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September 1, 2017

#### E-PORTAL FILING

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

**Re:** New Filing – Joint Petition for Approval of GRIP Cost Recovery Factors by Florida Public Utilities Company, Florida Public Utilities Company-Fort Meade, and Florida Division of Chesapeake Utilities Corporation.

Dear Ms. Stauffer:

Attached for filing, please find the Joint Petition for Approval of GRIP Cost Recovery Factors by Florida Public Utilities Company, Florida Public Utilities Company-Fort Meade, and Florida Division of Chesapeake Utilities Corporation, along with the Direct Testimony and Exhibit MC-1 of Mr. Mike Cassel. Also included with this filing are the following revised tariff pages:

CFG Fifth Revised Sheet No. 105.1 CFG Sixth Revised Sheet No. 105.2 FPUC NG Twelfth Revised Sheet No. 35.4 FPUC-FORT MEADE First Revised Sheet No. 64

Thank you for your assistance with this filing. As always, please don't hesitate to let me know if you have any questions whatsoever.

11 10

Beth Keating

Gunster, Yoakley & Stewart, P.A. 215 South Monroe St., Suite 601

Tallahassee, FL 32301 (850) 521-1706

MEK

cc:/(Certificate of Service)

#### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Joint Petition for Approval of Gas DOCKET NO. Program (GRIP) Reliability Infrastructure True-Up by Florida Public Utilities Company DATED: September 1, 2017 and the Florida Division of Chesapeake Utilities Corporation and Florida Public Utilities Company-Fort Meade

JOINT PETITION FOR APPROVAL OF GRIP COST RECOVERY FACTORS BY FLORIDA PUBLIC UTILITIES COMPANY, FLORIDA PUBLIC UTILITIES COMPANY-FORT MEADE, AND THE FLORIDA DIVISION OF CHESAPEAKE UTILITIES CORPORATION

Florida Public Utilities Company, Florida Public Utilities Company-Fort Meade ("Fort Meade") (herein jointly "FPUC"), and the Florida Division of Chesapeake Utilities Corporation ("CFG")(also referred to herein individually as "Company" and jointly as "Companies"), by and through their undersigned counsel, hereby file this Petition, pursuant to Section 366.06, Florida Statutes, and Order No. PSC-12-0490-TRF-GU, seeking approval from the Florida Public Service Commission ("FPSC" or "Commission") of FPUC's and CFG's GRIP cost recovery factors for the period January 2018 through December 2018. In support of this request, the Companies hereby state:

1) FPUC is a natural gas utility subject to the Commission's jurisdiction under Chapter 366, Florida Statutes. 1 Its principal business address is:

Florida Public Utilities Company 1750 S 14th Street, Suite 200 Fernandina Beach FL 32034

Florida Public Utilities Company - Fort Meade is a division of FPUC with its principal business address being the same as FPUC.

2) CFG is also a natural gas utility subject to the Commission's jurisdiction under Chapter 366, Florida Statutes. Its principal business address is:

<sup>&</sup>lt;sup>1</sup> FPUC's Indiantown Division does not participate in a GRIP program.

Florida Division of Chesapeake Utilities Corporation 1750 S 14th Street, Suite 200 Fernandina Beach FL 32034

3) The name and mailing address of the persons authorized to receive notices are:

Beth Keating, Esq. Gunster, Yoakley & Stewart, P.A. 215 South Monroe Street, Suite 601 Tallahassee, Florida 32301-1839 (850) 521-1706

Mike Cassel
Director, Regulatory and Governmental Affairs
Florida Public Utilities Company/Chesapeake
1750 S 14th Street, Suite 200
Fernandina Beach FL 32034
mcassel@fpuc.com

- 4) The Commission is vested with jurisdiction in this matter in accordance with Sections 366.04, 366.041, 366.05, and 366.06, Florida Statutes, pursuant to which the Commission is authorized to establish rates and charges for public utilities, including the relief requested herein, and to consider, among other things, the adequacy of facilities, as well as the utility's ability to improve such facilities. Likewise, in accordance with Section 368.05(2), Florida Statutes, the Commission has the authority to require improvements to natural gas distribution systems as may be necessary to promote the protection of the public.
- 5) Consistent with the requirements of Order No. PSC-12-0490-TRF-GU, issued September 24, 2012, the Companies have included with this filing Schedules A-D, which support the Companies' calculations of the yearly GRIP surcharge factors for the calendar year 2018.
- 6) The Companies are also submitting, contemporaneously with this Petition, the Direct Testimony and Exhibit MC-1, which includes the referenced schedules, of Mr. Mike Cassel in support of the Companies' request for approval of the requested factors. Therein, Mr. Cassel explains that certain projects in high consequence areas, namely within cities and larger municipalities, continue to be on an accelerated track. The accelerated status of these projects has caused an increase in GRIP costs, while these projects also often incur

additional costs associated with various construction requirements imposed by each municipality. As noted by Mr. Cassel, the Company anticipates that, as the projects in these high consequence areas are completed and the focus shifts to GRIP activity in other, less populated areas, the overall costs associated with GRIP will begin to decline.

- 7) As reflected on Schedule B-1, the final GRIP true-up amount for the period January 2016 through December 2016 was an under-recovery of \$1,456,443 for FPUC, an under-recovery of \$9,679 for CFG, and an under-recovery of \$2,582 for Fort Meade.
- 8) The Company projects total GRIP revenue requirements \$10,893,248 for FPUC, \$3,383,086 for CHPK, and \$25,019 for Fort Meade for the period January 2018 through December 2018. The projected net true-up is an over-recovery of \$648,578 for FPUC, an under-recovery of \$142,364 for CFG, and an over-recovery of \$15,103 for Fort Meade. After adding the projected GRIP revenue requirement to the (over/under) recovery amount, a total of \$10,244,670 for FPUC, \$3,525,45 for CFG, and \$9,916 for Fort Meade remains to be recovered during the period January 1, 2018 through December 31, 2018. After adding the projected revenue requirements for the programs and the true-up amounts then dividing this total among the Companies' rate classes, the following are the GRIP Cost Recovery factors for which the Companies seek approval in this petition:

<b>CFG</b>			
	GRIP		
RATE	<b>FACTORS</b>		
CLASS	PER THERM		
FTS-A	\$	0.55340	
FTS-B	\$	0.17785	
PP 4		0.11020	
FTS-1	\$	0.11838	

\$ 0.12603

FTS-2

FTS-2.1	\$	0.12095	
FTS-3	\$	0.05359	
FTS-3.1	\$	0.06238	
FTS-4	\$	0.07404	
FTS-5	\$	0.07777	
FTS-6	\$	0.06234	
FTS-7	\$	0.07864	
FTS-8	\$	0.07326	
FTS-9	\$	0.10860	
FTS-10	\$	0.12848	
FTS-11	\$	0.12575	
FTS-12	\$	0.03277	
FTS-13	N/A	A	
CLASS Rate Sch	edu	<u>le</u>	GRIP PER T Rate

CLASS	GRIP FACTORS PER THERM	
Rate Schedule	Rate per bill	
FTS-A (Exp)	\$	3.39
FTS-B (Exp)	\$	1.88
FTS-1 (Exp)	\$	1.81
FTS-2 (Exp)	\$	7.37
FTS-2.1 (Exp)	\$	13.82
FTS-3 (Exp)	\$	17.48
FTS-3.1 (Exp)	\$	37.59

# **FPUC**

RATE GRIP FACTORS
SCHEDULE PER THERM

RESIDENTIAL	\$0.24395
COMMERCIAL SMALL (General Service 1 & 2 & GS 1 & 2 Transportation)	\$0.16442
COMM. LRG VOLUME	\$0.09644
(Large Vol & LV Transportation)	
INTERRUPTIBLE SERVICE (Int Service & IS Transportation)	\$0.06494
	\$0.06494 \$0.37921
(Int Service & IS Transportation)	

# Fort Meade

RATE	<b>FACTORS</b>
SCHEDULE	PER THERM
RESIDENTIAL	\$0.08198
	40.02225
COMMERCIAL SMALL	\$0.02325
(General Service & GS Transportation)	
COMM. LRG VOLUME	\$0.00000
Out	φυ.υυυυ
(Large Vol & LV Transportation)	
INTERRUPTIBLE SERVICE	\$0,00000
	φοισσσσσ
(Int Service & IS Transportation)	
GENERAL LIGHTING SERVICE	\$0.00000
CELLER EL EL CITTE I O DEL FROM	70.000

9) The Companies attest that these factors have been calculated correctly and consistent with Commission requirements. Thus, the Companies ask that the Commission approve the proposed factors as set forth herein.

10) Attached to this Petition as Attachment A are proposed tariff pages, in clean and legislative format, reflecting the GRIP factors set forth herein.

**WHEREFORE,** FPUC, FPUC-Fort Meade, and CFG respectfully request that the Commission approve the proposed GRIP cost recovery factors to be effective for all meter readings for the period January 2018 through December 2018.

RESPECTFULLY SUBMITTED this 1st day of September, 2017.

Beth Keating

Gunster, Yoakley & Stewart, P.A. 215 South Monroe St., Suite 601

Tallahassee, FL 32301

(850) 521-1706

Attorneys for Florida Public Utilities Company and the Florida Division

# **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing has been served upon the following by Electronic Mail this 1st day of September, 2017.

Jennifer Crawford Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850 jcrawfor@psc.state.fl.us	J.R. Kelly/P. Christensen Office of Public Counsel c/o The Florida Legislature 111 W. Madison Street, Room 812 Tallahassee, FL 32399-1400 Kelly.JR@leg.state.fl.us
Mike Cassel 1750 S.W. 14th Street, Suite 200 Fernandina Beach, FL 32034-3052 Mcassel@fpuc.com	

Ву: \_

Beth Keating

Gunster, Yoakley & Stewart, P.A. 215 South Monroe St., Suite 601 Tallahassee, FL 32301

(850) 521-1706

# ATTACHMENT A

Florida Public Utilities Company, Florida Public Utilities Company – Indiantown Division,
Florida Public Utilities Company-Fort Meade, and
The Florida Division of Chesapeake Utilities Corporation

### **Revised Tariff Sheets**

(Clean and Legislative Versions)

CFG Fifth Revised Sheet No. 105.1 CFG Sixth Revised Sheet No. 105.2 FPUC NG Twelfth Revised Sheet No. 35.4 FPUC-FORT MEADE First Revised Sheet No. 64

### BILLING ADJUSTMENTS

(Continued from Sheet No. 35.3)

### Gas Reliability Infrastructure Program (GRIP)

### **Applicability**

The bill for gas or transportation service supplied to a Customer in any Billing Period shall be adjusted as follows:

The GRIP factors for the period from the first billing cycle for January 2018 through the last billing cycle for December 2018 are as follows:

Rates Per Therm
\$0.24395
\$0.16442
\$0.16442
\$0.16442
\$0.16442
\$0.09644
\$0.09644
\$0.06494
\$0.06494
\$0.37921
\$0.37921
\$0.16442
\$0.16442

(Continued to Sheet No. 35.5)

# RATE SCHEDULES MONTHLY RATE ADJUSTMENTS

#### Rate Schedule MRA

# 7. GAS REPLACEMENT INFRASTRUCTURE PROGRAM (GR1P):

### Applicability:

All Customers receiving Transportation Service from the Company and are assigned to or have selected rate schedules FTS-A, FTS-B, FTS-1, FTS-2, FTS-2.1, FTS-3, FTS-3.1, FTS-4, FTS-5, FTS-6, FTS-7, FTS-8, FTS-9, FTS-10, FTS-11, FTS-12, and FTS-13.

The Usage Rate for Transportation Service to each applicable rate classification shall be adjusted by the following recovery factors. The recovery factors for all meters read for the period January 1, 2018 through December 31, 2018 for each rate classification are as follows:

Rate Schedule	Classification of Service	Rate per therm
FTS A	< 130 therms	\$0.55340
FTS-B	> 130 therms up to 250 therms	\$0.17785
FTS-1	> 0 up to 500 therms	\$0.11838
FTS-2	> 500 therms up to 1,000 therms	\$0.12603
FTS-2.1	> 1,000 therms up to 2,500 therms	\$0.12095
FTS-3	> 2,500 therms up to 5,000 therms	\$0.05359
FTS-3.1	> 5,000 therms up to 10,000 therms	\$0.06238
FTS-4	> 10,000 therms up to 25,000 therms	\$0.07404
FTS-5	> 25,000 therms up to 50,000 therms	\$0.07777
FTS-6	> 50,000 therms up to 100,000 therms	\$0.06234
FTS-7	> 100,000 therms up to 200,000 therms	\$0.07864
FTS-8	> 200,000 therms up to 400,000 therms	\$0.07326
FTS-9	> 400,000 therms up to 700,000 therms	\$0.10860
FTS-10	> 700,000 therms up to 1,000,000 therms	\$0.12848
FTS-11	> 1,000,000 therms up to 2,500,000	\$0.12575
FTS-12	> 2,500,000 therms up to 12,500,000	\$0.03277
FTS-13	> 12,500,000 therms	N/A

(Continued to Sheet No. 105.2)

Issued by: Michael P. McMasters, President Chesapeake Utilities Corporation

Effective:

# RATE SCHEDULES MONTHLY RATE ADJUSTMENTS

Rate Schedule MRA (Continued from Sheet No. 105.1)

# 7. GAS INFRASTRUCTURE REPLACEMENT PROGRAM (GRIP) (Experimental):

## Applicability:

All Customers, assigned to a TTS Shipper, receiving Transportation Service from the Company and are assigned to or have selected rate schedules FTS-A (Exp), FTS-B (Exp), FTS-1 (Exp), FTS-2 (Exp), FTS-2.1 (Exp), FTS-3 (Exp), and FTS-3.1 (Exp).

The Firm Transportation Charge for Transportation Service to each applicable rate classification shall be adjusted by the following recovery factors. The recovery factors for all meters read for the period January 1, 2018 through December 31, 2018 for each rate classification are as follows:

Consumer		
Rate Schedule	Rate	e per bill
FTS-A (Exp)	\$	3.39
FTS-B (Exp)	\$	1.88
FTS-1 (Exp)	\$	1.81
FTS-2 (Exp)	\$	7.37
FTS-2.1 (Exp)	\$	13.82
FTS-3 (Exp)	\$	17.48
FTS-3.1 (Exp)	\$	37.59

(Continued to Sheet No. 105.3)

Issued by: Michael P. McMasters, President Chesapeake Utilities Corporation

Effective:

### **BILLING ADJUSTMENTS**

## Gas Reliability Infrastructure Program (GRIP)

#### **Applicability**

The bill for gas or transportation service supplied to a Customer in any Billing Period shall be adjusted as follows:

The GRIP factors for the period from the first billing cycle for January 2018 through the last billing cycle for December 2018 are as follows:

Rate Class	Rates Per Therm
Rate Schedule RS	\$0.08198
Rate Schedule GS-1	\$0.02325
Rate Schedule GS-2	\$0.02325
Rate Schedule GSTS-1	\$0.02325
Rate Schedule GSTS-2	\$0.02325
Rate Schedule LVS	\$0.0000
Rate Schedule LVTS	\$0.00000
Rate Schedule IS	\$0.00000
Rate Schedule ITS	\$0.00000
Rate Schedule GLS	\$0.00000
Rate Schedule GLSTS	\$0.00000
Rate Schedule NGV	\$0.00000
Rate Schedule NGVTS	\$0.00000

# **BILLING ADJUSTMENTS**

(Continued from Sheet No. 35.3)

# Gas Reliability Infrastructure Program (GRIP)

## **Applicability**

The bill for gas or transportation service supplied to a Customer in any Billing Period shall be adjusted as follows:

The GRIP factors for the period from the first billing cycle for January 20178 through the last billing cycle for December 20178 are as follows:

Rate Class	Rates Per Therm
Rate Schedule RS	\$0. <del>34225</del> <u>.24395</u>
Rate Schedule GS-1	\$0. <del>23903</del> <u>.16442</u>
Rate Schedule GS-2	\$0. <del>23903</del> <u>.16442</u>
Rate Schedule GSTS-1	\$0. <del>23903</del> <u>.16442</u>
Rate Schedule GSTS-2	\$0. <del>23903</del> <u>.16442</u>
Rate Schedule LVS	\$0. <del>12689</del> <u>.09644</u>
Rate Schedule LVTS	\$0. <del>12689</del> <u>.09644</u>
Rate Schedule IS	\$0. <del>11461</del> <u>.06494</u>
Rate Schedule ITS	\$0. <del>11461</del> <u>.06494</u>
Rate Schedule GLS	\$0. <del>49951</del> <u>37921</u>
Rate Schedule GLSTS	\$0. <del>49951</del> . <u>37921</u>
Rate Schedule NGV	\$0. <del>23903</del> <u>.16442</u>
Rate Schedule NGVTS	\$0. <del>23903</del> <u>.16442</u>

(Continued to Sheet No. 35.5)

# RATE SCHEDULES MONTHLY RATE ADJUSTMENTS

#### Rate Schedule MRA

# 7. GAS REPLACEMENT INFRASTRUCTURE PROGRAM (GR1P):

#### Applicability:

All Customers receiving Transportation Service from the Company and are assigned to or have selected rate schedules FTS-A, FTS-B, FTS-1, FTS-2, FTS-2.1, FTS-3, FTS-3.1, FTS-4, FTS-5, FTS-6, FTS-7, FTS-8, FTS-9, FTS-10, FTS-11, FTS-12, and FTS-13.

The Usage Rate for Transportation Service to each applicable rate classification shall be adjusted by the following recovery factors. The recovery factors for all meters read for the period January 1, 20178 through December 31, 20178b for each rate classification are as follows:

Rate Schedule	Classification of Service	Rate per therm
FTS A	< 130 therms	PO 45210 55240
		\$0.4 <del>5319</del> .55340
FTS-B	> 130 therms up to 250 therms	\$0. <del>15225</del> <u>.17785</u>
FTS-1	> 0 up to 500 therms	\$0. <del>10371</del> <u>.11838</u>
FTS-2	> 500 therms up to 1,000 therms	\$0. <del>11170</del> <u>.12603</u>
FTS-2.1	> 1,000 therms up to 2,500 therms	\$0. <del>11406</del> <u>.12095</u>
FTS-3	> 2,500 therms up to 5,000 therms	\$0. <del>04527</del> <u>.05359</u>
FTS-3.1	> 5,000 therms up to 10,000 therms	\$0. <del>06029</del> <u>.06238</u>
FTS-4	> 10,000 therms up to 25,000 therms	\$0. <del>07233</del> <u>.07404</u>
FTS-5	> 25,000 therms up to 50,000 therms	\$0. <del>07490</del> <u>.07777</u>
FTS-6	> 50,000 therms up to 100,000 therms	\$0. <del>05947</del> <u>.06234</u>
FTS-7	> 100,000 therms up to 200,000 therms	\$0. <del>08142</del> <u>.07864</u>
FTS-8	> 200,000 therms up to 400,000 therms	\$0. <del>06465</del> <u>.07326</u>
FTS-9	> 400,000 therms up to 700,000 therms	\$0. <del>14596</del> <u>.10860</u>
FTS-10	> 700,000 therms up to 1,000,000 therms	\$0. <del>09318</del> <u>.12848</u>
FTS-11	> 1,000,000 therms up to 2,500,000	\$0. <del>05475</del> .12575
FTS-12	> 2,500,000 therms up to 12,500,000	\$0. <del>03741</del> .03277
FTS-13	> 12,500,000 therms	N/A

(Continued to Sheet No. 105.2)

Issued by: Michael P. McMasters, President Chesapeake Utilities Corporation

Effective:

## RATE SCHEDULES MONTHLY RATE ADJUSTMENTS

Rate Schedule MRA (Continued from Sheet No. 105.1)

# 7. GAS INFRASTRUCTURE REPLACEMENT PROGRAM (GRIP) (Experimental):

# Applicability:

All Customers, assigned to a TTS Shipper, receiving Transportation Service from the Company and are assigned to or have selected rate schedules FTS-A (Exp), FTS-B (Exp), FTS-1 (Exp), FTS-2 (Exp), FTS-2.1 (Exp), FTS-3.1 (Exp).

The Firm Transportation Charge for Transportation Service to each applicable rate classification shall be adjusted by the following recovery factors. The recovery factors for all meters read for the period January 1, 20178 through December 31, 20178 for each rate classification are as follows:

Consumer		
Rate Schedule	Rate	per bill
FTS-A (Exp)	\$	<del>2.93</del> <u>3.39</u>
FTS-B (Exp)	\$	<del>1.71</del> <u>1.88</u>
FTS-1 (Exp)	\$	<del>1.70</del> <u>1.81</u>
FTS-2 (Exp)	\$	<del>6.68</del> - <u>7.37</u>
FTS-2.1 (Exp)	\$	<del>13.09</del> <u>13.82</u>
FTS-3 (Exp)	\$	<del>15.66</del> <u>17.48</u>
FTS-3.1 (Exp)	\$	<del>36.01</del> – <u>37.59</u>

(Continued to Sheet No. 105.3)

Issued by: Michael P. McMasters, President Chesapeake Utilities Corporation

Effective:

# **BILLING ADJUSTMENTS**

Gas Reliability Infrastructure Program (GRIP)

Applicability

The bill for gas or transportation service supplied to a Customer in any Billing Period shall be adjusted as follows:

The GRIP factors for the period from the first billing cycle for January 20178 through the last billing cycle for December 20178 are as follows:

Rate Class	Rates Per Therm
Rate Schedule RS	\$0. <del>36931</del> <u>.08198</u>
Rate Schedule GS-1	\$0. <del>11672</del> <u>.02325</u>
Rate Schedule GS-2	\$0. <del>11672</del> - <u>.02325</u>
Rate Schedule GSTS-1	\$0. <del>11672</del> <u>.02325</u>
Rate Schedule GSTS-2	\$0. <del>11672</del> <u>.02325</u>
Rate Schedule LVS	\$0.00000
Rate Schedule LVTS	\$0.00000
Rate Schedule IS	\$0.00000
Rate Schedule ITS	\$0.00000
Rate Schedule GLS	\$0.00000
Rate Schedule GLSTS	\$0.00000
Rate Schedule NGV	\$0.00000
Rate Schedule NGVTS	\$0.00000

### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: JOINT PETITION FOR APPROVAL OF GAS RELIABILITY INFRASTRUCTURE PROGRAM (GRIP) TRUE-UP BY FLORIDA PUBLIC UTILITIES COMPANY AND THE FLORIDA DIVISION OF CHESAPEAKE UTILITIES CORPORATION AND FLORIDA PUBLIC UTILITIES COMPANY-FORT MEADE

7		DIRECT TESTIMONY OF MICHAEL CASSEL
2	,	On behalf of
3	<u>F1</u>	orida Public Utilities Company, Florida Division of Chesapeake Utilities Corporation and
4		Florida Public Utilities Company-Fort Meade
5	Q.	Please state your name, occupation and business address.
6	A.	My name is Michael Cassel. I am the Director of Regulatory and Governmental Affairs
7		for Florida Public Utilities Company, Florida Public Utilities Company - Fort Meade
8		("Fort Meade") (herein jointly, "FPUC"), and the Florida Division of Chesapeake
9		Utilities Corporation ("CFG") (also referred to herein individually as "Company" and
10		jointly as "Companies"). FPUC has its administrative offices at 1750 S. 14th Street, Suite
11		200, Fernandina Beach, Florida 32034.
12	Q.	Describe briefly your education and relevant professional background.
13	A.	I received a Bachelor of Science Degree in Accounting from Delaware State University
14		in Dover, Delaware in 1996. From 1996 to 1999, I was employed by J.P. Morgan, Inc.,
15		where I had various accounting/finance responsibilities for the firm's private baking
16		clientele. Subsequently, I was employed by Computer Sciences Corporation as a Senior
17		Finance Manager from 1999 to 2006. In this position, I was responsible for the financial
18		operation of the company's chemical, oil and natural resources business. This included
19		forecasting, financial close and reporting responsibility, as well as representing Computer
20		Sciences Corporation's financial interests in contract/service negotiations with existing
21		and potential clients. From 2006 to 2008, I was employed by J.P. Morgan Chase &
22		Company, Inc. as a Financial Manager in their card finance group. My primary

1	1 responsibility in this position was the development	ent of client specific financial models and profit
2	2 loss statements. In 2008, I was hired by	Chesapeake Utilities Corporation ("CUC") as a
3	3 Senior Regulatory Analyst. In that posit	ion, I was primarily involved in the areas of gas
4	4 cost recovery, rate of return analysis, an	d budgeting for CUC's Delaware and Maryland
5	5 natural gas distribution companies. In 2	2010, I moved to Florida to assume the role of
6	6 Senior Tax Accountant for CUC's Flor	rida business units, which included FPUC and
7	7 CFG. Since that time, I have held varie	ous management roles including Manager of the
8	Back Office in 2011, and Director of Bus	iness Management in 2012.

- 9 Q. Have you filed testimony before the Florida Public Service Commission in prior cases?
- 11 A. Yes, I have submitted testimony in the Commission's annual Fuel and Purchased Power
  12 Cost Recovery Clause proceeding, as well as with the Company's initial Petition seeking
  13 approval of the Swing Service Rider last year.
- Q. Are you familiar with the Gas Reliability Infrastructure Program ("GRIP") of the Company and the associated projected and actual revenues and costs?
- 16 A. Yes.
- 17 Q. What is the purpose of your testimony in this docket?
- A. My testimony will provide the actual true-up for January 1, 2016 to December 1, 2016
  and the actual/estimated true-up based on 7 months actual 2017 data and 5 months
  projected 2017 data. My testimony will describe the Company's forecast of GRIP
  investment for natural gas mains and services for 2018. Finally, I will summarize the
  computations that are contained in composite exhibit MC-1 supporting the January
  through December 2018 projected GRIP surcharge factors for the FPUC, CFG and Fort
  Meade natural gas divisions.
- Q. Were the schedules filed by the Company completed by you or under your direct

1	supe	rvision?
2	A.	Yes, they were completed under my direct supervision and review.
3	Q.	Which set of schedules has your company completed and filed?
4	A.	The Company has prepared and filed in composite Exhibit MC-1, Schedules A, B, C, and
5		D that support the calculation of the yearly GRIP surcharge factors for January through
6		December 2018 for FPUC, CFG and Fort Meade.
7	Q.	What is the projection period for this filing?
8	A.	The projection period is January through December 2018.
9	Q.	What is the appropriate final GRIP true-up amount for the period January through
10		December 2016?
11	A.	For FPUC, the final GRIP true-up amount for the period January through December 2016
12		is an under-recovery of \$1,456,443 inclusive of interest, an under-recovery of \$9,679
13		inclusive of interest for CFG and an under-recovery of \$2,582 inclusive of interest for
14		Fort Meade.
15	Q.	What is the projected GRIP true-up amount for the period January through
16		December 2017?
17	A.	For FPUC, the projected GRIP true-up amount is an over-recovery of \$2,105,021
18		inclusive of interest, for the period January through December 2017. CFG has projected
19		an under-recovery for the same period of \$132,684 inclusive of interest. Fort Meade has
20		projected an over-recovery for the same period of \$17,685 inclusive of interest.
21	Q,	What is the total projected GRIP true-up amount to be collected from or refunded
22		to customers for the period January through December 2017?
23	A.	As shown on Schedule C-1, page 3 of 15, the total net over-recovery to be refunded for
24		FPUC is \$648,578 and CFG, Schedule C-1 page 8 of 15, has a total net under-recovery of
25		\$142,364 to be collected for the period January through December 2017. Fort Meade,

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A.

- Schedule C-1 page 13 of 15, has a total net over-recovery of \$15,103 to be refunded.
- Q. Please describe how the forecasts of the replacement of qualifying distribution
   mains and services were developed for the projection period.
- 4 A. In the initial joint petition for approval of GRIP (Order No. PSC-12-0490-TRF-GU), 5 FPUC and CFG reviewed the remaining eligible infrastructure and developed a 6 replacement plan, based on our Distribution Integrity Management Program ("DIMP") 7 and our best estimate of how quickly we could replace our bare steel and cast iron 8 facilities, with an accelerated period of 10 years. Both companies prioritized the 9 potential replacement projects focusing initially on areas of high consequence and areas 10 more susceptible to corrosion. FPUC provides service to large metropolitan areas and the 11 replacement of eligible infrastructure in high-density, urban areas typically cost more 12 than areas that are primarily rural. FPUC and CFG have continued to replace eligible 13 infrastructure aggressively. The Company continues to discover new bare steel, cast iron 14 and steel tubing mains and services for replacement that was not included in the original 15 petition. For example, the Company discovered steel tubing services in Fort Meade that 16 require replacing.
- Q. Please describe how the forecasts of the revenue requirements are developed for the projection period.
  - The projected revenue requirements include several components: 1) the return on estimated qualified investments for the projection period as calculated using the equity and debt components of the weighted average cost of capital from each companies respective prior rate cases. 2) depreciation expense (respectively calculated using the currently approved depreciation rates) and 3) expenses for customer and general public notifications associated with GRIP and ad valorem taxes, grossed up for federal and state income taxes. Since FPUC has a bare steel replacement and recovery program, originally

1	approved i	in the	Company's	2004	rate	case	proceeding,	the	revenue	requirement	is	net	of	the

- 2 existing bare steel program, which equates to \$747,727 embedded in base rate revenues.
- 3 CFG and Fort Meade do not have any recovery amounts embedded in their base rates.
- The 2018 projected mains and services to be replaced are shown on Exhibit MC-1,
- 5 Schedule C-1, pages 4, 9 and 14. FPUC is expecting to invest \$5,412,000 in mains and
- 6 \$1,188,000 for services. CFG is expecting to invest \$3,069,000 in mains and \$231,000 in
- 7 services and Fort Meade is expecting to invest \$100,000 in services.
- 8 Q. What are the resulting net total projected revenue requirements to be recovered
- 9 during this projection period?
- 10 A. The total projected revenue requirements to be recovered are \$10,244,670 for FPUC,
- 11 Schedule D-1 page 5 of 15, \$3,525,450 for CFG, Schedule D-1 page 10 of 15, and \$9,916
- for Fort Meade, Schedule D-1 page 14 of 15.
- 13 Q. Have you prepared a schedule that shows the calculation of the proposed GRIP
- surcharge factors for each rate class to be applied during the billing period January
- 15 1, 2018 through December 31, 2018?
- 16 A. Yes, Please see Schedule D-1 pages 5, 10 and 15 for FPUC, CFG and Fort Meade,
- 17 respectively. For CFG, rate class FTS-13 is excluded from the GRIP surcharge factor
- calculation since this rate class pertains to special contract customers.
- 19 Q. What should be the effective date of the GRIP surcharge factors for billing
- 20 **purposes?**
- 21 A. The GRIP surcharge factors should be effective for all meter reading during the period of
- 22 January 1, 2018 through December 31, 2018.
- 23 Q. Does this conclude your testimony?
- 24 A. Yes it does.

### Florida Public Utilities Company

Gas Reliability Infrastructure Program (GRIP)
Calculation of Equity and Debt Returns

Schedule A-1
Exhibit\_\_\_\_
Michael Cassel (MC-1)
Page 1 of 15

#### Earnings Surveillance Report - December 31, 2016

Equity Cost Rate	
2427 2001 1410	10.85%
Weighted Equity Cost Rate	4.79%
Revenue Expansion Factor	1.6406
Weighted Equity Cost Rate, times Revenue Expansion Factor	7.860%
Long Term Debt-CU	0.710%
Short Term Debt	0.310%
Long Term Debt-FC	0.310%
Short Term Debt-Refinanced LTD	0.000%
Customer Deposits	0.080%
Weighted Debt Cost Rate	1.410%
Overall Weighted Cost Rate	6.20%

#### Florida Public Utilities Company

Gas Reliability Infrastructure Program (GRIP)
Calculation of the Projected Revenue Requirements
January 1, 2016 through December 31, 2016

Schedule B-1 Exhibit\_\_\_\_ Michael Cassel (MC-1) Page 2 of 15

<u>Item</u> Qualified Investment	Beginning Balance	ACTUAL <u>Jan</u>	ACTUAL <u>Feb</u>	ACTUAL <u>Mar</u>	ACTUAL <u>Apr</u>	ACTUAL <u>Mav</u>	ACTUAL <u>Jun</u>	ACTUAL Jul	ACTUAL Aug	ACTUAL <u>Sep</u>	ACTUAL Oct	ACTUAL Nov	ACTUAL Dec	Year End Total/Balance
Qualified Investment - Mains - Current Year 1070 Activity Qualified Investment - Mains - Closed 1070 Activity to Plant Qualified Investment - Services - Current Year 1070 Activity		\$1,784,223 \$79,622 \$376,394	\$1,694,698 (\$919,459) \$215,319	\$1,836,338 (\$126,904) \$386,842	\$1,972,534 (\$3,106,133) \$388,186	\$928,777 \$414,893	\$1,337,233 (\$90,085) \$499,485	\$729,572 (\$4,659,950) \$280,899	\$1,029,951 (\$2,170,908) \$916,661	\$829,070 (\$778,690) \$168,094	\$954,422 (\$477,624) \$236,740	\$1,152,057 \$311,195	\$764,153 (\$3,672,553) \$363,413	\$15,013,028 (\$15,922,685) \$4,558,122
Qualified Investment - Services - Closed 1070 Activity to Plant Qualified Investment - Mains - Current 1010 Activity Qualified Investment - Services - Current 1010 Activity		\$697,671 (\$79,622) (\$697,671)		(\$220,287) \$126,904 \$220,287	(\$439,072) \$3,106,133 \$439,072	\$0 \$0	(\$587,465) \$90,085 \$587,465	(\$364,346) \$4,659,950 \$364,346	(\$372,351) \$2,170,908 \$372,351	(\$895,807) \$778,690 \$895,807	(\$314,082) \$477,624 \$314,082	(\$95,672) \$0 \$95,672	(\$789,839) \$3,672,553 \$789,839	
Total Qualified Investment - Mains 1070 Total Qualified Investment - Service 1070	\$1,350,505 \$0	\$3,214,349 \$1.074,066	\$3,989,588 \$112,511	\$5,699,023 \$279,067	\$4,565,423 \$228,182	\$5,494,200 \$643,074	\$6,741,348 \$555,094	\$2,810,970 \$471,648	\$1,670,013 \$1,015,958	\$1,720,393 \$288,245	\$2,197,191 \$210,903	\$3,349,248 \$426,426	\$440,847 \$0	\$440,847 \$0
Total Qualified Investment - Mains 1010	\$44,791,739	\$44,712,118	\$45,631,577	\$45,758,481	\$48,864,614	\$48,864,614	\$48,954,699	\$53,614,649	\$55,785,557	\$56,564,247	\$57,041,871	\$57,041,871	\$60,714,424	\$60,714,424
Total Qualified Investment - Service 1010 Total Qualified Investment	\$14,413,427 \$60,555,671	\$13,715,756 \$62,716,289	\$14,892,629 \$64,626,305	\$15,112,916 \$66,849,486	\$15,551,988 \$69,210,206	\$15,551,988 \$70,553,876	\$16,139,452 \$72,390,594	\$16,503,799 \$73,401,065	\$16,876,150 \$75,347,677	\$17,771,957 \$76,344,841	\$18,086,038 \$77,536,003	\$18,181,711 \$78,999,255	\$18,971,549 \$80,126,821	\$18,971,549 \$80,126,821
Year Assessed Developing	(6) 510 550	(71.040.001)	(01.004.040)								<del></del>		· · · · · · · · · · · · · · · · · · ·	<del></del>
Less: Accumulated Depreciation Net Book Value	(\$1,719,752) \$58,835,919	(\$1,849,231) \$60,867,058	V V V V V V V V	(\$2,109,345) \$64,740,142	(\$2,242,492) \$66,967,714	(\$2,383,357) \$68,170,519	(\$2,524,223) \$69,866,371	(\$2,666,605) \$70,734,460	(\$2,819,903) \$72,527,774	(\$2,978,744) \$73,366,098	(\$3,141,286) \$74,394,717	(\$3,305,571) \$75,693,685	(\$3,470,070) \$76,656,751	(\$3,470,070) \$76,656,751
Average Net Qualified Investment		\$59.851.489	501 500 100	062 604 740	0/5 052 000									
Average Net Quantien investment	-	339,831,489	\$61,758,198	\$63,694,740	\$65,853,928	\$67,569,117	\$69,018,445	\$70,300,416	\$71,631,117	\$72,946,936	\$73,880,407	\$75,044,201	\$76,175,218	ı
Depreciation Rates Approved Depreciation Rate-Mains		2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2 (00/	2 (00)	2 (20)	2 (22)			
Approved Depreciation Rate-Francis Approved Depreciation Rate-Services		2.70%		2,70%	2.70%	2.60%	2.60%	2.60% 2.70%	2.60% 2.70%	2,60% 2,70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	
Return on Average Net Qualified Investment														
Equity - Cost of Capital, inclusive of Income Tax Gross-up		8.2300%		8.2300%	8.2300%	8.2300%	8.2300%	8.2300%	8.2300%	8,2300%	8,2300%	8,2300%	8.2300%	
Debt - Cost of Capital		1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	1.5800%	
Equity Component - inclusive of Income Tax Gross-up Debt Component		\$410,481	\$423,558	\$436,840	\$451,648	\$463,412	\$473,352	\$482,144	\$491,270	\$500,294	\$506,696	\$514,678	\$522,435	\$5,676,809
Return Requirement	-	\$78,804 \$489,286	\$81,315 \$504,873	\$83,865 \$520,704	\$86,708 \$538,356	\$88,966 \$552,378	\$90,874 \$564,226	\$92,562 \$574,706	\$94,314 \$585,584	\$96,047 \$596,341	\$97,276 \$603,972	\$98,808 \$613,486	\$100,297 \$622,732	\$1,089,837 \$6,766,645
Investment Expenses	_					· · · · · · · · · · · · · · · · · · ·			·					
Depreciation Expense - Mains		\$97,049	\$96,876	\$98,868	\$99,143	\$105,873	\$105,873	\$106,069	\$116,165	\$120,869	\$122,556	\$123,591	\$123,591	\$1,316,523
Depreciation Expense - Services Property Taxes		\$32,430 \$98,060	\$30,860 \$98,060	\$33,508 \$98,060	\$34,004 \$98,060	\$34,992	\$34,992	\$36,314	\$37,134	\$37,971	\$39,987	\$40,694	\$40,909	\$433,795
General Public Notice Expense & Customer Notice Expense	_	\$0	\$3,102	\$90,000	\$6,180	\$98,060 \$18,792	\$98,060	\$98,060 \$0	\$98,060 \$18,133	\$98,060 (\$3,411)	\$98,060 \$11,509	\$98,060	\$98,060 \$6,268	\$1,176,718 \$60,574
Total Expense	-	\$227,539	\$228,899	\$230,437	\$237,387	\$257,717	\$238,925	\$240,442	\$269,492	\$253,489	\$272,112	\$262,344	\$268,828	\$2,987,610
Total Revenue Requirements		\$716,825	\$733,772	\$751,141	\$775,743	\$810,095	\$803,151	\$815,148	\$855,076	\$849,830	\$876,084	\$875,831	\$891,560	\$9,754,256
Annual Revenue Requirement for Bare Steel Replacement Investment Net Annual Revenue Requirements		\$62,310 \$654,515	\$62,310 \$671,462	\$62,310 \$688,831	\$62,310 \$713,433	\$62,310 \$747,785	\$62,310 \$740,841	\$62,310 \$752,838	\$62,310 \$792,766	\$62,310 \$787,520	\$62,310 \$813,774	\$62,310 \$813,521	\$62,317 \$829,243	\$747,727 \$9,006,529
GRIP Surcharge Revenues Collected Month		\$ 1,141,602	<b>\$</b> 1,150,607	\$ 1,072,832	\$ 924,042	\$ 806,763	\$ 755,582	\$ 700,138	\$668,074	\$ 699,603	\$ 752,444	<b>\$</b> 856,201	\$ 996,376	\$10,524,264
Beginning True-Up (Over) and Under Recovery for the Month		\$ (487,087)	\$ (479,145)	\$ (384,001)	\$ (210,609)	\$ (58,978)	\$ (14,741)	<b>\$</b> 52,700	<b>\$</b> 124,692	\$ 87,917	\$ 61,330	\$ (42,680)	\$ (167,133)	\$ 2,967,684 \$ (1,517,735)
Monthly Interest (Expense)/Income Ending (Over) and Under Recovery		\$ 763 \$ 2,481,361		\$ 507 \$ 1,619,372				\$ 409 \$ 1,389,420		\$ 530 \$ 1,603,038	\$ 555 \$ 1,664,924	\$ 625 \$ 1,622,868	\$ 708 \$ 1,456,443	\$ 6,494 \$ 1,456,443
Beg of Month Annual Interest Rate	-	0.34%		0.35%	0,32%	0,36%	0.38%	0.36%	0.35%	0.43%	0,39%	0,43%	0.47%	
End of Month Annual Interest Rate		0.34%	0,35%	0.320%	0.36%	0.38%	0,36%	0.35%	0.35%	0.43%	0.39% 0.43%	0.43% 0.47%	0.47% 0.63%	
Average Monthly Interest Rate		0.028%	0.029%	0,028%	0.028%	0,031%	0.031%	0.030%	0.033%	0.034%	0.034%	0.038%	0.046%	

#### Florida Public Utilities Company Gas Reliability Infrastructure Program (GRIP) Calculation of the Projected Revenue Requirements January 1, 2017 through December 31, 2017

Schedule C-1
Exhibit
Michael Cassel (MC-1)
Page 3 of 15

													•	
¥.	Beginning	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Projection	Projection	Projection	Projection	Projection	Year End
<u>Item</u>	Balance	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	Apr	May	Jun	<u>Jul</u>	Aug	Sep	Oct			
Qualified Investment						_			1700	<u>50p</u>	<u>000</u>	Nov	<u>Dec</u>	Total/Balance
Qualified Investment - Mains - Current Year 1070 Activity		\$330.017	\$455,719	\$434,089	\$306,338	\$191,053	\$446,144	\$518,387	#251 too					
Qualified Investment - Mains - Closed 1070 Activity to Plant		\$0	(\$336,801)	(\$161,074)	(\$733,288)	(\$192,464)			\$351,199	\$351,199	\$351,199	\$351,199	\$351,199	\$4,437,741
Qualified Investment - Services - Current Year 1070 Activity		\$213.896	\$185,403	\$165,184			\$0	(\$788,423)	(\$333,639)	(\$333,639)	(\$333,639)	(\$333,639)	(\$333,639)	(\$3,880,245)
Qualified Investment - Services - Closed 1070 Activity to Plant		\$0		,	\$211,894	\$162,992	\$153,407	\$155,783	\$77,093	\$77,093	\$77,093	\$77,093	\$77,093	\$1,634,025
Qualified Investment - Mains - Current 1010 Activity			(\$329,347)	(\$37,850)	(\$309,284)	(\$168,217)	(\$192,024)	(\$73,411)	(\$77,093)	(\$77,093)	(\$77,093)	(\$77,093)	(\$77,093)	(\$1,495,598)
		\$0	\$336,801	\$161,074	\$733,288	\$192,464	\$0	\$788,423	\$333,639	\$333,639	\$333,639	\$333,639	\$333,639	\$3,880,245
Qualified Investment - Services - Current 1010 Activity		\$0	\$329,347	\$37,850	\$309,284	\$168,217	\$192,024	\$73,411	\$77,093	\$77,093	\$77,093	\$77,093	\$77,093	\$1,495,598
										-		,	417,000	91,475,576
Total Qualified Investment - Mains 1070	\$440,847	\$770,864	\$889,782	\$1,162,797	\$735,847	\$734,436	\$1,180,579	\$910,543	\$928,103	\$945,663	\$963,223	\$980,783	2008 242	2000 a.a.
Total Qualified Investment - Service 1070	\$0	\$213,896	\$69,952	\$197,286	\$99,897	\$94,672	\$56,055	\$138,427	\$138,427	\$138,427			\$998,343	\$998,343
Total Qualified Investment - Mains 1010	\$60,714,424	\$60,714,424	\$61,051,225	\$61,212,299	\$61,945,587	\$62,138,052	\$62,138,052			,	\$138,427	\$138,427	\$138,427	\$138,427
Total Qualified Investment - Service 1010	\$18,971,549	\$18,971,549	\$19,300,896	\$19,338,746	\$19,648,030				\$63,260,114	\$63,593,753	\$63,927,392	\$64,261,031	\$64,594,670	\$64,594,670
Total Qualified Investment	\$80,126,821	\$80,670,734	\$81,311,856	\$81,911,129		\$19,816,247	\$20,008,271		\$20,158,775	\$20,235,868	\$20,312,961	\$20,390,054	\$20,467,147	\$20,467,147
	\$60,120,021	380,070,734	301,311,630	381,911,129	\$82,429,361	\$82,783,406	\$83,382,957	\$84,057,127	\$84,485,419	\$84,913,711	\$85,342,003	\$85,770,295	\$86,198,587	\$86,198,587
Less: Accumulated Depreciation	/AF :													
Net Book Value	(\$3,470,070)	(\$3,644,304)	(\$3,818,538)	(\$3,994,243)	(\$4,170,381)	(\$4,348,805)	(\$4,528,024)	(\$4,707,675)	(\$4,889,200)	(\$5,071,620)	(\$5,254,937)	(\$5,439,151)	(\$5,624,261)	(\$5,624,261)
Net Book Value	\$76,656,751	\$77,026,430	\$77,493,318	\$77,916,886	\$78,258,980	\$78,434,602	\$78,854,934	\$79,349,452	\$79,596,220	\$79,842,091	\$80,087,066	\$80,331,144	\$80,574,326	\$80,574,326
									,	\$15,07A,071	\$00,007,000	\$60,551,144	380,374,328	\$80,374,326
Average Net Qualified Investment	•	\$76,841,590	\$77 259 874	\$77,705,102	\$78,087,933	\$78,346,791	\$78,644,768	E20 102 102	670 472 025	000 010 110	***	<del></del>		
	•	41-1-15	4.7,255,577	377,703,102	370,007,933	\$70,340,791	3/6,044,/68	\$79,102,193	\$79,472,836	\$79,719,155	\$79,964,578	\$80,209,105	\$80,452,735	
Depreciation Rates														
Approved Depreciation Rate-Mains														
••		2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2,60%	2.60%	2,60%	2.60%	
Approved Depreciation Rate-Services		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2,70%	2,70%	2,70%	2,70%	2.70%	2.70%	
										-11-70	2.7070	4.7070	2.7070	
Return on Average Net Qualified Investment														
Equity - Cost of Capital, inclusive of Income Tax Gross-up		7.8600%	7.8600%	7.8600%	7.8600%	7.8600%	7,8600%	7.8600%	7.8600%	7.8600%	7.040004	*******		
Debt - Cost of Capital		1.4100%	1,4100%	1.4100%	1.4100%	1.4100%	1.4100%				7.8600%	7.8600%	7.8600%	
·		220070	1,410070	1.410070	1.410070	1.410076	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	
Equity Component - inclusive of Income Tax Gross-up		\$503,312	\$506.052	#500 OC0	4511.454									
Debt Component			\$506,052	\$508,968	\$511,476	\$513,171	\$515,123	\$518,119	\$520,547	\$522,160	\$523,768	\$525,370	\$526,965	\$6,195,034
Return Requirement		\$90,289	\$90,780	\$91,303	\$91,753	\$92,057	\$92,408	\$92,945	\$93,381	\$93,670	\$93,958	\$94,246	\$94,532	\$1,111,323
Return Requirement		\$593,601	\$596,833	\$600,272	\$603,229	\$605,229	\$607,531	\$611,064	\$613,928	\$615,830	\$617,726	\$619,615	\$621,497	\$7,306,356
		593,601	596,833	600,272	,									51,500,550
Investment Expenses														
Depreciation Expense - Mains		\$131,548	\$131,548	\$132,278	\$132,627	\$134,215	\$134,632	\$134,632	\$136,341	6127.064	4107.705			
Depreciation Expense - Services		\$42,686	\$42,686	\$43,427	\$43,512	\$44,208	\$44,587	•		\$137,064	\$137,786	\$138,509	\$139,232	\$1,620,413
Property Taxes		\$127,761	\$127,761	\$127,761	\$127,761			\$45,019	\$45,184	\$45,357	\$45,531	\$45,704	\$45,878	\$533,778
General Public Notice Expense & Customer Notice Expense		3127,701	\$127,761	\$127,761		\$127,761	\$127,761	\$127,761	\$127,761	\$127,761	\$127,761	\$127,761	\$127,761	\$1,533,135
Total Expense		\$301,995	\$301,995		\$0	\$875	\$7,124		\$0	\$0	. \$0	\$0	\$44,001	\$52,000
		3301,993	\$301,995	\$303,466	\$303,900	\$307,059	\$314,105	\$307,412	\$309,286	\$310,182	\$311,078	\$311,975	\$356,872	\$3,739,326
Tariba Daria														_
Total Revenue Requirements		\$895,596	\$898,828	\$903,738	\$907,129	\$912,288	\$921,636	\$918,477	\$923,213	\$926,013	\$928,805	\$931,590	\$978,369	\$11,045,682
											***************************************	4751,570	3770,307	311,045,082
Annual Revenue Requirement for Bare Steel Replacement Investment		\$62,310	\$62,310	\$62,310	\$62,310	\$62,310	\$62,310	\$62,310	\$62,310	Ø60 010	0.00.00			
Net Annual Revenue Requirements		\$833,286	\$836,518	\$841,428	\$844,819	\$849,978	\$859,326	\$856,167		\$62,310	\$62,310	\$62,310	\$62,317	\$747,727
				0011,120	\$077,017	3047,770	3039,320	\$630,107	\$860,903	\$863,703	\$866,495	\$869,280	\$916,052	\$10,297,955
GRIP Surcharge Revenues Collected Month		\$ 1,506,872	6 1265 761	*										
over parameter concern Monin	-	\$ 1,506,872	\$ 1,365,764	\$ 1,393,571	1,270,509	\$ 1,050,178 :	\$ 1,006,048	\$ 952,034	\$635,570	671,041	\$ 696,221	\$ 819,859	\$ 1,030,210	\$12,397,877
Beginning Truc-Up									-					
														\$ 1,456,443
(Over) and Under Recovery for the Month		\$ (673,586)		\$ (552,143)	(425,690)	\$ (200,200)	\$ (146,722)	\$ (95,867) \$	225,333	192,662	\$ 170,273	\$ 49,421		\$ (2,099,922)
Monthly Interest (Expense)/Income			\$ 270	\$ (13)	(347)					(763)			\$ (114,137)	• • • •
Ending (Over) and Under Recovery				C (000 (00)	(722,720)			\$ (1,168,762) \$						<del></del>
Ziming (Over) and Citate Recovery	\$ 1,456,443	\$ 783,440	\$ 254,463	<b>3</b> (297,693)	1/25./291									
	\$ 1,456,443	\$ 783,440	\$ 254,463	\$ (297,693)	(723,729)	y (324,514) .	3 (1,071,903)	<del>4 (1,100,702)</del> 3	(944,378)	(752,480)	\$ (582,807)	\$ (533,888)	\$ (648,578)	\$ (648,578)
Beg of Month Annual Interest Rate	\$ 1,456,443								· · · · · · · · · · · · · · · · · · ·	<u> </u>			· · · · · ·	3 (648,378)
	\$ 1,456,443	0.63%	0.62%	0.63%	0.80%	0.84%	0.86%	0.90%	1.08%	1,08%	1.08%	1.08%	1.08%	3 (648,378)
Bog of Month Annual Interest Rate End of Month Annual Interest Rate	\$ 1,456,443	0.63% 0.62%	0.62% 0.63%	0.63% 0.800%	0.80% 0.840%	0.84% 0.86%	0.86% 0.90%	0.90% 1.08%	1.08%	1,08% 1,08%	1.08%	1.08% 1.08%	· · · · · ·	3 (648,378)
Beg of Month Annual Interest Rate	\$ 1,456,443	0.63%	0.62%	0.63%	0.80%	0.84%	0.86%	0.90%	1.08%	1,08%	1.08%	1.08%	1.08%	\$ (648,378)

Florida Public Utilities Company Gas Reliability Infrastructure Program (GRIP) Calculation of the Projected Revenue Requirements January 1, 2018 through December 31, 2018

Schedule C-2 Exhibit\_\_\_\_\_ Michael Cassel (MC-1) Page 4 of 15

Balliston   Ball		Beginning													Year End
Considered from town As in 100 Activity or Piets   S451,000   S4	<u>Item</u>	<u>Balance</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	Aug	Sep	Oct	Nov	Dec	Total/Balance
Considered Informative Closed IDTO Activity to Plant   S428,450	Qualified Investment														
Consider Investment - Services - Current Varual (1970 Activity to Plant (1970 Activity) to Pla	Qualified Investment - Mains - Current Year 1070 Activity		\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$451,000	\$5,412,000
Consider Investment Assirt Control IPTO Activity to Plant   Consider IPT			(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$428,450)	(\$5,141,400)
Qualified Investment - Mainis - Current 1010 Activity         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$428,450         \$5					\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$1,188,000
Considered Investment - Services - Current 1010 Activity			(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$99,000)	(\$1,188,000)
Total Qualified Investment - Mains 1070	Qualified Investment - Mains - Current 1010 Activity		\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$428,450	\$5,141,400
Total Qualified Investment   Service 1070	Qualified Investment - Services - Current 1010 Activity		\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$99,000	\$1,188,000
State   Stat															
Total Qualified Investment   Service 1070	Total Qualified Investment Maior 1070	£009 242	£1 020 002	61.042.442	£1.065.003	E1 000 642	£1 111 002	Ø1 133 643	E1 156 100	61 150 540	A1 201 202	AL 222 042	01 0 4 C = 00		
Total Qualified Investment - Mains 1010 Total Qualified Investment - Service 1010 Total Qualified Investment - Ser	•												,		
Total Qualiffied Investment Service 1010  \$20,467,147  \$20,665,147  \$2											. ,				
Total Qualified Investment  S86,198,587  S86,748,587  S86,748,587  S87,248,587  S87				, ,										. , ,	
Less: Accumulated Depreciation Net Book Value (\$5,024,261) (\$5,034,262) (\$5,034,262) (\$5,044,261) (\$5,044,261) (\$5,044,262) (\$7,144,540) (\$7,334,575) (\$7,734,673) (\$7,732,305) (\$7,932,305															
Net Book Value \$80,574,326 \$80,938,320 \$81,301,163 \$81,662,885 \$82,023,395 \$82,382,785 \$82,274,023 \$83,088,111 \$83,454,047 \$83,308,832 \$84,162,467 \$84,514,950 \$84,866,282 \$84	rotal Qualified investment	\$60,170,367	360,746,367	301,270,301	\$67,046,367	360,396,367	\$00,940,307	\$69,496,387	\$90,048,387	\$90,398,387	\$91,148,587	391,098,387	\$92,248,587	\$92,798,587	\$92,798,587
Net Book Value \$80,574,326 \$80,938,320 \$81,301,163 \$81,662,885 \$82,023,395 \$82,382,785 \$82,274,023 \$83,088,111 \$83,454,047 \$83,308,832 \$84,162,467 \$84,514,950 \$84,866,282 \$84	Less: Accumulated Depreciation	(\$5.624.261)	(\$5.810.267)	(\$5.997.424)	(\$6.185.733)	(\$6 375 192)	(\$6.565.802)	(\$6.757.564)	(\$6.950.476)	(\$7 144 540)	(\$7 339 755)	(\$7.536.120)	(\$7 733 637)	(\$7 932 305)	(\$7.032.305)
Average Net Qualified Investment \$80,756,323 \$81,119,741 \$81,482,009 \$81,843,125 \$82,203,090 \$82,561,904 \$82,919,567 \$83,276,079 \$83,631,440 \$83,985,650 \$84,338,708 \$84,690,616 \$0		\$80,574,326	\$80,938,320									<u> </u>		(,,/	
Depreciation Rates					,,			*		******		401,102,101	001,511,550	## 1,000,EGE	551,000,202
Depreciation Rates	Average Net Qualified Investment	=	\$80,756,323	\$81,119,741	\$81,482,009	\$81.843.125	\$82,203,090	\$82,561,904	\$82,919,567	\$83,276,079	\$83,631,440	\$83,985,650	\$84 338 708	\$84 690 616	
Approved Depreciation Rate-Mains 2.60% 2.6		•								4	,,,				
Approved Depreciation Rate-Services 2.70%	Depreciation Rates														
Return on Average Net Qualified Investment  Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital Debt - Cost	Approved Depreciation Rate-Mains		2.60%	2.60%	2.60%	2.60%	2.60%	2,60%	2.60%	2.60%	2,60%	2,60%	2.60%	2,60%	
Equity - Cost of Capital inclusive of Income Tax Gross-up Debt - Cost of Capital   1.4100%   1.4	Approved Depreciation Rate-Services		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	
Equity - Cost of Capital inclusive of Income Tax Gross-up Debt - Cost of Capital   1.4100%   1.4	Botum on Augropa Not Ovalified Investment														
Debt - Cost of Capital   1.4100%	• •		7 0 ( 0 0 0 0 )	7.0(000)	* 0.000/	<b>5</b> 0 ( 0 0 0 )	T 0 ( 0 0 0 0 )	T 0 ( 0 0 0 )	= 0.00000	= 0.000.00					
Equity Component - inclusive of Income Tax Gross-up  \$528,954 \$531,334 \$533,707 \$536,072 \$538,430 \$540,780 \$543,123 \$545,458 \$547,786 \$550,106 \$552,419 \$554,724 \$6,502,894  Debt Component \$94,889 \$95,316 \$95,741 \$96,166 \$96,589 \$97,010 \$97,430 \$97,849 \$98,267 \$98,683 \$99,098 \$99,511 \$1,166,550  Return Requirement  Investment Expenses  Depreciation Expense - Mains Depreciation Expense - Services \$46,051 \$46,274 \$46,479 \$46,719 \$46,6719 \$46,6719 \$46,942 \$47,165 \$47,388 \$47,610 \$47,832 \$48,056 \$48,279 \$48,501 \$567,314  Property Taxes General Public Notice Expense & Customer Notice Expense \$4,333 \$4,3															
Debt Component   S94,889   S95,316   S95,741   S96,166   S96,589   S97,010   S97,430   S97,849   S98,267   S98,683   S99,098   S99,511   S1,166,550	Dest - Cost of Capital		1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1.4100%	1,4100%	1.4100%	
Debt Component   S94,889   S95,316   S95,741   S96,166   S96,589   S97,010   S97,430   S97,849   S98,267   S98,683   S99,098   S99,511   \$1,166,550   S62,449   S63,843   S626,650   S629,449   S632,238   S635,019   S637,791   S640,554   S643,308   S646,053   S648,789   S651,517   S654,235   \$7,669,444   S647,545   S6	Equity Component - inclusive of Income Tax Gross-up		\$528,954	\$531,334	\$533,707	\$536.072	\$538.430	\$540.780	\$543,123	\$545.458	\$547 786	\$550 106	\$552.419	\$554 724	\$6 502 894
Return Requirement         \$623,843         \$626,650         \$629,449         \$632,238         \$635,019         \$637,791         \$640,554         \$643,308         \$646,053         \$648,789         \$651,517         \$654,235         \$7,669,444           Investment Expenses           Depreciation Expense - Mains         \$139,955         \$140,883         \$141,812         \$142,740         \$143,668         \$144,597         \$145,525         \$146,453         \$147,382         \$148,310         \$149,238         \$150,167         \$1,740,730           Depreciation Expense - Services         \$46,051         \$46,274         \$46,497         \$46,719         \$46,942         \$47,165         \$47,388         \$47,610         \$48,205         \$48,201         \$567,314           Property Taxes         \$134,291	Debt Component		\$94,889	\$95,316	\$95,741		. ,								
Investment Expenses	Return Requirement	-	\$623,843	\$626,650	\$629,449	\$632,238	\$635,019	\$637,791	\$640,554						
Depreciation Expense - Mains \$139,955 \$140,883 \$141,812 \$142,740 \$143,668 \$144,597 \$145,525 \$146,453 \$147,382 \$148,310 \$149,238 \$150,167 \$1,740,730 \$175,407,407,407,407,407,407,407,407,407,407		-					····				· · · · · · · · · · · · · · · · · · ·				
Depreciation Expense - Services         \$46,051         \$46,274         \$46,497         \$46,719         \$46,942         \$47,165         \$47,388         \$47,610         \$47,833         \$48,056         \$48,279         \$48,501         \$567,314           Property Taxes         \$134,291 <td>Investment Expenses</td> <td></td>	Investment Expenses														
Property Taxes         \$134,291	Depreciation Expense - Mains		\$139,955	\$140,883	\$141,812	\$142,740	\$143,668	\$144,597	\$145,525	\$146,453	\$147,382	\$148,310	\$149,238	\$150,167	\$1,740,730
General Public Notice Expense & Customer Notice Expense & \$4,333	Depreciation Expense - Services		\$46,051	\$46,274	\$46,497	\$46,719	\$46,942	\$47,165	\$47,388	\$47,610	\$47,833	\$48,056	\$48,279	\$48,501	\$567,314
General Public Notice Expense & Customer Notice Expense & \$4,333	Property Taxes		\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$134,291	\$1,611,487
Total Expense \$324,630 \$325,781 \$326,932 \$328,083 \$329,234 \$330,385 \$331,536 \$332,687 \$333,838 \$334,989 \$336,140 \$337,295 \$3,971,531		_	\$4,333		\$4,333	\$4,333	\$4,333	\$4,333	\$4,333	\$4,333	\$4,333	\$4,333	\$4,333	\$4,337	
MILETON MILETO	Total Expense		\$324,630	\$325,781	\$326,932	\$328,083	\$329,234	\$330,385	\$331,536	\$332,687		\$334,989		\$337,295	
		-													
Total Revenue Requirements \$948,472 \$952,431 \$956,380 \$960,321 \$964,253 \$968,176 \$972,090 \$975,995 \$979,891 \$983,778 \$987,657 \$991,530 \$11,640,975	Total Revenue Requirements		\$948,472	\$952,431	\$956,380	\$960,321	\$964,253	\$968,176	\$972,090	\$975,995	\$979,891	\$983,778	\$987,657	\$991,530	\$11,640,975
Annual Revenue Requirement for Bare Steel Replacement Investment \$62,310 \$62,3										,		,			
Net Annual Revenue Requirements \$886,162 \$890,121 \$894,070 \$898,011 \$901,943 \$905,866 \$909,780 \$913,685 \$917,581 \$921,468 \$925,347 \$929,213 \$10,893,248	Net Annual Revenue Requirements		\$886,162	\$890,121	\$894,070	\$898,011	\$901,943	\$905,866	\$909,780	\$913,685	\$917,581	\$921,468	\$925,347	\$929,213	\$10,893,248

#### Florida Public Utilities Company

Gas Reliability Infrastructure Program (GRIP) Projection of Qualified Mains & Services Revenue Requirements Surcharge Calculation - January 1, 2018 through December 31, 2018 Per Therm Rate

Schedule D-1 Exhibit Michael Cassel (MC-1) Page 5 of 15

1. 1/1/18-12/31/18 Qualified Mains & Services Replacement Revenue Requirements \$10,893,248 Mains 74% \$8,061,003 Services 26% \$2,832,244 Net \$10,893,247 2. TRUE-UP from Prior Period (Over)/Under Recovery Estimated thru 12/2017 \$ (648,578)

3. 2018 Qualified Mains & Services Replacement Revenue Requirements Mains

74% \$7,581,055 26% \$2,663,614

\$10,244,670

Services Net

\$10,244,669

RATE SCHEDULE	2018 THERMS	SERVICES COS %	MAINS COS %	SERVICES REV REQ	MAINS REV REQ	GRIP REV REQ	DOLLARS PER THERM	TAX FACTOR	GRIP FACTORS PER THERM	TYPICAL ANNUAL THERMS	ANNUAL COST	AVERAGE MONTHLY COST
RESIDENTIAL	13,236,094	58.00%	22.00%	\$1,544,896	\$1,667,832	\$3,212,728	\$0.24272	1.00503	\$0.24395	250	\$60.99	\$5.08
COMMERCIAL SMALL (General Service & GS Transportation & NGVS &NGVTS)	13,426,146	17.00%	23.00%	\$452,814	\$1,743,643	\$2,196,457	\$0.16360	1.00503	\$0.16442	2,500	\$411.05	\$34.25
COMM. LRG VOLUME (Large Vol & LV Transportation)	43,281,725	25.00%	46.00%	\$665,904	\$3,487,285	\$4,153,189	\$0.09596	1,00503	\$0.09644	25,000	\$2,410.99	\$200.92
INTERRUPTIBLE SERVICE (Int Service & IS Transportation)	9,386,105	0.00%	8.00%	\$0	\$606,484	\$606,484	\$0.06462	1.00503	\$0.06494	50,000	\$3,247.01	\$270.58
GENERAL LIGHTING SERVICE	200,921	0.00%	1.00%	\$0	\$75,811	\$75,811	\$0.37732	1.00503	\$0.37921	500	\$189,61	\$15.80

TOTAL 79,530,991 100.00% 100.00% \$2,663,614 \$7,581,055 \$10,244,669

Gas Reliability Infrastructure Program (GRIP)
Calculation of Equity and Debt Returns

Schedule A-1
Exhibit
Michael Cassel (MC-1
Page 6 of 15

Earnings Surveillance Report - December 31, 2016

Equity Cost Rate	10.80%
Weighted Equity Cost Rate	4.59%
Revenue Expansion Factor	1.6503
Weighted Equity Cost Rate, times Revenue Expansion Factor	7.575%
Long Term Debt-CU	0.750%
Short Term Debt	0.290%
Short Term Debt-Refinanced LTD	0.000%
Customer Deposits	0.040%
Tax Credits-Weighted Cost	0.000%
Weighted Debt Cost Rate	1.080%
Overall Weighted Cost Rate	5.67%

Florida Division of Chesapeake Utilities Corporation
Gas Reliability Infrastructure Program (GRIP)
Calculation of the Projected Revenue Requirements
January 1, 2016 through December 31, 2016

Schedule B-1 

Item Qualified Investment	Beginning Balance	ACTUAL <u>Jan</u>	ACTUAL <u>Feb</u>	ACTUAL <u>Mar</u>	ACTUAL Apr	ACTUAL <u>May</u>	ACTUAL Jun	ACTUAL <u>Jui</u>	ACTUAL Aug	ACTUAL <u>S</u> ep	ACTUAL Oct	ACTUAL <u>Nov</u>	ACTUAL <u>Dec</u>	Year End <u>Total</u>
Qualified Investment - Mains - Current 1070 Activity Qualified Investment - Mains - Closed 1070 Activity to Plant		\$102,103 (\$141,194)	\$405,306 (\$199,112)	\$517,168 (\$190,692)	\$274,634 (\$33,394)	\$667,005	\$642,993 (\$210,564)	\$581,202 (\$553,404)	\$376,973 (\$1,323,444)	\$620,318 (\$187,569)	\$873,733 (\$241,513)	\$51,269 (\$126,709)	\$642,224 (\$1,497,342)	\$5,754,927 (\$4,704,937)
Qualified Investment - Services - Current 1070 Activity Qualified Investment - Services - Closed 1070 Activity to Plant		\$12,238 (\$12,238)	\$55,112	\$55,583	\$46,307	\$46,477	\$26,705	\$54,751	\$54,596	\$76,385	\$92,270	\$39,219	\$139,417	\$699,060
Qualified Investment - Mains - Current 1010 Activity		(\$12,238) \$141,194	(\$19,049) \$199,112	(\$82,108) \$190,692	(\$23,567) \$33,394	\$0	(\$89,402) \$210,564	(\$28,391) \$553,404	(\$50,959) \$1,323,444	(\$50,877) \$187,569	(\$106,698)	(\$69,911)	(\$147,332)	(\$680,531)
Qualified Investment - Services - Current 1010 Activity		\$12,238	\$19,049	\$82,108	\$23,567	\$0	\$89,402	\$28,391	\$50,959	\$50,877	\$241,513 \$106,698	\$126,709 \$69.911	\$1,497,342 \$147,332	\$4,704,937 \$680,531
										•	. ,	,	41.1,002	\$600,551
Total Qualified Investment - Mains 1070	\$435,452	\$396,360	\$602,555	\$929,031	\$1,170,270	\$1,837,276	\$2,269,705	\$2,297,502	\$1,351,031	\$1,783,780	E2 416 001	62 240 560		
Total Qualified Investment - Services 1070	\$4,002	\$4,002	\$40,065	\$13,541	\$36,281	\$82,758	\$20,061	\$46,421	\$50,059	\$75,567	\$2,416,001 \$61,138	\$2,340,560 \$30,446	\$1,485,442 \$22.531	\$1,485,442 \$22,531
Total Qualified Investment - Mains 1010	\$14,799,222	\$14,940,416	\$15,139,527	\$15,330,220	\$15,363,614	\$15,363,614	\$15,574,177	\$16,127,582	\$17,451,026	\$17,638,595	\$17,880,108	\$18,006,817	\$19,504,159	\$19,504,159
Total Qualified Investment - Services 1010 Total Qualified Investment	\$1,052,498 \$16,291,174	\$1,064,736	\$1,083,785	\$1,165,893	\$1,189,459	\$1,189,459	\$1,278,861	\$1,307,252	\$1,358,211	\$1,409,088	\$1,515,786	\$1,585,698	\$1,733,029	\$1,733,029
Total Quantica investment	\$16,291,174	\$16,405,514	\$16,865,933	\$17,438,684	\$17,759,625	\$18,473,107	\$19,142,804	\$19,778,757	\$20,210,326	\$20,907,030	\$21,873,033	\$21,963,520	\$22,745,161	\$22,745,161
Less: Accumulated Depreciation	(\$530,661)	(\$565,094)	(\$599,861)	(\$635,102)	(\$670,940)	(\$706,904)	(\$742,868)	(\$779,489)	(\$817,373)	(\$858,240)	(\$899,627)	(\$941,778)	(\$984.361)	(#004.261)
Net Book Value	\$15,760,513	\$15,840,420	\$16,266,072	\$16,803,582	\$17,088,685	\$17,766,203	\$18,399,936	\$18,999,268	\$19,392,953	\$20,048,790	\$20,973,406	\$21,021,742	\$21,760,800	(\$984,361) \$21,760,800
N 0 W7 W	_													021,700,000
Average Net Qualified Investment	_	\$15,800,467	\$16,053,246	\$16,534,827	\$16,946,133	\$17,427,444	\$18,083,069	\$18,699,602	\$19,196,111	\$19,720,872	\$20,511,098	\$20 997,574	\$21,391,271	-
Depreciation Rates														
Approved Depreciation Rate-Mains		2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2,60%	2.60%	
Approved Depreciation Rate-Services		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2,70%	
Return on Average Net Qualified Investment														
Equity - Cost of Capital, inclusive of Income Tax Gross-up		7.9060%	7.9060%	7.9060%	7.9060%	7.9060%	7.9060%	7.9060%	7.9060%	7.9060%	7.00(00)	7.00000	*******	
Debt - Cost of Capital		1.1800%	1,1800%	1.1800%	1.1800%	1.1800%	1.1800%	1.1800%	1.1800%	1.1800%	7.9060% 1.1800%	7.9060% 1.1800%	7,9060% 1.1800%	
Equity Component - inclusive of Income Tax Gross-up		****										1.100070	1,100070	
Debt Component		\$104,099 \$15,537	\$105,764 \$15,786	\$108,937 \$16,259	\$111,647	\$114,818	\$119,137	\$123,199	\$126,470	\$129,928	\$135,134	\$138,339	\$140,933	\$1,458,405
Return Requirement	_	\$119,636	\$121,550	\$125,196	\$16,664 \$128,310	\$17,137 \$131,955	\$17,782 \$136,919	\$18,388 \$141,587	\$18,876 \$145,347	\$19,392 \$149,320	\$20,169	\$20,648	\$21,035	\$217,672
	_				ψ120,510	\$151,755	\$130,313	\$141,367	3143,347	\$149,320	\$155,303	\$158,987	\$161,968	\$1,676,077
Investment Expenses														
Depreciation Expense - Mains Depreciation Expense - Services		\$32,065	\$32,371	\$32,802	\$33,215	\$33,288	\$33,288	\$33,744	\$34,943	\$37,811	\$38,217	\$38,740	\$39,015	\$419,499
Property Taxes		\$2,368 \$26,268	\$2,396 \$26,268	\$2,439 \$26,268	\$2,623	\$2,676	\$2,676	\$2,877	\$2,941	\$3,056	\$3,170	\$3,411	\$3,568	\$34,201
General Public Notice Expense and Customer Notice Expense		\$20,200	\$3,445	\$20,206	\$26,268 \$449	\$26,268 \$3,825	\$26,268	\$26,268 \$0	\$26,268 \$3,532	\$26,268 \$6,175	\$26,268	\$26,268	\$26,268	\$315,216
Total Expense	_	\$60,701	\$64,480	\$61,509	\$62,555	\$66,057	\$62,232	\$62,889	\$67,684	\$73,310	\$14,419 \$82,074	\$68,419	(\$2,118) \$66,733	\$29,727 \$798,643
West Burner B.	_	-							- 10.			- 000,125	500,755	\$770,045
Total Revenue Requirements	_	\$180,337	\$186,030	\$186,705	\$190,865	\$198,011	\$199,151	\$204,476	\$213,031	\$222,630	\$237,377	\$227,406	\$228,701	\$2,474,720
GRIP Surcharge Revenues Collected Month	\$	250,285	\$ 247,074	\$ 240,794	\$ 220,518	\$ 199,295	\$ 183,434	\$ 188,574	\$ 199,309	\$ 192,124	<b>\$</b> 210,257	\$ 224,383	\$ 234,324	\$2,590,372
Beginning True-Up														\$ 125,419
(Over) and Under Recovery for the Month	s	(69,948)				\$ (1,284)	\$ 15,717	\$ 15,902	\$ 13,722	\$ 30,506	\$ 27,120	\$ 3,023		(\$115,652)
Monthly Interest (Expense)/Income Ending (Over) and Under Recovery	\$ 125,419 \$			\$ (9)								<b>\$</b> 5	\$ 6	(\$88)
saming (Over) and onder Recovery	a 145,419 \$	55,495	\$ (5,542)	\$ (59,640)	\$ (89,314)	\$ (90,625)	\$ (74,934)	\$ (59,052)	\$ (45,347)	S (14,851)	\$ 12,269	\$ 15,296	\$ 9,679	\$ 9,679
Beg of Month Annual Interest Rate		0.34%	0.34%	0.35%	0.32%	0,36%	0.38%	0.36%	0.35%	0.43%	0.2007	0.4004	0.455	
End of Month Annual Interest Rate		0.34%	0.35%	0.32%	0.36%	0.38%	0.36%	0.35%	0.33%	0.43%	0.39% 0.43%	0.43% 0.47%	0.47% 0.63%	
Average Monthly Interest Rate		0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.47%	0,05%	

Gas Reliability Infrastructure Program (GRIP)
Calculation of the Projected Revenue Requirements
January 1, 2017 through December 31, 2017

Schedule C-1 Exhibit\_\_\_\_\_ Michael Cassel (MC-1) Page 8 of 15

Item Oualified Investment	Beginning Balance	Actual <u>Jan</u>	Actual <u>Feb</u>	Actual <u>Mar</u>	Actual Apr	Actual May	Actual Jun	Actual <u>Jul</u>	Projection Aug	Projection Sep	Projection Oct	Projection Nov	Projection Dec	Year End Total
Qualified Investment - Mains - Current 1070 Activity		#494 #94								_	_	<del></del>		<u></u>
Qualified Investment - Mains - Closed 1070 Activity to Plant		\$422,786 \$0	\$197,035 (\$91,990)	\$250,549	\$226,760	\$273,400	\$369,218	\$153,649	\$125,783	\$125,783	\$125,783	\$125,783	\$125,783	\$2,522,313
Qualified Investment - Services - Current 1070 Activity		\$37,298	\$45,767	(\$1,752,836) \$97,326	(\$299,429) \$29,062	(\$188,904) \$5,770	(\$177,424) \$34.094	(\$510,323)	(\$119,494)	(\$119,494)	(\$119,494)	(\$119,494)	(\$119,494)	(\$3,618,376)
Qualified Investment - Services - Closed 1070 Activity to Plant		\$0,250	(\$46,569)	\$61,466)	\$2,530	\$3,770 (\$103,456)	\$34,094 (\$47,750)	\$33,801 (\$28,159)	\$9,468 (\$9,468)	\$9,468	\$9,468	\$9,468	\$9,468	\$330,458
Qualified Investment - Mains - Current 1010 Activity		\$0	\$91,990	\$1,752,836	\$2,550	\$188,904	\$177,424	\$510,323	(\$9,468) \$119,494	(\$9,468) \$119,494	(\$9,468)	(\$9,468)	(\$9,468)	(\$332,209)
Qualified Investment - Services - Current 1010 Activity		\$0	\$46,569	\$61,466	(\$2,530)	\$103,456	\$47,750	\$28,159	\$9,468	\$9,468	\$119,494 \$9,468	\$119,494 \$9,468	\$119,494 \$9,468	\$3,618,376 \$332,209
						,		<b>,</b>	45,100	27,400	47,400	32,400	39,400	3332,209
Total Qualified Investment ~ Mains 1070														
Total Qualified Investment - Mains 1070 Total Qualified Investment - Services 1070	\$1,485,442	\$1,908,228	\$2,013,274	\$510,986	\$438,318	<b>\$</b> 522,813	\$714,607	\$357,934	\$364,223	\$370,512	\$376,801	\$383,090	\$389,379	\$389,379
Total Qualified Investment - Mains 1010	\$22,531 \$19,504,159	\$59,829 \$19,504,159	\$59,027	\$94,887	\$126,479	\$28,793	\$15,137	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780
Total Qualified Investment - Services 1010	\$1,733.029	\$1,733,029	\$19,596,149 \$1,779,598	\$21,348,986 \$1,841,065	\$21,648,414 \$1.838,534	\$21,837,319	\$22,014,743	\$22,525,065	\$22,644,559	\$22,764,053	\$22,883,547	\$23,003,041	\$23,122,535	\$23,122,535
Total Qualified Investment	\$22,745,161	\$23,205,245	\$23,448,048	\$23,795,923	\$24,051,746	\$1,941,990 \$24,330,915	\$1,989,740 \$24,734,227	\$2,017,899 \$24,921,678	\$2,027,367 \$25,056,929	\$2,036,835	\$2,046,303	\$2,055,771	\$2,065,239	\$2,065,239
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	420 (1104010	420,770,723	924,051,740	324,330,713	324,134,221	324,321,078	323,036,929	\$25,192,180	\$25,327,431	\$25,462,682	\$25,597,933	\$25,597,933
Less: Accumulated Depreciation	(\$984,361)	(\$1,030,519)	(\$1,076,677)	(\$1.123,139)	(\$1.173.537)	(\$1,224,579)	(\$1,276,262)	(\$1.328.438)	(\$1,381,782)	(\$1,435,407)	(\$1,489,312)	(\$1,543,497)	(\$1,597,962)	(\$1,597,962)
Net Book Value	\$21,760,800	\$22,174,726	\$22,371,371	\$22,672,784	\$22,878,209	\$23,106,336	\$23,457,965	\$23,593,240	\$23,675,147	\$23,756,773	\$23,838,119	\$23,919,185	\$23,999,971	\$23,999,971
												422,515,100	777,771	323,555,571
Average Net Qualified Investment	·	\$21,967,763	\$22,273,048	\$22,522,077	\$22,775,496	\$22,992,272	\$23,282,151	\$23,525,603	\$23,634,194	\$23,715,960	\$23,797,446	\$23,878,652	\$23,959,578	
Decision in the second									***					
Depreciation Rates Approved Depreciation Rate-Mains														
Approved Depreciation Rate-Services		2.60% 2.70%	2.60%	2.60%	2.60%	2.60%	2,60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	
ripported population reno-dervices		2.70%	2.70%	2,70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	
Return on Average Net Qualified Investment														
Equity - Cost of Capital, inclusive of Income Tax Gross-up		7.5750%	7,5750%	7.5750%	7.5750%	7.5750%	7.5750%	7.5750%	7.5750%	7.5750%	7.5750%	7.5750%	7.5750%	
Debt - Cost of Capital		1.0800%	1.0800%	1.0800%	1,0800%	1.0800%	1,0800%	1,0800%	1.0800%	1.0800%	1.0800%	1.0800%	1.0800%	
Emily Comment in Latin City To C												1.000070	1.000070	
Equity Component - inclusive of Income Tax Gross-up Debt Component		\$138,672	\$140,599	\$142,171	\$143,770	\$145,139	\$146,969	\$148,505	\$149,191	\$149,707	\$150,221	\$150,734	\$151,245	\$1,756,922
Return Requirement	-	\$19,771 \$158,442	\$20,046 \$160,644	\$20,270 \$162,440	\$20,498 \$164,268	\$20,693	\$20,954	\$21,173	\$21,271	\$21,344	\$21,418	\$21,491	\$21,564	\$250,492
		\$130,772	3100,044	\$102,440	3104,268	\$165,832	\$167,923	\$169,678	\$170,462	\$171,051	\$171,639	\$172,225	\$172,808	\$2,007,414
Investment Expenses														
Depreciation Expense - Mains		\$42,259	\$42,259	\$42,458	\$46,256	\$46,905	\$47,314	<b>\$</b> 47,699	\$48,804	\$49,063	\$49,322	\$49,581	\$49.840	0041 740
Depreciation Expense - Services		\$3,899	\$3,899	\$4,004	\$4,142	\$4,137	\$4,369	\$4,477	\$4,540	\$4,562	\$4,583	\$4,604	\$4,625	\$561,760 \$51,841
Property Taxes		\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$36,268	\$435,216
General Public Notice Expense and Customer Notice Expense		(\$1,963)	\$0	\$0	\$0	\$0	\$3,392	\$0	\$0	\$0	\$0	\$0	\$0	\$1,429
Total Expense		\$80,463	\$82,426	\$82,730	\$86,666	\$87,310	\$91,343	\$88,444	\$89,612	\$89,893	<b>\$</b> 90,173	\$90,453	\$90,733	\$1,050,246
Total Revenue Requirements		\$238 906	52.42.020	£215.180										
Town Toronto Requirements		3238 906	\$243,070	\$245 170	\$250 934	\$253,142	\$259,266	\$258,122	\$260,074	\$260,944	\$261,812	\$262,678	\$263,541	\$3,057,660
GRIP Surcharge Revenues Collected Month	-	\$ 320,712	\$ 297,164	\$ 304,997	\$ 268,374	\$ 158,855	\$ 220,099	\$ 215.254						
	-	3 320,712	3 257,104	\$ 504,59 <u>1</u>	3 200,374	3 120,023	\$ 220,099	\$ 215,254	\$ 208,887	\$ 209,762	\$ 228,825	\$ 236,881	\$ 255,010	\$2,924,819
Beginning True-Up														
(Over) and Under Recovery for the Month		\$ (81,806)	\$ (54,094)	\$ (59,827)	\$ (17,440)	\$ 94,287	\$ 39,167	\$ 42,868	\$ 51,187	\$ 51,183	\$ 32,987	\$ 25,797		\$ 9,679 \$132,840
Monthly Interest (Expense)/Income			\$ (52)		\$ (133)						. ,		\$ 6,332 \$ 124	(\$156)
Ending (Over) and Under Recovery	\$ 9,679	\$ (72,143)	\$ (126,289)	\$ (186,209)	\$ (203,782)	\$ (109,606)					\$ 107,802		\$ 142,364	
Beg of Month Annual Interest Rate														
End of Month Annual Interest Rate		0.63%	0,62%	0.63%	0.80%	0.84%	0.86%	0.90%	1.08%	1.08%	1.08%	1.08%	1.08%	
Average Monthly Interest Rate		0.62% 0.05%	0.63% 0.05%	0.80% 0.06%	0.84%	0.86%	0.90%	1.08%	1.08%	1.08%	1.08%	1.08%	1.08%	
• • • • • • • • • • • • • • • • • • • •		0.03%	0.03%	0.06%	0.07%	0.07%	0.07%	0.08%	0.09%	0.09%	0.09%	0.09%	0.09%	

Gas Reliability Infrastructure Program (GRIP)
Calculation of the Projected Revenue Requirements
January 1, 2018 through December 31, 2018

Schedule C-2
Exhibit\_\_\_\_
Michael Cassel (MC-1)
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Item		Beginning Balance	<u>Jan</u>	Fcb	Mar	Ann	Mari	1	T1			_			Year End
Qualified Inv	estment	Dutanos	3811	100	<u>wa</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	Dec	<u>Total</u>
	Qualified Investment - Mains - Current 1070 Activity		\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	\$255,750	67.000.000
	Qualified Investment - Mains - Closed 1070 Activity to Plant		(\$242,963)	(\$242,963)	(\$242,963)	(\$242,963)	(\$242,963)	(\$242,963)	(\$242,963)	(\$242,963)	(\$242,963)	(\$242.963)	(\$242,963)	\$233,730 (\$242,963)	\$3,069,000 (\$2,915,556)
	Qualified Investment - Services - Current 1070 Activity		\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$231,000
	Qualified Investment - Services - Closed 1070 Activity to Plant		(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$19,250)	(\$231,000)
	Qualified Investment - Mains - Current 1010 Activity		\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$242,963	\$2.915.556
	Qualified Investment - Services - Current 1010 Activity		\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$19,250	\$231,000
															,
*	Total Qualified Investment - Mains 1070	\$389,379	\$402,166	\$414,953	\$427,740	\$440,527	\$453,314	\$466,101	\$478,888	E401 675	0504.460	******			
	Total Qualified Investment - Services 1070	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780	\$20,780	\$491,675 \$20,780	\$504,462 \$20,780	\$517,249	\$530,036	\$542,823	\$542,823
	Total Qualified Investment - Mains 1010	\$23,122,535	\$23,365,498	\$23,608,461	\$23,851,424	\$24,094,387	\$24,337,350	\$24,580,313	\$24,823,276	\$25,066,239	\$20,780	\$20,780 \$25,552,165	\$20,780 \$25,795,128	\$20,780	\$20,780
	Total Qualified Investment - Services 1010	\$2,065,239	\$2,084,489	\$2,103,739	\$2,122,989	\$2,142,239	\$2,161,489	\$2,180,739	\$2,199,989	\$2,219,239	\$2,238,489	\$2,257,739	\$2,276,989	\$26,038,091 \$2,296,239	\$26,038,091 \$2,296,239
	Total Qualified Investment	\$25,597,933	\$25,872,933	\$26,147,933	\$26,422,933	\$26,697,933	\$26,972,933	\$27,247,933	\$27,522,933	\$27,797,933	\$28,072,933	\$28,347,933		\$28,897,933	\$28,897,933
											420,072,355	020,5 17,555	\$20,022,733	\$26,677,933	320,897,933
	Less: Accumulated Depreciation	(\$1,597,962)	(\$1,652,708)	(\$1,708,023)	(\$1,763,908)	(\$1,820,363)	(\$1,877,388)	(\$1,934,982)	(\$1,993,146)	(\$2,051,880)	(\$2,111,183)	(\$2,171,057)	(\$2,231,500)	(\$2,292,512)	(\$2.292.512)
	Net Book Value	\$23,999,971	\$24,220,225	\$24,439,910	\$24,659,025	\$24,877,570	\$25,095,545	\$25,312,951	\$25,529,787	\$25,746,053	\$25,961,750	\$26,176,876	\$26,391,433	\$26,605,421	\$26,605,421
															423,535,131
	Average Net Qualified Investment		\$24,110,098	\$24,330,068	\$24,549,468	\$24,768,298	\$24,986,558	\$25,204,248	\$25,421,369	\$25,637,920	\$25,853,902	\$26,069,313	\$26,284,155	\$26,498,427	
Depreciation	Rates											<del></del>			
Depreciation			2 60%	2.60%	2 60%	2.609/	2.60%	2 (08)	2.600/	0.600/	2 4004				
Depreciation	Rates Approved Depreciation Rate-Mains Approved Depreciation Rate-Services		2.60% 2.70%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	
Depreciation	Approved Depreciation Rate-Mains		2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	2.60% 2.70%	
•	Approved Depreciation Rate-Mains														
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up						2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2,70%	2.70%	
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services erage Net Qualified Investment		2.70%	2.70%	2.70%	2.70%					2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  terage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital		2.70% 7,5750% 1.0800%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70%	2.70%	2,70%	2.70%	
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up		2.70% 7.5750% 1.0800% \$152,195	2.70% 7.5750% 1.0800% \$153,584	2.70% 7.5750% 1.0800% \$154,969	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750%	2.70% 7.5750% 1.0800%	2.70% 7.5750% 1.0800%	\$1.917.194
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component	_	2.70%  7.5750% 1.0800%  \$152,195 \$21,699	2.70% 7.5750% 1.0800% \$153,584 \$21,897	2.70% 7.5750% 1.0800% \$154,969 \$22,095	2.70% 7.5750% 1.0800% \$156,350 \$22,291	2.70% 7.5750% 1.0800% \$157,728 \$22,488	2.70% 7.5750% 1.0800% \$159,102 \$22,684	2.70% 7.5750% 1.0800% \$160,472 \$22,879	2.70% 7.5750% 1.0800% \$161,839 \$23,074	2.70% 7.5750% 1.0800%	2.70% 7.5750% 1.0800%	2.70% 7.5750%	2.70% 7.5750%	\$1,917,194 \$273,342
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up	;	2.70% 7.5750% 1.0800% \$152,195	2.70% 7.5750% 1.0800% \$153,584	2.70% 7.5750% 1.0800% \$154,969	2.70% 7.5750% 1.0800% \$156,350	2.70% 7.5750% 1.0800% \$157,728	2.70% 7.5750% 1.0800% \$159,102	2,70% 7.5750% 1,0800% \$160,472	2.70% 7.5750% 1.0800% \$161,839	2.70% 7.5750% 1.0800% \$163,203	2.70% 7.5750% 1.0800% \$164,563	2.70% 7.5750% 1.0800% \$165,919	2.70% 7.5750% 1.0800% \$167,271	
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement	;	2.70%  7.5750% 1.0800%  \$152,195 \$21,699	2.70% 7.5750% 1.0800% \$153,584 \$21,897	2.70% 7.5750% 1.0800% \$154,969 \$22,095	2.70% 7.5750% 1.0800% \$156,350 \$22,291	2.70% 7.5750% 1.0800% \$157,728 \$22,488	2.70% 7.5750% 1.0800% \$159,102 \$22,684	2.70% 7.5750% 1.0800% \$160,472 \$22,879	2.70% 7.5750% 1.0800% \$161,839 \$23,074	2.70% 7.5750% 1.0800% \$163,203 \$23,269	2.70% 7.5750% 1.0800% \$164,563 \$23,462	2.70% 7.5750% 1.0800% \$165,919 \$23,656	2.70% 7.5750% 1.0800% \$167,271 \$23,849	\$273,342
•	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement	;	2.70% 7.5750% 1.0800% \$152,195 \$21,699 \$173,894	2.70%  7.5750% 1.0800%  \$153,584 \$21,897 \$175,481	2.70%  7.5750% 1.0800% \$154,969 \$22,095 \$177,063	2.70%  7.5750% 1.0800%  \$156,350 \$22,291 \$178,641	2.70%  7.5750% 1.0800%  \$157,728 \$22,488 \$180,216	2.70%  7.5750% 1.0800%  \$159,102 \$22,684 \$181,786	2.70%  7.5750% 1.0800%  \$160,472 \$22,879 \$183,352	2.70%  7.5750% 1.0800% \$161,839 \$23,074 \$184,913	2.70%  7.5750% 1.0800%  \$163,203 \$23,269 \$186,471	2.70%  7.5750% 1.0800% \$164,563 \$22,462 \$188,025	2.70%  7.5750% 1.0800%  \$165,919 \$23,656 \$189,574	2.70%  7.5750% 1.0800% \$167,271 \$23,849 \$191,120	\$273,342
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement  expenses Depreciation Expense - Mains	;	2.70%  7.5750% 1.0800% \$152,195 \$21,699 \$173,894	2.70%  7.5750% 1.0800% \$153,584 \$21,897 \$175,481	2.70%  7.5750% 1.0800% \$154,969 \$22,095 \$177,063	2.70%  7.5750% 1.0800% \$156,350 \$22,291 \$178,641	2.70%  7.5750% 1.0800% \$157,728 \$22,488 \$180,216	2.70%  7.5750% 1.0800%  \$159,102 \$22,684 \$181,786	2.70%  7.5750% 1.0800% \$160,472 \$22,879 \$183,352	2.70%  7.5750% 1.0800% \$161,839 \$22,074 \$184,913	2.70%  7.5750% 1.0800% \$163,203 \$23,269 \$186,471	2.70%  7.5750% 1.0800% \$164,563 \$23,462 \$188,025	2.70%  7.5750% 1.0800% \$165,919 \$23,656 \$189,574	2.70%  7.5750% 1.0800%  \$167,271 \$23,849 \$191,120	\$273,342 \$2,190,536 \$635,930
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement	;	2.70% 7.5750% 1.0800% \$152,195 \$21,699 \$173,894 \$50,099 \$4,647	2.70% 7.5750% 1.0800% \$153,584 \$21,897 \$175,481 \$50,625 \$4,690	2.70%  7.5750% 1.0800%  \$154,969 \$22,095 \$177,063  \$51,152 \$4,733	2.70%  7.5750% 1.0800%  \$156,350 \$22,291 \$178,641  \$51,678 \$4,777	2.70% 7.5750% 1.0800% \$157,728 \$22,488 \$180,216	2.70% 7.5750% 1.0800% \$159,102 \$22,684 \$181,786 \$52,731 \$4,863	2.70% 7.5750% 1.0800% \$160,472 \$22,879 \$183,352 \$53,257 \$4,907	2.70% 7.5750% 1.0800% \$161,839 \$23,074 \$184,913	2.70% 7.5750% 1.0800% \$163,203 \$23,269 \$186,471 \$54,310 \$4,993	2.70%  7.5750% 1.0800%  \$164,563 \$23,462 \$188,025	2.70% 7.5750% 1.0800% \$165,919 \$23,656 \$189,574 \$\$5,363 \$\$5,080	2.70%  7.5750% 1.0800%  \$167,271 \$23,849 \$191,120  \$55,889 \$5,123	\$273,342 \$2,190,536 \$635,930 \$58,620
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement  expenses Depreciation Expense - Mains Depreciation Expense - Services Property Taxes	;	2.70%  7.5750% 1.0800%  \$152,195 \$21,699 \$173,894  \$50,099 \$4,647 \$40,000	2.70%  7.5750% 1.0800% \$153,584 \$21,897 \$175,481  \$50,625 \$4,690 \$40,000	2.70%  7.5750% 1.0800% \$154,969 \$22,095 \$177,063  \$51,152 \$4,733 \$40,000	2.70%  7.5750% 1.0800% \$156,350 \$22,291 \$178,641  \$51,678 \$4,777 \$40,000	2.70%  7.5750% 1.0800% \$157,728 \$22,488 \$180,216  \$52,205 \$4,820 \$40,000	2.70% 7.5750% 1.0800% \$159,102 \$22,684 \$181,786 \$52,731 \$4,863 \$40,000	2.70%  7.5750% 1.0800% \$160,472 \$22,879 \$183,352  \$53,257 \$4,907 \$40,000	2.70% 7.5750% 1.0800% \$161,839 \$23,074 \$184,913 \$53,784 \$4,950 \$40,000	2.70% 7.5750% 1.0800% \$163,203 \$23,269 \$186,471  \$54,310 \$4,993 \$40,000	2.70%  7.5750% 1.0800% \$164,563 \$23,462 \$188,025  \$54,837 \$5,037 \$40,000	2.70% 7.5750% 1.0800% \$165,919 \$23,656 \$189,574  \$55,363 \$5,080 \$40,000	2.70% 7.5750% 1.0800% \$167,271 \$23,849 \$191,120 \$55,889 \$5,123 \$40,000	\$273,342 \$2,190,536 \$635,930 \$58,620 \$480,000
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement  expenses Depreciation Expense - Mains Depreciation Expense - Services	;	2.70% 7.5750% 1.0800% \$152,195 \$21,699 \$173,894 \$50,099 \$4,647	2.70%  7.5750% 1.0800%  \$153,584 \$21,897 \$175,481  \$50,625 \$4,690 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$154,969 \$22,095 \$177,063 \$51,152 \$4,733 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$156,350 \$22,291 \$178,641  \$51,678 \$4,777 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$157,728 \$22,488 \$180,216  \$52,205 \$4,820 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$159,102 \$22,684 \$181,786 \$52,731 \$4,863 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$160,472 \$22,879 \$183,352 \$53,257 \$4,907 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$161,839 \$23,074 \$184,913  \$53,784 \$4,950 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$163,203 \$23,269 \$186,471 \$54,310 \$4,993 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$164,563 \$23,462 \$188,025 \$54,837 \$5,037 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$165,919 \$23,656 \$189,574  \$55,363 \$5,080 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$167,271 \$23,849 \$191,120 \$55,889 \$5,123 \$40,000 \$1,500	\$273,342 \$2,190,536 \$635,930 \$58,620 \$480,000 \$18,000
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement  expenses Depreciation Expense - Mains Depreciation Expense - Services Property Taxes General Public Notice Expense and Customer Notice Expense	;	2.70%  7.5750% 1.0800%  \$152,195 \$21,699 \$173,894  \$50,099 \$4,647 \$40,000 \$1,500	2.70%  7.5750% 1.0800% \$153,584 \$21,897 \$175,481  \$50,625 \$4,690 \$40,000	2.70%  7.5750% 1.0800% \$154,969 \$22,095 \$177,063  \$51,152 \$4,733 \$40,000	2.70%  7.5750% 1.0800% \$156,350 \$22,291 \$178,641  \$51,678 \$4,777 \$40,000	2.70%  7.5750% 1.0800% \$157,728 \$22,488 \$180,216  \$52,205 \$4,820 \$40,000	2.70% 7.5750% 1.0800% \$159,102 \$22,684 \$181,786 \$52,731 \$4,863 \$40,000	2.70%  7.5750% 1.0800% \$160,472 \$22,879 \$183,352  \$53,257 \$4,907 \$40,000	2.70% 7.5750% 1.0800% \$161,839 \$23,074 \$184,913 \$53,784 \$4,950 \$40,000	2.70% 7.5750% 1.0800% \$163,203 \$23,269 \$186,471  \$54,310 \$4,993 \$40,000	2.70%  7.5750% 1.0800% \$164,563 \$23,462 \$188,025  \$54,837 \$5,037 \$40,000	2.70% 7.5750% 1.0800% \$165,919 \$23,656 \$189,574  \$55,363 \$5,080 \$40,000	2.70% 7.5750% 1.0800% \$167,271 \$23,849 \$191,120 \$55,889 \$5,123 \$40,000	\$273,342 \$2,190,536 \$635,930 \$58,620 \$480,000
Return on Av	Approved Depreciation Rate-Mains Approved Depreciation Rate-Services  erage Net Qualified Investment Equity - Cost of Capital, inclusive of Income Tax Gross-up Debt - Cost of Capital  Equity Component - inclusive of Income Tax Gross-up Debt Component Return Requirement  expenses Depreciation Expense - Mains Depreciation Expense - Services Property Taxes General Public Notice Expense and Customer Notice Expense		2.70%  7.5750% 1.0800%  \$152,195 \$21,699 \$173,894  \$50,099 \$4,647 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$153,584 \$21,897 \$175,481  \$50,625 \$4,690 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$154,969 \$22,095 \$177,063 \$51,152 \$4,733 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$156,350 \$22,291 \$178,641  \$51,678 \$4,777 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$157,728 \$22,488 \$180,216  \$52,205 \$4,820 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$159,102 \$22,684 \$181,786 \$52,731 \$4,863 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$160,472 \$22,879 \$183,352 \$53,257 \$4,907 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$161,839 \$23,074 \$184,913  \$53,784 \$4,950 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$163,203 \$23,269 \$186,471 \$54,310 \$4,993 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$164,563 \$23,462 \$188,025 \$54,837 \$5,037 \$40,000 \$1,500	2.70%  7.5750% 1.0800%  \$165,919 \$23,656 \$189,574  \$55,363 \$5,080 \$40,000 \$1,500	2.70% 7.5750% 1.0800% \$167,271 \$23,849 \$191,120 \$55,889 \$5,123 \$40,000 \$1,500	\$273,342 \$2,190,536 \$635,930 \$58,620 \$480,000 \$18,000

Gas Reliability Infrastructure Program (GRIP)
Projection of Qualified Mains & Services Revenue Requirements
Surcharge Calculation - January 1, 2018 through December 31, 2018
Per Therm/Bill Rate

Schedule D-1
Exhibit\_\_\_\_
Michael Cassel (MC-1)
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1/1/18-12/31/18 Qualified Mains & Services Replacement Revenue Requirements
 Mains
 Services
 4%
 \$135,323

Services 4% \$135,323 Net \$3,383,086

TRUE-UP from Prior Period (Over)/Under Recovery Estimated thru 12/2017
 \$ 142,364

2018 Qualified Mains & Services Replacement Revenue Requirements \$ 3,525,450

 Mains
 96%
 \$3,384,432

 Services
 4%
 \$141,018

Net \$\frac{\$\sigma\_{3,525,450}}{\sigma\_{3,525,450}}\$

DOLLARS

RATE 2018 2018 SERVICES MAINS SERVICES MAINS GPID DED EVEN.

RATE CLASS	2018 BILLS	2018 THERMS	SERVICES COS %	MAINS COS %	SERVICES REV REQ	MAINS REV REQ	GRIP REV REQ	DOLLARS PER THERM	EXPANSION FACTOR	GRIP FACTORS PER THERM	\$ PER BILL	EXPANSION FACTOR	GRIP FACTORS PER BILL	ANNUAL COST PER BILL	TYPICAL ANNUAL THERMS	ANNUAL COST	AVERAGE MONTHLY COST
FTS-A	15,542	95,178	14.34%	0.951%	\$ 20,222	\$ 32,186	\$52,408	\$0.55063	1.00503	\$ 0.55340	\$ 3.37	1.00503	\$ 3.39	\$ 40.67	110	\$60.87	\$5.07
FTS-B	27,931	296,034	9.74%	1.142%	\$ 13,735	\$ 38,650	\$52,385	\$0.17696	1,00503	\$ 0.17785	\$ 1.88	1.00503	\$ 1.88	\$ 22.62	215	\$38.24	\$3.19
FTS-1	137,039	2,089,574	33.87%	5.861%	\$ 47,763	\$ 198,362	\$246,125	\$0.11779	1,00503	\$ 0.11838	\$ 1.80	1.00503	\$ 1.81	\$ 21.66	275	\$32.55	\$2.71
FTS-2	9,870	577,478	12.69%	1.611%	\$ 17,895	\$ 54,523	\$72,418	\$0.12540	1.00503	\$ 0.12603	\$ 7.34	1.00503	<b>\$</b> 7.37	\$ 88.49	875	\$110.28	\$9.19
FTS-2.1	8,662	989,717	7,83%	3.193%	\$ 11,042	\$ 108,065	\$119,107	\$0.12034	1.00503	\$ 0.12095	\$ 13.75	1.00503	<b>\$</b> 13.82	\$ 165.84	1,575	\$190.50	\$15.87
FTS-3	3,367	1,098,582	3.93%	1.567%	\$ 5,542	\$ 53,034	\$58,576	\$0.05332	1.00503	\$ 0.05359	\$ 17.40	1.00503	\$ 17.48	\$ 209.82	4,000	\$214.35	\$17.86
FTS-3.1	4,033	2,430,303	3.91%	4.294%	\$ 5,514	\$ 145,328	\$150,842	\$0,06207	1.00503	\$ 0.06238	\$ 37.40	1.00503	\$ 37.59	\$ 451.08	7,300	\$455,37	\$37.95
FTS-4		2,914,525	4.37%	6.162%	\$ 6,162	\$ 208,549	\$214,711	\$0.07367	1.00503	\$ 0.07404					12,500	\$925,50	\$77.12
FTS-5		1,146,649	1.24%	2.570%	\$ 1,749	\$ 86,980	\$88,729	\$0,07738	1.00503	\$ 0.07777					37,500	\$2,916,39	\$243.03
FTS-6		1,528,791	1.25%	2.750%	\$ 1,763	\$ 93,072	\$94,835	\$0.06203	1.00503	\$ 0.06234					75,000	\$4,675.85	\$389.65
FTS-7		3,333,200	2.20%	7.615%	\$ 3,102	\$ 257,724	\$260,826	\$0.07825	1.00503	\$ 0.07864					150,000	\$11,796.68	\$983.06
FTS-8		5,002,772	1.62%	10.708%	\$ 2,284	\$ 362,405	\$364,689	\$0,07290	1.00503	\$ 0.07326					300,000	\$21,979.22	\$1,831.60
FTS-9		4,771,151	1.48%	15.171%	\$ 2,087	\$ 513,452	\$515,539	\$0.10805	1.00503	<b>\$</b> 0,10860					550,000	\$59,728.29	\$4,977.36
FTS-10		1,736,091	0,45%	6,539%	<b>\$</b> 635	\$ 221,308	\$221,943	\$0.12784	1.00503	\$ 0.12848					850,000	\$109,211.13	\$9,100.93
FTS-11		3,672,350	0.61%	13.551%	\$ 860	\$ 458,624	\$459,484	\$0.12512	1.00503	<b>\$</b> 0.12575					1,750,000	\$220,061.16	\$18,338.43
FTS-12		16,953,540	0.47%	16.315%	\$ 663	\$ 552,170	\$552,833	\$0.03261	1.00503	<b>S</b> 0.03277					3,000,000	\$98,318.18	\$8,193.18
FTS-13		N/A	N/A	0.000%	s -	\$ -	\$0	N/A		N/A					_	N/A	
TOTAL	206,444	48,635,935	100.00%	100,000%	\$ 141,018	\$ 3,384,432	\$ 3,525,450										

# Florida Public Utilities Company -Ft. Meade

Gas Reliability Infrastructure Program (GRIP)
Investment and Calculation of Equity and Debt Returns

Schedule A-1
Exhibit
Michael Cassel (MC-1)
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	Projected Total Investment
Earnings Surveillance Report - December 31, 2016	
Equity Cost Rate	11.00%
Weighted Equity Cost Rate	4.50%
Revenue Expansion Factor	1.6553
Weighted Equity Cost Rate, times Revenue Expansion Factor	7.450%
Long Term Debt-CU	0.720%
Short Term Debt	0.280%
Short Term Debt-Refinanced LTD	0.000%
Customer Deposits	0.040%
Tax Credits-Weighted Cost	0.000%
Weighted Debt Cost Rate	1.040%
Overall Weighted Cost Rate	5.54%

#### Florida Public Utilities-Ft. Meade

Gas Reliability Infrastructure Program (GRIP)
Calculation of the Projected Revenue Requirements
January 1, 2016 through December 31, 2016

Schedule B-1
Exhibit\_\_\_\_
Michael Cassel (MC-1)
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<u>Item</u> Qualified Investment	Beginning Balance	ACTUAL Jan	ACTUAL <u>Feb</u>	ACTUAL <u>Mar</u>	ACTUAL Apr	ACTUAL <u>May</u>	ACTUAL Jun	ACTUAL Jul	ACTUAL Aug	ACTUAL <u>Sep</u>	ACTUAL Oct	ACTUAL <u>Nov</u>	ACTUAL '	Year End Total
Qualified Investment - Mains - Current 1070 Activity		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Qualified Investment - Mains - Closed 1070 Activity to Plant		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S0	\$0	\$0	\$0 \$0
Qualified Investment - Services - Current 1070 Activity		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,771	\$9,933	\$49,166	\$70,871
Qualified Investment - Services - Closed 1070 Activity to Plant		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$70,871)	(\$70,871)
Qualified Investment - Mains - Current 1010 Activity		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Qualified Investment - Services - Current 1010 Activity		\$0	\$0	\$0	\$0	\$0	\$0	. \$0	\$0	\$0	\$0	\$0	\$70,871	\$70,871
Total Qualified Investment - Mains 1070	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Qualified Investment - Services 1070 Total Qualified Investment - Mains 1010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,771	\$21,704	(\$1)	(\$1)
Total Qualified Investment - Mains 1010 Total Qualified Investment - Services 1010	\$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Qualified Investment	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,871	\$70,871
Total Quantos divestment	30	30	30	20		\$0	\$0	\$0	\$0	\$0	\$11,771	\$21,704	\$70,871	\$70,871
Less: Accumulated Depreciation Net Book Value	\$0 \$0	\$0 \$0	\$0 \$0	\$0 	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0	\$0	\$0	\$0	\$0
THE SOUR VILLE	- 50	30	30	30	30	30	- 30	\$0	\$0	\$0	\$11,771	\$21,704	\$70,871	\$70,871
Average Net Qualified Investment	_	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,886	\$16,738	\$46,287	
Depreciation Rates														
Approved Depreciation Rate-Mains Approved Depreciation Rate-Services		2.60%	2.60%	2.60%	2,60%	2.60%	2.60%	2,60%	2,60%	2.60%	2.60%	2.60%	2.60%	
Approved Depreciation Rate-Services		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	
Return on Average Net Qualified Investment														
Equity - Cost of Capital, inclusive of Income Tax Gross-up		7.0000%	7.0000%	7.0000%	7.0000%	7.0000%	7.0000%	7.0000%	7,0000%	7.0000%	7.0000%	7.0000%	7.0000%	
Debt - Cost of Capital		1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	1.0700%	
Equity Component - inclusive of Income Tax Gross-up		\$0	\$0	\$0	\$0	\$0	. \$0	\$0	\$0	\$0	\$34	\$98	\$270	\$402
Debt Component		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5	\$15	\$41	\$402 \$61
Return Requirement		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40	\$113	\$311	\$463
Investment Expenses														
Depreciation Expense - Mains		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation Expense - Services		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Property Taxes		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
General Public Notice Expense and Customer Notice Expense Total Expense		\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$2,118	\$2,118
total Expense	_	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,118	\$2,118
Total Revenue Requirements	<del></del> -	\$0	\$0	\$0	\$0	\$0	\$0_	\$0	\$0	\$0	\$40	\$113	\$2,429	\$2,581
GRIP Surcharge Revenues Collected Month														\$0
Beginning True-Up													5	
(Over) and Under Recovery for the Month	\$	- \$		- \$	- \$	- \$	- \$	- S	- \$	- S	40	\$ 113 <b>\$</b>		\$2,581
Monthly Interest (Expense)/Income		5					- \$	S	- \$	5	S :			\$1
Ending (Over) and Under Recovery	\$	<u>- \$</u>	- \$	- S	- S	- \$	- \$	- S	- \$	- 9	40	\$ 152 <b>\$</b>	2,582	
Beg of Month Annual Interest Rate		0.34%	0.34%	0,35%	0.32%	0.36%	0,38%	0.36%	0.35%	0.35%	0,39%	0.43%	0.47%	
End of Month Annual Interest Rate		0.34%	0.35%	0.32%	0,36%	0.38%	0.36%	0.35%	0.35%	0.35%	0.39%	0.43%	0,47%	
Average Monthly Interest Rate		0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.04%	0.05%	
												0.0170	0.0576	

## Florida Public Utilities-Ft. Meade Gas Reliability Infrastructure Program (GRIP) Calculation of the Projected Revenue Requirements

January 1, 2017 through December 31, 2017

Beginning

Actual

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<u>Item</u>	Balance	Actual Jan	Actual Feb	Actual Mar	Actual Apr	Actual May	Actual Jun	Actual	Projection	Projection	Projection	Projection	Projection	Year End
Qualified Investment	Durance	<u>5411</u>	1.00	iviai	<u> </u>	iviav	Jun	<u>Jul</u>	Aug	Scp	Oct	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
Qualified Investment - Mains - Current 1070 Activity		\$0	\$0	\$0	\$0	\$0	\$0	\$0	S0	\$0	\$0	\$0	\$0	\$0
Qualified Investment - Mains - Closed 1070 Activity to Plant		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 \$0	\$0	\$0	\$0 \$0
Qualified Investment - Services - Current 1070 Activity		\$38,132	(\$762)	(\$2,592)	\$24,406	\$16,625	\$1,701	\$4,206	\$0	\$0	\$0	\$0	S0	\$81.717
<ul> <li>Qualified Investment - Services - Closed 1070 Activity to Plant</li> </ul>		\$0	\$0	(\$26,283)	\$0	(\$32,901)	(\$17,919)	(\$3,023)	\$0	\$0	\$0	\$0	\$0	(\$80,127)
Qualified Investment - Mains - Current 1010 Activity		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	S0
Qualified Investment - Services - Current 1010 Activity		\$0	\$0	\$26,283	\$0	\$32,901	\$17,919	\$3,023	\$0	\$0	\$0	50	\$0	\$80,127
														,
Total Qualified Investment - Mains 1070	\$0	\$0	en.	60	<b>*</b>	••								
Total Qualified Investment - Services 1070	(\$1)	\$38,132	\$0 \$37,369	\$0 \$8,495	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Qualified Investment - Mains 1010	\$0	\$30,132	\$37,369 \$0	\$8,493 <b>\$</b> 0	\$32,901 \$0	\$16,625 \$0	\$407 \$0	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589
Total Qualified Investment - Services 1010	\$70,871	\$70,871	\$70,871	\$97.154	\$97,154	\$130.056	\$147.975	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Qualified Investment	\$70,871	\$109,003	\$108.240	\$105,649	\$130,055	\$130,036	\$147,973	\$150,998 \$152,587	\$150,998 \$152,587	\$150,998	\$150,998	\$150,998	\$150,998	\$150,998
	\$70,071	\$107,005	3100,240	3103,049	\$130,033	\$140,080	\$148,382	\$132,387	\$152,587	\$152,587	\$152,587	\$152,587	\$152,587	\$152,587
Less: Accumulated Depreciation	\$0	(\$159)	(\$318)	(\$477)	(\$696)	(\$915)	(\$1,208)	(\$1,541)	(\$1,881)	(\$2,221)	(\$2,561)	(\$2,901)	(\$3,241)	(\$3,241)
Net Book Value	\$70,871	\$108,844	\$107,922	\$105,172	\$129,359	\$145,765	\$147,174	\$151.046	\$150,706	\$150,366	\$150,026	\$149,686	\$149,346	\$149,346
											0120,020	\$117,000	3145,540	3149,340
Average Net Qualified Investment		\$89,857	\$108,383	\$106,547	\$117,265	\$137.562	\$146,470	\$149,110	\$150 876	\$150,536	\$150 196	\$149,856	\$149,516	
Depreciation Rates														
Approved Depreciation Rate-Mains		2.60%	2.60%	2,60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	
Approved Depreciation Rate-Services		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	
Return on Average Net Qualified Investment														
Equity - Cost of Capital, inclusive of Income Tax Gross-up		7.4500%	7.4500%	7.4500%	7,4500%	7.4500%	7.4500%	7.45000/	7.450004	7 (5000)	<b>6</b> 160004			
Debt - Cost of Capital		1.0400%	1.0400%	1.0400%	1.0400%	1.0400%	1.0400%	7.4500% 1.0400%	7.4500%	7.4500%	7.4500%	7.4500%	7.4500%	
, <b></b>		1.040070	1,040076	1.040076	1.040076	1.040076	1.040076	1.0400%	1.0400%	1.0400%	1.0400%	1.0400%	1,0400%	
Equity Component - inclusive of Income Tax Gross-up		\$558	\$673	\$661	\$728	\$854	\$909	\$926	\$937	\$935	\$932	\$930	\$928	60.072
Debt Component		\$78	<b>\$</b> 94	\$92	\$102	\$119	\$127	\$129	\$131	\$130	\$130	\$130	\$130	\$9,972 \$1,392
Return Requirement	_	\$636	\$767	\$754	\$830	\$973	\$1,036	\$1,055	\$1,067	\$1,065	\$1,063	\$1,060	\$1,058	\$11,364
	_											41,000	91,050	311,504
Investment Expenses														
Depreciation Expense - Mains		\$0	20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation Expense - Services Property Taxes		\$159	\$159	\$159	\$219	\$219	\$293	\$333	\$340	\$340	\$340	\$340	<b>\$</b> 340	\$3,241
General Public Notice Expense and Customer Notice Expense		\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$1,416
Total Expense	_	\$0 \$277	\$277	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expense	-	32//	\$277	\$277	\$337	\$337	\$411	\$451	\$458	\$458	\$458	\$458	\$458	\$4,657
Total Revenue Requirements		\$913	\$1,044	\$1.031	\$1,167	\$1,310	\$1,447	\$1,506	\$1,525	\$1,523	\$1,521	01.510		
	_			<u> </u>	<b>41,10</b>	21,010	92,447	31,500	رعديه	31,343	31,321	\$1,518	\$1,516	\$16,021
GRIP Surcharge Revenues Collected Month		3,807	\$ 4,084 <b>\$</b>	3,222 S	2,988 \$	2.243 S	2,200 \$	1,892	2,638	S 2,638 5	\$ 2,638	\$ 2,638	2,638	\$33,624
										2,030	2,050	2,050	2,038	\$33,024
Beginning True-Up	\$	-,												\$ 2,582
(Over) and Under Recovery for the Month	\$	(-,,	. , , .	(2,191) <b>S</b>		(933) \$	(753) \$		§ (I,112)	\$ (1,115)	\$ (1,117)	\$ (1,119)		(\$17,603)
Monthly Interest (Expense)/Income	\$	1:	* (*/ *	(3) \$		(6) \$	(6) \$			<b>S</b> (10) S	\$ (11)	\$ (12)	§ (13)	(\$82)
Ending (Over) and Under Recovery	\$ 2,582 \$	(311)	\$ (3,352) \$	(5,546) \$	(7,372) \$	(8,310) \$	(9,069) \$	(9,463)	(10,584)	<b>S</b> (11,709) S	S (12,837)	\$ (13,968)	(15,103)	
Beg of Month Annual Interest Rate		0.63%	0.62%	0.639/	0.808/	0.0487	0.000/	0.000*	1.000					
End of Month Annual Interest Rate		0.63%	0.62%	0.63% 0.80%	0,80% 0,84%	0.84% 0.86%	0.86% 0.90%	0.90%	1.08%	1.08%	1.08%	1.08%	1.08%	
Average Monthly Interest Rate		0.02%	0.05%	0.80%	0.068%	0.86%	0.90%	1.08%	1.08%	1.08%	1.08%	1.08%	1.08%	
- ·		5.11570	0,0570	0,00076	0.00070	0.0776	0.0776	0.08%	0.09%	0.09%	0.09%	0.09%	0.09%	

#### Florida Public Utilities-Ft. Meade

Gas Reliability Infrastructure Program (GRIP)
Calculation of the Projected Revenue Requirements
January 1, 2018 through December 31, 2018

Schedule C-2
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Michael Cassel (MC-1)
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Item Oualified Investment		Beginning Balance	Jan	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>Mav</u>	<u>Jun</u>	<u>Jul</u>	Aug	Sep	Oct	Nov	<u>Dec</u>	Year End Total
Qualified Investment - Mains -	Comment 1070 A 41 Tr								_		336	<del>90.</del>	1301	Dec	10tal
Qualified Investment - Mains -	Clared 1070 Activity		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	so	\$0	\$0
Qualified Investment - Services			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 \$0
	s - Closed 1070 Activity to Plant		\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$100,000
Qualified Investment - Mains -	Current 1010 Activity to Plant		(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$8,333)	(\$100,000)
Qualified Investment - Services			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quantos arresultate - Service:	- Current To To Activity		\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$8,333	\$100,000
Total Qualified Investment - M		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	***					
Total Qualified Investment - So	rvices 1070	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589	\$1.589	\$1,589	\$0	\$0	\$0	\$0	\$0	\$0
Total Qualified Investment - M	ains 1010	\$0	\$0	\$0	\$0	\$0	\$1,585	\$0,36	\$1,589 \$0	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589	\$1,589
Total Qualified Investment - Se	rvices 1010	\$150,998	\$159,331	\$167,665	\$175,998	\$184.331	\$192,665	\$200.998	\$209.331	\$0	\$0	\$0	\$0	\$0	\$0
Total Qualified Investment		\$152,587	\$160,920	\$169,254	\$177,587	\$185,920	\$194,254	\$202,587	\$210,920	\$217,665 \$219,254	\$225,998 \$227,587	\$234,331	\$242,665	\$250,998	\$250,998
							017 1,110 4	3202,567	3210,920	3219,234	\$227,587	\$235,920	\$244,254	\$252,587	\$252,587
Less: Accumulated Depreciation	n	(\$3,241)	(\$3,581)	(\$3,939)	(\$4,316)	(\$4,712)	(\$5,127)	(\$5,560)	(\$6,012)	(0.0 400)	(0.5 omn)				
Net Book Value		\$149,346	\$157,339	\$165,315	\$173,271	\$181,208	\$189,127	\$197,027	. \$204,908	(\$6,483) \$212,771	(\$6,973) \$220,614	(\$7,481) \$228,439	(\$8,008)	(\$8,554)	(\$8,554)
								4177,027	. 3204,708	\$212,771	3220,614	\$228,439	\$236,246	\$244,033	\$244,033
Average Net Qualified Investm	ent	_	\$153,343	\$161,327	\$169,293	\$177,240	\$185,168	\$193,077	\$200,968	\$208,840	\$216,692	\$224,527	\$232,343	\$240,139	
Depreciation Rates															
Approved Depreciation Rate-M	lains		2.60%	2 (00)											
Approved Depreciation Rate-Se			2.70%	2.60% 2.70%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2,60%	
•• •• •• •• •• •• •• •• •• •• •• •• ••			2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2,70%	2.70%	2.70%	
Return on Average Net Qualified Investment															
Equity - Cost of Capital, inclusi	ive of Income Tax Gross-up		7.4500%	7,4500%	7.4500%	7.4500%	7.4500%	<b>7</b>							
Debt - Cost of Capital	•		1.0400%	1,0400%	1.0400%	1.0400%	1.0400%	7.4500%	7.4500%	7.4500%	7.4500%	7.4500%	7.4500%	7.4500%	
			1.010070	1.040078	1.040076	1.0400%	1.0400%	1.0400%	1.0400%	1.0400%	1.0400%	1,0400%	1.0400%	1.0400%	
Equity Component - inclusive of	f Income Tax Gross-up		\$952	\$1,002	\$1,051	\$L100	\$1,150	\$1,199	61 240						
Debt Component			\$133	\$140	\$147	\$154	\$1,150	\$1,199	\$1,248 \$174	\$1,297 \$181	\$1,345	\$1,394	\$1,442	\$1,491	\$14,670
Return Requirement			\$1,085	\$1,141	\$1,198	\$1,254	\$1,310	\$1,366	\$1,422	\$1,478	\$1.533	\$195	\$201	\$208	\$2,048
		_					47,510	91,500	51,722	\$1,476	\$1,555	\$1,589	\$1,644	\$1,699	\$16,718
Investment Expenses															
Depreciation Expense - Mains			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
Depreciation Expense - Services	s		\$340	\$358	\$377	\$396	\$415	\$433	\$452	\$471	\$0 \$490	\$0 \$508	\$0	\$0	\$0
Property Taxes			\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$471 \$249	\$490 \$249		\$527	\$546	\$5,313
General Public Notice Expense	and Customer Notice Expense	_	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$249 \$0	\$249 \$0	\$249	\$249	\$2,988
Total Expense		_	\$589	\$607	\$626	\$645	\$664	\$682	\$701	\$720	\$739	\$757	\$0 \$776	\$0	\$0
Total Revenue Requirements		_	\$1,674	\$1,748	\$1,824	\$1,899	\$1.974	\$2.048	\$2,123	\$2,198				\$795	\$8,301
	•	_						92,070	44,123	32,176	\$2,272	\$2,346	\$2,420	\$2,494	\$25,019

### Florida Public Utilities Company-Fort Meade

Gas Reliability Infrastructure Program (GRIP)
Projection of Qualified Mains & Services Revenue Requirements
Surcharge Calculation - January 1, 2018 through December 31, 2018
Per Therm Rate

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Exhibit\_\_\_\_
Michael Cassel (MC-1)
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1/1/18-12/31/18 Qualified Mains & Services Replacement Revenue	Requirements		\$	25,019
Mains	0%	\$0		
Services	100%	\$25,019		
Net		\$25,019		
TRUE-UP from Prior Period (Over)/Under Recovery Estimated th	ги 12/2017		\$	(15,103)
2018 Qualified Mains & Services Replacement Revenue Requirem	ients		\$	9.916
Mains	0%	\$0	•	-,
Services	100%	\$9,916		
Net	_	\$9,916		
	Mains Services Net  TRUE-UP from Prior Period (Over)/Under Recovery Estimated th  2018 Qualified Mains & Services Replacement Revenue Requirem Mains Services	Services 100%  Net  TRUE-UP from Prior Period (Over)/Under Recovery Estimated thru 12/2017  2018 Qualified Mains & Services Replacement Revenue Requirements  Mains 0%  Services 100%	Mains         0%         \$0           Services         100%         \$25,019           Net         \$25,019           TRUE-UP from Prior Period (Over)/Under Recovery Estimated thru 12/2017           2018 Qualified Mains & Services Replacement Revenue Requirements Mains         0%         \$0           Services         100%         \$9,916	Mains         0%         \$0           Services         100%         \$25,019           Net         \$25,019           TRUE-UP from Prior Period (Over)/Under Recovery Estimated thru 12/2017         \$           2018 Qualified Mains & Services Replacement Revenue Requirements Mains         0%         \$0           Services         100%         \$9,916

RATE SCHEDULE	2018 THERMS	SERVICES COS %	MAINS COS %	SERVICES REV REQ	MAINS REV REQ	GRIP REV REQ	DOLLARS PER THERM	TAX FACTOR	GRIP FACTORS PER THERM	TYPICAL ANNUAL THERMS	ANNUAL COST	AVERAGE MONTHLY COST
RESIDENTIAL	70,505	58.00%	22.00%	\$5,751	\$0	\$5,751	\$0.08157	1.00503	\$0.08198	250	\$20.50	\$1.71
COMMERCIAL SMALL (General Service & GS Transportation)	72,869	17.00%	23.00%	\$1,686	\$0	\$1,686	\$0.02313	1.00503	\$0.02325	2,500	\$58.12	\$4.84
COMM. LRG VOLUME (Large Vol & LV Transportation)	0	25.00%	46.00%	\$2,479	\$0	\$2,479	\$0.00000	1.00503	\$0.00000	25,000	\$0.00	\$0.00
INTERRUPTIBLE SERVICE (Int Service & IS Transportation)	0	0.00%	8.00%	\$0	\$0	\$0	\$0.00000	1.00503	\$0.00000	50,000	\$0.00	\$0.00
GENERAL LIGHTING SERVICE	0	0.00%	1.00%	\$0	\$0	\$0	\$0.00000	1.00503	\$0.00000	500	\$0.00	\$0.00

TOTAL 143,374 100.00% 100.00% \$9,916 \$0 \$9,916