Application No: A.15-07-014
Exhibit No.:
Witness: Paul Borkovich

Application of Southern California Gas Company (U 904 G) and San Diego Gas & Electric Company (U 902 G) for Authority to Revise their Natural Gas Rates Effective January 1, 2017 in this Triennial Cost Allocation Proceeding Phase 2	A.15-07-014 (Filed July 8, 2015)

PREPARED REBUTTAL TESTIMONY OF

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SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

April 11, 2016

I. PURPOSE

The purpose of my prepared rebuttal testimony on behalf of Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) is to explain why it is not possible to physically obtain real-time daily usage information from each core customer on the SoCalGas and SDG&E systems for the purpose of calculating Operational Flow Order (OFO) noncompliance charges.

II. IT IS NOT POSSIBLE TO PHYSICALLY OBTAIN REAL-TIME USAGE INFORMATION FROM EACH CORE CUSTOMER

The Commission determined in the Omnibus Decision that the core market must balance to a forecast rather than actual usage during OFO events because it was not physically possible to obtain real-time usage information from each core customer at that time.[1] As of April 1, 2016 this is still the case.

D.07-12-019 approved the consolidation of the SDG&E and SoCalGas core portfolios and ordered that all SoCalGas and SDG&E customers be subject to imbalance requirements and operating flow orders, with the core having the same monthly tolerance as do noncore customers.[2]

The daily measurement quantity used to calculate OFO violation charges for noncore customers with automated measurement is the daily quantity recorded as of the month-end close of the applicable month.[3] The SoCalGas Envoy system also provides daily usage information for each noncore transportation customer as recent as the previous gas day. The Envoy system does not currently provide same day usage to noncore customers and their suppliers. Noncore customers and their suppliers can install technology that allows them to monitor their gas usage

[1] D.07-12-019, mimeo., at 57.
[2] D.07-12-019, mimeo., at 107 (Findings of Fact 27-29).
[3] *See* SoCalGas Rule No. 30, Section B.1.h.

on a real-time basis, but that information and technology is not provided through Envoy. The proxy for daily measurement for noncore customers without automated metering is the customer's pre-established minimum daily quantity for a low OFO or EFO,[4] and its pre-established maximum daily quantity for High OFO events.[5] Daily usage for noncore customers whose automated meters are not functioning during an OFO event are based on estimated daily usage in accordance with Section C of SoCalGas Rule 14 when recorded daily usage information is not available.[6]

Southern California Generation Coalition (SCGC) asserts that core Balancing Agents should be subject to OFO calculations based on actual rather than forecast usage for customers having automated measurement installed. However, SCGC does not acknowledge that noncore customers with automated measurement can install technology to allow them to observe and respond to their usage on a real-time basis during the gas day, which is not possible to do for core balancing agents using the Advanced Metering Infrastructure (AMI) systems installed on the SDG&E system and under installation on the SoCalGas system.

In order to provide daily usage information currently provided to noncore customers and noncore balancing agents via Envoy, SoCalGas and SDG&E must be able to discretely measure each core customers usage from 12 AM to 12 AM PST each day, aggregate the daily usage by the respective core balancing agent, report the individual and aggregated usage to the core balancing agent each day, and store the individual and aggregated daily usage in a form retrievable by the billing system that would calculate the OFO noncompliance charges each month and charge them to the respective core balancing agent. In order to maintain consistent treatment between core and noncore customers, minimum and maximum daily quantities must

[4] *See* SoCalGas Rule No. 30, Section G.1.f.iii.
[5] *See* SoCalGas Rule No. 30, Section F.4.
[6] *See* SoCalGas Rule No. 30, Section G.1.f.ii.

also be determined for core customers without automated measurement capability installed. These amounts would have to be incorporated in the daily measurement database and be periodically updated to maintain accuracy.

SDG&E was authorized by Commission Order to install 1.4 million AMI electric meters and 900,000 AMI-enabled gas modules from 2008 through 2010.[7] The Commission cited operational benefits for installation of the gas modules that included the transformation of the meter reading process and enhanced gas leak detection. The aggregation of daily measurement data to precisely determine core gas throughput was not identified in the order as an operational benefit.

SDG&E has completed installation of its AMI-enabled gas modules. Daily meter reads are recorded that are used to calculate daily usage for individual customers who have the smart module installed on their gas meters that allows these customers to view their daily usage on the SDG&E online webpage. Systems have been developed to collect, manage and store only the daily meter reads collected from the 900,000 AMI-enabled gas meters. These systems are currently not capable of converting these daily meter reads into daily measurement quantities that can be allocated and aggregated to the respective core Balancing Agents for the purpose of calculating OFO noncompliance charges. The cost to develop and implement this enhancement to the SDG&E data measurement, collection and management systems has not been determined. And the cost to establish and maintain minimum and maximum daily quantities for customers without AMI-enabled gas meters under the Smart Meter Opt-Out have not been determined as well.

[7] D.07-04-043.

SoCalGas was later authorized by the Commission to construct and operate a stand-alone gas AMI system.[8] The project requires the installation of approximately 6 million AMI-enabled gas modules, and 2.4 million new gas meters. SoCalGas continues to work on the construction of its yet-to-be completed AMI system. The system consists of two primary components – the AMI module (MTU) attached to the gas meter and the communications network consisting of data collection units (DCU) installed across the SoCalGas service territory. As of December 31, 2015, SoCalGas has installed 4,572,006 of the required 6 million AMI modules, and 3,452 of the required 4,600 DCUs.

The Commission-cited benefits for construction of the SoCalGas AMI system included the elimination of the meter reading workforce and gas conservation benefits. While the order did cite the AMI system as providing a system-wide technology platform with the ability to expand operating benefits as new applications emerge,[9] the aggregation of daily measurement data to precisely determine daily core gas throughput for the Gas Acquisition Department and core transportation agents was not identified in the SoCalGas AMI decision as an operational benefit.

Systems have been developed to manage and store the hourly meter reads collected from all AMI-enabled gas meters. The MTU captures a meter's register read in cubic feet every hour, on the hour. Data from the MTU is batched and encrypted by the MTU every six hours; then on a random schedule between zero and six hours later, the data is communicated from the MTU to the DCU where it is then aggregated with other MTU data and transmitted to SoCalGas' back-office systems. This random transmission schedule is unique for every MTU transmission and serves to ensure an even usage of the MTU-DCU radio network. For system design purposes,

[8] D.10-04-027.
[9] *Id.* at 40.

the delay between when a given hourly read is taken by the MTU and when it is available and usable (e.g., aggregated with all other MTU reads for the same hour) in the SoCalGas back office system cannot be less than 14 hours. The delays are: six hours for the six hourly reads that are taken and batched in the MTU, plus up to six hours for data transmission, and approximately two hours for data processing at various stages. These systems are currently not capable of converting these hourly meter reads into daily measurement quantities that can be allocated and aggregated to the respective core Balancing Agents for the purpose of calculating OFO noncompliance charges. The cost to develop and implement this enhancement to the SoCalGas data management systems has not been determined. And the cost to establish and maintain minimum and maximum daily quantities for customers without AMI-enabled gas meters under the Smart Meter Opt-Out have not been determined as well.

This concludes my prepared rebuttal testimony.