nine AEP projects that have brought natural gas service to new areas of Florida where natural gas was not previously available. Access to natural gas has not only made a new fuel option available to these customers, it has reduced fuel costs for these businesses, and has made the area more attractive to business and industry because this fuel source is now available. These major expansions were completed while protecting our existing customers from any costs over the maximum allowable.

Q. What has been FCG's capital spend in terms of providing service to AEP areas?

A. FCG has invested $13.6 million in expansions in Indian River County, Hendry County and commercial corridors in Miami-Dade and Broward Counties.

Q. Has FCG installed other facilities to provide existing customers with greater access to natural gas supplies?

A. Yes. In particular, FCG is extending a high pressure main to serve Miami-Dade's compressed natural gas ("CNG") facilities. Miami-Dade Transit is transitioning its bus fleet to CNG, recognizing the long-term outlook on

natural gas prices and the projected domestic supplies. These facilities were extended under our standard tariffed extension policy. These investments will not only support the customer's desire to transition to a more economical fuel option, but will also improve access by Miami-Dade to fuel supplies following major weather events, such as hurricanes, and will help them reduce their carbon footprint. FCG projects to invest $2.3 million to serve Miami-Dade's request.

Q. Does FCG face challenges to its ability to extend service to new customers?

A. Yes. In particular, in recent years, construction costs, regulations, municipal requirements, permit fees, and material costs have increased to the level where FCG can no longer effectively manage costs without making some adjustments to further offset these increasing costs.

III. INVESTMENTS TO IMPROVE SERVICE

Q. Has FCG made capital investments for the purpose of improving service to customers?

A. Yes. FCG has made several investments that are designed to improve efficiencies and upgrade facilities and processes for the purpose of ensuring that FCG's service to customers is reliable, responsive, and efficient. Specific projects targeting this objective include installation of CNG stations, encoder receiver transmitters ("ERTs") on our meters, strategic additions to our vehicle fleet, improvements to our office facilities, and investments to modernize components within our gas operations, as

well as FCG's technology systems. Witness Igwilo will address how these investments have translated into tangible benefits, which ensure the continued provision of safe, reliable and efficient service for all FCG customers.

A. FCG CNG

Q. How has FCG invested in CNG?

A. FCG built two CNG stations at our service centers for our fleet at a cost of $3.7 million between 2013 and 2016.

Q. What benefits have been derived from these CNG stations?

A. FCG's fleet fuel costs have been reduced and stabilized as a result of our deployment of natural gas for our fleet. This reduces expenses, which, in turn, reduces upward pressure on rates for our customers. An added benefit, made all the more apparent following this active hurricane season, is that having CNG stations at the service centers provides a more reliable fuel supply for FCG's fleet vehicles during and immediately following hurricanes. Access to CNG has allowed us to continue emergency response operations even while there were widespread gasoline shortages in South Florida following Hurricane Irma. FCG's use of CNG within its fleet has also resulted in reduced pollution.

A potential added benefit of these stations is that both have the capability of being expanded to be a public access CNG fueling station should the market develop for this type of service. FCG would still need to invest in

additional equipment to open the stations to the public. FCG can develop this option when the appropriate payback and level of risk are achieved.

B. FLEET

Q. Has FCG developed an investment strategy around its fleet and, if so, how has this investment improved operations?

A. FCG has developed an investment strategy for our fleet. As fleet vehicles are replaced based on age, mileage and maintenance requirements, FCG selects replacement vehicles based upon the needs of the business with an eye towards keeping maintenance and operating costs low, as well. The more recent fleet replacement vehicles have been CNG dual-fuel vehicles. Consistent with our rationale behind deployment of CNG stations at our service centers, FCG believes that deployment of CNG vehicles within its service fleet will enable us to reduce fuel costs while providing the added benefit of reducing pollution. Moreover, the CNG vehicles can be locally refueled during hurricanes when gasoline stations are out of supply or electric power. FCG has invested $4.2 million in its fleet. Of that fleet, 53% of the vehicles run on CNG, and FCG will be adding nine more CNG vehicles to the fleet before the end of 2017.

C. FACILITIES/BUILDING

Q. Has FCG invested in new office facilities?

A. Yes. FCG acquired new office buildings in Brevard and Doral in 2011 and 2016, respectively.

Q. Why did FCG need new office space in both locations?

A. The old offices in Brevard were 1950s-era construction and had a deteriorating roof, failing support structure, and a low floor elevation, making it susceptible to flooding. The cost to repair and improve that building, in addition to the building no longer being suited for the current operations at FCG made it necessary to look at other options for the Brevard location. The new Brevard facility, which was constructed on the same property as the older building, was constructed of concrete block with a steel support structure capable of withstanding significant hurricane-force winds, while also less susceptible to flooding. FCG invested $2.4 million in the construction of the new facility, which was a better value than investing in the older building. The new Brevard facility's smaller size is also more appropriate for the current operations because shared services are not local, meter reading personnel have been reduced as result of implementing remote meter reading technology, as I discuss further herein, and the building has an open floor plan which allows FCG to make a more efficient use of space.

FCG also decided to relocate its Hialeah office to Doral. This relocation was completed in May 2016. The new office in Doral is also a smaller building that provides FCG with a facility that is sized more appropriately for its operations, particularly given that there is no longer any call center function in Florida. The Doral office is also located in an area that has allowed FCG to consolidate all of that service center's functions into a single building, even though the new building is smaller, which has resulted in operational and cost efficiencies. The location provides better access by employees to the Florida Turnpike and the Palmetto

Expressway, which has improved our ability to respond to customer orders more timely. FCG invested $8.4 million to purchase the Doral property and renovate the building for our operations. The old Hialeah building and property were sold with the gain recorded as a benefit to the customers. Witness Morley will discuss this customer benefit in more detail in his testimony.

Moreover, the Doral facility has been enhanced to make it more storm ready. Having storm-ready buildings allows FCG to hold our resources at these facilities and operate it as a command post after a storm or other major incident. Both the new Brevard and Doral buildings provide a better, safer environment for employees and are more energy-efficient to save on operating costs.

D. GAS OPERATIONS

Q. How has the Company invested in safety and reliability-related enhancements to improve service for customers?

A. Consistent with federal safety regulations, we have invested in upgrading our odorization equipment, which adds the recognizable “rotten egg” odor to natural gas so that it is more easily detectible. The new equipment is more reliable and reduces risk of failure. Specifically, we have replaced odorant controllers to reduce the risk of failure to inject odorant and replaced aging tanks to reduce the risk of leakage. We have also replaced our field Supervisory Control and Data Acquisition (“SCADA”) system, because our previous system had become obsolete, was

beginning to fail, and parts were no longer available. Replacing this system was critical, because SCADA allows FCG to reliably monitor flows and pressures at gate stations, as well as at other remote locations, which enables FCG to properly - and safely - operate its system, by providing timely notification when operational issues have arisen that need prompt attention. Investments for these projects were $800,000.

Q. Are there specific capital spends contemplated for the projected test year that are critical to the safety and reliability of operations?

A. Yes. As discussed by witness Bermudez, it is very important for utilities to stay up-to-date on the latest cyber-security technology. As such, FCG intends to invest $200,000 to refresh its cyber-security technology used to combat cyber-criminals who would target FCG's system, which will include replacement of dial-up modems that are more susceptible to cyber-security threats.

E. OPERATIONS TECHNOLOGY

Q. How is FCG investing in technology to improve its operations?

A. FCG has made upgrading the technology used in our business a priority. One focus has been on communication equipment transmitting pressures, temperatures, gas flow and cathodic protection voltage data. To that end, we are gradually replacing all of our wired modems with economical cellular modems. We have also upgraded our Remote Telemetry Units replacing older technology. These technologies allow real-time monitoring

of FCG's system to identify any safety or operational issues that need to be addressed so that we can respond promptly.

Q. Has FCG invested in other technology to improve operational efficiencies?

A. Yes. In particular, FCG has invested $11.2 million in the installation of encoder receiver transmitters ("ERTs") on all of its gas meters. As detailed in the testimony of Witness Igwilo, this investment greatly improved customer service by increasing meter read accuracy and dramatically reducing estimated bills.

F. INFORMATION TECHNOLOGY

Q. Are there other areas in which FCG has allocated capital dollars to technology improvements?

A. Yes. Over the past three years, FCG has invested $7.3 million in hardware and software applications to consolidate its customer information database, manage utility locate tickets, work order management, mobile mapping ("GSCA") and other purposes.

Q. What are the benefits that FCG and its customers have derived from this newly installed technology?

A. Witness Igwilo will address the benefits of these new technologies in greater detail, but, generally speaking, the benefits vary by technology. Foremost, FCG has moved its customer information system to the Customer Care & Billing system used by our other subsidiaries. Then, the need to better process "one-call" utility locate requests and to interface

with our work management system drove the integration to SENTRi software. This application has enabled FCG to better clear utility locate requests, efficiently route personnel to locate gas facilities, and track job durations.

As it relates to “Click” (Click Mobile and Click Schedule/Web), FCG moved to the Click product applications so that FCG’s orders could be on one platform, enterprise-wide, for all above-ground work. This has allowed for better resource management, facilitated central dispatching, efficient personnel routing and job duration tracking.

New web-based GIS software was also developed to improve and expand facility information available to field personnel. The Geographic Service Card Application (“GSCA”) provides advanced functionality, a better mapping system and access to scanned service records. With this information, FCG’s ability to locate gas facilities for excavators is improved through efficient, direct access to detailed records of services and mains. Evaluation of repair options is also improved during emergencies. The move to a new mobile GIS system was also driven by the aging platform of the current mobile application.

Transitions to these applications were developed at a corporate level for the benefit of all utility subsidiaries. FCG benefits from the synergies created by these enterprise-wide applications, which allow for more efficient training, maintenance and operation. These synergies reduce costs, which, in turn, reduces upward pressure on customer rates.

Witness Igwilo will discuss in greater detail the efficiencies and benefits that these systems have provided for FCG and its customers.

IV. INVESTMENTS RESPONSIVE TO REGULATORY REQUIREMENTS

Q. What projects are associated with FCG's capital spend necessary to respond to regulatory requirements?

A. FCG has an ongoing program focused upon completing projects in compliance with regulatory requirements. These safety-related capital projects include renewals of galvanized and threaded mains, inactive service removals, periodic testing of meters, and relocation of facilities for municipal construction projects.

One of the investments made consistent with FCG's regulatory commitments involved replacement of older threaded, galvanized steel mains and services. These mains and services were replaced with modern polyethylene ("PE") pipe, thereby enhancing the safety of the system with more capacity compared to the older, smaller diameter mains. The new mains were designed and installed in the road right-of-ways versus the rear property easements, which allows FCG employees to have more direct access to facilities for purposes of repairs, locates, and leak surveys, which reduces operational risks and challenges for the Company and its customers. The replacement of the galvanized pipes was made consistent with FCG's commitment to the FPSC to implement a Galvanized Pipe Replacement program and has cost $19.4 million since 2004.

Secondly, $5.5 million was spent on inactive service removals in compliance with Rule 25-12.045, Florida Administrative Code, which is sometimes referred to as the FPSC's "Cut and Cap" Rule. Service lines that have become inactive without reuse were retired and physically

disconnected from all sources of gas at the nearest point to the gas main to reduce risks to customers.

In addition, in compliance with Rule 25-7.064, Florida Administrative Code, $7.4 million was spent on periodic testing of customer meters. FCG uses a statistical sampling plan for the purpose of testing meters for accuracy in order to ensure their proper performance.

Also, $15.5 million was spent to relocate our facilities to make way for public improvements to bridges and roadways, and for drainage work. FCG's franchise agreements with each municipal jurisdiction for whom FCG performs this work dictate that FCG move its facilities that are identified to be in conflict with municipal projects at FCG's expense. Each project is engineered by FCG to resolve the facilities conflict with the least costs while maximizing value. Engineers also negotiate with municipal project designers to avoid conflicts with FCG facilities where possible.

Q. What investments has FCG made in order to comply with federal regulatory requirements around integrity management?

A. Consistent with the requirements implemented by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration ("PHMSA"), FCG has a Distribution Integrity Management Program ("DIMP"), as well as a Transmission Integrity Management Program ("TIMP"). Both of these programs utilize risk assessment models to identify facilities in each category that are at the highest risk of breach or failure.

Q. What projects have fallen under DIMP?

A. Under DIMP, the projects to be completed in 2017 involve replacing systems made of extruded steel tubing, as well as vintage PE systems with deteriorated tracing tape. Previously identified high risk projects were replaced under other budget categories, such as projects in the RENEW category discussed below.

Q. What projects have fallen under TIMP?

A. Under TIMP, FCG has conducted evaluations to determine if internal inspection tools could be used and upon completion installed internal inspection ("ILI") tool launcher/receivers and filters. In addition, FCG performed hydrostatic testing and replaced segments of transmission facilities found to have anomalies. Expenditures associated with this program have been over $7 million. The equipment associated with these expenditures, has been critical to FCG's ability to fully gauge the operating health of these pipelines. ILI inspections verified the integrity and safe operational capabilities of the high pressure pipelines. Defects found during ILI were remedied through replacement or reinforcement to remove these safety risks. The internal inspections were required per Subpart O of Part 192—Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards.

Q. What are the other categories in which capital projects consistent with these objectives would have been budgeted?

A. Those are our renewal projects and SAFE rider program. I address the SAFE program and renewal projects a little later in my testimony.

V. INVESTMENTS TO IMPROVE AND REINFORCE EXISTING FACILITIES

A. Pressure Improvement Projects (PRIM)

Q. What are the expenditures that can be attributed to PRIM Projects?

A. These projects include projects undertaken in Homestead, Coral Gables, Cutler Ridge, Doral and Lindgren Road in Miami-Dade County, as well as projects on Merritt Island and in Palm Bay in Brevard County.

FCG has installed several pressure improvement projects to increase pressures, increase capacity and create back feeds to prevent mass outages. Using Advantica software, flow models of all our systems have been analyzed to determine the lowest pressure points under peak load conditions. Our flow models are calibrated every 3 years. Projects have been engineered to increase pressures above the system minimums under pre-determined design degree days. As discussed by witness Becker, the design degree days are based on the coldest temperature expected, which on average, occurs once every 30 years. These improvements will assure customers will have reliable gas delivery in the event of maximum system loads or third party damage. In the case of the Homestead Lateral project, capacity was increased to Homestead while reducing pressure on the lateral running through a commercial corridor, which will reduce the cost to serve new customers along that commercial corridor because the cost to connect will be less expensive. FCG has invested $9.7 million to reinforce its systems.

B. Renewals ("RENEW")

Q. What is the objective of the RENEW projects?

A. FCG's objective is to renew and upgrade existing infrastructure to replace aging or obsolete facilities as necessary to maintain reliable service and to maintain compliance with safety regulations.

Q. How do these projects differ from DIMP and TIMP projects?

A. These projects are similar to those completed for DIMP or TIMP, but some were identified prior to DIMP analyses. Other projects are completed to improve our infrastructure above the minimum regulatory requirements. These projects would focus on replacing obsolete equipment to improve operational efficiencies and protect the whole of FCG's facilities in service for its customers.

Q. What capital expenditures have been made under the RENEW category?

A. Under RENEW, FCG spent $10.6 million since the last rate case. Some of the larger projects are as follows:

- FCG cleaned and rewrapped over 2 miles of main on the roof of the Miami International Airport with a modern coating system enabling these facilities to better withstand the tough Florida environment. The coatings will offer a longer lasting protection against corrosion that is less susceptible to cracking, peeling and moisture intrusion.
- FCG also refurbished the NW Hialeah and Port St. Lucie gate stations. At Port St. Lucie, this involved the replacement

of obsolete regulators and a relief valve, as well as reconfiguration of the piping runs, all of which will better facilitate maintenance. At NW Hialeah, obsolete regulators and redundant measurement equipment were replaced. In addition, throughput capability was increased and facilities were designed for standardized 60 psig and 300 psig outlet pressures.

- In addition, an extruded steel tubing system located in a section of the City of Miramar was replaced, thereby eliminating from that area the thin-walled steel tubing, which is susceptible to corrosion leaks and cannot otherwise be repaired with fittings. This project was undertaken in 2012, prior to FCG's DIMP program. Had it been undertaken after implementation of DIMP, this project would have been included under that category.

C. Cathodic Protection (CP)

Q. Have there been other capital expenditures that do not specifically involve the installation of equipment or facilities but provide system operations benefits?

A. Yes. Similar to the protective rewrap project described above under RENEW, in more recent years, FCG's CP projects have involved application of coatings, which are key to protecting our pipeline investments from the harsh Florida environment. Under this initiative, FCG has cleaned and rewrapped with a modern coating system facilities

traversing exposed canal and bridge crossings. The newer coatings will offer a longer lasting protection against corrosion that is less susceptible to cracking, peeling and moisture intrusion. FCG also strategically installed new rectifiers at key locations to provide CP to distribution systems that were previously protected by aging anodes. The rectifiers are a longer lasting solution that offers better control over the protection voltages, as well as more uniform protection across the systems. FCG has spent $700,000 on these projects. FCG customers benefit from CP projects as they protect the expensive assets we have installed preventing them from needing replacement due to corrosion.

VI. SAFE PROGRAM

Q. Please explain the Company's SAFE Program.

A. The Company's SAFE Program, which stands for Safety, Access, and Facility Enhancement, was approved by the FPSC by Order No. PSC-15-0390-TRF-GU, issued September 15, 2015, in Docket No. 150116-GU. By that Order, the FPSC approved FCG's request to establish this program, which is designed to facilitate the expeditious relocation of certain existing gas facilities located in, or associated with, rear lot easements. The goal of the program is to facilitate more direct access to these facilities by FCG. As the FPSC recognized in its Order, the existing location of these mains, services and, in some cases, above-ground facilities, presents significant operational risks and challenges for FCG and its customers. The SAFE Program facilitates the relocation process by enabling FCG to recover appropriate costs, along with a reasonable

return, for the necessary main relocations and associated new service lines, as well as costs associated with any above-ground facilities, such as meters and regulator sets, that may need to be replaced or relocated due to the main and service line relocations. FCG recovers these costs through a surcharge, which is then subject to true up each year. FCG has invested over $19 million to date in line with the schedule filed with the FPSC.

Q. Did the FPSC contemplate that the facilities installed through the SAFE Program would ever be included in FCG's rate base?

A. Yes. As further discussed by Witness Morley, the FPSC's Order specifically recognized that, because the surcharge is cumulative, if FCG were to file a rate case before the program expired, the then-current SAFE surcharge program would be folded into rate base. The Order further contemplated that the surcharge would then be recalculated.

Q. Have the SAFE Program investments proven to be beneficial?

A. Yes, they have proven to significantly reduce operational risks and challenges, thereby improving service and safety for both FCG employees and FCG customers.

Q. Please elaborate.

A. The original location of the facilities relocated under SAFE made access difficult resulting in a number of operating risks and challenges. The facilities being replaced have also been shown to carry the greatest

relative risk through FCG's DIMP assessment. At both the state and national level, safety initiatives, like FCG's SAFE Program, which encourage more expeditious replacement of higher-risk facilities while allowing utilities to fully recover the costs of expedited replacement, as well as earn an appropriate return, have garnered significant support from regulators.

Specifically, FCG serves in densely populated areas of South Florida, and the location of these facilities has historically made it difficult for FCG inspectors and repair personnel to access the facilities to identify and address problems. In addition to the issues created simply by their location, the facilities selected for remediation are categorized as presenting a higher risk under the Company's DIMP Program due to their material composition, leak incident rates, and neighborhood composition. Consequently, relocation and replacement of these facilities enhances FCG's ability to safely and efficiently, which improves our ability to expeditiously address any problems affecting customer service or safety. Moreover, because these facilities were already identified as higher risk, replacement, in and of itself, enhances safety for our customers.

VII. RATE BASE OVERVIEW

Q. Will the additions to plant included in FCG's projected test year be in service by the end of 2018?

A. With the exception of the LNG facility addressed by witness Wassell, the additions to plant, proposed by FCG for inclusion in its 2018 test year rate base are either currently in service and not scheduled for retirement prior

to the end of the test year, or for those assets that are not yet in service, will be in service by the Company in the provision of natural gas services to its customers by the end of the test year. Moreover, those assets either currently in service or that will be in service during the projected test year are appropriate assets to support the services being provided.

Q. Are the costs associated with the additions to plant included in FCG's projected test year reasonable?

A. Yes. The Company has taken the appropriate steps to ensure that the costs of the items in rate base for the projected test year are reasonable, and it has proposed only those additions to rate base that will provide a benefit to its customers.

Q. What are the processes and procedures that FCG uses to ensure that additions to plant are necessary and made at a reasonable cost?

A. FCG undertakes each of these projects based on its planning criteria and analysis of alternatives. As set forth previously in my testimony, the capital investment approval process considers whether capital projects satisfy regulatory requirements, are necessary to extend services to new customers, or will enhance the efficiency, safety and reliability of the service the Company provides to its customers in a cost-effective manner. In addition, the Company maintains and uses purchasing programs and policies designed to ensure that equipment and components are purchased at a reasonable cost and that the Company takes advantage of purchasing economies that are reasonably available to it.

Q. Do you have an opinion as to whether the additions to plant from 2005 through 2018 test year have been or will be added in a prudent manner and at a reasonable cost?

A. Yes. Based upon my knowledge of the Company's planning, operations, and purchasing policies and practices, and my knowledge of significant Company projects, I conclude that the utility plant rate base additions made since the end of the 2004 Rate Case test year, or to be made by the end of the 2018 test year, have been made or will be made in a prudent manner and at a reasonable cost. As it relates to FCG's proposed LNG facility, I defer to witness Wassell as it relates to the specifics of the plant, including site selection, design, and cost.

VIII. SUMMARY

Q. Please summarize your testimony.

A. My conclusion is FCG continues to be a safe and efficiently operated gas utility. The investments we made have been to provide safe and reliable gas service to new and existing customers, renew aging infrastructure, remain in compliance with regulatory requirements, and to fulfill our obligation to serve all customers.

Q. Does this conclude your testimony?

A. Yes.