1.4. Witness Christopher Olmsted states in Workpaper SCG-26-CWP at page 193 of 871

regarding Integrated Customer Data and Analytics ("ICDA"):

ICDA is a strategic priority and enabler for multiple projects within the Customer Service Enhancement Program (CSEP). ICDA will deliver an integrated data store that enables the future vision of Southern California Gas Company's customer analytics. The analytics solution will accommodate big data volumes generated from Advanced Meter (AM) interval data and self-service transactional data. The integration of this data will provide the ability to analyze customer behavioral data, trends, and preferences during the customer evolution process (starting service, requesting service, etc.). By doing so, this will allow SCG to make operational, tactical and strategic decisions more efficiently and timely, by making data promptly accessible and available to SCG's data analysts.

- 1.4.1. Does the existing data set holding the "big data volumes generated from Advanced Meter (AM) interval data," contain data from all approximately six million core customer meters?
- 1.4.2. If the answer to the previous question is "no," please describe the data base(s) that currently hold(s) the AM interval data.
- 1.4.3. How frequently is the data base containing the AM interval data updated to incorporate new hourly reads of customer meters?
- 1.4.4. Would the frequency of updating the AM interval data change with the proposed ICDA system?
- 1.4.5. Does the data base containing the AM interval data also contain information relevant to billing customers, such as the identification of the entity that procures natural gas on behalf of the customer?
- 1.4.6. If the answer to the previous question is "no," under the proposed ICDA could the data in the AM interval data be combined through query or other program to produce a data set that included the AM interval data as well as information relevant to billing customers?
- 1.4.7. How frequently could this type of query be performed with the proposed ICDA system?

Question 1.4: - Continued

- 1.4.8. Does the data base currently containing the self-service transactional data contain all approximately six million core customers?
- 1.4.9. If the answer to the previous question is "no," please describe data base that currently holds the self-service transactional data.
- 1.4.10. Does the statement "integration of this data" mean that a single data base will contain AM interval data and self-service transactional data?
- 1.4.11. If the answer to the previous question is "no," would the AM interval data and selfservice transactional data exist in separate data bases such that the various types of information could be combined for a single customer or group of customers through the use of queries or other programs?
- 1.4.12. Is it the witness's expectation that the integrated data base containing AM interval data and self-service transactional data would be expanded in the future to include other relevant data about customers such as customer behavioral data and customer billing data?

Utility Response 1.4:

1.4.1. Response: No. Existing data set holds advanced meter interval data only for meters with AMI modules installed. Data is not available for customers who have opted out of AMI or for customer meters that have yet to be converted to AMI.

1.4.2. Response: See response to 1.4.1.

1.4.3. Response: The AM database is uploaded once per day at 5:00 PM with data from the previous calendar day.

1.4.4. Response: No changes to frequency of updating the AM interval data are expected with the proposed ICDA system.

1.4.5. Response: SoCalGas objects to this request pursuant to Rule 10.1 of the Commission's Rules of Practice and Procedure, on the grounds that the request is vague and ambiguous in its use of the language "relevant to billing customers." Subject to and without waiving the foregoing objection, SoCalGas responds as follows:

The data base containing the AM interval data does not contain information related to the identity of the entity that procures gas on behalf of our customers.

SoCalGas Response to Question 1.4 Continued

1.4.6. Response: SoCalGas objects to this request pursuant to Rule 10.1 of the Commission's Rules of Practice and Procedure, on the grounds that the request is vague and ambiguous in its use of the language "relevant to billing customers." Subject to and without waiving the foregoing objection, SoCalGas responds as follows:

Since it is not in scope to query AM interval data and other programs to produce a data set, the analysis has not been performed to determine if this can be done.

1.4.7. Response: See response in 1.4.6.

1.4.8. Response: No. The existing data set holds advanced meter interval data only for meters with AMI modules installed. Data is not available for customers who have opted out of AMI or for customer meters that have yet to be converted to AMI.

1.4.9. Response: See response to 1.4.8.

1.4.10. Response: No, however, the AM interval data and self-service transactional data can be queried together.

1.4.11. Response: See response to 1.4.10.

1.4.12. Response: Yes, SoCalGas expects to expand the integrated database to include other relevant data in the future.

1.5. Witness Christopher Olmsted states in Workpaper SCG-26-CWP at page 256 of 871:

Software changes will be made to ENVOY application. Redesign system architecture to allow for quicker response to business and regulatory changes. Envoy will be broken down into multiple component services, so that each of these services can be deployed, tweaked, and then redeployed independently without compromising the integrity of an application.

Employ computational graphic techniques for complex Envoy processes like confirmation and allocations for better understanding of the process and the results by utilizing interactive graphics for complex computational requirements.

Implement Event-driven architecture to facilitate immediate information dissemination and reactive business process execution in Envoy.

Organize Envoy business functionality into loosely coupled, separately deployable entities for flexibility and to fulfill regulatory mandates in timely manner. Individual processing unit encapsulates cluster of related functionality so that they can change efficiently in response to business needs.

Ability to quickly adapt to business and regulatory changes. Ability to provide more timely data to customers.

- 1.5.1. Will this updated ENVOY system provide any enhancement to customers' ability to manage their nominations relative to the ENVOY Next Generation proposal made on workpaper page 262?
- 1.5.2. If the answer to the previous question is "yes," please describe how the system will enhance customers' ability to manage their nominations.
- 1.5.3. Will this updated ENVOY system be capable of allowing core and/or noncore customers to see their Measurement Day burn early in the day following the metered Measurement Day?
- 1.5.4. If the answer to the previous question is "yes," please identify how early in the day following a Measurement Day core and/or noncore customers will be able to see the Measurement Day burn data
- 1.5.5. Will this updated ENVOY system be capable of notifying customers of their imbalance position for the previous Measurement Day on a daily basis?
- 1.5.6. Will this updated ENVOY system be capable of notifying customers of their cumulative imbalance positions for the month on a daily basis?

Question 1.5: - Continued

- 1.5.7. Will this updated ENVOY system provide any enhancement to customers' ability to trade their daily gas imbalances with other customers relative to the ENVOY Next Generation proposal made on workpaper page 262?
- 1.5.8. If the answer to the previous question is "yes," please describe how the system will enhance customers' ability to trade their daily imbalances.

Utility Response 1.5:

1.5.1 - 1.5.8

SoCalGas objects to this request pursuant to Rule 10.1 of the Commission's Rules of Practice and Procedure to the extent it seeks information that is neither relevant to the subject matter involved in this proceeding nor is reasonably calculated to lead to the discovery of admissible evidence for this proceeding. Subject to and without waiving this objections, SoCalGas responds as follows: The proposed ENVOY enhancements are addressing the foundational architecture only. The proposed enhancements will not include any of the attributes listed in this question.