BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 20200051-GU

PETITION FOR RATE INCREASE BY PEOPLES GAS SYSTEM.
_____/

DOCKET NO. 20200166-GU

PETITION FOR APPROVAL OF 2020 DEPRECIATION STUDY BY PEOPLES GAS SYSTEM.
_____/

DOCKET NO. 20200178-GU

PETITION FOR APPROVAL TO TRACK, RECORD AS A REGULATORY ASSET, AND DEFER INCREMENTAL COSTS RESULTING FROM THE COVID-19 PANDEMIC, BY PEOPLES GAS SYSTEM.
_____/

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PROCEEDINGS:	HEARING
COMMISSIONERS PARTICIPATING:	CHAIRMAN GARY F. CLARK COMMISSIONER ART GRAHAM COMMISSIONER JULIE I. BROWN COMMISSIONER DONALD J. POLMANN COMMISSIONER ANDREW GILES FAY
DATE:	Thursday, November 19, 2020
TIME:	Commenced: 11:00 a.m. Concluded: 11:27 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: DEBRA R. KRICK
Court Reporter

PREMIER REPORTING
114 W. 5TH AVENUE
TALLAHASSEE, FLORIDA
(850) 894-0828

APPEARANCES:

ANDREW M. BROWN, and THOMAS R. FARRIOR, ESQUIRES, Macfarlane Ferguson & McMullen, P.O. Box 1531, Tampa, Florida 33601, appearing on behalf of Peoples Gas System (PGS).

J.R. KELLY, PUBLIC COUNSEL; CHARLES REHWINKEL, DEPUTY PUBLIC COUNSEL; A. MIREILLE FALL-FRY, ESQUIRES, Office of Public Counsel, c/o The Florida Legislature, 111 West Madison Street, Room 812, Tallahassee, Florida 32399-1400, appearing on behalf of the Citizens of the State of Florida (OPC).

JON C. MOYLE, JR., and KAREN PUTNAL, ESQUIRES, Moyle Law Firm, The Perkins House, 118 North Gadsden Street, Tallahassee, Florida 32301, appearing on behalf of Florida Industrial Power Users Group (FIPUG).

KURT M. SCHRADER, BIANCA LHERISSON, JENNIFER CRAWFORD, ESQUIRES, FPSC General Counsel's Office, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, appearing on behalf of the Florida Public Service Commission (Staff).

KEITH C. HETRICK, GENERAL COUNSEL; SAMANTHA M. CIBULA, ESQUIRE, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, Advisor to the Florida Public Service Commission.

I N D E X

WITNESSES

P R O C E E D I N G S

CHAIRMAN CLARK: All right. Good morning. We are going to go ahead and get the hearing started. We believe that everyone is on-line. We are having a little bit of, more so than normal, trouble with audio/video today, so if you notice a problem, give me a waive, give me some sort of signal that there is a problem and we will try to get it rectified as quick as possible.

We are going to convene the hearing for Dockets No. 20200051-GU, 20200166-GU and 20200178-GU.

I am going to ask staff, if they would, to please read the notice.

MR. SCHRADER: By notice issued on November 5th, 2020, time and place has been set for an administrative hearing in Docket Nos. 20200051-GU, 20200166-GU and 20200178-GU. The purpose of the hearing is set out more fully in that notice.

CHAIRMAN CLARK: All right. Let's begin by taking appearances. First, we will begin with Peoples Gas.

Mr. Brown.

MR. BROWN: Andy Brown with the law firm of Macfarlane Ferguson & McMullen, and also available

to ask questions today are Luke Buzard, Vice-President of Regulatory, and Sean Hillary, the company's Comptroller.

CHAIRMAN CLARK: Thank you, Mr. Brown.

OPC.

MS. FALL-FRY: Good morning, A. Mireille Fall-Fry with the Office of Public Counsel. And I would like to enter appearances for Charles Rehwinkel and J.R. Kelly.

CHAIRMAN CLARK: Thank you, Ms. Fall-Fry.

Mr. Moyle, FIPUG.

MR. MOYLE: Thank you, Mr. Chairman.

Jon Moyle for the Florida Industrial Power Users Group, and we should also have the record show an appearance for Karen Putnal of our firm.

CHAIRMAN CLARK: Thank you, Mr. Moyle.

Commission Staff.

MR. SCHRADER: Kurt Schrader and Bianca Lherisson -- or Kurt Schrader, and also entering an appearance for Bianca Lherisson.

MS. CIBULA: Samantha Cibula, Advisor to the Commission. And I also would like to make an appearance for Keith Hetrick, our General Counsel.

CHAIRMAN CLARK: Thank you very much.

Okay. Staff, do we have preliminary matters

this morning?

MR. SCHRADER: Yes, Mr. Chairman.

Staff would like to note that a comprehensive settlement agreement has been reached in this docket. Peoples has also agreed to withdraw its petition in Docket No. 20200178-GU if the Commission approves the settlement. And Peoples will not file any other petition seeking deferral of COVID-19 costs during the term of the agreement.

Pursuant to settlement, the parties have waived cross-examination of witnesses, and staff has confirmed with each Commissioner the excusal of witnesses prior to today's hearing. However, PGS has witnesses Sean Hillary and Luke Buzard to answer questions today should the Commissioners have any.

In accordance with the second order modifying the order establishing procedure, the parties will present their opening statements, after which they will be available to answer any questions that the Commissioners may have about the proposed rate case settlement agreement. Staff is prepared to answer questions as well.

CHAIRMAN CLARK: All right. Parties, do any preliminary matters from any of the parties?

All right. Seeing none. Let's move into prefiled testimony.

MR. SCHRADER: Staff asks that the prefiled testimony of Peoples' witnesses TJ Szelistowski, Karen Sparkman, adopting the testimony of Monica A. Whiting, Richard F. Wall, Timothy O'Connor, Richard K. Harper, Ph.D., Dylan D'Ascendis, adopting the testimony of Robert B. Hevert, Sean Hillary, Valerie Strickland, Charlene M. McQuaid, Lorraine Cifuentes, Daniel Yardley, T. Mark Whitaker, Luke Buzard and Dane Watson, OPC witnesses, David J. Garrett and Andrea Crane, and Commission Staff witnesses Intesar Terkawi and Rhonda L. Hicks be inserted in the record as though read.

CHAIRMAN CLARK: All right. Prefiled testimony of these witnesses will be inserted into the record as though read.

(Whereupon, prefiled direct testimony of TJ Szelistowski was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

THOMAS J. SZELISTOWSKI

POSITION, QUALIFICATIONS, PURPOSE

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

A. My name is Thomas J. Szelistowski. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Peoples Gas System (“Peoples” or the “Company”).

Q. Please describe your duties and responsibilities in that position.

A. As president of Peoples, I have responsibility for the overall performance of the Company including safety, customer service, compliance, operations and financial performance. It is my responsibility to ensure the delivery of natural gas to Peoples' 400,000 plus customers in a safe and reliable manner and to ensure that all aspects of Peoples’ business are conducted in the best interest of our customers, our employees and the general public.

Q. Please provide a brief outline of your educational background

and business experience.

A. I grew up in St. Petersburg, Florida where I attended public school. After high school, I attended the Georgia Institute of Technology where I earned a bachelor's degree in electrical engineering. I received a Master of Business Administration degree from the University of Tampa in 1987. During my undergraduate college career, I was a cooperative education student and worked at Tampa Electric on alternating quarters. I started work full time at Tampa Electric in 1983 as an engineer and have held a variety of engineering and leadership positions across the company. In January 2016, I became the vice president of operations for Peoples and was named president of Peoples in August of 2016. I am a registered professional engineer in the state of Florida.

Q. What are the purposes of your prepared direct testimony in this proceeding?

A. My prepared direct testimony has several purposes. First, I give an overview of Peoples, its history and describe the physical gas system and the customers it serves. I describe the importance of natural gas infrastructure in Florida.

I also identify the key elements of Peoples' request for the

base rate increase and explain why it is reasonable and necessary. Finally, I provide a synopsis of the Company's direct testimony and introduce Peoples' witnesses.

Q. Did you prepare an Exhibit in support of your prepared direct testimony?

A. No.

Q. Why has Peoples filed for new rates during the Coronavirus pandemic?

A. Peoples has known for some time that it would need to seek an increase in rates to become effective in 2021 in order to maintain the high-quality service for which Peoples is known. The Company began the first step in the process to obtain new rates by filing its test year letter on February 7, 2020. By filing this letter, Peoples would ordinarily be required to file its rate case within 60 days of that date. At the time that I signed the test year letter, the Coronavirus (later named COVID 19), did not appear to have the potential to cause loss of life on a worldwide scale and economic disruption not seen since the great depression. The effects of COVID worsened in February and into March. President Trump declared a National Emergency concerning COVID 19 on March 13, 2020

and two days later, Governor DeSantis issued an Executive Order declaring a State of Public Health Emergency for Florida. Because of the impact of these developments on our customers, I felt it appropriate to delay the filing and on April 6, 2020 I asked, and was granted permission by the Florida Public Service Commission, to extend the deadline for Peoples to file its rate case by 60 days.

Despite the effects of the Coronavirus, we must go forward in seeking rate relief in order to meet the Company's obligation to make necessary infrastructure investments that provide a safe and reliable natural gas distribution system in the communities Peoples serves, and to continue to be able to respond to customer demand, improve system safety, and enhance system resiliency. Fortunately, indications demonstrate that the Florida economy is improving, and the actions of the Federal & State governments will promote further recovery. The rate increase Peoples is proposing in this Petition will not go into effect until early 2021 and I share in the optimism of many economic and public health experts that the economy will be much improved by that time. However, as I will describe below, and other Company witnesses will testify to, the reasons that Peoples needs new rates by early 2021 and because of the length of time it takes for a rate proceeding to be completed, the process must begin at

this time.

Q. Has Peoples taken any steps to assist customers who are in financial distress?

A. Yes. Peoples has a program known as Share which provides utility bill assistance to customers that are experiencing unforeseen hardship or are in crisis situations, rendering them unable to pay their utility bill. These are generally our most at-risk customers. During these unprecedented COVID-19 times, we are also making proactive outbound calls to customers with active accounts in arrears greater than 60 days to ensure they are aware of the various assistance options available to them. Once we make contact with a customer, we help them fill out the application for Share assistance, and talk to them about other assistance options available to them outside of the Share program. The Company has increased its funding of this program in response to current conditions. Peoples is also increasing contributions to nonprofit partners across the State in areas we serve, which provide assistance to the community.

Q. Please provide an overview of the Company’s base rate increase request.

A. After 12 years without a base rate increase, Peoples must request a change to its rates. A total incremental base rate increase of $61.7 million is needed to continue to provide safe, high quality and reliable gas service to the people of Florida. Additionally, the Company is moving investments associated with the Cast Iron / Bare Steel Rider ("CI/BSR") into rate base in this proceeding.

Since Peoples' last base rate proceeding in 2008, the Company has made, and is continuing to make, necessary infrastructure investments to meet the demand and ensure the reliability of clean and efficient natural gas service across the growing state of Florida. Peoples is also continuing to enhance the safety and quality of operations, maintenance and customer service through functional and technology improvements.

Peoples continues to receive national recognition for our high-quality service and commitment to safety. This base rate increase request will support Company efforts to operate a safe and reliable system and ensure the continued best-in-class service to our customers.

OVERVIEW OF PEOPLES

Q. Please provide an overview of Peoples, its service areas and the communities it serves.

A. Peoples is the largest natural gas distribution company in the state of Florida, serving more than 400,000 customers in 39 of Florida's 67 counties. Peoples serves customers in the major metropolitan areas of Florida including Miami, Tampa, St. Petersburg, Orlando, and Jacksonville. Peoples also serves in a number of developing areas of the state, including Fort Myers, Sarasota, and Panama City. Peoples operates more than 14,000 miles of pipeline and more than 400,000 service lines to deliver natural gas to its customers.

Q. Please describe the mix of customers served by Peoples.

A. Peoples provides natural gas distribution service to approximately 365,000 residential customers, who make up approximately 90 percent of Peoples' customer base and contributes approximately 40 percent of its base revenue. The commercial and industrial customers make up the remaining ten percent of customers and account for approximately 60 percent of revenue. Additionally, Peoples serves six (6) major electric generators across the state of Florida which provides clean reliable domestic fuel source for power.

Peoples serves 54 compressed natural gas ("CNG") fueling stations across the state which fuel a variety of commercial vehicles including municipal buses, delivery vehicles and

waste management vehicles. These CNG stations contribute to significant reductions of sulfur and carbon dioxide emissions resulting in a cleaner environment for all Floridians.

Peoples serves two (2) liquefied natural gas ("LNG") installations in the Jacksonville area. These stations provide LNG as a transportation fuel for shipping purposes. These installations have helped customers meet their fuel needs in an environmentally responsible manner and shipping companies meet the new IMO 2020 requirements for maritime vessels.

Additionally, as described in Company witness Timothy O'Connor's prepared direct testimony, the interest for Renewable Natural Gas ("RNG") in Florida has increased and the Company is positioned to provide these services that would contribute to the reduction of greenhouse gases and also provide biogas solutions for waste generators. These projects also create a local source of natural gas and reduce the need for traditional gas sources.

Q. Please describe the history of Peoples and its relationship to Emera.

A. Founded in 1895, Peoples, a gas manufacturing and

distribution company, originally operated as the Tampa Gas Company. Between 1955 and 1959, several consolidations and acquisitions expanded the Company into 30 Florida communities and the Company was reincorporated into Peoples Gas System Inc. This also was the start of the conversion from manufacturing natural gas to distribution of natural gas which was available for the first time through a newly constructed interstate pipeline by Florida Gas Transmission. In 1976, Lykes Brothers, Inc. acquired Peoples and operated the Company until the mid-1990s. In 1997, Peoples was acquired by TECO Energy and became an operating division of Tampa Electric Company. In 2016, TECO Energy was acquired by Emera, Inc. ("Emera").

Q. What benefits have come from the Emera acquisition of Peoples?

A. The Emera acquisition of Peoples provides several benefits to the Company and its customers. Emera shares People's long-standing commitment to safety and excellent customer service.

While safety has always been at the forefront of the Company's values, being a part of a larger organization strongly focused on safety and compliance has improved our focus. The ability to share best practices across affiliates as well as corporate level support has led to improved safety performance and

results. The size and financial integrity of Emera has helped Peoples' ability to meet its customers' needs. Emera has delivered on its commitment to ensure that all parts of TECO Energy remain strong community partners.

Emera, like Peoples, carries a strong commitment to stewardship of the environment. Peoples plays an integral role in Emera's environmental commitment, providing a cleaner alternative to other fuels. Peoples' activity in developing the RNG market further supports Emera's commitment to the environment.

Q. How would you characterize Peoples' dedication to providing high quality customer service?

A. I would characterize Peoples dedication to providing excellent customer service as all-encompassing. I am very proud of the level of customer service Peoples team members provide to our customers as well as the national recognition we continue to receive for that service. As detailed in Company witness Monica A. Whiting's prepared direct testimony, Peoples' customers have recognized this high level of customer service in a variety of national surveys. Peoples is proud to have been recognized through J.D. Power as having the highest overall residential customer satisfaction in the

nation in six (6) of the last seven (7) years and being recognized as highest in the nation in business customer overall satisfaction for two (2) of the last three (3) years. Additionally, Peoples' customers have rated us as the easiest utility in the nation with which to conduct business, as well as for the fifth time the nations' most trusted utility, as measured by Escalent. These significant recognitions are due to the dedication of all team members across Florida as well as a strong corporate commitment to invest in safety, reliability, customer service and employee training. These results validate the focused spending and investment in areas that support customer experience including critical IT systems, programmatic improvements and field service functions.

I wanted to single out an incredible achievement reached this year which is the culmination of all of Peoples customer service investments and commitment. Peoples received the honor of ranking highest in the nation for residential customer satisfaction with gas utilities in the third wave of the 2020 J.D. Power residential customer satisfaction study. Peoples led all categories of the study. Final results of the 2020 study will publish in September. This is an extra-ordinary first-time achievement for the Company and I am incredibly proud of the Peoples team for having achieved this

milestone.

Q. Describe Peoples commitment to safety and how it relates to this rate request.

A. Peoples prides itself in the safe and reliable delivery of natural gas service for the protection of the general public, our team members and our customers. The Company has intensified its focus on overall pipeline safety and associated compliance which is clearly reflected in the Company's recent Commission annual safety inspection results of 2019. Peoples also received the 2019 and 2020 American Gas Association Safety Achievement Award for excellence in employee safety.

The Company has made significant investment into ensuring the safety of its employees and the public through the development of a pipeline safety management system consistent with American Pipeline Institute ("API") Recommended Practice 1173, as well as through employee training and overall strong safety and compliance culture. Peoples' communication with customers, excavators and the public related to pipeline safety and damage prevention helps to limit damage to our facilities and further ensure safety and reliability. The commitment to this industry framework has resulted in

investments and cost increases that are in the best interest of customers and are included in Peoples' base rate request.

BENEFITS OF NATURAL GAS IN FLORIDA

Q. In what ways is natural gas benefitting Florida and its residents?

A. Natural gas is at the heart of Florida's energy story and it fuels Florida's economy. Due to abundant domestic supply, natural gas prices are expected to remain very attractive and stable. In addition to being the fuel of choice for more than 60 percent of Florida's electric energy production, natural gas provides a cleaner and affordable alternative for Florida's residential, commercial and industrial energy needs and ultimately helps fuel Florida's economy.

The abundance of domestic natural gas allows residential customers the ability to economically heat their homes and provides an economical energy source for other domestic needs such as water heating, cooking and drying clothes. This clean and affordable source of energy helps to eliminate energy poverty by providing a more cost-effective means for our customers to meet their energy needs.

Florida's commercial businesses choose natural gas due to its

efficiency, affordability and reliability. Natural gas is utilized for many commercial applications including cooking, laundry and water heating for restaurants, hotels, hospitals and other commercial businesses due to its ability to reduce energy spend. The commercial availability of natural gas significantly influences economic development including job creation in multiple industries including hospitality, medical and industrial purposes.

Industrial customers demand natural gas for use in a variety of processes and its use provides an environmentally and economical alternative to other sources of energy. For certain industrial purposes the availability of natural gas is fundamental to the continuing operations of the business.

Compressed natural gas as a vehicle fuel has proved to be an economic alternative to diesel and significantly reduces sulfur emissions and reduces CO_2 emissions to our environment. Liquified natural gas used for ship fuel helps to reduce the use of diesel fuel along our coast and likewise reduces the maritime industry’s environmental impact.

The reliability of retail natural gas service is exceptional and provides the residents of Florida peace of mind and energy security. While some customers rely on natural gas for

everyday on-site generation, many more rely on natural gas for emergency backup generation that provides safety and comfort in the event of electric system disruption. The businesses that are critical to the well-being of Florida's residents rely on natural gas for emergency back-up power. Grocery stores, gas stations, hospitals and assisted living facilities all rely on natural gas to be available after significant weather events. Additionally, customers who use compressed natural gas to fuel fleet vehicles find it is still available after a catastrophe when supply disruptions occur to oil supplies.

Peoples prides itself in making life better for millions of Floridians: those who are direct customers and those who benefit from natural gas through the businesses and services they use.

Q. Describe how natural gas solutions provide a cleaner energy option for consumers.

A. Floridians continue to seek benefits from cleaner, more environmentally responsible energy options. Natural gas is approximately 90 percent efficient when delivered to customers for direct use, compared to approximately 30 percent efficient if utilized for electricity generation. In

other words, it is more efficient to operate a water heater, clothes dryer, cooking appliance, laundry facility or industrial plant by directly using natural gas versus electricity. The efficiency provided by direct use of natural gas reduces the overall environmental impact of the customer's energy use. As customers seek ways to minimize their environmental footprint, natural gas provides them with a lower carbon, cleaner option which leads to increased customer demand. In addition to higher efficiency, Peoples has supported many customers, including electric generation customers, in their transition from higher carbon fuels, like coal, oil or diesel, to natural gas. These transitions have reduced the emissions profiles of our customers which ultimately benefits all Floridians.

BUILDING TO SERVE

Q. How is Peoples meeting the demand for Natural Gas in Florida?

A. As Expert witness Dr. Richard K. Harper, PhD. will testify, the state of Florida continues to grow both economically and in terms of population. Peoples is meeting the strong demand for natural gas by constructing gas infrastructure to serve customers across Florida. As described in Company witness O'Connor's prepared direct testimony, Peoples is expanding to serve customers in new areas, helping local economies and

providing energy choice to residents and businesses. As Company witness Richard F. Wall describes in his prepared direct testimony, Peoples is growing organically by expanding within its existing service areas and providing service lines to individual customers. The Company is building to meet the demand in new areas of Florida's growth. Finally, Peoples is reinforcing its system in order to minimize outages, and to increase resiliency to all its customers.

Q. When is the most favorable time to expand natural gas systems?

A. The most cost-effective way to provide natural gas to customers is to build infrastructure prior to the construction of homes and businesses. Road rights-of-way tend to be less congested and driveways and landscaping does not yet exist resulting in lower initial construction costs.

In addition to the initial cost considerations, the early installation of natural gas facilities makes natural gas available immediately when homes are constructed, or business are opened. While some customers can choose to convert from other energy sources to natural gas at a later point in time, this is usually a much more expensive way to obtain natural gas service compared to early natural gas installation.

Q. What challenges are presented during the early installation of natural gas facilities?

A. One of the biggest challenges during the early stages of natural gas installation is that the best time to build out the infrastructure is before the customers arrive and the demand is certain. In this way the investment by the utility precedes the arrival of the demand. But this is also the way that costs are contained in the long run because pre-development – before the roads, parking lots and building slabs are built – is the simplest, safest and most efficient time to install the natural gas infrastructure. The presence of nearby natural gas infrastructure is often a desirable feature that many developers are able to use. Eventually, the new customers who choose natural gas service help us to recover the costs of the initial investment. But to correctly anticipate the full build out of homes and businesses along a pipeline requires a great deal of data and thoughtful analysis.

Q. Is Peoples making other investments to ensure safe and reliable service to its customers?

A. Yes. Peoples has made significant investments in technology to ensure the safe, reliable delivery of natural gas across

Florida. A number of these investments are described in the prepared direct testimony of Company witness Wall. Additionally, the Company has made numerous technology investments to improve the customers' experience. These improvements are described in Witness Whiting's prepared direct testimony.

BASE RATE INCREASE REQUEST

Q. Why is the Company requesting a base rate increase at this time?

A. Peoples seeks an increase in base rates so it can continue to provide a high level of service to customers and to meet the demand for new natural gas service across Florida while allowing for the opportunity to earn a fair return on the Company's investment.

Q. What is the amount of the annual revenue requirement increase and authorized Return on Equity ("ROE") requested by Peoples?

A. A total incremental base rate increase of $61.7 million is needed to continue to provide high quality and reliable gas service to the people of Florida. Additionally, the Company is seeking to move approximately $23.6 million into base revenue associated with moving its Cast Iron / Bare Steel

Rider (“CI/BSR”) investments into rate base and resetting the CI/BSR surcharge.

A significant amount of time has passed since the last base rate increase by Peoples, approximately 12 years. Since then, our total system rate base has almost tripled and the number of customers we serve has grown by almost 73,000 or by 22.4 percent.

Peoples’ proposes to maintain the authorized rate of return on equity of 10.75 percent, which is supported by Expert witness Robert B. Hevert. However, our proposed overall rate of return of 6.63 percent is 190 basis points lower due to successful management of the financing needs of our business.

Q. What is the proposed average rate increase for a typical customer?

A. The proposed rate increase will result in less than a $5.00 per month increase to a typical residential customer using 240 therms per year. Even with this monthly increase, the residential use of natural gas continues to offer significant savings versus other energy sources while providing a value and quality of life benefits that our customers have come to greatly appreciate. The proposed increase will also result

in a 3 percent to 10 percent total bill impact to the average customer in our non-interruptible commercial customer classes, excluding the commercial standby generator class, based on our current Purchased Gas Adjustment ("PGA") costs. With gas commodity prices anticipated to remain low for the foreseeable future, as further explained in witness O'Connor's and Expert witness Dr. Harper's direct testimonies, these increases support our investments to meet further customer demand, ensure system reliability and enhance safety and operations.

Q. Has Peoples completed an analysis of other commodities that have increased since 2009?

A. Yes, Peoples conducted an analysis of common household and business commodities using the U.S. Bureau of Labor Statistics' CPI-U index for price differentials over 2009 – 2020.

Common household commodities that have increased over this time included:

1. Baby Food (22 percent)
2. Meat (28 percent)
3. Cable & Satellite Television Services (35 percent)
4. Bacon (37 percent)

5. Butter (51 percent)

Using proposed rates, the average RS-2 customer's bill would increase by 14 percent. The Company found many common household items and services' price increases have significantly outpaced the proposed RS-2 increase over the same time period.

Common business commodities that have increased over this time included:

1. New Trucks (14 percent)
2. Motor Fuel (21 percent)
3. Garbage & trash collection (33 percent)
4. Postage & delivery services (47 percent)
5. Health Insurance (51 percent)

Using proposed rates, the average GS-1 customer's bill would increase by 7 percent. The company found many commercial items and services' price increases significantly outpaced the proposed GS-1 increase over the same time period.

Additionally, the Company reviewed the Bureau of Labor Statistics' Inflation Calculator. Cumulative inflation from 2009 to 2020 is 21 percent. The Company's proposed increase to rates is less than that of inflation and many other items

and services. The lower relative proposed increase versus inflation and various other items and services helps demonstrate natural gas would still come at a good value to its customer base.

Q. What are the key drivers of the Company's requested increase?

A. The key drivers for the Company's requested increase include its capital investments, improvements in safety and operations and increased construction and operations costs.

In order to respond to customer demand, improve system safety, and enhance system resiliency, the Company has an obligation to make necessary infrastructure investments that provide a safe and reliable natural gas distribution system in the communities Peoples serves. From 2009 through 2019, the Company has invested approximately $1.2 Billion in capital expenditures and has worked hard to make these investments without having to increase base rates to customers during this period. These significant infrastructure investments include adding more than 2,700 miles of main line pipe, adding more than 105,000 new customers, and making significant safety improvements through the accelerated replacement of cast iron and bare steel pipe.

While Peoples has made tremendous progress improving and expanding the Company's system to meet the needs of its customers, further investments are needed. Furthermore, as Company witness Wall states in his direct testimony, current construction costs have increased since the last rate case, which is also contributing to Peoples' need to increase base rates.

In addition to infrastructure investments, the Company has identified incremental operational resources to further the safety and reliability of the system and the communities we serve, meet evolving customer expectations and provide Florida with innovative energy solutions. In addition, certain operating expenses, such as medical costs, are increasing at a pace much faster than inflation and customer growth.

Q. How has Peoples managed its business since 2009 to avoid a base rate adjustment until now?

A. The Company has taken a number of steps to avoid a base rate increase since 2009 including focusing on operational efficiencies, cost control and regulatory agreements to avoid a request for an increase in rates.

The Company has proactively taken measures to improve operational efficiencies, including centralization of operational support teams; standards, compliance, dispatch, gas control and training; and deployment of new technology and software systems which have helped reduce the need for higher rates. In addition, over the last several years Peoples has engaged in numerous continuous improvement projects.

Peoples has moderated the financial impact of its significant investment in system assets by reducing its overall cost of capital. In 2019, the Company's overall cost of capital using the 10.75 percent midpoint ROE is approximately 6.6 percent, which is nearly two hundred basis points lower than the Commission approved 8.52 percent in the last base rate proceeding. This reduction is the result of the Company's prudent management of long-term debt financings which have reduced the Company's debt interest rates and maximizing available tax deductions that have significantly increased deferred income taxes as a funding source of capital.

Q. What regulatory agreements has the Company entered into since the last base rate proceeding in 2008?

A. Peoples has worked with the Commission, The Office of Public

Counsel and other customer representatives to develop Agreements that have helped the Company remain out of a base rate proceeding.

In late 2012, the Commission approved Peoples' CI/BSR program that supports the replacement of approximately 570 miles of main, enabling the Company to significantly improve system safety and reduce carbon emissions.

As a result of Peoples most recent depreciation study in 2017, the Commission approved an agreement reducing annual depreciation expense, accelerating $32.0 million of regulatory asset amortization associated with manufactured gas plants ("MGP") environmental remediation costs, and allowing for the inclusion of approximately 550 miles of obsolete plastic pipe replacements through the existing CI/BSR, and established a ROE range of 9.25 percent to 11.75 percent.

In 2018, the Commission approved an agreement authorizing Peoples to net approximately $10.9 million of accelerated MGP environmental remediation costs against the estimated 2018 federal tax reform benefits. Beginning in January 2019, Peoples reduced its base rates by approximately 5 percent or $11.6 million for the impact of tax reform and reduced annual

depreciation expense by an estimated $10.3 million. Per the 2018 Settlement Agreement, Peoples is permitted to initiate a general base rate proceeding during 2020 regardless of its earned ROE at the time, provided the new rates do not become effective prior to January 1, 2021.

Q. What other witnesses will testify on behalf of Peoples in this proceeding? Please provide a high-level summary of each witness' testimony.

A. There are 12 other witnesses who will provide direct testimony on behalf of Peoples:

Monica A. Whiting, Vice president of Customer Experience for Tampa Electric and Peoples, will detail the improvements made to better serve Peoples' customers and describe the numerous national awards Peoples has received in recognition of its high levels of customer service.

Richard F. Wall, Vice President of Engineering and Operations, will explain the operational improvements Peoples has made to improve safety, reliability and customer service.

Timothy O'Connor, Vice President of Business Development, will discuss the demand for natural gas in Florida, the need

for several major system expansion projects and associated capital investments to meet customer demand and the future of natural gas in Florida.

Richard K. Harper PhD., President of Economic Consulting Services Inc., will discuss the economic conditions in Florida and will provide information on the contributions of natural gas to the economy of Florida.

Robert B. Hevert, Partner at ScottMadden Inc., will provide a recommendation regarding the Company's proposed Return on Equity to be used for ratemaking purposes.

Sean P. Hillary, Controller at Peoples, will provide testimony regarding supporting the Company's decision to use a projected 2021 test year for ratemaking purposes, the determination of the Company's proposed annual revenue requirement, the cost of capital, and associated financial topics.

Valerie Strickland, Director of Corporate Tax at Tampa Electric, will provide testimony related to the computation of income tax and accumulated deferred income taxes, and the parent debt adjustment.

Charlene M. McQuaid, Vice President of Human Resources for Emera Inc. and Acting Vice President of Human Resources for Peoples will provide testimony related to compensation and benefits.

Lorraine L. Cifuentes, Director of Load Research and Forecasting at Tampa Electric, will describe Peoples' forecasting process and present the customer and revenue forecast that supports the revenue requirement for Peoples.

Daniel P. Yardley, Owner of Yardley and Associates, will testify regarding the cost of service, study, billing determinates and appropriate rate design.

T. Mark Whitaker, Director of Operations for Peoples, will provide testimony related to proposed changes to Peoples miscellaneous service charges in the Company's tariff.

Luke A. Buzard, Vice President of Regulatory Affairs for Peoples, will present the revised tariff sheets reflecting the requested rate adjustments and other tariff modifications for which Peoples seeks the Commission's approval.

SUMMARY

Q. Please summarize your prepared direct testimony.

A. Peoples' corporate mission is to improve the quality of life for the communities we serve. Peoples service of natural gas is a critical energy source in the state of Florida providing affordability, efficiency, resiliency and sustainability for residential, commercial and industrial customers.

Although Peoples has been successful in managing its business for 12 years without requesting an increase to base rates, an incremental increase is now necessary to ensure the delivery of safe and reliable natural gas to meet growing customer demand while earning an appropriate rate of return on our investment. Increased construction costs, pipeline infrastructure investments for the purposes of reliability and customer demand, and the increase in costs to operate the system with our high standards for safety and customer service are the factors influencing the request for an incremental revenue requirement.

Peoples has achieved extremely high results in recent years regarding safety and customer experience, clearly demonstrated by Florida Public Service Commission compliance results, safety statistics and third-party customer experience survey studies. As the largest local gas distributor ("LDC") in Florida, Peoples believes that our strategic direction and corporate management is focused

appropriately on being a community steward and providing high quality customer service. Peoples request for the incremental revenue requirement within this case will provide for the opportunity to continue to be the backbone of the energy needs of Florida while operating at the level our customers and stakeholders expect.

Q. Does this conclude your prepared direct testimony?

A. Yes, this concludes my prepared direct testimony.

(Whereupon, prefiled direct testimony of Karen Sparkman, adopting the testimony of Monica A. Whiting was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

MONICA A. WHITING

POSITION, QUALIFICATIONS AND PURPOSE

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

A. My name is Monica Whiting, Vice President of Customer Experience for Tampa Electric Company and Peoples Gas System ("Peoples" or the "Company"). My business address is 702 North Franklin Street, Tampa, Florida 33602.

Q. Please describe your duties and responsibilities as Vice President of Customer Experience at Peoples.

A. As Vice President of Customer Experience, I am responsible for leading the organization's customer experience strategy and operations. My responsibilities related to the customer experience strategy include ensuring the Company understands customers' evolving expectations for natural gas services and developing and implementing a strategy and plan to stay relevant to and provide excellent service to our customers. My customer operations responsibilities include delivering an excellent customer experience through the customer experience

centers, digital experience, billing and payment services and customer communications.

Q. Please provide a brief outline of your educational background and business experience.

A. I obtained my bachelor's degree in journalism from the University of Southern California. I began my utility career nearly 25 years ago with Colorado Springs Utilities in the area of communications. Since then I have held positions which have progressed in responsibility, functional area and leadership at four national utilities providing natural gas, electricity, water and wastewater services. I have experience in all areas of customer experience, including call centers, billing and payment, meter operations, key accounts, economic development, project management, demand side management, customer facing technologies, communication, marketing, product development and management, and strategic planning. I serve on various national customer experience industry organizations, and often speak on the topic on podcasts and at industry and national events. I have been with Peoples for more than three years.

Q. Have you testified before the Florida Public Service Commission ("Commission") in a previous Docket? If so, please

describe.

A. No.

Q. What are the purposes of your prepared direct testimony in this proceeding?

A. My prepared direct testimony will detail the improvements Peoples has made to better serve our customers. I will discuss Peoples' historically strong J.D. Power ratings from the Company's residential and commercial customers, as well as, various national awards, and the Company's strategy and philosophy to keep the customer at the center of everything we do. I will explain Peoples' focus on delivering a customer experience based on what customers want and how they want the Company to deliver it and will discuss these improvements across four major categories:

1. Customer Billing and Payment
2 Customer Digitalization
3. Customer Experience Center Improvements
4. Other Improvements

I will also describe how Peoples uses a holistic approach to customer experience which includes all areas of the

organization. As such, there are elements of our increased operations and maintenance expense in areas outside of the traditional customer service budget, such as operational personnel, that are a result of meeting enhanced customer expectations.

Q. Did you prepare an Exhibit in support of your prepared direct testimony?

A. Yes. Exhibit No. (MAW-1) was prepared under my direction and supervision. My Exhibit consists of three documents, entitled:

Document No. 1	List of Minimum Filing Requirements - ("MFRs") Co-Sponsored
Document No. 2	TECO Peoples Gas J.D. Power Study Highlights
Document No. 3	TECO Peoples Gas Awards

The information in the MFR schedules listed in Document No. 1 of my exhibit is based on the business records of the Company maintained in the ordinary course of business and are true and correct to the best of my information and belief.

CUSTOMER EXPERIENCE STRATEGY & INDUSTRY BACKGROUND

Q. Please explain how customer expectations in relation to their natural gas service have evolved?

A. Customer expectations in the gas business continue to grow and evolve, largely driven by technology and advancing service standards across various industries. Peoples has a long history of strong customer satisfaction, but what it took to please customers in 2008, the year of the Company's last rate case, is different than what is required today. Further, the Company understands that customers' needs and expectations will change and continue to evolve. What has not changed is that customers still want and expect safe, reliable and affordable natural gas, but that alone is not enough to meet customer expectations today. We live in a more digital world and customers expect an experience from their natural gas utility that is similar to what they receive from other companies like Amazon, or Federal Express. Customers want to self-serve using their communication channel of choice, whenever and wherever they want. Customers want faster service which raises service level expectations. Customers want a consistent and personalized experience that is simple to use, convenient and innovative. They want to feel empowered with information that allows them to timely make decisions for their family or business. They want to feel directly connected to their utility with a mutual sense

of commitment to the environment and service to the community. Additionally, they want to be able to do business with Peoples 24 hours a day, seven days a week. It is more challenging to gain the customers' attention because there is so much more information competing for the customer's attention. Customer research confirms that customers want information specifically related to services that impact their account, safety & reliability, billing and payment, and what the utility is doing to improve infrastructure and the environment.

Q. How has Peoples responded to customers' changing expectations?

A. Peoples has improved its customer service by leveraging technological advancements and human resources aligned to meet changing customer expectations. My prepared direct testimony will outline some key improvements that helped achieve this strategy and will demonstrate how this strategy and its implementation have created the Company's world class customer service.

Q. Has Peoples received any industry awards for its customer service?

A. Yes.

Q. From what organizations?

A. From J.D. Power and Escalent, the leading companies in measuring consumer opinions and attitudes regarding companies and their performance.

Q. What awards measuring customer service has Peoples received from J.D. Power?

A. Peoples ranked highest in the South Midsize segment of the J.D. Power 2019 Gas Utility Residential Customer Satisfaction Study. This was the seventh consecutive year Peoples won that award. Peoples also received the highest award in the South Segment of the 2019 Gas Utility Business Customer Satisfaction Study. This was the third time that Peoples received that award. See Document No. 2 of my exhibit for a timeline overview of the J.D. Power awards won by Peoples.

Q. Has Peoples received any similar awards from Escalent?

A. Yes. In 2019, Peoples was named the Most Trusted Utility in the nation, for the fifth time, in the 2019 Cogent Syndicated Utility Trusted Brand & Customer Engagement™ Residential

Study by Escalent. Peoples was also designated a Customer Champion and Environmental Champion by Escalent, for the sixth consecutive year, for its exceptional performance in the brand trust, service satisfaction and product experience categories of the Study. In 2019, Peoples was also named the Easiest Utility in the Nation to do Business with by Escalent. Document No. 3 of my exhibit contains a snapshot of Peoples' awards won since 2013.

Q. What is Peoples' customer experience philosophy and how does it benefit customers?

A. In 2017, the Company developed a formalized and updated Customer Experience Strategy and Customer Commitment Statement. This formalized strategy and commitment allows all employees to understand what is important to customers today, how customers expect us to deliver our products and services to them, and how each employee has accountability and the potential to impact the customer experience.

Peoples' Customer Experience Strategy is focused on what is important to customers and how they want Peoples to deliver these services. Peoples has defined the "what" as six drivers of customer satisfaction:

1. Safety and Reliability
2. Billing and Payment
3. Price
4. Corporate Citizenship
5. Communication
6. Customer Service – on-line, phone and field

Peoples has developed a strategy of “how” it will deliver outstanding customer service by:

1. Creating an effortless customer experience
2. Empowering customers to design their energy experience of choice
3. Building two-way connections with our customers

A key foundation to Peoples’ customer experience strategy and commitment is that all employees are responsible for delivering a world-class customer experience.

IMPROVEMENTS THAT BENEFIT CUSTOMERS

Q. In what specific area has Peoples improved the Customer Experience?

A. Peoples has focused on people, processes and technology to make improvements in the following areas:

1. Customer Billing and Payments
2. Customer Digitalization
3. Customer Experience Center
4. Miscellaneous Improvements
5. Future initiatives

Q. What improvements has Peoples made in the Customer Billing and Payments process and how do these improvements benefit customers?

A. Billing and Payments, which include Credit & Collection activity, are one of the most important drivers to customer satisfaction for both residential and business customers. Customers expect timely and accurate bills, timely and accurate processing of payments, and options for how they receive and pay their bills. Since Peoples' last rate case in 2008, the largest initiative undertaken to improve our billing and payment experience has been the 2017 implementation of a new billing system to replace the Company's legacy billing system which dated back to the 1980's. As a part of this implementation, Peoples invested in new foundational technology to better serve our customers in the areas of billing and payment, as well as credit and collection services.

Q. What are the results of the changes in the billing software?

A. Peoples' software upgrade has significantly increased the Company's capabilities and enhanced the customer experience in a number of ways: First, Peoples redesigned the bill itself, adding usage graphs and significant customer messages and communication in a more customer friendly format. Second, the new software gives customers more billing options. For example, customers with multiple accounts have the options to have all of those accounts on one bill. Customers on the Tampa Electric system have the option of receiving a combined gas and electric bill. Third, Peoples has created a new and enhanced paperless billing experience that is integrated with its on-line portal. Fourth, Peoples has reduced the number of estimated bills, the number of adjustments to bills and has improved the timeliness of the issuance of bills.

Q. How did the Customer Relationship and Billing System ("CRB") upgrade impact credit and collection activity.

A. Peoples used the CRB upgrade in combination with various other automation tools, including BOT automation, to streamline back-office credit and collection activities. The Company has also been able to speed the processing of customer payments to multiple times per hour. Previously, these were

run once during nighttime hours, which resulted in payments being processed more slowly.

Q. Does Peoples have any measurements of improvements in billing and customer acceptance of those improvements?

A. Yes. Peoples has data for the following metrics:

1. 99.63 percent of all bills were generated within 1 day of the scheduled billing cycle,
2. 99.99 percent of customer payments were processed within 3 days of receipt,
3. Less than 0.20 percent of Peoples' bills were estimated,
4. 45 percent of Peoples' customers received paperless billing, and
5. 77 percent of payments were electronically transmitted.

Q. Has Peoples included digitalization in its customer service efforts?

A. Yes. Peoples' customer experience strategy focuses on the digitalization of service to our customers. Peoples' has adopted a mobile first strategy, keeping a focus on how customers can do business with the Company on their device and channel of choice. It is important to note that while

Peoples has a strong focus on digital and self-service solutions, this is balanced with ensuring a personal touch and interactions with customer service representatives and/or non-digital solutions when preferred by the customer. Customer digitalization, through on-line service, strongly shapes customer satisfaction and creates efficiencies that improve the telephone experience.

Q. In what other ways has Peoples used digitalization technology?

A. Peoples launched its first on-line customer portal in 2017. Peoples' online portal allows residential and commercial customers to complete more than a dozen functions, including viewing their bills, usage, payment history, making payments at any time, as well as starting and stopping service.

Peoples' digital service has evolved following the initial implementation of its on-line portal. Peoples has improved usability by improving the design and offerings of menus, redesigning transactional screens for a refined, easier to use, mobile user experience.

Q Does Peoples have any data indicating the effect of digitalization on the customer experience?

A. Yes. Peoples has the following data demonstrating the effectiveness of the digitalization strategy:

1. 52 percent of Peoples' active customers have an on-line portal account.
2. In 2019, 89.65 percent of e-mails were responded to in 24 hours and 98.94 percent in 48 hours, including weekends and holidays.
3. Peoples' online customer service ratings have improved by more than 105 points improving from 760 in 2012 (the first year J.D. Power measured the telephone experience separately) to 865 in 2019.

Q. What are Peoples' Customer Experience Centers?

A. The Customer Experience Centers are the Company's central customer connection hubs where we provide one stop shopping service to customer inquiries, handling all types of incoming channels ranging from telephone, email and social media etc. The Customer Experience Centers handle emergency and non-emergency requests. Peoples' has three physical Customer Experience Centers located in Ybor City, Plant City and Miami.

Q. What improvements has Peoples made to the Customer Experience Centers?

A. In the last several years, Peoples has improved its Customer Experience Center by redesigning more than 200 processes and procedures and training employees in their use. This has reduced unnecessary handoffs and improved accuracy. The process of a Peoples' customer initiating service is one example of where the amount of time a customer is on the phone with a Company representative was significantly reduced. Peoples has also deployed a secure document upload system so Customer Experience representatives and customers can securely e-mail documents, eliminating the use of fax machines.

Q. What additional training has Peoples undertaken in the area of customer service?

A. Peoples has developed enhanced cross functional and soft skill training, and safety training, for the Company's customer experience representatives. Those representatives are required to undergo annual internal certification programs which they must successfully complete to continue serving our customers. There is also training for Peoples' telephone representatives and billing and payment and credit & collections employees. The result is that employees are better able to serve customers on a wider range of topics and issues, significantly reducing the need to transfer customers

to other areas or put them on hold.

Q. Has Peoples made any enhancements to its Interactive Voice Response ("IVR") telephone system?

A. Yes. Although the IVR is an older system, the Company has made it easier for customers to speak to a live agent, to self-serve common functions, and to be transferred back to a representative to schedule a gas appointment after making a payment without needing to make another call. Peoples' IVR system currently self-serves more than 60 percent of the Company's calls.

Q. Does Peoples have any data on how improvements in training and the telephone system have enhanced customer service?

A. Yes. The Company's improvement in phone interactions with customers have improved as demonstrated in the following metrics:

1. 2019's average speed of answer was 30 seconds compared to 94 seconds in 2009, an improvement of 68 percent.
2. 2019's abandon rate was less than 2 percent compared to 6 percent in 2009, an improvement of 67 percent.
3. In 2019, 81 percent of all calls were answered in 30

seconds or less, compared to 73 percent in 2009, an improvement of 10 percent.

4. Peoples' telephone customer service ratings have improved by more than 50 points, improving from 777 in 2012 (the first year J.D. Power measured the telephone experience separately) to 830 in 2019.

Call volume in Peoples' Customer Experience Center has declined approximately 19 percent compared to 2009. This decrease occurred despite the fact that customer counts increased during this same period.

Q. What other key improvements has Peoples recently implemented?

A. In addition to improvements noted in the categories above, Peoples has implemented several additional improvements directly focused on improving the customer experience.

Peoples provides customers with a new welcome letter when customers initiate service informing them of critical policies, services, and billing and payment options. This letter is delivered either as a hard copy by mail or via e-mail depending on the customer's selection at the time of sign up. Peoples also sends customers post cards letting them know that the Company will be in their area for planned

meter safety inspections.

Peoples has refreshed key messaging on its social media, website and bills to ensure relevant communication with customers related to safety, reliability, conservation programs, billing and payment services, the 811 program and the Company's on-line portal. There are new enhancements to appointment scheduling with customers being offered more appointments with a four-hour window and a goal of achieving 95 percent on time arrival.

Q. Have these improvements impacted customer complaints?

A. Yes. Customer complaints filed with the Florida Public Service Commission ("Commission") against Peoples have decreased by 25 percent from 101 total complaints in 2012 to 76 complaints in 2019. Peoples is equally proud that during the implementation of a new billing system in 2017, customer complaints were minimal and below previous years' levels, which is a testament to Peoples' strong customer focus and excellent business operations. Finally, the Company is proud that it has had zero Commission infractions for the last four years. As part of its commitment to quality customer service, Peoples contacts all customers who file a formal or informal Commission complaint and work these matters to resolution

with the customer. Additionally, Peoples uses these complaints as an opportunity for continuous improvement, either through employee training, process or system changes and or improved customer education.

Q. Does Peoples have additional customer service initiatives which it plans on implementing in the near future?

A. Yes. Peoples has the following planned initiatives: A consolidated customer preference center so customers can select what types of communications they would like, via what channel, and when they want to receive it. This will include text, email and telephone alerts and notifications. Examples of topics customers can select are billing and payment notifications, outage updates, conservation messaging, appointments and more.

1. An updated web-platform system to replace the current older technology system.
2. An updated IVR system and call center management system.
3. Enhanced outage information on the portal outage map.
4. An on-line user group and customer research to better understand the wants and needs of our customers, including customer segmentation, so that more personalized service can be provided in the future.

5. A dedicated mobile application advancing Peoples' current responsive design mobile experience.

Q. What other areas of the Company are directly involved in enabling Peoples to achieve its outstanding customer service?

A. Delivering an excellent customer experience requires engagement beyond the customer experience team and extends into all parts of the organization. The Company's field distribution team is critical in delivering services directly to our customers at their home. Peoples has improved on time arrival for the field distribution teams, increased advance notification of service work and provided more face time with the onsite field representative providing information about work completed and other natural gas-oriented questions. The cost of providing customer excellence is not just within the Customer Experience budget but also sits within other budgets in the organization.

Q. What costs are associated with the new CRB?

A. Tampa Electric has capitalized the costs for the development of the new CRB system and charges Peoples an annual usage fee based on its annual usage of the system. These costs are noted in Company witness Sean P. Hillary's prepared direct

testimony as part of the O&M expenses for FERC Account Number 903 (a Customer Experience account) and on MFR Schedule G-2 page 14.

In explaining the variance from the O&M benchmark on page 3 of MFR Schedule C-38, after deducting the annual usage fee of approximately $2.1 million, which did not exist in 2007, and adjusting for annual inflation, the customer experience departments' O&M expense has in fact reduced from their 2007 levels and is in fact under their benchmark.

Q. How does the Company work with customers struggling to pay their utility bill and/or to keep the cost of their gas utility bill down?

A. The Company offers payment arrangements to provide flexibility with extensions when customers are struggling to pay their bill. If assistance beyond a payment arrangement is required, Peoples works with a network of regional nonprofits to provide assistance with utility bills and other services provided by these agencies. Examples include, referrals to United Way's 2-1-1, LIHEAP funding (seasonal) and Peoples' SHARE Program, which is administered through the Salvation Army.

Peoples has enhanced the online portal for regional nonprofit

partners, which allows People's social service agencies to self-serve and work more efficiently in assisting customers in need. As a result, Peoples has increased its social service agency partnerships from 32 partner agencies in 2012 to 199 in 2019 and has provided approximately $300,000 in assistance dollars to over 1,500 households in 2019.

Peoples also works with customers to ensure they are using natural gas efficiently. It offers rebates for energy efficient appliances; provides education on energy saving tips through customer communication; and, conducts on-site high bill investigations when customers are concerned with high usage. Peoples is currently implementing an online energy audit tool. This tool will provide customers with a personalized view of their energy usage with links to our conservation programs and savings tips based on their inputs. Customers will also have the ability to perform scenario-based simulations to see the impact a change in behavior or equipment will have on their bill.

SUMMARY

Q. Please summarize your prepared direct testimony.

A. Peoples has a long history of delivering safe, reliable and affordable natural gas while delivering high value customer

service as measured through customer satisfaction. While this has been the Company's legacy, customer expectations, largely driven by technology and information, continue to change at a rapid pace. It is critical for Peoples and the utility industry to evolve with growing technology and customer expectations. Since Peoples' last rate case, the Company has successfully implemented a new customer billing system, a new on-line portal with a mobile-first approach, improved and increased electronic payment channels for our customers, improved customer service levels for our Customer Experience Center, billing and payment services, and made hundreds of smaller process and system enhancements to better serve Peoples' customers.

Peoples' enhanced customer experience strategy and customer commitment to engage all employees in this work, has been foundational to our continued success. Peoples' commitment is to keep the customer at the center of everything it does, including the investments we make in the areas of people, processes and technology.

It is this focus, and Peoples' excellence in execution, that has resulted in its industry leading customer satisfaction results year after year. Since 2009, Peoples has improved its residential J.D. Power customer satisfaction ratings by

more than 146 points, and by more than 70 points in the business study since its first year in 2016. Further, since 2009 Peoples has received 27 national customer experience awards including 10 from J.D. Power and 17 from Escalent /Cogent as a customer champion, environmental champion, easiest to do business with and most trusted brand.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

(Whereupon, prefiled direct testimony of Richard F. Wall was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

RICHARD F. WALL

POSITION, QUALIFICATIONS AND PURPOSE

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

A. My name is Richard F. Wall. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Peoples Gas System ("Peoples" or the "Company") as the Vice President of Engineering and Operations.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for all aspects of utility operations for Peoples, which consists of the following areas of responsibilities: Engineering, Gas Operations, Business Operations Support ("BOSS"), Technical Training & Development. My responsibilities include oversight of each of Peoples' 14 service areas, its transmission and distribution assets, including developing annual capital and operating budgets, and directing and planning the operational and maintenance activities of the distribution system to

ensure maximum efficiency, reliability and the safety of natural gas delivery to Peoples' customers. I assist in developing marketing and sales strategies and am responsible for the direction of team member training and evaluation, team member safety, organizational and team member development for all engineering and operational team members.

Q. Please provide a brief outline of your educational background and business experience.

A. I have been in the natural gas business since graduating from Hialeah High School in 1977. I began as a meter reader with City Gas Company of Florida and worked my way up to Vice President of Operations when that company was acquired by Elizabethtown Gas. At that time, I became responsible for operations in Florida, North Carolina and portions of Virginia. Elizabethtown subsequently became NUI Corporation which was in turn acquired by Atlanta Gas Light, and I worked for that company as Director of Operations before joining Peoples in 2005 as General Manager of South Florida Field Operations. I held several other positions at Peoples before holding my current position. Throughout my career I have attended many technical and administrative programs at the Gas Institute of Technology, Gas Training Institute, The Wharton School of Business, The University of Tampa and the

University of Oklahoma.

Q. What are the purposes of your prepared direct testimony in this proceeding?

A. My prepared direct testimony explains the capital investments Peoples has undertaken and the investments it is expected to make in the 2021 projected test year to meet customer demand and continue to provide safe and reliable natural gas service. I will also explain Peoples' capital expenditure budget process and describe investments in the Company's team members, processes and technology to enhance safety, improve the Company's overall efficiency and continue the Company's outstanding customer service. My prepared direct testimony will be organized into two general sections: Capital Projects & Construction Costs and Operations & Maintenance Expense.

Q. Did you prepare any exhibits in support of your prepared direct testimony?

A. Yes. Exhibit No. (RFW-1) was prepared under my direction and supervision. My Exhibit consists of 1 Document entitled:

Document No. 1 List of Minimum Filing Requirements - ("MFRs") Co-Sponsored

The information in the MFR schedules listed in Document No. 1 of my exhibit is based on the business records of the Company maintained in the ordinary course of business and are true and correct to the best of my information and belief.

Q. Describe the strategic principles and priorities that have guided Peoples' Operations and Distribution departments since Peoples' last base rate proceeding in 2008?

A. Safety, system integrity, operating efficiency and growing to meet customer demand have been and continue to be Peoples' guiding principles and priorities.

Q. Please summarize Peoples' efforts in these areas since its last base rate proceeding in 2008.

A. Safety is the most critical consideration in Peoples' business. Peoples has made significant investments in safety and reliability including the replacement of legacy pipe consisting of Cast Iron / Bare Steel ("CI/BS") and Problematic Plastic Pipe ("PPP"), as well as, investments in sustaining capital projects to ensure system integrity and reasonable and appropriate levels of redundancy.

Peoples has made significant improvements to the

organizational and functional alignment of operations in order to continue to improve safety and operational efficiency in providing high quality service to Peoples' customers. Enhancements to operations include centralizing key functions and adding resources to adequately accommodate the high customer demand and improve operational service, reliability and management.

Peoples has also invested extensively to meet growing customer demand for natural gas. The Company has experienced significant increases in demand for gas service which has driven capital activity above historical levels. Peoples employs multiple processes and protocols to manage construction projects ensuring initial pricing, project and cost management is properly administered.

CAPITAL PROJECTS & CONSTRUCTION COSTS

Q. Please describe the capital investment categories that are budgeted on an annual basis.

A. Peoples budgets capital projects in four categories as detailed by Company witness Sean P. Hillary in Exhibit (SPH-1) Document No. 6 of his prepared direct testimony:

1) Growth Projects: (2020: $117.0 million, 2021: $95.5

million) Growth projects respond to the increased demand from existing customers or to the reasonably anticipated demand from future customers. Many larger scale capital projects have elements of growth and system sustainability features.

2) Sustaining Projects: (2020: $52.2 million, 2021: $55.9 million) Sustaining projects are primarily designed to enhance the safety and reliability of the natural gas supply to customers and include projects to maintain adequate pressure or flow. These projects also include activities to ensure availability of a primary and secondary feed of supply and can include construction activities related to mandatory relocation activities. Sustaining projects are critical to adequately manage the operation of the system and to provide a high level of safety and overall system reliability for our customers.

3) Legacy Integrity Projects: (2020: $50.1 million, 2021: $38.9 million) Legacy projects include projects to retire and/or replace legacy CI/BS and PPP (obsolete materials) that have been identified by Pipeline and Hazardous Materials Safety Administration (“PHMSA”) as higher risk. The Company has undertaken these projects to improve the safety and reliability of Peoples’ system.

In 2019, Peoples proactively accelerated planned replacement efforts aimed at several locations within Peoples' distribution system that involved cast iron piping which were designed and operating at Utilization Pressure ("UP"), these UP systems were in the south Florida area. Based on recent industry safety related information and specific operating events, these UP projects were reevaluated, and Peoples determined that proactively accelerating the replacement of these projects within the 2019 capital budget and plan was in the best interest of safety and service to Peoples' customers.

4) Allowance for Funds Used During Construction ("AFUDC") Projects: (2020: $139.4 million, 2021: $73.5 million) Some of the growth and sustaining capital projects included in the Company's capital budget are eligible to accrue an AFUDC. The capital projects in the test year that are eligible for AFUDC are discussed in the prepared direct testimony of Company witness Hillary.

CAPITAL BUDGET PROCESS

Q. How does Peoples develop and budget capital expenditures?

A. In 2018, Peoples implemented an annual 10-Year Integrated Resource Plan ("IRP") to use as a tool to guide the development of its annual capital budget. In the IRP, the

Company first assigns scores to projects based on the following categories: 1) Safety, 2) Compliance, 3) Reliability, 4) Environmental 5) Growth, or 6) Strategic Direction. Assigning these scores involves judgment, because most capital projects, particularly large-scale capital projects, have elements of more than one category.

Q. What is the next action in the IRP process?

A. The Company develops data for each project in the form of a Project Charter that feeds data into the IRP system. The data inputs are systematic and uniform for each project, which allows each project to be compared with the other projects. The IRP process provides a consistent analytical framework for projects over time and allows the Company to identify, rank, and select the most operationally and cost-effective projects.

If the project is selected as noted above, it is brought into the capital budget and categorized as either a growth project, a sustaining project, a legacy project or an AFUDC project after which it will go through a further review process as part of the capital review process discussed by witness Hillary in his direct testimony.

GROWTH/SUSTAINING CAPITAL PROJECTS

Q. What Growth/Sustaining Capital Projects are planned for 2020?

A. Peoples is planning four major capital projects upcoming in 2020: 1) Jacksonville Expansion, 2) Southwest Florida Expansion, 3) Panama City Expansion, and 4) Miami Liquified Natural Gas ("LNG") project. Company witness Timothy O'Connor describes these projects and how they respond to customer demand in his prepared direct testimony. My prepared direct testimony explains how these capital projects maintain or improve safety and reliability.

Q. Please describe the Jacksonville Expansion Project.

A. The Jacksonville Expansion Project consists of four components: 1) An uprating of the southern portion of the existing 12-inch steel Fernandina Beach Pipeline that would allow natural gas to flow north to south from the Callahan Pipeline Interconnect toward Jacksonville; 2) the construction of a new 16-inch steel pipeline originating from the Fernandina Beach 12-inch steel pipeline near the intersection of Pecan Park Road and Main Street and terminating at the existing 24-inch steel pipeline on Heckscher Drive near the Port of Jacksonville allowing increased natural gas flow from the north to the south; 3) a

new compressor station near Peoples' Baldwin Gate Station that would allow gas being transported on the Southern Natural Companies ("SONAT") south Georgia lateral to flow more efficiently into Jacksonville; and 4) execution of a Gas Transportation Agreement with Seacoast Gas Transmission on the Callahan pipeline. This Agreement will provide Peoples' capacity from SONAT to Peoples' Fernandina Beach line and was approved by the Commission on January 16, 2020 in Docket No. 20190145-GU.

Q. What are the benefits and costs of Jacksonville Expansion project?

A. This four-part Jacksonville Expansion project will deliver incremental capacity to Jacksonville that will enable Peoples to meet current and future natural gas demand and reduce any supply capacity pressure limitations that would otherwise occur in the future. The Jacksonville Expansion project is expected to cost approximately $58.8 million and is planned to be in-service by December 2020.

Q. Please describe the Southwest Florida Expansion project.

A. The Southwest Florida Expansion project involves the construction of approximately 65 miles of 8-inch steel main

to expand Peoples' Fort Myers system.

Q. What are the benefits and costs of the Southwest Florida Expansion project?

A. The Southwest Florida Expansion project will provide gas to communities that previously did not have access to natural gas and includes the buildout of a system feed which adds increased reliability to the Fort Myers distribution system. Much of the Fort Myers' service area currently receives gas from a single point on the Florida Gas Transmission ("FGT") Intrastate Pipeline System. This project will create a new loop so a significant portion of the Fort Myers service area will be served by more than one feed, which will increase system reliability. The Southwest Florida Expansion project will cost approximately $48.7 million and is expected to be in-service by December 2020.

Q. Please describe the Panama City Expansion project, its benefits and costs.

A. The Panama City Expansion project will create another supply point into Panama City and will ease constraints on the current FGT Panama City feed. Peoples will connect an already existing FGT lateral to the rest of its Panama City supply

system, which will create redundancy and reduce supply disruptions. Peoples will construct two new gate stations and build 19 miles of 8-inch steel pipeline at a cost of approximately $28.4 million. The Panama City Expansion project is expected to be in-service by December 2020.

Q. Please describe the Miami LNG project.

A. The Miami LNG project involves construction of an LNG storage and a vaporization facility. It will give Peoples a new and cost-effective option for managing its summer system peaking requirements. This LNG project will directly connect to the Company's existing distribution system in the Dade-Broward area and will eliminate system supply constraints and the natural gas reliability challenges inherent in a single feed system. Once constructed, the Miami LNG project will provide added reliability and a continuous support option for natural gas service to Peoples' south Florida customers. The Miami LNG project will cost approximately $20.6 million and is expected to be in-service by June of 2021.

Q. Are the four major capital expansion projects prudent?

A. Yes. Each project was identified in Peoples' IRP process as necessary and cost-effective. Each of the projects will

improve system reliability, operating efficiency and will allow Peoples to reasonably meet future customer demand.

OTHER SUSTAINING PROJECTS

Q. Please describe Peoples' project types within the sustaining budget category and how they relate to the Company's modernization efforts.

A. Sustaining projects involve specific investments and advancements in system reliability such as looping, technology, and system hardening projects. These projects also include advancements in system reliability and technology improvements including:

- Monitoring and control in systems and system design.
- Improved tools and equipment.
- New or upgraded gate stations.
- District regulator station replacements and upgrades.
- Electronic leak detection and line detection tools.
- GPS and bar coding.

New technology, such as Supervisory Control and Data Acquisition ("SCADA"), Geographical Information System ("GIS"), Leak Management System ("LMS"), Multi-Vendor Reading System and Work Asset Management; and Municipal and highway

projects which allow for system upgrades.

Peoples is continuously focused on modernization efforts that drive improved safety, reliability and mitigation of risk. These advancements include, numerous performance and operating structure changes that have been implemented over the past 12 years, striving for standardization and consistency across the Company. Peoples has focused its attention on the areas of incident prevention, inspections and monitoring, replacement of legacy systems and obsolete materials, and actively analyzing and controlling the distribution of natural gas across Peoples' distribution systems. Peoples has also placed particular focus on improved team member training and learning with the addition of the Company's new GasWorX training facility. Peoples has upgraded its fleet through standardized vehicle and related equipment configurations and applicable work applications, adding fleet Automated Vehicle Locating tracking solutions. This has allowed real time electronic GPS vehicle location, speed and fastest route assessments leading to improved safety, performance, and customer appointment monitoring. Peoples has made improvements to LMSs to address leak detection, tracking and analysis, and has implemented the use of remote methane leak detection and the new "MobileGuard" leak detection system to increase the Company's focus on

methane reductions.

Q. How have these efforts helped to mitigate risks across the People's distribution network?

A. Peoples continues to be focused on establishing a framework for identifying and mitigating risks and continuously improving pipeline safety by engineering increased safety measures in Peoples' gas delivery systems, including the development of its Safety Management System ("SMS") in alignment with newer American Petroleum Institute standards. The Company believes that by continuously improving pipeline safety, operating integrity and safeguarding Peoples' systems for reliability and growth, it is protecting customers and the general public, and proactively reducing its Green House Gas footprint and better protecting the environment for natural gas service delivery to customers.

Q. Please describe Peoples' continuing efforts to retire and replace CI/BS pipe and PPP.

A. In 2012, Peoples began a program to retire and replace all CI/BS pipe and PPP from its system through the CI/BS Rider, which was approved by the Commission in Docket No. 20110320-GU, by Order PSC-12-0476-TRF-GU, issued on September 18,2012.

The Company will continue to minimize safety risks and improve operational reliability for its customers and the public by replacing these high-risk legacy pipes.

Q. What progress has Peoples made on CI/BS pipe and PPP replacement?

A. By the end of 2020, Peoples will have replaced approximately 91 percent of its CI/BS pipe. This includes having removed all remaining low-pressure pipelines from the system (11 miles) by mid-2019. These low-pressure pipelines were considered high safety risks since there are no added protections (pressure reliefs) installed at the connected customer premises. The Company expects to complete its remaining CI/BS retirements and replacement by 2022, which is within its original 10-year estimate.

Peoples began its PPP program on July 1, 2017 (528 miles) and the Company will have replaced about 30 percent of PPP by end of 2020. The Company expects to complete PPP retirements by 2028.

Q. How many miles of CI/BS pipe and PPP are being replaced in the 2021 projected test year?

A. Peoples plans to replace a total of approximately 30 miles of CI/BS and approximately 50 miles of PPP for a total of $38.9 million. The Company will focus on Miami, Tampa, Saint Petersburg, Orlando, Jacksonville and Ocala and then begin work in Daytona and Jupiter. The Commission has previously determined that these projects improve the safety of Peoples' system and are a prudent investment for the Company.

CONSTRUCTION COST CONTROLS

Q. Are natural gas system construction costs increasing?

A. Yes. Between 2009 and 2019, Peoples experienced construction cost increases between 34 percent and 76 percent for polyethylene pipe projects and over 90 percent for steel pipe projects. Construction and Installation costs vary significantly depending upon the project type (scattered new main and service work versus developed commercial main and service) and are equally impacted by jurisdictional costs associated to the specific work areas.

Q. Why are these construction costs increasing?

A. These increases have been driven by increases in: material costs; industry market demand for external contractors; governmental, regulatory, and compliance requirements

including permitting and maintenance of traffic requirements; retirement, removal and restoration costs; construction safety protocols and enhanced construction management, inspection and quality control.

Q. How does Peoples ensure that its planned capital projects are constructed at the lowest reasonable cost?

A. Peoples has made three significant improvements to the overall management of its construction cost controls for capital projects since the last base rate proceeding in 2008.

First, in 2015, the Company consolidated the number of contractors and secured fixed unit pricing through uniform blanket contracts establishing a better competitive environment. This lowered costs, streamlined project cost estimating and design and improved quality control and safety performance. The Company uses the same formal bidding process for all individual (non-blanket) projects, that are expected to cost more than $1.0 million.

Second, in 2016, the Company began competitively bidding its management of consolidated material inventory and supply through a centralized material management firm, Vendor Managed Inventory. This approach allows the Company to secure

necessary construction material resources at pre-established competitive prices.

Third, Peoples has improved oversight of its construction activities by increasing the use of construction project managers, job-site inspectors and system-wide project management. In 2019, Peoples centralized the engineering and construction activities across Peoples within one department to provide for turnkey design, construction and project management, and project closure.

Q. Are the costs of construction projects included in the 2021 projected test year reasonable?

A. Yes. The Company has used the processes and procedures described above to ensure that the construction projects included in the 2021 projected test year are needed and will be constructed at the lowest reasonable cost.

QUALITY ASSURANCE

Q. How does Peoples ensure that capital construction projects are completed by qualified personnel who share the Company’s focus on quality and safety for the customer?

A. In 2018, Peoples implemented a Contact Business Partner

Safety Program. This program is designed to ensure that there is adequate oversight of the contractors working on and constructing Peoples' system. Peoples uses a third-party system, ISNetWorld.com, to track and review pertinent contractor documentation (e.g., drug and alcohol plan, safety program participation, insurance certification, etc.) and verify the contractor's operator qualifications and inspection reports recorded by the Company's inspectors. Peoples' Safety and Construction Management Departments monitor the inspection reporting for any potential safety issues and respond when needed. Throughout the construction process, inspectors utilize the ISNetWorld.com to confirm that crews working on Peoples' system have appropriate operator qualifications.

In 2016, Peoples developed a robust quality assurance program. The Quality Assurance team performs various audits of operational controls, Company safety programs, and contractor operator qualification programs. This program is designed to ensure continuous improvement and is governed by Peoples' Pipeline Safety Management System ("SMS").

Peoples' SMS is a governing document aligned with the American Petroleum Institutes' Recommended Practice 1173 that provides a framework to manage pipeline safety and continuously

measure progress to improve overall pipeline safety performance. The system consists of 10 elements and follows the core principle of the Plan-Do-Check-Act cycle.

DISTRIBUTION OPERATIONS

Q. Has Peoples enhanced safety, operations or engineering functions since its last base rate proceeding filed in 2008?

A. Yes. The Company has made significant operational staffing and program changes in 10 areas. In general, these changes have centralized planning and decision making. Peoples has better organized its operations to focus on the Company's strategy and objectives which are centered on accountability, standardization and consistency. These changes allow Peoples to better manage growth and respond to increasing customer demand for gas service. The changes also enable the Company to address operationally based performance expectations and changes occurring within the natural gas industry. The changes have benefitted Peoples' customers and the public by reducing risk and improving overall operating performance.

Q. Please describe the 10 general areas of improvement and how they have benefitted customers.

A. 1. <u>Statewide Construction Inspection Teams:</u>

Peoples created and now uses teams of construction inspectors to ensure projects are done safely, ensuring quality control and on time and within budget.

In 2009, the function of inspecting field construction activities was embedded in the general operational responsibility for existing activities of the service area teams. Peoples had no dedicated full-time construction inspectors. The Company recognized that having independent construction inspectors that reviewed field practices on a constant basis was vital and would promote quality and safety. The use of designated construction inspectors has provided additional assurances that projects have been constructed in compliance with safety and regulatory expectations.

Currently, all major construction project teams include full time inspectors. In 2019, there were 19 Company inspectors. The Company has access to approximately 60 construction inspectors contracted on an as needed basis for use depending on the size and complexity of a construction project.

2. Centralized, statewide Measurement and Regulation ("M&R") team:

Peoples formed a centralized M&R team in late 2014 to improve operational efficiencies, standardization and emergency

response. Prior to 2014, all gate station maintenance, compliance, and repair were performed in a decentralized manner. The knowledge and technical skills required to support the Company's largest assets is better served from a centralized focused team. Benefits of this transition consist of standardization, increased operational timeliness and response, and more effective communication with pipeline suppliers.

Prior to 2014, Peoples employed nine people who performed similar work statewide in the service areas. The current M&R team consists of twenty people, including Gas Operations Technicians, Instrument & Control Technicians, Measurement Technicians, Measurement Analysists, a Supervisor and a Manager. These changes have resulted in a variance above the benchmark on MFR C-38 which is explained on justification number 6 on page 1.

3. Statewide Geographic Information System ("GIS") Team: The Company made significant improvements to its GIS system and changed how it is used in 2015.

Prior to 2015, Peoples used the corporate ESRI-GIS primarily as a stand-alone and basic mapping system that was maintained at each of the service areas statewide. In 2015, the Company

decided to leverage the full capabilities of the GIS system by improving data quality and user functionality. The Company centralized its GIS team, improved data quality control and quality assurance practices and established procedures to effectively and efficiently update construction as built drawings and other system information. By 2019, the Company was using its GIS system as the official system of record for field assets and as a central tool used for system design, modeling, line locating, new service inquires, emergency response oversight, compliance, outage management and related storm preparation and planning purposes. The centralized GIS team consists of one Supervisor and eight GIS Analysts and Technicians. Prior to the centralization of the department there were five GIS support positions across the state that helped maintain the technology platform.

4. Enterprise-wide Compliance Program:

Peoples developed and implemented a new Enterprise-wide compliance program in 2014 and 2015.

Prior to 2015, Peoples managed close to 1.0 million PHMSA and Commission compliance requirements manually within its operating service areas. In 2014 and 2015, the Company developed, designed and implemented a tracking and scheduling data management system called “Inspection Manager” to

monitor, control and document compliance and compliance management activities. The Inspection Manager System automates the scheduling and tracking of all compliance requirements statewide and has improved the accuracy, timeliness and control of the high volume of maintenance and inspection activities. This new system and the team members the Company added to administer the system have generated performance efficiencies and significantly improved the management and field-based performance of its compliance programs. These new resources have improved the results of the Company's ongoing inspection and maintenance related compliance efforts and the overall safety of its operating systems and team members, resulting in the Company having zero Commission compliance infractions in 2019 as explained by Company witness T. Mark Whitaker and shown on page 2 of MFR Schedule I-2. These changes have resulted in a variance above the benchmark on MFR C-38 which is explained on justification number 5 on page 1.

5. Gas Control Management Operation Room and Team:

In 2016, Peoples formed a centralized 24 hour, 7 days a week, 365 days a year, Gas Control team which was moved into a state-of-the-art control room. Prior to 2016, the gas control responsibilities and processes were spread among three team members with no around the clock support.

The Gas Control Team has enhanced system reliability and safety and promotes compliance with changing federal and state requirements. The team performs alarm monitoring, control point output, maintenance/repair dispatch, and supports the Peoples' SCADA system. The team currently consists of five controllers, one coordinator, and a supervisor. These changes have resulted in a variance above the benchmark on MFR C-38 which is explained on justification number 2 on page 1.

6. Training Center and Program:

In 2017, Peoples began designing and building its natural gas training center entitled, GasWorX. GasWorX is a simulated outdoor natural gas village and was created and designed to provide wide-ranging natural real life-like settings for all aspects of gas utility operations and technical training skills and experiences to all Peoples field based technical team members.

Peoples launched GasWorX and a new standardized training program in 2018. Both are the first of their kind in Florida and will play a critical role as the Company trains the new team members who will help manage, operate and maintain Peoples' growing system. The GasWorX training complex and program provides team members with a standardized and

comprehensive operational and technical training experience in a virtual natural gas distribution system setting.

Peoples' standardized training programs and complex are tailored to include all the key elements of natural gas utility operations, including safety processes, emergency response requirements, new construction and all aspects of the related operational, customer service and the maintenance activities regularly performed across Peoples' natural gas systems statewide.

The classroom, and laboratory settings, along with a simulated natural gas neighborhood, offer each participant a hands-on, real life setting and operating scenario-based training experience.

This facility was fully developed and designed to replicate real-world conditions with a fully functioning underground natural gas system, with all types of gas piping materials. The facility is connected to fully operational gate and regulator stations, and associated valving. The system simulates customer premises, residential, commercial and industrial meters and downstream customer piping and equipment. Trainees experience a variety of real-world experiences with gas appliances inside simulated homes on

positioned streets and avenues within the GasWorX training complex.

GasWorx also includes simulated leak training areas, underground line location training and corrosion related training based on the established standards of the National Association of Corrosion Engineers (“NACE”) and Peoples cathodic protection system maintenance and operation practices. These changes have resulted in a variance above the benchmark on MFR C-38 which is explained on justification number 4 on page 1.

7. Engineering and Construction:

Peoples consolidated the Engineering and Construction activities related to new or upgraded pipeline and infrastructure installation activities into one management team in 2019. Before the consolidation, permitting, design and construction activities were performed in various service area groups based on the nature of the project and also the overall size and type of project, with most larger projects managed at a corporate level and smaller projects at the various service areas. The combination of Engineering and Construction functions has allowed the Company to apply a standardized approach to all construction projects and to better coordinate construction and engineering activities

within the Company. It has also allowed the Company to standardize construction practices.

Peoples reorganization and structuring of this team in May of 2019 employed 106 team members in the combined Engineering and Construction department. Peoples' Engineering Department resources today are a combination of specifically structured and centralized resources covering all engineering and construction related responsibilities. Resources are managed within three distinct departments: Corporate Engineering and Construction, Distribution Design and Construction, and Engineering Technical Services. The teams cover specific areas of responsibilities such as engineering, design and construction, Distribution Integrity Management Program, Integrity Management Program, GIS management, materials & equipment standards, construction standards and job procedures, flow analysis and system modeling, associated project management and construction inspection. These changes have resulted in a variance above the benchmark on MFR C-38 which is explained on justification number 7 on page 1.

8. Business Operations Support Services (BOSS):

In 2017, Tampa Electric and Peoples implemented a new shared SAP customer relationship management and billing system

("CRMB"). The Company made significant process improvements and organizational changes when it implemented CRMB. These included the combining of Customer Service, Billing, and Credit and Collections departments for Tampa Electric and Peoples under one organization. At the same time, Peoples gave its Operations team more responsibilities in the areas of back office support for meter reading, collection, new construction, meter management, service dispatching, and operations related controls. Peoples created BOSS to standardize operations practices across its 14 service areas and so its operations group could interface effectively with the rest of the organization. The BOSS department has led and driven many cross functional standardized process improvements in these areas and has played an effective liaison role between Operations and Customer Experience organization. The BOSS team consisted of one manager and four specialists in 2017.

9. Statewide Centralized Dispatch Operations Team:

In 2019, the Company formed a new centralized dispatching team within the BOSS department to further gain standardization and work efficiencies related to the scheduling, dispatching, and planning of service work across Peoples' 14 service areas. Dedicated team members now manage these functions with the improved control and consistency

that comes with a centrally managed team that is focused solely on these critical functions and customer sensitive expectations. Other benefits include increased situational awareness across the state, improved change management, and improved process controls. The centralized dispatching team is made up of 11 team members, a supervisor and 10 dispatchers and now performs the specific aspects of work previously done on a distributed or proportional basis by over 20 administrative and work coordinators across the state.

10. Statewide Excavation Impacts & Peoples Damage Prevention Program:

Peoples has developed a plan to enhance the activities of its damage prevention team. Peoples experiences approximately 1,200 damages to underground facilities a year. These damages pose one of the most significant risks of the potential for severe injury and fatalities to customers, contractors, team members and first responders in Peoples' service areas.

Approximately 85 percent of damages on Peoples' underground system are due to contractors not calling for a Sunshine 811 locate ticket (a free service provided by Peoples and other underground utilities within Florida) or not adhering to Florida's "Call Before You Dig" procedures and statutes.

Peoples constantly seeks opportunities to reduce damages to underground facilities due to poor excavation practices. Its 2020 and 2021 budgeted O&M amounts reflect a concerted plan to further reduce the risk of excavation damages by committing more resources to its damage prevention teams. Specifically, Peoples is adding additional field-based coordinators who will proactively interact with contractors in Peoples' service areas to ensure adequate two-way communication and awareness of the need to prevent a damage to facilities before they happen. These staffing increases will improve safety, system reliability and the overall ability to address the increasing workload and reliability of Peoples' system for the benefit of all customers.

SAFETY AND RELIABILITY INVESTMENTS

Q. Has Peoples invested in safety and reliability related enhancements to improve service to customers?

A. Yes. Safety and reliability have been a central focus driving improvements and enhancements year after year. In 2019, 99.0 percent of Peoples customers had uninterrupted service with no disruptions. In addition, the Company continued a five-year trend of responding faster to reported leaks in less than an hour, reaching a record of 98.5 percent, with an average emergency response time of thirty minutes. These

results are no accident. Rather, they are the result of a series of process, technology and communications improvements, specifically focused on safety and customer service made by Peoples since its last base rate proceeding in 2008.

For example, Peoples' centralized dispatch team has invested in tools and technology to provide better alerts, technician tracking, situational awareness, and improved response times during emergencies such as outage, storm, and hit line events. The Company implemented process and communication protocols to provide customers with timely information regarding outages and other system and weather events, through phone, email, and web. The Company also developed communication programs to advise customers of Peoples construction and safety inspection activity in their neighborhoods. The Company has enhanced and redesigned its website to educate Peoples' customers on actions to take if they smell gas, Peoples' pipeline awareness program, storm safety, calling 811 and natural gas safety tips.

Q. What programs and process does Peoples use to identify, track and record potential gas leaks?

A. Peoples installed a new Leak Management System (LMS) in 2019.

This new LMS system and its improvements have improved overall leak management, and the timeliness of data visibility related to leak management, tracking, repair and damaged asset billing.

Prior to February 15, 2019, Peoples' process to respond and manage leak reporting was as follows:

Peoples' Utility Technicians would manually complete a paper-based Gas Leak and Repair Report form by hand and, when applicable, a Damage Supplemental Report, for gas leaks and/or pipeline-based damages to Peoples assets. A sketch was also hand drawn showing the specific leak location and related details. The completed paper form was then submitted to administrative personnel in the local service area office, who then manually entered the data into the Leak Information and Damage Reporting System. This process had limited data validation to ensure accurate information was captured and did not reduce potential human error which hindered the ability to manage the Company-wide leak processes.

The objective of Peoples' LMS project was to significantly improve the program, data and processes by purchasing and implementing a LMS along with validation and workflows for information entered by the Peoples' utility technicians. In

addition, the use of data entry-based logics ensured complete and accurate information by eliminating errors, (such as missed entries and or unnecessary fields), and enhancing and imposing required entries of information into specific fields. The new system allows Utility Technicians to enter the gas leak information with automated fields ensuring proper data collection and validation at initial entry. The LMS also generates a leak number for every leak entered into the system which improves the accuracy of leak data. The LMS allows for custom gas leak/repair reporting and out of the box gas leak/repair reporting solution. This system will integrate directly with the Accounting system and will be able to provide accounts receivable and payment support.

A fully automated LMS was purchased and implemented in February 2019 and transitioned Peoples' leak reporting and management to an electronic format of capturing, managing data, and effective tracking and responding to reported system gas leaks.

Field technicians who respond to a reported gas leak, now create an electronic leak form and input specific information which is routed to a work coordinator. The work coordinator manages the repair process with software tracking and scheduling of work assignments, and ensure required

timeframes are met through submittal to repair crews, management reviews and claim recovery if applicable.

Reports have been created and are being utilized by management to monitor performance and required repair/resurvey timeframe requirements. Billed damages and their receivables are now interfacing with the accounting system and related billing and collection systems. All active leaks which predated the LMS, have been inputted into the new software to manage and ensure proper repair and resurvey as appropriate.

OPERATIONS AND MAINTENANCE

Q. What other advancements within distribution operations have been implemented or planned?

A. Several very important and beneficial advancements have been both planned and implemented. Below I outline each of these improvements.

Mobile Command Unit: The addition of this mobile command unit supports the Company's safety, service and reliability priorities by enhancing the Company's emergency response capabilities, and is consistent with the emergency response expectations of local, regional, and state governments. The Mobile Command Unit makes Peoples' emergency response efforts

more effective and easier to direct and coordinate at specific incident sites, or in moving from neighborhood to neighborhood as restoration progresses in post-storm or post-gas outage scenarios. Additionally, it is particularly useful for working with mutual assistance and external crews from outside the service area when these situations arise.

The Mobile Command Unit can be utilized and positioned to respond to any emergency. The unit was an important part of Peoples' efforts to address and manage the emergency conditions in the aftermath of Hurricane Michael in 2018. The vehicle features four workstations and conference room space for up to nine people where team members can brief response-focused personnel and work with community leaders and emergency officials. When not in emergency use, the unit is available for other key community or business-related events that promote the Company and its operations.

Portable Gate & Regulators Station: Many of the projects that the Peoples' transmission engineering team lead, involve maintenance, upgrading or replacement of existing gate stations.

Each of Peoples' 82 gate stations is a critical point of gas supply into the Company's gas distribution system and serves

as a custody transfer point between Peoples and the interstate pipeline. Because these gate stations control the flow of gas to Peoples' downstream customers, Peoples needs a way to keep gas flowing, with proper custody transfer measurement and pressure control, while gate stations undergo maintenance, upgrade or replacement. In the past, Peoples had to develop specialized and distinct operational plans and re-engineer for temporary piping, metering and the site specific pressure control needed each time a gate station was to be isolated and taken out of service in order to be replaced. This invariably required significant engineering time and expense, and the purchase or renting of specific materials and equipment to keep gas flowing. Peoples has reduced these expenses by designing and building a reusable, portable gate and regulator station that can easily be moved to any needed location. Peoples no longer needs to use compressed natural gas tube trailers to feed the system or rent equipment from the interstate pipelines companies. Peoples has also eliminated the need for custom built measurement and pressure control systems for each project thereby simplifying the front-end project engineering/planning/approval process.

GPS & Bar Coding: Peoples has customized and implemented a GPS and barcoding system that provides greater tracking and traceability of the Company's pipeline assets. With the help

of GPS satellites and unique barcodes, Peoples ability to more accurately locate its underground assets, including pipes, valves, fittings and other key pipeline components has been strengthened. The technology allows Peoples to capture specific manufacturers information and details regarding the personnel who installed a given piece of infrastructure. Team members and contractors who typically work on new installations, repairs, relocates and retirements will receive this new equipment, including range poles and hand-held GPS units. Peoples will provide the team members with comprehensive training, job aides and reference materials for easy use.

Peoples' use of this system will enhance system records by making them electronic which will enhance asset location accuracy. This technology will also allow Peoples to have as built real time records of construction progress. This upgraded system and its field use will also improve utility location accuracy and streamline the compliance and reporting process.

MobileGuard Leak Detection System: Peoples is advancing its leak survey capabilities by implementing a new system called MobileGuard. The system consists of a methane/ethane analyzer, GPS, a sonic anemometer and proprietary leak

detection software that presents real-time geospatial maps of multiple gas concentrations. The MobileGuard gas leak detection system uses ABB Ability™ patented LGR Off-Axis Integrated Cavity Output Spectroscopy technique which provides heightened sensitivity and precision. This system enables the identification of leaks several hundred feet away from the source in favorable survey conditions. Peoples will integrate this new technology into its leak survey process thereby expanding the distance at which leaks can be detected creating better detection which leads to quicker response.

Drones: The implementation of unmanned aircraft systems into the Peoples' fleet offers a chance to increase speed and reduce the safety risks to personnel in the field. Peoples has begun using drones for pipeline route assessment which gives a team the ability to quickly fly proposed routes, and to collect topological and visual data of wetlands, ecological areas, and difficult terrain. This can be done from the safety of a line of sight viewpoint and eliminates the need for team members to directly enter an area. Peoples has also used drone technology to assist in post hurricane damage assessments. This provides quick access to areas heavily covered with debris and gives the necessary data to safely plan access/approach for cleanup and repairs. Future uses of the drone program include bridge hung pipe

inspections, aerial leak surveys, and pre/post construction scanning of stations for as built and documentation purposes.

SAFETY MANAGEMENT

Q. What additional investments have been made in the area of safety management?

A. Peoples has invested significantly over the past few years in its safety management initiatives which are implemented and overseen by the Company's safety management team. Traditionally, safety was coordinated by three safety advisors, each responsible for a geographical area. A fourth safety advisor has been added to provide increased support and supervision in the field thereby enhancing the Company's safety oversight and performance. In addition, the Company added an emergency management coordinator who is responsible for developing and managing the emergency response plan which has improved the Company's emergency planning, control and response. Finally, the Company added a contractor safety coordinator who has direct responsibility for the oversight and monitoring of contractor safety.

The safety management team provides ongoing safety training through the Company's Apprentice Program, monthly facility safety meetings, and other subject specific trainings (e.g.,

Smith Defensive Driving).

The safety management team facilitates incident and significant near miss reviews with a focus on continuous improvement. Lessons learned are communicated to all related operating personal, process improvements are designed, implemented and any required controls are implemented when appropriate.

In 2017, Peoples implemented a third-party safety management database, Process Map, as a tool to manage safety. The Process Map database is a platform for team members to record near misses and pro actives (a series of data points), document safety observations in the field, and for pre-job safety briefings. Pre-job safety briefings are held in the field before beginning work, to identify hazards and to relevant mitigate controls.

Additionally, Peoples has taken steps to aggressively promote the Florida’s 811 program, by significantly increasing public awareness of “Call Before You Dig”. As a result of these marketing efforts, customer and public awareness continues to increase and improve.

RATE BASE OVERVIEW

Q. Please describe the Company's 2021 projected test year capital expenditures that are critical to the safety and reliability of operations.

A. In the 2021 projected test year capital plan, Peoples' has identified 116 projects that provide improvements in safety and system reliability. The total cost for these projects is approximately $157.0 million. These include projects that address upgrades to existing distribution systems such as the upgrade to Cedar Hills Area and Tampa Downtown pipeline replacement projects, as well as improvements to existing gate stations such as the Tampa Northwest Gate and Hudson Gate. It should be noted that many projects provide multiple benefits, for example, a gate station rebuild to meet future customer demands will also provide added safety and reliability benefits.

Q. Are the plant addition costs for the 2021 projected test year, reasonable and prudent?

A. Yes. Based upon my knowledge of the Company's operations, policies and practices, and my knowledge of significant Company projects, I conclude that the utility plant rate base additions that have been made or will be made are in a prudent manner and at a reasonable cost.

SUMMARY

Q. Please summarize your prepared direct testimony.

A. Peoples continues to be a safe and efficiently operated natural gas utility. Peoples' ongoing operations and investments within its system are directly associated with continued safe, reliable performance and system growth, and provides Peoples' customers and the public the best access to the highest quality safety, and natural gas service.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

(Whereupon, prefiled direct testimony of Timothy O'Connor was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

TIMOTHY O'CONNOR

POSITION, QUALIFICATIONS, AND PURPOSE

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

A. My name is Timothy O'Connor. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Peoples Gas System ("Peoples" or the "Company") as Vice President, Business Development.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for Peoples' business development initiatives which includes expansions of the Company's pipeline system to meet the growing demand for natural gas service in Florida. This includes providing industry-leading service to customers and communities throughout Florida via a reliable natural gas infrastructure to deliver safe, affordable and cleaner energy options. The business development group at Peoples leads activities related to meeting customer demand through pipeline expansion, liquified

natural gas (“LNG”), compressed natural gas (“CNG”), renewable natural gas (“RNG”), analytics, and is responsible for natural gas trading and transportation.

Q. Please provide a brief outline of your educational background and business experience.

A. I obtained Bachelor of Science degrees in both Finance and Economics from New York University. I also obtained a Master of Business Administration degree from Fordham University. My professional career in the energy industry began in 2006 when I joined Emera Maine (formerly Bangor Hydro-Electric Company). I have held numerous positions in Accounting, Strategy Development and Business Development with Emera affiliates. In November 2016, I joined Peoples as Vice President, Business Development.

Q. What are the purposes of your prepared direct testimony in this proceeding?

A. The purpose of my prepared direct testimony is to provide an overview of the changing natural gas market in Florida and it is summarized in four main areas. First, Florida is experiencing strong growth in its economy and in natural gas demand. I will discuss these trends and how Peoples is able

to meet these demands and provide customer value. Second, I will provide an overview of four important expansion projects currently under development. All four expansion projects demonstrate the significant growth Florida is experiencing that is driving higher natural gas demand and requiring system expansions. Third, I will discuss the increased role for CNG, LNG and RNG in Florida. Last, I will discuss the human resource needs for the business development group within Peoples to support this increased customer demand.

Q. Did you prepare any exhibits in support of your prepared direct testimony?

A. Yes. Exhibit No. (TO-1) was prepared under my direction and supervision. My Exhibit consists of 5 Documents, entitled:

Document No. 1	List of Co-Sponsored Minimum Filing Requirements (“MFR”)
Document No. 2	Maps of Expansion Projects
Document No. 3	Chart of Developer Agreement signings since 2008
Document No. 4	Peoples’ Investment Aligns with Expanding Florida Population
Document No. 5	American Gas Association, *Energy Analysis,* September 1, 2018

The information in the MFR schedules listed in my exhibit are based on the business records of the Company maintained in the ordinary course of business and are true and correct to the best of my information and belief.

GROWTH

CUSTOMER GROWTH

Q. Please describe how Peoples has grown since its last base rate proceeding in 2008?

A. In 2007, Peoples provided natural gas service to approximately 325,000 customers. In 2019, the total customers that Peoples provided natural gas service surpassed 400,000. This represents an approximate 23 percent increase in customers served, and an increase of approximately 3.5 percent per year over the last two years. Document No. 4 of my exhibit demonstrates how Peoples' investments are concentrated in growing areas of Florida. Expert witness Dr. Richard K. Harper will address other aspects of growth in the Florida economy in his prepared direct testimony.

Q. How has the nature of the local distribution company ("LDC") changed since the Peoples' last base rate proceeding in 2008?

A. As a natural gas LDC, Peoples provides natural gas service

directly to customers for use within their homes and businesses. Since the last base rate proceeding and more recently, the demand for natural gas in Florida has not only increased for traditional LDC customers (residential, commercial and industrial), it has also increased in the CNG, LNG and RNG customer segments. Demand for natural gas is growing and as it grows, customers are also seeking natural gas in different forms. In addition to natural gas delivered in its typical gaseous state, customers are now seeking gas in liquified or compressed states, or from renewable resources. Within its commercial and industrial customer groups, Peoples now serves 54 CNG facilities and two LNG facilities. At the time of the last base rate proceeding in 2008, Peoples served only three CNG facilities and did not serve any LNG facilities. Furthermore, interest in RNG is high and Peoples expects several facilities to be developed and placed in-service in the coming years in the state.

Q. Do you expect natural gas demand in Florida to continue for the foreseeable future including demand for these new types of natural gas products?

A. Yes. The price of natural gas is very affordable and is a key driver for the increase in demand. Due to continued innovations in natural gas extraction, domestic supply

continues to be abundant, which has resulted in natural gas prices remaining low in past years. This pricing trend is expected to continue. The proven reliability of the gas system during extreme weather events and the environmental benefits of natural gas are also driving customer demand. Price, reliability and environmental benefits are supporting robust customer demand in all customer segments and is expected to continue. Peoples has consistently demonstrated industry leading customer service, which further supports growing demand. Expert witness Harper and Peoples' witness Lorraine L. Cifuentes will discuss this growth further in their respective testimonies.

MARKET CHANGES

Q. Describe how the natural gas market has changed since Peoples' last base rate proceeding in 2008.

A. Since Peoples' last base rate proceeding in 2008, the U.S. energy market has changed as significant new supplies of natural gas has transformed the marketplace. The commodity price for natural gas is lower in 2019 than it was in 2007, as a result of much greater supply and higher availability of natural gas. In addition, the focus on environmental responsibility has brought cleaner, more efficient energy like natural gas to the forefront of consumer options.

Q. How has natural gas commodity pricing and availability changed since Peoples' last base rate proceeding?

A. The price of natural gas has decreased significantly since Peoples' last base rate proceeding in 2008. Natural gas pricing in Florida is highly correlated to the Henry Hub Natural Gas Futures contract as posted on the CM Group's website at https://www.cmegroup.com/trading/energy/natural-gas/natural-gas_quotes_settlements_futures.html. At the end of 2007, the NYMEX January 2008 natural gas futures contract settled at $7.12/MMBtu. The February 2020 natural gas futures contract settled at $1.877/MMBtu. As of February 28, 2020, the average natural gas price for all future contract months through December 2032 was $2.553/MMBtu.

The availability of natural gas in the U.S., and specifically to Florida, has dramatically increased due to natural gas shale discoveries in the last decade. With this increased supply, the price of natural gas has declined as noted above. Furthermore, the availability of natural gas to Florida has markedly increased. In 2007, interstate pipeline capacity into Florida was approximately 3.0 bcf/day. Since then, the interstate pipeline system has grown to 5.5 bcf/day, mainly due to continued investments in interstate natural gas pipelines, including Sabal Trail Transmission. The decreased

price of natural gas and the increased ability to deliver natural gas into the state of Florida are key drivers supporting increased customer demand. Stated another way, affordable natural gas delivered throughout the state of Florida presents a compelling energy option to consumers; and is an energy option that customers are increasingly seeking. These changes in natural gas pricing and availability since the last base rate proceeding underpin Peoples' growth strategy and forecasted customer demand.

Q. Describe how natural gas solutions provide a cleaner energy option for consumers.

A. Floridians continue to seek benefits from cleaner, more environmentally responsible energy options. As stated in Document No. 5 of my exhibit, "When compared with electricity, natural gas is delivered to consumers with much less energy wasted. The cumulative efficiency – from the wellhead to the residential meter – of the natural gas trajectory is approximately 92 percent. This means that for every 100 MMBtu of energy produced, 92 MMBtu of energy is delivered to the consumer. Based on the current mix of energy used for electricity generation, electricity delivers to the consumer only 32 MMBtu of the same 100 MMBtu of energy produced. For oil, each 100 MMBtu produced results in 84 MMBtu reaching the

customer. For propane, each 100 MMBtu produced results in 87 MMBtu reaching the customer”.

“This energy efficiency advantage of natural gas-based homes stems from the fact that less than 10 percent of the natural gas energy produced is used or lost from the point of production to the residence. In contrast, almost 70 percent of the energy produced to satisfy the electricity needs of consumers is used or lost in the process of energy production, conversion, transmission, and distribution”.

As a result, it is more efficient to operate a water heater, clothes dryer, cooking appliance, laundry facility or industrial plant by directly using natural gas versus large volume combustion for the production and transmission of electricity. The efficiency provided by direct use of natural gas reduces the overall environmental impact of the customer’s energy use. As customers seek ways to minimize their environmental footprint and demonstrate responsible energy use, natural gas has become an attractive option that provides a lower carbon and cleaner option which leads to increased customer demand. Natural gas continues to support the move towards an affordable, clean, resilient and responsible energy system with high efficiency direct use, and low-carbon and clean electricity generation. This

efficiency has reduced and will continue to reduce the emissions profiles of Peoples' customers which ultimately benefits all Floridians.

Q. Describe Peoples' increase in residential customer demand for gas service since the last base rate proceeding in 2008.

A. Since Peoples' last base rate proceeding in 2008, the residential housing market has rebounded and builders want to build with natural gas. This is evident with the number of developer agreements signed since 2008. Document No. 3 of my exhibit, illustrates the sharp increase in the number of residential developer agreements executed between Peoples and developers/builders to install natural gas in communities.

Q. How does customer demand drive growth of the Peoples' system?

A. Generally, the ability of Peoples' pipeline system to serve new customers is defined by the existing physical pipeline and the volumes and pressures of natural gas that can be delivered through those pipes to end-users throughout Florida. There are three general areas where new customer demand drives growth on the Peoples' system: 1) new customers that can be served by the existing system, 2) new customers that require an expansion of the current system, and 3) system

growth to support overall customer demand.

PEOPLES' GROWTH CONSIDERATIONS

Q. Describe how Peoples' determines its ability to meet demand within its existing system.

A. When a new customer or customers seek natural gas service, Peoples determines if the existing infrastructure can deliver the forecasted volumes and pressures of natural gas. If current system capacity exists, Peoples will offer gas service provided the new customer(s) demand supports any incremental costs to provide service. This incremental cost is typically in the form of a new service line and meter to a home or business.

Q. In the event Peoples' existing system cannot serve new demand, describe how Peoples evaluates an expansion to its system.

A. When new customers seek natural gas service that cannot be served within the existing system, Peoples evaluates system expansion options to deliver required volumes and pressures of natural gas. This scenario is best illustrated with a new development area that seeks natural gas service. Peoples will evaluate the short, medium and long-term customer demand profiles and size the new extended pipeline infrastructure to

meet this demand. In this evaluation, considerations include future projections of customer demand, delivered volume and pressure requirements, economic development activities, pipeline route analyses and engineering design. The expansion typically includes the installation of new supply main pipeline from the existing system, in addition to service lines and meters to individual customer locations. This may also include gate stations, regulators and other ancillary equipment.

Q. Describe growth in support of overall customer demand on the Peoples' system.

A. Peoples consistently monitors the growth in customers, customer demand, volumes and pressures on its systems to determine if it can safely meet its load requirements. To use an expression, Peoples needs to evaluate the "forest from the trees". As customer demand naturally evolves over time, Peoples must evolve its system as well. Whereas, a new customer or group of customers support incremental infrastructure with their new demand, system growth focuses on the aggregate customer demand. System growth considerations include expansions to increase redundancy and reliability, equipment such as compression and regulation, upgrades or uprates to existing infrastructure and other such

improvements to provide an aggregate customer base with a full system solution. With fourteen service areas throughout Florida, the customer demand profile is constantly changing and requires Peoples to take a system approach to ensure all needs are met.

Q. Is system demand growth already considered when meeting new customer demand?

A. System growth considerations are included in Peoples' evaluation of its existing system or potential expansions. However, as growth materializes or customer usage varies, a system approach is required to meet customer demand and overall system reliability. A good example of system growth would be a consideration of a new highway or road. If a new residential development is to be constructed, a new road might be required. A two-lane highway might be sufficient, given the number of homes being constructed. As time goes by, and growth evolves, the road might need to be re-evaluated. If customer growth occurs faster or at a higher level, expansion plans to four lanes would occur. With that, stop signs and traffic flow control would likely be required as well. As the road expands, new customers may materialize, such as gas stations or restaurants, and new side streets might emerge off the original highway. This new growth would also then

need to be incorporated into planning. The point with this example is that the original two-lane highway was sufficient for the original development, but as time went by and more traffic and use of the highway occurred, the evaluation of the overall system growth was required. Likewise, Peoples undertakes this same important planning review for its current and future system needs.

Q. Describe how the Company balances short and long-term needs in the evaluation of system expansions.

A. Peoples' seeks to optimize system expansions and achieve the appropriate balance of the expansion costs with future needs. System growth requires Peoples to evaluate its ability to serve all customers in a given area and may result in system improvements to address needed redundancy, flow controls, system interconnections, safety and compliance requirements and other system improvements. Again, using the highway example, it may be premature to build a large multi-lane highway, complete with all the necessary intersections, traffic controls and off-ramps, for a very small development even though, in time, it develops into a robust growth area. Similarly, Peoples must weigh all the considerations of expansions including timing, size and reasonable expectation of demand for its service.

Q. Describe how COVID-19 has impacted the Company's needs for system expansion?

A. Peoples does not believe that COVID-19 will impact planned system expansions. Peoples' expansion needs are based on current demand and long-term forecasts of future demand for natural gas. Peoples must expand its system to meet current demand for natural gas service, and although COVID-19 has created short-term impacts on natural gas usage, Peoples believes long-term growth will continue as well. Furthermore, as discussed in Expert Witness Richard K. Harper's direct testimony, Peoples may experience increased customer demand in the residential sector as Floridians spend more time at home.

PEOPLES' FOUR GROWTH PROJECTS

Q. What are the four major growth projects currently under construction to meet customer demand in Peoples' service areas?

A. The four growth expansion projects are in Panama City, Jacksonville, Southwest Florida, and an LNG storage facility in Miami. Three of the four growth expansion projects are to meet increasing customer demand, while improving reliability and providing long-term flexibility within Peoples' system.

These projects were identified in Peoples' Petition for Authority to Accrue AFUDC in Docket No. 20190091-GU.

Q. What is the total capital investment and projected in-service date for each of the growth expansion projects?

A. The total capital investment for the Panama City expansion project is approximately $28.4 million and it will be placed in-service in December 2020. The total capital investment for the Southwest Florida expansion project is approximately $48.7 million and it will also be placed in-service in December 2020. The Jacksonville expansion project is approximately $58.8 million of Peoples' capital investment and it will be placed in-service in December 2020. Peoples' Miami LNG expansion project is a capital investment of approximately $20.6 million and will be placed in-service in the second quarter of 2021. The above-referenced dollars and assumptions are embedded within MFR G-1 pages 23 and 26 and MFR G-6 page 8.

PANAMA CITY

Q. What is the size of Peoples' Panama City service area?

A. Peoples' Panama City service area represents approximately 15,700 customers, of which 14,000 are residential and 1,700

are commercial and industrial customers.

Q. How does Peoples supply its Panama City service area with natural gas?

A. The Panama City service area is fed from the Florida Gas Transmission ("FGT") interstate pipeline. The entire area is primarily served from a single 8-inch pipeline from the FGT mainline to the Peoples distribution system. A second FGT pipeline serves Peoples distribution to the Panama City airport area only.

Q. Describe Peoples' ability to serve customer demand in Panama City.

A. Peoples' ability to serve customer demand in Panama City is constrained. Incremental capacity through the FGT 8-inch lateral is limited, primarily in the winter months. Peoples is seeking to increase its ability to serve existing customer demand as well as potential new customer growth.

Q. What is the system growth need for Peoples in Panama City?

A. Peoples requires a second feed from the interstate pipeline system given the current lateral is constrained. Peoples has

evaluated options to increase its ability to serve increased demand from current and new customers. Additionally, Peoples must add greater redundancy to its Panama City service area to allow for greater reliability. Any disruption to this single FGT source would directly impact the majority of Peoples' customers in Panama City service area.

Q. Is there any history that highlights this disruption potential?

A. Yes. In May 2018, FGT conducted planned hydrostatic testing of the 8-inch pipeline feeding Panama City. This week-long event required the entire Panama City service area to be fed by LNG and CNG trailers. Peoples worked with FGT, the Commission and all its potentially impacted customers to coordinate this outage event. Due to this coordinated effort, Peoples was able to mitigate the overall customer impact. However, this event demonstrated that a second feed into this growing area is necessary. In part due to the ability to sufficiently plan for this outage, LNG and CNG trailers worked in this instance. However, given current and future demand and requirements for a more stable pipeline solution, the trailer solution is not a feasible or viable option for future needs for the entire Panama City service area.

Q. Does Peoples have a plan to address its system growth needs for current and future customers?

A. Yes. Document No. 2 of my exhibit illustrates the FGT pipelines that run south from the FGT mainline into the Panama City area. Currently, the FGT pipeline to the east (8-inch) is the primary feed for the Peoples' system in Panama City. The FGT pipeline to the west (18-inch) serves Peoples' customers near the Panama City airport, as well as other non-Peoples gas users. This 18-inch pipeline has available capacity. By connecting the 18-inch pipeline with the 8-inch pipeline, Peoples can access incremental natural gas capacity to address current and future customer growth. This project takes maximum advantage of existing infrastructure and avoids duplication of systems to provide the needed incremental capacity to the entire Panama City area. In addition, this project provides a secondary feed which increases overall system reliability for Panama City natural gas customers.

Q. Did Peoples consider any other alternatives to address the Panama City need?

A. Yes. Peoples evaluated other pipeline options to serve its Panama City load. Specifically, Peoples evaluated extending its system all the way north to the FGT mainline. This would

essentially bypass the FGT 8-inch line. This would have added significant cost to run 34 miles further north. It would have also ignored the option with the 18-inch and its available capacity to the west. No other interstate pipelines serve this area of Florida, so any solution needed to incorporate FGT.

SOUTHWEST FLORIDA

Q. What is the size of Peoples' Southwest Florida ("SW FL") service area?

A. Peoples' SW FL service area represents approximately 18,600 customers, of which 15,800 are residential and 2,800 are commercial customers.

Q. What is Peoples' customer growth forecast for SW FL?

A. Since 2007, the SW FL service area of Peoples has more than doubled and grown from 7,300 customers to 18,600 customers. Peoples' current customer growth forecast projects an increase of approximately 3,700 customers from 2019 to 2021. Residential customers are expected to grow by approximately 3,500 and commercial customers by approximately by 200.

Residential and commercial growth has expanded eastward from

the coast as more residents and businesses have settled in the area. New developments under construction exist in Rural Lands West, Ave Maria and Immokalee. Peoples' current system in the SW FL service area requires expansion to serve these new customers with new mainline extensions. Expected new customers are approximately 20,000 residential and commercial customers over the next 15 years.

Q. How is Peoples' SW FL service area supplied with natural gas?

A. The SW FL service area is solely fed from the FGT interstate pipeline. No other interstate pipelines exist in this area of Florida.

Q. Can Peoples sufficiently serve customer demand in SW FL?

A. No. With the expected growth in residential and commercial customers in this region, incremental Peoples' system growth is needed now to expand the system to meet new customer demand. Peoples can serve existing customers, but with the expected increase, the system needs expansion.

Q. What are the growth needs for Peoples in SW FL?

A. The identified need is described by the approximately 20,000

projected customers seeking natural gas service in Ave Maria and Immokalee. The expansion of Peoples' system to these areas will offer affordable, reliable, safe and cleaner energy to these customers. SW FL is one of the fastest growing economic regions in the entire state. It was not long ago that natural gas for these residents wasn't even an option. In the early 2000's, Peoples extended its system south with a 119-mile project to serve this region. Since then, SW FL has grown to approximately 19,000 customers and the region is an excellent example of economic development.

Q. What is the need for additional system resiliency?

A. The entire Peoples' SW FL system is at the end of the west leg of the FGT interstate pipeline. Any load downstream of the FGT system is exposed to disruption risk. With almost 19,000 customers currently, and significant growth occurring, Peoples is adding the appropriate level of resiliency to the system. Although a full secondary option from another interstate pipeline would provide such resiliency, no such option is available at this time. However, this project will help Peoples strengthen its system to mitigate any localized disruption.

Q. If the SW FL system reinforcement does not provide full

redundancy, what is the benefit of this?

A. As mentioned, the SW FL system is at the end of the FGT interstate pipeline on the west coast of Florida. No secondary interstate pipeline feed option currently exists.

In the operation of Peoples system, upstream considerations for fuel supply delivery are evaluated. Just as importantly, distribution system considerations are also evaluated. With the expansion east to Rural Lands West, Ave Maria and Immokalee, Peoples will have more customers demanding gas from the same infrastructure. As discussed further in Peoples' Witness Richard F. Wall's direct testimony, the system reinforcement, or loop, will increase reliability and resiliency on that portion of the system.

Q. Does Peoples have a plan to address its growth needs for current and future customers?

A. Yes. As shown on Document No. 2 of my exhibit, the SW FL expansion consists of two primary phases. The first phase is the expansion of the Peoples' distribution system east to Rural Lands West, Ave Maria and Immokalee. As previously mentioned, natural gas service currently does not extend to these areas. The expansion of the distribution system will

facilitate these developments and the demand for natural gas.

The second phase consists of system reinforcement to loop the SW FL system. With the general growth along the west coast of SW FL, and the added expansion east to Rural Lands West, Ave Maria and Immokalee, added resiliency is necessary in the form of a system loop and will provide adequate local resiliency. This loop will allow Peoples to deliver natural gas in multiple ways and mitigate any localized disruptions should they occur.

Peoples concluded that the system expansion to Rural Lands West, Ave Maria and Immokalee is the best option for customers. The developments in these areas are seeking natural gas and illustrate the value developers and consumers place on affordability, availability, reliability, safety and environmental stewardship. This project expands the existing Peoples' distribution system to serve new customers and buttresses the system to maintain prudent resiliency standards for this region of Peoples' system.

Q. Did Peoples consider any other alternatives to address the SW FL need?

A. Yes. Peoples evaluated alternative route options to bring

natural gas service to Rural Lands West, Ave Maria and Immokalee. As mentioned previously, FGT is the only interstate gas pipeline in this area of Florida. Given the locations of the new customer developments, the best option was to extend the Peoples' system west to east. Peoples identified the best option as being the least cost alternative.

JACKSONVILLE

Q. What is the size of Peoples' Jacksonville service area?

A. Peoples' Jacksonville service area serves approximately 33,400 customers, of which 30,000 are residential and 3,400 are commercial or industrial customers.

Q. What is Peoples' customer growth forecast for Jacksonville?

A. Peoples' current customer growth forecast projects an increase of 6,650 customers from 2019 to 2021. Residential customers are expected to grow 6,350; commercial and industrial customers are expected to grow 300. Since 2007, the Jacksonville service area of Peoples' has grown from 19,400 customers to 33,400 customers.

In addition to growth as defined by customer count,

Jacksonville is experiencing strong large commercial and industrial growth. This growth includes LNG facilities, CNG stations, power generation, as well as large scale residential development.

Q. How does Peoples' supply natural gas to Jacksonville?

A. We supply the Jacksonville area from the FGT interstate pipeline system and the Southern Natural pipeline system.

Q. Does Peoples currently have sufficient capacity to serve customer demand in Jacksonville?

A. No. With ongoing organic customer demand as well as facility expansions requiring incremental capacity, the Peoples system will be unable to meet its Jacksonville system demand as early as 2021.

Q. What is the need for additional natural gas capacity for Peoples in Jacksonville?

A. There are multiple needs for additional natural gas capacity. This highlights the outstanding economic development occurring in Jacksonville, supported by the business community that is driving residential, commercial and

industrial growth. Additionally, Peoples must balance these demand requirements with operational and commercial knowledge and capabilities of the FGT and SONAT systems serving this area. The optionality provided by two upstream pipes is a benefit, but it comes with the need to balance the Peoples' system for all customers. Peoples is constantly evaluating its upstream needs on both interstate pipelines serving Jacksonville to ensure it continues to provide value to customers.

Q. Does Peoples have a plan to address its projected capacity shortfall for current and future customers?

A. Yes. Document No. 2 of my exhibit shows, Peoples is expanding the Jacksonville system in four main areas to increase its ability to serve existing and new customers.

First, Peoples executed a Gas Transportation Agreement with Seacoast Gas Transmission on the Callahan pipeline. This Agreement will provide Peoples' capacity from SONAT to Peoples' Fernandina Beach line. This Agreement received Commission approval pursuant to Consummating Order No. PSC-2020-0027-CO-GU, issued on January 16, 2020 in Docket No. 20190145-GU.

Second, Peoples is uprating its Fernandina Beach South ("FB South") pipeline to allow more natural gas to flow at optimal pressures on this pipeline. This is the portion of the existing Fernandina Beach pipeline that runs south from the interconnection with the Callahan pipeline. The FB South pipeline runs from the Callahan interconnection, near Yulee, south to the Nassau/Duval county line. This uprate is required to increase the maximum allowable operating pressure ("MAOP"), to take the optimal pressure from the Callahan pipeline to the Peoples' Jacksonville system.

Third, Peoples is constructing a new 16-inch pipeline that will run from the Nassau/Duval county line into the Jacksonville Port ("F-Connector"). The F-Connector will take the incremental capacity from the Callahan pipeline and the uprated FB South pipeline and deliver these volumes into Jacksonville where significant and growing natural gas demand load is occurring.

Fourth, and finally, Peoples is constructing a compression station at Baldwin ("Baldwin compressor"). This compression station will increase the pressure delivered into the western portion of the Peoples' Jacksonville system and result in higher pressure and volumes being delivered east and throughout the Jacksonville system.

Peoples concluded that the four-part system expansion of the FB South, F-Connector and Baldwin compression, along with the transportation capacity on the Callahan pipeline, provides the best value for customers. All other alternatives were more expensive and would have taken more time to construct. Jacksonville is the fastest growing area of Peoples' system as measured by throughput. This means that large customers are seeking more natural gas in Jacksonville than in any other area within the Peoples system. This is economic development. This is power generation converting to natural gas from coal or oil. This is vehicle fleets converting from diesel to CNG. This is LNG being used to power marine vessels, being shipped to islands to displace more expensive fuels and being used to fuel large trucks and trains. And this is meeting the demand for natural gas in homes and businesses in growing counties like Duval, St. Johns and Clay.

Q. Did Peoples consider any other alternatives to address the increasing Jacksonville demand?

A. Yes. Peoples evaluated other pipeline options to serve its Jacksonville load. The evaluation of any potential solution included both the incremental capacity as well as the required time element. As such, not only is the proposed solution the best alternative from a cost perspective; it was the only

alternative that could provide a solution by 2021, to meet the growing demand of Jacksonville.

MIAMI - LIQUEFIED NATURAL GAS

Q. What is the size of Peoples' Dade - Broward service area?

A. Peoples' Dade - Broward service area represents approximately 59,000 customers, of which 50,000 are residential and 9,000 are commercial and industrial customers.

Q. How is Peoples' Dade - Broward service area supplied natural gas?

A. The Dade - Broward service area is fed from the FGT interstate pipeline system. No other interstate pipeline extends south to Miami.

Q. What is the identified need for additional natural gas capacity for Peoples in Miami?

A. Peoples' Miami natural gas need is not currently a full-time daily need, but instead is an hourly need in the summer months.

The Peoples' Dade - Broward service area is only fed from FGT

and is at the geographical end of the state's entire pipeline system. In the summer, as the power generation fleet statewide peaks its natural gas usage, the FGT system becomes constrained to its utmost in the Miami area. Peoples holds winter and summer capacity on FGT, with more in winter to address its peak need. Currently and going forward, Peoples does not hold enough summer capacity and there is no additional summer primary capacity available on FGT. Further, the summer need is only for a few hours each day, not a full-time daily requirement.

Q. What options are available for Peoples to meet its obligation to provide adequate capacity to this market?

A. The only feasible option identified is to construct additional on-system peaking capability. Specifically, Peoples is constructing an LNG storage tank with vaporization capability connected to its Dade - Broward system. This creates an additional hourly capacity that could be transported within Peoples' system and address the customer need in Miami.

Q. What is LNG?

A. LNG is processed natural gas that has been condensed into a

liquid form by reducing its temperature to approximately minus 260°F (minus 162°C) at ambient pressure. This process is known as liquefaction. LNG takes up about 1/600th of the volume of natural gas in its vapor state, thus LNG's high energy density allows it to be readily and economically stored and transported.

Incremental LNG can be better suited to meet changing load characteristics than incremental firm transportation on an interstate pipeline. Each application is different, but LNG provides a potential solution if a demand need is variable or intermittent. LNG in Miami, a capacity constrained area, creates a reliable market storage alternative for Peoples' customers in the summer months.

Q. Why is this project necessary?

A. The Miami LNG project is the right solution for customers because it will allow Peoples to meet customer demand during peak hours primarily in the summer months. The east leg of FGT into the Miami area is constrained and there are no viable pipeline solutions to meet this customer need. LNG storage meets this customer need.

PEOPLES' STRATEGY FOR CLEANER ENERGY

Q. Describe Peoples' growth in support of cleaner energy?

A. Peoples' growth strategy in support of cleaner energy focuses on affordable, reliable and safe natural gas energy solutions. It equally focuses on providing cleaner energy options to consumers. Given this, LNG, CNG and RNG all represent opportunities for Peoples to lead and participate in a cleaner energy future. LNG and CNG use for transportation results in lower emissions compared to oil or diesel. RNG facilities capture and clean waste methane being emitted to the atmosphere from landfills, wastewater treatment facilities or farms, and injects pipeline quality natural gas into pipeline systems.

LIQUIFIED NATURAL GAS (LNG)

Q. What is Peoples' role in LNG development in Florida?

A. Peoples growth strategy is to lead the development of LNG infrastructure in the state of Florida. Florida is uniquely positioned for LNG development due to its natural geography and peninsular profile, its numerous deep-water high-volume ports and its significant cruise ship and other marine vessel markets. Given this profile and the high customer demand for natural gas, there is a growing need for pipeline infrastructure and LNG facilities to support the economic

development of Florida's LNG market.

Q. What does LNG development for Peoples look like?

A. Peoples will work to have the necessary pipeline infrastructure to deliver natural gas to LNG facilities. Peoples will also work to construct, own and operate LNG facilities throughout Florida to provide LNG solutions. These LNG solutions can include LNG to cruise ships and other marine vessels, LNG for land-based fleets, peak-shaving products, on-site fuel delivery and storage for power generation and delivery of natural gas via LNG to areas not served by the pipeline system. Peoples' recently filed a petition requesting approval of a tariff provision to meet customer demand for this growing market. There is growing demand for LNG in Florida and Peoples can best meet this demand by using our pipeline system to deliver natural gas, and then liquify natural gas for its multiple uses.

Q. Describe Peoples' current and future LNG customer profile.

A. Peoples currently provides natural gas to two operating LNG facilities in Jacksonville. These facilities require industrial size gas volumes and provide LNG to fuel marine vessels, large-scale trucking and for delivery to foreign

markets for power generation needs. Going forward, Peoples seeks to deliver natural gas to all LNG facilities to meet LNG demand by supporting LNG infrastructure throughout the state.

RENEWABLE NATURAL GAS

Q. What is RNG and what role does Peoples see for RNG on Peoples' system?

A. When waste decomposes, it releases biogas into the atmosphere which is a powerful greenhouse gas. That raw biogas can be captured and conditioned to create RNG. RNG, once conditioned, is interchangeable with conventional natural gas and can be injected into Peoples' natural gas distribution system therefore offsetting an equal amount of conventional gas which in turn reduces overall emissions.

Peoples seeks to lead RNG development in the state of Florida. With our statewide distribution system, we are in close proximity to landfills, wastewater treatment plans and farms that are potential RNG sites. Peoples is working with developers and facility owners to evaluate RNG potential. Currently, Peoples is investing approximately $28 million in the first RNG facility in Florida. Under Peoples' already approved RNG tariff, the customer will support the cost of

service for this facility investment. Additionally, it has the added environmental benefits of decarbonizing a portion of Peoples' system gas supply. This project will be in-service in 2021.

Q. Describe the benefits of RNG.

A. RNG represents a well-rounded opportunity for Peoples to deliver economic development, local natural gas supply, high resiliency and environmental benefits to the state. The capture and conditioning of biogas from landfills, wastewater treatment facilities and farms creates a new revenue stream for those entities. Instead of venting the biogas directly to the atmosphere or flaring it, the biogas from these facilities can be captured, conditioned and injected into the Florida natural gas pipeline system. RNG allows Peoples to procure clean gas from these locations in Florida, replacing gas that would otherwise be supplied from outside the state originating from traditional natural gas sources. Having localized and distributed supply increases supply certainty, diversity and overall resiliency, as it mitigates any pipeline or upstream supply disruption potentialities. Finally, RNG is renewable energy. RNG provides a lower carbon option for consumers and can be a key element in a comprehensive statewide environmental energy solution.

Peoples is actively developing and supporting RNG activities across Florida and seeks to play a leading role in its development given its extensive existing pipeline system.

Q. Does the Company propose any changes to the RNG tariff?

A. Yes. As described in more detail in Peoples' witness Luke A. Buzard's direct testimony, the Company proposes changes to the existing RNG tariff as detailed on revised tariff sheet No. 7.404. These changes are necessary to support the variations in RNG project designs and each project's ability to deliver cleaned biogas to both the interstate and intrastate pipelines and Peoples' distribution systems. Peoples has found that each RNG project is unique and the existing tariff needs adjustment to allow for flexibility in the utilization of the RNG tariff.

COMPRESSED NATURAL GAS

Q. Describe CNG within Peoples' customer profile and what role does Peoples see for CNG on its system.

A. Peoples currently serves 54 CNG stations in Florida, and currently owns three of the facilities. For heavy-duty trucks, buses and waste hauler trucks, CNG provides an economic, low carbon and environmentally friendly solution.

Fleet owners are seeking cleaner, more efficient ways to fuel their vehicles, and CNG continues to grow to meet this need. Peoples continues to support municipalities, cities, counties and fleet owners in the development of CNG stations and the conversion of their fleets. Like LNG and RNG, Peoples plans to continue to play a lead role to optimize the pipeline system to meet this growing demand.

GROWTH RELATED OPERATIONS AND MAINTENANCE EXPENSE

Q. Describe the business development labor resources needed to support the growth of the Peoples' system and Peoples development of the CNG, LNG and RNG markets.

A. As demonstrated on pages 17 and 18 of MFR G-2, Peoples proposes to add new positions to support these efforts in 2020 and 2021. As Peoples' system and the state of Florida move toward increased use of CNG, LNG, and RNG, Peoples needs additional expertise in the implementation and development of CNG, LNG and RNG, as well as, the data analytics and research that support these initiatives. LNG and RNG are relatively new market developments in Florida and expertise is needed to provide technical knowledge, commercial acumen and project development. CNG has already grown to some extent in Florida, but Peoples is not currently fully resourced with CNG experience to provide leadership and environmentally

beneficial solutions throughout the state. With the growth Peoples is experiencing, and the expected additional growth, data analytics is a crucial element of its business, and any business for that matter. Peoples has a high level of data from all functional areas of the business. Data analytics collects and aggregates this data from multiple sources, processes and organizes the data, and provides reporting and analysis in support of informed decision making for our business. The amount of analysis and critical information is truly outstanding in support of our business, and Peoples seeks to grow its analytical capabilities to support the entire organization.

SUMMARY

Q. Please summarize your prepared direct testimony.

A. Peoples' customers have the choice to use natural gas or other alternatives for their energy needs. In Florida, more and more customers are demanding natural gas for their homes and businesses. More customers are seeking an environmentally beneficial option for power generation, transportation and direct end-use. As evidenced in Panama City, southwest Florida, Jacksonville, and Miami, the expansion of the Peoples' system is needed to meet this demand and support the overall growth across Florida. These expansions represent

the optimal solutions for customers. Further, Peoples' business development activities and costs are reasonable and appropriately position Peoples to meet future customer demand while prudently managing its costs.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

(Whereupon, prefiled direct testimony of Richard K. Harper was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

DR. RICHARD K. HARPER

ON BEHALF OF PEOPLES GAS SYSTEM

EDUCATIONAL BACKGROUND AND EXPERIENCE

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

A. My name is Dr. Richard K. Harper. My business address is 516 E. Zaragoza St., Pensacola, FL 32502. I am self-employed.

Q. Please describe your duties and responsibilities in that position.

A. I conduct a variety of studies for public and private clients using the tools of economic analysis.

Q. Please provide a brief outline of your educational background and business experience.

A. I received a BA in Economics from Guilford College in 1978, and an MA in 1986 and a PhD in 1989, both in Economics from Duke University. I worked as a professional economist from 1980 – 1984 at Research Triangle Institute in Research

Triangle Park, North Carolina, and at the University of West Florida ("UWF") from 1989 until retiring in 2017. From 1996 – 2011 (except during a sabbatical and other time away) I served as the Director of UWF's Haas Center for Business Research and Economic Development, conducting numerous studies of the local, regional, and state economies and economic sectors. I then served as Executive Director of the UWF Office of Economic Development and Engagement, overseeing activities of the Haas Center and of the State Director's Office of the Florida Small Business Development Center Network. I served as the Senior Policy Advisor for Economic Affairs for the Florida Senate from 2012 until 2014. I then returned to UWF as Assistant, then Associate, Vice President for Research and Economic Development and served as the University's Chief Research Officer during 2015 and 2016. I have offered expert economics testimony in litigation and served as the economic expert for the State of Florida from inception until completion in its economic damages litigation with BP. Since retiring from UWF in 2017, I have worked as a consultant in economics, performing a variety of studies of economic issues for public and private clients. I currently serve as the Economic Advisor to Triumph Gulf Coast, Inc. ("Triumph"), providing advice and support to the Triumph Board of Directors as it seeks to distribute $1.5 billion in Deepwater Horizon damages funds to projects that will grow

and diversify the Northwest Florida economy.

PURPOSE OF TESTIMONY

Q. What are the purposes of your prepared direct testimony in this proceeding?

A. My prepared direct testimony will comment on past and future growth trends in Florida, with emphasis on geographic areas that are experiencing strong growth in economic and natural gas demand as described in the direct testimonies of Peoples Gas System's ("Peoples" or the "Company") witnesses Timothy O'Connor and Richard F. Wall. I have also been asked to comment on the benefit of natural gas use to the State of Florida and its citizens from an economic perspective. These benefits include the value for residential, commercial and industrial customers through economical energy prices that allow and promote additional job creation. They also include environmental benefits relative to traditional energy sources, such as coal and oil.

Q. Did you prepare an Exhibit in support of your prepared direct testimony?

A. Yes. Exhibit No. (RKH-1) was prepared under my direction and supervision. My Exhibit consists of 15 Documents entitled:

Document No. 1	Florida Population Change by Decade, 1970-2050
Document No. 2	Total Non-farm Employment, Jan00-Dec19
Document No. 3	Percent Change in Real GDP from a Year Ago, 1998 - 2018
Document No. 4	House Prices, Q1 1980 = 100
Document No. 5	Six-Month Ahead Predicted GDP Growth Rate Jan82-Dec19, s.a.
Document No. 6	Annual Growth Rates in U.S. Population, 1960-2019
Document No. 7	Population Growth Since 2008
Document No. 8	Florida’s Economic and Demographic Snapshot Bay County
Document No. 9	Florida’s Economic and Demographic Snapshot Broward County
Document No. 10	Florida’s Economic and Demographic Snapshot Charlotte County
Document No. 11	Florida’s Economic and Demographic Snapshot Collier County
Document No. 12	Florida’s Economic and Demographic Snapshot Duval County
Document No. 13	Florida’s Economic and Demographic Snapshot Lee County
Document No. 14	Florida’s Economic and Demographic Snapshot Miami/Dade County

Document No. 15 Citations and Sources

FLORIDA'S POPULATION GROWTH AND ECONOMIC GROWTH OVER TIME

Q. What are the Florida growth trends that are relevant to natural gas service expansion and reliability projects?

A. Florida has historically seen population and economic growth rates much greater than those for the nation overall. Demographers note that Florida's population growth rates have ranked among the top seven states in each decade since 1920, and in most decades ranked in the top four.[i] Florida's current population is approximately 21.5 million and is expected to swell to 24.4 million permanent residents by 2030, an increase over the next decade of almost 2.7 million people.

The migration of people, from sources both domestic and international, into Florida has had profound effects on the state's population and on Florida's economy. Today, as a result of the 2010 Census, New York and Florida each have 27 representatives in the U.S. House of Representatives, a share that is proportional to their populations. Population forecasts suggest that Florida will gain two additional seats as a result of the 2020 Census, taking it to 29, and that New York will lose one, taking it down to 26. This is the continuation of the long-term trend as Americans migrate from

the Northeast and Midwest to the South. As late as 1953, the Florida delegation to the 435-person U.S. House of Representatives was 6 representatives, while the state of New York sent 45.

Forecasts for the coming years suggest that the U.S. will grow by a total of 19.3 percent between 2020 and 2050.[ii] During that same period, Florida is expected to grow by 37.6 percent, almost double the country's overall percentage increase, or by a total of almost 8.2 million new residents. If Florida were instead to grow over that period at the projected nationwide growth rate, the 8.2 million expected new residents would be reduced by 3.98 million. These large projected population changes will increase the number of households seeking natural gas service. Meeting the needs of these new households via natural gas affords additional opportunities for reduced emissions per Florida household.

Q. Haven't Florida growth rates been declining in recent decades?

A. Yes. Population growth for Florida over the four past decades, and expected growth over the coming four decades can be seen in, Document No. 1 of my Exhibit. While growth in the most recent decade, at 2.7 million people, is not as large

as the 3.2-million-person growth attained over the 1980 – 1990 period, it exceeds the growth of all states except Texas. Further, strong growth in the number of domestic and international tourists to the state has created additional demand for lodging, restaurants, retail establishments, and other tourism amenities that can be met efficiently via natural gas.

Q. Does economic activity growth at local, state and national level mirror the respective population growth trends?

A. Economic growth trends closely resemble those of the population growth trends. The Florida economy in recent decades continues to grow at a substantially faster rate than the national economy. This is true even when considering the larger than national average impact to Florida of the Great Recession of 2007 to 2009. Using January 2000 employment as a base, the cumulative growth in nonfarm employment in Florida, at 31 percent, is almost twice as large as employment growth in the nation as a whole over the last twenty years. This is shown in Document No. 2 of my Exhibit.

Florida’s faster growth is also reflected in higher inflation-adjusted GDP growth. Over the most recent two decades for which data is available, Florida’s GDP growth was

0.4 percent higher than that of the nation. But for the effects of the Great Recession, that growth differential would have been even greater. Florida suffered particularly during that housing-driven recession because Florida's construction sector is about 25 percent larger than the national average in order to accommodate the aforementioned population growth rate that is higher than the national rate. This can be seen in Document No. 3 of Exhibit No. (RKH-1).

Q. Is the damage inflicted on growth and the housing market by the Great Recession now over?

A. Yes. Housing prices have substantially recovered in Florida and returned to the long-run housing price trends, and now slightly exceed the peak reached during the "housing bubble" before the Great Recession. Current supply side constraints in housing, including availability of labor as well as increased building commodity prices have been primary drivers of price increase, unlike the demand-side bubble that characterized the 2003 – 2006 period in the Florida market. This can be seen in Document No. 4 of my Exhibit.

Q. Can Florida expect to continue to have a positive growth differential when compared to the nation?

A. Yes. Forward-looking projections suggest that the Florida growth differential will continue to exceed that of the nation. As noted by the Federal Reserve Bank of Philadelphia which constructs this forward-looking projection for each state: “The leading index for each state predicts the six-month growth rate of the state's coincident index. In addition to the coincident index, the models include other variables that lead the economy: state-level housing permits (1 to 4 units), state initial unemployment insurance claims, delivery times from the Institute for Supply Management (ISM) manufacturing survey, and the interest rate spread between the 10-year Treasury bond and the 3-month Treasury bill.”[iii]

The index reflects the best estimate of what the growth rate in GDP will be six months from the date of the leading index. The index contains 456 monthly observations going back to January 1982. If we split the data series exactly in half (1982 through 2000, 2001 through 2019), the positive differential is larger in the more recent period. Florida’s projected six-month ahead growth rate was 0.55 percent (i.e., 55 basis points) higher than the U.S. six-month ahead growth rate during the most recent two decades relative to the prior two decades. Florida’s attractiveness to businesses and residents has been growing rather than shrinking over time. The difference in the index of leading indicators for Florida

relative to the nation can be seen in Document No. 5 of my Exhibit.

Q. Will the trend of higher growth in Florida than in the nation overall continue over the longer term or does it just reflect the recovery from the Great Recession that hit Florida harder than the rest of the nation?

A. Yes, they will continue. Population growth rates reflect ongoing demographic trends, with the peak birth years from the “Baby Boom” (1946 – 1964 birth years) giving way to subsequent lower birth rates. Generation X (1965 – 1979) was followed by the millennials (1980 – 1994) who have become the largest population group in the nation as the baby-boomer generation ages. This can be seen in Document No. 6 of my Exhibit. However, Florida still expects 8.2 million new residents between 2020 and 2050. Slower national growth rates notwithstanding, since the time of the Great Recession, Florida population growth has substantially exceeded the national population growth rate, with Florida growing twice as fast - a cumulative 16 percent versus eight percent for the nation over the 2008 – 2019 period. This can be seen in Document No. 7 No. of my Exhibit.

Q. Why will Florida continue to be a top destination for people

moving from other states?

A. Florida’s high population growth trends appear to likely continue into the future. Some of the primary drivers of relocation decisions by those who come from other state into Florida are longstanding, and include job opportunities, desire for a warmer climate and outdoor activities, and, an affordable lifestyle. Since the passage and implementation of the 2017 Tax Cuts and Jobs Act, there is also a change in the relative cost of living driven by lessened deductibility of state and local taxes under the federal income tax code. Because of Florida’s lack of a state income tax and its relatively modest property tax burden, along with its comparatively modest level of unfunded state pension liabilities, Florida’s attraction for inbound migration from other states continues to increase. Population growth will continue.

Even though national population growth rates are falling due to the demographics of the post-war generations, the cumulative growth in the number of residents of Florida means that a somewhat slower rate of growth will still attract close to the same number of households as occurred during previous decades.

Q. Will the Coronavirus have any significant negative long-term effects on the growth trends you have just described?

A. I do not believe so. Obviously, the Coronavirus has negatively affected economic growth in Florida and throughout the country in a way that we have never seen before, so it is with some caution that I try to predict how it will all end. However, I believe that once progress is made on the medical front and the economy as a whole begins to improve, the same factors that were causing population and economic growth in Florida will still be present. The cost of housing should still remain affordable when compared to the rest of the nation. The state will still be attractive to persons migrating from other states and the underpinnings of the past economic growth will still be in place to allow the state's growth to continue as the medical situation regarding the virus improves.

Q. Are there other likely effects of the Coronavirus on natural gas markets in Florida?

A. Yes, I believe there will be other effects. It seems likely that the pandemic will have lasting effects on consumer desire to leave crowded urban environments for a more suburban setting, which is the typical development pattern in Florida.

I expect that this demographic trend towards lower density environments as is typical across Florida, will continue to attract new residents to the state.

Further, an effect of the pandemic has been to increase at-home activities, including dining, shopping, and entertainment, relative to historical patterns. While a large part of this is transitory, experts suggest that at least some of this change in historical patterns is likely to be permanent and would therefore naturally increase consumer demand for natural gas and support increased availability of natural gas distribution systems.

BENEFITS TO FLORIDA OF GROWTH IN UTILIZATION OF NATURAL GAS

Q. What are the benefits to further growth in the use of natural gas in Florida?

A. The benefits of natural gas relative to other energy sources are well-understood. Among the most important is the multi-year and ongoing trend for affordability relative to alternate fuel sources.[iv] Another is the decrease in greenhouse gas emissions relative to fossil-fuel resources, and the concomitant decrease in noxious pollutant emissions.[v] These have led to quantifiable decreases in morbidity and mortality and associated increases in economic output across

the nation.[vi]

Natural gas supplies about one-fourth of all energy used in the U.S., up substantially from earlier levels, particularly since 2008. In Florida, the switch to natural gas has been more rapid than in most states and our state has already benefitted substantially from increased use of natural gas to meet energy needs in the home, in businesses, and in electricity generation. Across key industries, from electricity generation to construction, health care, food service, transportation, HVAC, and other applications, natural gas has provided reliable, inexpensive, and environmentally friendly energy to power Florida's economic growth.

The intensity of natural gas use has grown over time in Florida. The U.S. Energy Information Administration ("EIA") reported in September 2019 that Florida accounted for 24 percent of the nation's new utility-scale natural gas-fired electric generation capacity between 2008 and 2018.[vii] Over that same period, Florida's share of the national population grew from 6.1 percent to 6.5 percent. The 2.7 million person population increase in Florida over that period was 12.8 percent as large as the amount of growth in the other 49 states combined.[viii] So while Florida's strong population

growth explains some of the higher switching rate, it does not explain all of it. That rapid increase in capacity meant that over the 2008 – 2018 period, Florida's generation fleet went from 47 percent natural gas-fired to 72 percent natural gas-fueled, while coal's share of electric generation capacity decreased from 30 percent to 13 percent.

According to the most recent data from the EIA, in Florida, about 85.6 percent of natural gas use (measured by BTU) in 2018 was in electricity generation, with 7.5 percent industrial use, 4.5 percent in the commercial sector, about 1.3 percent in transportation, and 1.1 percent in the residential sector. This share of usage in electricity generation is higher than for any other state in the nation. It is indicative of Florida's warm climate, its large share of leisure and hospitality businesses, retail establishments, and service sector activity, and low share of industrial activity. It is also indicative of the transition that Florida has made over time away from traditional fossil fuels of coal and oil into cleaner burning natural gas.

Q. Will the growth of renewable energy resources impact growth trends for natural gas usage in Florida?

A. No. Currently, natural gas is economic even as renewables

increase, natural gas will play a significant role in energy solutions to customers. Renewables have not solved the problems of morning and evening demand peaks in the daily load (the “duck curve”), and mandated use of renewables would drive energy prices to levels likely to be unacceptable to Florida consumers and voters. Even in the future, the affordable cost and rapid dispatch capabilities of natural gas mean it will be an essential part of any set of sustainable energy policies.

ECONOMIC AND DEMOGRAPHIC FORECASTS FOR PROJECT LOCATIONS

Q. Have you prepared specific demographic and economic forecasts for the geographic locations associated with the new projects that Peoples is presenting in this matter?

A. Yes, economic and demographic descriptors for each of the counties that are recipients of these specific investments can be seen in the county-specific chart packages in Document Nos. 8 through 15 of my Exhibit.

Q. What are your conclusions in respect to these areas?

A. In each of the areas proposed for expansion, population growth is expected to exceed the national average rate of growth. This means that there will be an increase in demand for

natural gas. Florida's long-held advantage over other states in providing an environment where people want to live will continue, and new residents will vote with their feet in moving here. If anything, this advantage is increasing over time in terms of economics as the tax penalty to households of staying up North was increased by the 2017 changes to the federal tax code.

The projects proposed are representative of the diversity of the state insofar as they meet the needs of some of the counties with fastest residential housing growth, areas with the greatest planned industrial growth, and areas that will be expected to accommodate a greater share of Florida's future growth.

As described further in Witness O'Connor's testimony, Peoples four growth expansion projects are in Panama City, Jacksonville, Southwest Florida and Miami and are aligned with the growing population trend that Florida is experiencing. The Panama City expansion project is located in Bay county. Population growth from 2010-2018 was 7 percent, and 2018-2025 population is forecasted to grow at 5 percent. Hurricane Michael in 2018 has impacted this area and these growth rates. Although these growth rates lag the state average, the recovery of this region is expected to include

growing natural gas demand.

In Duval County, where the Jacksonville expansion project is located, population growth for 2010-2018 was nearly 10 percent, with nearly 6 percent growth forecasted for 2018-2025. In addition to overall population growth within Florida's 4th largest city resulting in increased natural gas demand, industrial growth, such as LNG development near the Port of Jacksonville is a potential significant demand for natural gas.

The Southwest Florida expansion project is located in Lee, Collier, and Charlotte counties. These 3 counties have experienced strong population growth from 2010-2018 of 22 percent, 18 percent, and 16 percent respectively. For 2018-2025, Lee, Collier and Charlotte counties have forecast population growth of 14 percent, 13 percent, and 6 percent, respectively. These historical and forecasted growth rates are robust and indicate support for infrastructure development and growing natural gas demand.

In Miami-Dade County, where the Miami LNG project is located, population growth for 2010-2018 was nearly 11 percent, with nearly 7 percent growth forecasted for 2018-2025. This population growth within Florida's largest city is expected

to result in increased natural gas demand.

SUMMARY

Q. Please summarize your prepared direct testimony.

A. The investment projects presented by Peoples in this matter are supported by the increased demand that will be driven by population growth and economic activity growth in the State. Use of low-priced American natural gas to meet the energy needs of these new households and businesses will allow Florida citizens to enjoy greater purchasing power by spending less of their incomes on energy. This new spending will ripple far beyond the energy sector, allowing new employment and income to be spread broadly across the Florida economy.

Q. Does this conclude your prepared direct testimony?

A. Yes.

(Whereupon, prefiled direct testimony of Dylan D'Ascendis, adopting the testimony of Robert B. Hevert, was inserted.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

ROBERT B. HEVERT

ON BEHALF OF PEOPLES GAS SYSTEM

I. INTRODUCTION

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

A. My name is Robert B. Hevert. I am a Partner with ScottMadden, Inc., a general management consultancy firm. My business address is 1900 West Park Drive, Suite 250, Westborough, MA 01581.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this direct testimony ("Direct Testimony") before the Florida Public Service Commission ("Commission") on behalf of Peoples Gas System ("Peoples" or the "Company").

Q. Please provide a brief outline of your educational background.

A. I hold a Bachelor's degree in Business and Economics from the University of Delaware, and an MBA with a concentration in

Finance from the University of Massachusetts. I also hold the Chartered Financial Analyst designation.

Q. Please describe your experience in the energy and utility industries.

A. I have worked in regulated industries for over 30 years, having served as an executive and manager with consulting firms, a financial officer of a publicly traded natural gas utility, and an analyst at a telecommunications utility. In my role as a consultant, I have advised energy and utility clients across North America on a wide range of financial and economic issues, including corporate and asset-based transactions, asset and enterprise valuation, transaction due diligence, and strategic matters. As an expert witness, I have provided testimony in nearly 300 proceedings regarding financial and regulatory policy matters before numerous state utility regulatory agencies (including the Commission), the Federal Energy Regulatory Commission ("FERC"), U.S. District Court, and the Alberta Utilities Commission. A summary of my professional and educational background, including a list of my testimony in prior proceedings, is included in Attachment A to my Direct Testimony.

II. PURPOSE AND OVERVIEW OF TESTIMONY

Q. What is the purpose of your prepared Direct Testimony in this proceeding?

A. My Direct Testimony presents evidence and provides a recommendation regarding the Company's proposed Return on Equity ("ROE")[1] to be used for ratemaking purposes in this proceeding.

Q. Did you prepare any exhibits in support of your prepared Direct Testimony?

A. Yes. My analyses and conclusions are supported by the data presented in Document Nos. 1 through 21 of Exhibit No. (RBH-1), which have been prepared by me or under my direction.

Q. What are your conclusions regarding the appropriate Cost of Equity for the Company?

A. My analyses indicate that an ROE in the range of 10.00 percent to 11.00 percent represents the range of equity investors' required return in the currently unstable capital market and macroeconomic environment in which utilities such as Peoples operate. Considering the quantitative and qualitative analyses discussed throughout my Direct Testimony, and taking

[1] Throughout my direct testimony, I interchangeably use the terms "ROE" and "Cost of Equity".

into account the demand for natural gas in the Company's service territory, the capital investments required to meet that demand, and the Company's superior performance, I believe an ROE toward the upper end of that range is appropriate. Based on those considerations and factors, I recommend an ROE of 10.75 percent.

Q. Please provide a brief overview of the analyses that led to your ROE recommendation.

A. Because all financial models are subject to various assumptions and constraints, equity analysts and investors tend to use multiple methods to develop their return requirements. I relied on four widely accepted approaches to develop my ROE recommendation: (1) the Constant Growth form of the Discounted Cash Flow ("DCF") model; (2) the Capital Asset Pricing Model ("CAPM"), including the Empirical Form (the "ECAPM"); (3) the Bond Yield Plus Risk Premium approach; and (4) the Expected Earnings approach, which I consider a corroborating method.

In addition to the methods noted above, I considered the evolving capital market and business conditions, the Company's business risks and growth prospects, and the Company's superior performance. Although I did not make explicit adjustments to my ROE estimates for those factors,

I did consider them in determining where the Company's Cost of Equity falls within the range of analytical results.

My analyses recognize that estimating the Cost of Equity is an empirical, but not an entirely mathematical exercise; it relies on both quantitative and qualitative data and analyses, all of which are used to inform the judgment that inevitably must be applied. I therefore considered my analytical results in the context of such Company-specific and general capital market factors as those summarized above. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony, I find an ROE of 10.75 percent to be reasonable and appropriate.

As my Direct Testimony explains, no single model is more reliable than all others under all market conditions, and all require the use of reasoned judgment in their application and interpreting their results. Each model's results therefore must be assessed in the context of current and expected capital market conditions, and relative to other appropriate benchmarks.

In developing my recommendation, I recognized that the low and high analytical results (set by the low end of the Constant Growth DCF model results, and the high end of the ECAPM results, respectively) are not reasonable estimates of

the Company's Cost of Equity. In large measure, that is because those results are far removed from the returns recently authorized in other jurisdictions. As discussed in more detail later in my Direct Testimony, because the Constant Growth DCF model's fundamental assumptions do not align with current and expected market conditions, it is not likely to produce reliable results; other regulatory commissions have found as much. Because Risk Premium-based methods more directly reflect measures of capital market risk, they may be more likely than other approaches (such as the Constant Growth DCF method) to provide reliable ROE estimates in evolving or unstable capital markets.

Q. Please now summarize the results of the four methods discussed above, and how they contributed to your ROE recommendation.

A. The results of my analyses are summarized in Document No. 1 of my exhibit. The range of results produced by the four approaches noted above are as follows:

- The Constant Growth DCF method median results indicate an ROE in the range of approximately 7.47 percent to 11.51 percent (please refer to Document No. 2);[2]

[2] As discussed above, my estimate of the indicated range is narrower than the overall range of model results. Moreover, for the reasons discussed below, I find the underlying assumptions of the DCF model inconsistent with the current capital market and believe the model's results should be viewed with caution.

- The CAPM model suggests an ROE in the range of approximately 8.99 percent to 15.54 percent,[3] and the ECAPM model indicates an ROE in the range of approximately 10.12 percent to 15.89 percent (please refer to Document No. 6);[4]
- The Bond Yield Plus Risk Premium approach suggests an ROE in the range of 9.92 percent to 10.41 percent (*see*, Document No. 7);[5] and
- The Expected Earnings approach indicates an ROE in the range of approximately 9.53 percent to 9.64 percent (*see*, Document No. 8).[6]

As discussed in more detail throughout the balance of my Direct Testimony, my conclusions and recommendation reflect the following considerations:

- The effect of flotation costs, which represent a permanent reduction to the capital needed to support the assets required to provide safe and reliable utility service;
- The incremental risks associated with the Company's need to fund substantial capital expenditures;
- The high level of overall performance and significant growth demonstrated by the Company; and

[3] As discussed above, my estimate of the indicated range is narrower than the overall range of model results.
[4] Results rounded.
[5] Results rounded.
[6] Results rounded.

- The need to maintain the financial profile required to access capital at reasonable rates, even during periods of capital market volatility.

Q. Are there other factors that should be considered in determining the weight given to the methods and results summarized above?

A. Yes. All models used to estimate the Cost of Equity are subject to certain assumptions, which may become more, or less, relevant as market conditions change. An important consideration is the consistency of each model's underlying assumptions with those conditions, and the reasonableness of their results relative to observable benchmarks. As discussed below in Section III, that consideration is especially important during market disruptions such as the market we are currently experiencing.

For example, the Constant Growth DCF model assumes the estimated Cost of Equity will remain constant in perpetuity, regardless of whether and how market conditions change. Risk Premium-based methods (such as the CAPM), on the other hand, provide a measure of risk by directly reflecting investors' expectations regarding future market returns. Other Risk Premium approaches (*e.g.*, the Bond Yield Plus Risk Premium approach) reflect the well-documented finding that the Cost

of Equity does not move in lockstep with interest rates. For example, at times interest rates fall because investors are so risk averse, they would rather accept a very modest return on Treasury securities than take on the risk of equity ownership. In such circumstances, low interest rates suggest an increasing, not a decreasing, Cost of Equity. The Expected Earnings analysis calculates the Cost of Equity based on the opportunity cost of the return of an alternative investment in an enterprise with similar risk, and corroborates the findings from the DCF, CAPM, and Bond Yield Plus Risk Premium approaches. Because those methods provide different perspectives on investor return requirements, their use in combination enables a more comprehensive assessment of the Cost of Equity.

In summary, each model has strengths and weaknesses and it is important to recognize those differences in estimating the Cost of Equity. As noted above, the Constant Growth DCF model requires constant assumptions, inputs, and results in perpetuity, while Risk Premium-based methods provide the ability to reflect investors' views of risk, future market returns, and the relationship between interest rates and the Cost of Equity. The Expected Earnings method provides an observable and straightforward measure of the expected return on the book value of equity. Because it is largely insulated from potential distortions arising from unstable market

conditions, including it in the set of models used to estimate the Company's Cost of Equity serves to attenuate potentially distorted results from other methods. On balance, I believe my recommendation reasonably reflects the methods investors apply, and the factors they consider in developing their return requirements.

Q. How is the remainder of your Direct Testimony organized?

A. The balance of my Direct Testimony is organized as follows:

- Section III – Highlights the current capital market conditions and their effect on the Company's Cost of Equity;
- Section IV – Provides a summary of the issues regarding Cost of Equity estimation in regulatory proceedings and discusses the regulatory guidelines pertinent to the development of the cost of capital;
- Section V – Explains my selection of the proxy group used to develop my analytical results;
- Section VI – Explains my analyses and the analytical bases for my ROE recommendation;
- Section VII – Provides a discussion of specific business risks and other considerations that have a direct bearing on the Company's Cost of Equity; and
- Section VIII – Summarizes my conclusions and recommendation.

I also have included Appendices A and B, which explain the selection criteria used to develop my utility proxy group, and the analysis and inputs for each of my Cost of Equity analyses.

III. CAPITAL MARKET ENVIRONMENT

Q. Does your recommendation consider the current capital market environment?

A. Yes, it does. From an analytical perspective, it is important that the inputs and assumptions used to arrive at an ROE recommendation, including assessments of capital market conditions, are consistent with the recommendation itself. Although all analyses require an element of judgment, the application of that judgment must be made in the context of the quantitative and qualitative information available to the analyst and the capital market environment in which the analyses were undertaken.

Q. Please describe the recent capital market dislocation and its implications for estimating the Company's Cost of Equity.

A. There is no question capital markets in the U.S. have undergone a severe dislocation. The increase in risk and loss of value brought about by COVID-19, the "coronavirus", has cut across all market sectors, including utilities. From

February 12 to April 30, 2020, the S&P 500 lost about 14.00 percent of its value, and the utility sector lost about 17.00 percent.[7] During that time, the broad market and the utility sector both had lost as much as 34.00 percent.[8] At the same time, the Chicago Board Options Exchange ("Cboe") Volatility Index ("VIX"), which measures expected market volatility, increased six-fold (from 13.68 on February 14 to 82.69 on March 16); on March 9, the 30-year Treasury yield fell below 1.00 percent.[9]

Central banks have implemented multiple policies to address the financial market instability. On March 3, 2020, the Federal Reserve reduced the overnight lending rate by 50 basis points, to a target range of 1.00 percent to 1.25 percent. It did so in light of the "evolving risks to economic activity" posed by the coronavirus, and despite its view that "[t]he fundamentals of the U.S. economy remain strong."[10] On March 12, 2020, the Federal Reserve Bank of New York ("FRBNY") released a statement regarding "Treasury Reserve Management Purchases and Repurchase Operations". In that statement, the FRBNY announced that, from March 13 to April 13, 2020, it would purchase $60 billion of Treasury securities "across a

[7] Source: S&P Capital IQ. Utility sector measured by the XLU, and Dow Jones Utility Average.
[8] Source: S&P Capital IQ. Utility sector measured by the XLU, and Dow Jones Utility Average. Largest losses occurred on March 23, 2020.
[9] Source: Bloomberg Professional.
[10] *Federal Reserve Press Release*, March 3, 2020.

range of maturities".[11] The FRBNY also stated it had updated its monthly schedule of repurchase agreement operations to "address temporary disruptions in Treasury financing markets."[12] Together, the FRBNY's changes were meant to "address highly unusual disruptions in Treasury financing markets associated with the coronavirus outbreak."[13]

Three days later, on March 15, 2020, the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, the Federal Reserve, and the Swiss National Bank announced "a coordinated action to enhance the provision of liquidity via the standing U.S. dollar liquidity swap line arrangements."[14] That same day, the Federal Reserve lowered the Federal Funds rate by an additional 100 basis points, to a target range of 0.00 percent to 0.25 percent, and announced its plan to increase holdings of Treasury securities and agency mortgage-back securities by a total of $700 billion.[15]

In late March, the Federal Reserve announced additional initiatives to support the capital markets, including a new method to measure counterparty credit risk derivatives contracts, an optional extension of the regulatory capital

[11] Federal Reserve Bank of New York, *Statement Regarding Treasury Reserve Management Purchases and Repurchase Operations*, March 12, 2020.
[12] Ibid.
[13] Ibid.
[14] Bank of Canada, *Coordinated Central Bank Action to Enhance the Provision of Global U.S. Dollar Liquidity*, March 15, 2020.
[15] *Federal Reserve Press Release*, March 15, 2020.

transition for the new credit loss accounting standard,[16] and the establishment of a "temporary FIMA Repo Facility" intended to support "the smooth functioning of financial markets, including the U.S. Treasury market, and thus maintain the supply of credit to U.S. households and businesses."[17]

On March 23, the U.S. House of Representatives introduced a bill providing approximately $2.5 trillion of economic stimulus payments; on March 25, the U.S. Senate passed the Coronavirus Aid, Relief, and Economic Security Act, which was signed into law on March 27, 2020. On April 24, President Trump signed the Paycheck Protection Program and Health Care Enhancement Act that provided an additional $484 billion in emergency aid.[18]

On April 6, the Federal Reserve announced it would "establish a facility to facilitate lending to small businesses via the Small Business Administration's Paycheck Protection Program ("PPP") by providing term financing backed by PPP loans."[19] On April 9, it "took additional actions to provide up to $2.3 trillion in loans to support the economy," explaining that

[16] Joint Press Release, *Agencies announce two actions to support lending to households and businesses*, March 27, 2020.
[17] *Federal Reserve Press Release*, March 31, 2020.
[18] S&P Global Market Intelligence, *Trump signs $484B coronavirus relief package into law*, April 24, 2020.
[19] *Federal Reserve Press Release*, April 6, 2020.

the "funding will assist households and employers of all sizes and bolster the ability of state and local governments to deliver critical services during the coronavirus pandemic."[20] By April 29, Securities Held Outright on the Federal Reserve's balance sheet increased to $5.56 trillion from $3.81 trillion on February 5, 2020.[21]

The May 1, 2020 edition of *Blue Chip Financial Forecast* ("*Blue Chip*") described the pandemic's effect on the general economy as follows:

> This time in economic history will forever be marked with footnotes and asterisks denoting the "COVID Recession." This period is unique for the enormous numbers we'll see in the plunge in GDP, the height of the unemployment rate, the magnitude of the federal budget deficit and the rapid surge in the Federal Reserve balance sheet. Footnotes and asterisks are justified because the cause of this recession is not economic; it's a world-wide disease epidemic. It is truly a Black Swan event that precludes conventional economic modeling.[22]

Blue Chip further explained that the uncertainty created by

[20] *Federal Reserve Press Release*, April 9, 2020.
[21] Federal Reserve Schedule H.4.1.
[22] *Blue Chip Financial Forecast*, May 1, 2020, at 1.

the pandemic is reflected in the wide range of Gross Domestic Product ("GDP") forecasts among its survey participants:

> …the average of the forecasts for Q2 is -27.8%, with the "highest" -6.0% and the lowest -45.0% (all [Seasonally Adjusted Annual Rates]). In April, the average estimate was -15.9%. The average for Q3 shows that GDP should return to positive growth, 7.4%, while the range runs from -41.7% to +55.0%. As an indication that those extreme numbers are not totally huge outliers, the bottom ten forecasts average -13.5% and the top ten average +26.1%.[23]

According to the U.S. Department of Labor ("DOL"), the seasonally adjusted insured unemployment rate for the week ending April 4, 2020 was 8.20 percent. As DOL explained, "[t]his marks the highest level of the seasonally adjusted insured unemployment rate in the history of the seasonally adjusted series." The previous high, set in May 1975, was 7.00 percent.[24] By April 11th, the rate increased to 11.00 percent.[25] For the month of April 2020, the national unemployment rate stood at 14.70 percent (seasonally adjusted), which the Bureau of Labor Statistics noted was "the highest rate and the largest over-the-month increase in

[23] Ibid. [clarification added]
[24] U.S. Department of Labor News Release, April 16, 2020.
[25] U.S. Department of Labor News Release, April 23, 2020.

the history of the series."[26] On April 29, 2020, the Bureau of Economic Analysis released its estimate for GDP for the first quarter of 2020, showing real GDP declined by 4.80 percent (annual rate) in the first three months of the year.[27]

It is within that broad context that on April 2, Standard & Poor's ("S&P") downgraded its outlook on the utility sector from "Stable" to "Negative", explaining that it expects a 12.00 percent contraction in GDP during the second quarter of 2020, reducing commercial and industrial usage.[28] On May 4, S&P observed the utility sector's credit profile had been "helped by proactive measures the industry [had] taken to ensure liquidity through revolving credit facilities and issuing debt."[29] S&P further noted consistent access to capital is critical to utilities' credit quality, given they "often operate with negative discretionary cash flow".[30] Despite those findings, S&P maintained its negative outlook for the utility sector.

Despite those central bank actions, the 30-Year Treasury bond yield has remained highly volatile, as seen in the Coefficient of Variation (*see*, Document No. 9 of my exhibit). Investor

[26] U.S. Bureau of Labor Statistics News Release, May 8, 2020.
[27] U.S. Bureau of Economic Analysis News Release, April 29, 2020.
[28] S&P Global Ratings, *COVID-19: The Outlook For North American Regulated Utilities Turns Negative*, April 2, 2020, at 1, 6-7.
[29] S&P Global Market Intelligence, *S&P credits utilities' moves to bolster liquidity against virus impacts*, May 6, 2020.
[30] Ibid.

reactions to the market instability also are reflected in the "yield spread", or the difference between utility dividend yields and long-term Government bond yields. As the 30-year Treasury yield fell, utility dividend yields increased, widening the yield spread (*see*, Document No. 10 of my exhibit). That pattern, in which utility dividend yields move in the opposite direction of interest rates, reflects the disjointed capital market, and investors' reactions to it. Under more "normal" conditions, dividend yields tend to be directionally related to Treasury yields, such that the yield spread remains relatively constant. But that relationship has a limit. Investors will not continuously bid up utility prices as interest rates fall; the widening yield spread demonstrates as much.

From a slightly different perspective, from January 1 to February 11, 2020, the correlation between the S&P 500 dividend yield and the utility sector dividend yield[31] was about 14.00 percent. From February 12 through April 30, 2020, it increased to 92.00 percent (*see*, Document No. 11 of my exhibit). That increasing correlation is not surprising. As Morningstar recently explained, during volatile markets there often is little distinction in returns across assets or portfolios. That is, "correlations go to 1."[32] When that

[31] Utility sector defined as the XLU.

[32] Morningstar, *Correlations Going to 1: Amid Market Collapse, U.S. Stock Fund Factors Show Little Differentiation*, March 6, 2020.

happens, utility stocks lose their “defensive” quality.

A direct consequence of stronger correlations is higher Beta coefficients. As discussed in Appendix B, Beta coefficients are a function of two parameters: (1) relative volatility (the standard deviation of the subject company’s returns relative to the standard deviation of the market return; and (2) the correlation between the subject company’s returns and the market return.[33] Under the CAPM, higher Beta coefficients indicate an increase in the Cost of Equity. Applying Bloomberg’s two-year calculation convention, the increase in correlations, and in relative volatility, since mid-February 2020 (*see*, Document No. 12 of my exhibit) is apparent. Not surprisingly, the increased correlation and relative volatility combine to produce comparatively high (adjusted) Beta coefficients (*see*, Document No. 13 of my exhibit).

Even if we extend the calculation period to five years, the increase in correlations increases calculated Beta coefficients well above their January and February 2020 levels (see, Document No. 14 of my exhibit).

Q. What concerns have the credit rating agencies noted regarding the effects of COVID-19 on the utility sector dislocation?

[33] *See*, Equation [8].

A. As noted earlier, S&P downgraded its outlook for the North American utility sector from stable to negative. In its review of how COVID-19 may affect the utility sector, S&P explained it expects a 12.00 percent contraction in GDP during the second quarter of 2020, reducing commercial and industrial usage. S&P further noted that although companies with decoupling structures may be able to offset some of that lower usage, bad debt expenses likely will increase. Even though some utilities may be able to defer those costs, S&P notes that in prior incidents, utilities had negotiated with regulatory commissions to "write off some of these costs as part of a larger agreement."[34]

Regarding liquidity and capital access, S&P observes that "the industry continues to exhibit adequate liquidity and access to the debt markets, despite uneven performance of the commercial paper market for tier 2 issuers", but availability to equity markets "remains extraordinarily challenging."[35] S&P expects the negative discretionary cash flow associated with high capital investment commitments and the "lack of access to the equity markets" to "lead to a weakening of credit measures."[36]

[34] S&P Global Ratings, *COVID-19: The Outlook For North American Regulated Utilities Turns Negative*, April 2, 2020, at 7.
[35] Ibid.
[36] Ibid.

Although utilities have some discretion as to how they may reduce capital investments while maintaining safe and reliable service, in a prolonged recession they may consider reducing dividend payments. As S&P notes, "[t]here is precedent that during times of high financial stress, utilities have reduced their dividends and we would expect that the industry, if necessary, would use this lever, acting prudently to preserve credit quality."[37] It is through such "levers" that S&P expects the sector to remain a high quality, investment grade industry.[38]

Moody's Investor Services ("Moody's") similarly observed that "[i]n a prolonged economic downturn, boards of directors are likely to review dividend plans as an option to conserve cash."[39] Moody's expects companies with higher payout ratios as more likely to reduce dividends, and sees the potential for average dividend payout ratios to increase to about 80.00 percent from a median of 63.00 percent in 2019.[40] In Moody's view, the ability to reduce dividends provides utilities "with a significant source of internal cash that could help them offset the impact of a potentially prolonged coronavirus-related economic downturn."[41]

37 Ibid., at 9.
38 Ibid.
39 Moody's Investors Service, *Dividends a major source of cash if coronavirus downturn is prolonged*, April 6, 2020, at 1.
40 Ibid., at 2-3.
41 Ibid., at 1.

Q. Have utility credit spreads reflected the concerns noted by S&P and Moody's?

A. Yes, they have. As Document No. 15 of my exhibit demonstrates, credit spreads for A, BBB+, and BBB rated utility debt increased significantly from February 19 to April 30, 2020, nearly 50.00 percent by the end of the period and more than doubling during the period. Looking back to 2007, before the 2008/2009 Financial Crisis, utility credit spreads as of April 30, 2020 were in the top 90th to 92nd percentile. Put another way, even considering the Financial Crisis, credit spreads currently are at historically high levels.

Q. What conclusions do you draw from those analyses?

A. Because underlying Treasury yields have been depressed due to investors seeking the safety of Treasury securities, an important measure of incremental return requirements is the change in credit spreads. Debt investors have a contractual, senior claim on cash flows over a limited horizon, whereas equity investors bear the residual risk of ownership in perpetuity. Despite those protections, the additional return required by debt investors approximately doubled during the current market dislocation. Given its lower priority claim on cash flows and its perpetual exposure to risk, we can assume

the increase in the Cost of Equity would be greater than the increase in credit spreads. Again, even if we cannot precisely measure the increase in the Cost of Equity associated with the market dislocation, we reasonably can conclude it has increased.

Second, S&P and Moody's both point to reducing the growth in dividends as a means of preserving credit quality in the event of a prolonged economic downturn. Doing so, however, comes at the expense of equity investors. The potential tension between maintaining credit quality and preserving dividends is another reason the Cost of Equity may increase more than credit spreads.

If dividends are maintained despite lower earnings and cash flow, payout ratios will increase. As Moody's observed, over time companies with higher payout ratios are more likely to reduce dividends, which would put further downward pressure on stock valuations. And as S&P noted, reduced equity valuations diminish the ability to access external equity, further eroding credit quality.

Lastly, S&P and Moody's discuss the importance of cash flow in their rating processes. The two principal sources of cash flow to utilities are net income and depreciation. A reduction in the Company's ROE, therefore, would reduce the

Company's earnings, cash flow, and ability to internally fund capital investments and dividends, putting further downward pressure on credit metrics and stock prices.

In short, during a period of heightened and possibly prolonged market uncertainty, observable market information makes clear that utility investors now face greater risks and require higher returns.

Q. Have authorized returns moved downward in the low interest rate environment?

A. No, they have not. As Document No. 16 of my exhibit demonstrates, despite the decline in yields in 2015 and 2016, and again in 2019-2020, regulatory commissions have not been inclined to reduce authorized returns for natural gas distribution utilities. As Document No. 16 demonstrates, there has been no meaningful trend since 2015; time explains less than 1.00 percent of the change in ROEs, and the trend is statistically insignificant. The consistency of authorized returns as interest rates fell also is consistent with the widely accepted principle that the Equity Risk Premium increases as interest rates fall.

Q. What conclusions do you draw from your analyses of the current capital market environment, and how do those conclusions

affect your ROE recommendation?

A. When markets become this uncertain, and this disrupted, investors increase their return requirements. Estimating that additional return becomes increasingly complex. That is the technical issue. The practical issue is plain: When utility investors are faced with such extraordinary market uncertainty, regulatory consistency and supportiveness become critically important.

I appreciate that the Commission has the difficult task of balancing the interests of customers and investors. I also appreciate doing so becomes increasingly difficult under stressed economic and financial conditions. We should not lose sight of the common interest customers and investors have in a financially strong utility. On balance, it remains my opinion that the Company's Cost of Equity falls in the range of 10.00 percent to 11.00 percent. Although current conditions suggest the investor-required ROE now falls toward the highest end of that range, given the uncertainty surrounding the eventual scope and duration of the current market dislocation, I recommend an ROE of 10.75 percent.

IV. SUMMARY OF ISSUES SURROUNDING COST OF EQUITY ESTIMATION IN REGULATORY PROCEEDINGS

Q. Before addressing specific aspects of this proceeding, please

provide a general overview of the issues surrounding the Cost of Capital in regulatory proceedings.

A. In general terms, the Cost of Capital is the return investors require to commit their capital to a firm. Investors will commit those funds only if the return they *expect* is equal to, or greater than, the return they *require*. From the firm's perspective, that required return, whether it is provided to debt or equity investors, has a cost. Individually, we refer to the "Cost of Debt" and the "Cost of Equity" as measures of those costs; together, they are referred to as the "Cost of Capital."

The Cost of Capital (including the costs of both debt and equity) is based on the economic principle of "opportunity costs." Investing in any asset, whether debt or equity securities, implies a forgone opportunity to invest in alternative assets. For any investment to be sensible, its expected return must be at least equal to the return expected on alternative, comparable risk investment opportunities. Because investments with like risks should offer similar returns, the opportunity cost of an investment should equal the return available on an investment of comparable risk. In that important respect, the returns required by debt and equity investors represent a cost to the Company.

Although both debt and equity have required costs, they differ in certain fundamental ways. The Cost of Debt, for example, is contractually defined and can be directly observed as the interest rate, or yield, on debt securities.[42] The Cost of Equity, on the other hand, is neither directly observable nor a contractual obligation. Rather, equity investors have a claim on cash flows only after debt holders are paid; the uncertainty (or risk) associated with those residual cash flows determines the Cost of Equity. Because equity investors bear that additional "residual risk," they require higher returns than debt holders. In that basic sense, equity and debt investors differ – they invest in different securities, face different risks, and require different returns.

Whereas the Cost of Debt can be directly observed, the Cost of Equity must be estimated or inferred based on market data and various financial models. As discussed throughout my Direct Testimony, each model is subject to its own set of specific assumptions, which may be more, or less, applicable as market conditions change. Further, because the Cost of Equity is premised on opportunity costs, the models typically are applied to a group of "comparable" or "proxy" companies. The choice of models (including their inputs), the selection of proxy companies, and the interpretation of model results

[42] The observed interest rate may be adjusted to reflect issuance or other directly observable costs.

all require the application of reasoned judgment. That judgment should consider data and information, both quantitative and qualitative, not necessarily included in the models themselves.

In the end, the estimated Cost of Equity should reflect the return that investors require considering the subject company's risks, and the returns available on comparable investments. A given utility stock may require a higher return based on the risks to which it is exposed, or the growth it may expect, relative to other utilities. That is, although utilities may be viewed as a "sector", not all require the same return. The assessment of relative risks and growth prospects, and their effect on the Cost of Equity, requires the application of reasoned, experienced judgment applied to a variety of data, much of which is qualitative.

Q. Please provide a brief summary of the regulatory guidelines established for the purpose of determining the ROE.

A. The United States Supreme Court (the "Supreme Court") established the guiding principles for establishing a fair return for capital in two cases: (1) *Bluefield Water Works and Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923) *("Bluefield")*; and (2) *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) *("Hope")*.

In those cases, the Supreme Court recognized that the fair ROE should be: (1) comparable to returns investors expect to earn on other investments of similar risk; (2) sufficient to assure confidence in the company's financial integrity; and (3) adequate to maintain and support the company's credit and to attract capital.

Q. Does the Commission provide similar guidance?

A. Yes, the Commission applies the principles established in the *Hope* and *Bluefield* cases. For example, in the Company's 2008 rate proceeding, the Commission found that the authorized ROE "satisfies the standards set forth in the Hope, 320 U.S. 591 and Bluefield, 262 U.S. 679 decisions of the U.S. Supreme Court regarding a fair and reasonable return for the provision of regulated service."[43]

Based on those standards, the authorized ROE should provide the Company with the opportunity to earn a fair and reasonable return, and should enable efficient access to external capital under a variety of market conditions.

Q. Aside from those long-held standards, why is it important for a utility to be allowed the opportunity to earn a return

[43] Order No. PSC 09-0411-FOF-GU, Docket No. 080318-GU, at 16.

adequate to attract capital at reasonable terms?

A. A return adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. As discussed above, and in keeping with the *Hope* and *Bluefield* standards, that return should be commensurate with the returns expected elsewhere in the market for investments of equivalent risk. Based on those standards, the Commission's decision in this case should provide the Company with the opportunity to earn an ROE that is: (1) adequate to attract capital at reasonable terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks. To the extent the Company is provided a reasonable opportunity to earn its market-based Cost of Equity, neither customers nor shareholders should be disadvantaged. A return adequate to attract capital at reasonable terms enables the Company to continue to provide safe, reliable natural gas service while maintaining its financial integrity.

Q. How is the Cost of Equity estimated in regulatory proceedings?

A. As noted earlier (and as discussed in more detail later in my Direct Testimony), the Cost of Equity is estimated using various financial models. By their nature, those models

produce a range of results from which the ROE is determined. That determination must be based on a comprehensive review of relevant data and information; it does not necessarily lend itself to a strict mathematical solution. The key consideration in determining the ROE is to ensure the overall analysis reasonably reflects investors' view of the financial markets in general, and the subject company (in the context of the proxy companies), in particular.

In summary, practitioners, academics, and regulatory commissions recognize that financial models are not precise quantifications of investor behavior, but are tools to be used in the ROE estimation process. They appreciate that the strict adherence to any single approach, or to the specific results of any single approach, can lead to flawed or misleading conclusions. That position is consistent with the *Hope* and *Bluefield* principle that it is the analytical result, as opposed to the method employed, that controls in determining just and reasonable rates. A reasonable ROE estimate therefore considers multiple methods, and the reasonableness of their individual and collective results in the context of observable, relevant market information.

V. PROXY GROUP SELECTION

Q. Why is it necessary to select a group of proxy companies to determine the Company's Cost of Equity?

A. First, it is important to bear in mind that the Cost of Equity for a given enterprise depends on the risks attendant to the business in which the company is engaged. In theory and in practice, the value of a given company reflects the aggregate market value of its constituent business units. The value of the individual business units reflects the risks and opportunities inherent in the business sectors in which those units operate.

In this proceeding, we are focused on estimating the Cost of Equity for the Company's Florida operations. Because the ROE is a market-based concept, and given that Peoples is not a publicly traded entity, it is necessary to establish a group of companies that are both publicly traded and comparable to Peoples to serve as its "proxy" for purposes of the ROE estimation process. Even if the Company were publicly traded, it is possible that transitory events could bias its market value in one way or another over a given period. A significant benefit of using a proxy group is that it serves to moderate the effects of anomalous, temporary events associated with any one company. Please see Appendix A to this Direct Testimony for a description of how I selected the proxy group. Applying the screening criteria discussed in Appendix A results in a proxy group that, taken as a whole, is fundamentally comparable to the Company's investment profile.

Q. Please provide a summary profile of Peoples.

A. Peoples is a division of Tampa Electric Company ("Tampa Electric"), providing natural gas distribution to approximately 361,000 customers throughout Florida.[44] Tampa Electric is a wholly owned subsidiary of TECO Energy, Inc. ("TECO Energy"), which is a wholly owned indirect subsidiary of Emera Incorporated ("Emera"). Emera, TECO Energy, and Tampa Electric all have a current long-term S&P issuer credit rating of BBB+ (outlook: negative), and long-term credit ratings from Moody's of Baa3, Baa2, and A3, respectively.[45]

Q. What companies are included in your proxy group?

A. The criteria discussed in Appendix A produced a proxy group including the following seven companies: Atmos Energy Corporation; New Jersey Resources Corporation; Northwest Natural Holding Company; ONE Gas, Inc.; South Jersey Industries, Inc.; Southwest Gas Holdings, Inc.; and Spire Inc.

Q. Does the selection of a proxy group suggest that analytical results will be tightly clustered around average (*i.e.*, mean) results?

[44] Source: S&P Global Market Intelligence.
[45] Source: S&P Global Market Intelligence. Credit ratings are not available for Peoples.

A. Not necessarily. For example, the DCF approach calculates the Cost of Equity using the expected dividend yield and projected growth. Despite the care taken to ensure risk comparability, market expectations with respect to future risks and growth opportunities will vary from company to company. Even within a group of similarly situated companies, it is common for analytical results to reflect a seemingly wide range.[46] An important analytical issue is how to best estimate the market-required ROE from within that range. That determination necessarily must consider a wide range of both empirical and qualitative information. As noted earlier, it is not an entirely mathematical analysis.

VI. COST OF EQUITY ESTIMATION

Q. Please briefly discuss the ROE in the context of the regulated Rate of Return.

A. Regulated utilities primarily use common stock and long-term debt to finance their capital investments. The overall rate of return ("ROR") weighs the costs of the individual sources of capital by their respective book values.

Q. How have you determined the investor-required ROE?

[46] In Appendix B, I provide more substantive descriptions of the models used to estimate the ROE.

A. Because the Cost of Equity is not directly observable, it must be estimated, or inferred, based on both quantitative and qualitative information. Although several empirical models have been developed for that purpose, all are subject to limiting assumptions or other constraints. When faced with the task of estimating the Cost of Equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Many finance texts therefore recommend using multiple approaches to estimate the Cost of Equity.[47]

Regulatory commissions in other jurisdictions, such as Hawaii, Massachusetts, and North Carolina, have found that no individual model is more reliable than all others under all market conditions.[48] Those findings are consistent with investor practice. As such, I have applied several methods, including the Constant Growth DCF model, the CAPM and ECAPM, the Bond Yield Plus Risk Premium approach, and the Expected

[47] *See, for example,* Eugene Brigham, Louis Gapenski, Financial Management: Theory and Practice, 7th Ed., 1994, at 341; and Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed., 2000, at 214.

[48] *See, for example*: (1) Public Utilities Commission of the State of Hawaii, Docket No. 7700, Order No. 13704 in Docket No. 7700, *In the Matter of the Application of Hawaiian Electric Company, Inc. For Approval of Rate Increases and Revised Rate Schedules and Rules*, December 28, 1994, at 92; (2) The Commonwealth of Massachusetts Department of Public Utilities, *Investigation by the Department of Public Utilities*, Docket D.P.U. 15-155, September 30, 2016, at 376-378; and (3) State of North Carolina Utilities Commission, *In the Matter of Application of Public Service Company of North Carolina, Inc. for a General Increase in its Rates and Charges*, Docket No. G-5, Sub 565, *Order Approving Rate Increase and Integrity Management Tracker*, October 28, 2016, at 35-36.

Earnings method.

Q. Why did you select those four models?

A. I did so for two reasons. First, because the purpose of ROE analyses is to estimate the return investors require, it is important to use the models investors apply. As discussed in Appendix B, the models I have applied are commonly used in practice. Second, the models focus on different aspects of return requirements, and provide different insights to investor behavior. Using multiple models therefore provides a more complete, and more reliable perspective on investors' return requirements.

Q. Please briefly describe the Constant Growth DCF model.

A. The Constant Growth DCF approach defines the Cost of Equity as the sum of (1) the expected dividend yield, and (2) expected long-term growth. The expected dividend yield equals the expected annual dividend divided by the current stock price, and the growth rate is based on analysts' expectations of earnings growth. Under the model's strict assumptions, the growth rate equals the rate of capital appreciation (that is, the growth in the stock price).[49]

[49] As discussed in Appendix B, the model assumes that earnings, dividends, book value, and the stock price all grow at the same constant rate in perpetuity.

Given that structure, it does not matter whether the investor holds the stock in perpetuity, or whether they hold the stock for a specific period, collect the dividends, then sell at the prevailing market price. Under the model's assumptions, the result is the same regardless of the holding period.

Q. Please briefly describe the Capital Asset Pricing Model.

A. Whereas DCF models focus on expected cash flows, Risk Premium-based models, such as the CAPM, focus on the additional return that investors require for taking on incremental risk. In finance, "risk" generally refers to the variation in expected returns, rather than the expected return, itself. Consider two firms, X and Y, with expected returns, and the expected variation in returns noted in Document No. 17 of my exhibit. Although the two have the same expected return (12.50 percent), Firm Y's are far more variable. From that perspective, Firm Y would be considered the riskier investment.

Now consider two other firms, Firm A and Firm B. Both have expected returns of 12.50 percent, and both are equally risky as measured by their volatility. But as Firm A's returns go up, Firm B's returns go down. That is, the returns are negatively correlated (*see*, Document No. 18).

If we were to combine Firms A and B into a portfolio, we would expect a 12.50 percent return with no uncertainty because of the opposing symmetry of their risk profiles. That is, we can diversify the risk away. As long as two stocks are not perfectly correlated, we can achieve diversification benefits by combining them into a portfolio. That is the essence of the CAPM; because we can combine firms into a portfolio, the only risk that matters is the risk that remains after diversification, *i.e.*, the "non-diversifiable" risk.

The CAPM defines the Cost of Equity as the sum of the "risk-free" rate, and a premium to reflect the additional risk associated with equity investments. The "risk-free" rate is the yield on a security viewed as having no default risk, such as long-term Treasury bonds. The risk-free rate essentially sets the baseline of the CAPM. That is, an investor would expect a higher return than the risk-free rate to purchase an asset that carries risk. The difference between that higher return (*i.e.*, the required return) and the risk-free rate is the risk premium.

$$Risk\text{-}Free\ Rate + Risk\ Premium = Required\ Return \quad [1]$$

The risk premium is defined as a security's Beta coefficient multiplied by the risk premium of the overall market (the "Market Risk Premium" or "MRP"). The Beta coefficient is a

measure of the subject company's risk relative to the overall market, *i.e.*, the "non-diversifiable" risk. A Beta coefficient of 1.00 means that the security is equally as risky as the overall market; a value below 1.00 represents a security with less risk than the overall market, and a value over 1.00 represents a security with more risk than the overall market. Equation [2] provides the general format of the CAPM formula:

$$Risk\text{-}Free\ Rate + (Beta\ Coefficient\ x\ MRP) = Required\ Return \quad [2]$$

I also applied the "Empirical CAPM", which calculates the product of the adjusted Beta coefficient and the Market Risk Premium, and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the Market Risk Premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ROE estimate. This approach helps correct for the tendency of low-Beta coefficient securities to realize returns somewhat higher than the traditional CAPM would predict, and high-Beta coefficient securities to realize returns lower than predicted. That is, the ECAPM addresses the tendency of the CAPM to underestimate the Cost of Equity for low-Beta coefficient companies, such as regulated utilities.

Q. Please briefly describe the Bond Yield Risk Premium method.

A. This approach is based on the basic financial principle that equity investors bear the risk associated with ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders are riskier than returns to bondholders, equity investors must be compensated for bearing that additional risk (that difference often is referred to as the "Equity Risk Premium"). Bond Yield Plus Risk Premium approaches estimate the Cost of Equity as the sum of the Equity Risk Premium and the yield on a class of bonds.

$$Bond\ Yield + Equity\ Risk\ Premium = Required\ Return \quad [3]$$

Q. Please briefly describe the Expected Earnings approach.

A. The Expected Earnings analysis calculates the forward-looking (i.e., expected) rate of earnings on book value of each proxy company by adjusting the expected return on equity as reported by Value Line for the expected change in equity (i.e., shares of common equity) of each company to arrive at an adjusted expected return on equity for each proxy group company. This figure represents the return on book value investors expect each proxy company to earn in the near future (usually three to five years). I have applied this approach as a

corroborating method to the results of my other models.

Q. What are the results of your Constant Growth DCF-based analysis?

A. The results of the Constant Growth DCF model described in Appendix B, part A are provided in Document No. 2 of my exhibit. The median DCF results for my proxy group are 10.43 percent, 10.25 percent, and 10.23 percent for the 30-, 90-, and 180-trading day periods, respectively. The median high DCF results for the 30-, 90-, and 180-day averaging periods are 11.51 percent, 11.45 percent, and 11.20 percent, respectively.[50]

Q. Please now summarize your remaining analytical results.

A. The Risk Premium-based results, including the CAPM, ECAPM and Bond Yield Plus Risk Premium methods, explained in detail in Appendix B, parts B and C, respectively, are provided in Document Nos. 6 and 7 of my exhibit. The CAPM model indicates an ROE in the range of approximately 8.99 percent to 15.54 percent; and the results of my ECAPM analysis produces a range of results from 10.12 percent to 15.89 percent. The Bond

[50] For the purposes of my Direct Testimony, I have put more emphasis on the median results of my Constant Growth DCF analysis, because the mean results are affected by an anomalously high growth rate for Northwest Natural Holding Company of 22.50 percent from Value Line due to the company's significant losses in 2017.

Yield Plus Risk Premium approach suggests an ROE in the range of 9.92 to 10.41 percent.

The Expected Earnings results, explained in detail in Appendix B, part D, are summarized in Document No. 8 of my exhibit. The Expected Earnings approach indicates an ROE in the range of approximately 9.53 percent to 9.64 percent.

VII. OTHER CONSIDERATIONS

Q. What other factors have you considered in determining your recommended ROE?

A. Because the analytical methods discussed above provide a range of estimates, there are several additional factors that should be taken into consideration when establishing a reasonable range for the Company's Cost of Equity. Those factors include flotation costs associated with equity issuances, the Company's planned capital investment program, and the Company's high level of overall performance and significant growth.

Flotation Costs

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These include out-of-pocket

expenditures for preparation, filing, underwriting, and other costs of issuance.

Q. Why is it important to recognize flotation costs in the allowed ROE?

A. To attract and retain new investors, a regulated utility must have the opportunity to earn a return that is both competitive and compensatory. To the extent the opportunity to recover prudently incurred flotation costs is denied, actual returns will fall short of expected (or required) returns, thereby diminishing its ability to attract adequate capital on reasonable terms.

Q. Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. Flotation costs are part of capital costs, which are properly reflected on the balance sheet under "paid in capital" rather than current expenses on the income statement. Flotation costs are incurred over time, just as investments in rate base or debt issuance costs. As a result, the great majority of flotation costs are incurred prior to the test year, but remain part of the cost structure during the test year and beyond, and as such, should be recognized for ratemaking purposes. Therefore, recovery of flotation costs is

appropriate even if no new issuances are planned in the near future because failure to allow such cost recovery may deny Peoples the opportunity to earn its required rate of return in the future.

Q. Do the DCF, CAPM, and Bond Yield Plus Risk Premium models already incorporate investor expectations of a return in order to compensate for flotation costs?

A. No. The models used to estimate the appropriate ROE assume no “friction” or transaction costs, as these costs are not reflected in the market price (in the case of the DCF model) or risk premium (in the case of the CAPM and the Bond Yield Plus Risk Premium model). Therefore, it is appropriate to consider flotation costs when determining where the Company’s return should fall.

Q. Is the need to consider flotation costs eliminated because Peoples is a wholly owned subsidiary?

A. No, it is not. Wholly owned subsidiaries, such as Peoples, receive equity capital from their parents, and provide returns on the capital that roll up to the parent, which is designated to attract and raise capital based on the returns of those subsidiaries. To deny recovery of issuance costs associated with capital that is invested in the subsidiaries

ultimately would penalize the investors that fund the utility operations, and would inhibit the utility's ability to obtain new equity capital at a reasonable cost. This is important for companies, such as Peoples, that are planning continued capital expenditures in the near term, and for which access to capital (at reasonable cost rates) to fund such required expenditures will be critical.

Q. How did you calculate the flotation cost recovery adjustment?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs. My estimate of flotation costs recognizes the costs of issuing equity that were incurred by the proxy companies in their most recent two issuances. As shown in Document No. 19 of my exhibit, an adjustment of 0.10 percent (*i.e.*, 10 basis points) reasonably represents flotation costs for the Company.

Q. Is the need to consider flotation costs recognized by the academic and financial communities?

A. Yes. The need to reimburse investors for equity issuance costs is recognized by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. For example, Dr. Morin notes that "[t]he costs of issuing [common stock] are just as real as operating

and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit the recovery of these costs."[51] Dr. Morin further notes that "equity capital raised in a given stock issue remains on the utility's common equity account and continues to provide benefits to ratepayers indefinitely."[52] This treatment is consistent with the philosophy of a fair rate of return. As explained by Dr. Shannon Pratt:

> Flotation costs occur when a company issues new stock. The business usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the business. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the business's required returns must be greater to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the net cash flow to discount, or by incorporating the cost into the cost of equity capital. Since flotation costs typically are not applied to

[51] Roger A. Morin, Ph.D., New Regulatory Finance, Public Utility Reports, Inc., 2006, at 321.
[52] *Id.*, at 327.

> operating cash flow, they must be incorporated into the cost of equity capital.[53]

Similarly, Morningstar has commented on the need to reflect flotation costs in the Cost of Capital:

> Although the cost of capital estimation techniques set forth later in this book are applicable to rate setting, certain adjustments may be necessary. One such adjustment is for flotation costs (amounts that must be paid to underwriters by the issuer to attract and retain capital).[54]

Q. Has the Commission previously recognized the need to recover flotation costs?

A. Yes. In Peoples' 2008 rate application, the Commission did not make a specific adjustment for flotation costs, but acknowledged that "[t]his Commission has traditionally recognized a reasonable adjustment for flotation costs in the determination of the investor-required ROE."[55]

Q. Are you proposing to adjust your recommended ROE by 10 basis

[53] Shannon P. Pratt, Roger J. Grabowski, Cost of Capital: Applications and Examples, 4th ed. (John Wiley & Sons, Inc., 2010), at 586.
[54] Morningstar, Inc. Ibbotson SBBI 2013 Valuation Yearbook, at 25.
[55] Order No. PSC-09-0411-FOF-GU, Docket No. 080318-GU, at 13.

points to reflect the effect of flotation costs on the Company's ROE?

A. Consistent with recent Commission practice, I am not proposing a specific adjustment. Rather, I have considered the effect of flotation costs, in addition to the Company's other business risks, in determining where the Company's ROE falls within the range of results.

Planned Capital Expenditures

Q. Please briefly summarize the Company's capital investment plans.

A. Peoples currently plans to invest approximately $622.5 million of additional capital over the 2020-2021 period,[56] which represents nearly 50.00 percent of its 2019 year end net utility plant.[57] That amount includes investments required to support growth, and to maintain safe, sufficient, and reliable service in both transmission and distribution facilities. As discussed by Peoples Gas Systems' Witness Sean P. Hilary, the Company will require continued access to the capital markets, at reasonable terms, to finance its capital spending plan.[58] As the Company moves forward with

[56] Source: Company provided data.
[57] Peoples Gas System, Annual Report to the Florida Public Service Commission for the year ended December 31, 2019, at 6.
[58] Testimony of Company witness Sean P. Hillary, at 61.

its capital spending plan, timely recovery of its capital costs is critical to mitigate the delay of capital recovery and execute its capital spending program.

Q. Do credit rating agencies recognize risk associated with increased capital expenditures?

A. Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. S&P has noted several long-term challenges for utilities' financial health including: heavy construction programs to address demand growth; declining capacity margins; and aging infrastructure and regulatory responsiveness to mounting requests for rate increases.[59] More recently, S&P noted:

> We assume that capital spending will remain a focus of most utility managements and strain credit metrics. It provides growth when sales are diminished by ongoing demanded efficiency from regulators and other trends, and it is welcomed by policymakers that appreciate the economic stimulus and the benefits of safer, more reliable service. The speed with which the regulatory process turns

[59] Standard & Poor's, *Industry Report Card: Utility Sectors in the Americas Remain Stable, While Challenges Beset European, Australian, and New Zealand Counterparts*, RatingsDirect, June 27, 2008, at 4.

> the new spending into higher rates to begin to pay for it is an important factor in our assumptions and the forecast. Any extended lag between spending and recovery can exacerbate the negative effect on credit metrics and therefore ratings.[60]

The rating agency views noted above also are consistent with certain observations discussed in Section III of my Direct Testimony: (1) the benefits of maintaining a strong financial profile are significant when capital access is required, and become particularly acute during periods of market instability; and (2) the Commission's decision in this proceeding will have a direct bearing on the Company's credit profile, and its ability to access the capital needed to fund its investments.

Q. Do substantial capital expenditures directly relate to a utility being allowed the opportunity to earn a return adequate to attract capital at reasonable terms?

A. Yes, they do. The allowed ROE should enable the subject utility to finance capital expenditures and working capital requirements at reasonable rates, and to maintain its financial integrity in a variety of economic and capital

[60] Standard & Poor's, *Industry Top Trends 2017: Utilities*, RatingsDirect, February 16, 2017, at 4.

market conditions. As discussed throughout my Direct Testimony, a return adequate to attract capital at reasonable terms enables the utility to provide safe, reliable service while maintaining its financial soundness. To the extent a utility is provided the opportunity to earn its market-based cost of capital, neither customers nor shareholders should be disadvantaged. These requirements are of particular importance to a utility when it is engaged in a substantial capital expenditure program.

The ratemaking process is predicated on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility services, the utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory commissions recognize that since utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of the utility and its ratepayers.

Further, the financial community carefully monitors current and expected financial condition of utility companies, as well as the regulatory environment in which those companies operate. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' assessments of risk. That is especially

important during periods in which the utility expects to make significant capital investments and, therefore, may require access to capital markets.

Q. How do the Company's expected capital expenditures compare to the proxy group?

A. To reasonably make that comparison, I calculated the ratio of expected capital expenditures to net plant for each company in the proxy group. For the projected test year period 2020-2021, I performed that calculation using Peoples' projected capital expenditures relative to its net plant for the year ended December 31, 2019. As shown in Document No. 20 of my exhibit, relative to the proxy group, Peoples has the highest ratio of projected capital expenditures to net plant, approximately 22.00 percentage points higher than the proxy group median.

Q. What are your conclusions regarding the effect of Peoples' capital investment plan on its risk profile and cost of capital?

A. It is clear that Peoples' capital investment plan relative to net plant is significantly larger than the proxy group companies. It also is clear that equity investors and credit rating agencies recognize the additional risks associated

with substantial capital expenditures. These additional risk factors suggest that an ROE toward the upper end of my recommended range of returns would be appropriate.

Overall Performance

Q. Has Peoples demonstrated a combination of high level of performance and significant customer growth?

A. Yes, it has. Even as Peoples' total number of customers increased by nearly 52,000 customers (i.e., approximately 15.00 percent) over the past five years, the Company has sustained consistent levels of high performance in customer satisfaction, service quality, and low customer bills. *See*, direct testimony of Monica Whiting and TJ Szelistowski.

Q. Is it appropriate for a regulatory entity such as the Commission to recognize utility performance when setting the ROE?

A. Yes. The rationale for setting an ROE that recognizes utility performance that results in higher service quality and reliability and lower bills for customers, and the mutual benefits to customers and investors from doing so, are summarized by Dr. Morin in his text New Regulatory Finance, in which he discusses incentive-based regulation:

> In essence, an incentive premium in excess of the authorized rate of return is granted as an incentive device and/or to reward the attainment of a certain performance objective. Benefits accrue to both investors and ratepayers, the former in the form of enhanced profitability, and the latter in the form of reduced costs. The ROE increment is frequently tied to a specific performance target, for example a given ratio of actual/filed capital spending program. More importantly, the ROE increment is applied in order to reward overall management performance as opposed to the attainment of a narrow, specific objective.[61]

Although Dr. Morin's discussion specifically addresses formal incentive plans, I believe the same rationale applies to setting the ROE in a traditional rate case.

Q. Is such a premium part of the Cost of Equity?

A. No. Such a premium would represent an award above the Cost of Equity to recognize and reward utility performance.

Q. Is recognizing superior performance in the authorized ROE

[61] Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 539.

consistent with previous ROE adders approved by the Commission?

A. Yes. In its order approving Gulf Power Company's ("Gulf") 2001 rate application, the Commission found:

> Gulf's past performance has been superior and we expect that level of performance to continue into the future. In recognition of this, we find that Gulf deserves to have 25 basis points added to the mid-point ROE of 11.75%.[62]

Q. What are your conclusions regarding Peoples' high level of overall performance?

A. Setting an ROE that recognizes overall performance is an appropriate element of the Commission's regulatory discretion. These factors, along with Peoples' higher risk factors and need to access debt and equity capital, support an ROE at the upper end of my recommended range.

VIII. CONCLUSIONS AND RECOMMENDATION

Q. What is your conclusion regarding the Company's Cost of Equity?

[62] Order No. PSC 02-0787-FOF-EI, Docket No. 010949-EI, at 32.

A. As discussed earlier in my Direct Testimony, it is prudent and appropriate to consider multiple analytical methods to arrive at an ROE recommendation for Peoples. I have performed several analyses to estimate the Company's Cost of Equity and have considered several market-wide and Company-specific issues. My recommendation reflects analytical results based on a proxy group of natural gas utilities, and also considers other factors, including the effect of flotation costs, the Company's capital investment plans, and the Company's high level of growth and performance.

Given those considerations, I believe an ROE in the range of 10.00 percent to 11.00 percent represents the range of equity investors' required rate of return for investment in natural gas utilities, like Peoples, in today's highly volatile capital markets. It is my view that an ROE at the upper end of that range, which recognizes the Company's superior performance, is reasonable and appropriate. Based on the quantitative and qualitative analyses discussed throughout my Direct Testimony, I recommend that the Commission authorize the Company the opportunity to earn an ROE of 10.75 percent.

Q. Does this conclude your prepared Direct Testimony?

A. Yes, it does.

APPENDIX A: PROXY GROUP SELECTION

Q. How did you select the companies included in your proxy group?

A. I began with the universe of companies that Value Line classifies as Natural Gas Utilities, which includes ten domestic U.S. utilities, and applied the following screening criteria:

- Because certain of the models used in my analyses assume that earnings and dividends grow over time, I excluded companies that do not consistently pay quarterly cash dividends;
- To ensure that the growth rates used in my analyses are not biased by a single analyst, all the companies in my proxy group are covered by at least two utility industry equity analysts;
- All companies in my proxy group have investment grade senior unsecured and/or corporate credit ratings from S&P;
- To incorporate companies that are primarily regulated gas distribution utilities, I included companies with at least 60.00 percent of operating income derived from regulated natural gas utilities; and
- I eliminated companies currently known to be party to a merger or other transformative transactions.

Q. Did you include Peoples in your proxy group?

A. No. To avoid the circular logic that would otherwise occur, it has been my consistent practice to exclude the subject company (or its parent) from the proxy group. Further, neither Peoples nor Emera Incorporated are classified by Value Line as domestic Natural Gas Utilities.

Q. What companies met those screening criteria?

A. The criteria discussed above resulted in a proxy group of the following seven companies: Atmos Energy Corporation; New Jersey Resources Corporation; Northwest Natural Holding Company; ONE Gas, Inc.; South Jersey Industries, Inc.; Southwest Gas Holdings, Inc.; and Spire Inc.

APPENDIX B: DETAILED DESCRIPTION OF MODELS

A. Constant Growth DCF Model

Q. Please more fully describe the Constant Growth DCF approach.

A. The Constant Growth DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its simplest form, the Constant Growth DCF model expresses the Cost of Equity as the discount rate that sets the current price equal to expected cash flows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_t}{(1+k)^t} \quad [4]$$

where P_0 represents the current stock price, $D_1 \ldots D_t$ represent expected future dividends, and k is the discount rate, or required ROE. Equation [4] is a standard present value calculation that can be simplified and rearranged into the familiar form:

$$k = \frac{D(1+g)}{P_0} + g \quad [5]$$

Equation [5] often is referred to as the "Constant Growth DCF" model, in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

Q. What assumptions are required for the Constant Growth DCF Model?

A. The Constant Growth DCF model assumes: (1) earnings, book value, and dividends all grow at the same, constant rate in perpetuity; (2) the dividend payout ratio remains constant; (3) the Price to Earnings ("P/E") multiple remains constant in perpetuity; (4) the discount rate (that is, the estimated Cost of Equity) is greater than the expected growth rate; and (5) the calculated Cost of Equity remains constant, also in perpetuity. These simplifying assumptions, which may become more or less relevant as market conditions change, are required to derive the familiar Constant Growth DCF model

provided in Equation [5].

Q. What market data did you use to calculate the dividend yield component of your Constant Growth DCF Model?

A. The dividend yield is based on the proxy companies' current annualized dividend, and average closing stock prices over the 30-, 90-, and 180-trading day periods as of April 30, 2020.

Q. Why did you use three averaging periods to calculate an average stock price?

A. I did so to ensure the model's results are not skewed by anomalous events that may affect stock prices on any given trading day. At the same time, the averaging period should be reasonably representative of expected capital market conditions over the long term. In my view, using 30-, 90-, and 180-day averaging periods reasonably balances those concerns.

Q. Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A. Yes, I did. Because utilities increase their quarterly dividends at different times throughout the year, it is

reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is appropriate to calculate the expected dividend yield by applying one-half of the long-term growth rate to the current dividend yield.[63] That adjustment ensures that the expected dividend yield is representative of the coming 12-month period and does not overstate the dividends to be paid during that time.

Q. Is it important to select appropriate measures of long-term growth in applying the DCF model?

A. Yes. In its Constant Growth form, the DCF model (*i.e.*, as presented in Equation [5] above) assumes a single growth estimate in perpetuity. To reduce the long-term growth rate to a single measure, we must assume a fixed payout ratio, and that earnings per share ("EPS"), dividends per share ("DPS"), and book value per share all grow at the same constant rate in perpetuity. Because dividend growth can only be sustained by earnings growth, the model should incorporate a variety of long-term earnings growth estimates. That can be accomplished by averaging measures of long-term growth that tend to be least influenced by capital allocation decisions that companies may make in response to near-term changes in

[63] *See*, Exhibit No. (RBH-1), Document No. 2.

the business environment. Because such decisions may directly affect near-term dividend payout ratios, estimates of earnings growth are more indicative of long-term investor expectations than are dividend growth estimates. For the purposes of the Constant Growth DCF model, therefore, growth in EPS represents the appropriate measure of long-term growth.

Q. Please summarize the findings of academic research on the appropriate measure of growth for estimating equity returns using the DCF model.

A. The relationship between various growth rates and stock valuation metrics has been the subject of much academic research.[64] As noted over 40 years ago by Charles Phillips in The Economics of Regulation:

> For many years, it was thought that investors bought utility stocks largely on the basis of dividends. More recently, however, studies indicate that the market is valuing utility stocks with reference to total per share earnings, so that the earnings-price ratio has assumed increased emphasis in rate cases.[65]

[64] *See,* Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

[65] Charles F. Phillips, Jr., The Economics of Regulation, at 285 (Rev. ed. 1969).

Subsequent academic research has clearly and consistently indicated that measures of earnings and cash flow are strongly related to returns, and that analysts' forecasts of growth are superior to other measures of growth in predicting stock prices.[66] For example, Vander Weide and Carleton state that, "[our] results… are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions."[67] Other research specifically notes the importance of analysts' growth estimates in determining the Cost of Equity, and in the valuation of equity securities. Dr. Robert Harris noted that "a growing body of knowledge shows that analysts' earnings forecast are indeed reflected in stock prices."[68] Citing Cragg and Malkiel, Dr. Harris notes that those authors "found that the evaluations of companies that analysts make are the sorts of ones on which market valuation is based."[69] Similarly, Brigham, Shome and Vinson noted that "evidence in the current literature

[66] *See, e.g.*, Andreas C. Christofi, Petros C. Christofi, Marcus Lori and Donald M. Moliver, *Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate*, Journal of Investing (Spring 1999); Harris and Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, 21 (Summer 1992); and Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

[67] James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988). The Vander Weide and Carleton study was updated in 2004 under the direction of Dr. VanderWeide. The results of the updated study were consistent with the original study's conclusions.

[68] Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return*, Financial Management (Spring 1986).

[69] *Ibid*.

indicates that (i) analysts' forecasts are superior to forecasts based solely on time series data; and (ii) investors do rely on analysts' forecasts."[70]

To that point, the research of Vander Weide and Carleton demonstrates that earnings growth projections have a statistically significant relationship to stock valuation levels, while dividend growth rates do not.[71] Those findings suggest that investors form their investment decisions based on expectations of growth in earnings, not dividends. Consequently, earnings growth, not dividend growth, is the appropriate estimate for the purpose of the Constant Growth DCF model.

Q. Please summarize your inputs to the Constant Growth DCF model.

A. I applied the DCF model to the proxy group of natural gas utility companies using the following inputs for the price and dividend terms:

- The average daily closing prices for the 30-, 90-, and 180-trading days ended April 30, 2020 for the term P_0; and
- The annualized dividend per share as of April 30, 2020 for the term D_0.

[70] Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management (Spring 1985).

[71] *See,* Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

I then calculated my DCF results using each of the following growth terms:

- The Zacks consensus long-term earnings growth estimates;
- The First Call consensus long-term earnings growth estimates;
- The Value Line long-term earnings growth estimates; and
- The Retention Growth estimates.[72]

Q. Please describe the Retention Growth estimate as applied in your DCF model.

A. The Retention Growth model, which is a generally recognized and widely taught method of estimating long-term growth, is an alternative approach to the use of analysts' earnings growth estimates. The model estimates growth as a function of (1) expected earnings, and (2) the extent to which earnings are retained. In its simplest form, the model represents long-term growth as the product of the retention ratio (*i.e.*, the percentage of earnings not paid out as dividends (referred to below as "b") and the expected return on book equity (referred to below as "r")). Thus, the simple "b x r" form of the model projects growth as a function of internally generated funds. That form of the model is limiting, however, in that it does not provide for growth funded from external

[72] *See*, Exhibit No. (RBH-1), Document No. 3.

equity.

The “br + sv” form of the Retention Growth estimate used in my DCF analysis is meant to reflect growth from both internally generated funds (*i.e.*, the “br” term) and from issuances of equity (*i.e.*, the “sv” term). The first term, which is the product of the retention ratio (*i.e.*, “b”, or the portion of net income not paid in dividends) and the expected Return on Equity (*i.e.*, “r”) represents the portion of net income that is “plowed back” into the Company as a means of funding growth. The “sv” term is represented as:

$$\left(\frac{m}{b} - 1\right) \; x \; Growth\, rate\, in\, Common\, Shares \quad [6]$$

where $\frac{m}{b}$ is the Market-to-Book ratio. In this form, the “sv” term reflects an element of growth as the product of (a) the growth in shares outstanding, and (b) that portion of the market-to-book ratio that exceeds unity. As shown in Document No. 3 of my exhibit, all components of the Retention Growth model may be derived from data provided by Value Line.

Q. How did you calculate the DCF results?

A. For each proxy company, I calculated the median low, median, and median high DCF results. For the median result, I combined the average of the EPS growth rate estimates reported

by Value Line, Zacks, and First Call with the subject company's dividend yield for each proxy company and then calculated the median result for those estimates. I calculated the high DCF result by using the maximum EPS growth rate as reported by Value Line, Zacks, First Call, and the Retention Growth method for each proxy group company in combination with the dividend yield for each of the proxy companies. The proxy group median high results then reflect the median of the maximum DCF results for the proxy group as a whole. I used a similar approach to calculate the proxy group median low results using instead the minimum of the Value Line, Zacks, First Call, and Retention Growth method growth rates for each company. For the purposes of my Direct Testimony, I have put more emphasis on the median results of my Constant Growth DCF analysis, because the mean results are affected by an anomalously high growth rate for Northwest Natural Gas Company of 22.50 percent from Value Line due to the company's significant losses in 2017.

Q. What are the results of your Constant Growth DCF analysis?

A. My Constant Growth DCF results are summarized in Document No. 2 of my exhibit. The median DCF results for my proxy group are 10.43 percent, 10.25 percent, and 10.23 percent for the 30-, 90-, and 180-trading day periods, respectively. The median high DCF results for the 30-, 90-, and 180-day

averaging periods are 11.51 percent, 11.45 percent, and 11.20 percent, respectively.

B. CAPM Analysis

Q. Please describe the general form of the CAPM analysis.

A. The CAPM analysis is a risk premium method that estimates the Cost of Equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or "systematic" risk of that security). The CAPM describes the relationship between a security's investment risk and the market rate of return, and assumes all other risk, *i.e.*, all non-market or unsystematic risk, can be eliminated through portfolio diversification. The risk that cannot be diversified away is referred to as "undiversifiable", or "systematic", risk. The CAPM also assumes investors require compensation only for the systematic risk, which results from macroeconomic and other events that affect the returns on all assets.

As shown in Equation [7], the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

$$K_e = r_f + \beta(r_m - r_f) \quad [7]$$

where:

k = the required market ROE for a security;

β = the Beta coefficient of that security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

Equation [7] describes the Security Market Line ("SML"), or the CAPM risk-return relationship, which is graphically depicted in Document No. 21 of my exhibit. The intercept is the risk-free rate (r_f) which has a Beta coefficient of zero, the slope is the expected market risk premium ($r_m - r_f$). By definition, r_m, the return on the market has a Beta coefficient of 1.00. Under the CAPM, the expected equity risk premium on a given security is proportional to its Beta coefficient.

Intuitively, higher Beta coefficients indicate the subject company's returns have been relatively volatile and have moved in tandem with the overall market. Consequently, if a company has a Beta coefficient of 1.00, it is as risky as the market and does not provide diversification benefit.

In Equation [7], the term ($r_m - r_f$) represents the Market Risk Premium.[73] According to the theory underlying the CAPM,

[73] The Market Risk Premium is defined as the incremental return of the market over the risk-free rate.

because unsystematic risk can be diversified away by adding securities to their investment portfolios, the market will not compensate investors for bearing that risk. Therefore, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

$$\beta_j = \frac{\sigma_j}{\sigma_m} x\, \rho_{j,m} \quad [8]$$

where σ_j is the standard deviation of returns for company "j," σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns in between company j and the broad market. The Beta coefficient therefore represents both relative volatility (*i.e.*, the standard deviation) of returns, and the correlation in returns between the subject company and the overall market.

Q. What assumptions did you include in your CAPM analysis?

Because utility equity is a long-duration investment, I used three different estimates of the risk-free rate: (1) the current 30-day average yield on 30-year Treasury bonds (*i.e.*, 1.31 percent);[74] (2) the near-term projected 30-year Treasury yield (*i.e.*, 1.55 percent);[75] and (3) the long-term projected

[74] Source: Bloomberg Professional.

[75] *See,* Blue Chip Financial Forecasts, Vol. 39, No. 5, May 1, 2020, at 2. Consensus projections of the 30-year Treasury yield for the six quarters ending September 2021.

30-year Treasury yield (*i.e.*, 3.45 percent).[76]

Q. Why have you relied on the 30-year Treasury yield for your CAPM analysis?

A. In determining the security most relevant to the application of the CAPM, it is important to select the term (or maturity) that best matches the life of the underlying investment. Because utility equity has a perpetual life, the 30-year Treasury yield is the appropriate measure of the risk-free rate.

Q. Please describe your *ex-ante* approach to estimating the Market Risk Premium.

A. The approach is based on the market required return, less the current 30-year Treasury yield. To estimate the market required return, I calculated the market capitalization weighted average ROE based on the Constant Growth DCF model. To do so, I relied on data from Bloomberg and Value Line.[77] With respect to Bloomberg-derived growth estimates, I calculated the expected dividend yield (using the same one-half growth rate assumption described earlier), and combined

[76] *See,* Blue Chip Financial Forecasts, Vol. 38, No. 12, December 1, 2019, at 14. Consensus projections of the 30-year Treasury yield for the periods 2021-2025 and 2026-2030.

[77] *See*, Exhibit No. (RBH-1), Document No. 4.

that amount with the projected earnings growth rate to arrive at the market capitalization weighted average DCF result. I performed that calculation for each company for which Bloomberg provided both dividend yields and consensus growth rates. I then subtracted the current 30-year Treasury yield from that amount to arrive at the DCF-derived *ex-ante* market risk premium estimate. In the case of Value Line, I performed the same calculation, again using all companies for which five-year earnings growth rates were available. The results of those calculations are provided in Document No. 4 of my exhibit.

Q. How did you apply your expected Market Risk Premium and risk-free estimates?

A. I relied on the *ex-ante* Market Risk Premia discussed above, together with the current, near-term, and long-term projected 30-year Treasury bond yields as inputs to my CAPM analysis.

Q. What Beta coefficient did you use in your CAPM model?

A. As shown in Document No. 5 of my exhibit, I considered Beta coefficients reported by Value Line and Bloomberg, both of which adjust their calculated (or raw) Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00. A notable difference between the

two is that Value Line calculates the Beta coefficient over a five-year period, whereas Bloomberg's default calculation is based on two years of data.

Q. What are the results of your CAPM analysis?

A. The results of my CAPM analysis, which are summarized in Document No. 6 of my exhibit, suggest an ROE in the range of approximately 8.99 percent to 15.54 percent.

Q. Are you concerned with the difference in CAPM results based on Bloomberg and Value Line Beta coefficients?

A. No, I am not. Because Bloomberg calculates Beta coefficients over two years, the ongoing market instability will be more acutely reflected in them than it would be in Value Line's Beta coefficients, which are calculated over five years. Further, because Value Line reports are provided on a periodic basis, they are not as current as the Bloomberg Beta coefficients, which may be calculated at any time. That said, as demonstrated in Document No. 14, applying Value Line's method to current data indicates Beta coefficients calculated on that basis also have increased. From that perspective, the CAPM results based on the "Average Value Line Beta Coefficient" may be considered conservatively low.

Q. Did you consider another form of the CAPM in your analysis?

A. Yes. To address the change in Beta coefficients discussed above, I also included the Empirical CAPM approach (also referred to as the ECAPM), which calculates the product of the adjusted Beta coefficient and the Market Risk Premium, and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the Market Risk Premium, without any effect from the Beta coefficient.[78] The results of the two calculations are summed, along with the risk-free rate, to produce the Empirical CAPM result, as provided in Equation [9]:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [9]$$

where:

k_e = the required market ROE;

β = Adjusted Beta coefficient of an individual security;

r_f = the risk-free rate of return; and

r_m = the required return on the market as a whole.

Q. What is the benefit of the ECAPM approach?

A. The ECAPM addresses the tendency of the CAPM to under-estimate the Cost of Equity for companies, such as regulated utilities,

[78] *See, e.g.*, Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 189-190.

with relatively low Beta coefficients. As discussed below, the ECAPM recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, and that the CAPM under-estimates the alpha, or the constant return term.[79]

Numerous tests of the CAPM have measured the extent to which security returns and Beta coefficients are related as predicted by the CAPM. The ECAPM method reflects the finding that the actual SML described by the CAPM formula is not as steeply sloped as the predicted SML.[80] Fama and French state that "[t]he returns on the low Beta portfolios are too high, and the returns on the high Beta portfolios are too low."[81] Similarly, Dr. Morin states:

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted....
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:

[79] Ibid., at 191 ("The ECAPM and the use of adjusted betas comprised two separate features of asset pricing. Even if a company's beta is estimated accurately, the CAPM still understates the return for low-beta stocks.").

[80] Ibid., at 175. The Security Market Line plots the CAPM estimate on the Y-axis, and Beta coefficients on the X-axis.

[81] Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence", *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004, at 33.

$$K = R_F + x\,(R_M - R_F) + (1-x)\beta(R_M - R_F)$$

where x is a fraction to be determined empirically. The value of x that best explains the observed relationship Return = 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:

$$K = R_F + 0.25(R_M - R_F) + 0.75\,\beta(R_M - R_F)$$ [82]

Analysts may argue using adjusted Beta coefficients addresses the empirical issues with the CAPM by increasing the expected returns for low Beta coefficient stocks and decreasing the returns for high Beta coefficient stocks, concluding that there is no need for the ECAPM approach. I disagree with that argument. Beta coefficients are adjusted because of their general regression tendency to converge toward 1.00 over time, *i.e.*, over successive calculations. As also noted earlier, numerous studies have determined that at any given point in time, the SML described by the CAPM formula is not as steeply sloped as the predicted SML. To that point, Dr. Morin states:

> Some have argued that the use of the ECAPM is inconsistent with the use of adjusted betas, such as those supplied by Value Line and Bloomberg. This is because the reason for using the ECAPM is to

[82] Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 175, 190.

> allow for the tendency of betas to regress toward the mean value of 1.00 over time, and, since Value Line betas are already adjusted for such trend, an ECAPM analysis results in double-counting. This argument is erroneous. Fundamentally, the ECAPM is not an adjustment, increase or decrease, in beta. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. The ECAPM and the use of adjusted betas comprised two separate features of asset pricing. Even if a company's beta is estimated accurately, the CAPM still understates the return for low-beta stocks. Even if the ECAPM is used, the return for low-beta securities is understated if the betas are understated. Referring back to Figure 6-1, the ECAPM is a return (vertical axis) adjustment and not a beta (horizontal axis) adjustment. Both adjustments are necessary.[83]

It therefore is appropriate to rely on adjusted Beta

[83] Ibid., at 191.

coefficients in both the CAPM and ECAPM. As with the CAPM, my application of the ECAPM uses the Market DCF-derived *ex-ante* Market Risk Premium estimate, the current yield on 30-year Treasury securities as the risk-free rate, and two estimates of the Beta coefficient. The results of my ECAPM analysis, which are shown on Document No. 6 of my exhibit, produce a range from 10.12 percent to 15.89 percent.

C. Bond Yield Plus Risk Premium Approach

Q. Please describe the Bond Yield Plus Risk Premium approach.

A. This approach is based on the basic financial tenet that equity investors bear the residual risk associated with ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders are riskier than returns to bondholders, equity investors must be compensated for bearing that additional risk. Risk premium approaches, therefore, estimate the Cost of Equity as the sum of the equity risk premium and the yield on a particular class of bonds. Because the Equity Risk Premium is not directly observable, it typically is estimated using a variety of approaches, some of which incorporate *ex-ante*, or forward-looking, estimates of the Cost of Equity, and others that consider historical, or *ex-post*, estimates. An alternative approach is to use actual authorized returns for gas distribution companies to estimate

the Equity Risk Premium.

Q. Please explain how you performed your Bond Yield Plus Risk Premium analysis.

A. As indicated above, I first defined the Risk Premium as the difference between authorized ROEs and the then-prevailing level of long-term (*i.e.*, 30-year) Treasury yields. I then gathered data from 1,154 natural gas rate proceedings between January 1, 1980 and April 30, 2020. I also calculated the average period between the filing of the case and the date of the final order (that is, the "lag period"). To reflect the prevailing level of interest rates during the pendency of the proceedings, I calculated the average 30-year Treasury yield over the average lag period (approximately 187 days).

Because the data cover several economic cycles,[84] the analysis also may be used to assess the stability of the Equity Risk Premium. As noted above, the Equity Risk Premium is not constant over time; prior research has shown it is directly related to expected market volatility, and inversely related to the level of interest rates.[85] That finding is

[84] *See*, National Bureau of Economic Research, *U.S. Business Cycle Expansion and Contractions*.

[85] *See*, *e.g.*, Robert S. Harris and Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45; and Farris M. Maddox, Donna

particularly relevant given the relatively low level of current Treasury yields.

Q. How did you model the relationship between interest rates and the Equity Risk Premium?

A. The basic method used was regression analysis, in which the observed Equity Risk Premium is the dependent variable, and the average 30-year Treasury yield is the independent variable. Relative to the long-term historical average, the analytical period includes interest rates and authorized ROEs that are quite high during one period (*i.e.*, the 1980s) and that are quite low during another (*i.e.*, the post-Lehman bankruptcy period). To account for that variability, I used the semi-log regression, in which the Equity Risk Premium is expressed as a function of the natural log of the 30-year Treasury yield:

$$RP = \alpha + \beta(LN(T_{30}) \quad [10]$$

As shown in Document No. 7 of my exhibit, the semi-log form is useful when measuring an absolute change in the dependent variable (in this case, the Risk Premium) relative to a proportional change in the independent variable (the 30-year

T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, Financial Management, Autumn 1995, at 89-95.

Treasury yield).

As the chart in Document No. 7 demonstrates, over time there has been a statistically significant, negative relationship between the 30-year Treasury yield and the Equity Risk Premium. An important consequence of that relationship is that simply applying the long-term average Equity Risk Premium of 4.77 percent would significantly understate the Cost of Equity. Based on the regression coefficients in the chart, however, the implied ROE is between 9.92 percent and 10.41 percent (*see,* Document No. 7).

D. Expected Earnings Analysis

Q. Please describe the Expected Earnings Analysis.

A. The Expected Earnings approach supplements market-based models by highlighting information that is important to investors, providing a direct measure of the book-based return comparable-risk utilities are expected to earn. The standard revenue requirements formula explicitly recognizes the validity of book value of equity by choosing to measure capital structure based on book value rather than market value. Because it looks to the earnings expected of comparable-risk companies, the approach is consistent with the Hope and Bluefield "comparable return" standard. The Expected Earnings approach therefore provides a simple and

direct measure of equity investors' expected opportunity cost on the book value of equity, without the need for assumptions regarding investor behavior.

Q. Please explain how you applied the Expected Earnings Analysis.

A. I relied on Value Line's projected Return on Common Equity for the period 2023-2025, and adjusted those projected returns to account for the fact that they reflect common shares outstanding at the end of the period, rather than the average shares outstanding over the course of the year.[86] The results range from 7.05 percent to 11.60 percent, with an average value of 9.64 percent and median value of 9.53 percent (*see*, Document No. 8).

[86] The rationale for that adjustment is straightforward: Earnings are achieved over the course of a year, and should be related to the equity that was, on average, in place during that year. *See*, Leopold A. Bernstein, Financial Statement Analysis: Theory, Application, and Interpretation, Irwin, 4th Ed., 1988, at 630.

(Transcript continues in sequence in Volume 2.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

I, DEBRA KRICK, Court Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED this 8th day of December, 2020.

DEBRA R. KRICK
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EXPIRES AUGUST 13, 2024