- 1. On page AS-2, lines 8-11, Anne Smith states that "When the impact of commodity costs and other ratemaking items such as regulatory account balances are included, this increase results in a TY2012 system average rate revenue increase of \$308 million (7.4%) as compared to currently effective 2010 rates."
 - 1.1. Please identify each cost category underlying the \$308 million increase, by function or purpose, and the related amount of increase for each category, including but not limited to the following categories:
 - 1.1.1. As characterized by Ms. Smith on page AS-1, lines 17-18, increases arising from "mandated programs that are beyond the direct control of the company."
 - 1.1.2. "Commodity costs" as referenced by Ms Smith on page AS-15. Please also explain what Ms. Smith means by "impact of commodity costs."
 - 1.1.3. Pension funding and PBOPs referenced on page AS-16
 - 1.1.4. Regulatory balances referenced on page AS-15
 - 1.1.5. Distribution costs, distinguishing between O&M and capital increases
 - 1.1.6. Local transmission costs, distinguishing between O&M and capital increases
 - 1.1.7. Backbone transmission costs, distinguishing between O&M and capital increases
 - 1.1.8. Pipeline integrity costs, distinguishing between O&M and capital increases. If applicable, please identify the amount of pipeline integrity costs, by cost category, included both in response to this Question 1.1.5 and any previous question

SoCalGas Response:

Response 1.1.1

SoCalGas does not have a list of all expenses being requested in the 2012 GRC due to mandated programs. However, Ms. Smith summarizes the major mandated programs impacting the SoCalGas 2012 GRC on page AS-1, lines 18-28. Following is a cross reference to the testimony supporting these items:

Response to Question 1.1.1 (Continued)

Environmental Regulations

- Policy and compliance: see the testimony and workpapers of Ms. Lisa Gomez (Exhibit SCG-15)
- Operating costs*: see the testimonies and workpapers of Ms. Gina Orozco-Mejia for Gas Distribution (Exhibit SCG-02), Mr. John Dagg for Gas Transmission (Exhibit SCG-03), Mr. Jim Mansdorfer for Underground Storage (Exhibit SCG-04), Mr. Ray Stanford for Gas Engineering (Exhibit SCG-05), Mr. Hector Madrariaga for Fleet (Exhibit SCG-11) and David Taylor for Real Estate, Land & Facilities (Exhibit SCG-14)

* Note: when reviewing the testimonies and workpapers for operating cost witnesses, please be advised that environmental-related expenditures are often rolled into Operations and Maintenance and Capital project-related expenditures without a distinct accounting designation as 'environmental-related'.

- Regulatory accounting: see the testimony of Mr. Greg Shimansky (Exhibit SCG-34)

Department of Transportation (DOT) Pipeline Safety Regulations

- See the testimony of Mr. Ray Stanford (Exhibit SCG-05)

Pension/Post-retirement Benefits Other than Pensions (PBOPs) Regulations

- See the testimony of Mr. David Sarkaria (Exhibit SCG-20)

Employee Safety Regulations

- See the testimony of Mr. Scott Drury (Exhibit SCG-16)

Accounting/Affiliate Transactions Regulations

- See the testimony of Mr. Ken Deremer (Exhibit SCG-22)

Response 1.1.2

The SoCalGas 2012 requested revenue requirement is \$2.124 billion. Revenue requirement includes both revenues collected in rates and fee-based miscellaneous revenues. This request is an increase of \$280 million over the 2011 SoCalGas authorized revenue requirement of \$1.844 billion. However, the CPUC requires that our bill notice compare rate revenues at the time we file our GRC application (December 2010) to forecasted rate revenues using our 2012 GRC request (a two-year change). Further, rate revenues include revenues requested in the GRC (excluding fee based revenues) as well as other ratemaking costs such as regulatory accounts revenues and commodity costs. Ms. Smith's reference to the "impact of commodity costs" is in this context.

Response to Question 1.1.2 (Continued)

The table below provides the calculations necessary to move between the two comparison points:

2012 vs. 2010 change in total rate revenues	\$308 mm
(as noticed)	
Reflect 2011 Attrition (2008 GRC)	<\$54 mm>
Reflect change in Misc. Revenues between	\$29 mm
2010 and 2012	
Reflect the impact of changes between 2010	<\$3 mm>
and 2012 due to commodity costs, regulatory	
account amortizations and other ratemaking	
adjustments	
2012 GRC revenue requirement change	\$280 mm
relative to 2011	

Response 1.1.3

Please see the testimony of Mr. David Sarkaria (Exhibit SCG-20).

Response 1.1.4

Please see the response to Question 1.1.2.

Response 1.1.5

Please see the testimony of Ms. Gina Orozco-Mejia (Exhibit SCG-2).

Response 1.1.6

Please see the testimony of Mr. John Dagg (Exhibit SCG-3).

Response 1.1.7

Please see the testimony of Mr. John Dagg (Exhibit SCG-3).

Response 1.1.8

Please see the testimony of Mr. Ray Stanford (Exhibit SCG-5).

1.1. Please explain the methodology used in calculating the \$308 million increase in average rate revenue increases.

SoCalGas Response:

Please see the response to Question 1.1.2.

1.2. Please provide any spreadsheet or other document that shows the calculation of the \$308 million increase.

SoCalGas Response:

Please see the response to Question 1.1.2.

- 2. Page 5 of Gary Lenart's workpapers lists the cost components of noncore commercial and industrial rates. The base margin cost categories include backbone transmission costs and local transmission costs.
 - 2.1 Please list the factors that SoCalGas/SDG&E used to distinguish local transmission pipelines from backbone transmission pipelines in this breakdown.

SoCalGas Response:

No proposals to the categorization of backbone or local transmission costs for cost allocation / rate design purposes are being made in this GRC application. The distinction between local and backbone transmission lines is the same as that approved in the last Biennial Cost Allocation Proceeding (BCAP) Decision (D.09-11-006) and no change to this distinction is being proposed in this GRC application. The increase in revenue requirement was allocated per the method approved in Phase 2 of the last BCAP Decision.

2.2 Please identify, by number, each pipeline included in the backbone transmission pipeline category.

SoCalGas Response:

2.3 Please identify, by number, each pipeline included in both the backbone transmission and local transmission pipeline categories. For each pipeline, clarify how the pipeline costs were allocated between backbone and local transmission pipeline categories.

SoCalGas Response:

2.4 Please provide a pipeline system map showing the location of each pipeline on the SDG&E and SoCalGas systems.

SoCalGas Response:

2.5 Were the factors identified in response to Question 2.1 the same factors employed by SoCalGas in its application and accompanying testimony to differentiate backbone transmission pipelines and local transmission pipelines in the SoCalGas/SDG&E in the FAR Update case (A.10-03-028)?

SoCalGas Response:

No, the factors being used in this GRC application are not the same as those used in the FAR Update case, but are instead the same as those authorized in the last BCAP Decision. This was done because, (i) this GRC is not proposing any change to the factors employed to differentiate between backbone and local transmission lines; and (ii), a decision has not been received in the FAR Update case.

2.5.1 If not, identify which factors were not employed in the FAR Update testimony and whether there were additional factors employed in the FAR proceeding that are not identified in the response to Question 2.1.

SoCalGas Response:

2.5.2 If there are differences between the differentiation used in the FAR Update testimony and the differentiation used in this proceeding, please explain the reason for the differentiation.

SoCalGas Response:

2.5.3 Identify by number any pipeline classified as backbone transmission the FAR Update that are identified as local transmission in this proceeding.

SoCalGas Response:

2.5.4 Identify by number any pipeline classified as local transmission in the FAR Update that are identified as backbone transmission in this proceeding.

SoCalGas Response:

2.6 Were pipeline facilities classified as backbone transmission consistent with the Joint Recommendation of SDG&E/SoCalGas, DRA, TURN, CMTA, SCGC, and RES, submitted in the FAR Update case (A.10-03-028)? If not, why not?

SoCalGas Response:

2.7 Were the factors identified in response to Question 2.1 the same factors employed by SoCalGas in its proposal, as adopted by the Commission, to differentiate backbone transmission pipelines and local transmission pipelines in the System Integration decision (D. 06-04-033)?

SoCalGas Response:

No proposals to the categorization of backbone or local transmission costs for cost allocation / rate design purposes are being made in this GRC application. The differentiation between local and backbone transmission lines is the same as that approved in the latest BCAP Decision and no change to this distinction is being proposed in this application. The increase in revenue requirement was allocated per the method approved in Phase 2 of the last BCAP Decision.

2.7.1 If not, identify which factors were not employed in the System Integration proposal and whether there were additional factors employed in the System Integration proceeding that are not identified in the response to Question 2.1.

SoCalGas Response:

2.7.2 If there are differences between the differentiation used in the System Integration proposal and the differentiation used in this proceeding, please explain the reason for the differentiation.

SoCalGas Response:

2.7.3 Identify, by number, any pipeline classified as backbone transmissionin the System Integration proceeding that are identified as local transmission in this proceeding.

SoCalGas Response:

2.7.4 Identify, by number, any pipeline classified as local transmission in the System Integration proceeding that are identified as backbone transmission in this proceeding.

SoCalGas Response:

2.8 Will the adoption of the Joint Recommendation in the FAR Update case affect in any way the categorization of costs as backbone or local transmission in this case. If so, explain how and why.

SoCalGas Response:

It may, as one of the primary purposes of the FAR Update case was to categorize costs as backbone or local transmission. However, a decision has not been reached in that case; and, no proposals to the categorization of backbone or local transmission costs for cost allocation / rate design purposes are being made in this GRC application.

2.9 How will the backbone transmission revenue requirement established in this proceeding affect SoCalGas' proposal in its 2011 Triennial Cost Allocation Proceeding?

SoCalGas Response:

While the 2011 Triennial Cost Allocation Proceeding (TCAP) may be affected by this GRC application due to the new revenue requirement authorized by a decision, it is not possible to determine the affect on any proposals in the TCAP because it has not yet been filed.

2.10 If SoCalGas is required by the FAR Update decision to perform a bottoms-up calculation of the backbone transmission revenue requirement to inform the 2011 TCAP, will the revenue requirement established in this case form the basis off that calculation? If yes, explain how it might be used. If no, explain why not.

SoCalGas Response:

This depends on whether or not a decision has been received in this GRC application, and the revenue requirement is then known, before an application is filed in the 2011 TCAP.

- 3. On page 52 of John L. Dagg's workpapers, he provides forecasts of the following projects needed to comply with AB 32:
 - Incremental "Packing Seal Replacement Maintenance"
 - Incremental leak survey, monitoring, and reporting
 - Incremental repairs and maintenance (on RV's, valves, flanges)
 - Incremental air compressor maintenance at Kelso-convert gas start to air start. Expand current air system by upgrading electrical and adding capacity.
 - Incremental instrument calibration and repair, calibration gas, and lab certification
 - 3.1 Clarify in which year SoCalGas plans to undertake each of these projects.
 - 3.2 Clarify which of the projects listed above have been mandated by CARB? Where SoCalGas understands a project to be mandated, please cite the regulation and/or order requiring the project.

SoCalGas Response:

- 3.1 SoCalGas has planned to begin each of the listed activities in 2011.
- 3.2 None of the enhanced maintenance activities listed above are specifically mandated by CARB.

AB32 authorized CARB to mandate a comprehensive program of regulatory and market mechanisms designed to achieve real, cost effective, quantifiable reductions of greenhouse gases. The CARB mandates are to reduce GHG emissions by prescribed levels and timeframes. They do not mandate how the reductions are to be achieved.

The maintenance activities referenced in the workpapers represent a composite listing of varying maintenance activities which are an integral part of SoCalGas' programmatic strategy to reduce fugitive and combustion emission sources to meet the general objectives of AB 32.

- 4. Beginning on page GAW-88, Gillian A. Wright discusses the Sustainable SoCal Program which, on lines 21-22, she explains is meant "to promote development of small scale biomethane production in southern California."
 - 4.1 Table GAW-31, on page GAW-89, clarifies that SoCalGas seeks an estimated \$11,272,000 to cover expenses for this program in 2012. Does it seek additional funds related to this program in 2013, 2014, or 2015? If so, please provide the amount of costs sought.

SoCalGas Response:

The estimated \$11,272,000 is the capital investment for the Sustainable SoCal Program that SoCalGas seeks to recover in rate base during this proposed rate case period from 2012 to 2015. In addition to the capital costs, the Sustainable SoCal program is proposed to incur average annual O&M costs of \$606,000 during this rate case period. Additional details and cost information related to the Sustainable SoCal Program is described the testimony of Mr. Stanford, Exh SCG-05, pages RKS 24 – 26 and RKS 83 – 84.

4.2 In lines 9-11 on page GAW-89, Ms. Wright states that "SCG proposes to install four biogas conditioning systems at certain customer sites for the purposes of capturing 'raw gas' and converting it to pipeline quality biogas (biomethane)."

SoCalGas Response:

4.2.1 Clarify whether the costs of this system will be fully recovered by SoCalGas through the utility revenue requirement or whether some or all of these costs will be the responsibility of a SoCalGas affiliate. If yes, please identify the affiliate and the portion of cost responsibility that will be borne by the affiliate.

SoCalGas Response:

All of the costs will be recovered by SoCalGas through the utility revenue requirement.

4.2.2 List the criteria used to select the customers chosen for installation of the biogas conditioning systems.

SoCalGas Response:

SoCalGas is currently in the process of developing a short list of potential wastewater treatment plants (WWTP) that would qualify for the Sustainable SoCal Program. The final four sites will be selected based on: 1) lowest estimated cost and 2) having some diversity amongst the four sites (location, volumetric biogas flow, etc). The selection criteria developed by SoCalGas is as follows:

- 1. The WWTP needs to have an onsite digester to produce the raw biogas.
- 2. The WWTP needs to have raw biogas volumes in the range of 200 to 600 standard cubic feet per minute ("scfm").
- 3. The WWTP needs to be willing to sign a 10-15 year contract agreement allowing SoCalGas to own, operate and maintain the biogas conditioning system at their facility.
- 4. The WWTP shall provide SoCalGas, its employees, contractors, and agents access to the biogas facility to observe, monitor and inspect the biogas conditioning system.
- 5. The WWTP needs to have adequate space at their facility to host the biogas conditioning system.
- 6. There needs to be a SoCalGas pipeline in the general area of the WWTP that has adequate capacity to accept the biomethane.
- 7. The WWTP is seeking a solution to make better use of their raw biogas (instead of flaring the raw biogas to the atmosphere for example).

4.2.3 Clarify if any of the customers chosen for installation of the biogas conditioning systems are affiliates of SoCalGas/SDG&E.

SoCalGas Response:

As of the date of this response, SoCalGas has not selected any customers for the Sustainable SoCal Program. The Sustainable SoCal Program specifically targets wastewater treatment facilities operating in Southern California, and none of these facilities are affiliates of SoCalGas or SDG&E.

4.2.4 Are any of SoCalGas/SDG&E's affiliates involved in biomethane production, biomethane distribution, or biomethane marketing.

SoCalGas Response:

Under current proposal, none of SoCalGas/SDG&E's affiliates would be involved in the Sustainable SoCal Program.

- 4.3 In lines 17-19, on page GAW-89, Ms. Wright states that "[*a*]ll of the producer biogas will be cleaned to pipeline quality and meet the gas quality specifications as set forth in SCG Rule No. 30, Section I."
 - 4.3.1 Is the "*cleaning*" provided through the biogas conditioning systems? If not, explain the equipment required and the associated cost and revenue requirement.

SoCalGas Response:

Yes, the "cleaning" is provided through the biogas conditioning system.

4.3.2 Clarify what the process will be to clean the raw biogas to ensure it is of pipeline quality consistent with Rule 30, Section I.

SoCalGas Response:

Please refer to Mr. Stanford's Testimony (RKS 24-25) where he discusses current market and available technology for biogas conditioning.

4.3.3 Please provide an estimate of the costs of conditioning the raw biogas to ensure it will comply with Rule 30, Section I.

SoCalGas Response:

As discussed in the testimony GAW-92, line 2-3, SoCalGas estimates that the average cost of biogas conditioning will be approximately \$14.31/MMbtu. This estimate includes the required interconnection costs of \$3.36/MMbtu.

4.3.4 Who will bear the cost of cleaning the raw biogas to ensure it can comply with Rule 30, Section I?

SoCalGas Response:

It is proposed the costs associated with the proposed Sustainable SoCal Program will be funded by ratepayers.

- 4.4 In lines 15-16 of page GAW-91, Ms. Wright states that "*The output methane, conditioned* to meet SCG gas standards, will be compressed and injected into SCG's gas pipeline system. SCG will use this gas for company facilities use and to fuel CNG fleet vehicles."
 - 4.4.1 Specify from which customer classes the costs of biogas conditioning will be recovered.

SoCalGas Response:

The costs of biogas conditioning will be added to base margin and will be recovered from all customers (see to GAW-91 line 22 - 24).

4.4.2 How will the portion of costs related to company use be allocated?

SoCalGas Response:

As stated in the testimony GAW-91, line 19 - 24, the biogas will be used to supply approximately 75-80% of SCG's gas use for company facilities and CNG fleet. All costs of biogas conditioning will be added to base margin and will be recovered from all customers (see GAW-91 line 22 - 24) using the System Average Percent Change method adopted in the decision in Phase 2 of the last BCAP. The avoided costs for natural gas commodity will be reflected in reduced costs for "Other Company Use Gas" (see table GAW-32 for lifecycle cost assumptions including levelized cost of natural gas), which is allocated to all customers based on the Equal Cents per Therm method also adopted in Phase 2 decision of the last BCAP.

4.4.3 How will the portion of costs related to natural gas vehicle fueling be recovered.

SoCalGas Response:

See Response 4.4.2, with the clarification that this question is referring to natural gas vehicle fuel used by the Utility in its operations.

4.4.4 For the categories of costs referenced in Question 4.4.2 and 4.4.3, what percentage would be recovered from industrial customers under schedule G-TLS?

SoCalGas Response:

Under the currently adopted cost allocation methodology, Industrial customers on the G-TLS tariff will be allocated 0.5% of all biogas costs. This is the System Average Percent Change allocation to this class.

4.4.5 Will the natural gas vehicle tariff reflect the cost of the biogas conditioning equipment? If so, what percentage of the proposed conditioning revenue requirement will be borne by natural gas vehicle customers?

SoCalGas Response:

Yes, the natural gas vehicle tariff will reflect the costs of biogas conditioning. See response to Question 4.4.1

Under the currently adopted cost allocation methodology, natural gas vehicle customers will be allocated 0.5% of all biogas costs. This is the System Average Percent Change allocation to this class.

Note: The biogas output will only offset the gas costs otherwise incurred by SoCalGas' CNG fleet, and not available for sales to natural gas vehicle customers. Also see response to Question 4.4.6.

4.4.6 Can SoCalGas be certain that a molecule of natural gas delivered by a biogas producer is actually used in CNG fleet vehicles, or will the gas delivered to the fleet vehicles instead be a blended gas stream?

SoCalGas Response:

The biomethane injected into SoCalGas' gas pipeline system and used by CNG fleet vehicles will be a blended gas stream. The amount of biomethane injected into SoCalGas' pipeline will offset the amount of natural gas (non-renewable) that otherwise would have been transported into SoCalGas' pipeline system.

- 4.5 In lines 19-21, of page GAW-91, Ms. Wright states "starting in 2015 this volume of biomethane used in place of natural gas will result in avoided costs for GHG credits, which SCG estimates could be worth \$130,000 per year."
 - 4.5.1 Please provide the workpapers showing the calculation of these avoided costs.

SoCalGas Response:

The attachment below provides the GHG credits for a 300 scfm biogas conditioning system for the Sustainable SoCalGas Program.



4.5.2 Are there other benefits that this program will generate for ratepayers?

SoCalGas Response:

The Sustainable SoCal program is intended to promote market development of the biogas market in support of several important State goals as discussed in the testimony GAW-90 line 24-29 and GAW-91 line 1-4. The primary benefits are consistent with the benefits to be realized in achieving those goals.

4.6 In lines 14-15 of page GAW-93, Ms. Wright states that "[*a*]s part of this strategy, SCG will evaluate additional options to maximize economic benefits for ratepayers including selling biogas as a renewable energy for electric generation."

4.6.1 Does either of SoCalGas or SDG&E intend to sell biogas to electric generators?

SoCalGas Response:

For the initial rollout of the Sustainable SoCal Program, SoCalGas is planning to minimize any transaction costs, through internal utility consumption, and avoid the need to schedule any of the pipeline quality gas into the pipeline system. Should the Sustainable SoCal Program be expanded at some point in the future, SoCalGas will evaluate all of the available options pertaining to the use of the biomethane to maximize the economic benefits for ratepayers.

4.6.2 If the answer to Question 4.6.1 is yes, under what authority may SoCalGas or SDG&E sell biogas to noncore customers such as electric generators?

SoCalGas Response:

Per the response to Question 4.6.1, SoCalGas proposes to account for biogas as company use.

4.6.3 If the answer to Question 4.6.1 is yes, how would revenues from these sales be allocated?

SoCalGas Response:

SoCalGas has not determined or proposed a revenue allocation associated with the sales of biogas in the Sustainable SoCal program.

4.6.4 If the answer to Question 4.6.1 is no, will Sempra sell this biogas through a SoCalGas/SDG&E affiliate?

SoCalGas Response:

If the sales of biogas is considered in the future, SoCalGas would make the necessary regulatory filing(s) to seek and obtain CPUC approval.

5. Beginning on page 60 of Gina Orozco-Mejia's testimony, she provides an overview of capital expenditure projects related to the distribution system. Please clarify if any of the distribution-related capital expenditure projects were included in the last general rate case and were not undertaken? If not undertaken, explain whether the projects were cancelled or delayed. Please also describe each project and provide the costs associated with each project.

SoCalGas Response:

In the 2012 general rate case, most of Gas Distribution's capital forecasts were based on historical levels of spending, such as a five-year average, five-year trend, or 2009 base year. A description of the forecast methodology used for each capital category can be found in exhibit SCG-02, pages GOM-63 – GOM-89.

For two of the capital categories, Supply Line Replacements and Pipeline Relocations – Freeway, lists of potential projects were provided as examples of what might be expected in 2010, 2011, and 2012. The forecasts for these capital categories were not based on the lists of projects, but were based instead on historical spending levels. The forecast for Supply Line Replacements was based on a historical five-year (2005 to 2009) average, and the forecast for Pipeline Relocations – Freeway was based on the 2009 adjusted recorded base.

The only capital category that was forecasted based on a known project was the 29 Palms Marine Base. A description of this project can be found in exhibit SCG-02-CWP, on page GOM-CWP-5. This is a new project that was not included in the 2008 general rate case.

6. Beginning on page 69 of Raymond K. Stanford's testimony, he provides an overview of capital expenditures related to SoCalGas' Transmission, Engineering, and Pipeline Integrity operations. Please clarify if any of these capital expenditure projects were included in the last general rate case and were not undertaken? If not undertaken, explain whether the projects were cancelled or delayed. Please also describe each project and provide the costs associated with each project.

SoCalGas Response:

A review of Capital work papers for Gas Transmission in the 2008 Test Year General Rate Case (GRC) compared to those in the 2012 Test Year GRC shows three (3) projects of the same scope and purpose that appear in both proceedings. They are as follows:

BC	Project	TY2008 GRC (2005\$, \$000)	TY2012 GRC (2009\$, \$000)	Status
314	OC Gateway	\$602	\$13,578	Project delayed. Costs are
	Grade Separations			planned in both 2011 and 2012
315	Ventura Station			Project delayed. Costs are
	Controls	\$2,035	\$1,795	planned in "prior years" and in
				2010 only
315	Newberry Station	\$4,143	\$3,383	Project delayed. Costs planned in
	Controls			2012 only

Project Descriptions:

BC314.03 - Orange County Gateway Grade Separation Projects -

To alleviate congestion in the Cities of Placentia, Fullerton and Anaheim, OCTA is planning a series of grade separations along railroad crossings throughout those cities. The plan involves undercrossings/overcrossings at up-to 12 intersections. Currently, six (6) grade separations are in the planning phase. In order for the OCTA to qualify for federal \$ (along w/ OC Measure M \$), their projects must be in construction prior to the end of the 2013 calendar year. SCG must be relocated prior to OCTA construction. This is a mandatory project due to conflicts with future roadways. The grade separations will involve the relocation of portions of 36-inch Line 1016, 36-inch Line 4000 or both.

<u>NOTE</u>: The change in cost estimates from 2008 to 2012 is due to significant changes in project scope. The 2008 value was based on an early preliminary design submitted by OCTA. The 2012 forecast is based on a more fully developed OCTA design, allowing for SoCalGas to identify all potential pipeline relocation locations."

Response to Question 6 (Continued)

BC315.02 - Upgrade to Ventura Compressor Station Controls -

Replacement of antiquated pneumatic and electro-mechanical control systems used to operate three high-pressure IC-engine-driven gas compressors and related ancillaries. Modernize station operations in advance of major degradation of station reliability. Replace components in three engine/compressor unit panels and upgrade the fuel, ignition, vibration and engine health monitoring of each unit. Replace/upgrade the control systems operating all major ancillary systems including gas, jacket water and oil cooling; and all station valves to support operations. These systems components range in age from 21-84 years old. This station was constructed in 1922, with limited compressor control system upgrades last occurring in 1989.

BC315.01 - Upgrade to Newberry Springs Compressor Station Controls -

This project consists of replacing the pneumatic and electro-mechanical control systems on (7) Clark TLA internal-combustion, engine-driven compressor units and related station auxiliary systems at Newberry Springs Compressor Station. Scope of work includes installation of new engine control panels for each unit, new station control panel and replacement of sensors, wiring, industrial communications and local controllers. New Programmable Logic Controllers, local control networks, and operator interfaces will also be installed. This work supports both station reliability and the need to upgrade basic control system infrastructure to leverage the pending installation of air-fuel, ignition and catalyst systems which are planned for in 2012 to support more stringent Environmental Protection Agency regulations governing large internal combustion engine emissions. This companion work is described in the Direct Testimony of Mr. Raymond K. Stanford under the capital work paper entitled "Gas Transmission Compressor Station Additions/Replacements RICE NESHAPS / Rule 1160 Compliance Project." The control work is presented separately because it has value above and beyond the emission reduction compliance arena -it can stand alone on reliability and related avoided cost considerations.