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October 21, 2020

**E-PORTAL**

Mr. Adam Teitzman, Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

**Re: Docket No. 20200126-GU - Request for approval of tariff modifications to accommodate receipt and transportation of renewable natural gas from customers, by Florida City Gas.**

Dear Mr. Teitzman:

Attached for electronic filing, please find Florida City Gas's Responses to Staff's First Data Requests in the referenced docket.

Thank you for your assistance in connection with this filing. If you have any questions whatsoever, please do not hesitate to let me know.

Sincerely,



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Cc:// J.R. Kelly, Stephanie Morse (Office of Public Counsel)

QUESTION:

Paragraph 12 of the petition states "... depending on the price, location, and market conditions, the gas could potentially be purchased by FCG as part of its system supply." Please explain if purchases gas from a biogas producer, whether the cost of the gas would be included in the utility's Purchased Gas Adjustment calculations and how the cost of the biogas would compare to other natural gas purchases.

RESPONSE:

Currently, FCG does not have any agreements to purchase RNG and is unaware of any current RNG supply agreements in Florida. However, the development and use of RNG is consistent with the legislative policy and findings in Section 366.91, F.S., that it is in the public interest to promote the development of renewable energy resources in this state, diversify fuel types, encourage investment within the state, improve environmental conditions, and make Florida a leader in new and innovative technologies. Purchasing RNG to offset a portion of the conventional gas in FCG's Purchased Gas Adjustment (PGA) portfolio is consistent with this Florida statutory policy.

Should FCG elect to purchase RNG from a biogas producer to offset a portion of the conventional gas in FCG's PGA portfolio, FCG would seek Commission approval in the annual PGA clause to recover the RNG costs, similar to all other gas procurement agreements that are subject to review and approval for recovery in the annual PGA clause. Quantities of RNG purchased under a RNG supply agreement, similar to a fossil natural gas agreement, will include an annual supply quantity for purchase, a contract rate per term, and an agreement term. All purchases under an RNG supply agreement will be recorded and included in the PGA calculation just as existing purchases of fossil natural gas are currently.

It is expected that the cost of RNG will vary based on location and the source of the RNG. To FCG's knowledge, there are not any current RNG supply agreements in Florida with publicly available data on pricing. Based on pricing in other jurisdictions, it is generally anticipated that the cost of the commodity will be higher for RNG compared to the current cost of fossil natural gas. The higher costs are due primarily to the fact that biogas has to be conditioned to meet pipeline quality standards and lesser economies of scale compared to traditional sources of natural gas. However, as noted above, the specific location of the supply source for RNG may mitigate other costs in the PGA, such as pipeline capacity costs, that would otherwise be incurred when increasing the ability to supply customers in constrained areas. RNG sourced within high demand and growth areas on the system can provide reliability without the need to secure additional long-term pipeline capacity.

QUESTION:

Has FCG installed conditioning equipment to clean and upgrade biogas to renewable natural gas as of September 30, 2020? If yes, please provide the name of each location and when construction started/was completed.

RESPONSE:

No. FCG has not entered into any agreements to provide biogas conditioning and has not ordered or made a commitment to purchase biogas conditioning equipment.

QUESTION:

Please explain why FCG filed this petition now and whether FCG has been contacted by potential biogas producers to provide biogas conditioning service. In your response, please also state how many customers FCG expects to take service under the proposed Renewable Natural Gas (RNG) tariff.

RESPONSE:

As a preliminary matter, FCG continually evaluates and looks for opportunities to promote the development of renewable energy resources in this state, diversify fuel types, encourage investment within the state, improve environmental conditions, and make Florida a leader in new and innovative technologies consistent with the legislative policy and findings in Section 366.91, F.S. Consistent with these legislative policy and findings, FCG's proposed tariffed Renewable Natural Gas Service – Rate Schedule RNGS will take advantage of the abundant renewable natural gas and its potential to provide significant environmental, economic, and system benefits to FCG's customers and the communities it serves.

FCG filed this petition anticipating that the Company will need to provide an approved biogas conditioning and transportation service program based on current and future market demand for these services by utilities. Driving market demand for RNG are businesses and homeowners who have a focus on the environment and an interest in reducing greenhouse gas emissions. It is becoming very common for businesses to establish long-term sustainability goals to reduce their carbon footprint and residents in the State of Florida are similarly concerned about climate change.

FCG has been in contact with or has been contacted by a number of municipalities or private businesses that intend to produce or use RNG. As demand for renewable energy grows across the country, it is not known at this time how many potential producers or users of RNG may materialize in FCG's service footprint but interest is already high and there are numerous potential sources of RNG within FCG's service footprint. Based on trends across the country, FCG anticipates steadily increasing demand for RNG; therefore, the Company is preparing to provide solutions to address the market demand. FCG has received inquiries from its existing and prospectively new residential, commercial and industrial customers regarding the availability of RNG. Based on those inquiries, FCG predicts the continued long-term interest in all forms of renewable energy, to include RNG, will be strong in the coming years.

QUESTION:

Could a biogas producer install and maintain their own conditioning equipment or contract with a third-party (instead of contracting with FCG)? Please explain the choices a biogas producer has with respect to the installation of conditioning and upgrading service.

RESPONSE:

Yes. A biogas producer may elect to install and maintain their own bio-gas conditioning equipment or contract with a third-party for that service. This choice by the biogas producer will ultimately come down to safety, cost, quality of service, reliability, and whether they provide the service themselves, through a third-party, or through the utility.

FCG often finds that many customers prefer to do business with a regulated utility due to their focus on safety as a number one priority of their business. Additionally, utilities such as FCG are recognized for their compliance with regulatory requirements, their credit worthiness, the transparency under which utilities operate, and the regulatory oversight of utility operations at the local, state and federal levels.

QUESTION:

Would the conditioning equipment be installed by FCG on the customer's property or on FCG property? Please explain.

RESPONSE:

The location of the bio-gas conditioning equipment would, in most cases, be positioned on the customer's property via an easement agreement to utilize the customer's property for such purpose. The biogas conditioning equipment could be located on Company-owned property if there isn't room on the customer's property or if there is an advantage to FCG and the customer to locate the biogas conditioning and associated equipment on Company property.

QUESTION:

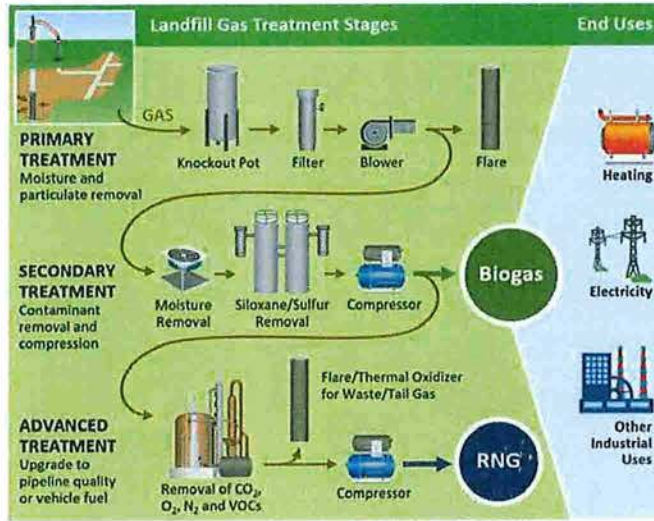
Please explain the installation process of conditioning equipment that will be installed at the customer's facility and provide an illustrative diagram of such equipment.

RESPONSE:

The process involved in the installation of bio-gas conditioning and associated utility equipment all starts with a certified lab study of the bio-gas available at the proposed RNG production site. Once the BTU and constituent content has been determined by laboratory analysis, the type, size and capacity of the bio-gas equipment may be determined. Ordinarily, the manufacturer of the equipment has a standard layout and design that may be utilized by FCG engineers to incorporate into the overall design of the entire system. Once a design has been determined, FCG's engineering department will produce sealed drawings. With the final design in-hand, the necessary local, state and federal permitting, as applicable, may be obtained. Simultaneously, a request for proposal (RFP) process will be communicated to contractors qualified and licensed to bid on and if selected, perform the installation and commissioning of the bio-gas conditioning systems and associated equipment. FCG will award a contract for the installation of the bio-gas conditioning equipment once the RFP process has concluded and permits have been granted.

Please see Attachment 1 for a Landfill Biogas Treatment System Diagram.

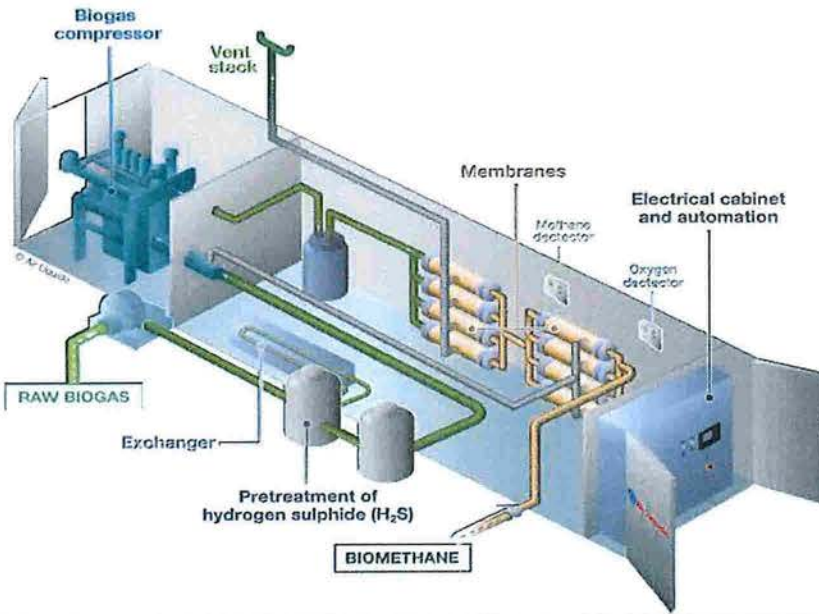
**Landfill Biogas Treatment System Diagram**



Source: US Environmental Protection Agency

How is biogas upgraded into biomethane?

Through a process of purification:



Source: Air Liquide Company



QUESTION:

Please state the estimated total cost of construction (or range of possible costs) for the installation of the conditioning equipment.

RESPONSE:

Every biogas conditioning system investment will be different based on the requirements to condition the biogas to the pipeline quality specified by the utility or transmission company. The quantity of gas to be conditioned, the compression necessary to move the gas into the local distribution system, and transmission line or utility interconnection costs are all major considerations. The costs could vary across a broad band range, but based on publically available information and case studies, it is anticipated that the costs for biogas conditioning equipment and associated equipment could generally be in the range of \$5 MM to \$25 MM dollars depending on the factors stated above.

QUESTION:

What is the cost of operation on a per year basis for the conditioning equipment and describe any required routine maintenance?

RESPONSE:

FCG anticipates that the annual operations and maintenance costs for biogas conditioning equipment could be in the range of 4% to 7% of the original capital cost of the equipment. Routine maintenance requires a daily, weekly, monthly, semi-annual and annual inspections of all system equipment, to include all moving parts such as motors, fans, compressors, valves, actuators, etc. Other maintenance items may include the replacement of filters, membranes, oil changes, lubrication of equipment, drive belts and the disposal of constituent liquids or solids, etc. Routine maintenance items are all based on the manufacturer's specifications and the biogas equipment owner's procedures. In addition to routine maintenance, there are also variable costs associated with the costs of operation such as electricity to operate biogas equipment that are not included in the range mentioned above.

QUESTION:

Would the utility use employees of FCG to do the installation process of the conditioning equipment, or is the intent of the utility to hire outside contractors to complete part or all of the construction and installation process? Please explain and state whether the labor cost (FCG labor or outside labor) will be included in the calculation of the monthly services charge.

RESPONSE:

FCG anticipates that it will conduct a request for proposal (RFP) process to solicit and select outside contractors to perform the installation of the biogas conditioning equipment for the entire construction process. The labor and materials, along with the cost of the biogas conditioning equipment itself would be included in the calculation of the monthly services charge.

QUESTION:

Does FCG have an expected amount of customers that would be installing conditioning services to help off-set their gas already supplied by FCG? Please explain the data collection process that helped FCG arrive at this number.

RESPONSE:

No. FCG is currently in the process of evaluating market opportunities while seeking Commission approval of its RNG tariff and tariff changes, which is a preliminary and necessary step to install and operate the equipment to collect and condition the waste biogas so that it may be used onsite by the producing customer and/or injected into FCG's system for delivery to another location, as well as for FCG to receive and transport the producing customer's renewable natural gas. At this time, FCG does not have an expected number of customers that would take advantage of FCG's RNG tariff to install conditioning services and/or transportation services for RNG. However, as explained in FCG's response to Staff Data Request No. 3, FCG has been in contact with or has been contacted by a number of municipalities or private businesses that intend to produce or use RNG. Additionally, FCG has developed a list of landfills, waste treatment facilities and agri-business facilities within its service footprint. There are approximately 9 landfills, dozens of waste treatment facilities, and at least three large agri-business locations currently within reach of FCG's distribution systems. The information gathered has been developed through either direct inquiry with municipal agencies or from publically available government and non-government sources on-line.

QUESTION:

What internal mechanisms and control is FCG taking to ensure the credit worthiness of customers to be served under the RNG tariffs?

RESPONSE:

Under FCG's proposed RNG tariff, the RNG Service Agreement with the RNG producer/customer may require commitment(s) by the customer to purchase RNG Service for a minimum period of time, to take or pay for a minimum amount of RNG Service, to make a contribution in aid of construction, to furnish a guarantee, such as a surety bond, letter of credit or other means of establishing credit, and/or to comply with other provisions as determined appropriate by the Company. FCG will ensure creditworthiness by requiring the customer to remit a deposit in the amount of two-months estimated billing or provide an irrevocable letter of credit or surety bond. The customer will also be required to provide banking references and FCG will perform credit analysis utilizing a reputable reporting agency such as Dun & Bradstreet.

QUESTION:

How would the utility handle a customer who is going into default and can no longer pay the monthly services charge?

RESPONSE:

FCG would discontinue biogas conditioning services and secure its equipment in place. If necessary, FCG will apply the customer's deposit to any past-due balances and if available, pursue payment utilizing the irrevocable letter of credit or surety bond. Additionally, FCG would pursue any and all legal means available to the Company in order to secure its investment.

QUESTION:

The proposed tariff states that the RNG service agreement may require a minimum period of time. Please explain how FCG would establish the term of the RNG agreement.

RESPONSE:

The term of the agreement would set for a minimum period to ensure that the total installed cost of the conditioning facilities required to upgrade biogas to provide renewable natural gas service, plus the carrying costs at the Company's overall cost of capital, will be fully recovered from the participating customer. The minimum term and negotiated monthly rate will be set to ensure that service provided under Rate Schedule RINGS does not cause any additional cost to FCG's other rate classes. Additionally, a take or pay mechanism will be utilized to protect FCG and its customers by decoupling the forecasted volumes of biogas producer commits to be conditioned from the full recovery of FCG's investment in the conditioning equipment.

QUESTION:

What internal controls and mechanisms are in place to ensure that the biogas that is conditioned and treated is up to gas quality and safety standards?

RESPONSE:

FCG has referenced in its RNG tariff filing that the biogas to be conditioned and introduced into its distribution system for transportation must at a minimum meet Florida Gas Transmission's gas quality standards. This will ensure that the RNG gas received into FCG system has the same or better gas quality standards as the fossil natural gas that FCG receives from Florida Gas Transmission and which the Company is providing customers today.

At each location where the RNG producer will be interconnected to FCG's system, there will be equipment installed to constantly monitor RNG quality, including heating value, water content, and inert gases (i.e., CO<sub>2</sub>, O<sub>2</sub> and Hydrogen Sulfides). Automated system controls and remote monitoring will allow for a shut down and lock-out of RNG injection into FCG's gas systems immediately should gas quality monitoring systems detect a drop in quality below acceptable thresholds. FCG staffs a 24-hour a day control room for monitoring of gas systems, which would also be used to monitor the RNG quality.

As a regulated utility, FCG is held to high federal and state safety standards, and RNG is no exception. FCG's current safety and operational requirements for its system will apply to all interconnections and transport of RNG on its system.



QUESTION:

Where can customers find the company's stated gas quality and standards? Please provide a link if applicable.

RESPONSE:

FCG refers to gas heating content requirements in its approved tariff within each of its posted rate schedules and the information may be found under the paragraph: Character of Service. Additionally, the RNG tariff FCG filed for approval refers to the required gas quality standards under Special Conditions, paragraph 2, "All Customer RNG that is delivered into Company's distribution system for transportation and delivery must (1) meet the gas quality standards defined in Florida Gas Transmission's tariff in effect and applicable at the time the RNG Service Agreement entered and (2) have an acceptable heat content such that the RNG delivered into the Company's distribution system does not, as determined in the sole discretion of the Company, impact the Company's ability to deliver gas on the order of 1,100 British Thermal Units per cubic foot."

Gas quality standards contained in Florida Gas Transmission's tariff may be found on the web at [www.fgttransfer.energytransfer.com](http://www.fgttransfer.energytransfer.com)