

DRA DATA REQUEST
DRA-SCG-037-DAO
SOCALGAS 2012 GRC – A.10-12-006
SOCALGAS RESPONSE
DATE RECEIVED: FEBRUARY 8, 2011
DATE RESPONDED: FEBRUARY 18, 2011

Exhibit Reference: SCG-5

Subject: DIMP-Driven Activities, GIS Enhancements

Please provide the following:

1. Page RKS-38 refers to the testimony of Richard D. Phillips in Exhibit SCG-13. Please identify all other GIS related costs discussed by witness Phillips and provide a citation to his testimony.

SoCalGas Response:

Mr. Phillips' testimony addresses the OpEx 20/20 program, developed as a set of enterprise-wide, technology based initiatives intended to make the Utilities more efficient and to help them meet future operational challenges. The Geographic Information System (GIS) project is one of 12 of these discrete initiatives.

The costs associated with GIS are first addressed on page RP-7, Table SCG-RP-01 of Mr. Phillips testimony. Additional GIS costs are specifically referenced in Table SCG-RP-04, page RP-9. GIS costs are also embedded in the total OpEx programs costs shown in Table SCG-RP-02, on page RP-8; Table SCG-RP-03, on page RP-9; and Table SCG-RP-05, on page RP-10. Additional references to the GIS project are found on pages RP-1A, Line 32 through RP-2A, Line 16.

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2. With regard to the GIS project discussed on pages RKS-37 to RKS-40, please provide a copy of the project scope and timeline.
 - a. What is the current status of the GIS conversion project?
 - b. When does SCG expect to complete the GIS conversion process for the entire service territory?

SoCalGas Response:

- a. The GIS conversion project is composed of 26 planned conversion delivery areas. The service territory was divided into 26 relatively equally sized “conversion areas”, to allow for a manageable and consistent flow of data to and from the vendor. Currently, SoCalGas has accepted 20 of the 26 conversion areas and is working on bringing backlog work orders posted during conversion up to date in the system.
- b. The planned completion date for the entire SoCalGas Service Territory is November 7, 2011

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3. On page RKS-39, SCG states, “A CP polygon is simply an area outlining a contiguous set of pipelines that are part of a single CP area. Currently, that work is performed manually. With the data included in GIS, electronic traces can be conducted to verify that the CP polygons are correct....” Please identify the annual expenses and tracking account for this work activity from 2005 to the present, and explain how this cost will be accounted for in TY2012 and beyond.

SoCalGas Response:

With the completion of the enterprise GIS system, and integration of CP data and maps, the Cathodic Protection staffs will be able to take advantage of the new GIS tools to perform their required activities in a more thorough and comprehensive manner. The GIS system will not eliminate any of their responsibilities just provide a better set of tools to use.

Historically, each of the approximately 23,000 CP areas is maintained on a series of paper maps by the Cathodic Protection staff at each Region. Depending on the size of the CP area, there could be from one to dozens of sheets included per area. Maintenance of these maps and associated data sheets are but one of the many routine responsibilities of the Cathodic Protection teams. As such there are no specific accounts used to track the expenses specific to this activity.

While they aren't specifically called out, the costs for these CP activities are captured and accounted for within the Cathodic Protection sections of Ms. Gina Orozco-Mejia's testimony, Exhibit SCG-02, beginning on page GOM-40 and O&M workpaper 2DG003.000. As the CP data and CP area maps are integrated into the GIS, accounting for the expenses of this work activity should not change. The Cathodic Protection personnel will still be responsible for the accuracy of the CP data and CP area depictions within the GIS.

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4. With regard to the cost estimates for “Service line location research and mapping,” as stated on page 58 of the workpapers, please provide the following:
- a. A copy of the OpEx project scope.
 - b. A copy of all calculations and documents used to determine that only 93 percent of known services could be determined using existing source map products.
 - c. When did SCG become knowledgeable that only 93% of services could be captured?
 - d. What has SCG done with the service lines that were not capturable?
 - e. A detailed explanation along with a copy of all calculations and documents used to determine that SCG will need 12 contract employees for this work activity.
 - f. A copy of all calculations used to determine that there are 500,000 unmatched services.
 - g. A copy of all calculations and documents used to determine that it will require 15 minutes to research each unmatched service line.
 - h. A copy of all calculations and documents used to determine the cost of \$100,000 per GIS skilled contract employee.

SoCalGas Response:

- a. The OpEx program is summarized and discussed in detail in the testimony of Mr. Rick Phillips, Exhibit SCG-13. It involves 12 discrete technology-based corporate initiatives, with the Geographic Information System project being one.

Briefly, the OpEx GIS project scope is to convert the SoCalGas’ Facility Operating maps (Atlas Sheets) and other ancillary sources from 34,000 Microstation CAD sources to a contiguous and networked Geographic Information System. Further discussion of the details of the GIS OpEx initiative can be found in the testimony of Mr. Rick Phillips, Exhibit SCG-13, and beginning on page RP-1A.

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Response to Question 4 (Continued)

- b. The number of services captured is monitored as conversion areas are completed. This estimate was developed when only four delivery areas had been delivered. Now that we have twenty areas converted, we show only 89% placement. Cumulative report of placed services by delivery area follows:

GIS Conversion Delivery Area	Delivery Area Services Placed	Delivery Area Services Geocoded	Delivery Area PCT of Placed Services	Delivery Area Unplaced Services	Cumulative Total of Placed Services	Cumulative Total Unplaced Services	Cum PCT of Placed Services
DA: 1	36153	37720	96%	1567	36153	1567	96%
DA: 2	79976	83086	96%	3110	116129	4677	96%
DA: 3	116087	121400	96%	5313	232216	9990	96%
DA: 4	141854	159352	89%	17498	374070	27488	93%
DA: 5	139670	160180	87%	20510	513740	47998	91%
DA: 6	139008	151413	92%	12405	652748	60403	92%
DA: 7	139390	155389	90%	15999	792138	76402	91%
DA: 8	115960	132796	87%	16836	908098	93238	91%
DA: 9	144214	162964	88%	18750	1052312	111988	90%
DA: 10	184590	199463	93%	14873	1236902	126861	91%
DA: 11	189711	198963	95%	9252	1426613	136113	91%
DA: 12	180206	192740	93%	12534	1606819	148647	92%
DA: 13	201090	219062	92%	17972	1807909	166619	92%
DA: 14	186581	196909	95%	10328	1994490	176947	92%
DA: 15	224895	251632	89%	26737	2219385	203684	92%
DA: 16	164920	232378	71%	67458	2384305	271142	90%
DA: 17	222488	240428	93%	17940	2606793	289082	90%
DA: 18	132706	204534	65%	71828	2739499	360910	88%
DA: 19	169552	194831	87%	25279	2909051	386189	88%
DA: 20	181417	193892	94%	12475	3090468	398664	89%

- c. SoCalGas was aware that there was a potential that all service locations would not be captured at the onset of the project. The goal of the current service placement scope is to capture service locations found on source maps and use automated placement methods to place as many as the technology allows. Without actually completing the conversion the number of unplaced services can only be estimated. The 93% number was derived for this estimate when the project had completed its 4th delivery area (DA:4 in table above).

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Response to Question 4 (Continued)

- d. The system of record for SoCalGas service information is CMS Service History. This system continues to be maintained and all service address and history information is retained there. In the GIS System, a report has been developed that compares the records in both systems and reports discrepancies between the systems. A service line that was not captured during the conversion process will be identified and be posted to the GIS after the conversion process is completed.
- e. A sample set of un-resolved locations were researched to determine the amount of time required to research service locations given the information in the CMS Service History records and the GIS system. On average, it was found that approximately 15 minutes per service would be required to locate and place the service information for each record. Our labor requirements were based on the following assumptions:
- Estimated number of un-captured services = 500,000
 - Time required to process each un-captured service = 0.25 hours
 - Work hours per year = 2080 hours
 - Project duration = 5 years.

Calculation:

$(500,000 \text{ un-captured services}) \times (0.25 \text{ hours work to resolve each}) = (125,000 \text{ project hours})$
 $(125,000 \text{ project hours}) \div (2080 \text{ hours per FTE-year}) = (60 \text{ FTE years})$
 $(60 \text{ FTEs}) \div (5 \text{ Years project duration}) = (12 \text{ FTEs or Contract employees}).$

- f. Based upon knowledge of company service information and typical success rates of geocoding techniques a 90% service placement rate was assumed for the calculation. Results were then rounded to the nearest 100,000 for contingency.

Calculation:

$(4.3 \text{ Million Services}) \times (0.10 \text{ Un-captured}) = (430,000 \text{ un-captured services})$
 $(430,000 \text{ un-captured services}) + (70,000 \text{ contingency planning}) = 500,000 \text{ un-captured services}$

- g. A sample set of un-resolved locations were researched to determine the amount of time required to research service locations given information in the Service History records and the GIS System. On average, it was found that approximately 15 minutes per service would be required to locate and place the service information for each record.
- h. The \$100,000 cost is derived from rates that SoCalGas currently pays similar contractors on the current GIS conversion project.