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**Title:** Actions related to a Biomethane Purchase and Sale Agreement with Colony Energy Partners, LLC.:  
 1. Adopt a finding of Class 1/Existing Facilities Categorical Exemption pursuant to Section 15301 of the California Environmental Quality Act.  
 2. Authorize the City Manager to execute a Biomethane Purchase and Sale Agreement with Colony Energy Partners, LLC.

**Sponsors:** Department of Public Utilities

**Indexes:**

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**Attachments:** 1. Colony Fresno Biomethane Project Pro Forma 11 6.pdf, 2. Colony Agreement.pdf

Date	Ver.	Action By	Action	Result
1/11/2018	1	City Council	adopted	Pass

**REPORT TO THE CITY COUNCIL**

**January 11, 2018**

**FROM:** THOMAS C. ESQUEDA, Director  
Department of Public Utilities

**SUBJECT**

Actions related to a Biomethane Purchase and Sale Agreement with Colony Energy Partners, LLC.:

1. Adopt a finding of Class 1/Existing Facilities Categorical Exemption pursuant to Section 15301 of the California Environmental Quality Act.
2. Authorize the City Manager to execute a Biomethane Purchase and Sale Agreement with Colony Energy Partners, LLC.

**RECOMMENDATION**

Staff recommends the City Council 1) adopt a finding of Class 1/Existing Facilities Categorical Exemption pursuant to Section 15301 of the California Environmental Quality Act; and 2) approve and authorize the City Manager or designee to execute an agreement with Colony Energy Partners, LLC, to convert the City's Digester Gas to Biomethane, which can then be sold as a Renewable Natural Gas and Regulatory Credits.

**EXECUTIVE SUMMARY**

The City of Fresno (City)'s Fresno-Clovis Regional Water Reclamation Facility (RWRF) is currently flaring approximately 1,200,000 standard cubic feet per day of methane-containing Digester Gas (equal to approximately 260,000 MMBtu per year). Colony Energy Partners, LLC. will convert the Digester Gas to a Biomethane product, and sell both the Biomethane and Regulatory Credits to third parties. The City will receive a percentage of the sales.

## **BACKGROUND**

The RWRF utilizes a low- solids anaerobic digestion (AD) process to stabilize combined primary and secondary sludge prior to beneficial use of the fully-digested sludge. In addition to municipal sludge, the City also processes third-party anaerobically digestible material (ADM) in the anaerobic digestion process. The third-party sources of ADM include fats, oils, and grease (FOG) delivered from grease trap cleaning companies, as well as food processing wastes received from food processing companies located in the San Joaquin Valley. According to the California Association of Sanitation Agencies, 17 percent of wastewater treatment plants in California practice some form of co-digestion using a blend of municipal sludge and ADM. The City currently charges third-party haulers of ADM a flat rate of \$0.03 per gallon to dispose of ADM at the RWRF for processing through the City's anaerobic digesters. In 2015, the City processed approximately 7.0 million gallons (MG) of ADM at the RWRF.

### **Digester Gas Conditioning to Biomethane**

A byproduct of the anaerobic digestion process is Digester Gas, which contains methane, carbon dioxide, hydrogen sulfide, ammonia, siloxane, water, and other trace gases. The methane content of the City's Digester Gas is approximately 55 percent with an energy content of approximately 560 British Thermal Units per Cubic Foot (Btu/ft<sup>3</sup>). As a raw product, the City's Digester Gas is suitable for use in boilers to generate hot water and steam and engines to drive process equipment and electrical generators to produce electricity. Depending upon the quality of ADM material, the addition of ADM material to the City's anaerobic digestion process can enhance the production of Digester Gas.

The City has an existing Digester Gas Conditioning System (DGCS) installed at the RWRF that can convert the City's Digester Gas to a Biomethane product that has methane content greater than 95 percent with an energy content of 960 Btu/ft<sup>3</sup>. As a cleaned and conditioned product, the City's Biomethane is suitable for use in gas-fired turbines and injection into natural gas pipelines. The DGCS was originally installed and placed in service in May 2012 to supply Biomethane to the City's gas-fired turbines located at the RWRF. The gas-fired turbines reached their useful life, and were removed from service during fiscal year 2017. During calendar years 2014 and 2015, the City produced an average of 856 and 862 standard cubic feet per minute (scfm) of Digester Gas, respectively; and during the same two years, the City produced 491 and 499 scfm of Biomethane, respectively, by processing the Digester Gas through the existing DGCS.

### **Biomethane as a Renewable Natural Gas**

The State of California and the U.S. Environmental Protection Agency have promulgated regulations that allow for the City's Biomethane (cleaned and conditioned Digester Gas) to be classified as a Renewable Natural Gas (RNG) that provides greenhouse gas reductions. As a RNG, the City is in a position to generate two sources of revenue from the sale of the City's Biomethane. The first source of revenue is generated from the sale of the City's Biomethane to third-parties as a renewable fuel replacement for natural gas. The second source of revenue is generated from the sale of Regulatory Credits to third parties that need to purchase and acquire greenhouse gas reductions credits. In addition, the City's RNG satisfies Pacific Gas and Electric's (PG&E's) Gas Rule No. 21 requirements for Biomethane, thereby allowing for injection of the City's Biomethane into PG&E's natural gas transmission mains for subsequent sale to a broader population of third-parties that desire to purchase RNG and Regulatory Credits.

On January 12, 2017, Council approved a contract for the design and construction of a booster compressor and a three-mile long pipeline to interconnect to an existing PG&E natural gas transmission main at the intersection of Jensen Avenue and Chateau Fresno. PG&E does not currently have a contract with a public agency to inject RNG into a PG&E natural gas transmission main, and is conducting an evaluation of the cost and schedule associated with the construction of the required RNG metering and monitoring station, also known as the point of receipt (POR) station. PG&E has already completed an Informational Review for the Interconnection and has tentatively concluded that the Interconnection is acceptable. It is anticipated that the time required to complete the negotiations with PG&E for RNG injection, as well as design and construction of the booster pumping station, interconnection, metering and monitoring station, DGCS upgrades, and RNG pipeline, will be approximate 24 to 60 months.

## Sale and Purchase Agreement Terms and Conditions

Recognizing that the City will not be able to inject its RNG supply into PG&E's natural gas transmission main for at least 24 months, and possibly as long as 60 months, the City proposes to enter into a contract with Colony Energy to market and sell the City's RNG using tube trailers to transport the City's RNG from the WWRf to third parties located throughout the San Joaquin Valley. Following is a brief summary of the key conditions associated with the short-term agreement.

- 1) The agreement shall have a term of five years (concurrently, the City will be working with PG&E to complete the required injection facilities to deliver the City's RNG to PG&E's natural gas transmission main).
  - a) During the initial term of the agreement, the City's staff will gain knowledge, understanding and experience with operating the DGCS to produce a qualified RNG on a routine and consistent basis; the marketing and sale of RNG as a renewable fuel; and the marketing and sale of Regulatory Credits.
  - b) The currently planned Date of First Delivery of Digester Gas from the City to Colony Energy is on, or before, January 31, 2019.
- 2) The City's primary responsibility for this agreement will be to continue operating the anaerobic digestion process in accordance with current standard operating procedures to produce Digester Gas. The responsibility for the Digester Gas will transfer from the City to Colony Energy at the gas meter serving the Digester Gas Conditioning System. The City is not obligated to achieve any Digester Gas quality standards or fulfill any quantity requirements.
- 3) The agreement includes a Termination for Convenience provision, which allows the City to make a payment to Colony to terminate the agreement at the sole discretion of the City, so that the City can pursue other options for Biomethane marketing and sales. This provision is being provided to allow the City to terminate the agreement early in the event the City's RNG interconnect with PG&E can be placed into service prior to the five-year termination date of the agreement with Colony.
- 4) Colony Energy shall be responsible for the operation, inspection, maintenance and repair of the DGCS, including the costs for all utilities required to operation the DCGS. In addition, Colony Energy will be responsible for ensuring the Biomethane achieves the quality requirements for the sale of the City's Biomethane as a RNG and for qualified Regulatory Credits.
  - a) If major repairs are required for the DCGS, the City will participate on a 50/50 cost share basis, as the improvements will remain the property of the City upon expiration of the agreement.
  - b) The agreement includes the establishment of a Reserve Account of \$500,000 that will be funded by the City and Colony Energy on a 50/50 basis to address any unforeseen or anticipated equipment failures that may occur during any given year. The City will hold the funds associated with the Reserve Account and disperse the funds for qualified maintenance and repair expenses.
- 5) The City will be reimbursed on a two-tier compensation schedule. The tiers are based on market conditions for RNG and Regulatory Credits.
  - a) After a calendar year quarter when gross sales are less than \$1,500,000, the City shall receive 30 percent of the gross sales, and Colony Energy shall receive 70 percent of the gross sales.
  - b) After a calendar year quarter when gross sales are \$1,500,000 or greater, the City shall receive 40 percent of the gross sales, and Colony Energy shall receive 60 percent of the gross sales.
  - c) For illustrative purposes of revenue potential, a preliminary pro-forma for Tier 1 and Tier 2 revenue conditions is presented as an attachment to this Staff Report. The estimated revenue potential is between \$1.5 million and \$2.8 million per year depending upon market conditions for Biomethane sales and Regulatory Credit sales.
  - d) From Colony's share of the gross sales, Colony Energy shall be incur all costs associated with, but not limited to, Digester Gas conditioning, compression, transportation, pipeline delivery and marketing required for the sale of Biomethane to third parties.

- 6) Neither the City nor Colony Energy may assign the agreement to any other party without the prior written consent of the other, nor, further, is the City not obligated or required to approve any requested assignments.

### **Recommendation**

Based on current market conditions, including state and federal subsidies available for Biomethane generated from Digester Gas, and recognizing the City will not be able to place a Biomethane injection station into service for at 24-60 months, staff seeks approval of the proposed Biomethane Purchase and Sale Agreement with Colony Energy Partners. Colony will convert the City's Digester Gas to a Biomethane, and market and sell the Biomethane to third parties, using tube trailers to transport the City's Biomethane from the WWRF. The estimated revenue potential for the Biomethane Sale and Purchase Agreement is between \$1.5 million and \$2.8 million per year depending upon market conditions for Biomethane sales and Regulatory Credit sales.

City staff recommends that the Fresno City Council authorize the City Manager, or designee, to execute a Biomethane Purchase and Sale Agreement with Colony Energy Partners, LLC, to convert the City's Digester Gas to Biomethane, and to sell the City's Biomethane as a renewable natural gas, and for Regulatory Credits.

The agreement with Colony Energy Partners has been approved as to form by the City Attorney's Office.

### **ENVIRONMENTAL FINDINGS**

Staff has performed a preliminary environmental assessment of this project and has determined that it falls within the Class 1/Existing Facilities Categorical Exemption set forth in CEQA Guidelines, section 15301 as this contract involves using the RWRF's existing gas conditioning system, and will install a temporary CNG gas compressor and storage racks at the RWRF in an area under 2,000 square feet, which will involve negligible expansion of the RWRF. Furthermore, none of the exceptions to Categorical Exemptions set forth in the CEQA Guidelines, section 15300.2 apply to this project.

### **LOCAL PREFERENCE**

Local preference was not applied because this Biomethane purchase and sale agreement is not a purchase or consultant agreement.

### **FISCAL IMPACT**

This project has no impact to the General Fund and is located in Council Districts 3. Revenues generated from the Biomethane Sale and Purchase Agreement shall remain in the Wastewater Management Division Enterprise Fund to fund expenditures related to anaerobic digestion, sludge dewatering, recycle stream treatment, sludge disposal, digester gas conditioning, and digester gas injection into the PG&E natural gas transmission main. The estimated revenue potential for the Biomethane Sale and Purchase Agreement is between \$1.5 million and \$2.8 million per year depending upon market conditions for Biomethane sales and Regulatory Credit sales.

Attachments:  
Pro-Forma  
Agreement