

SCGC DATA REQUEST
SCGC-SCG-DR-09
SOCALGAS 2012 GRC – A.10-12-006
SOCALGAS RESPONSE
DATE RECEIVED: AUGUST 11, 2011
DATE RESPONDED: AUGUST 25, 2011

- 9.1. With respect to the response to SCGC Question 4.6.4, please provide a timeline that shows the time associated with the major categories listed in the response, that is, “permitting, contracting, construction and installation.”

SoCalGas Response:

As indicated in response to SCGC Question 4.6.4, the installation of a biogas upgrading plant is expected to take 12-18 months, including permitting, contracting, construction and installation. SoCalGas is currently in the process of host site selection. SoCalGas will be able to provide additional detail regarding the individual phases of the project timeline once the specific wastewater treatment facilities are selected for the proposed program.

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- 9.2. With respect to the \$5.6 million cost estimate for each biogas installation discussed in Mr. Stanford's testimony at page RKS-83, as needed "to cover the costs related to the equipment purchase, interconnection, site specific feasibility study, required permits, and other installation costs including contractors' fees,"
- 9.2.1 Please provide a breakdown of the \$5.6 million by each of these cost categories.
- 9.2.2 How far in advance of the installation date must SoCalGas or its contractor order the biogas conditioning equipment?

SoCalGas Response:

- 9.2.1 Detail for the projected capital costs per unit is provided in Exhibit SCG-05-CWP-R, pages RKS-CWP-257-R to RKS-CWP-258-R.
- 9.2.2 Based on previous discussions with biogas conditioning vendors, it takes anywhere between 7 to 12 months (from the equipment order date) to have the biogas conditioning installed at the project site.

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- 9.3. With respect to Mr. Stanford's testimony at page RKS-83 that two biogas conditioning units would be built after 2012:
- 9.3.1 When does SoCalGas plan to build each of these units?
 - 9.3.2 Would the timeline for developing either or both of these units depend in any way upon the SoCalGas' experience with the installation of first two units?
 - 9.3.3 If the answer to the previous question is "yes," please describe the factors that would influence the timing of the installation of the subsequent units.

SoCalGas Response:

- 9.3.1 One additional installation is planned for year 2013 and another for year 2014 as discussed in "Schedule" in Exhibit SCG-05-CWP-R, page RKS-CWP-256-R.
- 9.3.2 At this point in time, SoCalGas does not expect that the timeline for developing either the third or fourth units will depend in any specific way on the experience regarding installation of the first units. That said, SoCalGas plans to use "lessons learned" from the first two units when planning, constructing, and operating the third and fourth units. Additionally, SoCalGas does not anticipate timeline delays for the 2013 and 2014 installations.
- 9.3.3 Please see response to 9.3.2.

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- 9.4 Please provide the forecast and workpapers for each of the two gas price forecasts referenced in the footnote to Table GAW-32.

SoCalGas Response:

Detail for the two gas price forecasts referenced in the footnote to Table GAW-32 is provided below.



Sustainable_SoCal_NaturalGasForecast.xls

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- 9.5 Regarding the statement made at page GAW-90 of Exhibit SCG-09: “Many capture at least some of the raw biogas produced for onsite use in some heating and cogeneration applications. However, these onsite biogas applications are also becoming less viable options due to stricter air quality and emission regulations.”
- 9.5.1 Please provide supporting calculations and other documentation to support this statement.
 - 9.5.2 Please provide the size, type, manufacturer, and emission characteristics of the generating units that SoCalGas is referring to.
 - 9.5.3 Please provide the emissions standards for each pollutant that SoCalGas is referring to.

SoCalGas Response:

- 9.5.1 The referenced statement is based on SoCalGas’ experience and direct interaction with customers using onsite gas engine cogeneration systems and feedback from members of Southern California Alliance of Publicly Owned Treatment Works. Also see response 9.5.2 below for a specific example of significant impact of stricter air quality and emission regulations to a facility with an onsite generation system.
- 9.5.2 SoCalGas does not have specific information on generating units (manufacturer, type, size, etc). SoCalGas’ statement that onsite heating and cogeneration applications are becoming less viable options due to stricter air quality and emission regulations is supported by the upcoming emission reduction requirements for engines per SCAQMD Rule 1110.2. It is SoCalGas’ understanding that engines, including those that operate on biogas, will need to take action during 2012/2013 to meet the emission reduction requirements of Rule 1110.2 and this statement is further supported by the South Orange County Wastewater Authority’s 10 Year Capital Improvement Plan (see attachment below). Within the report, it discusses the impact of SCAQMD Rule 1110.2 and states “Alternatives range from retrofitting the existing engine with emissions control technology to burning all digester gas at the flare.” Retrofitting the existing engine with the necessary control technology is very expensive as evident in the cost estimate discussed on page 9-14 (\$4.62 million).

South Orange County Wastewater Authority’s 10 Year Capital Improvement Plan



SOCWAMARCH2010
TENYEARPLAN.pdf

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Response to Question 9.5 (Continued)

- 9.5.3 South Coast Air Quality Management District Rule 1110.2 was made effective in 2009 for engines that operate on natural gas and is expected to be effective in 2012/2013 for internal combustion (IC) engines that operate on biogas. The purpose of this rule is to reduce Oxides of Nitrogen (NO_x), Volatile Organic Compounds (VOCs), and Carbon Monoxide (CO) from engines (see attachment below). Many wastewater facilities currently use their biogas as fuel for onsite engines and will need to take action during 2012/2013 to meet the emission reduction requirements of Rule 1110.2.

The Compliance Guide for SCAQMD Rule 1110.2.



ComplianceGuide.pdf