

SCGC DATA REQUEST
SCGC-SCG-DR-03
SOCALGAS 2016 GRC – A.14-11-004
SOCALGAS RESPONSE
DATE RECEIVED: APRIL 7, 2015
DATE RESPONDED: APRIL 24, 2015

3.1. With regard to the workpapers of R. Stanford, No. SCG-07-CWP at page 9:

3.1.1. What communities are connected, either directly or through the gas distribution system, to the North Coastal gas transmission system north of Gaviota?

SoCalGas Response:

The North Coastal gas transmission and distribution systems serve those communities in Santa Barbara County north of the community of Gaviota, and those communities in San Luis Obispo County within the SoCalGas service territory.

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3.1.2. What is the total population associated with these communities?

SoCalGas Response:

Population (as of January 1, 2014: latest available city-level estimates from the California Department of Finance’s Demographic Research Unit. The data includes unincorporated areas (“Balance of County”) of the North Coastal area; SoCalGas unable to subdivide that data.

Santa Barbara County	299,369
Buellton	4,893
Guadalupe	7,144
Lompoc	43,314
Santa Maria	101,103
Solvang	5,363
Balance of County	137,552

San Luis Obispo County	272,357
Arroyo Grande	17,334
Atascadero	28,675
El Paso de Robles	30,469
Grover Beach	13,153
Morro Bay	10,276
Pismo Beach	7,705
San Luis Obispo	45,473
Balance of County	119,272

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3.1.3. What is the total annual gas consumption recorded for these communities over the last five years?

SoCalGas Response:

SoCalGas does not have recorded actual annual gas consumption for the North Coastal area of its system readily available. The following data is an estimate of the annual gas consumption based on flowrate through Gaviota, local California producer supplies, and deliveries from PG&E at Morro Bay. The North Coastal area is also supplied with deliveries from PG&E at Edelman and from the San Joaquin Valley/Line 85; however, an estimated annual gas measurement from these supplies is unavailable.

Year	Total Volume Delivered (MMcf)
2010	10915.32
2011	13257.32
2012	14691.89
2013	14220.46
2014	12709.28

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3.1.4. What is the rate of growth associated with that annual gas consumption?

SoCalGas Response:

SoCalGas does not have a rate of growth for the North Coastal area readily available. However, the North Coastal area is primarily residential and small commercial/industrial, and rate of growth for these customer classes is available in the 2014 California Gas Report, available at <http://socalgas.com/regulatory/cgr.shtml>. In addition, total new business meter-set growth is available in Exhibit SCG-04-CWP-R, Page 171 (Supplemental Workpaper SCG-FBA-CAP-SUP-009), Table 2, Column I.

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- 3.1.5. How many times during the past twenty years has the North Coastal gas transmission system north of Gaviota been dependent upon PG&E for its supply?

SoCalGas Response:

Twenty years of data is unavailable. The attached are daily data listing deliveries from PG&E at Morro Bay to the North Coastal System for the past 5 years, which show instances where PG&E was relied upon for supply. The North Coastal area is also supplied with deliveries from PG&E at Edelman and from the San Joaquin Valley/Line 85; however, a direct gas measurement from these supplies is not readily available.

Attachment name: "SCGC_DR-03_Q315_Exh SCG07.xlsx"

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- 3.1.6. Please provide the details of each situation identified in the response to the previous question, including the date of each occurrence, the cause of the occurrence, and the amount of gas that was delivered from PG&E during that occurrence.

SoCalGas Response:

Deliveries from PG&E to the North Coastal system are generally required to provide under-pressure protection services during high sendout conditions, or to supply the North Coastal system when the SoCalGas supply from Gaviota is diminished or unavailable. SoCalGas does not have detailed records for every instance that resulted in deliveries from PG&E to the North Coastal system.

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- 3.1.7. Please identify the transmission pipeline by number (Taft) that SoCalGas would propose to connect to the North Coastal gas transmission system north of Gaviota.

SoCalGas Response:

The proposed North Coastal transmission pipeline would interconnect with Line 225 near Taft and with Line 1010 near the community of Orcutt.

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- 3.1.8. Is the pipeline identified in the response to the previous question connected to SoCalGas' transmission Line 85 or Line 225?
- 3.1.8.1. Please provide a map showing the interconnections of the pipeline identified in response to question 3.1.7, and please provide a map showing the interconnections of the proposed 36 inch pipeline from Taft to near Gaviota.

SoCalGas Response:

Please refer to response 3.1.7 of this data request. Attached is the requested schematic; the proposed pipeline between Line 225 and Line 1010 is shown in green:

Attachment name: "SCGC_DR-03_Q318_Exh SCG07.PDF"

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- 3.1.9. What is the capital cost associated with building approximately 80 miles of 36 inch transmission line from the Taft area in the southern San Joaquin Valley area westerly to near Gaviota?

SoCalGas Response:

During this General Rate Case cycle, SoCalGas is only requesting \$5 million in 2015 and \$5 million in 2016 for 18.7 miles of land acquisition. The projected capital cost (direct) for this project has not been finalized. Pipeline routing and optimal pipe diameter has not been finalized.

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3.1.10. Please identify every other alternative that exists for improving service to the customers who are dependent upon the North Coastal gas transmission system north of Gaviota.

SoCalGas Response:

At this time, SoCalGas has identified two alternatives as describe below:

1. Looping Line 247 and Line 1010 with 24 miles of 16 inch diameter pipeline looped along Line 247 between Goleta and Gaviota, and 31 miles of 16 inch diameter pipeline looped along Line 1010 between Gaviota and Orcutt.
2. New onshore Liquefied Natural Gas (LNG) facility near Orcutt on Line 1010.

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3.1.11. Please identify the capital cost associated with each alternative identified in the response to the previous question.

SoCalGas Response:

At this time, capital cost estimates for Looping Line 247 and Line 1010 have not been prepared and finalized.

At this time, capital costs estimates for a new onshore LNG facility near Orcutt have not been prepared and finalized.

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- 3.1.12. Please explain why building a transmission line between Taft and Gaviota is a superior option to each of the alternatives identified in the response to the question prior to the previous question.

SoCalGas Response:

Building a transmission line between Taft and Gaviota (Orcutt) will provide an independent path to the North Coastal system. The independent path will enhance reliability in the North Coastal system and reduce reliance on PG&E to provide under-pressure protection services during high sendout conditions, or to supply the North Coastal system when the SoCalGas supply from Gaviota is diminished or unavailable.

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3.2. With regard to the workpapers of R. Stanford, No. SCG-07-CWP at page 15:

3.2.1. What is the typical current pressure loss when flowing supply from Chino to Moreno?

SoCalGas Response:

The typical current pressure loss is approximately 65 psig at an assumed flow rate of 10.4 million cubic feet per hour (MMCFH).

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- 3.2.2. What is the projected typical pressure loss when flowing supply from Chino to Moreno, assuming that Line 2001 is looped from Chino to Moreno?

SoCalGas Response:

At the same assumed flow rate of 10.4 MMCFH, the projected typical pressure loss would be reduced to approximately 20 psig.

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- 3.2.3. What is the increased supply projected to be deliverable to Moreno assuming that Line 2001 is looped from Chino to Moreno?

SoCalGas Response:

The increased supply cannot be projected because the flow from Chino to Moreno depends upon supplies available from the Northern System, supplies delivered on the Southern System, storage withdrawal availability, and demand on both the Southern System and in the Los Angeles Basin.

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- 3.2.4. Is the increased supply identified in the response to the previous question expected to be available on a regular basis or only sporadically?

SoCalGas Response:

As the increased throughput depends on many factors specified in response to Question 3.2.3 of this data request, it is not possible to quantify the frequency of its availability. The Chino-Moreno project will provide reliability to flow gas from Chino to Moreno at a significantly lower pressure loss, and also be available in case Line 2001 needs repairs and needs to be taken down from service.

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- 3.2.5. Is the increased supply discussed in the response to the previous question expected to be available more frequently than it is at the current time assuming that Line 2001 is looped from Chino to Moreno?

SoCalGas Response:

Please refer to response 3.2.4 of this data request.

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- 3.2.6. If the answer to the previous question is “yes,” please state how much more frequently?

SoCalGas Response:

Not applicable.

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- 3.2.7. How would the responses to questions 3.2.3, 3.2.4, 3.2.5, and 3.2.6 change if SoCalGas were to complete its proposed “North-South Project” between Adelanto and Moreno?

SoCalGas Response:

The responses to questions 3.2.3, 3.2.4, 3.2.5, and 3.2.6 will not change if SoCalGas were to complete the proposed “North-South Project.” The Chino-Moreno project will enhance reliability by enabling gas to flow from Chino to Moreno at a significantly lower pressure loss, and be available in case Line 2001 needs repairs and is taken down from service. The North-South Project would provide Southern System customers with access to storage supplies and more receipt points, which would in turn increase the reliability of service to those customers.

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3.2.8. What is the projected capital cost of looping Line 2001 from Chino to Moreno?

SoCalGas Response:

SoCalGas is requesting \$2 million in 2015 and \$2 million in 2016 for 7.5 miles of land acquisition during this General Rate Case cycle. The projected capital cost (direct) for looping Line 2001 from Chino to Moreno has not been finalized.

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3.2.9. When would SoCalGas expect to complete the project?

SoCalGas Response:

As stated in the response for 3.2.8, SoCalGas is requesting 7.5 miles of land acquisition expenditures during this General Rate Case cycle. The projected completion date for looping Line 2001 from Chino to Moreno has not been finalized.

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3.2.10. Would the looping of Line 2001 be necessary if SoCalGas were to complete its proposed “North-South Project” between Adelanto and Moreno?

SoCalGas Response:

Yes, the looping of Line 2001 would still enhance reliability if SoCalGas were to complete its proposed North-South Project. The looping of Line 2001 and the North-South Project are independent projects. Please refer to response 3.2.7 of this data request.

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3.2.11. To what extent, if any, would the proposed “North-South Project” between Adelanto and Moreno be necessary if the proposed looping of Line 2001 were completed?

SoCalGas Response:

The full North-South Project will still be necessary if the proposed looping of Line 2001 is completed. These two projects serve different purposes. Please see response to question 3.2.7 for more details on their functionality.

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3.3. With regard to the workpapers of R. Stanford, No. SCG-07-CWP at page 104:

3.3.1. Please identify each compressor station that had work completed during 2014 under this project category.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, because rule 1160 was pending approval in 2014, no work was completed in 2014 under this project category.

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- 3.3.2. Please state the items of equipment that were replaced at each of the compressors identified in the response to the previous question.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, because Rule 1160 was pending approval in 2014, no items of equipment were replaced in 2014 as part of the Rule 1160 updates.

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- 3.3.3 Please state the cost associated with the work completed in 2014 by compressor station identified in the response to the question prior to the previous question.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, because Rule 1160 was pending approval in 2014, no work was completed in 2014 as part of the Rule 1160 updates and no costs were incurred.

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- 3.3.4. Please identify each compressor station that had work completed during Quarter 1 of 2015 under this project category.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, because Rule 1160 was pending approval in Quarter 1 of 2015, no compressor station work was completed in Quarter 1 of 2015 as part of the Rule 1160 updates.

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- 3.3.5. Please state the items of equipment that were replaced at each of the compressors identified in the response to the previous question.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, because Rule 1160 was pending approval in Quarter 1 of 2015, no items of equipment were replaced in Quarter 1 of 2015 as part of the Rule 1160 updates.

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- 3.3.6. Please state the cost associated with the work completed in Quarter 1 of 2015 by compressor station identified in the response to the question 3.3.4.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. Adjusted-recorded 2015 data will not be available until approximately the first quarter of 2016.

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- 3.3.7. Please identify each compressor station that SoCalGas expects to complete work on during Quarters 2-4 of 2015 under this project category.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, SoCalGas expects to complete work at the following compressor stations during Q2 – Q4 of 2015:

North Needles Compressor Station

South Needles Compressor Station

Blythe Compressor Station

Newberry Springs Compressor Station

Kelso Compressor Station

Adelanto Compressor Station

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3.3.8. Please state the items of equipment that SoCalGas expects to replace at each of the compressors identified in the response to the previous question.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, the table below lists the items of equipment anticipated to be installed by the end of year 2015.

<u>Compressor Station</u>	<u>Unit(s)</u>	<u>Equipment Changes</u>
<u>North Needles</u>	<u>Main Units 1 – 3</u>	<u>Turbocharger Modification</u>
		<u>Continuous Pressure Monitoring</u>
	<u>Main Units 4 – 5</u>	<u>Air Fuel Ratio Controllers</u>
		<u>Ignition System</u>
	<u>Generators 1 & 2</u>	<u>Air Fuel Ratio Controllers</u>
		<u>Catalyst and Housing</u>
<u>Air Compressor</u>	<u>Air Fuel Ratio Controller</u> <u>Catalyst</u>	
<u>South Needles</u>	<u>Main Units 1-7</u>	<u>Turbocharger Modifications</u>
	<u>Main Units 1-2</u>	<u>Continuous Pressure Monitoring</u>
	<u>Main Units 3 – 5*</u>	<u>Cylinder Heads</u>
		<u>Medium Pressure Mechanical Valves</u>
		<u>Continuous Pressure Monitoring</u>
		<u>Pre Combustion Chambers</u>
		<u>Electronic Pre Chamber Check Valves</u>
	<u>Fuel Gas Modulator Valves</u>	
	<u>Generators 1 - 3</u>	<u>Air Fuel Ratio Controllers</u>
<u>Air Compressor</u>	<u>Air Fuel Ratio Controller</u> <u>Catalyst</u>	
<u>Blythe</u>	<u>Generators 1 – 4</u>	<u>Catalyst</u>
<u>Newberry Springs</u>	<u>Air Compressor</u>	<u>Air Fuel Ratio Controller</u>
		<u>Catalyst</u>
<u>Kelso</u>	<u>Generator</u>	<u>Catalyst</u>
		<u>Air Fuel Ration Controller</u>
		<u>Ignition System</u>
<u>Adelanto</u>	<u>Generators</u>	<u>Catalyst</u>
		<u>Air Fuel Ratio Controller</u>
		<u>Ignition System</u>

*Cylinder work on Main Units 3-7 at South Needles Compressor Station is dependent on receipt of the replacement cylinder heads. Depending on delivery date of the cylinder heads more or less units at South Needles Compressor Station may see completed upgrades in 2015.

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3.3.9 Please state the cost associated with the work by compressor station identified in the response to question 3.3.7.

SoCalGas Response:

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3.3.10. Please identify each compressor station that SoCalGas expects to complete work on during 2016 under this project category.

SoCalGas Response:

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North Needles Compressor Station

South Needles Compressor Station

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3.3.11. Please state the items of equipment that SoCalGas expects to replace at each of the compressors identified in the response to the previous question.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. That being said, the table below lists the items of equipment anticipated to be installed by the end of year 2016.

<u>Compressor Station</u>	<u>Unit(s)</u>	<u>Equipment Changes</u>
<u>North Needles</u>	<u>Main Units 1 – 3</u>	<u>Improved Cooling</u>
		<u>Trapped Equivalency Ratio (Air Fuel Ratio)</u>
<u>South Needles</u>	<u>Main Units 1-7</u>	<u>Improved Cooling</u>
		<u>Trapped Equivalency Ratio (Air Fuel Ratio)</u>
	<u>Main Units 6 – 7*</u>	<u>Cylinder Heads</u>
		<u>Medium Pressure Mechanical Valves</u>
		<u>Continuous Pressure Monitoring</u>
		<u>Pre Combustion Chambers</u>
		<u>Electronic Pre Chamber Check Valves</u>
<u>Fuel Gas Modulator Valves</u>		

*Cylinder work on Main Units 3-7 at South Needles Compressor Station is dependent on receipt of the replacement cylinder heads. Depending on delivery date of the cylinder heads more or less units at South Needles Compressor Station may see completed upgrades in 2016.

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3.3.12. Please state the cost associated with the work by compressor station identified in the response to question 3.3.10.

SoCalGas Response:

The forecasts for projects represented in the GRC are developed as a snapshot-in-time as of the November 2014 date of the Application filing, and are representative of the types of projects and programs the utility expects to encounter in the normal course of business. Projects that are either delayed or advanced in one area may be offset by other projects that are advanced or delayed in another as a result of changing conditions such as permit applications, resource supply, changed priorities and emergent work. The Rate Case Plan does not provide for the utility to update its forecasted expenses or schedule, either up or down, in its application except for certain, specific and identified items in the update filing following hearings. Adjusted-recorded 2016 data will not be available until approximately first quarter 2017.

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3.4. With regard to the workpapers of R. Stanford, No. SCG-07-CWP at page 116:

3.4.1. What is the cost of adding the 11,700 hp to Ventura Station?

SoCalGas Response:

The cost of adding the 11,700 hp to Ventura Station is approximately \$32.8 million.

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3.4.2. What is the cost of upgrading the main unit engine instrumentation and controls programming?

SoCalGas Response:

Estimated cost for main unit engine instrumentation and the electronic Pre-Combustion Chamber Check Valves (ePCC) referred to in your question 3.4.5 is approximately \$200,000. The estimate is not broken between the two items.

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3.4.3. What is the cost of installing remote monitoring capability to Ventura Station?

SoCalGas Response:

The cost of installing remote monitoring capability to Ventura Station is approximately \$80,000.

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3.4.4. What is the cost of replacing the belt drive pumps with gear or electric drive pumps?

SoCalGas Response:

The cost of replacing the belt drive pumps with gear or electric drive pumps is approximately \$240,000.

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- 3.4.5. What is the cost of replacing the check valve type pre-combustion chambers with EPCC-controlled pre-combustion chambers?

SoCalGas Response:

The original engine manufacturer (OEM) pre-combustion chambers (PCC) will not be replaced. ePCC technology replaces the mechanical PCC check valves, not the pre combustion chambers themselves. Please refer to response to 3.4.2. for cost information.

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- 3.4.6. What is the projected decrease in output in producer gas from the POPCO site each year over the next five years?

SoCalGas Response:

SoCalGas has no such forecast available.

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- 3.4.7. What are the summer load requirements on the coastal system that SoCalGas projects each year for the next five years?

SoCalGas Response:

Summer demand north of Goleta is approximately 40 MMcfd and is not expected to change appreciably over the next five years.

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- 3.4.8. If the additional 11,700 hp is not added to Ventura Station, what is the projected injection capability each year at Goleta Storage field over the next five years?

SoCalGas Response:

If the Ventura compressor station project does not proceed, injection capacity at Goleta will be limited to a maximum of 90 million cubic feet per day (MMcfd) of capacity available at the existing Ventura compressor station, assuming local production is at least 50 MMcfd to serve customer demand. If local production is not available, injection at Goleta may be little to nothing.

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3.4.9. What is the current injection capability at Goleta Storage field?

SoCalGas Response:

Goleta injection capacity ranges from 127 to 163 MMcfd depending on several factors such as the level of gas in storage and suction pressure.