

Application No: A.17-10-
Exhibit No.: _____
Witness: Jerry Stewart

Application of Southern California Gas Company
(U 904 G) and San Diego Gas & Electric Company
(U 902 G) Regarding Feasibility of Incorporating
Advanced Meter Data Into the Core Balancing
Process.

A.17-10-_____
(Filed October 2, 2017)

PREPARED DIRECT TESTIMONY OF

JERRY STEWART

ON BEHALF OF

SOUTHERN CALIFORNIA GAS COMPANY

SAN DIEGO GAS & ELECTRIC COMPANY

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

October 2, 2017

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1 **PREPARED DIRECT TESTIMONY**
2 **OF JERRY STEWART**

3 **I. PURPOSE**

4 The purpose of my prepared direct testimony on behalf of San Diego Gas & Electric
5 Company (“SDG&E”) is to present an overview of SDG&E’s Advanced Meter Infrastructure
6 (“AMI”) technology, specifically the current timing and availability of gas consumption data for
7 core customers.

8 **II. CURRENT STATE OF AMI DATA AVAILABILITY**

9 Pursuant to Commission Decision (“D.”) 07-04-043, SDG&E was authorized to install
10 approximately 1.4 million AMI-enabled, solid state electric meters and 900,000 AMI-enabled
11 gas modules. The Commission cited operational benefits for installation of the gas modules that
12 included the transformation of the meter reading process and enhanced gas leak detection.¹
13 D.07-04-043 did not describe the AMI system as being designed and used to acquire daily
14 measurement quantities that could be allocated and aggregated to the respective core Balancing
15 Agents for potentially calculating Operational Flow Order (“OFO”) noncompliance charges.

16 SDG&E’s AMI system records and collects two daily gas meter reads that are used to
17 calculate daily usage for individual customers who have an AMI-enabled module installed on
18 their gas meter. Additionally, an AMI-enabled gas module allows these customers to view their
19 daily usage on the SDG&E webpage. Back office systems have been designed and configured to
20 collect, manage, and only store the daily meter reads collected from the AMI-enabled gas meters
21 and would require substantial system upgrades to accept hourly measurements that could be
22 allocated and aggregated to the respective core Balancing Agents, or “Hour Lag Data” as that
23 term is defined the direct testimony of Mr. David Mercer.

¹ D.07-04-043, mimeo., at 2.

1 Unlike the SoCalGas Advanced Meter system described in the direct testimony of Mr.
2 Mercer, the SDG&E gas modules are not recording hourly metering data. Instead, the gas
3 modules take a self-read at their programmed “Daily Freeze Time” (“DFT”) at 15:00
4 Coordinated Universal Time (“UTC”, or 7 AM PST) and a second read taken just before the gas
5 module transmits its payload to its host electric meter at 06:00 UTC (i.e., 10 PM PST).

6 In response to an interrogation request sent by the Collection Engine (“CE”), the electric
7 meter sends a combined electric and gas data payload to the Meter Data Management System
8 (“MDMS”) sometime between midnight and 6 AM PST. The MDMS separates and imports the
9 gas and electric payloads, interprets the unit of measure, (i.e. CCF (100 cubic ft.) or MCF (1000
10 cubic ft.)), and assigns the reads to a valid service point for billing. Customer usage is converted
11 to therms in the SDG&E Customer Information System (“CIS”) at the time a customer bill is
12 generated. SDG&E processes all 900,000 gas meter reads over the course of a six hour
13 interrogation from midnight to 6 AM PST. This process includes both reads and events which
14 are critical for determining the status and health of the battery powered modules. The processed
15 data is viewable through user interfaces in the MDMS application and is transferred to the
16 CIS/billing application at 5 AM (80% of available data) and 9 AM (remaining 20% of available
17 data).

18 **III. OBTAINING HOURLY READS IS NOT POSSIBLE WITH THE CURRENTLY**
19 **INSTALLED AMI TECHNOLOGY**

20 While the testimony of Mr. Mercer describes a scenario whereby Hour Lag Data could
21 theoretically be obtained at SoCalGas through substantial system upgrades, the circumstances are
22 different for SDG&E. As noted previously, SDG&E’s meters do not currently obtain hourly
23 reads. Therefore, the speed at which the data is transferred through the system to MDMS is not
24 the only constraint – the gas modules are also not configured to record hourly reads and the

1 method in which the gas and electric reads are transferred and collected would not make it
2 possible to obtain Hour Lag Data with the currently installed AMI technology. Obtaining Hour
3 Lag Data would require a complete redeployment of SDG&E's AMI-enabled gas modules.
4 Reinstallation of new AMI enabled gas modules and additional network relays to support
5 additional network bandwidth would cost at least \$200 million. Additionally, SDG&E back
6 office systems would also have to be evaluated in relation to their ability to deliver Hour Lag
7 Data. If the Commission finds that such a solution should be prepared, SDG&E would need to
8 file a separate business plan application for approval.

9 This concludes my prepared direct testimony.

10 **VI. QUALIFICATIONS**

11 My name is Jerry Stewart. I am employed by SDG&E as the Smart Meter Operations
12 Manager. My business address is 9305 Lightwave Avenue, San Diego, California, 92123.

13 My current responsibilities include overseeing SDG&E's Smart Meter applications,
14 Smart Meter Daily Operations Team, Electric Meter Engineering, Smart Meter Technical
15 Support Team, and the Network Operations and Engineering Team. I assumed my current
16 position in 2011. I have been employed by SDG&E since 2003, and have held positions of
17 increasing responsibility in Project Management, Electric Metering Operations, and Smart Meter
18 Operations. I received a Bachelor of Science degree in Business Management, and a Master of
19 Business Administration with an emphasis in Energy Management from the University of
20 Phoenix.