



October 23, 2017

BY E-PORTAL

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

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

Dear Ms. Stauffer:

Attached, for electronic filing, please find the testimony and exhibits of Florida City Gas's witness Gregory Becker. (Document 6 of 14)

Sincerely,

A handwritten signature in blue ink that reads "Beth Keating".

Beth Keating
Gunster, Yoakley & Stewart, P.A.
215 South Monroe St., Suite 601
Tallahassee, FL 32301
(850) 521-1706

MEK

ATTACHMENTS

cc:// PSC (20 Hard copies)

Office of Public Counsel (Kelly)

1 Before the Florida Public Service Commission

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

3 Prepared Direct Testimony of Gregory Becker

4 Date of Filing: October 23, 2017

5

6 Q. Please state your name and business address.

7 A. My name is Gregory Becker. My business address is Ten Peachtree
8 Place, Atlanta, Georgia 30309.

9

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

11 A. I am employed by Southern Company Gas as Director of Capacity
12 Planning.

13

14 Q. What are your responsibilities as Director of Capacity Planning at
15 Southern Company Gas?

16 A. My business team is responsible for load forecasting and economic
17 analysis of upstream capacity options and services for Southern Company
18 Gas, including Southern Company Gas's subsidiary, Florida City Gas
19 ("FCG," "utility," or the "Company"). I first undertook these responsibilities
20 in January 2012 with the former AGL Resources Inc. ("AGLR") and
21 retained the role when the Company was acquired by The Southern
22 Company ("Southern") and became Southern Company Gas.

23

24 Q. Please describe your educational background and professional
25 experience.

1 A. I began my career in 1990 as an Analyst at National Fuel Gas in Buffalo,
2 New York in their gas supply department. In 1998, I moved to New
3 Energy Associates as a Senior Consultant in their gas practice. In that
4 role, I supported clients throughout North America in their use of a
5 proprietary planning software called SENDOUT[®]. In April 2006, I joined
6 AGLR as a Senior Analyst in Gas Operations, was subsequently promoted
7 to Manager, and now serve in my current role as Director of the Capacity
8 Planning department.

9 In 2003, I received a Bachelor of Arts degree in Management from
10 Southern Polytechnic State University. Southern Polytechnic State
11 University is now part of Kennesaw State University.

12

13 Q. Are you sponsoring any exhibits in this case?

14 A. Yes, I am sponsoring several exhibits. Along with my testimony, I am
15 sponsoring Exhibit No. _____ GB-1, which is the FCG System Map. I
16 am also sponsoring the Cost Comparison of our Liquefied Natural Gas
17 (“LNG”) proposal as compared to pipeline capacity options, which is
18 Exhibit No. _____ GB-2 to my testimony which contains confidential
19 information. I am also sponsoring Exhibit No. _____ GB-3, the Load vs.
20 Supply Summary.

21

22 Q. What is the purpose of your testimony?

23 A. On behalf of FCG, I will discuss the benefits of the incremental gas supply
24 capabilities that FCG is attempting to acquire from different sources in the
25 coming years to meet its capacity needs, including the need to construct

1 an LNG facility. In addition, I will explain the need for a capacity allocation
2 methodology for the interstate capacity held by FCG.

3

4 Q. Are there other witnesses who will be providing testimony on behalf of
5 FCG regarding the LNG project?

6 A. Yes. Witness Wassell, Vice President of Storage and Peaking
7 Operations, will be offering testimony on the physical and operational
8 characteristics of an LNG supply resource and costs for the FCG facility.
9 Additionally, witness Bermudez, is offering testimony to support the need
10 for added gas supply capability that is cost effective and can reliably serve
11 the needs for the FCG system.

12

13 **I. CAPACITY NEEDS**

14 Q. What is the geographic size of FCG's service territory?

15 A. FCG currently serves about 108,600 customers, of which approximately
16 100,900 are residential, and 7,700 are commercial, business, and
17 industrial customers. FCG also serves transportation-only customers
18 throughout its service territory. As you can see on my exhibit GB-1 (FCG
19 System Map), the FCG service territory begins in the mid-state area and
20 includes Brevard and Indian River counties. It stretches to the south along
21 the east coast of the state to include St. Lucie, Glades, Hendry, Palm
22 Beach, Broward and Miami-Dade counties.

23

24 Q. Geographically, where is FCG's largest concentration of customers?

1 A. The largest concentration of customers on the FCG system is located in
2 the Miami–Dade County area. The area of the system with the highest
3 load potential (response to colder weather) is in the Brevard County area.
4

5 Q. What is firm transportation or FT capacity?

6 A. Firm transportation, or FT, capacity is the amount of space that is
7 reserved on the interstate pipeline for use by FCG. This space on the
8 interstate pipeline allows FCG to buy natural gas and transport or move it
9 to our service territory to meet the needs of our system’s customers in a
10 safe, cost effective, and reliable manner. The cost of capacity, or the
11 reservation fee, is paid to the interstate pipeline. FCG charges its Sales
12 customers for these costs through its Purchased Gas Adjustment.
13

14 Q. What is a Sales customer?

15 A. Customers who receive gas supply from the Company.
16

17 Q. How does natural gas move through a pipeline system?

18 A. Natural gas moves by seeking pressure equalization. Gas will move from
19 an area of high pressure toward an area of low pressure. Interstate
20 pipelines move gas through their pipes by compressing the gas to have
21 high pressure, so that it will then move in a direction toward the lower
22 pressure, thereby pushing the natural gas vapor through the pipes. FCG
23 does not have compression on its distribution system. Instead, it relies on
24 the delivery of natural gas from the interstate pipeline at a regulated and
25 controlled higher pressure. Taking delivery of natural gas at a higher

1 pressure establishes the pressure differential that makes gas move away
2 from the interstate pipeline's delivery point and into FCG's distribution
3 system, where pressures are generally lower. The pressure is reduced in
4 the system by customer consumption, among other things. As customers
5 draw gas out of the distribution system, to burn in their furnace or water
6 heater for example, it reduces the pressure in that immediate area. The
7 system will rebalance itself by moving volumes of natural gas through the
8 pipe to equalize the pressure.

9

10 Q. So gas does not flow the same way as water?

11 A. No, it does not flow the same way as water. A gas transmission or
12 distribution system relies entirely upon pressure to move the gas from one
13 point to another – gravity has very little impact on the flow of gas. Gas
14 transmission and distribution systems do not have the ability to “flow” gas
15 in both directions on a particular pipeline segment.

16

17 Q. Where does FCG currently contract for FT capacity on the interstate
18 pipeline system that delivers gas to the service territory?

19 A. FCG holds FT contracts for natural gas delivery to its service territory on
20 the Florida Gas Transmission (“FGT”) pipeline system. The maximum
21 winter time delivery entitlement across the contracts that FCG has with the
22 pipeline totals 68,955 Dth/d of FT capacity. The amount of FT capacity is
23 lower in the summer months when our Sales customers typically require
24 less natural gas service.

25

1 Q. How does FCG forecast its capacity needs?

2 A. Each year, FCG's Capacity Planning department conducts a design day
3 load analysis. As the name implies, this study is meant to estimate the
4 amount of natural gas consumption that will occur on a very cold day,
5 which is informative to the development of the physical infrastructure put
6 in place to meet that customer demand and the gas supply capabilities
7 that need to be secured to do so – what the utility designs its system to
8 handle. This study projects how much natural gas supply the FCG system
9 may need if the planned design weather conditions should occur. The
10 analysis assumes a single cold winter day event having an average daily
11 temperature of 36 degrees Fahrenheit in the Miami-Dade County area and
12 a concurrent average daily temperature of 28 degrees Fahrenheit in the
13 Brevard County portion of the state. We use such low average
14 temperatures because, as explained above, natural gas is in greater
15 demand when it is colder.

16

17 Q. When has it been that cold in the Miami-Dade County or Brevard County
18 areas?

19 A. The Company's records show that the Miami-Dade County area
20 experienced a day having a 36 degrees Fahrenheit average temperature
21 as recently as December 24, 1989. The Brevard County area
22 experienced 2 days that were 28 degrees Fahrenheit on December 25,
23 1983 and again on January 21, 1985. There are other instances when a
24 single day's cold weather has yielded a day with an average temperature
25 that is just a couple degrees away from these design temperatures on

1 different winter days. It is the Company's responsibility to plan for these
2 events, even if they are few and far between.

3

4 Q. When did FCG complete the most recent design day load analysis?

5 A. The most recent design day load analysis was completed by FCG in the
6 Spring of 2017.

7

8 Q. Does FCG hold a design day level of FT capacity year round to meet its
9 customers' needs in the summer months?

10 A. No. The existing FT capacity available from FGT is sculpted, which
11 means that the utility holds more capacity in the winter months when
12 demand is higher than it does in the summer months. The utility contracts
13 for its greatest amount of gas supply capability in the winter months. Our
14 customers want warm homes in the cooler Fall and cold Winter months
15 and that is when the utility has the greatest ability to serve the customer's
16 needs for natural gas service. FCG has already attempted to match the
17 seasonal gas supply available to the system to the forecasted load on the
18 system as we move through a year.

19 A residential customer base, in aggregate, will need more gas supply
20 capability in the winter months than in the summer months. In contrast, a
21 commercial or light industrial customer's need for natural gas is less
22 impacted by the weather or season and more directly tied to the
23 processes performed by that company. Each type of customer, therefore,
24 has a different load factor or annual need for natural gas service.

25

1 Q. In addition to the design day analysis, are there other considerations to
2 determine capacity?

3 A. Yes. FCG relies on additional considerations and planning criteria to help
4 forecast the level of natural gas supply that may be needed on a single
5 very cold day where the Company needs to be prepared to serve its
6 customers. The study considers trends in customer growth and the
7 location of the growth across the FCG system. While it is important to be
8 able to meet the aggregate demand on the system, it is equally important
9 to have gas supply available in the areas of the system where the demand
10 is located. The next important aspect to consider is the characteristic of
11 the load to be served. The characteristics of a residential load are
12 different than those of a commercial or light industrial customer. For
13 instance, residential demand tends to have dual peaks. The customer
14 demand ramps up in the early morning hours as people wake up, warm
15 their homes and businesses during colder weather, cook meals and bathe
16 to begin their day. There is usually a similar, and perhaps smaller,
17 evening period where demand ramps up again when customers return
18 from work, again look to heat their homes, prepare meals and more. By
19 comparison, commercial and light industrial customer loads tend to be
20 more stable and fluctuate less in response to temperature changes. They
21 tend to keep their facilities warmed and operating at some level on a more
22 constant basis, but may ramp up consumption during working hours.

23
24 Q. What is a Transportation customer?

1 A. The FCG Tariff defines a Transportation customer as a customer receiving
2 gas supply from a Third Party Supplier. So, a Transportation customer is
3 one who only contracts for the transport of natural gas on FCG's system
4 but who does not get their supply of natural gas from FCG.

5

6 Q. What is an "Essential Use" Transportation customer?

7 A. Essential Use Transportation customers are a subset of Transportation
8 customers that require natural gas service for health and safety reasons.
9 An example would be a hospital or a hotel or the NASA facilities. This
10 subset of customers is meant to mirror FGT's priorities.

11

12 Q. What sources does FCG rely upon for the inputs to its projections?

13 A. The majority of the load that is expected to be on the system in a design
14 day event is captured by using a multi-variable, linear regression model for
15 each of the three separate geographic divisions that are operationally
16 planned for on the FCG system. The model at its core determines the
17 nature of the relationship between the sales customers' historical daily
18 demand and weather. The sales customers in this layer for our purposes
19 include sales and small transportation customers, which are
20 indistinguishable for our purposes. Utilizing variables such as
21 temperatures, wind speed, bend points, day of the week, and a year trend
22 variable, the regression analysis results are used to predict the level of
23 demand with given specific temperature levels. Utilizing a customer count
24 projection with the regression results, the needs of existing customers,
25 future residents, and small commercial customers can be forecasted. This

1 would make up the load expectation for the first layer the Company plans
2 for.

3 A second layer of the design day forecast is the existing Essential Use
4 Transportation customers. The Company holds capacity for these
5 customers as a backup supply, because their needs are critical by nature.
6 The design day load component for these existing Essential Use
7 Transportation customers is calculated by summing each customer's
8 Demand Charge Quantity, or DCQ, per FCG's tariff.

9 The Company also factors in an adjustment to the Essential Use
10 Transportation customer load for new opportunities from customers that
11 have recently come onto the system or that have a high probability of
12 becoming a customer. Only Essential Use customers are in this
13 incremental layer, because the resulting design day is meant to serve
14 residents and critical gas supply needs.

15 Adding these components together, along with the current non--Essential
16 Use transportation load, based on their DCQ, produces the design day
17 forecast by geographic division. Even though FCG does not provide a gas
18 supply function for the non-Essential Use transportation load we include it
19 in this analysis so we capture the fact that their gas supplies will be
20 flowing through FCG's system on those cold days. The Sales customer
21 load, Essential Use Transport and non-essential use transport
22 components of the design day load are summed to create a system-wide
23 forecast.

24

1 Q. Are there any considerations in meeting this demand beyond developing
2 sufficient aggregate capacity?

3 A. Having the right aggregate amount of capacity is important, but having
4 that capacity deliverable in all the right places across the FCG system is
5 equally, if not more, important. FCG has a distribution system, or physical
6 infrastructure, that provides delivery of natural gas to our customers. This
7 physical system is based on receipt of gas from delivery stations off of the
8 FGT pipeline. The service territory extends north to south along the
9 eastern edge of Florida. In most cases, each of the FGT delivery gates
10 makes natural gas delivery available to an isolated or stand-alone area of
11 the distribution system that is not physically connected, in a meaningful
12 way, to other areas of the FCG system. In other words, FGT is like a
13 “backbone” of the FCG system, and the utility relies on delivery of natural
14 gas from the interstate pipeline to all the areas of its distribution system
15 where the customer load is located. Delivery of natural gas into FCG’s
16 Brevard County area of the system cannot support a customer’s need for
17 natural gas in the Miami-Dade part of the system, because there is no
18 direct FCG pipeline infrastructure linking those two geographic areas.

19

20 Q. Are there factors in the capacity market that FCG considers in
21 forecasting?

22 A. Yes. FGT is fully subscribed unless the pipeline does some type of
23 expansion project. That means that it does not have any more FT
24 capacity available to sell to anyone, including FCG.

25

1 Q. Why is that important?

2 A. FCG has an active and growing number of Sales and Transportation
3 customers. To serve a transportation customer, a third party supplier or
4 marketer provides gas supply to meet the needs of their transportation
5 customer. The third party supplier or marketer will deliver natural gas to
6 the FCG system off of the FGT pipeline to meet the gas consumption
7 needs of their transportation customer. FCG only provides the delivery
8 service to the customer's premises. FCG does not contract for or hold FT
9 capacity to provide gas supply for these transport customers.
10 Furthermore, FCG realizes that the interstate pipeline, FGT in particular, is
11 fully subscribed unless and until the pipeline embarks on an expansion
12 project. Thus, as this market grows, particularly the transportation load,
13 and the customers require greater amounts of natural gas supply to be
14 delivered to the FCG system, FCG lacks any degree of certainty as to
15 whether these third party suppliers or marketers have actually secured the
16 firm capacity necessary to make these deliveries on behalf of their
17 customers on the FCG system. This lack of certainty causes FCG
18 concern as to the ability of these third party suppliers to fully meet the
19 capacity needs of the growing transportation service load.

20

21 Q. How have these third party suppliers or marketers been making delivery to
22 their customers if the pipeline is currently fully subscribed?

23 A. FCG is not aware of these third party suppliers' or marketer's commercial
24 arrangements for capacity on FGT. We believe they are making delivery
25 to their transportation customers by relying on capacity that is available in

1 the secondary market. That would be capacity that is firm and contracted
2 for by some other FGT shipper with primary delivery to other areas of
3 FGT's system but has been released or made available to a replacement
4 shipper.

5 This is a very important distinction to make. These replacement shippers
6 will not always have a firm right to deliver gas to the FCG system with the
7 capacity they use to meet the needs of FCG's Transportation customers.
8 As I have noted, the FGT system is fully subscribed absent some type of
9 expansion. If there is cold weather, the pipeline will be used at a high
10 level. In such instances, FGT may curtail deliveries, in which case, the
11 third party supplier's or marketer's use of this secondary capacity is more
12 likely to be cut by FGT than would a shipper with firm primary delivery
13 rights to the FCG system.

14

15 Q. What does it mean to be cut?

16 A. That means that FGT will not allow that third party supplier's volumes of
17 gas to flow on the interstate pipeline. That would result in a lack of gas
18 supply needed to meet the consumption needs of FCG's Transportation
19 customers on that cold day.

20

21 Q. Does the possibility of Transportation customers, including Essential Use
22 Transportation customers, becoming Sales customers affect FCG's
23 forecasting?

24 A. Yes. There is no provision in FCG's tariff that precludes a Transportation
25 customer from becoming a Sales customer, and they would be able to do

1 so by providing very little notice to FCG. FCG is obligated to accept them
2 as a Sales customer shortly after they request it. As such, the utility
3 needs to position its gas supply portfolio to meet the gas supply needs of
4 all its customers on a firm basis to facilitate the growth that is being
5 forecasted.

6

7 Q. What is FCG's current customer growth forecast?

8 A. FCG's current customer growth forecast shows the 2018 to 2019 year-
9 over-year customer growth is expected to be 953 total customers.
10 Residential customer accounts are projected to increase by 826, which is
11 a 0.82% increase. Commercial accounts are projected to grow by 127,
12 which is a 1.65% increase. The year-over-year growth is broken down as
13 87% residential and 13% commercial.

14

15 Q. Does FCG currently hold sufficient capacity to meet the projected needs of
16 its Sales customers?

17 A. Yes, FCG does hold enough FT capacity and gas supply capability to
18 serve the projected needs of our Sales customers.

19

20 Q. Are you forecasting growth for Transportation customers?

21 A. Yes, FCG's transportation customer group is also poised to grow. The
22 current projections for Transportation customer load growth is
23 predominantly in the Miami-Dade County part of the system. Estimates
24 show as much as 4,500 Dth/d of incremental design day load possibly
25 being on the system by the 2017-18 heating season. Overall system

1 throughput or the amount of natural gas sent to these Transportation
2 customers is also projected to increase.

3

4 Q. Does FCG currently hold sufficient capacity to meet the needs of all of its
5 sales and Essential Use Transportation customers?

6 A. No. While FCG holds sufficient capacity at present to meet the projected
7 needs of our existing Sales Customers, FCG does not currently hold
8 enough capacity or gas supply capability to serve the needs of both the
9 Sales and Essential Use Transportation customers currently served by the
10 distribution system.

11

12 Q. What is the identified need for added gas supply capability for FCG?

13 A. FCG needs approximately 43,000 Dth/d of aggregate gas supply
14 capability to meet the forecasted needs of Transportation customers on its
15 distribution system today.

16

17 Q. Can you put that figure of 43,000 Dth/d into context for us?

18 A. Yes, I can. FCG currently subscribes to a total of 68,955 Dth/d of FT
19 service on Florida Gas Transmission (FGT). The added 43,000 Dth/d
20 represents a 62% increase relative to our current level of gas supply
21 capability. Stated another way, that represents 82,000 residential
22 customers across the FCG system.

23

24 Q. Why does FCG need this added gas supply capability?

1 A. Without a firm supply of natural gas to serve all the load in FCG's service
2 territory, we may not be in a position to maintain gas supply service on the
3 coldest of days. Places like hospitals, water treatment facilities, and
4 segments of the hospitality industry rely on third party suppliers or
5 marketers to deliver natural gas to FCG to serve their gas supply needs.
6 FCG must establish and maintain an ability to keep these customers
7 supplied and to meet the forecasted growing need for gas supply in the
8 state.

9

10 Q. Does FCG have a plan to meet the needs of its Essential Use
11 Transportation customers and continue to meet the needs of its Sales
12 customers?

13 A. Yes. FCG has a two-pronged plan that will meet the demands of its
14 Essential Use Transportation customers and will not interfere with
15 continuing to meet the demands of its Sales customers. First, FCG will
16 purchase the new capacity that will be added to the FGT system through a
17 minor FGT expansion project in order to meet part of the need. Second,
18 FCG plans to build an LNG facility that will allow it to meet the remainder
19 of the need. This plan would provide 30,000 Dth/d, consisting of 20,000
20 Dth/d from the FGT purchase and 10,000 Dth/d from the LNG facility
21 project. This 30,000 Dth/d of capacity will allow FCG to meet the design
22 day demands of Essential Use Transportation customers, while continuing
23 to meet the design day demands of its Sales customers.

24

1 Q. Why does FCG believe the two-pronged approach will best meet its
2 capacity needs?

3 A. FCG believes that a two-pronged approach that includes LNG as a gas
4 supply option coupled with FT service from FGT is most appropriate, due
5 in large part to the fact that the customer consumption on the FCG system
6 is responsive to cold weather. Once the cold weather abates the
7 consumption diminishes.

8 The utility certainly could make commercial arrangements, by participating
9 in a substantial expansion project, to hold FT pipeline service to meet its
10 design level gas supply need in its entirety, but holding FT capacity year
11 round to meet what is really an infrequent, “needle-peak” load event would
12 be extremely expensive and irresponsible. FCG knows there is a more
13 cost-effective way to meet this type of gas supply requirement through the
14 use of a peaking resource like LNG, provided that the Florida Public
15 Service Commission (“FPSC”) approves the proposal for FCG to build an
16 LNG facility.

17 Statistically speaking, a design weather event occurs once about every 30
18 years. And, as noted, holding FT pipeline capacity to meet that level of
19 gas supply requirement for every day in the winter months is not the best
20 option for our customers. In contrast, an LNG peaking option is a more
21 cost-effective way to meet that type of gas supply requirement. Having a
22 gas supply resource that could reach a meaningful amount of load and be
23 utilized for a limited number of days, one to three days for example, at a
24 relatively high daily quantity, is the more rational choice. This would allow
25 the gas supply available to the system to match the load “shape” of the

1 customers' needs much more efficiently. This peaking resource, which is
2 how LNG supplies are often described, would be most appropriate and
3 prudent to address FCG's peak gas supply needs as its service territory
4 experiences cold winter days that are at, or approaching, its design day
5 planning criteria. The FT service is the durational supply source that the
6 system's customers can rely on each and every day of the year.

7

8 Q. What does the phrase "once about every 30 years" mentioned above
9 mean?

10 A. The phrase once about every 30 years is meant to convey that a design
11 day cold weather event is rare. FCG believes that even if, statistically, it
12 may be an infrequent event, it is important and proper to plan for such an
13 event. The utility has the obligation to serve and must plan to meet its
14 customers' needs in a safe and reliable manner. Although a 1 in 30
15 statistical label might suggest that such a cold weather event would
16 happen infrequently (once every 30 years) there is no certainty to the
17 timing of cold weather events and they could, in fact, occur in back-to-
18 back heating seasons.

19

20 Q. How does LNG add supply to your system?

21 A. LNG adds gas supply by making incremental natural gas vapor available
22 for consumption in close proximity to where the LNG facility is located.
23 Since that local gas requirement can be satisfied, at least in part, by the
24 LNG supply, interstate pipeline deliveries can be re-directed to fulfill the
25 need in other areas of FGT's system. This is sometimes referred to as

1 displacement. We typically think of LNG as being a peaking or winter gas
2 supply resource. The Company's plan to develop the plant will allow it to
3 call on the gas supply capability any time of the year if needed to support
4 providing safe reliable service to our customers.

5

6 Q. Are there additional factors that weighed in favor of having the LNG
7 project being constructed and held within the utility?

8 A. By FCG having an LNG peaking resource at its operational disposal, it can
9 augment system reliability on the coldest of days, as well as any other day
10 of the year, should the need arise. If there was an outage that impeded
11 FCG's ability to take pipeline delivery of natural gas, then an LNG
12 resource could supplement that need for a short period while the outage
13 issue is resolved. If a major system disruption was to occur, the utility
14 could have alternative supply available to the system and backstop the
15 loss of service from the interstate pipeline. Since the LNG would be
16 created elsewhere and trucked in to the LNG facility, it will be a benefit
17 having a supply source that is not wholly dependent on timely delivery of
18 natural gas by the interstate pipeline.

19

20 Q. Do you have specific examples of how an LNG peaking resource can be
21 helpful in addressing future reliability concerns?

22 A. Yes, although the weather and load characteristic examples discussed
23 above are the primary drivers for an LNG supply resource, the FPSC is
24 familiar with a recent example of an accident-related event that created a
25 significant outage. On Mother's Day, 2015, a motor vehicle struck an FCG

1 gate station leaving over 6,000 customers without service in the Port St.
2 Lucie area. While FCG was able to effectively utilize other Southern
3 Company Gas resources to help restore service expeditiously, onsite
4 peaking resources could have mitigated against such a loss of service
5 with appropriate siting and connectivity to the system.

6

7 Q. How will FCG obtain additional FT service from FGT?

8 A. As I have mentioned, FGT capacity is limited, but FCG is nonetheless in
9 the process of securing some of the last remaining FGT capacity that will
10 be made available through a minor expansion project to create
11 incremental gas supply capability. However, that comes at a cost. The
12 entire gas supply portfolio that FCG has on FGT today costs about \$10.6
13 Million annually in reservation charges for a maximum winter time delivery
14 right of 68,955 Dth/d of firm transport capacity. This last available 20,000
15 Dth/d of capacity on FGT's east leg capacity, which will also need to be
16 coupled with a flowing supply source to produce incremental supply
17 capability through a minor expansion project, will cost [REDACTED]
18 annually to add to the portfolio. While the cost may seem expensive, the
19 great benefit provided to FCG's system makes it worth the cost. This
20 expansion project will create FT capacity that will be deliverable to the
21 Miami-Dade County area and areas in the northern part of FCG's system
22 off the interstate pipeline.

23

24 Q. What is an example of the load growth in the Miami-Dade County area?

1 A. On February 2, 2017 the Miami-Dade County Department of
2 Transportation and Public Works (“DTPW”) issued a press release to
3 announce the passage of a resolution to buy 300 compressed natural gas
4 (“CNG”) powered busses, along with the development of two publicly-
5 accessible CNG fueling stations. Their announcement also indicated that
6 they will take delivery of these 300 busses over a three-year period. Their
7 current bus fleet is 800 buses. The press release also highlighted the
8 economic rationale behind the decision to fuel a meaningful portion of their
9 fleet:

10 *“The fiscal impact for the initial 10 years in the implementation of*
11 *the CNG bus program is an estimated \$321.6 Million. However, this*
12 *long-term investment can yield significant savings in the long run.*

13

14 *According to the Greater Cleveland Regional Transit Authority,*
15 *which began introducing CNG buses in 2015, it estimated a cost*
16 *savings of more than \$200,000 for the life of each bus since CNG*
17 *costs one third the price of regular diesel fuel.”*

18

19 Q. What do you forecast will be the result of the two-pronged approach in
20 meeting FCG’s projected demand?

21 A. The Company forecasts that the two-pronged approach will yield an
22 incremental 30,000 Dth/d of gas supply to the system, covering a
23 significant portion of the projected need of 43,000 Dth/d. The added gas
24 supply capability from the interstate pipeline and the supply capability from
25 the LNG facility will provide 100% of the needs of the Essential Use

1 Transportation customers on the FCG system. Securing the projected
2 43,000 Dth/d of the added supply needs would allow FCG to supply all
3 Transportation customers on the FCG system.
4

5 **II. ANALYSIS OF ALTERNATIVES**

6 Q. Are there other pipelines that serve the state of Florida?

7 A. Yes. The other pipelines that serve the state of Florida near FCG's
8 service territory are Gulfstream Natural Gas System ("Gulfstream") and
9 Sabal Trail Transmission ("Sabal Trail"). Sabal Trail has a related pipeline
10 project called Florida Southeast Connection Pipeline ("Southeast
11 Connection").
12

13 Q. Does FCG currently hold capacity on these pipelines?

14 A. No. The Company does not hold interstate capacity on Gulfstream, Sabal
15 Trail or the Southeast Connection pipelines.
16

17 Q. Should FCG seek capacity on these pipelines, instead of pursuing its two-
18 pronged approach?

19 A. No. With regard to Gulfstream, that pipeline is not currently physically
20 connected to the FCG system nor does it extend to an area of the system
21 where interconnection with it would provide any significant capacity relief
22 without meaningful, distribution infrastructure improvements. Moreover,
23 the option to pick up Gulfstream capacity was eliminated, because of the
24 rules in that pipeline's FERC-approved tariff. The pipeline has "winter
25 only" FT space available, which would be a very good fit for FCG's needs.

1 Their tariff, however, precludes Gulfstream from transacting on
2 seasonally-available FT capacity on a long-term basis. FCG determined it
3 would not be prudent to risk building a gas supply portfolio meant to
4 support customer growth and economic development around a package of
5 FT capacity that FCG had no certainty of having from one winter heating
6 season to the next.

7

8 Q. Is the Sabal Trail pipeline a good option for obtaining additional capacity
9 for FCG's system?

10 A. No. It simply does not reach far enough south into Florida to deliver
11 natural gas to FCG.

12

13 Q. What about the Southeast Connection pipeline that moves natural gas
14 further south off of the Sabal Trail pipeline?

15 A. The Southeast Connection moves gas from the Orlando area, where
16 Sabal Trail ends, down into Martin County. While the pairing of these two
17 pipelines could help deliver flowing gas volumes closer to the FCG
18 system, interconnection with the new pipeline source would still
19 necessitate costly distribution infrastructure improvements to make use of
20 added gas supply capabilities. These supply sources could deliver added
21 gas supply to the FCG system. However, the utility needs gas supply in
22 Brevard County, Vero Beach and its Miami-Dade County portions of the
23 system. To connect with the Southeast Connection in order to receive gas
24 from these two pipelines, even at the point closest to the FCG system,
25 would still require FCG to build out a meaningful amount of natural gas

1 infrastructure to bridge the gap between those pipelines and the areas on
2 FCG's system where additional supply is needed. In addition, FCG would
3 have to pay for capacity on both Sabal Trail and the Southeast Connection
4 pipeline. The cost of the expensive Sabal Trail capacity, plus the
5 Southeast Connection costs, when coupled with the need for distribution
6 system expansions, quickly makes that option uneconomical.

7

8 Q. What type of capital spend would FCG have to incur to make use of the
9 Sabal Trail / Southeast Connection capacity?

10 A. The planned and approved build route of Sabal Trail and Southeast
11 Connection would necessitate a further build of high pressure
12 transmission pipeline to reach FCG's service territory and simply was not
13 economically feasible. Rough estimates just to build down from Martin
14 County to the Miami-Dade area would span at least 95 miles. At a rule-of-
15 thumb cost per mile of \$3.0M to \$5.0M, that quickly shows the most
16 expensive pipeline supply option becoming even less favorable for
17 supporting the economic development and growth in FCG's service
18 territory.

19

20 Q. Did FCG consider any other alternative approaches to address the
21 capacity issue besides the two prongs discussed earlier?

22 A. FCG did consider another option for meeting our capacity needs, but we
23 are unable to publicly disclose the specifics of that option as it is the
24 subject of a non-disclosure agreement. This option also proved to be too

1 costly based on FCG's system needs and compared to the option FCG is
2 proposing in this proceeding.

3 Q. What option did FCG conclude was the right choice given its evaluation of
4 possible alternatives?

5 A. Today, FGT is the only feasible pipeline-based option for getting natural
6 gas supplies to the FCG system where it is needed in order to meet the
7 natural gas needs of our customers. The build-out of FGT's "east leg," as
8 it is referred to, is nearly complete. Further delivery of more capacity from
9 this build out is more cost effective than the other two pipelines through
10 new interconnects or delivery points that will require the company to invest
11 in major capital projects to get gas to where the supply is needed. FCG
12 therefore concluded that the right decision was to move forward with
13 developing an LNG peaking supply resource and to contract for the last
14 available 20,000 Dth/d of FT capacity on the "east leg" portion of FGT's
15 system. The Company intends to secure the added FT service in 2017 for
16 service starting in 2020. The comparative costs of the options rejected
17 and selected are shown in my Exhibit GB-2, which is being provided as a
18 confidential document.

19 Beyond the options discussed above, FCG would have to commit to a
20 major FGT pipeline expansion project that reaches all the way back to gas
21 production area(s) in north Florida or perhaps even further upstream on
22 the interstate pipeline to Mississippi or even Texas or the Sable Trail /
23 Southeast Connection project, coupled with FCG capital spend to move
24 gas where it is needed. Such a major expansion would be dramatically
25 more expensive and more complicated than the other options.

1 **III. ADVERSE CONSEQUENCES**

2 Q. If FCG is not allowed to move forward with the LNG project, will FCG be
3 able to meet the needs of its customers?

4 A. If FCG is not allowed to move forward with an LNG project to augment
5 available gas supply to the system, it will not be able to source enough
6 natural gas to meet the forecasted needs of all the Essential Use
7 Transportation customers on its system without incurring significant
8 additional costs in excess of the costs projected for the LNG resource
9 option.

10

11 Q. What would be the timing of any capacity purchases if FCG is unable to
12 move forward with LNG?

13 A. If FCG is unable to move forward with the LNG option, it would pivot to
14 secure service from one or more interstate pipelines. Assuming that the
15 pipelines have available FT capacity to sell, which does not currently exist,
16 adding new capacity would require one to three years. That lead time
17 may be necessary to develop new pipeline delivery gate stations and
18 additional distribution system infrastructure upgrades to move the physical
19 gas from where the pipeline could deliver it to where it is physically
20 needed by FCG's customers. If, however, the interstate pipelines remain
21 fully subscribed and an expansion project becomes necessary, the
22 timeline for adding new capacity purchases expands to three to five years
23 based on the amount of time it takes to get regulatory approvals and build
24 out a meaningful interstate pipeline expansion project. Such a project
25 may or may not also require FCG to build-out additional distribution

1 system infrastructure. FCG's capacity needs would not be enough to
2 sponsor a pipeline expansion project. The interstate pipeline would have
3 to attract other shippers to the project to make any such expansion viable
4 from a cost perspective. Either interstate option could be held up by
5 numerous challenges at the local, state and federal level – as has been
6 seen in recent months in particular. Also, as indicated earlier, such an
7 approach would be economically infeasible.

8

9 Q. Would the cost of developing an LNG project, if approved, result in a
10 shared cost among all of FCG's customers?

11 A. Yes, it would result in costs that would be shared by all of the customers
12 served by FCG's system.

13

14 Q. Would the costs of those capacity purchases be passed on to FCG's
15 customers?

16 A. Yes. Today the capacity reservation fees become a part of FCG's
17 Purchased Gas Adjustment ("PGA") filing and are paid for by the sales
18 customers of the system.

19

20 Q. Can you provide an order of magnitude of the impact that additional
21 capacity purchases may have on customers' bills?

22 A. According to the figures calculated by our rates and regulatory group that
23 were shared with me, the cost of adding the incremental 20,000 Dth/d of
24 FGT FT capacity to the current PGA calculation will increase the customer
25 rates from \$7.285 per Dth to \$9.622 per Dth. That is a 32% increase.

1 That comparison assumes all costs are borne by the PGA customers, i.e.,
2 Sales customers, going forward, which is, however, not the Company's
3 proposal in this case. Our proposal is to change the way that the
4 Company captures and allocate gas costs to the Sales customers. The
5 Sales customers will be allocated an amount of gas supply capacity
6 needed to serve their gas supply requirements. The balance of FCG's
7 gas supply resources will be allocated and released to the third party
8 suppliers or marketers who provide gas supply service to the
9 Transportation customers; both Essential Use and non-Essential Use.

10

11 **IV. REVISED ALLOCATION OF CAPACITY COSTS**

12 Q. Even if the FPSC approves FCG's proposal to include the LNG project as
13 a means to address a portion of FCG's projected capacity needs, will FCG
14 still be required to purchase additional capacity from the interstate
15 pipelines?

16 A. Yes, if FCG is to have the ability to meet 100% of its current forecasted
17 need for natural gas from our sales, Essential Use and non-Essential Use
18 Transportation customers, there is a need for an increment of gas supply
19 capability totaling 42,684 Dth/d. After the 20,000 Dth/d from incremental
20 FGT FT service and the 10,000 Dth/d of sendout from the LNG facility,
21 FCG will still need an amount of 12,684 Dth/d in our latest estimates.

22

23 Q. What is FCG's current cost for existing capacity from FGT?

1 A. The FT capacity that FCG currently has under contract on FGT is only \$16
2 to \$20 per Dth of capacity. Annually, the total cost for the capacity
3 available to the utility today is around \$10.6 Million.

4 Q. At present, how are these capacity costs allocated to FCG's customers?

5 A. Currently, all of the capacity charges for interstate FT service are captured
6 and paid for by the system's Sales customers in the PGA, including the
7 capacity that backstops the Transportation service only customers, who
8 are not subject to the PGA costs.

9

10 Q. Does FCG hold excess capacity?

11 A. Florida City Gas currently holds enough gas supply capability or interstate
12 FT capacity to meet all of the projected sales customer load and
13 approximately 72% of the projected Essential Use Transportation
14 customer load on a design day. A design day, again, is that single coldest
15 day that a utility plans its system operations for as described in more detail
16 earlier. So, no, the Company does not hold excess capacity today. The
17 costs associated with the FT capacity that it does hold are passed on to
18 our sales customers through the PGA, even though a meaningful amount
19 of the current gas supply capability, 28%, is earmarked to provide gas
20 supply service to Essential Use Transportation customers should a third-
21 party supplier or marketer fail to perform.

22

23 Q. Does FCG have concerns with regard to the manner in which capacity
24 costs are currently allocated?

1 A. Yes, FCG does have a concern with the manner in which capacity costs
2 are currently allocated. In order for FCG to secure and maintain a level of
3 gas supply capability as described in my testimony above, FCG will need
4 to secure and/or develop additional gas supply capabilities. This will result
5 in a meaningful increase in the amount of gas supply related costs. Right
6 now, all gas costs are recouped through the PGA from charges to the
7 Sales customers. Transportation customers see little, if any, of these
8 costs in charges by the Company. If FCG continues to burden the Sales
9 customers with higher and higher PGA-related costs, it will begin to lose
10 customers to alternative energy sources. This may lead to cost scenarios
11 that spiral higher and higher, as fewer and fewer customers remain to
12 absorb the PGA-related charges. That is why it is appropriate and fair to
13 begin allocating capacity and the related costs of that gas supply
14 capability to the entire customer population, including Transportation
15 Customers, because all customers benefit from the capacity being
16 available to serve FCG's system at the end of the FGT pipeline.
17 The most equitable solution is for the Transportation market segment, and
18 the third-party suppliers who provide gas supply to the Transportation
19 customers, to participate in the cost recovery process to help send
20 appropriate economic signals to the marketplace.

21
22 Q. Are FCG's concerns with regard to the allocation of capacity costs unique
23 in Florida?

24 A. No. It is my understanding that, while the various natural gas utilities in
25 Florida may approach the issue of capacity from different perspectives,

1 FCG's peers have recently taken steps to address the allocation of
2 capacity costs in a more equitable manner, namely Florida Public Utilities
3 Company (Docket No. 20160085-GU) and Peoples Gas System (Docket
4 No. 20160120-GU).

5 Q. What is FCG's proposal to address the allocation of capacity costs?

6 A. FCG is proposing to implement a capacity allocation methodology that will
7 spread interstate pipeline capacity and its associated costs to all FCG
8 customer classes and the marketers or third party suppliers actively
9 serving Transportation customers on the FCG system.

10 FCG's proposal contemplates allocating costs based on customer type
11 (Sales vs. Transportation) and type of transport load (Essential Use vs.
12 non-Essential Use). The Sales customers would be allocated an amount
13 of capacity that will meet their needs on an annual basis first. The
14 capacity used to meet this customer group's needs will be allocated by
15 load or overall forecasted level of gas supply needed and location of the
16 need, thereby taking advantage of any peaking supplies, like LNG, and
17 the sculpted nature of FCG's current gas supply portfolio. The amount of
18 capacity allocated to this group of customers will include a modest 5%
19 reserve margin. A reserve margin is an added amount of gas supply
20 capability to cover unexpected events on a design day. Unexpected
21 events could be weather forecast error, customers consuming more gas
22 than projected on a design day or some type of supply interruption that
23 prevents the utility from using some portion of its gas supply resources.

24 The current FCG portfolio of interstate transport capacity has its maximum
25 delivery capability in the winter months of December through March. In

1 April and October, the available capacity is a lesser amount. In the
2 summer months of May through September, it is lower still. This shaping
3 of the gas supply capability in the portfolio attempts to match or follow the
4 need of the sales customers on the system. Allocation of the LNG peaking
5 resource to the sales customers fits its load profile well.

6 Remaining capacity would then be allocated to the Essential Use group of
7 Transportation customers. If there is still capacity available to allocate it
8 would be made available to the remaining non-essential use
9 Transportation customers. Since the gas supply capability of the system
10 is less than the aggregate level of customer demand, these last two
11 groups of customers will not receive an allocation of capacity to fully
12 satisfy their forecasted need for natural gas until FCG has successfully
13 installed and placed the LNG facility into operation and the added FGT
14 capacity is placed in service by the pipeline and found a source for the
15 identified need of about 12,700 Dth/d. After successful installation and
16 operation of the LNG facility, all Essential Use Transportation customers'
17 needs will be met. In the case of non-Essential Use Transportation
18 customers who become Sales customers, FCG will use its best efforts to
19 provide firm gas service to those customers when sufficient capacity is
20 available. If sufficient interstate pipeline capacity is not available, those
21 customers will not receive firm gas delivery service.

22

23 Q. Would this necessitate a tariff change?

24 A. Yes, as described more fully in the testimony of witness Meiselman.

25

1 Q. What would be the impact to FCG's PGA?

2 A. Implementing this capacity allocation methodology will ensure that the
3 Sales customers continue to have access to adequate gas supply to meet
4 their forecasted needs, while minimizing the impact of escalating capacity
5 costs to those customers, primarily residential, who are subject to the
6 PGA.

7

8 Q. How would FCG's proposed allocation methodology affect the bills of the
9 Sales customers?

10 A. Since the PGA customers, i.e., Sales customers, currently pay for all of
11 the gas supply resources available to the system, allocating them only
12 what is needed to meet their load requirements plus a 5% reserve margin
13 should lower their overall costs.

14

15 Q. How would it affect the bills of the Transportation customers?

16 A. The Transportation customers would begin to see a charge for gas supply
17 resources that the company would secure to ensure that gas supply is
18 available to South Florida even on the coldest of days.

19

20 Q. Has FCG discussed this proposal with its Transportation customers that
21 are not subject to the PGA?

22 A. FCG met with the marketers who serve the Transportation customers by
23 arranging for and delivering their gas supply needs. The Company shared
24 its capacity allocation plans, examples of the capacity allocation method
25 that is proposed to be used, and listened to input and took feedback from

1 the marketers who delivery gas supplies to the Transportation market
2 segment. These meetings are ongoing.

3

4 Q. What is the benefit of addressing this capacity cost allocation issue now?

5 A. The benefit of moving to this cost and capacity allocation approach now is
6 that it will give the market a window of time to adapt to these forthcoming
7 changes. It will also more appropriately price the service to both the Sales
8 customers, through the Company's PGA, and the Transportation
9 customers, through the service they receive from their third party supplier
10 or marketer.

11 **V. SUMMARY**

12

13 Q. Please summarize your testimony.

14 A. Gas supply capabilities in the state will continue to become more
15 constrained as we move forward and new customer load is brought onto
16 the FCG system, particularly in the southern part of the state as the
17 population increases. As such, FCG will continue to proactively seek out
18 cost-effective ways to meet the forecasted needs of our customers. At
19 this time, FCG has determined that the planned LNG project, the
20 additional FGT firm transportation capacity, working in conjunction with the
21 revisions to FCG's allocation of firm transportation capacity and its
22 resultant costs, are the most prudent and effective means by which FCG
23 can address these issues for the foreseeable future. FCG will
24 nonetheless continue to explore the viability of other options as they
25 become available.

1

2 FCG strives to secure and provide safe, reliable and cost effective gas
3 supply service for all of our customers. Initiating this pro-growth approach
4 to capacity and revision to capacity cost allocation is appropriate.

5

6 Q. Does this conclude your testimony?

7 A. Yes.

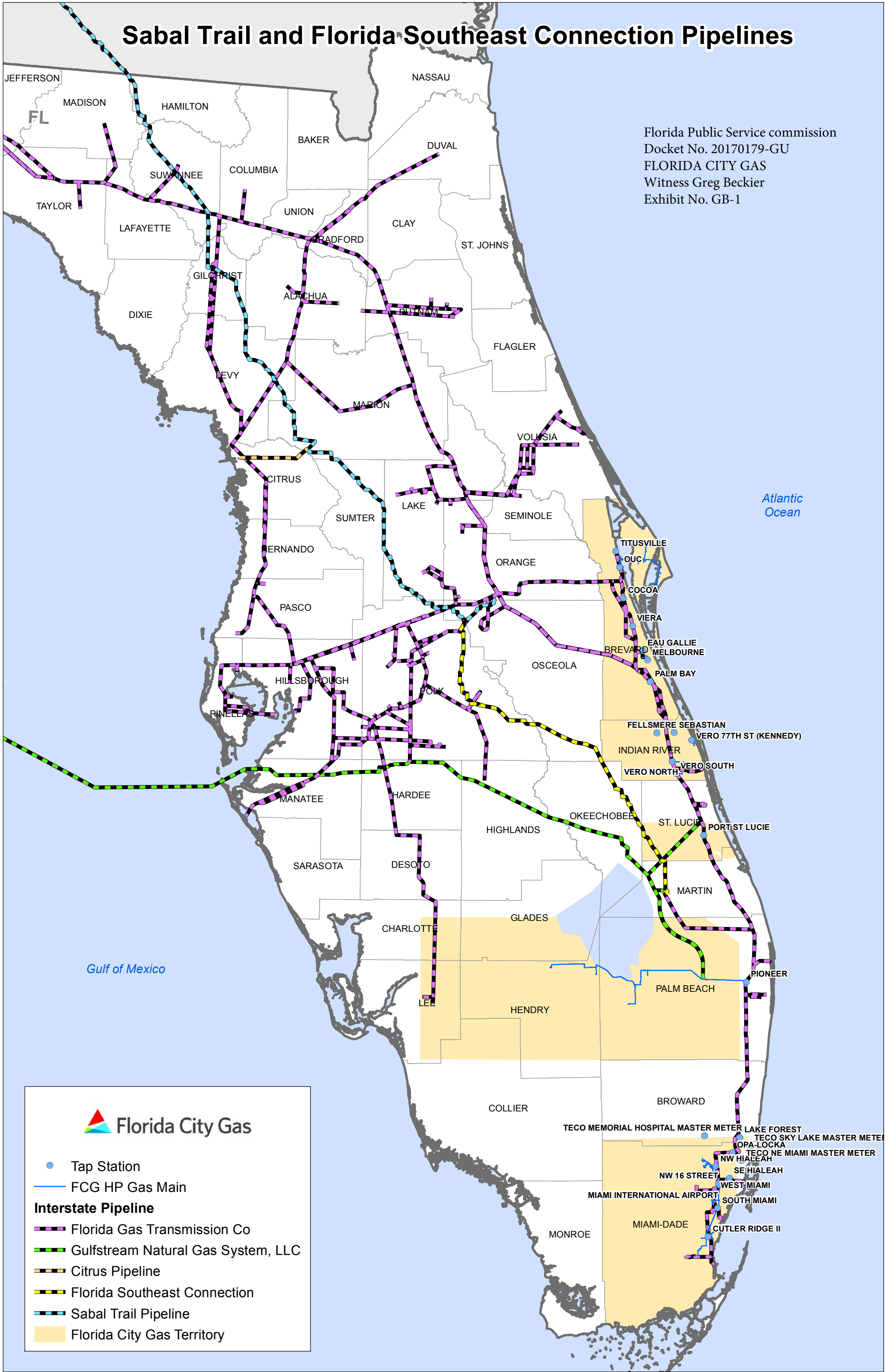
8


9

10

Sabal Trail and Florida Southeast Connection Pipelines

Florida Public Service Commission
 Docket No. 20170179-GU
 FLORIDA CITY GAS
 Witness Greg Beckier
 Exhibit No. GB-1





- Tap Station
- FCG HP Gas Main
- Interstate Pipeline**
- Florida Gas Transmission Co
- Gulfstream Natural Gas System, LLC
- Citrus Pipeline
- Florida Southeast Connection
- Sabal Trail Pipeline
- Florida City Gas Territory

1 **Testimony Exhibit - GB-2: Cost Comparison**

2
3

		Reservation Cost	Dth/d	Annual Cost
4				
5	Gulfstream Pipeline	/2 /6 \$ 21.5837 per Dth	10,000	\$2,590,040
6				
7	Sabal Trail Pipeline	\$ 61.8016 per Dth		
8	Florida Southeast Connection	\$ 13.6419 per Dth		
9		/3 /6 \$ 75.4435	10,000	\$9,053,217
10				
11	Florida Gas Transmission	/4 [REDACTED] per Dth	10,000	[REDACTED]
12				
13	LNG (Annual Rev. Requirements)	/5 \$ 47.8756 per Dth	10,000	\$5,745,066

14
15

16 Assumptions

- 17 /1 10,000 Dth/d delivery to approximate sendout of LNG facility
- 18 /2 Gulfstream Pipeline 6% hourly rate service reservation fee
- 19 /3 Sabal Trail + Southeast Connection 6% hourly rate service reservation fee
- 20 /4 Offered FGT expansion reservation rate
- 21 /5 Imputed rate based on \$5.745M annual revenue requirement
- 22 /6 Excludes any estimate of FCG infrastructure to deliver gas supply into its system

FCG Total System		
	Design Day Load (Dth)	Design Day Capacity (Dth)
Sales Customers	47,187	49,546
Transportation Customers		
Essential Use		
Existing Customers	22,250	19,409
New Customers	4,551	0
	26,801	19,409
Non-Essential Use	35,292	0
Total System	109,280	68,955

Brevard		
	Design Day Load (Dth)	Design Day Capacity (Dth)
Sales Customers	30,478	30,922
Transportation Customers		
Essential Use		
Existing Customers	6,307	0
New Customers	0	0
	6,307	0
Non-Essential Use	1,608	0
Total System	38,393	30,922

* Based on contractual delivery rights, there is not enough capacity to meet Sales load + a 5% reserve margin.

	Design Day Load (Dth)	Capacity Requirements
Sales Customers	47,187	49,546
Transportation Customers		
Essential Use		
Existing Customers	22,250	22,250
New Customers	4,551	4,551
	26,801	26,801
Non-Essential Use	35,292	35,292
Total System	109,280	111,639

Existing Capacity	68,955
New FT	20,000
LNG	10,000
	<hr/>
	98,955

Vero Beach		
	Design Day Load (Dth)	Design Day Capacity (Dth)
Sales Customers	4,725	4,961
Transportation Customers		
Essential Use		
Existing Customers	3,373	2,007
New Customers	0	0
	3,373	2,007
Non-Essential Use	23,778	0
Total System	31,875	6,968

Miami		
	Design Day Load (Dth)	Design Day Capacity (Dth)
Sales Customers	11,983	12,583
Transportation Customers		
Essential Use		
Existing Customers	12,570	12,570
New Customers	4,551	4,551
	17,121	17,121
Non-Essential Use	9,906	1,361
Total System	39,011	31,065

Incremental Supply Need	12,684
--------------------------------	---------------