

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

In The Matter of the Application of San Diego Gas  
& Electric Company (U 902 G) and Southern California  
Gas Company (U 904 G) for a Certificate of Public  
Convenience and Necessity for the Pipeline Safety &  
Reliability Project

Application 15-09-013  
(Filed September 30, 2015)

**AMENDMENT TO APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY  
(U 902 G) AND SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) FOR  
A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR  
THE PIPELINE SAFETY & RELIABILITY PROJECT**

**(VOLUME I OF III)**

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**I. INTRODUCTION**

Pursuant to Rule 1.12 of the Rules of Practice and Procedure of the California Public Utilities Commission (Commission or CPUC) and the Joint Assigned Commissioner and Administrative Law Judge's Ruling Requiring an Amended Application and Seeking Protests, Responses, and Replies issued January 22, 2016 (Ruling), San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas) (together, the Applicants) hereby submit this amendment to the above-captioned Application for a Certificate of Public Convenience and Necessity (CPCN) for the Pipeline Safety & Reliability Project (Proposed Project or PSRP). Except as stated below, the original Application, which includes the Applicants' Proponent's Environmental Assessment (PEA), is unchanged and incorporated herein by reference.

The Proposed Project involves: 1) the construction of a new, approximately 47-mile long, 36-inch diameter natural gas transmission pipeline in San Diego County and associated

facilities,<sup>1</sup> and 2) lowering the pressure of approximately 45 miles of existing Line 1600<sup>2</sup> for use as a distribution line, once the new line is constructed. The new pipeline (Line 3602) will carry natural gas from SDG&E’s existing Rainbow Metering Station near the Riverside County line to Marine Corps Air Station (MCAS) Miramar.

**II. CONTENTS OF AMENDED APPLICATION**

The Commission requires the Applicants to amend their original Application to provide the information requested in the Ruling (at 11-18). This Amended Application complies with the Ruling by providing the requisite information and is organized as follows:

<b>Information Required by Ruling</b>	<b>Ruling Reference Section/Page</b>	<b>Location of Required Information in Amended Application</b>
A needs and cost analysis which quantifies specific benefits and applies quantifiable data to define the relative costs and benefits of the Proposed Project and the range of alternatives identified in the Ruling. <sup>3</sup>	Section 2.1 at 11-14	Section III, Section IV and Volume III
A comprehensive review of data on the history of safety and reliability testing or incidences of Line 1600.	Section 2.2 at 14	Section V.A
A safety evaluation which includes a specific description of how the Proposed Project complies with state and federal safety regulations.	Section 2.2 at 14	Section V.B
A safety evaluation which includes a specific description of how the Proposed Project provides public and worker safety.	Section 2.2 at 14	Section V.C

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<sup>1</sup> These facilities will include mainline valves, metering equipment, pressure-limiting equipment, in-line inspection equipment, corrosion protection systems, and intrusion detection and leak monitoring systems.

<sup>2</sup> Line 1600 is an existing, approximately 50-mile natural gas transmission line constructed in 1949 that has not been pressure tested in accordance with modern day practices and recently-adopted regulations. In Commission Decision (D.) 14-06-007, the Commission adopted the Applicants’ Pipeline Safety Enhancement Plan (PSEP), which calls for pressure testing or replacing Line 1600 in order for it retain its transmission function.

<sup>3</sup> The Ruling also directed the Applicants to “coordinate with CPUC Energy Division’s (ED) Natural Gas and [California Environmental Quality Act (CEQA)] sections as soon as possible to discuss the scope of analysis and methodology” for the need/cost analysis. The Applicants complied by meeting with the ED Natural Gas and CEQA sections on February 9, 2016 to discuss the cost analysis methodology.

<b>Information Required by Ruling</b>	<b>Ruling Reference Section/Page</b>	<b>Location of Required Information in Amended Application</b>
A safety evaluation which includes a specific description of how the Proposed Project has adequate project management and recordkeeping procedures and processes in place.	Section 2.2 at 14-15	Section V.D
Competing Utilities	Section 2.3 at 15	Section VII.B.2
Project Maps	Section 2.3 at 15	Section VII.B.3
Statement of Proposed Rates	Section 2.3 at 16	Section VII.B.5
Proxy Statement	Section 2.3 at 16	Section VII.B.6
Ten-year historic monthly volumes through Line 1600	Section 2.3 at 16	Section VII.B.7
Ten-year historic daily and annual maximum volumes through Line 1600	Section 2.3 at 16	Section VII. B.7
Ten-year forecasted (maximum daily and annual average daily volumes in the area to be served by the Proposed Project	Section 2.3 at 16-17	Section VII. B.7
Contract availability statement for Proposed Project	Section 2.3 at 17	Section VII. B.8
Economic Feasibility and Market Requirements showing need for the Proposed Project	Section 2.3 at 17	Section VII. B.9
Out-of-State Supplier Tariff Statement	Section 2.3 at 17	Section VII. B.11

This Amended Application also contains a supplement to the PEA, set forth in Volume II hereto, which provides newly available information regarding modifications to the gas distribution system associated with lowering the pressure of Line 1600 and connecting Line 3602 with the pre-lay pipeline segment. The Applicants provide a cost analysis in Volume III of this Amended Application, as discussed in Section IV *infra*.

In support of their Application, the Applicants are concurrently serving with this Amended Application the prepared direct testimony of eleven witnesses to add further context and clarity to the issues noted in the Ruling.<sup>4</sup> The testimony of the Applicants' witnesses, and the issues they address, are summarized in Section VIII *infra*.

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<sup>4</sup> See A.15-09-013, E-Mail Ruling Granting Sempra's Request to Serve Testimony on the Same Date the Amended Application is Filed and Providing Further Guidance (February 25, 2016).

### **III. PROJECT OBJECTIVES, PURPOSE AND NEED**

The Proposed Project presents a timely and rare opportunity to cost-effectively achieve three fundamental objectives for the Applicants' integrated natural gas transmission system (Gas System) for the portion that operates within San Diego County (SDG&E system). The Proposed Project will: enhance the safety of existing Line 1600 and modernize the system with state-of-the-art materials, improve system reliability and resiliency by minimizing dependence on a single pipeline, and enhance operational flexibility to manage stress conditions by increasing system capacity.

#### **A. Enhance the Safety of Line 1600**

The Proposed Project enables the Applicants to enhance the safety of their Gas System and comply with California Public Utilities Code (PUC) Section 958 and D.11-06-017 by de-rating the maximum allowable operating pressure (MAOP) of Line 1600, a pipeline that was constructed in 1949 using non-state-of-the-art manufacturing methods, with Line 3602, a new state-of-the-art natural gas transmission pipeline.

As discussed in Section V.A *infra*, in 2011 the Applicants proactively reduced the MAOP on Line 1600 in order to increase the margin of safety on the pipeline. Since that time, the Applicants have conducted an in-line inspection of Line 1600 to validate the integrity and safety of the pipeline. As described in greater detail in Section V.A *infra*, the results of the in-line inspection, along with knowledge of the manufacturing methods and overall operating history of Line 1600, led the Applicants, as knowledgeable operators of their Gas System, to conclude that

the long-term safety of Line 1600 would be better addressed through de-rating of this legacy pipeline, rather than through a pressure test<sup>5</sup> and continued operation at transmission pressure.

Construction of a new line would enable the Applicants to reduce the operating pressure of Line 1600 to a distribution level of service, significantly enhancing the overall safety and integrity of the system; continue to serve customers directly served off Line 1600; avoid the potential customer impacts associated with pressure testing this portion of Line 1600; and enhance system reliability, resiliency, and operational flexibility.

### **B. Improve Applicants' System Reliability and Resiliency**

San Diego County is essentially completely reliant on the compressor station in the City of Moreno Valley (Moreno Compressor Station) and Line 3010,<sup>6</sup> which together provide approximately 90 percent of SDG&E's capacity. As a result, an outage on Line 3010 or at the Moreno Compressor Station would constrain available capacity in San Diego, which may lead to gas curtailments. This situation would be alleviated with the new 36-inch diameter line providing resiliency<sup>7</sup> for both Line 3010 and the Moreno Compressor Station.

The Applicants propose installation of Line 3602, a 36-inch diameter pipeline, to replace Line 1600's transmission function and enable core and noncore customers to continue to receive

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<sup>5</sup> The Applicants use the terms "pressure test" and "hydrotest" interchangeably throughout this Amended Application and accompanying prepared direct testimony.

<sup>6</sup> Line 3010 is a 30-inch diameter natural gas transmission pipeline located in SDG&E's service area. It was placed into service in 1961 and runs from the Rainbow Metering Station to the Tecolote Station.

<sup>7</sup> The term "resilience" means the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents. Press Release (dated Feb. 12, 2013) Presidential Policy Directive -- Critical Infrastructure Security and Resilience, *available at* <https://www.whitehouse.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>. The Applicants use the term "resiliency" and "redundancy" interchangeably throughout this Amended Application and accompanying prepared direct testimony because a redundant transmission pipeline enables a gas system to be resilient.

gas service in San Diego in the event of a planned or unplanned service reduction or outage of the existing 30-inch diameter Line 3010 or the Moreno Compressor Station.

### **C. Enhance Operational Flexibility to Manage Stress Conditions**

The Proposed Project increases the transmission capacity of the Gas System in San Diego County by approximately 200 million cubic feet per day (MMcfd) as a result of the new line being 36 inches in diameter; allowing the Applicants to reliably manage fluctuating peak demand of core and noncore customers, including electric generation (EG) and clean transportation. The new line would provide incremental pipeline capacity that would give flexibility to operate the SDG&E system by expanding the options available to handle stress conditions on a daily and hourly basis that place customer service at risk.

In sum, and as explained in greater detail in the Applicants' prepared direct testimony, the Proposed Project should be approved expeditiously to realize the benefits described *supra* and accomplish the shared objective of prudently enhancing the safety of the Applicants' Gas System.

## **IV. NEED/COST ANALYSIS REPORT**

The Ruling (at 11-14) requires the Applicants to provide a cost analysis that compares the relative costs and benefits of the Proposed Project and various project alternatives (Alternatives), in compliance with PUC Section 1003(d) and Rule 3.1(f). Specifically, the Ruling (at 12) requires that the analysis: 1) quantify seven categories of benefits, and 2) apply quantifiable data to define the relative costs and benefits of the Proposed Project and the Alternatives identified in the Ruling. The seven categories of benefits that must be quantified are: 1) increased safety, 2) increased reliability, 3) increased operational flexibility, 4) increased system capacity, 5)

increased ability for gas storage by line packing, 6) reduction in the price of gas for ratepayers, and 7) other benefits identified by the Applicants.

**A. Cost-Effectiveness Analysis**

To comply with this requirement, the Applicants retained Pricewaterhouse Coopers (PwC) who, with input and data from the Applicants, undertook a cost-effectiveness analysis to quantify and compare the relative costs and benefits of the Proposed Project and Alternatives. The Cost-Effectiveness Analysis is included as Volume III of this Amended Application.

Based on PwC's analysis, the most cost-effective solution that accomplishes increased safety, resiliency and operational flexibility, and the other benefits identified by the Ruling, is the Proposed Project. Specifically, the Cost-Effectiveness Analysis finds that when considering both net project costs and benefits, the Proposed Project is the most cost-effective, prudent alternative, as it provides more benefits than any of the Alternatives, except for the 42-inch diameter pipeline, which provides the same level of benefits but costs significantly more than the Proposed Project. The analysis confirms that even though the "least-cost" alternative is the Hydrotest Alternative, the incremental safety, reliability, capacity, and other benefits of the Proposed Project outweigh the differences in net costs.

**B. Additional Qualitative Benefits**

In addition to the quantitative information provided in the Cost-Effectiveness Analysis, the Applicants have also identified qualitative benefits associated with the Proposed Project that should also be considered. Those benefits include the prudence of addressing both foreseeable and unforeseeable future needs, as well as potential environmental policy benefits.

## **1. Prudence of addressing foreseeable and unforeseeable future needs**

The Proposed Project is the prudent approach for meeting the fundamental objectives for the Applicants' Gas System, which are outlined in Section III *supra*. The Proposed Project provides significant long-term benefits for the Applicants' customers in the areas of increased safety, increased reliability, increased capacity and increased operational flexibility.

In addition to meeting these present needs, however, constructing a 36-inch pipeline now avoids the need to build another pipeline in the future as well as the associated additional costs and construction impacts. Construction of a new 47-mile pipeline will necessarily result in significant costs and disruption – regardless of the diameter. Moreover, the new pipeline will be in service for decades. If a new pipeline is constructed to address present safety, reliability and capacity/operational flexibility needs, it would be imprudent *not* to size the line to meet future potential needs.

## **2. Environmental Policy Benefits**

The Proposed Project would also help the State meet both near-term and long-term environmental and petroleum reduction goals by facilitating the integration of increasing amounts of renewable energy onto the electric system and the delivery of natural gas for use by Natural Gas Vehicles (NGV), particularly in the heavy-duty vehicles sector. The Proposed Project would also reduce dependence on Moreno Compressor Station, which could result in emission reductions at that facility.

When renewable resources are not available, natural gas-fired electric generation is dispatched to provide continuous, reliable electric service. The Proposed Project is an

investment in the infrastructure necessary to integrate more renewable energy onto the electric grid, even as other technologies become more cost-effective or available.<sup>8</sup>

In addition, reducing emissions and petroleum use within the transportation sector will be critical to meet the State's air quality goals, climate change policy goals, and achieve energy independence and stability for California.<sup>9</sup> Since natural gas is not a petroleum product, the use of natural gas in transportation can play an important role in reducing the State's reliance on petroleum fuels and the Proposed Project would assist in delivering that fuel to the clean transportation sector in San Diego County.

The Proposed Project also offers potential environmental benefits at the Moreno Compressor Station. As discussed above, and in more detail in the accompanying prepared direct testimony, the additional pipeline capacity that the Proposed Project may enable the Applicants to reduce the operational hours at Moreno Compressor Station and continue to meet the current level of demand. A 36-inch pipeline operating in common with Line 3010 can support an SDG&E demand of 630 MMcfd at times without any compression required at Moreno Compressor Station. A reduction in engine utilization for compression not only reduces fuel usage and maintenance cost, but also may translate directly into emission reductions.

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<sup>8</sup> Senate Bill (SB) 350, the Clean Energy and Pollution Reduction Act of 2015, requires electric service providers in California to increase their purchase of eligible renewable energy resources from 33% to 50% under the Renewables Portfolio Standard (RPS) by December 2030. Thus, by law, the amount of renewable generation coming on-line will continue to increase.

<sup>9</sup> The California Energy Commission (CEC) recognizes that transportation accounts for nearly 40% of total California energy consumption, roughly 36% of state greenhouse gas (GHG) emissions, and petroleum accounts for more than 90% of California transportation energy sources and that "the usage of natural gas and biomethane in the transportation sector offers significant opportunities to assist California in meeting its goals for reducing the environmental impact of fuels, reducing petroleum usage, and providing cost savings to fleets." CEC, Assembly Bill (AB) 1257 Natural Gas Act Report: Strategies to Maximize the Benefits Obtained From Natural Gas as an Energy Resource, November 2015 (AB 1257 Report) at 41-42.

## **V. SAFETY EVALUATION AND COMPLIANCE ANALYSIS**

The Applicants provide the following information to address the safety- and records-related topics set forth in the Ruling.

### **A. History of Safety and Reliability Testing or Incidences of Line 1600**

The Ruling (at 14) requires the Applicants to provide a “comprehensive review of data on the history of safety and reliability testing or incidences that would provide a view of the existing state of the existing pipeline.” The sections below describe Line 1600 and provide information regarding integrity monitoring, inspection history and repair history of Line 1600.

#### **1. Overview of Line 1600**

Line 1600 was placed in service in 1949 and is primarily comprised of 16”OD, 0.250 inch wall, X-52 grade pipe that runs from the Rainbow Metering Station in Fallbrook, an unincorporated community within San Diego County, to Mission Base in the City of San Diego.<sup>10</sup> It is approximately 50 miles long, and 46.5 miles (approximately 93%) are comprised of electric flash weld (EFW) pipeline segments, and a small percentage of electric resistance welded (ERW) pipe. Additionally, approximately 33 miles (approximately 60% of the total length) of Line 1600 is comprised of High Consequence Areas (HCA). Line 1600 contains the largest mileage of flash welded pipeline in the Applicants’ Gas System.

The Applicants do not have documentation to demonstrate that Line 1600 was pressure tested when initially placed in service, and was grandfathered under federal pressure testing regulations adopted in 1970.<sup>11</sup> The historic MAOP of Line 1600 was 800 pounds per square

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<sup>10</sup> Approximately 2,500 feet (0.5 miles) of Line 1600 near Lake Hodges is constructed of 14-inch diameter, 0.250 inch nominal wall, grade X-52 seamless pipe.

<sup>11</sup> See D.11-06-017 at 5, n.3.

inch, gage (psig); however, the pressure was reduced to its current MAOP of 640 psig in 2011.<sup>12</sup> This action of lowering the MAOP to 39% specified minimum yield strength (SMYS) has provided a significant and permanent effect on the integrity risks associated with the pipeline. In-line inspection (ILI)-related repairs coupled with the reduced operating pressure on Line 1600 have already created a significant safety margin. Lowering the pressure further so that Line 1600 will operate below 20% of the SMYS will create an additional safety margin beyond that which has already been implemented.

## **2. Manufacturing-related anomalies and integrity monitoring of Line 1600**

As previously stated, Line 1600 was originally constructed with predominantly EFW pipe in 1949, and a small percentage of ERW pipe. Electric flash welding of long seams is an obsolete form of pipe manufacturing where the longitudinal edges of heat softened pipe were forced together to form a welded bond. Excess extruded material was then trimmed away, forming the classic “box-like” appearance of a flash welded seam. This process was only utilized by a single pipe manufacturer – A.O. Smith Corporation, and pipe production using flash welded seams was discontinued by 1969. Process control, material chemistry, and manufacturing-related factors all contribute to seam weld quality issues and related anomalies.

The anomalies associated with EFW pipe are similar in many respects to that of pre-1970 ERW manufacturing processes, where low frequency direct current welding of the long seam and manufacturing process issues combined to create a number of well-documented integrity concerns including hook cracking, cold welds, non-metallic inclusions, susceptibility to selective

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<sup>12</sup> This pressure reduction was implemented July 13, 2011 as part of actions taken by the Applicants in response to the safety recommendations issued by the National Transportation Safety Board on January 3, 2011. *See* Report of Southern California Gas Company (U 904 G) and San Diego Gas & Electric Company (U 902 G) on Actions Taken in Response to the National Transportation Safety Board Safety Recommendations (Apr. 15, 2011).

seam corrosion, and variety of other related issues.<sup>13</sup> Among the more common types of anomalies listed, hook cracks associated with the EFW seam welds have been observed on Line 1600.

Hook cracks (also known as upturned fiber imperfections) take their name from the distinctive “J-shaped” flaw that results when metal separations in the steel skelp<sup>14</sup> that are originally oriented parallel to the skelp surfaces are forced together resulting in flow of the material toward either the inner or outer surface of the resultant weld.<sup>15</sup> Selective seam corrosion is preferential metal loss that occurs at a weld bond line region or heat affected zone (HAZ). This phenomenon is promoted by localized galvanic differences in the weld and surrounding material, and when exposed to a corrosive environment results in the preferential attack of the weld area at an accelerated rate relative to the surrounding pipe material.<sup>16,17</sup>

Integrity monitoring of Line 1600 includes (but is not limited to) conditions such as selective seam corrosion, corrosion coincident with hook cracks, or other forms of interaction between threats such as third-party damage at otherwise stable defect locations.

### **3. Operations & Maintenance Repair History**

Since installation in 1949, 13 grind repairs and 7 repair bands associated with routine operations & maintenance (O&M) activities have been installed on Line 1600. These repairs are representative of typical maintenance for a pipeline of this size and vintage, and do not

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<sup>13</sup> J.F. Kiefner and E.B. Clark, *History of Line Pipe Manufacturing in North America* (Kiefner 1996 Report), American Society of Mechanical Engineers (ASME) CRTD-Vol. 43 (1996).

<sup>14</sup> Skelp is a strip of metal (such as wrought iron, steel) for making a hollow cylindrical piece or tube by bending it round longitudinally or helically and welding.

<sup>15</sup> J.F. Kiefner with the assistance of the Interstate Natural Gas Association of America (INGAA), *Evaluating the Stability of Manufacturing and Construction Defects in Natural Gas Pipelines, Department of Transportation Final Report 05-12R* ) (Kiefner 2007 Report), Table A-1 (Apr. 26, 2007).

<sup>16</sup> *Id.* at Table 3.

<sup>17</sup> Kiefner 1996 Report, at 5-4.

significantly impact the integrity condition of the pipeline. Review of repair and maintenance history is incorporated into the assessments conducted as part of the Transmission Integrity Management Program (TIMP). A review of those assessment activities is provided in Sections V.A.4 and V.A.5 *infra*.

#### **4. Line 1600 Integrity Assessment History**

In accordance with 49 Code of Federal Regulations (CFR) 192.921(a)(3) and 192.937(c)(1), two TIMP-related assessments have been conducted on Line 1600: External Corrosion Direct Assessment (ECDA) in 2007 and in-line inspection (ILI, also known as “smart pigging”) from 2012-2015.

##### **a. External Corrosion Direct Assessment**

The baseline assessment of pipe segments within HCA on Line 1600 was completed on February 23, 2007. Inspections were performed over approximately 20.7 miles, resulting in 11 examinations to investigate the likelihood of active external corrosion. External corrosion and third-party damage were not observed during examinations and no repairs were required.

##### **b. In-Line Inspection Phases**

TIMP reassessment of Line 1600 was conducted utilizing a series of ILI surveys from December 2012 to December 2015. All pipe segments between the launcher and receiver (*i.e.*, HCA and non-HCA segments) were inspected using an axial magnetic flux leakage (AMFL), circumferential magnetic flux leakage (CMFL also known as transverse field inspection or TFI), and geometry smart pigs. AMFL is sensitive to volumetric flaws such as metal loss caused by corrosion or third-party damage, CMFL is sensitive to some types of long seam flaws such as selective seam corrosion and hook cracking, and the geometry tools detect areas of deformation.

ILI of Line 1600 was performed in three separate phases, primarily due to the break in geometric continuity created by the reduction in pipeline diameter from 16-inch down to 14-inch diameter (near the middle of the pipeline at Lake Hodges), and back up again to 16-inch diameter for the remainder of the pipeline. The phases are numbered from 1 to 3 in the chronological order of inspection. The inspection lengths, ILI tools utilized, and dates for each inspection phase are listed in Table 1 *infra*.

**TABLE 1  
In-line Inspection Phases for Line 1600**

<b>Phase</b>	<b>Inspection Length (miles)</b>	<b>Inspection Extent</b>	<b>ILI tools</b>	<b>Assessment Date</b>
1	29.1	Rainbow Metering Station to Lake Hodges	• Axial MFL	12/5/2012
			• Geometry	
2	20.1	Lake Hodges to Mission Base	• Circumferential MFL	2/6/2013
			• Axial MFL	
3	0.5	Lake Hodges	• Geometry	12/19/2013
			• Circumferential MFL	3/20/2014
			• Axial MFL	
			• Geometry	12/10/2015

**c. In-Line Inspection Findings**

The final reports for each of the ILI phases for Line 1600 identified anomalies:<sup>18</sup> Phase 1 found 1,471; Phase 2 found 1,226; and Phase 3 found 85. Reported anomaly types and quantities for each phase are listed in Table 2 *infra*. Due to differences in tool sensitivities, the quantity of

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<sup>18</sup> Anomalies refer to unexamined pipe features which are classified as potential deviations from sound pipe material, welds, or coatings. All engineering materials contain anomalies which may or may not be detrimental to material performance.

anomalies listed for the CMFL tool for Phases 1 and 2 contain anomalies that were detected by the AMFL and geometry tools (*i.e.*, anomalies were counted twice).

**TABLE 2**  
**In-line Inspection Reported Anomalies**

Reported Anomaly Type	Phase 1		Phase 2		Phase 3*
	AMFL and Geometry	CMFL	AMFL and Geometry	CMFL	AMFL and Laser Deform.
Crack-like	0	3	0	14	0
Deformation	47	116	28	33	0
Long Seam	123	265	100	198	0
Manufacturing	18	20	134	40	6
Metal loss	343	536	148	531	79
<b>TOTAL</b>	<b>531</b>	<b>940</b>	<b>410</b>	<b>816</b>	<b>85</b>

\* The Applicants received the final report for Phase 3 in March 2016. At the time of this filing, planning to validate the ILI results was still in progress.

**d. In-Line Inspection Based Repairs**

For Phase 1 and Phase 2, a total of 62 direct examinations (excavations) of Line 1600 were conducted to validate the anomalies reported by the smart pigs. Nineteen examinations were either directly confirmed as hook cracking, or determined to likely be hook crack related. Six examinations were performed at locations where crack-like anomalies were reported, and hook cracking was confirmed in all 6 locations. Thirteen examinations were performed at locations where manufacturing related metal loss was detected at the longitudinal seam, and hook cracking was confirmed at 4 locations, and determined to be likely for the remaining 9 locations.

Findings from all direct examinations resulted in the following remediation activities:

- 10 cylindrical replacements (totaling approximately 290 feet) to remediate<sup>19</sup> 1 mechanical damage defect and mitigate<sup>20</sup> 140 flaws (approximately 77% were longitudinal seam weld and base metal flaws related to the pipe manufacturing process),
- 39 repair bands to remediate 17 defects due to both mechanical/third-party damage and 68 nearby flaws (approximately 87% were longitudinal seam weld and base metal flaws resulting of the pipe manufacturing process), and
- 84 grind repairs to mitigate workmanship and base metal flaws resulting from the construction and manufacturing process.

#### **5. Existing State of Line 1600**

Assessment data from both ILI technologies demonstrate that for the remaining anomalies in Line 1600, adequate safety margins exist for operation at its MAOP of 640 psig. 49 CFR 192.939(a) requires an operator to establish a reassessment interval for each covered segment that operates at or above 30% SMYS and prescribes methods for determining an interval based upon the safety margins calculated for remaining flaws. The maximum reassessment interval allowed under TIMP for any covered segment is 7 years, although findings may yield longer intervals as prescribed in 49 CFR 192.939(1) through 192.939(3). When a covered segment is assigned a maximum reassessment interval, it confirms that the remaining flaws are not expected to exceed acceptable safety limits prior to the next assessment. Each integrity assessment on Line 1600 has produced a maximum reassessment interval of 7 years.

While Line 1600 is safe for service, in order to continue operating at a transmission service level, it must be pressure tested or replaced as part of PSEP. As discussed in greater

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<sup>19</sup> Remediate means an operation or procedure that transforms an unacceptable condition to an acceptable condition by eliminating the causal factors of a defect.

<sup>20</sup> Mitigate means the limitation or reduction of the probability of occurrence or expected consequence for a particular event.

detail in the accompanying Prepared Direct Testimony of Travis Sera, the Proposed Project and conversion of Line 1600 to distribution service would further enhance safety.

**B. Compliance with State and Federal Safety Regulations**

The Ruling (at 14) directs the Applicants to provide “a specific description of how the proposed pipeline meets or exceeds all applicable federal and state safety regulations, rules, and requirements.” The following information demonstrates that the Proposed Project, will at a minimum, meet the applicable federal and state safety regulations, rules, and requirements by complying with applicable SDG&E and SoCalGas Gas Standards, and will, in many cases, exceed these requirements.

SDG&E’s and SoCalGas’ Gas Standards comprise the policy and procedures that govern the design, construction, operations, and maintenance of the Transmission and Distribution systems and are based on the relevant regulatory codes and ordinances. The Gas Standards are the documents that memorialize compliance requirements in company policies and procedures, and explain, in detail, how the Applicants comply with (or exceed) federal and state safety regulations, rules, and requirements. The Gas Standards are internally reviewed and updated periodically. Further, the Gas Standards are subject to periodic audit by the Commission’s Safety and Enforcement Division (SED). The Applicants provide matrices to SED during these audits that explain which Gas Standards address which federal and state safety regulations, rules, and requirements. Because the Gas Standards themselves are confidential, they are available upon request and execution of a nondisclosure agreement.

Although the Gas Standards themselves may exceed federal and state safety regulations, rules, and requirements, for the Proposed Project, the Applicants have also identified additional areas where they are proposing to exceed federal and state safety regulations, rules, and

requirements. The table in Appendix A provides a summary of where the Proposed Project will exceed the applicable state and federal safety regulations, rules, and requirements, including: (1) Commission General Order (GO) 112-F; (2) 49 CFR Part 191 and Part 192; and (3) the Occupational Safety and Health Act (OSHA).<sup>21</sup> In addition, the Applicants provide the following supplemental information regarding the applicable code requirements the Proposed Project will meet or exceed.

**1. Subpart B – Materials § 192.55 “Steel Pipe”**

The Applicants utilize greater pipe base metal and weld toughness than American Petroleum Institute (API)5L. API5L requires the steel pipe to have a minimum impact toughness of 30 ft-lbs whereas the Applicants utilize over 80 ft-lbs. Minimum weld toughness by API5L is 20 ft-lbs but the Applicants utilize a minimum of 66 ft-lbs. The Applicants also utilize a more stringent chemical composition to comply with qualified welding procedures. By exceeding the API5L requirements, the Proposed Project is designed to provide greater resistance to propagating cracks and increases the pipe’s resistance to third-party damage.

**2. Subpart C – Pipe Design § 192.111 “Design factor (F) for Steel Pipe”**

The design factor of a pipe segment establishes the safety margin against pipe yielding from its internal pressure.<sup>22</sup> For example, a pipeline in a Class 3 location is required to have a design factor of 0.5 or lower. This limits the maximum pressure in a pipe segment to half of its yield pressure, which is equivalent to having a safety factor of 2, based on yield. Table 3 *infra* illustrates the following code requirements for design factors based on the location of a pipe segment.

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<sup>21</sup> When the word “code” is used in the table in Appendix A, it means 49 CFR Part 192, which governs nearly all aspects of the design, inspection, and testing of a pipeline and its appurtenances.

<sup>22</sup> For clarity, the term yielding does not mean the pipe ruptures but rather it will be permanently deformed. Pipe has additional strength beyond its yield point.

**TABLE 3**  
Code Requirements for Design Factors

Class Location	Description of Class Location	Design Factor
1	10 or fewer buildings intended for human occupancy	0.72
2	More than 10 but fewer than 46 buildings intended for human occupancy	0.60
3	46 or more buildings intended for human occupancy, or an area where the pipeline lies within 100 yards of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period	0.50
4	Where buildings with four or more stories above ground are prevalent	0.40

The Proposed Project will have Class 1, 2, and 3 locations, but will not have any Class 4 locations. However, the Applicants will design the entire length of pipeline to meet Class 4 requirements, exceeding code requirements, in order to provide an additional safety margin and accommodate future growth and development that would cause the location to become Class 4.

### 3. Subpart D – § 192.179 “Transmission Line Valves”

The Proposed Project is designed to enable designated Class 3 and/or HCA segments to be isolated and depressurized within 30 minutes should a failure occur. This design will meet or exceed the Applicants’ PSEP for isolation and depressurization of segments of a pipeline, which already exceed code requirements.<sup>23</sup> All Main Line Valves (MLVs) installed on this Proposed Project will have capabilities for remote operation by the Applicants’ Gas Control Center and/or automatic closure, without operator intervention in the event of a significant failure. Further, valves on selected taps, crossovers and bridle assemblies will be equipped with remote control

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<sup>23</sup> A.11-11-002, Amended Testimony of Southern California Gas Company and San Diego Gas & Electric Company in Support of Proposed Natural Gas Pipeline Safety Enhancement Plan, Chapter V, Proposed Valve Enhancement Plan, dated December 2, 2011, <http://www.socalgas.com/regulatory/documents/r-11-02-019/Amended%20Testimony-12.2.11.pdf>.

capabilities to support operation of the pipeline and prevention of back-flow of gas into any main pipeline section isolated to control an unplanned gas release.

MLVs will have actuators that reside above ground or will be installed below grade within a concrete vault. The actuator will operate using gas pressure provided from the pipeline, supported by pneumatic and electronic controls. The MLVs will be 36-inch, full-opening, to allow for the passage of internal inspection devices. Each MLV location would have a blow down valve installed on each side of the MLV to allow for depressurization of either of the adjoining pipe segments. Remote Control Valves will also be installed at interconnect locations, and at the Rainbow Pressure-Limiting Station and MLV 7.<sup>24</sup>

The Proposed Project is planned to have a maximum spacing between MLVs of 5 miles unless other physical constraints requires spacing more than 5 miles apart. Five mile spacing exceeds code requirements for all locations, which specifies a maximum valve spacing of 20, 15, and 8 miles for Class 1, 2, and 3 locations, respectively. The closer valve spacing will enable a faster blow down time for all pipe sections than would be achieved by strictly adhering to the maximum distance set forth in the code.

#### **4. Subpart E – Welding of Steel in Pipelines § 192.241 “Inspection and Test of Welds”**

The current code requires non-destructive testing for pipelines constructed in Class 1 and 2 locations that are not in highway or railroad right-of-ways on 10% and 15% of welds, respectively. The Applicants will exceed the requirement by non-destructive testing of 100% of the welds and non-destructive examination by dye penetrant of branch connections for pipelines in these areas.

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<sup>24</sup> MLV 7 is located at the north end of Lake Hodges.

**5. Subpart G – General Construction Requirements for Transmission Lines and Mains § 192.317 “Protection from Hazards”**

The proposed pipeline route does not cross any active seismic faults. The pipeline does traverse two potential landslide areas. Typical mitigation for potential landslides is to slightly reroute the pipeline away from the potential landslide areas or to install the pipe at a depth below the slide plane of the landslide. Further site-specific geological investigation will be performed to select the appropriate mitigation method.

**6. Subpart J – Test Requirements § 192.505 “Strength Test Requirements for Steel Pipeline to Operate at a Hoop Stress of 30% or more of SYMS”**

The Proposed Project will traverse Class 1, 2 and 3 locations. However, the entire pipeline will be designed to the more rigorous requirements for Class 4 locations. As a result, the pipeline will have greater strength and safety margins than is required by the code for these areas.

Another safety factor to be incorporated into the design is at the pressure testing phase. The pipe is planned to be tested to more than 2.5 times the MAOP, which provides an additional 66% safety factor beyond even the more rigorous testing requirements for Class 3 and 4 locations. The pressure testing will also include a short duration pressure spike to provide an additional factor of safety.

**7. Subpart L – Operations § 192.625 “Odorization of Gas”**

The entire proposed pipeline will be odorized even though the requirement is to only odorize pipelines in Class 3 and 4 locations. Odorization of these lines will enhance the ability to detect leaks.

**8. Subpart M – Maintenance § 192.705 “Transmission Lines: Patrolling”**

Consistent with the Applicants’ PSEP Technology Plan enhancements proposal, the Proposed Project will be equipped throughout its routing with an advanced right-of-way intrusion detection/monitoring systems to provide early warning when digging, drilling, boring, cutting, compacting or where unplanned heavy vehicle operations by third parties pose a threat to pipeline integrity. The system(s) will also continuously monitor for ground movement and temperature gradients associated with an unplanned release of gas from the pipeline. This monitoring will employ the use of fiber optic cabling buried above and/or adjacent to the pipeline during construction and system monitoring stations co-located with Supervisory Control and Data Acquisition (SCADA) and control assets at up to four (4) mainline valve locations.

**9. Subpart M – Maintenance § 192.706 “Transmission Lines: Leakage Surveys”**

Consistent with the Applicants’ PSEP Technology Plan enhancements proposal, to further support the early detection and management of unplanned gas releases, gas detection sensors will be employed at key locations along the pipeline routing, including near earthquake faults and where the pipeline is routed in proximity to facilities which pose special consideration for evacuation and/or commerce impact in the event of a pipeline incident. The Applicants’ preliminary assessment is that 50 such monitors (point sensors) will be installed along the pipeline route. The systems will provide near-real time alarm notification to operations personnel when gas concentration levels indicate a potential gas release.

**10. Other Applicable Design Recommended Practices, Codes, and Standards”**

In addition to safety areas discussed above, the Applicants design their facilities in accordance with recommended practices, codes, and standards to promote safe operations. A list of other design recommended practices, codes, and standards are included in Table 4 *infra*. This

list is not all-inclusive and additional recommended practices, codes, and standards may be applied to the design as it progresses.

**TABLE 4  
Other Design Recommended Practices, Codes, and Standards**

Document Title	Title of Code Section
API RP500	Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Division 1 and Division 2
International Society of Automation (ISA) 84.00.01 P1, P2, P3	Functional Safety: Safety Instrumented Systems for the Process Industry Sector
National Fire Protection Association (NFPA) 400	Hazardous Material Code

**C. Employee and Public Safety**

The Ruling (at 14) requires the Applicants to provide a “specific description of how the proposed pipeline management procedures and processes for the construction project provide public and worker safety during all phases of the project including, but not limited to, trenching, construction/fabrication, testing, and initial operation.”

The Applicants follow California Occupational Health and Safety requirements under Title 8 of the California Code of Regulations (CCR) and have numerous procedures that provide guidelines which company personnel and their agents are required to follow when performing specific duties when installing or repairing pipeline systems, including pipeline facilities. These policies meet or exceed regulatory and local government requirements, and are in line with the industry standards. Such policies promote the integrity of the pipeline and that the duties are performed in a way that is safe for the public, company and contractor employees. Table 5 *infra* below contains examples of key safety program/guidelines areas to protect the public, employees and their agents.

**TABLE 5**  
**Key Safety Program/Guidelines**

<b>Management Procedure/Processes/Requirement</b>
Injury & Illness Prevention Program
Contracting Transmission Pipeline Construction
Contractor Safety Observation Areas
Contractor Safety Program
Employee Safety Training
General Construction Requirements Steel Transmission System
General Construction Requirements for Distribution Mains and Service Lines
Pedestrian Path of Travel and Accessibility
Pipeline/Facilities Testing
Prevention of Damage to Subsurface Installations
Qualification of New Construction Contractors
Traffic Control Plans

**1. Contractors/Contractor Employees**

Contractors working for the Applicants are required to comply with all federal, state and local laws, ordinances and regulations and ensure the safety compliance of their employees, as well as ensuring their operations do not impact the safety of the Applicants’ employees and the public. The Applicants work collaboratively to promote a safe work environment for all workers and, prior to commencement of work, contractors and the Applicants’ representative review project scope and determine specific relevant health, safety, and environmental requirements. At a minimum, contractors are required to:

- Abide by all applicable federal, state, and local environmental, health, and safety laws and regulations;
- Have a written Injury and Illness Prevention Plan (IIPP) meeting the requirements of Title 8, CCR, Section 3203; and
- Sign a Contractor Safety Notice, which ensures understanding of and adherence to all essential safety programs needed to be in place to mitigate typical safety hazards/conditions known to exist on utility projects.

## **2. Department of Transportation – Covered Functions**

If performing Department of Transportation (DOT)-covered functions, contractors must ensure that its employees adhere to all Operator Qualification requirements in CFR 49, section 192 and those set forth in SoCalGas standard 167.0100 – Operator Qualification Program. In addition, contractors must have a qualified Anti-Drug and Alcohol Misuse Prevention Program either self-administered, or administered by a qualified third party consortium. Contractors must ensure its program includes random testing of contractor’s DOT-covered employees in accordance with the DOT CFR, Title 49 CFR, Part 40 and Part 199 regulated by the Pipeline & Hazardous Materials Safety Administration (PHMSA). If contractor employees operate commercial motor vehicle(s), contractors must also have a Drug & Alcohol Misuse Prevention Program that conforms to the DOT Federal Motor Carrier Safety Administration’s 49 CFR, Part 382 regulations.

Prior to commencement of covered safety-sensitive functions, contractors will be required to register with the Applicants’ service agent, Veriforce LLC, to initiate review and approval of the contractor’s Operator Qualification program and Anti-Drug and Alcohol Misuse Prevention Program. Contractors will be required to submit requested compliance documentation to the Applicants’ service agent. Furthermore, contractors must submit to unannounced job site inspections by the Applicants’ field personnel, and allow Veriforce LLC access to property and records in accordance with Part 199 and Part 382, for comprehensive record audits of contractor’s Anti-Drug Abuse Prevention Programs and Alcohol Misuse Prevention Programs.

When requested, contractors must also provide statistical data on all drug testing conducted in accordance with Title 49, Part 40, Part 199 and/or Part 382, and per the schedule set

forth by Veriforce LLC and the company administrator. Each contractor is, in all respects, responsible for maintaining a DOT compliance program for work under DOT-covered functions.

### **3. Pre-Work Meetings**

Pre-work meetings will be held to discuss specific environmental, safety, and/or health issues for the job or facility. The following are examples of the information that will be discussed at the pre-work meetings and is required to be acknowledged in writing using the Contractor Safety Notice:

*Hazard Communication:* Specific hazards at the Applicants' facilities and procedures that have the potential to impact contractors' employees are communicated to contractors. These hazards may include, but are not limited to: asbestos, lead, confined spaces, equipment operation, energized electrical and gas systems, fall hazards, specific hazardous substances, etc.

Contractors must share and communicate hazard information covered in this meeting with all contractor employees and subcontractors before work begins. Contractors who utilize non-English speaking workers on site are required to have English speaking and reading interpreters with them at all times.

*Hazardous Materials:* Prior to the start of a job or project, contractors are required to disclose any and all hazardous materials they plan to use to the Applicants' representative who will then inform contractors if: (1) the use of the hazardous materials is allowed, (2) the use of certain hazardous materials is prohibited, or (3) the use of a certain hazardous material is not prohibited, but requires either supervision, recordkeeping, reporting, or the use of safety procedures.

*Prohibited Materials:* No materials containing detectable amounts of asbestos may be used for construction or otherwise used at the Applicants' sites. No Proposition 65 listed

chemicals may be introduced at the Applicants'-controlled sites unless the contractor provides adequate warning to the Applicants and other persons who may be exposed.

*Handling and Disposal of Contractor's Hazardous Materials:* Contractors must ensure proper handling and disposal of hazardous materials brought on-site, including primary and secondary chemical labeling, location of Material Safety Data Sheets, disposal, and recycling.

*Handling and Disposal of Hazardous Waste:* When waste is generated during construction activities, contractors must contact the Applicants' representative or Field Environmental Specialist. All utility generated waste must be disposed of at an approved SoCalGas/SDG&E disposal site.

*Specific safety rules and requirements:* To ensure safe work practices are followed according to this Contractor Safety Program and any SoCalGas/SDG&E practices that are required by contract specific safety rules and requirements are discussed with contractors.

*Reporting of Incidents:* Contractors are required to immediately and properly report any fires, hazardous situations, hazardous substance releases, incidents, OSHA recordable injuries and illnesses, injury or property damage involving the public.

*Enforcement and Reporting of Post-Accident Testing:* Proper review, reporting and enforcement of drug and/or alcohol testing of incidents meeting the post-accident criteria of CFR Title 49, Part 40, Part 199 and Part 382.

*Emergency Response:* Emergency response such as evacuation alarms, routes, assembly areas, and interaction with emergency services will be discussed.

*Stop the Job (STJ) Process:* If an unsafe work condition or activity is identified, anyone working onsite has the authority to stop the job. All work will immediately cease once the STJ is declared and will not begin again until site supervision and the involved Contractor(s) have done

a thorough investigation, remediated the unsafe situation, determined it is safe and communicated this to affected employees.

#### **4. Non-Compliance with Safety and Health Requirements**

The Applicants reserve the right to intervene on issues of imminent danger anytime throughout any construction project. Quality assurance is achieved through observations of the work and routine monitoring. While enforcement of a contractor's safety program is the responsibility of the contractor, the Applicants identify hazards and unsafe actions and communicate them to the contractor's superintendent or safety representative, when noted through routine monitoring of the construction activities or when reported by others. These observations and discussions with the contractor's personnel are documented and filed with the contractor safety notice. The Applicants' representative is responsible for holding contractors accountable for quality and safety relative to the contract.

The Applicants reserve the right to take action which includes warnings up to termination of contract in the event a contractor has any non-compliance with environmental, safety and health requirements or observed safety hazards.

#### **5. The Applicants' Employees**

Employees follow the IIPP of each individual company. At SDG&E this can be found in the Employee Safety Handbook. At SoCalGas it is found in section one of the IIPP Manual. Each contains the required seven elements of Title 8 §3203 along with action steps to implement each element.

Beyond the IIPP, additional safety direction is provided within the Employee Safety Handbook (SDG&E) and the IIPP Manual (SoCalGas). Included therein are Employee Responsibilities, Supervisor Responsibilities, Personal Protective Equipment, Basic Safety

Rules, Codes of Safe Practices, and Incident Reporting (injuries, near misses/close calls, and motor vehicle incidents). Additionally, safety procedures are included where necessary in SoCalGas/SDG&E policies and procedures.

## **6. Employee Training**

The Applicants are committed to its employees performing their job duties safely and in compliance with applicable safety laws, rules, regulations, permit requirements, company standards, and the IIPP. Providing and documenting employee safety training is an integral part of the company's safety compliance efforts.

All SoCalGas/SDG&E employees who perform job duties that are governed by federal, state, and local safety regulations, statutes, company and corporate policies, and the IIPP must complete all applicable mandatory safety training courses. In some cases, employees may not be allowed to perform affected job duties prior to completion of mandatory training. Supervisors are responsible for ensuring that their employees receive all applicable mandatory safety training. When an employee is unable to attend training on the scheduled date, arrangements must be made for the employee to complete the training. Employees who miss the mandatory safety training are not qualified to perform tasks covered by the training until training is completed.

### **D. Project Management and Recordkeeping**

The Ruling (at 14-15) request Applicants to provide a “specific description of adequate management procedures and processes for fully documenting, and retaining records and documents related to, initial design, materials procurement, employee and contractor operator qualifications, construction, testing, and initial operation.”

The Applicants have established policies and procedures to support a comprehensive management system for traceable, verifiable and complete recordkeeping for all aspects of a project such as initiation, scoping, engineering design and material procurement, construction, strength testing and close-out. The Applicants summarize the primary policies in Table 5 below which includes, but is not limited to, standards for project record management and operator qualifications.

<b>TABLE 5</b>
<b>Management Procedure/Processes</b>
Records Management and Retention
Map Maintenance for High Pressure Pipelines
Documentation Traceability of Pipeline Materials
As-Built Surveys for Construction of High Pressure Pipelines and Pipeline Facilities
Data Gathering and Integration
Operator Qualification Program

The Applicants’ record management system is a process of gathering, organizing, reviewing, storing and sharing documents, enhancing the ability to collaborate, retrieve, and share information across the project team and, eventually, for the life of the asset. During document generation there is version control and various approval processes, including quality assurance and quality control (QA/QC) before a document is considered issued for review, approval and/or construction. A similar QA/QC process is implemented post-construction in order to incorporate construction drawing redlines and produce the final completion drawings.

**1. Project Management**

The Applicants utilize hardcopy and electronic records systems that document a project’s scope development, construction and commissioning, and close-out. The Applicants’ record management system includes software systems specifically designed to manage and retain project records for the life of the asset. The Applicants’ systems include tools such as

SharePoint, Computer Aided Design (CAD)/Geographic Information System (GIS), Pipeline Document Management System (PDMS), Network Servers and SAP modules and other company databases that link to company-defined record systems and databases. The Applicants' project record management systems also include various business controls that manage the financial, contractual and general project management governance that support the project.

## **2. Engineering and Design**

Typically the format for document distribution is in electronic format and within a CAD system. The Applicants' engineering and design process includes drawing and design specifications, GIS, mapping and surveying standards, QA/QC prior to issuance and an approval process before a design is released to construction. Post-construction Global Position System (GPS) data is validated to be transferred into the Applicants' GIS system and construction redlines are integrated into the final completion drawings. An additional QA/QC is completed to assure the GIS system matches the final completion drawings.

## **3. Material Procurement**

Material procurement is a function of the Applicants' supply management process that includes checkpoints for engineering approval of manufacturer specifications and material testing requirements. Material procurement includes site surveillance at the manufacturer or vendor's initiation point in order to witness identified key material generation activities by certified inspectors representing the Applicants.

Material traceability documentation, such as the Mill Test Report or Certificate of Compliance, is managed through the Applicants' inventory system, where the material is verified at construction staging and at installation. Material inspection can be performed by gas engineering at the construction staging location or at the SoCalGas inspection department at the

Pico Rivera storeroom. Interim material traceability documentation is verified at this point, as well as various other control points before and after construction staging and installation. Additional verification is performed during fabrication, prior to installation and during the project close-out process.

#### **4. Construction Management**

The Applicants manage field changes of construction drawings through the appropriate approval process, when required, in the format of change orders, Request for Information, engineering review and approval and other identified processes. GIS mapping and surveying occurs during construction and the GPS data is reconciled with field changes, engineering re-designs, inspector drawing redlines and other approved field changes.

Construction inspectors document field changes in daily inspection reports and redline changes on the construction drawings. The construction inspector also verifies operator qualifications for contractors through hardcopy cards or the Applicants' enterprise system. A construction inspector documents material installed, monitors and inspects the installation process, including, but not limited to, fabrication, non-destructive examinations, strength testing and field coating.

#### **5. Project Turnover and Close-Out**

The project close-out process includes the reconciliation of any approved engineering revisions, field changes and final surveying data which will lead to the final completion drawings and upload of data into the Applicants' enterprise systems for records management. Pipeline asset and related records are retained for the life of the asset within the company-defined asset management system. Turnover of project records includes initiation of operating and maintenance service orders of installed pipeline and other compliance activities. Project close-

out includes a QA/QC of all defined project compliance records that will be retained through the life of the asset.

## **VI. STATUTORY REQUIREMENTS**

This Application is made pursuant to PUC Section 1001 *et seq.*, CEQA, the Commission's Rules of Practice and Procedure, and prior decisions, orders and resolutions of this Commission.

### **A. Public Utilities Code Section 1001**

Investor-owned utilities may choose, but are not required, to request a certificate authorizing the new construction of certain major gas line facilities within territory already served by it, as specified under PUC Sections 1001, 1002, 1002.5, 1003.5 and 1004 *et seq.*, and Rules 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, and 3.2 *et al.* of the Commission's Rules.<sup>25</sup>

On September 30, 2015, the Applicants filed the above-captioned Application pursuant to the Commission's Rules to secure a CPCN authorizing construction within territory already served by SDG&E of a new 36-inch-diameter intrastate natural gas pipeline segment (Proposed Project) estimated to cost greater than fifty million dollars (\$50,000,000).<sup>26</sup> A PEA, which addresses each of the CEQA factors for the Proposed Project, was submitted with the Application as required by Commission Rule 2.4.

The Commission reviews such certificate for construction or extension of facilities applications under two concurrent processes: (1) an environmental review pursuant to the

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<sup>25</sup> PUC 1001 provides that "[t]his article shall not be construed to require any such corporation to secure such certificate for an extension within any city or city and county within which it has theretofore lawfully commenced operations, or for an extension into territory either within or without a city or city and county contiguous to its street railroad, or line, plant, or system, and not theretofore served by a public utility of like character, or for an extension within or to territory already served by it, necessary in the ordinary course of its business."

<sup>26</sup> Intrastate natural gas pipelines operate within State borders and link natural gas producers to local markets and to the interstate pipeline network.

CEQA; and (2) consideration of the State’s need to provide sufficient and competitively-priced natural gas supplies for both present and anticipated future residential, industrial, commercial, and utility demand pursuant to PUC Sections 1001 *et seq.*

**B. Public Utilities Code Section 1002**

PUC Section 1002(a) provides that “[t]he Commission, as a basis for granting any certificate pursuant to section 1001 shall give consideration to the following factors: 1) community values, 2) recreational and park areas, 3) historical and aesthetic value, and 4) influence on the environment...” As stated in the original Application (at 8), the Proposed Project has been designed with consideration to these factors.

In the PEA, Applicants acknowledged that the Commission will independently address the potential environmental impacts of the Proposed Project in the course of its review of the Application and may modify the Proposed Project to comply with CEQA.<sup>27</sup> The Applicants further recognized that the proposed construction will necessarily result in temporary disruptions to the communities located along the pipeline route, even after all feasible mitigation measures are incorporated into the Proposed Project, and, for this reason:

Applicants propose[d] to work with communities and the CPUC to identify public purpose improvements and benefits that can be reasonably incorporated into the Proposed Project to ensure adequate consideration of “community values.” To the extent feasible, reasonable, and prudent in the view of the CPUC, the Applicants will work with the CPUC and the public to identify potential community enhancements that can be completed within the Proposed Project area that are above and beyond the mitigation measures required by CEQA.<sup>28</sup>

To date, no specific public purpose improvements or benefits have been identified.

Applicants anticipate, however, that potential community enhancements will be identified during

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<sup>27</sup> PEA Chapter 2, Project Purpose and Need/Project Objectives, page 2-8.

<sup>28</sup> PEA Chapter 2, Project Purpose and Need/Project Objectives, pages 2-8 to 2-9.

the public review process and that such enhancements, to the extent feasible, reasonable and prudent, will be provided in connection with the Proposed Project. Therefore, the Proposed Project will likely provide benefits to the locally impacted communities that cannot be identified, much less quantified, at this time.

**C. Public Utilities Code Section 1003(d)**

PUC Section 1003(d) requires applicants for a CPCN to include in their applications a cost analysis comparing the project with any feasible alternative sources of power. The Ruling (at 11-14) also directs the Applicants to provide this information. The Applicants retained PwC who, with input and data from the Applicants, prepared a cost-effectiveness analysis to quantify and compare the relative costs and benefits of the Proposed Project and Alternatives. The Cost-Effectiveness Analysis is set forth in Volume III of this Amended Application.

**D. Public Utilities Code Section 1005.5**

Whenever the Commission issues to a gas corporation a certificate authorizing the new construction of any addition to or extension of the corporation's plant estimated to cost greater than fifty million dollars (\$50,000,000), the Commission shall specify in the certificate a maximum cost determined to be reasonable and prudent for the facility. The Commission shall determine the maximum reasonable and prudent cost using an estimate of the anticipated construction cost, taking into consideration the design of the project, the expected duration of construction, an estimate of the effects of economic inflation, and any known engineering difficulties associated with the project.

PUC Section 1005.5 requires applicants for a CPCN to include in their applications cost estimates for the cost cap. Please refer to Section VII.B.4 *infra*.

## **VII. PROCEDURAL REQUIREMENTS**

### **A. Rule 2.3 – Financial Statement**

In compliance with Rule 2.3, the original Application provided the then-most recent Financial Statements for SDG&E and SoCalGas. In this Amended Application, the Applicants provide the current Financial Statements for SDG&E and SoCalGas for the nine-month period ending September 30, 2015, which are attached as Appendix B and Appendix C, respectively.

### **B. Rule 3.1 – Construction or Extension of Facilities**

The original Application provided information in accordance with Rule 3.1(a) – (i) of the Commission’s Rules of Practice and Procedure, which is incorporated herein by reference. The Ruling (at 15-18) requires the Applicants to include in this Amended Application, information pertaining to Rules 3.1(b), 3.1(c), 3.1(h), 3.1(i), 3.1(k)(1)(A), 3.1(k)(1)(B), 3.1(k)(2), 3.1(k)(3)(A), 3.1(k)(3)(B) and 3.1(o). In addition, the Ruling (at 11-12) directs the Applicants to provide information to comply with Rules 3.1(e) and 3.1(f). As such, the Applicants provide the following information.

#### **1. Rule 3.1(b) – Competing Utilities**

Commission Rule 3.1(b) requires applicants for a CPCN to include in their applications “The names and addresses of all utilities, corporations, persons or other entities, whether publicly or privately operated, with which the proposed construction is likely to compete, and of the cities or counties within which service will be rendered in the exercise of the requested certificate.” As stated in the original Application (at 22-23), the Proposed Project will be built entirely within the service territory of SDG&E, and is not intended to compete with the projects of any other entity. Further, the requested certification is to enhance gas service within SDG&E’s service territory (which consists of San Diego County, including but not necessarily limited to, the Cities

of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach and Vista).

The intent of the Proposed Project is to provide more reliable backbone and local transmission service to SDG&E customers under SoCalGas Rate Schedule G-Backbone Transportation Service (BTS) and the SDG&E Rate Schedules for core and noncore service. The Proposed Project is not an export pipeline project and as such, it does not compete with other utilities. A firm service export project to Mexico would be a firm off-system delivery (OSD) project subject to Commission-specified requirements in SoCalGas Rate Schedule G-OSD and D.11-03-029.

## **2. Rule 3.1(c) – Project Maps**

Commission Rule 3.1(c) requires an applicant for a CPCN to include in its application “A map of suitable scale showing the location or route of the proposed construction or extension, and its relation to other public utilities, corporations, persons, or entities with which the same is likely to compete.”

As stated in the previous section and in the original Application (at 23), the Proposed Project is not intended to compete with the projects of any other entity. Further, the intent of the Proposed Project is to provide more reliable backbone and local transmission service to SDG&E customers and is not designed to be a firm export pipeline project and as such, it does not compete with other utilities. Maps showing the locations under consideration for the Proposed Project are included in the Volume II of the original Application, PEA, Chapter 3.0 – Project Description, Section 3.0, Figures 3-1 and 3-2, at pages 3-3 and 3-7, and Attachment 3-A.

**3. Rule 3.1(e) – Public Convenience and Necessity**

Commission Rule 3.1(e) requires an applicant for a CPCN to include in its application “Facts showing that public convenience and necessity require, or will require, the proposed construction or extension, and its operation.”

Please refer to the original Application, Sections III.A and III.B. A more detailed discussion of the public convenience and necessity for the Proposed Project may be found at Volume II of the original Application, PEA, Chapter 2.0 – Purpose and Need. In addition, see Section III *supra* and a more detailed discussion in the accompanying prepared direct testimony.

**4. Rule 3.1(f) – Estimated Cost**

Commission Rule 3.1(f) requires an applicant for a CPCN to include in its application “A statement detailing the estimated cost of the proposed construction or extension and the estimated annual costs, both fixed and operating associated therewith.”

A table of estimated cost for the Proposed Project is found in Volume II of the original Application, PEA, Chapter 3.0 – Project Description, Section 3.8, Table 3-7 at page 3-67, as supplemented by Volume II of this Amended Application, PEA Supplement, Chapter 2 - Project Description Supplement. Further, Volume III of this Amended Application provides a more detailed discussion of estimated cost of the Proposed Project and Alternatives.

**5. Rule 3.1(h) – Proposed Rates**

Commission Rule 3.1(h) requires an application for a CPCN to include “A statement of the proposed rates to be charged for service to be rendered by means of such construction or extension.” In addition, the Ruling (at 16) requires the Applicants to include in this statement “a scenario to include a potentially larger increase associated with the North-South application, A.13-12-013.”

As stated in the original Application (at 25), the Applicants propose to allocate the incremental gas transportation revenue requirements associated with the Proposed Project to its BTS rates.<sup>29</sup> SDG&E and SoCalGas' retail rates are found in their respective currently-effective tariffs approved by this Commission. Schedule No. G-BTS can be viewed electronically by accessing <http://www.socalgas.com/regulatory/tariffs/tm2/pdf/G-BTS.pdf>. In compliance with the Ruling, Appendix D provides tables showing the impacts of combining the revenue from the North-South proceeding with the instant proceeding. Table 1 addresses the revenue and rate impact on the BTS rate and Table 2 focuses on the monthly bill impact.

#### **6. Rule 3.1(i) – Proxy Statement**

Commission Rule 3.1(i) requires an applicant for a CPCN to include in its application “a copy of the latest proxy statement sent to stockholders by it or its parent company containing the information required by the rules of the SEC if not previously filed with the Commission.”

A copy of the most recent proxy statement sent to all shareholders of SDG&E's parent company, Sempra Energy, dated March 26, 2015, was mailed to the Commission on April 28, 2015, and is incorporated herein by reference.

A copy of SoCalGas' most recent proxy statement, dated April 24, 2015, was provided to the Commission on April 28, 2015, and is incorporated herein by reference.

#### **7. Rule 3.1(k)(1)(A) – Volumes Statement**

Commission Rule 3.1(k)(1)(A) requires a gas utility to include in its application “[a] statement of the volumes to be transported via the proposed pipeline.” Further, the Ruling (at 16-17) directs Applicants to provide:

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<sup>29</sup> BTS is available on both a firm and interruptible basis. Firm service is available under either a Straight Fixed Variable (*i.e.*, 100% reservation) charge or Modified Fixed Variable (*i.e.*, part reservation, part volumetric) charge. Interruptible service charges are 100% volumetric.

Ten-Year forecasted (maximum daily and annual average daily volumes in the area to be served by proposed Line 3602, including information on the quality of gas and broken down by customer type (e.g., core, non-core commercial and industrial, and noncore electric generation)<sup>30</sup>

The Proposed Project will operate as part of the Applicants’ integrated gas transmission system. SDG&E does not forecast throughput for individual pipelines on its system. SDG&E plans its gas transmission system to meet the Commission-mandated design standards for core service (1-in-35 year peak day) and firm noncore service (1-in-10 year cold day). The most recent demand forecasts are presented below. It is important to note that demand varies throughout the operating day, both for core customers as the temperature changes, and for noncore customers, such as electric generators responding to increased demand for electricity. Peak hour demand ranges from 1.2 to 1.7 times the daily demand.

**SDG&E Long-Term Demand Forecast**

Operating Year	1-in-35 Year Cold Day Demand (MMCFD)				1-in-10 Year Cold Day Demand <sup>31</sup> (MMCFD)			
	Core	Noncore C&I	EG	Total	Core	Noncore C&I	EG	Total
2015/16	366	0	0	366	347	61	199	607
2016/17	370	0	0	370	350	62	165	577
2017/18	372	0	0	372	352	62	168	582
2018/19	373	0	0	373	353	63	173	589
2019/20	374	0	0	374	353	63	173	589
2020/21	373	0	0	373	352	63	175	590
2021/22	373	0	0	373	353	62	175	590
2022/23	374	0	0	374	353	62	175	590
2023/24	374	0	0	374	353	62	175	590
2024/25	374	0	0	374	354	62	174	589
2025/26	376	0	0	376	356	61	174	591
2030/31	389	0	0	389	368	61	174	603
2035/36	404	0	0	404	382	61	174	617

<sup>30</sup> The Applicants believe this is a typographical error and that the Commission intended to request information regarding the “quantity” of gas as opposed to the “quality” of gas. As such, the Applicants provide its forecast of the *quantity* of gas to be served by proposed Line 3602.

<sup>31</sup> The gas demand forecasts for noncore C&I and EG customer classes do not distinguish between firm and interruptible noncore service. Thus, for the purposes of this assessment, SDG&E assumed that all future peak C&I and EG loads elected firm noncore service.

Annual average forecast data can be found in the 2014 California Gas Report, which is available at <http://www.sdge.com/sites/default/files/documents/2061011959/2014-cgr.pdf?nid=16736>.

The Ruling (at 16) also requires the Applicants to provide the “ten-year historic monthly volumes through Line 1600” and the “ten-year historic daily and annual maximum volumes through Line 1600.” SDG&E does not measure throughput by individual pipeline on its system. System throughput measured at Rainbow Metering Station showing the combined daily throughput for Line 1600 and Line 3010, for the 2011-2014 time period, is provided in Appendix E. Data prior to May 2011 is unavailable.

#### **8. Rule 3.1(k)(1)(B) – Contract Availability Statement**

Commission Rule 3.1(k)(1)(B) requires a gas utility to include in its application “[a] statement that copies of summaries of all contracts for delivery and receipt of gas to be transported via the proposed pipeline and information on the reserves and delivery life pertaining thereto will be made available for inspection on a confidential basis by the Commission or other authorized employee thereof. *The terms and provisions of individual contracts for gas supply and data as to reserves or delivery life of individual gas suppliers shall not be required to be stated in the application or in the record of the proceedings, and if disclosed to the Commission or to any officer or employee of the Commission on a confidential basis as herein provided, shall not be made public or be open to public inspection.*” [Emphasis Added]

Copies of summaries of all contracts for delivery and receipt of gas currently transported via Line 1600 and/or to be transported via the proposed Line 3602 are/will be available for inspection by the Commission on a confidential basis.

**9. Rule 3.1(k)(2) – Economic Feasibility Summary**

Commission Rule 3.1(k)(2) requires a gas utility to include in its application “[a] summary of the economic feasibility, the market requirements and other information showing the need for the new pipeline and supply.”

Please see Volume III of this Amended Application, PEA Chapter 2 - Purpose and Need, and in greater detail in the accompanying prepared direct testimony.

**10. Rule 3.1(k)(3)(A) – Out-Of-State Supplier Tariff Statement**

Commission Rule 3.1(k)(3)(A) requires a gas utility to include in its application “Where the gas to be transported through the pipeline is to be purchased by the applicant from, or transported by the applicant for, an out-of-state supplier:

(A) A copy of the proposed tariff under which the gas will be purchased or transported.”

The Proposed Project is an intrastate pipeline within territory served by SDG&E. Service will be provided to SDG&E customers under the current rate schedules in effect and available to their customers. Gas transported through the proposed Line 3602 would be received from the Applicants’ backbone at Rainbow Metering Station. All but a small percentage of the gas transported on the Applicants’ backbone system, is received from upstream interstate pipelines and Pacific Gas and Electric Company that currently transport gas to the SoCalGas system under their existing tariffs. No expansion of these pipelines or the SoCalGas backbone system upstream of Rainbow Station is required for the Proposed Project.

Copies of the existing tariffs of the upstream interstate pipelines and Pacific Gas and Electric Company can be viewed electronically by accessing links provided in Appendix F.

**11. Rule 3.1(k)(3)(B) – Out-Of-State Supplier Annual Report Statement**

Commission Rule 3.1(k)(3)(B) requires a gas utility to include in its application “Where the gas to be transported through the pipeline is to be purchased by the applicant from, or transported by the applicant for, an out-of-state supplier:

(B) A statement that the out-of-state pipeline supplier has agreed: (1) to file with this Commission copies of annual reports which it files with the Federal Power Commission; (2) to file with this Commission monthly statements of its revenues, expenses and rate base components; (3) to file with this Commission copies of its tariffs as filed from time to time with the Federal Power Commission; and (4) at all times to permit this Commission or its staff reasonable opportunity for field inspection of facilities and examination of books and records, plus assurance that reasonable requests for operating information otherwise prepared in the course of business will be supplied in connection with any proceeding before the Federal Power Commission.”

Please refer to Section VII.B.10 *supra*. The out-of-state upstream pipeline suppliers listed in Appendix F have filed their tariffs with the Federal Energy Regulatory Commission (formerly, the Federal Power Commission). The status of pre-existing regulatory obligations between these upstream pipeline suppliers with this Commission remains unchanged by the Proposed Project, as they currently transport gas to the Applicants integrated gas system under their existing approved tariffs and relevant service agreements with SoCalGas.

**12. Rule 3.1(o) – Additional Information and Data**

Commission Rule 3.1(o) requires a gas utility to include in its application “[s]uch additional information and data as may be necessary to a full understanding of the situation.”

Please see Section IV.B *supra*.

**C. Rule 3.2(a) – (d) – Authority to Increase Rates**

Rule 2.1(d) requires all applications to comply with “[s]uch additional information as may be required by the Commission in a particular proceeding.” Commission Rule 3.2 contains some additional requirements for applications for authority to increase rates, or to implement changes that would result in increased rates. Certain requirements of Rule 3.2 are duplicative of the requirements of Rule 3.1; therefore, duplicative information which is more precisely identified and discussed in Section VII.B *supra* has been intentionally omitted from this section. The original Application provided information in accordance with Rule 3.2(a) – (d) of the Commission’s Rules of Practice and Procedure, which is incorporated herein by reference unless specifically updated in the sections below.

**1. Rule 3.2(a)(1) – Balance Sheet and Income Statement**

The most recent Balance Sheets and Income Statements for SDG&E and SoCalGas for the nine-month period ending September 30, 2015 are attached to this Application as Appendix G and Appendix H, respectively.

**2. Rule 3.2(a)(2) – Statement of Effective Rates**

SDG&E and SoCalGas’ retail rates are found in their respective currently-effective tariffs approved by this Commission. A statement of all of SDG&E and SoCalGas’ presently effective rates can be viewed electronically or printed by accessing the referenced hyperlinks <http://www.sdge.com/rates-regulations/current-and-effective-tariffs/current-and-effective-tariffs> and <http://www.socalgas.com/regulatory/tariffs/tariffs-rates.shtml> respectively.

**3. Rule 3.2(a)(3) – Statement of Proposed Increases**

A statement of proposed increases that will result from this Amended Application are described in Appendix I and Appendix J for SDG&E and SoCalGas, respectively.

**4. Rule 3.2(a)(4) – Description of Property and Equipment**

SDG&E’s original cost of utility plant, together with the related reserves for depreciation and amortization, for the nine-month period ending September 30, 2015, is included in Appendix K. SoCalGas’ original cost of utility plant, together with the related reserves for depreciation and amortization, for the nine-month period ending September 30, 2015, is included in Appendix L.

**5. Rule 3.2(a)(5) and (6) – Summary of Earnings**

The summary of earnings for SDG&E and SoCalGas are included in Appendix M and Appendix N, respectively.

**6. Rule 3.2.(a)(8) – Proxy Statement**

*See* Section VII.B.6 *supra*.

**7. Rule 3.2(d) – Bill Insert Notice**

In compliance with Rule 3.2(d) of the Commission’s Rules of Practice and Procedure, SDG&E and SoCalGas, within 45 days of the filing of this Amended Application, will provide notice of this Amended Application to all of its customers along with the regular bills sent to those customers that will generally describe the proposed revenue requirement changes addressed in this Amended Application.

**VIII. SUMMARY OF PREPARED DIRECT TESTIMONY**

The testimony of the Applicants’ witnesses, and the issues they address, are summarized below and incorporated by reference herein:

**A. Mr. Douglas Schneider**

Mr. Schneider explains why, from a policy standpoint, the Proposed Project should be approved by the Commission. Mr. Schneider presents an overview of the Applicants’ PSEP and

explains why the Proposed Project offers the best approach to comply with the State's test or replace requirements and enhance safety beyond minimal compliance. In addition, Mr. Schneider concisely describes the Applicants' integrated gas system and gives a brief history of Line 1600. Mr. Schneider then explains from a policy perspective how the Proposed Project enhances safety and provides beneficial system reliability/resiliency, enhances operational flexibility, and supports some of the State's environmental goals.

**B. Mr. Travis Sera**

Mr. Sera explains why replacing the existing transmission function of Line 1600 and converting the pipeline to distribution service, rather than pressure testing, would provide a greater margin of safety and overall risk reduction. Mr. Sera expands on the discussion in Section V.A *supra*, regarding the current fitness of Line 1600 for service. He describes the threat categories and manufacturing-related anomalies on Line 1600 and discusses the results of the in-line inspection of Line 1600.

In his testimony, Mr. Sera also sets forth the risk-based methodology for testing or replacing Line 1600. He discusses the pipeline integrity risk, potential impact radius, long seam flaws, benefits of pressure reduction and limitations of pressure testing.

**C. Mr. David Bisi**

Mr. Bisi describes the Applicants' integrated natural gas transmission system and the portion that operates within San Diego County. Mr. Bisi details how the Proposed Project improves the reliability/resiliency and operational flexibility of SDG&E's system. Further, Mr. Bisi notes that elevated electric generation demand, which is not reflected in long-term demand forecasting, may cause potential capacity issues in San Diego. He also explains how system capacity could be impacted if Line 1600 was pressure tested.

**D. Mr. S. Ali Yari**

Mr. Yari explains how natural gas-fired generation is critical to SDG&E and California and why the Proposed Project is needed from an electric reliability standpoint. He describes the current and expected natural gas-fired electric generation plants in SDG&E's service territory. Mr. Yari discusses the interdependency and need for coordination between electric and gas systems and also describes how a curtailment of gas supply to electric generation can result in the loss of firm electric customers. Mr. Yari notes that natural gas-fired electric generation in San Diego also provides energy to the California Independent System Operator Corporation (CAISO) system.

In compliance with the Ruling, Mr. Yari discusses how the Applicants considered grid-scale battery/energy storage, smaller-scale battery storage, and other reliable alternative energy options as alternatives to the Proposed Project.

**E. Mr. Jani Kikuts**

Mr. Kikuts notes that the Applicants' natural gas transmission and distribution systems are a complex network of pipelines. He explains that there are an infinite number of scenarios that could cause a supply disruption on an existing natural gas transmission line, which would impact the Applicants' natural gas system and their ability to provide gas service to customers.

To illustrate, Mr. Kikuts describes a plausible outage scenario and its potential impacts to core, noncore and electric generation customers in SDG&E's system. Mr. Kikuts also provides an overview of the steps the Applicants would undertake to manage a potential outage event and restore gas service.

**F. Ms. Gwen Marelli**

Ms. Marelli discusses how the Proposed Project will maintain the resiliency of the Applicants' integrated gas system and customer access to competitively-priced supply. She also describes how Alternatives E and F (outlined in the Ruling at 13), which rely on using the Otay Mesa receipt point and requires customers to procure and transport gas supply to the SDG&E system, do not provide the same resiliency or access to competitively-priced supply as the Proposed Project, which will result in increased costs. She further describes how the Proposed Project would avoid additional costs of alternative supplies associated with pressure testing line 1600. Ms. Marelli also explains the history of BTS service and why the Proposed Project should become part of the Applicants' integrated gas system.

**G. Ms. Deanna Haines**

Ms. Haines addresses how the Applicants are committed to meeting and exceeding safety requirements, protecting the safety of workers and the public, and assuring that adequate records are maintained and retained with respect to the Proposed Project. Specifically, Ms. Haines' testimony responds to the Ruling's direction to provide a specific description of: 1) how the proposed Line 3602 meets or exceeds all applicable federal and state safety regulations, rules, and requirements; 2) how the proposed Line 3602 management procedures and processes for the construction project provide public and worker safety during all phases of the project including, but not limited to, trenching, construction/fabrication, testing, and initial operation; and 3) adequate management procedures and processes for fully documenting, and retaining records and documents related to, initial design, materials procurement, employee and contractor operator qualifications, construction, testing, and initial operation.<sup>32</sup>

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<sup>32</sup> See also Sections V.B through V.D, *supra*.

**H. Mr. Neil Navin**

Mr. Navin explains how the Applicants developed their cost estimates and provides the direct cost estimates for the Proposed Project and the de-rating of Line 1600. He also discusses the contingency costs and post-construction operations and maintenance costs.

Mr. Navin also describes the schedule and scope of the Proposed Project and provides detail on the major project components: Line 3602 construction, construction of the Rainbow Pressure Limiting Station, installation of ten mainline valves, installation of a smart-pig launcher and receiver, construction of two pressure limiting stations, construction and installation of three interconnects with Line 1600, Line 1601 and Line 2010, and de-rating of Line 1600 after Line 3602 is placed in service.

In addition, Mr. Navin discusses the scope, cost and schedule for the Hydrotest Alternative,<sup>33</sup> which is the pressure test of Line 1600. He explains how this alternative would be very expensive, lengthy and complicated. He also provides a brief overview of data inputs he provided for the costs analysis portion of the Applicants' Cost-Effectiveness Analysis performed for certain of the Alternatives.

**I. Mr. Michael Woodruff**

Mr. Woodruff presents the revenue requirements for the Proposed Project. He explains how the revenue requirement was derived and discusses escalation and loaders.

**J. Mr. Jason Bonnett**

Mr. Bonnett provides the illustrative rate impacts for the Proposed Project.

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<sup>33</sup> Referred to in the Ruling as the "No Project Alternative."

**K. Mr. John Roy**

Mr. Roy discusses the Applicants' proposal to establish a memorandum account to record incremental costs not recovered in the revenue requirement.

**IX. LIST OF APPENDICES AND ATTACHMENTS**

Appendix A – Summary of State and Federal Safety Regulations, Rules and Requirements Applicable to the Proposed Project

Appendix B – SDG&E Financial Statements

Appendix C – SoCalGas Financial Statements

Appendix D – Illustrative Rate Scenario with A.13-12-013

Appendix E – Volumes Statement

Appendix F – Supplier Tariffs

Appendix G – SDG&E Balance Sheet and Income Statement

Appendix H – SoCalGas Balance Sheet and Income Statement

Appendix I – SDG&E Statement of Proposed Increases

Appendix J – SoCalGas Statement of Proposed Increases

Appendix K – SDG&E Original Cost and Depreciation Statement

Appendix L – SDG&E Original Cost and Depreciation Statement

Appendix M – SDG&E Summary of Earnings

Appendix N – SoCalGas Summary of Earnings

Volume II PEA Supplement

Volume III Cost-Effectiveness Analysis

**X. CONCLUSION**

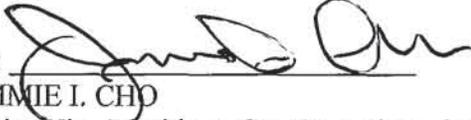
For the reasons set forth above, the Applicants hereby amend the above captioned Application to comply with the Ruling, which ordered the Applicants to provide information to

address PUC Sections 1001 and 1003(d) and pertinent subsections of Commission Rule 3.1, as well as provide a safety evaluation and compliance analysis.

The Applicants respectfully request that the Commission: (1) accept its Application, as amended herein, as complete; (2) prepare an Environmental Impact Report regarding the potential environmental impacts of the Proposed Project; (3) issue a decision granting the Applicants a Certification of Public Convenience and Necessity authorizing the Applicants to construct the Proposed Project set forth in the Application (as amended herein), PEA (as supplemented herein) and the accompanying documents; (4) approve the Applicants' revenue requirement request and rate recovery for the Proposed Project, as described in this Application (as amended herein) and the supporting documents; and (5) provide such other and further ratemaking relief as the Commission deems necessary or appropriate.

DATED this 21th day of March 2016, at San Diego, California.

Respectfully submitted,

By:   
JIMMIE I. CHO  
Senior Vice President, Gas Operations & System  
Integrity

SAN DIEGO GAS & ELECTRIC COMPANY  
SOUTHERN CALIFORNIA GAS COMPANY

By:   
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**XI. VERIFICATION**

Jimmie I. Cho declares the following:

I am an officer of San Diego Gas & Electric Company and Southern California Gas Company and am authorized to make this Verification on its behalf. I am informed and believe that the matters stated in the foregoing **AMENDMENT TO APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 G) AND SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE PIPELINE SAFETY & RELIABILITY PROJECT** are true to my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 21th day of March 2016, at San Diego, California.



JIMMIE I. CHO  
Senior Vice President, Gas Operations & System Integrity

SAN DIEGO GAS & ELECTRIC COMPANY  
SOUTHERN CALIFORNIA GAS COMPANY

## APPENDIX A

### Summary of State and Federal Safety Regulations, Rules and Requirements Applicable to the Proposed Project

**TABLE 1**

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
<b>CPUC General Order 112-F</b>					
Subpart B-REPORTS	122	Gas Incident Reports		Meet	
Subpart B-REPORTS	123	Annual Reports		Meet	
Subpart B-REPORTS	124	Reporting Safety – Related Conditions		Meet	
Subpart B-REPORTS	125	Proposed Installation Report		Meet	
<b>49 Code of Federal Regulations Part 191</b>					
<b>Reports</b>	§191.5	Immediate notice of certain incidents		Meet	
<b>Reports</b>	§191.7	Report submission requirements		Meet	
<b>Reports</b>	§191.15	Transmission systems; gathering systems; and liquefied natural gas facilities: Incident report		Meet	
<b>Reports</b>	§191.17	Transmission systems; gathering systems; and liquefied natural gas facilities: Annual report		Meet	
<b>Reports</b>	§191.23	Reporting safety-related conditions		Meet	
<b>Reports</b>	§191.25	Filing safety-related condition reports		Meet	
<b>49 Code of Federal Regulations Part 192</b>					
Subpart A - GENERAL	192	General		Meet	
Subpart B – MATERIALS	§192.53	General		Meet	

<sup>1</sup> Code refers to 49 CFR Part 192, which governs nearly all aspects of the design, inspection, and testing of a pipeline and its appurtenances.

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
Subpart B – MATERIALS	§192.55	Steel pipe	Comply with American Petroleum Institute’s (API) 5L “Specification for Line Pipe.” Minimum impact of toughness of 30 ft-lbs. Minimum seam weld toughness is 20 ft-lbs.	Exceed	SoCalGas/SDG&E will exceed API5L by requiring greater pipe impact toughness and seam weld toughness of 80 ft-lbs and 66 ft-lbs respectively for the 36” diameter pipe and a more stringent chemical composition to comply with qualified welding procedures.
Subpart B – MATERIALS	§192.65	Transportation of pipe	Comply with API5L recommended practice RP5L1 and RP5LW	Exceed	SoCalGas/SDG&E also require compliance with API recommended practice RP5LT, for Truck Transportation of Line Pipe
Subpart C –PIPE DESIGN	§192.103	General		Meet	
Subpart C –PIPE DESIGN	§192.105	Design formula for steel pipe		Meet	
Subpart C –PIPE DESIGN	§192.109	Nominal wall thickness (t) for steel pipe		Meet	
Subpart C –PIPE DESIGN	§192.111	Design factor (F) for steel pipe	Classes 1, 2, 3 and 4 locations require 0.72, 0.6 0.5, 0.4 Design Factors, respectively.	Exceed	A 0.4 Design Factor, which is only required in Class 4 locations, will be used for all locations, resulting in significantly higher safety factors than required in Class 1,2, and 3 locations.
Subpart C –PIPE DESIGN	§192.115	Temperature Derating Factor (T) for Design of Steel Pipe		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.143	General requirements		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.144	Qualifying metallic components		Meet	

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.145	Valves		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.147	Flanges and flange accessories		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.150	Passage of internal inspection devices		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.153	Components fabricated by welding		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.155	Welded branch connections		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.159	Flexibility		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.161	Supports and anchors		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.163	Compressor stations: Design and construction		N/A	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.165	Compressor stations: Liquid removal		N/A	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.167	Compressor stations: Emergency shutdown		N/A	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.169	Compressor stations: Pressure limiting devices		N/A	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.171	Compressor stations: Additional safety equipment		N/A	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.173	Compressor stations: Ventilation		N/A	
Subpart D - DESIGN	§192.179	Transmission line	The required	Exceed	The pipeline is designed

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OF PIPELINE COMPONENTS		valves	Spacing between Main Line Valves is 20 miles in Class 1, 15 miles for Class 2, and 8 miles for Class 3 locations. Each section of a transmission line must have a blow down valve with enough capacity to blow down a line as rapidly as practicable.		to have 5-mile Main Line Valve spacing, which is shorter valve spacing than is required by code for all locations.
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.183	Vaults: Structural design requirements		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.185	Vaults: Accessibility		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.187	Vaults: Sealing, venting, and ventilation		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.189	Vaults: Drainage and waterproofing		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.195	Protection against accidental over pressuring	Each pipeline that is connected to a gas source so that the maximum allowable operating pressure could be exceeded as the result of pressure control failure or of some other type of failure, must have pressure relieving or pressure limiting devices that meet the requirements of	Meet	

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			§§192.199 and 192.201		
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.199	Requirements for design of pressure relief and limiting devices		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.201	Required capacity of pressure relieving and limiting stations		Meet	
Subpart D - DESIGN OF PIPELINE COMPONENTS	§192.203	Instrument, control, and sampling pipe and components		Meet	
Subpart E – WELDING OF STEEL IN PIPELINES	§192.225	Welding procedures		Meet	
Subpart E – WELDING OF STEEL IN PIPELINES	§192.227	Qualification of welders	API 1104, "Welding of Pipelines and Related Facilities"	Exceed	SoCalGas/SDG&E require welders to perform an additional overhead weld for qualification that is not required by API 1104.
Subpart E – WELDING OF STEEL IN PIPELINES	§192.229	Limitations on welders		Meet	
Subpart E – WELDING OF STEEL IN PIPELINES	§192.231	Protection from weather		Meet	
Subpart E – WELDING OF STEEL IN PIPELINES	§192.235	Preparation for welding	API 1104, "Welding of Pipelines and Related Facilities" allows misalignment of 1/8"	Exceed	SoCalGas/SDG&E require more precise alignment by limiting misalignment to 3/32".
Subpart E – WELDING OF STEEL IN PIPELINES	§192.241	Inspection and test of welds		Meet	

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
Subpart E – WELDING OF STEEL IN PIPELINES	§192.243	Nondestructive testing	Code requires 10% and 15% of welds in Class 1 and 2 locations respectively, that are not in highway or railroad right-of-ways to be non-destructively tested.	Exceed	100% of welds in Class 1 and 2 locations not in highway or railroad right-of-ways will be non-destructively tested.
Subpart E – WELDING OF STEEL IN PIPELINES	§192.245	Repair or removal of defects	API 1104, “Welding of Pipelines and Related Facilities” allows repair of rejected first time repair	Exceed	SoCalGas/SDG&E do not allow subsequent repair of a rejected first-time repair.
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.305	Inspection: General		Meet	
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.307	Inspection of materials		Meet	
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.309	Repair of steel pipe		Meet	
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION	§192.313	Bends and elbows		Meet	

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
LINES AND MAINS					
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.317	Protection from hazards		Meet	
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.319	Installation of pipe in a ditch		Meet	
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.323	Casing	Code does not require coating or cathodic protection of casing pipe.	Exceed	All casing pipe will be coated and cathodically protected regardless of outside agency requirements.
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.325	Underground clearance		Meet	We typically exceed 12” clearance unless impracticable.
Subpart G— GENERAL CONSTRUCTION REQUIREMENTS FOR TRANSMISSION LINES AND MAINS	§192.327	Cover	Class 1 locations require 30" of soil cover above the pipe. Class 2 and 3 locations require 36" cover.	Exceed	Soil cover will be specified as 42" minimum unless constraints prevent the extra cover.
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.453	General		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL FOR	§192.455	External corrosion control: Buried or submerged pipelines installed		Meet	

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
CORROSION CONTROL		after July 31, 1971			
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.459	External corrosion control: Examination of buried pipeline when exposed		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.461	External corrosion control: Protective coating		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.463	External corrosion control: Cathodic protection		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.465	External corrosion control: monitoring		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.467	External corrosion control: Electrical isolation		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.469	External corrosion control: Test stations		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.471	External corrosion control: Test leads		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.473	External corrosion control: Interference currents		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.475	Internal corrosion control: General requirements		Meet	
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.476	Internal corrosion control: Design and construction of transmission		Meet	

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		line.			
Subpart I— REQUIREMENTS FOR CORROSION CONTROL	§192.479	Atmospheric corrosion control: General requirements		Meet	
Subpart J—TEST REQUIREMENTS	§192.503	General requirements		Meet	
Subpart J—TEST REQUIREMENTS	§192.505	Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS	Tests in Class 1 require a test to a pressure of 1.1 x Maximum Allowable Operating Pressure (MAOP); For Class 2 - 1.25 x MAOP; and Class 3 and 4 - 1.5x MAOP.	Exceed	Where possible the pipeline will be tested to 90% of its Yield Pressure (YP) including at least a 5% pressure spike. This will result in a test that is more than 2.5x MAOP, which exceeds the testing requirement for all locations.
Subpart J—TEST REQUIREMENTS	§192.515	Environmental protection and safety requirements		Meet	
Subpart J—TEST REQUIREMENTS	§192.517	Test Documentation		Meet	
Subpart L - OPERATIONS	§192.605	Procedural Manual for operations, maintenance, and emergencies		Meet	
Subpart L - OPERATIONS	§192.613	Continuing surveillance		Meet	
Subpart L - OPERATIONS	§192.614	Damage prevention program	Each operator of a buried pipeline must carry out, in accordance with this section, a written program to prevent damage to that pipeline from excavation activities.	Exceed	Additional pipeline cover is being provided to aid in damage prevention. See 192.327 for "cover" details and 192.705 additional monitoring. Warning Mesh will be installed above the pipeline to identify the pipeline below. Fiber optic cabling with real-time

<b>PSRP</b>					
<b>Where the Utilities Plan to Meet or Exceed Applicable State and Federal Regulations</b>					
<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
					monitoring for ground movement and inferential leak detection will be installed along the pipeline route.
Subpart L - OPERATIONS	§192.615	Emergency plans		Meet	
Subpart L - OPERATIONS	§192.616	Public awareness		Meet	
Subpart L - OPERATIONS	§192.619	Maximum allowable operating pressure (MAOP): Steel pipeline	The MAOP is the lowest of the following: 1. Design Pressure of the weakest component; or 2. Pressure obtained by dividing the test pressure by a factor based on Class Location.	Exceed	The pipeline will be operating at a lower pressure than the code allows in Class 1, 2 and 3 locations due to designing the entire pipeline for a Class 4 location and testing to a higher pressure than required by code (see sections 192.505 and 192.619).
Subpart L - OPERATIONS	§192.625	Odorization of gas	Odorizing is required for Class 3 and 4 locations.	Exceed	SoCalGas/SDG&E transmission pipelines are odorized regardless of location.
Subpart L - OPERATIONS	§192.629	Purging of pipelines		Meet	
Subpart M— MAINTENANCE	§192.705	Transmission lines: Patrolling	The requirement for the frequency of patrolling varies from 2 - 4 times per year depending on the location.	Exceed	Fiber-optic right-of-way continuous intrusion monitoring is planned to be installed on this pipeline to provide early threat warning, consistent with the technology enhancements discussed in our Pipeline Safety Enhancement Plan (PSEP).
Subpart M— MAINTENANCE	§192.706	Transmission lines: Leakage surveys	Leakage surveys must be conducted at intervals of 7.5 - 15 months	Exceed	Real-time methane above ground methane sensors will be installed on select segments of the

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<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
			depending on Class Location.		pipeline identified by risk analysis consistent with the technology enhancements discussed in our PSEP for right-of-way leak monitoring. The Fiber optic cable monitoring system referenced under 192.705 and 192.614 will also allow for pipeline leak detection in near-real time.
Subpart M— MAINTENANCE	§192.707	Line Markers		Exceed	In addition to the requirement to install aboveground pipeline markers, SoCalGas/SDG&E will install Warning Mesh above the pipeline to indicate that there is a pipeline below the mesh.
Subpart M— MAINTENANCE	§192.731	Compressor stations: Inspection and testing of relief devices		N/A	
Subpart M— MAINTENANCE	§192.735	Compressor Station Storage of Combustible materials		N/A	
Subpart M— MAINTENANCE	§192.736	Compressor Station: Gas Detection		N/A	
Subpart M— MAINTENANCE	§192.743	Pressure Limiting and regulating stations; Capacity of relief devices		Meet	
Subpart M— MAINTENANCE	§192.751	Compressor stations: Prevention of accidental ignition		N/A	
Subpart N— QUALIFICATION	§192.801	Scope		Meet	

<b>PSRP</b>					
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<b>Code<sup>1</sup></b>	<b>Section</b>	<b>Title</b>	<b>Requirement</b>	<b>Meet or Exceed</b>	<b>If exceeding, how?</b>
OF PIPELINE PERSONNEL					
Subpart N—QUALIFICATION OF PIPELINE PERSONNEL	§192.803	Definitions		Meet	
Subpart N—QUALIFICATION OF PIPELINE PERSONNEL	§192.805	Qualification program		Meet	
Subpart N—QUALIFICATION OF PIPELINE PERSONNEL	§192.807	Recordkeeping		Meet	
Subpart N—QUALIFICATION OF PIPELINE PERSONNEL	§192.809	General		Meet	
Subpart O—GAS TRANSMISSION PIPELINE INTEGRITY MANAGEMENT	§192.939	What are the required reassessment intervals	Operators are required to only perform a lesser confirmatory reassessment every 7 years if a longer reassessment period has been obtained.	Exceed	SoCalGas/SDG&E will be performing full integrity reassessments of the pipeline with internal inspection devices called smart pigs at a maximum interval of 7 years.

APPENDIX B

SDG&E Financial Statement

**SAN DIEGO GAS & ELECTRIC COMPANY**  
**FINANCIAL STATEMENT**  
**Sep 30, 2015**

<b>(a) Amounts and Kinds of Stock Authorized:</b>					
Common Stock		255,000,000	shares		Without Par Value
<b>Amounts and Kinds of Stock Outstanding:</b>					
Common Stock		116,583,358	shares		291,458,395

**(b) Brief Description of Mortgage:**

Full information as to this item is given in Application Nos. 08-07-029,10-10-023 and 12-03-005 to which references are hereby made.

**(c) Number and Amount of Bonds Authorized and Issued:**

	Nominal Date of Issue		Par Value Authorized and Issued	Outstanding		Interest Paid in 2014
<b>First Mortgage Bonds:</b>						
6.80% Series KK, due 2013	12-01-91		14,400,000	0		0
Var% Series OO, due 2027	12-01-92		250,000,000	150,000,000		7,612,500
5.85% Series RR, due 2021	06-29-93		60,000,000	0		0
5.875% Series VV, due 2034	06-17-04		43,615,000	43,615,000		2,562,373
5.875% Series WW, due 2034	06-17-04		40,000,000	40,000,000		2,350,000
5.875% Series XX, due 2034	06-17-04		35,000,000	35,000,000		2,056,250
5.875% Series YY, due 2034	06-17-04		24,000,000	24,000,000		1,410,000
5.875% Series ZZ, due 2034	06-17-04		33,650,000	33,650,000		1,976,938
4.00% Series AAA, due 2039	06-17-04		75,000,000	75,000,000		3,000,000
5.35% Series BBB, due 2035	05-19-05		250,000,000	250,000,000		13,375,000
5.30% Series CCC, due 2015	11-15-05		250,000,000	250,000,000		13,250,000
6.00% Series DDD, due 2026	06-08-06		250,000,000	250,000,000		15,000,000
1.65% Series EEE, due 2018	09-21-06		161,240,000	161,240,000		2,660,460
6.125% Series FFF, due 2037	09-20-07		250,000,000	250,000,000		15,312,500
6.00% Series GGG, due 2039	05-14-09		300,000,000	300,000,000		18,000,000
5.35% Series HHH, due 2040	05-13-10		250,000,000	250,000,000		13,375,000
4.50% Series III, due 2040	08-26-10		500,000,000	500,000,000		22,500,000
3.00% Series JJJ, due 2021	08-18-11		350,000,000	350,000,000		10,500,000
3.95% Series LLL, due 2041	11-17-11		250,000,000	250,000,000		9,875,000
4.30% Series MMM, due 2042	03-22-12		250,000,000	250,000,000		10,750,000
3.60% Series NNN, due 2023	09-09-13		450,000,000	450,000,000		16,200,000
.4677% Series OOO, due 2017	03-12-15		140,000,000	140,000,000		-
1.9140% Series PPP, due 2022	03-12-15		39,112,892	48,490,631		-
<b>Total 1st. Mortgage Bonds:</b>						<b>181,766,020</b>
<b>Unsecured Bonds:</b>						
5.30% CV96A, due 2021	08-02-96		38,900,000	38,900,000		2,061,700
5.50% CV96B, due 2021	11-21-96		60,000,000	60,000,000		3,300,000
4.90% CV97A, due 2023	10-31-97		25,000,000	25,000,000		1,225,000
<b>Total Unsecured Bonds</b>						<b>6,586,700</b>
<b>Total Bonds:</b>						<b>188,352,720</b>

**SAN DIEGO GAS & ELECTRIC COMPANY**  
**FINANCIAL STATEMENT**  
 Sep 30, 2015

Other Indebtedness:	Date of Issue	Date of Maturity	Interest Rate	Outstanding	Interest Paid 2015
Commercial Paper & ST Bank Loans	Various	Various	Various	44,200,000	\$157,004

**Amounts and Rates of Dividends Declared:**

The amounts and rates of dividends during the past five fiscal years are as follows:

Preferred Stock	Shares Outstanding 12-31-14					
		2011	2012	2013	2014	2015
5.0%	-	\$375,000	\$375,000	\$281,250	-	-
4.50%	-	270,000	270,000	202,500	-	-
4.40%	-	286,000	286,000	214,500	-	-
4.60%	-	343,868	343,868	257,901	-	-
\$ 1.70	-	2,380,000	2,380,000	1,785,000	-	-
\$ 1.82	-	1,164,800	1,164,800	873,600	-	-
<b>Total</b>	-	<b>\$4,819,668</b>	<b>\$4,819,668</b>	<b>\$3,614,751</b>	-	-

Common Stock	2011	2012	2013	2014	2015
Dividend to Parent [1]	-	-	-	\$200,000,000	150,000,000

**NOTE 11 PREFERRED STOCK 10K:**

On October 15, 2013, SDG&E redeemed all six series of its outstanding shares of contingently redeemable preferred stock for \$82 million, including a \$3 million early call premium (pg 9.1).

A balance sheet and a statement of income and retained earnings of applicant for the nine months ended Sep 30, 2015 are attached hereto.

[1] San Diego Gas & Electric Company dividend to parent.

APPENDIX C

SoCalGas Financial Statement

**SOUTHERN CALIFORNIA GAS COMPANY**  
**FINANCIAL STATEMENT**  
**SEPTEMBER 30, 2015**

(a) Amounts and Kinds of Stock Authorized:

Preferred Stock	160,000	shares	Par Value \$4,000,000
Preferred Stock	840,000	shares	Par Value \$21,000,000
Preferred Stock	5,000,000	shares	Without Par Value
Preferred Stock	5,000,000	shares	Without Par Value
Common Stock	100,000,000	shares	Without Par Value

Amounts and Kinds of Stock Outstanding:

**PREFERRED STOCK**

6.0%	79,011	shares	\$1,975,275
6.0%	783,032	shares	19,575,800

**COMMON STOCK**

91,300,000	shares	834,888,907
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(b) Terms of Preferred Stock:

Full information as to this item is given in connection with Application No. 96-09-046, to which references are hereby made.

(c) Brief Description of Mortgage:

Full information as to this item is given in Application No. 09-09-046 to which reference is hereby made.

(d) Number and Amount of Bonds Authorized and Issued:

	Nominal Date of Issue	Par Value		Interest Paid in 2015
		Authorized and Issued	Outstanding	
<u>First Mortgage Bonds:</u>				
5.45% Series HH, due 2018	10-14-03	250,000,000	250,000,000	13,625,000
5.75% Series KK, due 2035	11-18-05	250,000,000	250,000,000	14,375,000
5.125% Series MM, due 2040	11-18-10	300,000,000	300,000,000	15,375,000
3.750% Series NN, due 2042	09-21-12	350,000,000	350,000,000	13,125,000
4.450% Series OO, due 2044	03-13-14	250,000,000	250,000,000	8,911,962
3.150% Series PP, due 2024	09-11-14	500,000,000	500,000,000	4,812,500
1.550% Series QQ, due 2018	06-18-15	250,000,000	250,000,000	0
3.200% Series RR, due 2025	06-18-15	350,000,000	350,000,000	0
<u>Other Long-Term Debt</u>				
4.750% SFr. Foreign Interest Payment Securities	05-14-06	7,475,533	7,475,533	355,088
5.67% Medium-Term Note, due 2028	01-15-03	5,000,000	5,000,000	283,500

**SOUTHERN CALIFORNIA GAS COMPANY**  
**FINANCIAL STATEMENT**  
**SEPTEMBER 30, 2015**

<u>Other Indebtedness:</u>	<u>Date of Issue</u>	<u>Date of Maturity</u>	<u>Interest Rate</u>	<u>Outstanding</u>	<u>Interest Paid 2015</u>
Commercial Paper & ST Bank Loans	12/14	01/15	Various	0	\$63,872

Amounts and Rates of Dividends Declared:

The amounts and rates of dividends during the past five fiscal years are as follows:

<u>Preferred Stock</u>	<u>Shares Outstanding @ 12-31-14</u>	<u>Dividends Declared</u>				
	2011	2012	2013	2014	2015	
6.0%	79,011	\$118,517	\$118,517	\$118,517	\$118,517	\$88,888
6.0%	783,032	1,174,548	1,174,548	1,174,548	1,174,548	880,912
	<u>862,043</u>	<u>\$1,293,065</u>	<u>\$1,293,065</u>	<u>\$1,293,065</u>	<u>\$1,293,065</u>	<u>\$969,800</u>

Common Stock

Amount	\$50,000,000	\$250,000,000	\$50,000,000	\$100,000,000	\$50,000,000	[1]
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A balance sheet and a statement of income and retained earnings of Applicant for the nine months ended September 30, 2015 are attached hereto.

[1] Southern California Gas Company dividend to parent company, Sempra Energy.

## APPENDIX D

Illustrative Rate Scenario with A.13-12-013

## Appendix D : Proposed Project Rate Impacts

### Pipeline Safety Reliability Project Rate Impacts

A. 15-09-013

Witness: J. Bonnett

#### Notes:

Current BTS Revenue Requirement as effective on January 1, 2016 and approved by SoCalGas AL 4877  
 Pipeline Safety Reliability Project Revenue Requirement from Testimony and Workpapers of Michael Woodruff.  
 North-South Revenue data pursuant to Updated Direct Testimony of Mr. Bonnett filed on November 12, 2014  
 BTS Denominator as effective January 1, 2016 and approved by SoCalGas AL 4877  
 BTS Denominator Mtdh/d **2,852**

**TABLE 1**  
**Illustrative BTS Revenue and Rate Impacts**

Year	Current BTS Revenue Requirement	Pipeline Safety Reliability Project Revenue Requirement	North-South Project Revenue Requirement	Total BTS Revenue Requirement	Current BTS SFV Rate	Pipeline Safety Reliability Project BTS Rate Impact	North-South Project BTS Rate Impact	Total BTS SFV Rate
	\$ Millions	\$ Millions	\$ Millions	\$ Millions	S/dth/d	S/dth/d	S/dth/d	S/dth/d
	A	B	C	D = A + B + C	E	F	G	H = E + F + G
2020	\$168.6	\$3.5	\$133.6	\$305.7	\$0.162	\$0.003	\$0.128	\$0.294
2021	\$168.6	\$85.9	\$120.5	\$375.1	\$0.162	\$0.083	\$0.116	\$0.360
2022	\$168.6	\$85.6	\$118.7	\$373.0	\$0.162	\$0.082	\$0.114	\$0.358
2023	\$168.6	\$82.8	\$114.4	\$365.9	\$0.162	\$0.080	\$0.110	\$0.351
2024	\$168.6	\$80.0	\$110.5	\$359.1	\$0.162	\$0.077	\$0.106	\$0.345

### Pipeline Safety Reliability Project Rate Impacts

A. 15-09-013

Witness: J. Bonnett

**TABLE 2**  
**Illustrative Bundled Rate Impacts**

	Current Class-Average Transportation Rates*	Gas Commodity Price**	Bundled Rate/Bill	L3602 Pipeline Cost BTS Rate Impact***	North-South Project BTS Rate Impact***	L1600 Derate Cost Class Average Rate Impact	L3602 Pipeline Cost and L1600 Derate Cost Class Average Rate Impact	% impact on bundled rates/bills
	A	B	C = A+B	D	E	E	F = (D + E)	G = (F / C)
1 <u>SoCalGas</u>								
2 Residential S/th	\$0.778	\$0.315	\$1.093	\$0.008	\$0.012	(\$0.000)	\$0.020	1.8%
3 Average Residential Bill S/month (37 th)	\$27.65	\$11.63	\$39.28	\$0.306	\$0.451	\$0.000	\$0.757	1.9%
4 Core C&I S/th	\$0.414	\$0.315	\$0.729	\$0.008	\$0.012	(\$0.000)	\$0.020	2.7%
5 NGV S/th	\$0.226	\$0.315	\$0.540	\$0.008	\$0.012	\$0.000	\$0.020	3.7%
6								
7 Noncore C&I - Distribution S/th	\$0.067	\$0.315	\$0.382	\$0.008	\$0.012	(\$0.000)	\$0.020	5.2%
8 Noncore C&I - TLS S/th	\$0.017	\$0.315	\$0.331	\$0.008	\$0.012	\$0.000	\$0.020	6.0%
9 Electric Generation - Distribution S/th	\$0.052	\$0.315	\$0.367	\$0.008	\$0.012	\$0.000	\$0.020	5.4%
10 Electric Generation - TLS S/th	\$0.013	\$0.315	\$0.328	\$0.008	\$0.012	\$0.000	\$0.020	6.0%
11								
12 <u>SDG&amp;E</u>								
13 Residential S/th	\$0.954	\$0.315	\$1.269	\$0.008	\$0.012	\$0.014	\$0.034	2.7%
14 Average Residential Bill S/month (26 th)	\$24.62	\$8.34	\$32.96	\$0.215	\$0.324	\$0.350	\$0.889	2.7%
15 Core C&I S/th	\$0.427	\$0.315	\$0.742	\$0.008	\$0.012	\$0.004	\$0.024	3.2%
16 NGV S/th	\$0.237	\$0.315	\$0.552	\$0.008	\$0.012	\$0.000	\$0.020	3.6%
17								
18 Noncore C&I - Distribution S/th	\$0.095	\$0.315	\$0.410	\$0.008	\$0.012	\$0.002	\$0.021	5.2%
19 Noncore C&I - TLS S/th	\$0.020	\$0.315	\$0.335	\$0.008	\$0.012	\$0.000	\$0.020	5.9%
20 Electric Generation - Distribution S/th	\$0.057	\$0.315	\$0.372	\$0.008	\$0.012	\$0.000	\$0.020	5.4%
21 Electric Generation - TLS S/th	\$0.013	\$0.315	\$0.328	\$0.008	\$0.012	\$0.000	\$0.020	6.0%

\* Transportation rates effective January 1, 2016, as approved in AL 4910 at SoCalGas and AL 2445-G at SDG&E.

\*\* Gas price is the prior twelve month average of the core procurement tariff (February 2015 - January 2016).

\*\*\* This is the impact to the BTS Tariff. Individual customers may have impacts that differ due to how they purchase gas.

## APPENDIX E

### Volumes Statement

Date	MMcfd	Date	MMcfd	Date	MMcfd	Date	MMcfd
5/1/2011	56.05	1/1/2012	86.01	1/1/2013	106.51	1/1/2014	65.89
5/2/2011	54.46	1/2/2012	91.70	1/2/2013	112.22	1/2/2014	66.73
5/3/2011	55.15	1/3/2012	88.78	1/3/2013	110.41	1/3/2014	68.06
5/4/2011	55.46	1/4/2012	80.15	1/4/2013	112.05	1/4/2014	65.27
5/5/2011	82.07	1/5/2012	79.36	1/5/2013	109.13	1/5/2014	66.43
5/6/2011	68.84	1/6/2012	81.98	1/6/2013	108.74	1/6/2014	75.16
5/7/2011	36.38	1/7/2012	80.53	1/7/2013	110.56	1/7/2014	72.09
5/8/2011	37.46	1/8/2012	80.66	1/8/2013	108.41	1/8/2014	67.72
5/9/2011	63.09	1/9/2012	95.08	1/9/2013	102.49	1/9/2014	70.66
5/10/2011	54.37	1/10/2012	93.00	1/10/2013	104.49	1/10/2014	69.79
5/11/2011	57.60	1/11/2012	88.94	1/11/2013	116.15	1/11/2014	64.63
5/12/2011	58.65	1/12/2012	85.33	1/12/2013	113.54	1/12/2014	64.54
5/13/2011	44.00	1/13/2012	85.40	1/13/2013	112.18	1/13/2014	69.16
5/14/2011	34.22	1/14/2012	86.09	1/14/2013	128.56	1/14/2014	63.89
5/15/2011	34.18	1/15/2012	82.65	1/15/2013	113.73	1/15/2014	64.55
5/16/2011	50.44	1/16/2012	87.05	1/16/2013	103.39	1/16/2014	69.62
5/17/2011	54.15	1/17/2012	92.88	1/17/2013	97.47	1/17/2014	66.30
5/18/2011	54.04	1/18/2012	97.73	1/18/2013	98.58	1/18/2014	60.03
5/19/2011	45.03	1/19/2012	93.57	1/19/2013	98.47	1/19/2014	61.84
5/20/2011	54.83	1/20/2012	85.57	1/20/2013	97.56	1/20/2014	67.54
5/21/2011	35.80	1/21/2012	81.79	1/21/2013	102.19	1/21/2014	70.93
5/22/2011	41.87	1/22/2012	87.70	1/22/2013	98.61	1/22/2014	72.76
5/23/2011	57.52	1/23/2012	96.96	1/23/2013	96.90	1/23/2014	70.26
5/24/2011	58.72	1/24/2012	87.31	1/24/2013	97.55	1/24/2014	57.15
5/25/2011	67.35	1/25/2012	84.70	1/25/2013	99.39	1/25/2014	49.17
5/26/2011	49.80	1/26/2012	80.99	1/26/2013	95.57	1/26/2014	49.65
5/27/2011	44.19	1/27/2012	80.22	1/27/2013	96.25	1/27/2014	52.39
5/28/2011	31.60	1/28/2012	77.50	1/28/2013	104.05	1/28/2014	57.57
5/29/2011	28.46	1/29/2012	79.70	1/29/2013	12.50	1/29/2014	52.62
5/30/2011	33.82	1/30/2012	94.98	1/30/2013	0.00	1/30/2014	59.63
5/31/2011	62.29	1/31/2012	91.28	1/31/2013	0.00	1/31/2014	59.76
6/1/2011	60.40	2/1/2012	89.42	2/1/2013	79.42	2/1/2014	60.57
6/2/2011	52.54	2/2/2012	90.26	2/2/2013	98.76	2/2/2014	63.85
6/3/2011	55.36	2/3/2012	88.04	2/3/2013	97.08	2/3/2014	48.21
6/4/2011	39.97	2/4/2012	80.75	2/4/2013	100.18	2/4/2014	65.50
6/5/2011	50.56	2/5/2012	81.56	2/5/2013	102.74	2/5/2014	62.50
6/6/2011	47.66	2/6/2012	87.15	2/6/2013	81.23	2/6/2014	61.23
6/7/2011	50.40	2/7/2012	85.22	2/7/2013	103.31	2/7/2014	49.15
6/8/2011	45.66	2/8/2012	87.14	2/8/2013	110.69	2/8/2014	46.55
6/9/2011	50.37	2/9/2012	84.89	2/9/2013	102.15	2/9/2014	43.97
6/10/2011	39.18	2/10/2012	82.35	2/10/2013	104.16	2/10/2014	51.15
6/11/2011	29.03	2/11/2012	77.55	2/11/2013	111.12	2/11/2014	50.84
6/12/2011	37.78	2/12/2012	76.56	2/12/2013	111.88	2/12/2014	47.64
6/13/2011	46.37	2/13/2012	93.08	2/13/2013	109.34	2/13/2014	45.82
6/14/2011	55.70	2/14/2012	92.46	2/14/2013	105.12	2/14/2014	41.93
6/15/2011	53.76	2/15/2012	98.23	2/15/2013	97.53	2/15/2014	39.59
6/16/2011	49.95	2/16/2012	92.95	2/16/2013	93.36	2/16/2014	41.37
6/17/2011	51.78	2/17/2012	87.93	2/17/2013	91.95	2/17/2014	44.21
6/18/2011	44.58	2/18/2012	82.13	2/18/2013	96.41	2/18/2014	46.16
6/19/2011	40.32	2/19/2012	81.17	2/19/2013	108.43	2/19/2014	48.02
6/20/2011	57.69	2/20/2012	85.73	2/20/2013	109.64	2/20/2014	49.94
6/21/2011	52.67	2/21/2012	90.91	2/21/2013	111.29	2/21/2014	46.07
6/22/2011	48.85	2/22/2012	88.82	2/22/2013	106.77	2/22/2014	43.56
6/23/2011	54.17	2/23/2012	86.85	2/23/2013	96.95	2/23/2014	47.01
6/24/2011	53.78	2/24/2012	80.28	2/24/2013	99.74	2/24/2014	50.75
6/25/2011	46.08	2/25/2012	82.30	2/25/2013	103.46	2/25/2014	41.00
6/26/2011	46.99	2/26/2012	80.83	2/26/2013	108.81	2/26/2014	41.94
6/27/2011	52.28	2/27/2012	93.84	2/27/2013	109.04	2/27/2014	42.26
6/28/2011	52.00	2/28/2012	92.72	2/28/2013	106.95	2/28/2014	45.71
6/29/2011	46.34	2/29/2012	89.30	3/1/2013	96.41	3/1/2014	42.12
6/30/2011	50.82	3/1/2012	92.09	3/2/2013	80.54	3/2/2014	44.38
7/1/2011	52.17	3/2/2012	90.52	3/3/2013	65.13	3/3/2014	44.45
7/2/2011	49.49	3/3/2012	86.71	3/4/2013	73.82	3/4/2014	43.67
7/3/2011	38.30	3/4/2012	84.89	3/5/2013	81.11	3/5/2014	41.97
7/4/2011	45.23	3/5/2012	85.84	3/6/2013	87.97	3/6/2014	42.30
7/5/2011	70.61	3/6/2012	91.33	3/7/2013	96.29	3/7/2014	46.81
7/6/2011	82.51	3/7/2012	96.17	3/8/2013	95.79	3/8/2014	42.49
7/7/2011	71.59	3/8/2012	91.97	3/9/2013	80.16	3/9/2014	44.05
7/8/2011	55.36	3/9/2012	83.49	3/10/2013	88.68	3/10/2014	52.29
7/9/2011	45.44	3/10/2012	80.46	3/11/2013	72.72	3/11/2014	49.29
7/10/2011	42.30	3/11/2012	83.03	3/12/2013	72.85	3/12/2014	54.73
7/11/2011	47.28	3/12/2012	75.93	3/13/2013	48.57	3/13/2014	51.07
7/12/2011	49.80	3/13/2012	75.95	3/14/2013	36.35	3/14/2014	59.66
7/13/2011	54.28	3/14/2012	81.70	3/15/2013	35.71	3/15/2014	49.31
7/14/2011	55.85	3/15/2012	83.51	3/16/2013	33.89	3/16/2014	46.15
7/15/2011	61.66	3/16/2012	86.10	3/17/2013	34.08	3/17/2014	57.22
7/16/2011	39.94	3/17/2012	97.27	3/18/2013	38.47	3/18/2014	47.96
7/17/2011	39.27	3/18/2012	97.19	3/19/2013	37.62	3/19/2014	46.45
7/18/2011	54.75	3/19/2012	N/A	3/20/2013	9.43	3/20/2014	50.19
7/19/2011	74.06	3/20/2012	N/A	3/21/2013	0.37	3/21/2014	46.31
7/20/2011	73.98	3/21/2012	91.33	3/22/2013	0.10	3/22/2014	46.10
7/21/2011	76.61	3/22/2012	89.24	3/23/2013	0.07	3/23/2014	43.84
7/22/2011	63.28	3/23/2012	85.94	3/24/2013	1.29	3/24/2014	51.73
7/23/2011	48.43	3/24/2012	73.04	3/25/2013	0.15	3/25/2014	43.12
7/24/2011	60.19	3/25/2012	76.89	3/26/2013	3.86	3/26/2014	47.16
7/25/2011	72.84	3/26/2012	88.88	3/27/2013	0.00	3/27/2014	50.60
7/26/2011	76.81	3/27/2012	N/A	3/28/2013	0.16	3/28/2014	45.80
7/27/2011	74.19	3/28/2012	N/A	3/29/2013	0.84	3/29/2014	39.24
7/28/2011	62.67	3/29/2012	87.34	3/30/2013	0.65	3/30/2014	28.79
7/29/2011	49.54	3/30/2012	87.89	3/31/2013	0.62	3/31/2014	42.95
7/30/2011	64.52	3/31/2012	88.23	4/1/2013	8.43	4/1/2014	47.04
7/31/2011	74.59	4/1/2012	90.78	4/2/2013	1.31	4/2/2014	42.68
8/1/2011	80.43	4/2/2012	104.28	4/3/2013	0.34	4/3/2014	37.91
8/2/2011	80.91	4/3/2012	N/A	4/4/2013	11.07	4/4/2014	38.49
8/3/2011	80.38	4/4/2012	N/A	4/5/2013	0.12	4/5/2014	30.37

8/4/2011	63.27	4/5/2012	94.82	4/6/2013	8.97	4/6/2014	34.62
8/5/2011	50.69	4/6/2012	93.94	4/7/2013	1.47	4/7/2014	45.17
8/6/2011	54.55	4/7/2012	89.57	4/8/2013	2.40	4/8/2014	54.94
8/7/2011	52.63	4/8/2012	87.43	4/9/2013	0.66	4/9/2014	38.79
8/8/2011	76.24	4/9/2012	96.93	4/10/2013	0.10	4/10/2014	51.95
8/9/2011	72.20	4/10/2012	96.36	4/11/2013	0.05	4/11/2014	53.78
8/10/2011	70.38	4/11/2012	94.87	4/12/2013	0.12	4/12/2014	44.13
8/11/2011	68.73	4/12/2012	97.54	4/13/2013	0.04	4/13/2014	39.02
8/12/2011	56.76	4/13/2012	104.09	4/14/2013	0.89	4/14/2014	50.78
8/13/2011	47.76	4/14/2012	96.69	4/15/2013	0.00	4/15/2014	55.21
8/14/2011	57.55	4/15/2012	90.64	4/16/2013	0.00	4/16/2014	63.29
8/15/2011	62.54	4/16/2012	96.39	4/17/2013	0.00	4/17/2014	61.54
8/16/2011	59.76	4/17/2012	84.97	4/18/2013	0.00	4/18/2014	58.34
8/17/2011	58.69	4/18/2012	82.56	4/19/2013	0.53	4/19/2014	42.05
8/18/2011	58.20	4/19/2012	94.45	4/20/2013	3.40	4/20/2014	50.34
8/19/2011	60.27	4/20/2012	95.96	4/21/2013	0.14	4/21/2014	66.14
8/20/2011	56.40	4/21/2012	88.40	4/22/2013	7.50	4/22/2014	76.86
8/21/2011	66.65	4/22/2012	87.92	4/23/2013	7.37	4/23/2014	75.99
8/22/2011	79.08	4/23/2012	86.60	4/24/2013	6.83	4/24/2014	63.10
8/23/2011	82.02	4/24/2012	96.71	4/25/2013	4.12	4/25/2014	57.04
8/24/2011	82.16	4/25/2012	103.29	4/26/2013	0.64	4/26/2014	54.38
8/25/2011	84.40	4/26/2012	94.51	4/27/2013	0.50	4/27/2014	55.60
8/26/2011	85.39	4/27/2012	71.40	4/28/2013	0.00	4/28/2014	63.54
8/27/2011	84.05	4/28/2012	64.94	4/29/2013	1.46	4/29/2014	61.34
8/28/2011	81.46	4/29/2012	66.52	4/30/2013	0.73	4/30/2014	75.81
8/29/2011	81.37	4/30/2012	92.06	5/1/2013	1.81	5/1/2014	81.43
8/30/2011	64.89	5/1/2012	89.60	5/2/2013	0.89	5/2/2014	75.03
8/31/2011	62.83	5/2/2012	94.04	5/3/2013	4.35	5/3/2014	51.58
9/1/2011	56.44	5/3/2012	87.38	5/4/2013	0.00	5/4/2014	45.30
9/2/2011	69.10	5/4/2012	80.18	5/5/2013	0.79	5/5/2014	54.50
9/3/2011	56.76	5/5/2012	67.23	5/6/2013	0.45	5/6/2014	56.56
9/4/2011	56.26	5/6/2012	84.24	5/7/2013	0.20	5/7/2014	49.70
9/5/2011	53.80	5/7/2012	95.36	5/8/2013	1.28	5/8/2014	49.47
9/6/2011	60.41	5/8/2012	97.14	5/9/2013	1.53	5/9/2014	40.91
9/7/2011	88.09	5/9/2012	93.41	5/10/2013	0.52	5/10/2014	31.03
9/8/2011	75.55	5/10/2012	88.24	5/11/2013	8.50	5/11/2014	34.19
9/9/2011	88.15	5/11/2012	92.83	5/12/2013	0.43	5/12/2014	50.77
9/10/2011	73.08	5/12/2012	79.47	5/13/2013	21.75	5/13/2014	70.29
9/11/2011	61.36	5/13/2012	59.33	5/14/2013	8.68	5/14/2014	79.40
9/12/2011	72.70	5/14/2012	68.15	5/15/2013	24.63	5/15/2014	89.18
9/13/2011	78.51	5/15/2012	76.61	5/16/2013	16.13	5/16/2014	86.28
9/14/2011	73.77	5/16/2012	91.72	5/17/2013	0.12	5/17/2014	57.47
9/15/2011	51.23	5/17/2012	89.54	5/18/2013	0.00	5/18/2014	56.81
9/16/2011	55.65	5/18/2012	92.59	5/19/2013	0.55	5/19/2014	40.51
9/17/2011	54.48	5/19/2012	86.35	5/20/2013	0.79	5/20/2014	45.91
9/18/2011	56.49	5/20/2012	87.82	5/21/2013	2.12	5/21/2014	52.56
9/19/2011	77.93	5/21/2012	90.27	5/22/2013	0.09	5/22/2014	64.57
9/20/2011	83.76	5/22/2012	92.21	5/23/2013	0.38	5/23/2014	45.12
9/21/2011	78.29	5/23/2012	91.91	5/24/2013	0.27	5/24/2014	37.99
9/22/2011	83.58	5/24/2012	85.08	5/25/2013	0.04	5/25/2014	36.08
9/23/2011	73.89	5/25/2012	88.75	5/26/2013	0.15	5/26/2014	49.08
9/24/2011	62.25	5/26/2012	73.23	5/27/2013	1.11	5/27/2014	51.02
9/25/2011	40.03	5/27/2012	71.44	5/28/2013	0.05	5/28/2014	54.98
9/26/2011	68.48	5/28/2012	81.14	5/29/2013	18.22	5/29/2014	46.72
9/27/2011	79.80	5/29/2012	90.87	5/30/2013	24.82	5/30/2014	44.39
9/28/2011	77.72	5/30/2012	91.28	5/31/2013	25.55	5/31/2014	40.21
9/29/2011	79.84	5/31/2012	100.76	6/1/2013	0.00	6/1/2014	50.42
9/30/2011	77.56	6/1/2012	93.69	6/2/2013	0.01	6/2/2014	47.54
10/1/2011	62.59	6/2/2012	78.52	6/3/2013	5.45	6/3/2014	46.31
10/2/2011	49.73	6/3/2012	74.97	6/4/2013	5.50	6/4/2014	46.80
10/3/2011	54.86	6/4/2012	93.56	6/5/2013	11.13	6/5/2014	40.99
10/4/2011	68.77	6/5/2012	84.79	6/6/2013	8.92	6/6/2014	37.26
10/5/2011	73.81	6/6/2012	96.30	6/7/2013	1.10	6/7/2014	39.88
10/6/2011	65.04	6/7/2012	95.63	6/8/2013	0.03	6/8/2014	43.89
10/7/2011	57.61	6/8/2012	27.44	6/9/2013	0.13	6/9/2014	59.38
10/8/2011	67.30	6/9/2012	1.33	6/10/2013	0.12	6/10/2014	49.16
10/9/2011	36.75	6/10/2012	2.75	6/11/2013	0.19	6/11/2014	38.74
10/10/2011	60.98	6/11/2012	4.09	6/12/2013	0.09	6/12/2014	38.03
10/11/2011	60.56	6/12/2012	65.87	6/13/2013	0.30	6/13/2014	45.81
10/12/2011	82.88	6/13/2012	93.22	6/14/2013	0.41	6/14/2014	48.34
10/13/2011	84.02	6/14/2012	92.61	6/15/2013	0.05	6/15/2014	45.41
10/14/2011	77.44	6/15/2012	94.40	6/16/2013	0.05	6/16/2014	57.71
10/15/2011	73.10	6/16/2012	96.94	6/17/2013	0.05	6/17/2014	56.11
10/16/2011	29.95	6/17/2012	90.43	6/18/2013	0.07	6/18/2014	57.61
10/17/2011	78.82	6/18/2012	93.44	6/19/2013	0.04	6/19/2014	58.79
10/18/2011	77.56	6/19/2012	24.63	6/20/2013	0.16	6/20/2014	57.72
10/19/2011	73.10	6/20/2012	65.14	6/21/2013	0.09	6/21/2014	47.97
10/20/2011	59.28	6/21/2012	86.40	6/22/2013	0.41	6/22/2014	49.49
10/21/2011	67.28	6/22/2012	85.42	6/23/2013	0.00	6/23/2014	56.84
10/22/2011	86.79	6/23/2012	65.70	6/24/2013	0.10	6/24/2014	55.74
10/23/2011	56.03	6/24/2012	68.47	6/25/2013	0.11	6/25/2014	50.09
10/24/2011	65.23	6/25/2012	21.85	6/26/2013	1.18	6/26/2014	51.80
10/25/2011	64.01	6/26/2012	1.69	6/27/2013	0.68	6/27/2014	51.86
10/26/2011	68.25	6/27/2012	1.22	6/28/2013	8.42	6/28/2014	48.78
10/27/2011	71.98	6/28/2012	4.90	6/29/2013	3.59	6/29/2014	52.38
10/28/2011	83.21	6/29/2012	0.03	6/30/2013	0.06	6/30/2014	74.41
10/29/2011	84.49	6/30/2012	0.56	7/1/2013	15.89	7/1/2014	79.80
10/30/2011	38.98	7/1/2012	0.03	7/2/2013	18.80	7/2/2014	77.27
10/31/2011	60.54	7/2/2012	1.13	7/3/2013	0.07	7/3/2014	73.26
11/1/2011	75.11	7/3/2012	1.80	7/4/2013	0.84	7/4/2014	57.28
11/2/2011	82.44	7/4/2012	0.02	7/5/2013	0.18	7/5/2014	44.34
11/3/2011	72.68	7/5/2012	0.17	7/6/2013	0.45	7/6/2014	52.22
11/4/2011	82.59	7/6/2012	0.78	7/7/2013	0.04	7/7/2014	70.38
11/5/2011	85.36	7/7/2012	3.50	7/8/2013	1.30	7/8/2014	77.71

11/6/2011	81.42	7/8/2012	2.24	7/9/2013	4.69	7/9/2014	78.30
11/7/2011	89.76	7/9/2012	89.18	7/10/2013	1.23	7/10/2014	76.23
11/8/2011	87.54	7/10/2012	103.81	7/11/2013	0.09	7/11/2014	55.07
11/9/2011	67.04	7/11/2012	108.50	7/12/2013	0.94	7/12/2014	68.15
11/10/2011	73.99	7/12/2012	95.62	7/13/2013	0.49	7/13/2014	72.97
11/11/2011	69.25	7/13/2012	96.13	7/14/2013	0.00	7/14/2014	80.67
11/12/2011	81.92	7/14/2012	84.53	7/15/2013	0.13	7/15/2014	80.16
11/13/2011	77.73	7/15/2012	84.45	7/16/2013	0.86	7/16/2014	77.76
11/14/2011	68.25	7/16/2012	94.13	7/17/2013	0.09	7/17/2014	59.84
11/15/2011	66.23	7/17/2012	3.82	7/18/2013	0.16	7/18/2014	57.32
11/16/2011	66.00	7/18/2012	0.02	7/19/2013	1.28	7/19/2014	50.07
11/17/2011	83.32	7/19/2012	18.66	7/20/2013	1.15	7/20/2014	51.40
11/18/2011	77.12	7/20/2012	95.03	7/21/2013	0.05	7/21/2014	59.22
11/19/2011	76.57	7/21/2012	91.02	7/22/2013	1.00	7/22/2014	65.46
11/20/2011	74.47	7/22/2012	90.71	7/23/2013	0.04	7/23/2014	76.40
11/21/2011	85.58	7/23/2012	96.49	7/24/2013	0.15	7/24/2014	80.96
11/22/2011	86.52	7/24/2012	88.70	7/25/2013	2.19	7/25/2014	80.55
11/23/2011	85.22	7/25/2012	83.61	7/26/2013	0.06	7/26/2014	80.83
11/24/2011	82.23	7/26/2012	84.86	7/27/2013	0.55	7/27/2014	76.26
11/25/2011	75.86	7/27/2012	88.72	7/28/2013	0.11	7/28/2014	81.88
11/26/2011	81.87	7/28/2012	78.38	7/29/2013	0.11	7/29/2014	80.40
11/27/2011	66.33	7/29/2012	76.43	7/30/2013	0.10	7/30/2014	78.81
11/28/2011	79.35	7/30/2012	84.51	7/31/2013	3.49	7/31/2014	87.43
11/29/2011	93.17	7/31/2012	80.67	8/1/2013	0.07	8/1/2014	83.86
11/30/2011	89.20	8/1/2012	89.14	8/2/2013	0.13	8/2/2014	78.32
12/1/2011	78.82	8/2/2012	88.29	8/3/2013	0.00	8/3/2014	58.97
12/2/2011	75.03	8/3/2012	84.24	8/4/2013	0.06	8/4/2014	56.16
12/3/2011	89.51	8/4/2012	82.39	8/5/2013	0.15	8/5/2014	56.05
12/4/2011	97.72	8/5/2012	82.79	8/6/2013	0.06	8/6/2014	66.91
12/5/2011	104.58	8/6/2012	97.84	8/7/2013	0.05	8/7/2014	56.64
12/6/2011	105.24	8/7/2012	97.66	8/8/2013	0.71	8/8/2014	58.71
12/7/2011	109.25	8/8/2012	100.27	8/9/2013	1.21	8/9/2014	56.19
12/8/2011	103.48	8/9/2012	102.89	8/10/2013	0.06	8/10/2014	58.18
12/9/2011	96.76	8/10/2012	103.01	8/11/2013	0.08	8/11/2014	75.28
12/10/2011	90.71	8/11/2012	92.91	8/12/2013	0.73	8/12/2014	74.09
12/11/2011	89.94	8/12/2012	91.91	8/13/2013	0.04	8/13/2014	77.28
12/12/2011	105.35	8/13/2012	105.69	8/14/2013	0.09	8/14/2014	79.64
12/13/2011	103.45	8/14/2012	99.43	8/15/2013	0.76	8/15/2014	86.03
12/14/2011	100.32	8/15/2012	97.97	8/16/2013	2.00	8/16/2014	79.57
12/15/2011	101.63	8/16/2012	95.55	8/17/2013	0.03	8/17/2014	65.98
12/16/2011	97.79	8/17/2012	95.26	8/18/2013	1.26	8/18/2014	81.50
12/17/2011	84.18	8/18/2012	80.28	8/19/2013	1.13	8/19/2014	77.53
12/18/2011	87.65	8/19/2012	86.41	8/20/2013	0.70	8/20/2014	66.90
12/19/2011	86.71	8/20/2012	95.68	8/21/2013	4.99	8/21/2014	64.09
12/20/2011	82.48	8/21/2012	94.05	8/22/2013	1.18	8/22/2014	58.62
12/21/2011	80.09	8/22/2012	88.90	8/23/2013	3.15	8/23/2014	52.80
12/22/2011	97.30	8/23/2012	87.49	8/24/2013	0.05	8/24/2014	52.78
12/23/2011	90.39	8/24/2012	80.46	8/25/2013	0.09	8/25/2014	56.98
12/24/2011	81.53	8/25/2012	58.16	8/26/2013	11.48	8/26/2014	63.97
12/25/2011	80.40	8/26/2012	50.55	8/27/2013	2.34	8/27/2014	62.83
12/26/2011	88.84	8/27/2012	87.79	8/28/2013	7.78	8/28/2014	65.30
12/27/2011	90.33	8/28/2012	103.47	8/29/2013	0.13	8/29/2014	59.44
12/28/2011	88.73	8/29/2012	104.92	8/30/2013	16.16	8/30/2014	50.33
12/29/2011	82.40	8/30/2012	97.51	8/31/2013	7.77	8/31/2014	50.12
12/30/2011	81.15	8/31/2012	91.27	9/1/2013	0.00	9/1/2014	54.04
12/31/2011	81.34	9/1/2012	77.90	9/2/2013	6.19	9/2/2014	59.04
		9/2/2012	69.02	9/3/2013	6.44	9/3/2014	59.35
		9/3/2012	75.71	9/4/2013	72.69	9/4/2014	59.23
		9/4/2012	96.38	9/5/2013	79.43	9/5/2014	65.15
		9/5/2012	94.98	9/6/2013	73.53	9/6/2014	61.78
		9/6/2012	97.93	9/7/2013	62.09	9/7/2014	61.77
		9/7/2012	92.31	9/8/2013	58.93	9/8/2014	56.97
		9/8/2012	89.32	9/9/2013	60.29	9/9/2014	65.19
		9/9/2012	89.69	9/10/2013	59.24	9/10/2014	68.30
		9/10/2012	95.36	9/11/2013	50.97	9/11/2014	78.31
		9/11/2012	92.66	9/12/2013	58.04	9/12/2014	83.18
		9/12/2012	92.72	9/13/2013	57.19	9/13/2014	79.93
		9/13/2012	101.99	9/14/2013	53.94	9/14/2014	81.14
		9/14/2012	105.13	9/15/2013	52.38	9/15/2014	89.87
		9/15/2012	105.64	9/16/2013	58.49	9/16/2014	102.48
		9/16/2012	88.62	9/17/2013	54.27	9/17/2014	96.36
		9/17/2012	89.98	9/18/2013	57.74	9/18/2014	74.32
		9/18/2012	89.33	9/19/2013	57.21	9/19/2014	79.23
		9/19/2012	89.95	9/20/2013	54.50	9/20/2014	66.31
		9/20/2012	95.41	9/21/2013	48.84	9/21/2014	61.25
		9/21/2012	94.08	9/22/2013	39.49	9/22/2014	62.39
		9/22/2012	84.86	9/23/2013	60.54	9/23/2014	66.87
		9/23/2012	83.18	9/24/2013	56.84	9/24/2014	70.00
		9/24/2012	84.91	9/25/2013	55.38	9/25/2014	75.91
		9/25/2012	84.35	9/26/2013	54.71	9/26/2014	63.40
		9/26/2012	81.17	9/27/2013	61.38	9/27/2014	45.96
		9/27/2012	88.02	9/28/2013	55.13	9/28/2014	51.14
		9/28/2012	86.30	9/29/2013	51.94	9/29/2014	59.18
		9/29/2012	87.62	9/30/2013	61.64	9/30/2014	66.78
		9/30/2012	96.28	10/1/2013	56.93	10/1/2014	78.97
		10/1/2012	103.13	10/2/2013	57.35	10/2/2014	82.43
		10/2/2012	93.75	10/3/2013	59.53	10/3/2014	82.09
		10/3/2012	89.06	10/4/2013	54.94	10/4/2014	76.36
		10/4/2012	87.51	10/5/2013	52.34	10/5/2014	79.84
		10/5/2012	84.03	10/6/2013	53.53	10/6/2014	89.08
		10/6/2012	68.85	10/7/2013	56.15	10/7/2014	82.79
		10/7/2012	82.21	10/8/2013	58.41	10/8/2014	79.86
		10/8/2012	94.49	10/9/2013	62.19	10/9/2014	74.25
		10/9/2012	94.68	10/10/2013	58.84	10/10/2014	78.41

10/10/2012	56.38	10/11/2013	64.54	10/11/2014	59.54
10/11/2012	87.64	10/12/2013	60.14	10/12/2014	57.37
10/12/2012	80.58	10/13/2013	58.00	10/13/2014	60.69
10/13/2012	82.89	10/14/2013	65.71	10/14/2014	58.97
10/14/2012	87.48	10/15/2013	85.43	10/15/2014	75.67
10/15/2012	111.51	10/16/2013	83.92	10/16/2014	67.47
10/16/2012	96.16	10/17/2013	57.78	10/17/2014	63.50
10/17/2012	99.10	10/18/2013	60.12	10/18/2014	52.69
10/18/2012	100.26	10/19/2013	57.65	10/19/2014	58.02
10/19/2012	88.32	10/20/2013	60.34	10/20/2014	61.45
10/20/2012	80.73	10/21/2013	63.21	10/21/2014	54.81
10/21/2012	65.17	10/22/2013	60.73	10/22/2014	61.25
10/22/2012	81.03	10/23/2013	65.27	10/23/2014	62.59
10/23/2012	87.30	10/24/2013	64.93	10/24/2014	56.55
10/24/2012	84.14	10/25/2013	69.78	10/25/2014	41.72
10/25/2012	85.94	10/26/2013	69.05	10/26/2014	50.86
10/26/2012	91.10	10/27/2013	54.33	10/27/2014	79.91
10/27/2012	83.76	10/28/2013	73.25	10/28/2014	79.36
10/28/2012	61.70	10/29/2013	75.79	10/29/2014	79.81
10/29/2012	86.91	10/30/2013	66.37	10/30/2014	82.84
10/30/2012	85.33	10/31/2013	62.12	10/31/2014	72.03
10/31/2012	58.34	11/1/2013	68.93	11/1/2014	63.38
11/1/2012	52.98	11/2/2013	69.99	11/2/2014	67.99
11/2/2012	53.91	11/3/2013	62.37	11/3/2014	82.77
11/3/2012	54.78	11/4/2013	80.18	11/4/2014	84.57
11/4/2012	58.53	11/5/2013	69.50	11/5/2014	84.71
11/5/2012	79.33	11/6/2013	71.24	11/6/2014	81.93
11/6/2012	76.86	11/7/2013	67.77	11/7/2014	80.64
11/7/2012	66.97	11/8/2013	70.55	11/8/2014	76.53
11/8/2012	65.70	11/9/2013	67.49	11/9/2014	79.30
11/9/2012	70.45	11/10/2013	68.50	11/10/2014	76.44
11/10/2012	73.82	11/11/2013	74.59	11/11/2014	74.41
11/11/2012	64.69	11/12/2013	73.99	11/12/2014	80.36
11/12/2012	76.64	11/13/2013	79.13	11/13/2014	76.44
11/13/2012	81.83	11/14/2013	73.77	11/14/2014	79.89
11/14/2012	79.94	11/15/2013	63.17	11/15/2014	62.36
11/15/2012	75.68	11/16/2013	60.71	11/16/2014	62.21
11/16/2012	71.15	11/17/2013	69.33	11/17/2014	89.63
11/17/2012	63.84	11/18/2013	75.33	11/18/2014	89.33
11/18/2012	62.29	11/19/2013	71.35	11/19/2014	86.41
11/19/2012	73.20	11/20/2013	73.59	11/20/2014	69.44
11/20/2012	72.90	11/21/2013	77.03	11/21/2014	61.64
11/21/2012	80.85	11/22/2013	75.89	11/22/2014	57.63
11/22/2012	63.39	11/23/2013	64.51	11/23/2014	62.18
11/23/2012	74.20	11/24/2013	64.67	11/24/2014	66.97
11/24/2012	71.24	11/25/2013	69.68	11/25/2014	57.43
11/25/2012	70.30	11/26/2013	65.01	11/26/2014	59.46
11/26/2012	97.02	11/27/2013	65.69	11/27/2014	58.14
11/27/2012	112.50	11/28/2013	61.03	11/28/2014	60.71
11/28/2012	111.29	11/29/2013	70.84	11/29/2014	49.18
11/29/2012	113.66	11/30/2013	57.29	11/30/2014	59.39
11/30/2012	108.93	12/1/2013	56.02	12/1/2014	82.94
12/1/2012	94.71	12/2/2013	67.51	12/2/2014	84.18
12/2/2012	90.12	12/3/2013	66.54	12/3/2014	85.74
12/3/2012	73.44	12/4/2013	76.36	12/4/2014	83.56
12/4/2012	62.53	12/5/2013	85.98	12/5/2014	83.27
12/5/2012	62.33	12/6/2013	95.19	12/6/2014	80.40
12/6/2012	89.45	12/7/2013	83.84	12/7/2014	75.32
12/7/2012	84.45	12/8/2013	94.26	12/8/2014	82.68
12/8/2012	81.93	12/9/2013	87.95	12/9/2014	85.74
12/9/2012	88.02	12/10/2013	71.35	12/10/2014	84.11
12/10/2012	96.98	12/11/2013	78.50	12/11/2014	84.20
12/11/2012	96.37	12/12/2013	84.76	12/12/2014	82.52
12/12/2012	95.24	12/13/2013	87.37	12/13/2014	76.83
12/13/2012	107.35	12/14/2013	67.13	12/14/2014	79.27
12/14/2012	109.87	12/15/2013	67.04	12/15/2014	86.15
12/15/2012	99.28	12/16/2013	68.16	12/16/2014	93.41
12/16/2012	97.61	12/17/2013	63.12	12/17/2014	87.94
12/17/2012	97.05	12/18/2013	66.32	12/18/2014	88.82
12/18/2012	104.00	12/19/2013	80.44	12/19/2014	84.96
12/19/2012	110.90	12/20/2013	73.03	12/20/2014	75.93
12/20/2012	107.06	12/21/2013	70.41	12/21/2014	77.62
12/21/2012	104.56	12/22/2013	74.62	12/22/2014	81.53
12/22/2012	99.92	12/23/2013	66.78	12/23/2014	71.61
12/23/2012	95.72	12/24/2013	64.29	12/24/2014	56.27
12/24/2012	94.08	12/25/2013	57.80	12/25/2014	57.87
12/25/2012	91.86	12/26/2013	66.67	12/26/2014	89.84
12/26/2012	96.59	12/27/2013	69.13	12/27/2014	90.19
12/27/2012	102.48	12/28/2013	64.08	12/28/2014	93.53
12/28/2012	104.23	12/29/2013	68.05	12/29/2014	97.27
12/29/2012	105.02	12/30/2013	72.10	12/30/2014	101.84
12/30/2012	104.39	12/31/2013	70.95	12/31/2014	111.69
12/31/2012	108.28				

APPENDIX F

Supplier Tariffs

EPN – El Paso Natural Gas Pipeline

<http://passportebb.elpaso.com/ebbmasterpage/Tariff/OrgChart.aspx?code=EPNG>

NBP – North Baja Pipeline

<http://www.tcplus.com/North%20Baja/Tariff/TitleSheet>

TW – Transwestern Pipeline

<http://twtransfer.energytransfer.com/ipost/TW/tariff/title-sheet-section>

MP – Mojave Pipeline

<http://passportebb.elpaso.com/ebbmasterpage/Tariff/OrgChart.aspx?code=MOPC&pdftag=title>

QST – Questar Southern Trails Pipeline

[http://www.questarpipeline.com/tariff\\_STP/2Frametarentire.html](http://www.questarpipeline.com/tariff_STP/2Frametarentire.html)

KR – Kern River Pipeline

<http://services.kernrivergas.com/portal/Informational-Postings/Tariff/Entire-Tariff>

PG&E – Pacific Gas and Electric

<http://www.pge.com/tariffs/>

## APPENDIX G

### SDG&E Balance Sheet and Income Statement

**SAN DIEGO GAS & ELECTRIC COMPANY  
BALANCE SHEET  
ASSETS AND OTHER DEBITS  
SEPTEMBER 30, 2015**

	<b>2015</b>
<b>1. UTILITY PLANT</b>	
101 UTILITY PLANT IN SERVICE	\$14,367,101,567
102 UTILITY PLANT PURCHASED OR SOLD	-
104 UTILITY PLANT LEASED TO OTHERS	85,194,000
105 PLANT HELD FOR FUTURE USE	11,307,728
106 COMPLETED CONSTRUCTION NOT CLASSIFIED	-
107 CONSTRUCTION WORK IN PROGRESS	711,880,011
108 ACCUMULATED PROVISION FOR DEPRECIATION OF UTILITY PLANT	(4,492,473,352)
111 ACCUMULATED PROVISION FOR AMORTIZATION OF UTILITY PLANT	(510,032,224)
114 ELEC PLANT ACQUISITION ADJ	3,750,722
115 ACCUM PROVISION FOR AMORT OF ELECTRIC PLANT ACQUIS ADJ	(937,680)
118 OTHER UTILITY PLANT	1,002,944,475
119 ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION OF OTHER UTILITY PLANT	(249,922,068)
120 NUCLEAR FUEL - NET	-
TOTAL NET UTILITY PLANT	10,928,813,179
<b>2. OTHER PROPERTY AND INVESTMENTS</b>	
121 NONUTILITY PROPERTY	5,946,616
122 ACCUMULATED PROVISION FOR DEPRECIATION AND 0	(364,300)
123 INVESTMENTS IN SUBSIDIARY COMPANIES	-
124 OTHER INVESTMENTS	-
125 SINKING FUNDS	-
128 OTHER SPECIAL FUNDS	1,060,280,100
TOTAL OTHER PROPERTY AND INVESTMENTS	1,065,862,416

Data from SPL as of September 30, 2015

**SAN DIEGO GAS & ELECTRIC COMPANY  
BALANCE SHEET  
ASSETS AND OTHER DEBITS  
SEPTEMBER 30, 2015**

<b>3. CURRENT AND ACCRUED ASSETS</b>		2015
131	CASH	3,030,462
132	INTEREST SPECIAL DEPOSITS	-
134	OTHER SPECIAL DEPOSITS	-
135	WORKING FUNDS	500
136	TEMPORARY CASH INVESTMENTS	-
141	NOTES RECEIVABLE	-
142	CUSTOMER ACCOUNTS RECEIVABLE	346,797,616
143	OTHER ACCOUNTS RECEIVABLE	26,817,735
144	ACCUMULATED PROVISION FOR UNCOLLECTIBLE ACCOUNTS	(3,707,704)
145	NOTES RECEIVABLE FROM ASSOCIATED COMPANIES	1,040
146	ACCOUNTS RECEIVABLE FROM ASSOCIATED COMPANIES	1,408,885
151	FUEL STOCK	3,260,510
152	FUEL STOCK EXPENSE UNDISTRIBUTED	-
154	PLANT MATERIALS AND OPERATING SUPPLIES	102,483,040
156	OTHER MATERIALS AND SUPPLIES	-
158	ALLOWANCES	211,964,533
163	STORES EXPENSE UNDISTRIBUTED	-
164	GAS STORED	363,740
165	PREPAYMENTS	213,745,858
171	INTEREST AND DIVIDENDS RECEIVABLE	30,284,804
173	ACCRUED UTILITY REVENUES	68,396,000
174	MISCELLANEOUS CURRENT AND ACCRUED ASSETS	2,294,000
175	DERIVATIVE INSTRUMENT ASSETS	110,421,434
TOTAL CURRENT AND ACCRUED ASSETS		1,117,562,453
<b>4. DEFERRED DEBITS</b>		
181	UNAMORTIZED DEBT EXPENSE	32,258,871
182	UNRECOVERED PLANT AND OTHER REGULATORY ASSETS	3,459,221,656
183	PRELIMINARY SURVEY & INVESTIGATION CHARGES	4,935,394
184	CLEARING ACCOUNTS	87,898
185	TEMPORARY FACILITIES	-
186	MISCELLANEOUS DEFERRED DEBITS	38,117,572
188	RESEARCH AND DEVELOPMENT	-
189	UNAMORTIZED LOSS ON REACQUIRED DEBT	12,970,940
190	ACCUMULATED DEFERRED INCOME TAXES	622,871,848
TOTAL DEFERRED DEBITS		4,170,464,179
TOTAL ASSETS AND OTHER DEBITS		17,282,702,227

Data from SPL as of September 30, 2015

**SAN DIEGO GAS & ELECTRIC COMPANY**  
**BALANCE SHEET**  
**LIABILITIES AND OTHER CREDITS**  
**SEPTEMBER 30, 2015**

**5. PROPRIETARY CAPITAL**

	2015
201 COMMON STOCK ISSUED	(\$291,458,395)
204 PREFERRED STOCK ISSUED	-
207 PREMIUM ON CAPITAL STOCK	(591,282,978)
210 GAIN ON RETIRED CAPITAL STOCK	-
211 MISCELLANEOUS PAID-IN CAPITAL	(479,665,368)
214 CAPITAL STOCK EXPENSE	24,605,640
216 UNAPPROPRIATED RETAINED EARNINGS	(3,901,431,394)
219 ACCUMULATED OTHER COMPREHENSIVE INCOME	11,616,701
TOTAL PROPRIETARY CAPITAL	(5,227,615,794)

**6. LONG-TERM DEBT**

221 BONDS	(4,239,648,000)
223 ADVANCES FROM ASSOCIATED COMPANIES	-
224 OTHER LONG-TERM DEBT	-
225 UNAMORTIZED PREMIUM ON LONG-TERM DEBT	-
226 UNAMORTIZED DISCOUNT ON LONG-TERM DEBT	9,859,819
TOTAL LONG-TERM DEBT	(4,229,788,181)

**7. OTHER NONCURRENT LIABILITIES**

227 OBLIGATIONS UNDER CAPITAL LEASES - NONCURRENT	(626,930,962)
228.2 ACCUMULATED PROVISION FOR INJURIES AND DAMAGES	(28,972,084)
228.3 ACCUMULATED PROVISION FOR PENSIONS AND BENEFITS	(231,530,674)
228.4 ACCUMULATED MISCELLANEOUS OPERATING PROVISIONS	-
230 ASSET RETIREMENT OBLIGATIONS	(846,331,644)
TOTAL OTHER NONCURRENT LIABILITIES	(1,733,765,364)

Data from SPL as of September 30, 2015

**SAN DIEGO GAS & ELECTRIC COMPANY  
BALANCE SHEET  
LIABILITIES AND OTHER CREDITS  
SEPTEMBER 30, 2015**

**8. CURRENT AND ACCRUED LIABILITES**

		2015
231	NOTES PAYABLE	(44,200,000)
232	ACCOUNTS PAYABLE	(443,436,444)
233	NOTES PAYABLE TO ASSOCIATED COMPANIES	-
234	ACCOUNTS PAYABLE TO ASSOCIATED COMPANIES	(21,881,544)
235	CUSTOMER DEPOSITS	(70,845,796)
236	TAXES ACCRUED	(195,083,388)
237	INTEREST ACCRUED	(54,123,252)
238	DIVIDENDS DECLARED	-
241	TAX COLLECTIONS PAYABLE	(8,891,671)
242	MISCELLANEOUS CURRENT AND ACCRUED LIABILITIES	(264,593,044)
243	OBLIGATIONS UNDER CAPITAL LEASES - CURRENT	(39,463,611)
244	DERIVATIVE INSTRUMENT LIABILITIES	(188,147,705)
245	DERIVATIVE INSTRUMENT LIABILITIES - HEDGES	-
	TOTAL CURRENT AND ACCRUED LIABILITIES	(1,330,666,455)

**9. DEFERRED CREDITS**

252	CUSTOMER ADVANCES FOR CONSTRUCTION	(38,572,657)
253	OTHER DEFERRED CREDITS	(348,878,514)
254	OTHER REGULATORY LIABILITIES	(1,361,255,774)
255	ACCUMULATED DEFERRED INVESTMENT TAX CREDITS	(19,477,103)
257	UNAMORTIZED GAIN ON REACQUIRED DEBT	-
281	ACCUMULATED DEFERRED INCOME TAXES - ACCELERATED	-
282	ACCUMULATED DEFERRED INCOME TAXES - PROPERTY	(1,848,041,128)
283	ACCUMULATED DEFERRED INCOME TAXES - OTHER	(1,144,641,257)
	TOTAL DEFERRED CREDITS	(4,760,866,433)

	TOTAL LIABILITIES AND OTHER CREDITS	(\$17,282,702,227)
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Data from SPL as of September 30, 2015

**SAN DIEGO GAS & ELECTRIC COMPANY**  
**STATEMENT OF INCOME AND RETAINED EARNINGS**  
**NINE MONTHS ENDED SEPTEMBER 30, 2015**

**1. UTILITY OPERATING INCOME**

400	OPERATING REVENUES		\$3,613,174,322
401	OPERATING EXPENSES	\$2,237,186,073	
402	MAINTENANCE EXPENSES	100,481,589	
403-7	DEPRECIATION AND AMORTIZATION EXPENSES	426,951,749	
408.1	TAXES OTHER THAN INCOME TAXES	93,356,007	
409.1	INCOME TAXES	73,433,119	
410.1	PROVISION FOR DEFERRED INCOME TAXES	348,097,607	
411.1	PROVISION FOR DEFERRED INCOME TAXES - CREDIT	(204,682,441)	
411.4	INVESTMENT TAX CREDIT ADJUSTMENTS	(2,138,062)	
411.6	GAIN FROM DISPOSITION OF UTILITY PLANT	-	
	TOTAL OPERATING REVENUE DEDUCTIONS		<u>3,072,685,641</u>
	NET OPERATING INCOME		540,488,681

**2. OTHER INCOME AND DEDUCTIONS**

415	REVENUE FROM MERCHANDISING, JOBBING AND CONTRACT WORK	-	
417	REVENUES OF NONUTILITY OPERATIONS	4,707	
417.1	EXPENSES OF NONUTILITY OPERATIONS	-	
418	NONOPERATING RENTAL INCOME	60,372	
418.1	EQUITY IN EARNINGS OF SUBSIDIARIES	-	
419	INTEREST AND DIVIDEND INCOME	33,332,508	
419.1	ALLOWANCE FOR OTHER FUNDS USED DURING CONSTRUCTION	26,911,290	
421	MISCELLANEOUS NONOPERATING INCOME	288,227	
421.1	GAIN ON DISPOSITION OF PROPERTY	-	
	TOTAL OTHER INCOME	<u>60,597,104</u>	
421.2	LOSS ON DISPOSITION OF PROPERTY	-	
425	MISCELLANEOUS AMORTIZATION	187,536	
426	MISCELLANEOUS OTHER INCOME DEDUCTIONS	3,744,872	
	TOTAL OTHER INCOME DEDUCTIONS	<u>3,932,408</u>	
408.2	TAXES OTHER THAN INCOME TAXES	468,992	
409.2	INCOME TAXES	1,577,334	
410.2	PROVISION FOR DEFERRED INCOME TAXES	43,664,994	
411.2	PROVISION FOR DEFERRED INCOME TAXES - CREDIT	(21,961,887)	
	TOTAL TAXES ON OTHER INCOME AND DEDUCTIONS	<u>23,749,433</u>	
	TOTAL OTHER INCOME AND DEDUCTIONS		<u>32,915,263</u>
	INCOME BEFORE INTEREST CHARGES		573,403,944
	EXTRAORDINARY ITEMS AFTER TAXES		12,557,074
	NET INTEREST CHARGES*		<u>142,704,795</u>
	NET INCOME		<u><u>\$443,256,223</u></u>

*\*NET OF ALLOWANCE FOR BORROWED FUNDS USED DURING CONSTRUCTION, (\$10,183,597)*

**SAN DIEGO GAS & ELECTRIC COMPANY**  
**STATEMENT OF INCOME AND RETAINED EARNINGS**  
**NINE MONTHS ENDED SEPTEMBER 30, 2015**

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**3. RETAINED EARNINGS**

RETAINED EARNINGS AT BEGINNING OF PERIOD, AS PREVIOUSLY REPORTED	\$3,608,175,171
NET INCOME (FROM PRECEDING PAGE)	443,256,223
DIVIDEND TO PARENT COMPANY	(150,000,000)
DIVIDENDS DECLARED - PREFERRED STOCK	0
OTHER RETAINED EARNINGS ADJUSTMENTS	0
RETAINED EARNINGS AT END OF PERIOD	<u>\$3,901,431,394</u>

## APPENDIX H

### SoCalGas Balance Sheet and Income Statement

**SOUTHERN CALIFORNIA GAS COMPANY  
BALANCE SHEET  
ASSETS AND OTHER DEBITS  
SEPTEMBER 30, 2015**

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<b>1. UTILITY PLANT</b>		<u>2015</u>
101	UTILITY PLANT IN SERVICE	\$12,697,752,150
102	UTILITY PLANT PURCHASED OR SOLD	-
105	PLANT HELD FOR FUTURE USE	-
106	COMPLETED CONSTRUCTION NOT CLASSIFIED	-
107	CONSTRUCTION WORK IN PROGRESS	925,787,639
108	ACCUMULATED PROVISION FOR DEPRECIATION OF UTILITY PLANT	(4,955,800,050)
111	ACCUMULATED PROVISION FOR AMORTIZATION OF UTILITY PLANT	(45,451,681)
117	GAS STORED-UNDERGROUND	<u>61,503,699</u>
	TOTAL NET UTILITY PLANT	<u>8,683,791,757</u>
 <b>2. OTHER PROPERTY AND INVESTMENTS</b>		
121	NONUTILITY PROPERTY	122,062,324
122	ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION OF NONUTILITY PROPERTY	(89,289,072)
123	INVESTMENTS IN SUBSIDIARY COMPANIES	-
124	OTHER INVESTMENTS	122
125	SINKING FUNDS	-
128	OTHER SPECIAL FUNDS	<u>3,000,000</u>
	TOTAL OTHER PROPERTY AND INVESTMENTS	<u>35,773,374</u>

Data from SPL as of November 19, 2015.

**SOUTHERN CALIFORNIA GAS COMPANY  
BALANCE SHEET  
ASSETS AND OTHER DEBITS  
SEPTEMBER 30, 2015**

<b>3. CURRENT AND ACCRUED ASSETS</b>		2015
131	CASH	108,625,418
132	INTEREST SPECIAL DEPOSITS	-
134	OTHER SPECIAL DEPOSITS	-
135	WORKING FUNDS	92,491
136	TEMPORARY CASH INVESTMENTS	13,750,000
141	NOTES RECEIVABLE	-
142	CUSTOMER ACCOUNTS RECEIVABLE	330,640,175
143	OTHER ACCOUNTS RECEIVABLE	41,291,517
144	ACCUMULATED PROVISION FOR UNCOLLECTIBLE ACCOUNTS	(6,282,331)
145	NOTES RECEIVABLE FROM ASSOCIATED COMPANIES	250,044,982
146	ACCOUNTS RECEIVABLE FROM ASSOCIATED COMPANIES	(25,932,078)
151	FUEL STOCK	-
152	FUEL STOCK EXPENSE UNDISTRIBUTED	-
154	PLANT MATERIALS AND OPERATING SUPPLIES	30,087,406
155	MERCHANDISE	31,098
156	OTHER MATERIALS AND SUPPLIES	-
158	GHG ALLOWANCE	55,489,158
163	STORES EXPENSE UNDISTRIBUTED	1,552,825
164	GAS STORED	162,007,067
165	PREPAYMENTS	41,489,933
171	INTEREST AND DIVIDENDS RECEIVABLE	3,647,338
173	ACCRUED UTILITY REVENUES	-
174	MISCELLANEOUS CURRENT AND ACCRUED ASSETS	45,015,238
175	DERIVATIVE INSTRUMENT ASSETS	2,270,102
176	LONG TERM PORTION OF DERIVATIVE ASSETS - HEDGES	-
	TOTAL CURRENT AND ACCRUED ASSETS	1,053,820,339
 <b>4. DEFERRED DEBITS</b>		
181	UNAMORTIZED DEBT EXPENSE	17,632,160
182	UNRECOVERED PLANT AND OTHER REGULATORY ASSETS	1,887,935,320
183	PRELIMINARY SURVEY & INVESTIGATION CHARGES	1,023,913
184	CLEARING ACCOUNTS	(2,141,974)
185	TEMPORARY FACILITIES	-
186	MISCELLANEOUS DEFERRED DEBITS	89,587,435
188	RESEARCH AND DEVELOPMENT	900,085
189	UNAMORTIZED LOSS ON REACQUIRED DEBT	9,777,912
190	ACCUMULATED DEFERRED INCOME TAXES	440,535,978
191	UNRECOVERED PURCHASED GAS COSTS	-
	TOTAL DEFERRED DEBITS	2,445,250,829
	TOTAL ASSETS AND OTHER DEBITS	\$ 12,218,636,299

Data from SPL as of November 19, 2015.

**SOUTHERN CALIFORNIA GAS COMPANY  
BALANCE SHEET  
LIABILITIES AND OTHER CREDITS  
SEPTEMBER 30, 2015**

**5. PROPRIETARY CAPITAL**

	2015
201 COMMON STOCK ISSUED	(834,888,907)
204 PREFERRED STOCK ISSUED	(21,551,075)
207 PREMIUM ON CAPITAL STOCK	-
208 OTHER PAID-IN CAPITAL	-
210 GAIN ON RETIRED CAPITAL STOCK	(9,722)
211 MISCELLANEOUS PAID-IN CAPITAL	(31,306,680)
214 CAPITAL STOCK EXPENSE	143,261
216 UNAPPROPRIATED RETAINED EARNINGS	(2,138,540,419)
219 ACCUMULATED OTHER COMPREHENSIVE INCOME	17,664,489
TOTAL PROPRIETARY CAPITAL	(3,008,489,053)

**6. LONG-TERM DEBT**

221 BONDS	(2,500,000,000)
224 OTHER LONG-TERM DEBT	(12,475,533)
225 UNAMORTIZED PREMIUM ON LONG-TERM DEBT	-
226 UNAMORTIZED DISCOUNT ON LONG-TERM DEBT	7,177,792
TOTAL LONG-TERM DEBT	(2,505,297,741)

**7. OTHER NONCURRENT LIABILITIES**

227 OBLIGATIONS UNDER CAPITAL LEASES - NONCURRENT	(420,409)
228.2 ACCUMULATED PROVISION FOR INJURIES AND DAMAGES	(178,700,655)
228.3 ACCUMULATED PROVISION FOR PENSIONS AND BENEFITS	(730,285,508)
228.4 ACCUMULATED MISCELLANEOUS OPERATING PROVISIONS	-
230 ASSET RETIREMENT OBLIGATIONS	(1,327,382,932)
TOTAL OTHER NONCURRENT LIABILITIES	(2,236,789,504)

Data from SPL as of November 19, 2015.

**SOUTHERN CALIFORNIA GAS COMPANY  
BALANCE SHEET  
LIABILITIES AND OTHER CREDITS  
SEPTEMBER 30, 2015**

<b>8. CURRENT AND ACCRUED LIABILITES</b>		2015
231	NOTES PAYABLE	-
232	ACCOUNTS PAYABLE	(436,701,330)
233	NOTES PAYABLE TO ASSOCIATED COMPANIES	-
234	ACCOUNTS PAYABLE TO ASSOCIATED COMPANIES	(13,228,251)
235	CUSTOMER DEPOSITS	(74,071,378)
236	TAXES ACCRUED	(18,568,344)
237	INTEREST ACCRUED	(22,958,332)
238	DIVIDENDS DECLARED	(50,323,265)
241	TAX COLLECTIONS PAYABLE	(19,047,035)
242	MISCELLANEOUS CURRENT AND ACCRUED LIABILITIES	(155,301,009)
243	OBLIGATIONS UNDER CAPITAL LEASES - CURRENT	(1,787,779)
244	DERIVATIVE INSTRUMENT LIABILITIES	(217,724)
245	DERIVATIVE INSTRUMENT LIABILITIES - HEDGES	-
	<b>TOTAL CURRENT AND ACCRUED LIABILITIES</b>	<b>(792,204,447)</b>
<b>9. DEFERRED CREDITS</b>		
252	CUSTOMER ADVANCES FOR CONSTRUCTION	(78,278,976)
253	OTHER DEFERRED CREDITS	(158,482,095)
254	OTHER REGULATORY LIABILITIES	(1,551,855,217)
255	ACCUMULATED DEFERRED INVESTMENT TAX CREDITS	(14,398,903)
257	UNAMORTIZED GAIN ON REACQUIRED DEBT	-
281	ACCUMULATED DEFERRED INCOME TAXES - ACCELERATED	-
282	ACCUMULATED DEFERRED INCOME TAXES - PROPERTY	(1,029,569,704)
283	ACCUMULATED DEFERRED INCOME TAXES - OTHER	(843,270,659)
	<b>TOTAL DEFERRED CREDITS</b>	<b>(3,675,855,554)</b>
	<b>TOTAL LIABILITIES AND OTHER CREDITS</b>	<b>\$ (12,218,636,299)</b>

Data from SPL as of November 19, 2015.

**SOUTHERN CALIFORNIA GAS COMPANY**  
**STATEMENT OF INCOME AND RETAINED EARNINGS**  
**NINE MONTHS ENDED SEPTEMBER 30, 2015**

**1. UTILITY OPERATING INCOME**

400	OPERATING REVENUES		2,439,722,253
401	OPERATING EXPENSES	1,448,452,766	
402	MAINTENANCE EXPENSES	184,027,437	
403-7	DEPRECIATION AND AMORTIZATION EXPENSES	341,564,492	
408.1	TAXES OTHER THAN INCOME TAXES	64,743,272	
409.1	INCOME TAXES	(5,138,949)	
410.1	PROVISION FOR DEFERRED INCOME TAXES	260,272,921	
411.1	PROVISION FOR DEFERRED INCOME TAXES - CREDIT	(163,121,096)	
411.4	INVESTMENT TAX CREDIT ADJUSTMENTS	(1,420,609)	
411.6	GAIN FROM DISPOSITION OF UTILITY PLANT	-	
411.7	LOSS FROM DISPOSITION OF UTILITY PLANT	-	
	TOTAL OPERATING REVENUE DEDUCTIONS		2,129,380,234
	NET OPERATING INCOME		310,342,019

**2. OTHER INCOME AND DEDUCTIONS**

415	REVENUE FROM MERCHANDISING, JOBBING AND CONTRACT WORK	-	
417	REVENUES FROM NONUTILITY OPERATIONS	-	
417.1	EXPENSES OF NONUTILITY OPERATIONS	(82,113)	
418	NONOPERATING RENTAL INCOME	334,276	
418.1	EQUITY IN EARNINGS OF SUBSIDIARIES	-	
419	INTEREST AND DIVIDEND INCOME	3,409,441	
419.1	ALLOWANCE FOR OTHER FUNDS USED DURING CONSTRUCTION	28,837,902	
421	MISCELLANEOUS NONOPERATING INCOME	(584,174)	
421.2	LOSS ON DISPOSITION OF PROPERTY	(261,000)	
	TOTAL OTHER INCOME	31,654,332	
425	MISCELLANEOUS AMORTIZATION	7,400	
426	MISCELLANEOUS OTHER INCOME DEDUCTIONS	(3,466,102)	
		(3,458,702)	
408.2	TAXES OTHER THAN INCOME TAXES	(84,175)	
409.2	INCOME TAXES	1,057,342	
410.2	PROVISION FOR DEFERRED INCOME TAXES	(16,145,102)	
411.2	PROVISION FOR DEFERRED INCOME TAXES - CREDIT	14,227,903	
420	INVESTMENT TAX CREDITS	-	
	TOTAL TAXES ON OTHER INCOME AND DEDUCTIONS	(944,032)	
	TOTAL OTHER INCOME AND DEDUCTIONS		27,251,598
	INCOME BEFORE INTEREST CHARGES		337,593,617
	NET INTEREST CHARGES*		60,579,700
	NET INCOME		\$277,013,917

\*NET OF ALLOWANCE FOR BORROWED FUNDS USED DURING CONSTRUCTION. (\$9,203,982)

Data from SPL as of November 19, 2015.

**STATEMENT OF INCOME AND RETAINED EARNINGS**  
**NINE MONTHS ENDED SEPTEMBER 30, 2015**

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**3. RETAINED EARNINGS**

RETAINED EARNINGS AT BEGINNING OF PERIOD, AS PREVIOUSLY REPORTED	\$1,912,496,300
NET INCOME (FROM PRECEDING PAGE)	277,013,917
DIVIDEND TO PARENT COMPANY	(50,000,000)
DIVIDENDS DECLARED - PREFERRED STOCK	(969,798)
OTHER RETAINED EARNINGS ADJUSTMENT	<u>-</u>
RETAINED EARNINGS AT END OF PERIOD	<u><u>\$2,138,540,419</u></u>

## APPENDIX I

### SDG&E Statement of Proposed Increases

**TABLE 1**  
**Natural Gas Transportation Rate Revenues**  
**San Diego Gas & Electric**  
**2016 Rates**

PSRP 2021 Rates

	At Present Rates			At Proposed Rates			Changes		
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Average	Jan-1-16	Revenues	Rates	Rate
	Volumes mtherms A	Rate \$/therm B	Revenues \$000's C	Volumes mtherms D	Rate \$/therm E	Revenues \$000's F	Revenues \$000's G	Rates \$/therm H	change % I
<b>CORE</b>									
Residential	321,869	\$0.95394	\$307,042	321,869	\$0.96792	\$311,543	\$4,501	\$0.01398	1.5%
Commercial & Industrial	177,578	\$0.42742	\$75,900	177,578	\$0.43125	\$76,581	\$681	\$0.00384	0.9%
NGV - Pre SempraWide	11,417	\$0.32884	\$3,754	11,417	\$0.33049	\$3,773	\$19	\$0.00165	0.5%
SempraWide Adjustment	11,417	(\$0.09158)	(\$1,046)	11,417	(\$0.09308)	(\$1,063)	(\$17)	(\$0.00150)	1.6%
NGV Post SempraWide	11,417	\$0.23726	\$2,709	11,417	\$0.23741	\$2,710	\$2	\$0.00015	0.1%
<b>Total CORE</b>	<b>510,864</b>	<b>\$0.75490</b>	<b>\$385,651</b>	<b>510,864</b>	<b>\$0.76505</b>	<b>\$390,835</b>	<b>\$5,184</b>	<b>\$0.01015</b>	<b>1.3%</b>
<b>NONCORE COMMERCIAL &amp; INDUSTRIAL</b>									
Distribution Level Service	25,161	\$0.09502	\$2,391	25,161	\$0.09662	\$2,431	\$40	\$0.00160	1.7%
Transmission Level Service (2)	13,582	\$0.01967	\$267	13,582	\$0.01967	\$267	\$0	\$0.00000	0.0%
<b>Total Noncore C&amp;I</b>	<b>38,743</b>	<b>\$0.06861</b>	<b>\$2,658</b>	<b>38,743</b>	<b>\$0.06964</b>	<b>\$2,698</b>	<b>\$40</b>	<b>\$0.00104</b>	<b>1.5%</b>
<b>NONCORE ELECTRIC GENERATION</b>									
Distribution Level Service									
Pre Sempra Wide	103,761	\$0.03336	\$3,462	103,761	\$0.03383	\$3,510	\$48	\$0.00046	1.4%
Sempra Wide Adjustment	103,761	\$0.02325	\$2,413	103,761	\$0.02290	\$2,376	(\$36)	(\$0.00035)	-1.5%
Distribution Level post SW	103,761	\$0.05661	\$5,874	103,761	\$0.05673	\$5,886	\$12	\$0.00012	0.2%
Transmission Level Service (2)	577,118	\$0.01343	\$7,752	577,118	\$0.01343	\$7,752	\$1	\$0.00000	0.0%
<b>Total Electric Generation</b>	<b>680,879</b>	<b>\$0.02001</b>	<b>\$13,626</b>	<b>680,879</b>	<b>\$0.02003</b>	<b>\$13,638</b>	<b>\$13</b>	<b>\$0.00002</b>	<b>0.1%</b>
<b>TOTAL NONCORE</b>	<b>719,622</b>	<b>\$0.02263</b>	<b>\$16,284</b>	<b>719,622</b>	<b>\$0.02270</b>	<b>\$16,337</b>	<b>\$53</b>	<b>\$0.00007</b>	<b>0.3%</b>
<b>SYSTEM TOTAL</b>	<b>1,230,486</b>	<b>\$0.32665</b>	<b>\$401,935</b>	<b>1,230,486</b>	<b>\$0.33090</b>	<b>\$407,172</b>	<b>\$5,237</b>	<b>\$0.00426</b>	<b>1.3%</b>

- 1) These rates are for Natural Gas Transportation Service from "Citygate to Meter". The BTS rate is for service from Receipt Point to Citygate. BTS is a SoCalGas tariff and service is purchased from SoCalGas.
- 2) Average transmission level service rate is shown here, see Rate Table 6 for detail list of TLS rates.
- 3) All rates include Franchise Fees & Uncollectible charges

**TABLE 2**  
**Core Gas Transportation Rates**  
**San Diego Gas & Electric**  
**2016 Rates**

PSRP 2021 Rates

	At Present Rates			At Proposed Rates			Changes		
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Average	Jan-1-16	Revenues	Rates	Rate
	Volumes	Rate	Revenues	Volumes	Rate	Revenues	Revenues	Rates	change
	mtherms	\$/therm	\$000's	mtherms	\$/therm	\$000's	\$000's	\$/therm	%
	A	B	C	D	E	F	G	H	I
<b>1 RESIDENTIAL RATES Schedule GR,GM</b>									
<b>2 Rates Excluding CSITMA &amp; CAT</b>									
<b>3 Customer Charge \$/month</b>	848,086	\$0.00	\$0	848,086	\$0.00	\$0	\$0	\$0.00	
<b>4</b>									
<b>5 Baseline \$/therm</b>	217,220	\$0.90327	\$196,210	217,220	\$0.91657	\$199,098	\$2,889	\$0.01330	1.5%
<b>6 Non-Baseline \$/therm</b>	104,649	\$1.07877	\$112,892	104,649	\$1.09398	\$114,483	\$1,592	\$0.01521	1.4%
<b>7 Average Rate \$/therm</b>	321,869	\$0.96033	\$309,101	321,869	\$0.97425	\$313,582	\$4,481	\$0.01392	1.4%
<b>8 NBL/BL Ratio</b>									
<b>9 Composite Rate \$/th</b>									
<b>10 NBL/Composite rate ratio</b>		1.14			1.14				
<b>11 NBL- BL rate difference \$/th</b>									
<b>12</b>									
<b>13 Rates Including CSITMA, Excluding CAT</b>									
<b>14 CSITMA Adder to Volumetric Rate</b>	256,575	\$0.00478	\$1,225	256,575	\$0.00478	\$1,225	\$0	\$0.00000	0.0%
<b>15 Baseline \$/therm</b>		\$0.90805			\$0.92135			\$0.01330	1.5%
<b>16 Non-Baseline \$/therm</b>		\$1.08354			\$1.09876			\$0.01521	1.4%
<b>17 Average NonCARE Rate \$/therm</b>		\$0.96511			\$0.97903			\$0.01392	1.4%
<b>18</b>									
<b>19 Sub Meter Credit Schedule GS,GT</b>									
<b>20 GS Unit Discount \$/day</b>	6,004	(\$0.29392)	(\$644)	6,004	(\$0.29392)	(\$644)	\$0	\$0.00000	0.0%
<b>21 GT Unit Discount \$/day</b>	27,745	(\$0.36460)	(\$3,692)	27,745	(\$0.36460)	(\$3,692)	\$0	\$0.00000	0.0%
<b>22</b>									
<b>23 Schedule GL-1</b>									
<b>24 LNG Facility Charge, domestic use \$/mcf</b>	289	\$14.79	\$51	289	\$14.79	\$51		\$0.00000	0.0%
<b>25 LNG Facility Charge, non-domestic \$/mth/mbtu</b>		\$0.05480			\$0.05480			\$0.00000	0.0%
<b>26 LNG Volumetric Surcharge \$/th</b>	100	\$0.16571	\$16	100	\$0.16571	\$16		\$0.00000	0.0%
<b>27</b>			\$68			\$68			
<b>28 Volumetric Rates Including CSITMA &amp; CAT</b>									
<b>29 CAT Adder to Volumetric Rate</b>	247	\$0.00000	\$0	247	\$0.00000	\$0	\$0	\$0.00000	
<b>30 Baseline \$/therm</b>		\$0.90805			\$0.92135			\$0.01330	1.5%
<b>31 Non-Baseline \$/therm</b>		\$1.08354			\$1.09876			\$0.01521	1.4%
<b>32 Average Rate \$/therm</b>		\$0.96511			\$0.97903			\$0.01392	1.4%
<b>33</b>									
<b>34 Other Adjustments :</b>									
<b>35 Employee Discount</b>			(\$412)			(\$412)	\$0		
<b>36 SDFFD</b>			\$1,397			\$1,417	\$20		
<b>37</b>									
<b>38 Credit for CSITMA Exempt Customers:</b>		(\$0.00478)			(\$0.00478)			\$0.00000	0.0%
<b>39</b>									
<b>40</b>									
<b>41 Total Residential</b>	<b>321,869</b>	<b>\$0.95394</b>	<b>\$307,042</b>	<b>321,869</b>	<b>\$0.96792</b>	<b>\$311,543</b>	<b>\$4,501</b>	<b>\$0.01398</b>	<b>1.5%</b>

See footnotes Table 1

**TABLE 3**  
**Natural Gas Transportation Rate Revenues**  
**San Diego Gas & Electric**  
**2016 Rates**  
**PSRP 2021 Rates**

	At Present Rates			At Proposed Rates			Changes		
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Average	Jan-1-16	Revenues	Rates	Rate
	Volumes	Rate	Revenues	Volumes	Rate	Revenues	\$000's	\$/therm	change
	mtherms	\$/therm	\$000's	mtherms	\$/therm	\$000's	\$000's	\$/therm	%
	A	B	C	D	E	F	G	H	I
1 <b>Other Core Rates \$/therm</b>									
2 Schedule GPC - Procurement Price		\$0.31726			\$0.31726			\$0.00000	0.0%
3									
4 <b>CORE COMMERCIAL &amp; INDUSTRIAL RATES Schedule GN-3</b>									
5 Customer Charge \$/month	29,865	\$10.00	\$3,584	29,865	\$10.00	\$3,584	\$0	\$0.00000	0.0%
6									
7 <b>Rates Excluding CSITMA &amp; CAT</b>									
8 Tier 1 = 0 to 1,000 therms/month	79,475	\$0.48830	\$38,808	79,475	\$0.49398	\$39,259	\$451	\$0.00568	1.2%
9 Tier 2 = 1,001 to 21,000 therms/month	82,322	\$0.33593	\$27,654	82,322	\$0.33838	\$27,856	\$202	\$0.00245	0.7%
10 Tier 3 = over 21,000 therms/month	15,781	\$0.29288	\$4,622	15,781	\$0.29443	\$4,646	\$24	\$0.00154	0.5%
11									
12 <b>Rates Including CSITMA, Excluding CAT</b>									
13 CSITMA Adder to Volumetric Rate	169,353	\$0.00478	\$809	169,353	\$0.00478	\$809	\$0	\$0.00000	0.0%
14 Tier 1 = 0 to 1,000 therms/month		\$0.49307			\$0.49875			\$0.00568	1.2%
15 Tier 2 = 1,001 to 21,000 therms/month		\$0.34070			\$0.34316			\$0.00245	0.7%
16 Tier 3 = over 21,000 therms/month		\$0.29766			\$0.29920			\$0.00154	0.5%
17									
18 <b>Rates Including CSITMA &amp; CAT</b>									
19 CAT Adder to Volumetric Rate	23,606	\$0.00000	\$0	23,606	\$0.00000	\$0	\$0	\$0.00000	
20 Tier 1 = 0 to 1,000 therms/month		\$0.49307			\$0.49875			\$0.00568	1.2%
21 Tier 2 = 1,001 to 21,000 therms/month		\$0.34070			\$0.34316			\$0.00245	0.7%
22 Tier 3 = over 21,000 therms/month		\$0.29766			\$0.29920			\$0.00154	0.5%
23									
24 <b>Other Adjustments :</b>									
25 Adjustment for SDFFD			\$423			\$427	\$4		
26 Credit for CSITMA Exempt Cutomers:		(\$0.00478)			(\$0.00478)			\$0.00000	0.0%
27									
28 <b>Total Core C&amp;I</b>	<b>177,578</b>	<b>\$0.42742</b>	<b>\$75,900</b>	<b>177,578</b>	<b>\$0.43125</b>	<b>\$76,581</b>	<b>\$681</b>	<b>\$0.00384</b>	<b>0.9%</b>

1) CSITMA - Tariff rate includes CSITMA, exempt customers (including CARE participants and Constitutionally Exempt) receive Credit for CSITMA.  
 CARE participants receive 20% CARE discount (Tariff rate less Credit for CSITMA Exempt Customers)\*20%  
 See footnotes Table 1

**TABLE 4**  
**Other Core Gas Transportation Rates**  
**San Diego Gas & Electric**

2016 Rates  
 PSRP 2021 Rates

	At Present Rates			At Proposed Rates			Changes			
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Average	Jan-1-16	Revenues	Rates	Rate	
	Volumes	Rate	Revenues	Volumes	Rate	Revenues	\$000's	\$/therm	change	
	mtherms	\$/therm	\$000's	mtherms	\$/therm	\$000's	\$000's	\$/therm	%	
	A	B	C	D	E	F	G	H	I	
1	<b>NATURAL GAS VEHICLE RATES G-NGV</b>									
2	Sempra-Wide NGV Rates									
3	Customer Charge									
4	24	\$13.00	\$4	24	\$13.00	\$4	\$0	\$0.00	0.0%	
5	10	\$65.00	\$8	10	\$65.00	\$8	\$0	\$0.00	0.0%	
6	11,417	\$0.21154	\$2,415	11,417	\$0.21169	\$2,417	\$2	\$0.00015	0.1%	
7	209	\$1.05591	\$220	209	\$1.05591	\$220	\$0	\$0.00000	0.0%	
8	Combined transport & compressor adder \$/th		\$1.26745	Combined transport & compressor adder \$/th		\$1.26760		\$0.00015	0.0%	
9	<b>Volumetric Rates Includes CSITMA, Excludes CAT</b>									
10	CSITMA Adder to Volumetric Rate									
11	11,399	\$0.00478	\$54	11,399	\$0.00478	\$54	\$0	\$0.00000	0.0%	
12	GHG Adder to Volumetric Rate									
13	11,417	\$0.00000	\$0	11,417	\$0.00000	\$0	\$0	\$0.00000		
14	Uncompressed Rate \$/therm		\$0.21632	Uncompressed Rate \$/therm		\$0.21647		\$0.00015	0.1%	
15	Combined transport & compressor adder \$/th		\$1.27223	Combined transport & compressor adder \$/th		\$1.27238		\$0.00015	0.0%	
16	<b>Volumetric Rates Includes CSITMA &amp; CAT</b>									
17	CAT Adder to Volumetric Rate									
18		\$0.00000			\$0.00000					
19	Uncompressed Rate \$/therm		\$0.21632	Uncompressed Rate \$/therm		\$0.21647	\$0	\$0.00015	0.1%	
20	Combined transport & compressor adder \$/th		\$1.27223	Combined transport & compressor adder \$/th		\$1.27238		\$0.00015	0.0%	
21	<b>Other Adjustments :</b>									
22	Adjustment for SDFFD									
23			\$7			\$8	\$0			
24	Credit for CSITMA Exempt Customers \$/th									
25		(\$0.00478)			(\$0.00478)			\$0.00000	0.0%	
26	Credit for GHG Adder \$/th									
27		\$0.00000			\$0.00000			\$0.00000		
28	Low Carbon Fuel Standard (LCFS) Credit									
29		\$0.00000			\$0.00000			\$0.00000		
30	<b>Total NGV</b>	<b>11,417</b>	<b>\$0.23726</b>	<b>\$2,709</b>	<b>11,417</b>	<b>\$0.23741</b>	<b>\$2,710</b>	<b>\$2</b>	<b>\$0.00015</b>	<b>0.1%</b>
31	<b>RESIDENTIAL NATURAL GAS VEHICLES (optional rate)</b>									
32	Customer Charge									
33	848	\$5.00	\$51	848	\$5.00	\$51	\$0	\$0.00	0.0%	
34	Uncompressed Rate w/o CSITMA & CA									
35	929	\$0.29495	\$274	929	\$0.29855	\$277	\$3	\$0.00360	1.2%	
36	929	\$0.34971	\$325	929	\$0.35331	\$328	\$3	\$0.00360	1.0%	
37	<b>Volumetric Rates Including CSITMA , Excluding CAT</b>									
38	CSITMA Adder to Volumetric Rate									
39		\$0.00478			\$0.00478			\$0.00000	0.0%	
40	Uncompressed Rate \$/therm		\$0.29973	Uncompressed Rate \$/therm		\$0.30333		\$0.00360	1.2%	
41	<b>Volumetric Rates Includes CSITMA &amp; CAT</b>									
42	CAT Adder to Volumetric Rate									
43	0	\$0.00000	\$0	0	\$0.00000	\$0	\$0	\$0.00000		
44	Uncompressed Rate \$/therm		\$0.29973	Uncompressed Rate \$/therm		\$0.30333	\$0	\$0.00360	1.2%	
45	<b>Other Adjustments :</b>									
46	Adjustment for SDFFD									
47			\$0			\$0	\$0			
48	Credit for CSITMA Exempt Customers \$/th									
49		(\$0.00478)			(\$0.00478)			\$0.00000	0.0%	
50	<b>Total Res NGV</b>	<b>929</b>	<b>\$0.34971</b>	<b>\$325</b>	<b>929</b>	<b>\$0.35331</b>	<b>\$328</b>	<b>\$3</b>	<b>\$0.00360</b>	<b>1.0%</b>

1) CSITMA - Tariff rate includes CSITMA, exempt customers (including CARE participants and Constitutionally Exempt) receive Credit for CSITMA.

**TABLE 5**  
**NonCore Gas Transportation Rates**  
**San Diego Gas & Electric**

2016 Rates  
PSRP 2021 Rates

	At Present Rates			At Proposed Rates			Changes		
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Average	Jan-1-16	Revenues	Rates	Rate
	Volumes	Rate	Revenues	Volumes	Rate	Revenues	\$000's	\$/therm	change
	mtherms	\$/therm	\$000's	mtherms	\$/therm	\$000's	G	H	I
	A	B	C	D	E	F			
<b>NonCore Commercial &amp; Industrial Distribution Level</b>									
Customer Charges \$/month	54	\$350.00	\$228	54	\$350.00	\$228	\$0	\$0.00	0.0%
<b>Volumetric Charges Incl CARB &amp;, Excl GHG</b>	25,161	\$0.08182	\$2,059	25,161	\$0.08342	\$2,099	\$40	\$0.00160	2.0%
CSITMA Adder to Volumetric Rate	21,818	\$0.00478	\$104	21,818	\$0.00478	\$104	\$0	\$0.00000	0.0%
GHG Adder to Volumetric Rate	#DIV/0!	\$0.00000	\$0	#DIV/0!	\$0.00000	\$0	\$0	\$0.00000	#DIV/0!
<b>Volumetric Charges Incl CARB, GHG, and CSITMA</b>									
Volumetric Rates \$/therm		\$0.08660			\$0.08819			\$0.00160	1.8%
<b>Other Adjustments :</b>									
SDDFD									
Credit for CSITMA Exempt Customers \$/th		(\$0.00478)			(\$0.00478)		\$0.00000	0.0%	
Credit for CARB Fee Exempt Customers \$/th		(\$0.00179)			(\$0.00179)		\$0.00000	0.0%	
Credit for GHG Fee Exempt Customers \$/th		\$0.00000			\$0.00000		\$0.00000	#DIV/0!	
<b>NCCI-Distribution Total</b>	<b>25,161</b>	<b>\$0.09502</b>	<b>\$2,391</b>	<b>25,161</b>	<b>\$0.09662</b>	<b>\$2,431</b>	<b>\$40</b>	<b>\$0.00160</b>	<b>1.7%</b>
<b>NCCI-Transmission Total (1)</b>	<b>13,582</b>	<b>\$0.01967</b>	<b>\$267</b>	<b>13,582</b>	<b>\$0.01967</b>	<b>\$267</b>	<b>\$0</b>	<b>\$0.00000</b>	<b>0.0%</b>
<b>NCCI-Transmission Class Average</b>	<b>13,582</b>	<b>\$0.01967</b>	<b>\$267</b>	<b>13,582</b>	<b>\$0.01967</b>	<b>\$267</b>			
<b>Total NonCore C&amp;I</b>	<b>38,743</b>	<b>\$0.06861</b>	<b>\$2,658</b>	<b>38,743</b>	<b>\$0.06964</b>	<b>\$2,698</b>	<b>\$40</b>	<b>\$0.00104</b>	<b>1.5%</b>
<b>ELECTRIC GENERATION</b>									
<b>Small EG Distribution Level Service (a Sempra-Wide rate) Excludes CARB, GHG, and CSITMA</b>									
Customer Charge, \$/month	40	\$50.00	\$24	40	\$50.00	\$24	\$0	\$0.00	0.0%
Volumetric Rate \$/therm	16,347	\$0.13473	\$2,202	16,347	\$0.13508	\$2,208	\$6	\$0.00	0.3%
<b>Large EG Distribution Level Service (a Sempra-Wide rate) Excludes CARB, GHG, and CSITMA</b>									
Customer Charge, \$/month		\$0.00			\$0.00			\$0.00	
Volumetric Rate (Incl ITCS) \$/th	87,414	\$0.03974	\$3,474	87,414	\$0.03982	\$3,481	\$6	\$0.00	0.2%
EG Distribution excl CARB & GHG Fee, C	103,761	\$0.05494	\$5,701	103,761	\$0.05506	\$5,713	\$12	\$0.00	0.2%
<b>Volumetric Rates Including CARB Fee, Excluding CSITMA:</b>									
CARB Fee Cost Adder - Small	14,770	\$0.00179	\$27	14,770	\$0.00179	\$27	\$0	\$0.00000	
CARB Fee Cost Adder - Large	81,853	\$0.00179	\$147	81,853	\$0.00179	\$147	\$0	\$0.00000	
GHG Fee Cost Adder - Small	16,347	\$0.00000	\$0	16,347	\$0.00000	\$0	\$0	\$0.00000	
GHG Fee Cost Adder - Large	22,950	\$0.00000	\$0	22,950	\$0.00000	\$0	\$0	\$0.00000	
EG-Distribution Tier 1 Incl CARB & GHG Fee, Excl CSITMA		\$0.13653			\$0.13688			\$0.00035	0.3%
EG-Distribution Tier 2 Incl CARB & GHG Fee, Excl CSITMA		\$0.04154			\$0.04161			\$0.00007	0.2%
Total - EG Distribution Level	103,761	\$0.05661	\$5,874	103,761	\$0.05673	\$5,886	\$12	\$0.00012	0.2%
Credit for CARB Fee Exempt Customers \$/th		(\$0.00179)			(\$0.00179)				
Credit for GHG Fee Exempt Customers \$/th		\$0.00000			\$0.00000				
EG Transmission Level Service Excl CARB	471,084	\$0.01310	\$6,172	471,084	\$0.01310	\$6,173	\$0	\$0.00	0.0%
EG Transmission Level Service Incl CARB	106,034	\$0.01490	\$1,580	106,034	\$0.01490	\$1,580	\$0	\$0.00	0.0%
EG Transmission Level Service - Average	577,118	\$0.01343	\$7,752	577,118	\$0.01343	\$7,752			
<b>TOTAL ELECTRIC GENERATION</b>	<b>680,879</b>	<b>\$0.02001</b>	<b>\$13,626</b>	<b>680,879</b>	<b>\$0.02003</b>	<b>\$13,638</b>	<b>\$13</b>	<b>\$0.00002</b>	<b>0.1%</b>

1) CSITMA - Tariff rate includes CSITMA, exempt customers (including CARE participants and Constitutionally Exempt) receive Credit for CSITMA.

Schedule EG Tariff Rate excludes CSITMA, since EG customers are exempt.

2) EFMA - GTNC and EG Tariff rates includes EFMA. Those EG and GTNC customers that are exempt will receive EFMA credit.

3) GHG - GTNC and EG Tariff rates includes GHG. Those EG and GTNC customers that are exempt will receive GHG credit.

See footnotes Table 1

**TABLE 6**  
**Transmission Level Service Gas Transportation Rates**  
**San Diego Gas & Electric**

2016 Rates  
 PSRP 2021 Rates

	At Present Rates			At Proposed Rates			Changes		
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Average	Jan-1-16	Revenues	Rates	Rate
	Volumes	Rate	Revenues	Volumes	Rate	Revenues	\$000's	\$/therm	change
	mtherms	\$/therm	\$000's	mtherms	\$/therm	\$000's	\$000's	\$/therm	%
	A	B	C	D	E	F	G	H	I
<b>1 Transmission Level Service Rate Excluding CSITMA, CARB, and GHG Fees</b>									
2 Reservation Service Option (RS):									
3 Daily Reservation rate \$/th/day		\$0.00551			\$0.00551		\$0	\$0.00000	0.0%
4 Usage Charge for RS \$/th		\$0.00576			\$0.00576		\$0	\$0.00000	0.0%
5									
6 Class Average Volumetric Rate (CA)									
7 Volumetric Rate \$/th		\$0.00741			\$0.00741		\$0	\$0.00000	0.0%
8 Usage Charge for CA \$/th		\$0.00576			\$0.00576		\$0	\$0.00000	0.0%
9 Class Average Volumetric Rate CA \$/th		\$0.01317			\$0.01317		\$0	\$0.00000	0.0%
10									
11 115% CA (for NonBypass Volumetric NV) \$/th		\$0.01515			\$0.01515		\$0	\$0.00000	0.0%
12 135% CA (for Bypass Volumetric BV) \$/th		\$0.01778			\$0.01778		\$0	\$0.00000	0.0%
13									
14 Average Transmission Level Service	590,700	\$0.01310	\$7,739	590,700	\$0.01310	\$7,740	\$1	\$0.00000	0.0%
15									
16 <b>C&amp;I Rate Including CSITMA, CARB, and GHG Fees</b>									
17 CSITMA Adder to Usage Rate \$/th	13,582	\$0.00478	\$65	13,582	\$0.00478	\$65	\$0	\$0.00000	0.0%
18 EFMA Cost Adder	119,616	\$0.00179	\$215	119,616	\$0.00179	\$215		\$0.00000	
19 GHG Cost Adder	13,894	\$0.00000	\$0	13,894	\$0.00000	\$0		\$0.00000	
20 Reservation Service Option (RS):									
21 Daily Reservation rate \$/th/day		\$0.00551			\$0.00551		\$0	\$0.00000	0.0%
22 Usage Charge for RS \$/th		\$0.01233			\$0.01233		\$0	\$0.00000	0.0%
23									
24 Class Average Volumetric Rate (CA)									
25 Volumetric Rate \$/th		\$0.00741			\$0.00741		\$0	\$0.00000	0.0%
26 Usage Charge for CA \$/th		\$0.01233			\$0.01233		\$0	\$0.00000	0.0%
27 Class Average Volumetric Rate CA \$/th		\$0.01974			\$0.01974		\$0	\$0.00000	0.0%
28									
29 115% CA (for NonBypass Volumetric NV) \$/th		\$0.02172			\$0.02172		\$0	\$0.00000	0.0%
30 135% CA (for Bypass Volumetric BV) \$/th		\$0.02435			\$0.02435		\$0	\$0.00000	0.0%
31									
32 <b>Other Adjustments:</b>									
33 Credit for CSITMA Exempt Customers \$/th		(\$0.00478)			(\$0.00478)			\$0.00000	0.0%
34 CARB Fee Credit for Exempt Customers \$/th		(\$0.00179)			(\$0.00179)			\$0.00000	0.0%
35 GHG Fee Credit for Exempt Customers \$/th		\$0.00000			\$0.00000			\$0.00000	
36									
37 <b>EG Rate Including CARB &amp; GHG Fees, excluding CSITMA:</b>									
38 CARB Fee Cost Adder		\$0.00179			\$0.00179			\$0.00000	
39 GHG Fee Cost Adder		\$0.00000			\$0.00000			\$0.00000	
40 Reservation Service Option (RS):									
41 Daily Reservation rate \$/th/day		\$0.00551			\$0.00551		\$0	\$0.00000	0.0%
42 Usage Charge for RS \$/th		\$0.00755			\$0.00756		\$0	\$0.00000	0.0%
43									
44 Class Average Volumetric Rate (CA)									
45 Volumetric Rate \$/th		\$0.00741			\$0.00741		\$0	\$0.00000	0.0%
46 Usage Charge for CA \$/th		\$0.00755			\$0.00756		\$0	\$0.00000	0.0%
47 Class Average Volumetric Rate CA \$/th		\$0.01497			\$0.01497		\$0	\$0.00000	0.0%
48									
49 115% CA (for NonBypass Volumetric NV) \$/th		\$0.01694			\$0.01694		\$0	\$0.00000	0.0%
50 135% CA (for Bypass Volumetric BV) \$/th		\$0.01958			\$0.01958		\$0	\$0.00000	0.0%
51									
52 <b>Other Adjustments:</b>									
53 CARB Fee Credit for Exempt Customers \$/th		(\$0.00179)			(\$0.00179)			\$0.00000	0.0%
54 GHG Fee Credit for Exempt Customers \$/th		\$0.00000			\$0.00000			\$0.00000	#DIV/0!
55									
56 Average Transmission Level Service	590,700	\$0.01358	\$8,019	590,700	\$0.01358	\$8,019	\$1	\$0.00000	0.0%

See footnotes Table 1

APPENDIX J

SoCalGas Statement of Proposed Increases

**TABLE 1**  
**Natural Gas Transportation Rates**  
**Southern California Gas Company**  
**January, 2016 Rates**

PSRP 2021 Rates

	Present Rates			Proposed Rates			Changes		
	Jan-1-16	Proposed	Jan-1-16	Jan-1-16	Proposed	Jan-1-16	Revenue	Rate	% Rate
	Volumes Mth A	Rate \$/therm B	Revenues \$000's C	Volumes Mth D	Rate \$/therm E	Revenues \$000's F	Change \$000's G	Change \$/therm H	change % I
1 <b>CORE</b>									
2 Residential	2,337,534	\$0.77784	\$1,818,239	2,337,534	\$0.77784	\$1,818,230	(\$9)	(\$0.00000)	0.0%
3 Commercial & Industrial	984,102	\$0.41418	\$407,594	984,102	\$0.41418	\$407,592	(\$2)	(\$0.00000)	0.0%
4									
5 NGV - Pre SempraWide	117,220	\$0.21676	\$25,408	117,220	\$0.21676	\$25,408	(\$0)	(\$0.00000)	0.0%
6 SempraWide Adjustment	117,220	\$0.00887	\$1,040	117,220	\$0.00902	\$1,057	\$17	\$0.00015	1.6%
7 NGV - Post SempraWide	117,220	\$0.22563	\$26,448	117,220	\$0.22577	\$26,465	\$17	\$0.00015	0.1%
8									
9 Gas A/C	825	\$0.22305	\$184	825	\$0.22305	\$184	(\$0)	(\$0.00000)	0.0%
10 Gas Engine	16,774	\$0.15232	\$2,555	16,774	\$0.15232	\$2,555	\$0	\$0.00000	0.0%
11 Total Core	3,456,455	\$0.65241	\$2,255,020	3,456,455	\$0.65241	\$2,255,026	\$6	\$0.00000	0.0%
12									
13 <b>NONCORE COMMERCIAL &amp; INDUSTRIAL</b>									
14 Distribution Level Service	893,164	\$0.06714	\$59,963	893,164	\$0.06714	\$59,963	(\$0)	(\$0.00000)	0.0%
15 Transmission Level Service (2)	654,456	\$0.01675	\$10,965	654,456	\$0.01676	\$10,965	\$1	\$0.00000	0.0%
16 Total Noncore C&I	1,547,620	\$0.04583	\$70,928	1,547,620	\$0.04583	\$70,928	\$0	\$0.00000	0.0%
17									
18 <b>NONCORE ELECTRIC GENERATION</b>									
19 Distribution Level Service									
20 Pre Sempra Wide	333,969	\$0.05967	\$19,927	333,969	\$0.05967	\$19,926	(\$0)	(\$0.00000)	0.0%
21 Sempra Wide Adjustment	333,969	(\$0.00718)	(\$2,399)	333,969	(\$0.00708)	(\$2,363)	\$36	\$0.00011	-1.5%
22 Distribution Post Sempra Wide	333,969	\$0.05248	\$17,528	333,969	\$0.05259	\$17,563	\$36	\$0.00011	0.2%
23 Transmission Level Service (2)	2,641,080	\$0.01335	\$35,258	2,641,080	\$0.01335	\$35,261	\$3	\$0.00000	0.0%
24 Total Electric Generation	2,975,049	\$0.01774	\$52,786	2,975,049	\$0.01776	\$52,825	\$39	\$0.00001	0.1%
25									
26 TOTAL RETAIL NONCORE	4,522,669	\$0.02735	\$123,714	4,522,669	\$0.02736	\$123,753	\$39	\$0.00001	0.0%
27									
28 <b>WHOLESALE</b>									
29 Wholesale Long Beach (2)	92,897	\$0.01310	\$1,217	92,897	\$0.01310	\$1,217	\$0	\$0.00000	0.0%
30 Wholesale SWG (2)	67,209	\$0.01310	\$881	67,209	\$0.01310	\$881	\$0	\$0.00000	0.0%
31 Wholesale Vernon (2)	87,906	\$0.01310	\$1,152	87,906	\$0.01310	\$1,152	\$0	\$0.00000	0.0%
32 International (2)	69,979	\$0.01310	\$917	69,979	\$0.01310	\$917	\$0	\$0.00000	0.0%
33 Total Wholesale & International	317,990	\$0.01310	\$4,166	317,990	\$0.01310	\$4,167	\$0	\$0.00000	0.0%
34 SDGE Wholesale	1,247,558	\$0.01127	\$14,058	1,247,558	\$0.01127	\$14,058	(\$0)	(\$0.00000)	0.0%
35 Total Wholesale Incl SDGE	1,565,548	\$0.01164	\$18,224	1,565,548	\$0.01164	\$18,225	\$0	\$0.00000	0.0%
36									
37 TOTAL NONCORE	6,088,217	\$0.02331	\$141,938	6,088,217	\$0.02332	\$141,978	\$39	\$0.00001	0.0%
38									
39 Unbundled Storage (4)			\$26,476			\$26,476	\$0		
40 System Total (w/o BTS)	9,544,672	\$0.25390	\$2,423,434	9,544,672	\$0.25391	\$2,423,479	\$45	\$0.00000	0.0%
41 Backbone Trans. Service BTS (3)	2,852	\$0.16201	\$168,642	2,852	\$0.24459	\$254,591	\$85,949	\$0.08257	51.0%
42 <b>SYSTEM TOTALw/BTS</b>	<b>9,544,672</b>	<b>\$0.27157</b>	<b>\$2,592,075</b>	<b>9,544,672</b>	<b>\$0.28058</b>	<b>\$2,678,070</b>	<b>\$85,995</b>	<b>\$0.00901</b>	<b>3.3%</b>
43									
44 EOR Revenues	203,920	\$0.03420	\$6,973	203,920	\$0.03425	\$6,985	\$12	\$0.00006	0.2%
45 Total Throughput w/EOR Mth/yr	9,748,592			9,748,592					

- 1) These rates are for Natural Gas Transportation Service from "Citygate to Meter". The BTS rate is for service from Receipt Point to Citygate.
- 2) These Transmission Level Service "TLS" amounts represent the average transmission rate, see Table 7 or detail list of TLS rates.
- 3) BTS charge (\$/dth/day) is proposed as a separate rate. Core will pay through procurement rate, noncore as a separate charge.
- 4) Unbundles Storage costs are not part of the Core Storage or Load Balancing functions (those are included in transport rates).

**TABLE 2**  
**Residential Transportation Rates**  
**Southern California Gas Company**

PSRP 2021 Rates

	Present Rates			Proposed Rates			Changes		
	Jan-1-16 Volumes Mth A	Average Rate \$/th B	Jan-1-16 Revenue \$000's C	Jan-1-16 Volumes Mth D	Rate \$/th E	Jan-1-16 Revenue \$000's F	Revenue Change \$000's G	Rate Change \$/th H	% Rate change % I
1 <b>RESIDENTIAL SERVICE</b>									
2 Customer Charge									
3 Single Family	3,663,383	\$5.00	\$219,803	3,663,383	\$5.00	\$219,803	\$0	\$0.00000	0.0%
4 Multi-Family	1,674,287	\$5.00	\$100,457	1,674,287	\$5.00	\$100,457	\$0	\$0.00000	0.0%
5 Small Master Meter	122,347	\$5.00	\$7,341	122,347	\$5.00	\$7,341	\$0	\$0.00000	0.0%
6 Submeter Credit-\$/unit/day	147,568	(\$0.23573)	(\$12,697)	147,568	(\$0.23573)	(\$12,697)	\$0	\$0.00000	0.0%
7 <b>Volumetric Transportation Rate Excludes CSITMA and CAT:</b>									
8 Baseline Rate	1,583,823	\$0.55992	\$886,808	1,583,823	\$0.55991	\$886,802	(\$6)	(\$0.00000)	0.0%
9 Non-Baseline Rate	743,221	\$0.81992	\$609,379	743,221	\$0.81991	\$609,376	(\$3)	(\$0.00000)	0.0%
10	2,327,044	\$0.77828	\$1,811,091	2,327,044	\$0.77828	\$1,811,082	(\$9)	(\$0.00000)	0.0%
11 NBL/BL Ratio:									
12 Composite Rate \$/th		\$1.07601			\$1.07600			(\$0.00000)	0.0%
13 Gas Rate \$/th		\$0.31726			\$0.31726			\$0.00000	0.0%
14 NBL/Composite rate ratio (4) =		1.06			1.06				
15 NBL- BL rate difference \$/th		0.26000			0.26000			\$0.00000	0.0%
16									
17 Large Master Meter Rate (Excludes Rate Adders for CAT):									
18 Customer Charge	55	\$373.78	\$248	55	\$373.78	\$248	\$0	\$0.00	0.0%
19 Baseline Rate	7,802	\$0.18130	\$1,414	7,802	\$0.18130	\$1,414	(\$0)	(\$0.00000)	0.0%
20 Non-Baseline Rate	2,688	\$0.26549	\$714	2,688	\$0.26549	\$714	\$0	\$0.00000	0.0%
21	10,490	\$0.22655	\$2,377	10,490	\$0.22655	\$2,377	\$0	\$0.00000	0.0%
22									
23 <b>Residential Rates Includes CSITMA, Excludes CAT:</b>									
24 CSITMA Adder to Volumetric Rate	1,671,915	\$0.00288	\$4,817	1,671,915	\$0.00288	\$4,817	\$0	\$0.00000	0.0%
25 Residential:									
26 Customer Charge		\$5.00			\$5.00			\$0.00000	0.0%
27 BaseLine \$/therm		\$0.56280			\$0.56279			(\$0.00000)	0.0%
28 Non-Baseline \$/therm		\$0.82280			\$0.82279			(\$0.00000)	0.0%
29 Average NonCARE Rate \$/therm		\$0.78116			\$0.78116			(\$0.00000)	0.0%
30 Large Master Meter:									
31 Customer Charge		\$373.78			\$373.78			\$0.00	0.0%
32 BaseLine Rate		\$0.18418			\$0.18418			(\$0.00000)	0.0%
33 NonBaseLine Rate		\$0.26837			\$0.26837			\$0.00000	0.0%
34 Average NonCARE Rate \$/therm		\$0.22943			\$0.22943			\$0.00000	0.0%
35 <b>Residential Rates Includes CSITMA &amp; CAT:</b>									
36 CAT Adder to Volumetric Rate	8,732	(\$0.00522)	(\$46)	8,732	(\$0.00522)	(\$46)	\$0	\$0.00000	0%
37 Residential:									
38 Customer Charge		\$5.00			\$5.00			\$0.00000	0.0%
39 BaseLine Rate		\$0.55758			\$0.55758			(\$0.00000)	0.0%
40 NonBaseLine Rate		\$0.81758			\$0.81758			(\$0.00000)	0.0%
41 Large Master Meter:									
42 Customer Charge		\$373.78			\$373.78			\$0.00000	0.0%
43 BaseLine Rate		\$0.17896			\$0.17896			\$0.00000	0.0%
44 NonBaseLine Rate		\$0.26315			\$0.26315			\$0.00000	0.0%
45 <b>Other Adjustments :</b>									
46 TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)			\$0.00000	0.0%
47									
48 <b>TOTAL RESIDENTIAL</b>	<b>2,337,534</b>	<b>\$0.77784</b>	<b>\$1,818,239</b>	<b>2,337,534</b>	<b>\$0.77784</b>	<b>\$1,818,230</b>	<b>(\$9)</b>	<b>(\$0.00000)</b>	<b>0.0%</b>

See footnotes Table 1

**TABLE 3**  
**Core Nonresidential Transportation Rates**  
**Southern California Gas Company**

PSRP 2021 Rates

	Present Rates			Proposed Rates			Changes			
	Jan-1-16 Volumes Mth	Average Rate \$/th	Jan-1-16 Revenue \$000's	Jan-1-16 Volumes Mth	Rate \$/th	Jan-1-16 Revenue \$000's	Revenue Change \$000's	Rate Change \$/th	% Rate change %	
	A	B	C	D	E	F	G	H	I	
1										
2	<b>CORE COMMERCIAL &amp; INDUSTRIAL</b>									
3	Customer Charge 1	147,208	\$15.00	\$26,497	147,208	\$15.00	\$26,497	\$0	\$0.00	0.0%
4	Customer Charge 2	60,603	\$15.00	\$10,909	60,603	\$15.00	\$10,909	\$0	\$0.00	0.0%
5	<b>Volumetric Transportation Rate Excludes CSITMA &amp; CAT:</b>									
6	Tier 1 = 250th/mo	223,928	\$0.60609	\$135,720	223,928	\$0.60608	\$135,719	(\$0)	(\$0.00000)	0.0%
7	Tier 2 = next 4167 th/mo	495,650	\$0.36220	\$179,527	495,650	\$0.36220	\$179,526	(\$1)	(\$0.00000)	0.0%
8	Tier 3 = over 4167 th/mo	264,524	\$0.19868	\$52,557	264,524	\$0.19868	\$52,556	(\$0)	(\$0.00000)	0.0%
9		984,102	\$0.41175	\$405,209	984,102	\$0.41175	\$405,207	(\$2)	(\$0.00000)	0.0%
10										
11	<b>Volumetric Transportation Rate Includes CSITMA, Excludes CAT:</b>									
12	CSITMA Adder to Volumetric Rate	980,381	\$0.00288	\$2,825	980,381	\$0.00288	\$2,825	\$0	\$0.00000	0.0%
13	Tier 1 = 250th/mo		\$0.60897			\$0.60896		(\$0.00000)	0.0%	
14	Tier 2 = next 4167 th/mo		\$0.36509			\$0.36508		(\$0.00000)	0.0%	
15	Tier 3 = over 4167 th/mo		\$0.20156			\$0.20156		(\$0.00000)	0.0%	
16			\$0.41464			\$0.41463		(\$0.00000)		
17	<b>Volumetric Transportation Rate Includes CSITMA &amp; CAT:</b>									
18	CAT Adder to Volumetric Rate	84,283	(\$0.00522)	(\$440)	84,283	(\$0.00522)	(\$440)	\$0	\$0.00000	0%
19	Tier 1 = 250th/mo		\$0.60375			\$0.60375		(\$0.00000)	0.0%	
20	Tier 2 = next 4167 th/mo		\$0.35987			\$0.35987		(\$0.00000)	0.0%	
21	Tier 3 = over 4167 th/mo		\$0.19634			\$0.19634		\$0.00000	0.0%	
22			\$0.40942			\$0.40942		(\$0.00000)	0.0%	
23	<b>Other Adjustments :</b>									
24	TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)		\$0.00000	0.0%	
25										
26	<b>TOTAL CORE C&amp;I</b>	<b>984,102</b>	<b>\$0.41418</b>	<b>\$407,594</b>	<b>984,102</b>	<b>\$0.41418</b>	<b>\$407,592</b>	<b>(\$2)</b>	<b>(\$0.00000)</b>	<b>0.0%</b>
27										
28	<b>NATURAL GAS VEHICLES (a sempra-wide rate)</b>									
29	Customer Charge, P-1	229	\$13.00	\$36	229	\$13.00	\$36	\$0	\$0.00000	0.0%
30	Customer Charge, P-2A	83	\$65.00	\$64	83	\$65.00	\$64	\$0	\$0.00000	0.0%
31	Uncompressed Rate Excludes CSITMA, GHG & CAT	117,220	\$0.21037	\$24,659	117,220	\$0.21051	\$24,676	\$17	\$0.00015	0.1%
32	Total Uncompressed NGV	117,220	\$0.21122	\$24,759	117,220	\$0.21137	\$24,776	\$17	\$0.00015	0.1%
33	Compressed Rate Adder	1,287	\$1.05002	\$1,351	1,287	\$1.05002	\$1,351	\$0	\$0.00000	0.0%
34										
35	<b>Uncompressed Rate Includes CSITMA, Excludes CAT</b>									
36	CSITMA Adder to Volumetric Rate	117,175	\$0.00288	\$338	117,175	\$0.00288	\$338	\$0	\$0.00000	0.0%
37	GHG Adder to Volumetric Rate	91,747	\$0.00000	\$0	91,747	\$0.00000	\$0	\$0	\$0.00000	
38	Uncompressed Rate \$/therm		\$0.21325			\$0.21339		\$0.00015	0.1%	
39	<b>Other Adjustments :</b>									
40	TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)		\$0.00000	0.0%	
41	TCA for GHG exempt customers		\$0.00000			\$0.00000		\$0.00000		
42	Low Carbon Fuel Standard (LCFS) Credit		\$0.00000			\$0.00000		\$0.00000		
43	<b>TOTAL NGV SERVICE</b>	<b>117,220</b>	<b>\$0.22563</b>	<b>\$26,448</b>	<b>117,220</b>	<b>\$0.22577</b>	<b>\$26,465</b>	<b>\$17</b>	<b>\$0.00015</b>	<b>0.1%</b>
44										
45	<b>RESIDENTIAL NATURAL GAS VEHICLES (optional rate)</b>									
46	Customer Charge	5,460	\$10.00	\$655	5,460	\$10.00	\$655	\$0	\$0.00000	0.0%
47	Uncompressed Rate Excludes CSITMA & CAT	5,346	\$0.21298	\$1,139	5,346	\$0.21298	\$1,139	(\$0)	(\$0.00000)	0.0%
48		5,346	\$0.33553	\$1,794	5,346	\$0.33553	\$1,794	(\$0)	(\$0.00000)	0.0%
49	<b>Uncompressed Rate Includes CSITMA, Excludes CAT</b>									
50	CSITMA Adder to Volumetric Rate		\$0.00288			\$0.00288		\$0.00000	0.0%	
51	Uncompressed Rate \$/therm		\$0.21586			\$0.21586		(\$0.00000)	0.0%	
52										
53	<b>Uncompressed Rate Includes CSITMA &amp; CAT</b>									
54	CAT Adder to Volumetric Rate	0	(\$0.00522)	\$0	0	(\$0.00522)	\$0	\$0	\$0.00000	0.0%
55	Uncompressed Rate		\$0.21064			\$0.21064		\$0	\$0.00000	0.0%
56	<b>Other Adjustments :</b>									
57	TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)		\$0.00000	0.0%	
58										
59	<b>TOTAL RESIDENTIAL NATURAL GAS VEHICLES</b>	<b>5,346</b>	<b>\$0.33553</b>	<b>\$1,794</b>	<b>5,346</b>	<b>\$0.33553</b>	<b>\$1,794</b>	<b>(\$0)</b>	<b>(\$0.00000)</b>	<b>0.0%</b>

**TABLE 4**  
**Core Nonresidential Transportation Rates (continued)**  
**Southern California Gas Company**

PSRP 2021 Rates

	Present Rates			Proposed Rates			Changes			
	Jan-1-16 Volumes Mth A	Average Rate \$/th B	Jan-1-16 Revenue \$000's C	Jan-1-16 Volumes Mth D	Rate \$/th E	Jan-1-16 Revenue \$000's F	Revenue Change \$000's G	Rate Change \$/th H	% Rate change % I	
1										
2										
3	<b>NON-RESIDENTIAL GAS A/C</b>									
4	Customer Charge	12	\$150.00	\$22	12	\$150	\$22	\$0	\$0.00000	0.0%
5	Volumetric Rate	825	\$0.19397	\$160	825	\$0.19397	\$160	(\$0)	(\$0.00000)	0.0%
6		825	\$0.22017	\$182	825	\$0.22017	\$182	(\$0)	(\$0.00000)	0.0%
7	<b>Volumetric Rates Includes CSITMA, Excludes CAT</b>									
8	CSITMA Adder to Volumetric Rate	825	\$0.00288	\$2	825	\$0.00288	\$2	\$0	\$0.00000	0.0%
9	Volumetric		\$0.19686			\$0.19686		(\$0.00000)	0.0%	
10	<b>Volumetric Rates Includes CSITMA &amp; CAT</b>									
11	CAT Adder to Volumetric Rate	0	(\$0.00522)	\$0	0	(\$0.00522)	\$0	\$0	\$0.00000	0.0%
12	Gas A/C Rate		\$0.19164			\$0.19164		\$0	(\$0.00000)	0.0%
13	<b>Other Adjustments :</b>									
14	TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)		\$0.00000	0.0%	
15										
16	<b>TOTAL A/C SERVICE</b>	<b>825</b>	<b>\$0.22305</b>	<b>\$184</b>	<b>825</b>	<b>\$0.22305</b>	<b>\$184</b>	<b>(\$0)</b>	<b>(\$0.00000)</b>	<b>0.0%</b>
17										
18	<b>GAS ENGINES</b>									
19	Customer Charge	708	\$50.00	\$425	708	\$50	\$425	\$0	\$0.00000	0.0%
20	Volumetric Excludes CSITMA & CAT	16,774	\$0.12411	\$2,082	16,774	\$0.12411	\$2,082	\$0	\$0.00000	0.0%
21		16,774	\$0.14944	\$2,507	16,774	\$0.14944	\$2,507	\$0	\$0.00000	0.0%
22	<b>Volumetric Rates Includes CSITMA, Excludes CAT</b>									
23	CSITMA Adder to Volumetric Rate	16,774	\$0.00288	\$48	16,774	\$0.00288	\$48	\$0	\$0.00000	0.0%
24	Volumetric		\$0.12700			\$0.12700		\$0.00000		
25	<b>Volumetric Rates Includes CSITMA &amp; CAT</b>									
26	CAT Adder to Volumetric Rate	0	(\$0.00522)	\$0	0	(\$0.00522)	\$0	\$0	\$0.00000	0.0%
27	Gas Engine Rate		\$0.12178			\$0.12178		\$0	\$0.00000	0.0%
28	<b>Other Adjustments</b>									
29	TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)		\$0.00000	0.0%	
30										
31	<b>TOTAL GAS ENGINES</b>	<b>16,774</b>	<b>\$0.15232</b>	<b>\$2,555</b>	<b>16,774</b>	<b>\$0.15232</b>	<b>\$2,555</b>	<b>\$0</b>	<b>\$0.00000</b>	<b>0.0%</b>
32										
33	<b>STREET &amp; OUTDOOR LIGHTING (equals average Non-CAT CCI Rate)</b>									
34	Street & Outdoor Lighting Base Rate		\$0.41175			\$0.41175		(\$0.00000)	0.0%	
35										

**TABLE 5**  
**Noncore Commercial & Industrial Rates**  
**Southern California Gas Company**

PSRP 2021 Rates

	Present Rates			Proposed Rates			Changes			
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Jan-1-16	Jan-1-16	Revenue	Rate	% Rate	
	Volumes	Rate	Revenue	Volumes	Rate	Revenue	Change	Change	change	
	Mth	\$/th	\$000's	Mth	\$/th	\$000's	\$000's	\$/th	%	
	A	B	C	D	E	F	G	H	I	
1	<b>NonCore Commercial &amp; Industrial Distribution Level</b>									
2	Customer Charge	602	\$350.00	\$2,530	602	\$350.00	\$2,530	\$0	\$0.00000	0.0%
3										
4	<b>Volumetric Rates Includes CARB fee, Excludes GHG, and CSITMA</b>									
5	Tier 1 = 250kth/yr	133,045	\$0.14430	\$19,199	133,045	\$0.14430	\$19,199	(\$0)	(\$0.00000)	0.0%
6	Tier 2 = 250k to 1000k	217,578	\$0.08762	\$19,064	217,578	\$0.08762	\$19,063	(\$0)	(\$0.00000)	0.0%
7	Tier 3 = 1 to 2 million th/yr	109,379	\$0.05136	\$5,617	109,379	\$0.05136	\$5,617	(\$0)	(\$0.00000)	0.0%
8	Tier 4 = over 2 million th/yr	433,162	\$0.02545	\$11,022	433,162	\$0.02545	\$11,022	(\$0)	(\$0.00000)	0.0%
9	Volumetric totals (excl itcs)	893,164	\$0.06147	\$54,902	893,164	\$0.06147	\$54,901	(\$0)	(\$0.00000)	0.0%
10										
11	<b>Volumetric Rates Includes CARB, GHG, CSITMA</b>									
12	CSITMA Adder to Volumetric Rate		\$0.00288	\$2,531		\$0.00288	\$2,531	\$0	\$0.00000	0.0%
13	GHG Adder to Volumetric Rate		\$0.00000	\$0		\$0.00000	\$0	\$0	\$0.00000	
14	Tier 1 = 250kth/yr		\$0.14718			\$0.14718			(\$0.00000)	0.0%
15	Tier 2 = 250k to 1000k		\$0.09050			\$0.09050			(\$0.00000)	0.0%
16	Tier 3 = 1 to 2 million th/yr		\$0.05424			\$0.05424			(\$0.00000)	0.0%
17	Tier 4 = over 2 million th/yr		\$0.02833			\$0.02833			(\$0.00000)	0.0%
18	<b>Other Adjustments :</b>									
19	TCA for CSITMA exempt customers		(\$0.00288)			(\$0.00288)			\$0.00000	0.0%
20	CARB Fee Credit \$/th		(\$0.00082)			(\$0.00082)			\$0.00000	0.0%
21	GHG Fee Credit \$/th		\$0.00000			\$0.00000			\$0.00000	
22	<b>NCCI - DISTRIBUTION LEVEL</b>	893,164	\$0.06714	\$59,963	893,164	\$0.06714	\$59,963	(\$0)	(\$0.00000)	0.0%
23										
24	NCCI-TRANSMISSION LEVEL Incl CARB & GHG Fee	10,674	\$0.01392	\$149	10,674	\$0.01392	\$149	\$0	\$0.00000	0.0%
25	NCCI-TRANSMISSION LEVEL Incl CARB & GHG Fee	643,782	\$0.01680	\$10,816	643,782	\$0.01680	\$10,817	\$1	\$0.00000	0.0%
26	NCCI-TRANSMISSION LEVEL (2)	654,456	\$0.01675	\$10,965	654,456	\$0.01676	\$10,965	\$1	\$0.00000	0.0%
27										
28	<b>TOTAL NONCORE C&amp;I</b>	<b>1,547,620</b>	<b>\$0.04583</b>	<b>\$70,928</b>	<b>1,547,620</b>	<b>\$0.04583</b>	<b>\$70,928</b>	<b>\$0</b>	<b>\$0.00000</b>	<b>0.0%</b>

**TABLE 6**  
**Noncore Electric Generation Rates and Enhanced Oil Recovery Rates**  
**Southern California Gas Company**

PSRP 2021 Rates

	Present Rates			Proposed Rates			Changes			
	Jan-1-16	Average	Jan-1-16	Jan-1-16	Rate	Jan-1-16	Revenue	Rate	% Rate	
	Volumes	Rate	Revenue	Volumes	Rate	Revenue	Change	Change	change	
	Mth	\$/th	\$000's	Mth	\$/th	\$000's	\$000's	\$/th	%	
	A	B	C	D	E	F	G	H	I	
1										
2	<b><u>ELECTRIC GENERATION</u></b>									
3										
4										
5	<b><u>Small EG Distribution Level Service (a Sempra-Wide rate) Excludes CARB &amp; GHG fee &amp; CSITMA:</u></b>									
6	Customer Charge	147	\$50.00	\$88	147	\$50.00	\$88	\$0	\$0.00000	0.0%
7	Volumetric Rate	42,850	\$0.13398	\$5,741	42,850	\$0.13433	\$5,756	\$15	\$0.00035	0.3%
8	Small EG Distribution Level Service	42,850	\$0.13604	\$5,829	42,850	\$0.13639	\$5,844	\$15	\$0.00035	0.3%
9										
10	<b><u>Large EG Distribution Level Service (a Sempra-Wide rate) Excludes CARB &amp; GHG Fee &amp; CSITMA</u></b>									
11	Customer Charge	34	\$0.00	\$0	34	\$0.00	\$0	\$0	\$0.00000	
12	Volumetric Rate	291,119	\$0.03952	\$11,506	291,119	\$0.03959	\$11,527	\$21	\$0.00007	0.2%
13	Large EG Distribution Level Service	291,119	\$0.03952	\$11,506	291,119	\$0.03959	\$11,527	\$21	\$0.00007	0.2%
14										
15	EG Distribution excl CARB fee & CSITMA	333,969	\$0.05191	\$17,335	333,969	\$0.05201	\$17,371	\$36	\$0.00011	0.2%
16										
17	<b><u>Volumetric Rates Includes CARB &amp; GHG fee, Excludes CSITMA</u></b>									
18	EFMA Cost Adder	235,121	\$0.00082	\$192	235,121	\$0.00082	\$192	\$0	\$0.00000	0.0%
19	GHG Cost Adder	88,625	\$0.00000	\$0	88,625	\$0.00000	\$0	\$0	\$0.00000	
20	EG-Distribution Tier 1 w/CARB fee		\$0.13480			\$0.13515		\$0.00035	0.3%	
21	EG-Distribution Tier 2 w/CARB Fee		\$0.04034			\$0.04041		\$0.00007	0.2%	
22	Total - EG Distribution Level	333,969	\$0.05248	\$17,528	333,969	\$0.05259	\$17,563	\$36	\$0.00011	0.2%
23	CARB Fee Credit \$/th		(\$0.00082)			(\$0.00082)		\$0.00000	0.0%	
24	GHG Fee Credit \$/th		\$0.00000			\$0.00000		\$0.00000		
25										
26	EG Transmission Level Service Excl CARB & GHG fee	1,839,870	\$0.01310	\$24,106	1,839,870	\$0.01310	\$24,108	\$2	\$0.00000	0.0%
27	EG Transmission Level Service Incl CARB & GHG Fee	801,210	\$0.01392	\$11,153	801,210	\$0.01392	\$11,154	\$1	\$0.00000	0.0%
28	EG Transmission Level (2)	2,641,080	\$0.01335	\$35,258	2,641,080	\$0.01335	\$35,261	\$3	\$0.00000	0.0%
29										
30	<b>TOTAL ELECTRIC GENERATION</b>	<b>2,975,049</b>	<b>\$0.01774</b>	<b>\$52,786</b>	<b>2,975,049</b>	<b>\$0.01776</b>	<b>\$52,825</b>	<b>\$39</b>	<b>\$0.00001</b>	<b>0.1%</b>
31										
32	<b><u>EOR Rates &amp; revenue Excludes CARB Fee &amp; CSITMA:</u></b>									
33	Distribution Level EOR:									
34	Customer Charge	23	\$500.00	\$138	23	\$500.00	\$138	\$0	\$0.00000	0.0%
35	Volumetric Rate Excl CARB & GHG Fee & CSITMA	109,229	\$0.05122	\$5,595	109,229	\$0.05133	\$5,606	\$12	\$0.00011	0.2%
36										
37	<b><u>Volumetric Rates Includes CARB &amp; GHG Fee, Excludes CSITMA</u></b>									
38	CARB Fee		\$0.00082			\$0.00082				
39	GHG Fee		\$0.00000			\$0.00000				
40	Volumetric Rate Incl CARB fee & Excl CSITMA		\$0.05204			\$0.05214		\$0.00011	0.2%	
41	Distribution Level EOR	109,229	\$0.05248	\$5,733	109,229	\$0.05259	\$5,744	\$12	\$0.00011	0.2%
42	CARB Fee Credit \$/th		(\$0.00082)			(\$0.00082)		\$0.00000	0.0%	
43	GHG Fee Credit \$/th		\$0.00000			\$0.00000		\$0.00000	#DIV/0!	
44	Transmission Level EOR Excludes CARB & GHG fee	94,691	\$0.01310	\$1,241	94,691	\$0.01310	\$1,241	\$0	\$0.00000	0.0%
45	<b>Total EOR</b>	<b>203,920</b>	<b>\$0.03420</b>	<b>\$6,973</b>	<b>203,920</b>	<b>\$0.03425</b>	<b>\$6,985</b>	<b>\$12</b>	<b>\$0.00006</b>	<b>0.2%</b>

1) CSITMA - Noncore C&I D Tariff rate includes CSITMA. Customers exempt, including Constitutionally Exempt, receive Transportation Charge Adj. (TCA).

EG Tariff Rate excludes CSITMA, since EG customers are exempt.

2) CARB & GHG Fees - EG-D and NCCI-D rates include CARB & GHG Fees.

3) EOR customers tariff includes CARB & GHG Fees and excludes CSITMA; since EOR customers are exempt from CSITMA and get a credit for CARB & GHG Fees.

See footnotes Table 1

**TABLE 7**  
**Transmission Level Service Transportation Rates**  
**Southern California Gas Company**

	Present Rates			Proposed Rates			Changes		
	Jan-1-16 Volumes Mth	Average Rate \$/th	Jan-1-16 BCAP Vols \$000's	Jan-1-16 Volumes Mth, Mdt	Rate \$/th	Jan-1-16 Revenue \$000's	Revenue Change \$000's	Rate Change \$/th	% Rate change %
	A	B	C	D	E	F	G	H	I
<b>1 Rate Excluding CSITMA &amp; CARB Fee:</b>									
2 Reservation Service Option (RS):									
3 Daily Reservation rate \$/th/day		\$0.00547			\$0.00547			\$0.00000	0.0%
4 Usage Charge for RS \$/th		\$0.00573			\$0.00573			\$0.00000	0.0%
5 Class Average Volumetric Rate (CA)									
6 Volumetric Rate \$/th		\$0.00737			\$0.00737			\$0.00000	0.0%
7 Usage Charge for CA \$/th		\$0.00573			\$0.00573			\$0.00000	0.0%
8 Class Average Volumetric Rate (CA) \$/th		\$0.01310			\$0.01310			\$0.00000	0.0%
9									
10 115% CA (for NonBypass Volumetric NV) \$/th		\$0.01506			\$0.01506			\$0.00000	0.0%
11 135% CA (for Bypass Volumetric BV) \$/th		\$0.01768			\$0.01768			\$0.00000	0.0%
12 <b>Total Transmission Level Service (NCCI, EOR, EG)</b>	<b>3,295,536</b>	<b>\$0.01310</b>	<b>\$43,178</b>	<b>3,295,536</b>	<b>\$0.01310</b>	<b>\$43,181</b>	<b>\$4</b>	<b>\$0.00000</b>	<b>0.0%</b>
13									
14 <b>C&amp;I Rate Including CSITMA &amp; CARB &amp; GHG Fee:</b>									
15 CSITMA Adder to Usage Charge	643,782	\$0.00288	\$1,855	643,782	\$0.00288	\$1,855	\$0	\$0.00000	
16 CARB Fee Adder	1,455,666	\$0.00082	\$1,191	1,455,666	\$0.00082	\$1,191	\$0	\$0.00000	
17 GHG Fee Adder	49,583	\$0.00000	\$0	49,583	\$0.00000	\$0	\$0	\$0.00000	
18 Reservation Service Option (RS):									
19 Daily Reservation rate \$/th/day		\$0.00547			\$0.00547		\$0	\$0.00000	0.0%
20 Usage Charge for RS \$/th		\$0.00943			\$0.00943		\$0	\$0.00000	0.0%
21 Class Average Volumetric Rate (CA)									
22 Volumetric Rate \$/th		\$0.00737			\$0.00737		\$0	\$0.00000	0.0%
23 Usage Charge for CA \$/th		\$0.00943			\$0.00943		\$0	\$0.00000	0.0%
24 Class Average Volumetric Rate (CA) \$/th		\$0.01680			\$0.01680		\$0	\$0.00000	0.0%
25									
26 115% CA (for NonBypass Volumetric NV) \$/th		\$0.01876			\$0.01876		\$0	\$0.00000	0.0%
27 135% CA (for Bypass Volumetric BV) \$/th		\$0.02138			\$0.02138		\$0	\$0.00000	0.0%
28 <b>Other Adjustments :</b>									
29 Transportation Charge Adj. (TCA) for CSITMA exempt customers		(\$0.00288)			(\$0.00288)			\$0.00000	
30 California Air Resources Board (CARB) Fee Credit \$/th		(\$0.00082)			(\$0.00082)			\$0.00000	
31 GHG Fee Credit		\$0.00000			\$0.00000			\$0.00000	
32 <b>Total Transmission Level Service Includes CSITMA</b>	<b>3,295,536</b>	<b>\$0.01403</b>	<b>\$46,223</b>	<b>3,295,536</b>	<b>\$0.01403</b>	<b>\$46,227</b>	<b>\$4</b>	<b>\$0.00000</b>	<b>0.0%</b>
33									
34 <b>EG &amp; EOR Rate Including EFMA &amp; GHG , excluding CSITMA:</b>									
35 CARB Fee Adder		\$0.00082			\$0.00082			\$0.00000	
36 GHG Fee Adder		\$0.00000			\$0.00000			\$0.00000	
37 Reservation Service Option (RS):									
38 Daily Reservation rate \$/th/day		\$0.00547			\$0.00547		\$0	\$0.00000	0.0%
39 Usage Charge for RS \$/th		\$0.00655			\$0.00655		\$0	\$0.00000	0.0%
40 Class Average Volumetric Rate (CA)									
41 Volumetric Rate \$/th		\$0.00737			\$0.00737		\$0	\$0.00000	0.0%
42 Usage Charge for CA \$/th		\$0.00655			\$0.00655		\$0	\$0.00000	0.0%
43 Class Average Volumetric Rate (CA) \$/th		\$0.01392			\$0.01392		\$0	\$0.00000	0.0%
44									
45 115% CA (for NonBypass Volumetric NV) \$/th		\$0.01588			\$0.01588		\$0	\$0.00000	0.0%
46 135% CA (for Bypass Volumetric BV) \$/th		\$0.01850			\$0.01850		\$0	\$0.00000	0.0%
47									
48 <b>Other Adjustments :</b>									
49 California Air Resources Board (CARB) Fee Credit \$/th		(\$0.00082)			(\$0.00082)			\$0.00000	0.0%
50 Greenhouse Gas (GHG) Fee Credit \$/th		\$0.00000			\$0.00000			\$0.00000	#DIV/0!
51									
52 <b>Rate Excluding CSITMA, CARB, GHG Fee, &amp; Uncollectibles (applicable to Wholesale &amp; International):</b>									
53 Reservation Service Option (RS):									
54 Daily Reservation rate \$/th/day		\$0.00546			\$0.00546			\$0.00000	0.0%
55 Usage Charge for RS \$/th		\$0.00571			\$0.00571			\$0.00000	0.0%
56 Class Average Volumetric Rate (CA)									
57 Volumetric Rate \$/th		\$0.00735			\$0.00735			\$0.00000	0.0%
58 Usage Charge for CA \$/th		\$0.00571			\$0.00571			\$0.00000	0.0%
59 Class Average Volumetric Rate (CA) \$/th		\$0.01306			\$0.01306			\$0.00000	0.0%
60									
61 115% CA (for NonBypass Volumetric NV) \$/th		\$0.01502			\$0.01502			\$0.00000	0.0%
62 135% CA (for Bypass Volumetric BV) \$/th		\$0.01763			\$0.01764			\$0.00000	0.0%
63 <b>Total Transmission Level Service (WS &amp; Int'l)</b>	<b>317,990</b>	<b>\$0.01310</b>	<b>\$4,166</b>	<b>317,990</b>	<b>\$0.01310</b>	<b>\$4,167</b>	<b>\$0</b>	<b>\$0.00000</b>	<b>0.0%</b>
64									
65 <b>Average Transmission Level Service</b>	<b>3,613,526</b>	<b>\$0.01394</b>	<b>\$50,389</b>	<b>3,613,526</b>	<b>\$0.01395</b>	<b>\$50,393</b>	<b>\$4</b>	<b>\$0.00000</b>	<b>0.0%</b>

**TABLE 8**  
**Backbone Transmission Service and Storage Rates**  
**Southern California Gas Company**

	Present Rates			Proposed Rates			Changes			
	Jan-1-16 Volumes Mth	Average Rate \$/th	Jan-1-16 BCAP Vols \$000's	Jan-1-16 Volumes Mth, Mdth	Rate \$/th	Jan-1-16 Revenue \$000's	Revenue Change \$000's	Rate Change \$/th	% Rate change %	
	A	B	C	D	E	F	G	H	I	
1	<b>Backbone Transmission Service BTS</b>									
2	BTS SFV Reservation Charge \$/dth/day	2,852	\$0.16201	\$168,642	2,852	\$0.24459	\$254,591	\$85,949	\$0.08257	51.0%
3	BTS MFV Reservation Charge \$/dth/day		\$0.12961			\$0.19567				
4	BTS MFV Volumetric Charge \$/dth		\$0.03240			\$0.04892				
5	BTS Interruptible Volumetric Charge \$/dth		\$0.16201			\$0.24459		\$0.08257	51.0%	
6										
7										
8	<b>Storage Rates: (incl. HRSMA)</b>									
9	Injection mmcf/d; rate = \$/dth/day	850	\$30.77139	\$26,770	850	\$30.77139	\$26,770	\$0	\$0.00	0.0%
10	Inventory BCF; rate = \$/dth	138	\$0.25491	\$36,030	138	\$0.25491	\$36,030	\$0	\$0.00	0.0%
11	Withdrawal mmcf/d; rate = \$/dth/day	3,195	\$8.18644	\$26,770	3,195	\$8.18644	\$26,770	\$0	\$0.00	0.0%
12			\$89,571			\$89,571	\$0			

See footnotes Table 1

- 1) CSITMA - NCCI and EG TLS Tariff rates include CSITMA. Customers exempt (Constitutional Exempt and EG) receive Transportation Charge Adjustment TCA.
- 2) EFMA - TLS NCCI, EOR and EG Tariff rates include CSITMA. TLS NCCI, EOR and EG customers exempt as they pay CARB fees directly receive credit.
- 3) Wholesale Customers exclude CSITMA and EFMA since these customers are exempt.

APPENDIX K

SDG&E Original Cost and Depreciation Statement

**SAN DIEGO GAS & ELECTRIC COMPANY**

**COST OF PROPERTY AND  
DEPRECIATION RESERVE APPLICABLE THERETO  
AS OF SEPTEMBER 30, 2015**

<u>No.</u>	<u>Account</u>	<u>Original Cost</u>	<u>Reserve for Depreciation and Amortization</u>
<b>ELECTRIC DEPARTMENT</b>			
302	Franchises and Consents	222,841.36	202,900.30
303	Misc. Intangible Plant	<u>141,257,013.30</u>	<u>55,237,654.10</u>
	TOTAL INTANGIBLE PLANT	<u>141,479,854.66</u>	<u>55,440,554.40</u>
310.1	Land	14,526,518.29	46,518.29
310.2	Land Rights	0.00	0.00
311	Structures and Improvements	95,069,397.72	38,339,236.01
312	Boiler Plant Equipment	166,496,015.17	65,352,525.17
314	Turbogenerator Units	131,184,022.25	43,737,556.07
315	Accessory Electric Equipment	85,626,487.97	31,536,908.21
316	Miscellaneous Power Plant Equipment	43,116,186.54	8,718,987.81
	Steam Production Decommissioning	<u>0.00</u>	<u>0.00</u>
	TOTAL STEAM PRODUCTION	<u>536,018,627.94</u>	<u>187,731,731.56</u>
320.1	Land	0.00	0.00
320.2	Land Rights	0.00	0.00
321	Structures and Improvements	8,868,527.59	2,658,162.87
322	Boiler Plant Equipment	223,650,959.30	21,662,290.99
323	Turbogenerator Units	26,982,318.72	2,370,893.39
324	Accessory Electric Equipment	10,877,778.70	1,458,232.53
325	Miscellaneous Power Plant Equipment	147,104,595.48	48,807,803.51
101	SONGS PLANT CLOSURE GROSS PLANT-	<u>(417,484,179.79)</u>	<u>(76,957,383.00)</u>
	TOTAL NUCLEAR PRODUCTION	<u>0.00</u>	<u>0.29</u>
340.1	Land	143,475.87	0.00
340.2	Land Rights	56,032.61	6,454.27
341	Structures and Improvements	22,703,423.92	6,004,182.75
342	Fuel Holders, Producers & Accessories	20,348,101.38	6,479,169.80
343	Prime Movers	85,663,135.71	29,421,287.80
344	Generators	341,381,604.65	117,434,698.52
345	Accessory Electric Equipment	32,506,374.56	10,881,715.74
346	Miscellaneous Power Plant Equipment	<u>26,173,720.53</u>	<u>11,856,992.31</u>
	TOTAL OTHER PRODUCTION	<u>528,975,869.23</u>	<u>182,084,501.19</u>
	TOTAL ELECTRIC PRODUCTION	<u>1,064,994,497.17</u>	<u>369,816,233.04</u>

<u>No.</u>	<u>Account</u>	<u>Original Cost</u>	<u>Reserve for Depreciation and Amortization</u>
350.1	Land	68,252,868.81	0.00
350.2	Land Rights	155,882,509.41	17,972,319.17
352	Structures and Improvements	411,641,763.98	54,688,943.96
353	Station Equipment	1,252,715,442.09	228,291,663.65
354	Towers and Fixtures	895,606,322.35	140,680,581.74
355	Poles and Fixtures	429,102,068.40	76,749,078.07
356	Overhead Conductors and Devices	545,756,460.54	207,469,775.95
357	Underground Conduit	334,549,032.17	43,671,941.46
358	Underground Conductors and Devices	354,590,177.43	43,969,271.39
359	Roads and Trails	308,794,016.99	21,949,474.23
101	SONGS PLANT CLOSURE GROSS PLANT-	0.00	0.00
	TOTAL TRANSMISSION	4,756,890,662.17	835,443,049.62
360.1	Land	16,176,227.80	0.00
360.2	Land Rights	83,197,072.94	38,359,570.23
361	Structures and Improvements	4,016,116.21	1,850,707.07
362	Station Equipment	472,371,457.66	140,040,909.84
363	Storage Battery Equipment	32,252,131.27	1,860,326.80
364	Poles, Towers and Fixtures	628,150,966.37	254,207,249.32
365	Overhead Conductors and Devices	526,985,838.60	190,117,310.22
366	Underground Conduit	1,095,293,587.53	434,325,980.32
367	Underground Conductors and Devices	1,413,682,572.55	843,367,411.59
368.1	Line Transformers	560,544,506.46	115,809,024.77
368.2	Protective Devices and Capacitors	25,188,633.24	(2,646,021.89)
369.1	Services Overhead	133,139,239.44	120,913,318.90
369.2	Services Underground	331,022,935.25	233,634,073.91
370.1	Meters	192,381,788.02	63,246,231.22
370.2	Meter Installations	56,007,062.17	15,970,423.15
371	Installations on Customers' Premises	7,948,192.28	10,767,852.61
373.1	St. Lighting & Signal Sys.-Transformers	0.00	0.00
373.2	Street Lighting & Signal Systems	27,523,799.88	19,416,915.56
	TOTAL DISTRIBUTION PLANT	5,605,882,127.67	2,481,241,283.62
389.1	Land	7,312,142.54	0.00
389.2	Land Rights	0.00	0.00
390	Structures and Improvements	32,160,259.94	23,852,688.16
392.1	Transportation Equipment - Autos	0.00	49,884.21
392.2	Transportation Equipment - Trailers	58,145.67	10,322.68
393	Stores Equipment	15,720.46	15,343.08
394.1	Portable Tools	23,360,039.75	7,769,338.51
394.2	Shop Equipment	341,135.67	239,358.64
395	Laboratory Equipment	2,145,336.65	189,367.64
396	Power Operated Equipment	60,528.93	117,501.67
397	Communication Equipment	244,486,723.66	88,931,537.04
398	Miscellaneous Equipment	4,484,346.50	585,204.29
	TOTAL GENERAL PLANT	314,424,379.77	121,760,545.92
101	TOTAL ELECTRIC PLANT	11,883,671,521.44	3,863,701,666.60

<u>No.</u>	<u>Account</u>	<u>Original Cost</u>	<u>Reserve for Depreciation and Amortization</u>
<b>GAS PLANT</b>			
302	Franchises and Consents	86,104.20	86,104.20
303	Miscellaneous Intangible Plant	0.00	0.00
	<b>TOTAL INTANGIBLE PLANT</b>	<b>86,104.20</b>	<b>86,104.20</b>
360.1	Land	0.00	0.00
361	Structures and Improvements	43,992.02	43,992.02
362.1	Gas Holders	0.00	0.00
362.2	Liquefied Natural Gas Holders	0.00	0.00
363	Purification Equipment	0.00	0.00
363.1	Liquefaction Equipment	0.00	0.00
363.2	Vaporizing Equipment	0.00	0.00
363.3	Compressor Equipment	0.00	0.00
363.4	Measuring and Regulating Equipment	0.00	0.00
363.5	Other Equipment	0.00	0.00
363.6	LNG Distribution Storage Equipment	2,052,614.24	964,581.84
	<b>TOTAL STORAGE PLANT</b>	<b>2,096,606.26</b>	<b>1,008,573.86</b>
365.1	Land	4,649,143.75	0.00
365.2	Land Rights	2,232,291.80	1,337,635.32
366	Structures and Improvements	12,228,213.09	9,749,130.94
367	Mains	212,063,882.02	68,011,342.33
368	Compressor Station Equipment	83,709,593.70	66,992,402.04
369	Measuring and Regulating Equipment	20,861,500.73	16,225,663.29
371	Other Equipment	(181,013.09)	0.00
	<b>TOTAL TRANSMISSION PLANT</b>	<b>335,563,612.00</b>	<b>162,316,173.92</b>
374.1	Land	102,187.24	0.00
374.2	Land Rights	8,239,569.29	6,659,839.47
375	Structures and Improvements	43,446.91	61,253.10
376	Mains	658,276,219.13	352,997,910.42
378	Measuring & Regulating Station Equipment	17,808,618.23	7,535,386.86
380	Distribution Services	253,454,115.48	293,152,964.41
381	Meters and Regulators	157,283,066.75	52,481,684.81
382	Meter and Regulator Installations	92,643,598.15	34,705,122.32
385	Ind. Measuring & Regulating Station Equipment	1,516,810.70	1,157,471.96
386	Other Property On Customers' Premises	0.00	0.00
387	Other Equipment	5,223,271.51	4,902,467.41
	<b>TOTAL DISTRIBUTION PLANT</b>	<b>1,194,590,903.39</b>	<b>753,654,100.76</b>

<u>No.</u>	<u>Account</u>	<u>Original Cost</u>	<u>Reserve for Depreciation and Amortization</u>
392.1	Transportation Equipment - Autos	0.00	25,503.00
392.2	Transportation Equipment - Trailers	74,500.55	74,500.68
394.1	Portable Tools	8,155,631.79	3,865,715.48
394.2	Shop Equipment	76,864.06	47,717.41
395	Laboratory Equipment	283,093.66	272,724.95
396	Power Operated Equipment	162,284.40	149,377.85
397	Communication Equipment	2,496,030.92	852,710.96
398	Miscellaneous Equipment	157,056.49	57,770.31
	TOTAL GENERAL PLANT	11,405,461.87	5,346,020.64
101	TOTAL GAS PLANT	1,543,742,687.72	922,410,973.38
<b>COMMON PLANT</b>			
303	Miscellaneous Intangible Plant	315,860,381.66	198,478,812.23
350.1	Land	0.00	0.00
360.1	Land	0.00	0.00
389.1	Land	7,168,914.56	0.00
389.2	Land Rights	1,080,961.15	27,776.34
390	Structures and Improvements	334,569,892.00	135,052,124.46
391.1	Office Furniture and Equipment - Other	26,695,638.41	13,331,548.42
391.2	Office Furniture and Equipment - Computer E	51,159,501.34	30,917,421.92
392.1	Transportation Equipment - Autos	33,942.29	(338,930.17)
392.2	Transportation Equipment - Trailers	12,195.98	3,950.55
393	Stores Equipment	63,971.09	47,752.50
394.1	Portable Tools	1,232,026.51	300,114.17
394.2	Shop Equipment	213,047.56	137,387.63
394.3	Garage Equipment	1,096,434.79	161,187.27
395	Laboratory Equipment	1,997,981.54	898,912.90
396	Power Operated Equipment	0.00	(192,979.10)
397	Communication Equipment	192,835,322.47	67,449,231.27
398	Miscellaneous Equipment	2,287,818.69	1,418,683.97
118.1	TOTAL COMMON PLANT	936,308,030.04	447,692,994.36
	TOTAL ELECTRIC PLANT	11,883,671,521.44	3,863,701,666.60
	TOTAL GAS PLANT	1,543,742,687.72	922,410,973.38
	TOTAL COMMON PLANT	936,308,030.04	447,692,994.36
101 & 118.1	TOTAL	14,363,722,239.20	5,233,805,634.34
101	PLANT IN SERV-SONGS FULLY RECOVER	0.00	0.00
101	PLANT IN SERV-ELECTRIC NON-RECON Electric	(2,540,241.64)	0.00

<u>No.</u>	<u>Account</u>	<u>Original Cost</u>	<u>Reserve for Depreciation and Amortization</u>
101	PLANT IN SERV-ASSETS HELD FOR SALE		
	Electric	0.00	0.00
	Common	0.00	0.00
		<u>0.00</u>	<u>0.00</u>
101	PLANT IN SERV-LEGACY METER RECLASS		
	Electric	0.00	0.00
		<u>0.00</u>	<u>0.00</u>
101	PLANT IN SERV-PP TO SAP OUT OF BAL		
	Electric	0.00	0.00
		<u>0.00</u>	<u>0.00</u>
118	PLANT IN SERV-COMMON NON-RECON		
	Common - Transferred Asset Adjustment	(1,633,319.82)	(1,633,319.82)
		<u>(1,633,319.82)</u>	<u>(1,633,319.82)</u>
101	Accrual for Retirements		
	Electric	(6,398,695.94)	(6,398,695.94)
	Gas	(73,301.91)	(73,301.91)
		<u>(6,471,997.85)</u>	<u>(6,471,997.85)</u>
	TOTAL PLANT IN SERV-ACCRUAL FOR RE		
	Electric	0.00	0.00
	Gas	0.00	0.00
		<u>0.00</u>	<u>0.00</u>
	TOTAL PLANT PURCHASED OR SOLD	0.00	0.00
		<u>0.00</u>	<u>0.00</u>
104	Electric	85,194,000.02	10,784,868.30
	Gas	0.00	0.00
		<u>85,194,000.02</u>	<u>10,784,868.30</u>
	TOTAL PLANT LEASED TO OTHERS		
		<u>85,194,000.02</u>	<u>10,784,868.30</u>
105	Plant Held for Future Use		
	Electric	11,307,727.50	0.00
	Gas	0.00	0.00
		<u>11,307,727.50</u>	<u>0.00</u>
	TOTAL PLANT HELD FOR FUTURE USE		
		<u>11,307,727.50</u>	<u>0.00</u>
107	Construction Work in Progress		
	Electric	550,237,348.56	
	Gas	161,642,662.44	
	Common	65,548,179.58	
		<u>777,428,190.58</u>	<u>0.00</u>
	TOTAL CONSTRUCTION WORK IN PROGRESS		
		<u>777,428,190.58</u>	<u>0.00</u>
108	Accum. Depr SONGS Mitigation/Spent Fuel Disallowance		
	Electric	0.00	0.00
		<u>0.00</u>	<u>0.00</u>

<u>No.</u>	<u>Account</u>	<u>Original Cost</u>	<u>Reserve for Depreciation and Amortization</u>
108.5	Accumulated Nuclear Decommissioning Electric	0.00	908,970,513.69
	TOTAL ACCUMULATED NUCLEAR DECOMMISSIONING	0.00	908,970,513.69
101.1	ELECTRIC CAPITAL LEASES	837,939,281.00	172,812,856.00
118.1	COMMON CAPITAL LEASE	20,071,932.81	18,803,784.44
		858,011,213.81	191,616,640.44
120	NUCLEAR FUEL FABRICATION	62,963,775.37	40,861,208.00
120	SONGS PLANT CLOSURE-NUCLEAR FUEL	(62,963,775.37)	(40,861,208.00)
143	FAS 143 ASSETS - Legal Obligation	271,718,404.13	(844,124,606.57)
	SONGS Plant Closure - FAS 143 contra	(270,338,553.03)	(61,166,058.00)
	FIN 47 ASSETS - Non-Legal Obligation	69,819,775.07	29,177,883.96
143	FAS 143 ASSETS - Legal Obligation	0.00	(1,371,078,441.35)
	TOTAL FAS 143	71,199,626.17	(2,247,191,221.96)
	UTILITY PLANT TOTAL	16,156,217,437.97	4,089,881,117.14

APPENDIX L

SoCalGas Original Cost and Depreciation Statement

**SOUTHERN CALIFORNIA GAS COMPANY**

Plant Investment and Accumulated Depreciation

As of September 30, 2015

ACCOUNT NUMBER	DESCRIPTION	ORIGINAL COSTS	ACCUMULATED RESERVE	NET BOOK VALUE
<b>INTANGIBLE ASSETS</b>				
301	Organization	\$ 76,457	\$ -	\$ 76,457
302	Franchise and Consents	\$ 579,560	\$ -	\$ 579,560
	Total Intangible Assets	\$ 656,017	\$ 0	\$ 656,017
<b>PRODUCTION:</b>				
325	Other Land Rights	\$ 15,321	\$ -	\$ 15,321
330	Prd Gas Wells Const	\$ 5,557,139	\$ (1,415)	\$ 5,555,724
331	Prd Gas Wells Eqp	\$ 454,718	\$ (55)	\$ 454,663
332	Field Lines	\$ 1,731,111	\$ -	\$ 1,731,111
334	FldMeas&RegStnEquip	\$ 536,249	\$ -	\$ 536,249
336	Prf Eqpt	\$ 485,415	\$ -	\$ 485,415
	Total Production	\$ 8,779,952	\$ (1,470)	\$ 8,778,482
<b>UNDERGROUND STORAGE:</b>				
350	Land	\$ 4,539,484	\$ -	\$ 4,539,484
350SR	Storage Rights	\$ 17,935,798	\$ (17,502,307)	\$ 433,491
350RW	Rights-of-Way	\$ 25,354	\$ (15,989)	\$ 9,365
351	Structures and Improvements	\$ 49,460,425	\$ (20,458,638)	\$ 29,001,786
352	Wells	\$ 333,342,991	\$ (174,411,775)	\$ 158,931,216
353	Lines	\$ 111,364,267	\$ (94,874,978)	\$ 16,489,288
354	Compressor Station and Equipment	\$ 154,433,413	\$ (65,212,242)	\$ 89,221,170
355	Measuring And Regulator Equipment	\$ 7,177,877	\$ (2,164,480)	\$ 5,013,397
356	Purification Equipment	\$ 145,272,400	\$ (70,121,538)	\$ 75,150,862
357	Other Equipment	\$ 46,639,926	\$ (9,911,355)	\$ 36,728,572
	Total Underground Storage	\$ 870,191,935	\$ (454,673,303)	\$ 415,518,632
<b>TRANSMISSION PLANT- OTHER:</b>				
365	Land	\$ 2,717,378	\$ -	\$ 2,717,378
365LRTS	Land Rights	\$ 21,665,634	\$ (15,845,927)	\$ 5,819,707
366	Structures and Improvements	\$ 36,568,425	\$ (21,200,680)	\$ 15,367,745
367	Mains	\$ 1,509,376,117	\$ (617,123,557)	\$ 892,252,561
368	Compressor Station and Equipment	\$ 220,774,695	\$ (109,618,016)	\$ 111,156,679
369	Measuring And Regulator Equipment	\$ 81,561,664	\$ (26,459,274)	\$ 55,102,390
371	Other Equipment	\$ 4,772,085	\$ (2,984,497)	\$ 1,787,589
	Total Transmission Plant	\$ 1,877,435,998	\$ (793,231,950)	\$ 1,084,204,048
<b>DISTRIBUTION PLANT:</b>				
374	Land	\$ 28,985,409	\$ -	\$ 28,985,409
374LRTS	Land Rights	\$ 2,947,429	\$ (12,264)	\$ 2,935,165
375	Structures and Improvements	\$ 256,911,391	\$ (76,884,555)	\$ 180,026,836
376	Mains	\$ 3,697,134,863	\$ (2,123,264,526)	\$ 1,573,870,337
378	Measuring And Regulator Equipment	\$ 98,139,703	\$ (67,670,506)	\$ 30,469,197
380	Services	\$ 2,330,331,798	\$ (1,933,318,038)	\$ 397,013,760
381	Meters	\$ 825,863,936	\$ (154,503,713)	\$ 671,360,223
382	Meter Installation	\$ 461,620,470	\$ (152,001,460)	\$ 309,619,010
383	House Regulators	\$ 150,962,053	\$ (60,706,328)	\$ 90,255,725
387	Other Equipment	\$ 34,617,730	\$ (22,736,739)	\$ 11,880,991
	Total Distribution Plant	\$ 7,887,514,781	\$ (4,591,098,129)	\$ 3,296,416,652
<b>GENERAL PLANT:</b>				
389	Land	\$ 1,342,839	\$ -	\$ 1,342,839
389LRTS	Land Rights	\$ 74,300	\$ -	\$ 74,300
390	Structures and Improvements	\$ 194,911,235	\$ (181,301,612)	\$ 13,609,624
391	Office Furniture and Equipment	\$ 961,128,338	\$ (484,332,761)	\$ 476,795,577
392	Transportation Equipment	\$ 392,287	\$ (203,605)	\$ 188,682
393	Stores Equipment	\$ 99,134	\$ (65,099)	\$ 34,035
394	Shop and Garage Equipment	\$ 56,869,926	\$ (23,031,308)	\$ 33,838,618
395	Laboratory Equipment	\$ 4,884,772	\$ (3,064,218)	\$ 1,820,554
396	Construction Equipment	\$ 11,957	\$ 6,777	\$ 18,734
397	Communication Equipments	\$ 137,278,583	\$ (46,678,883)	\$ 90,599,700
398	Miscellaneous Equipment	\$ 2,901,703	\$ (496,677)	\$ 2,405,026
	Total General Plant	\$ 1,359,895,075	\$ (739,167,386)	\$ 620,727,689
	Grand Total	\$ 12,004,473,757	\$ (6,578,172,238)	\$ 5,426,301,519

## Appendix M

### SDG&E Summary of Earnings

**SAN DIEGO GAS & ELECTRIC COMPANY  
SUMMARY OF EARNINGS  
NINE MONTHS ENDED SEPTEMBER 30, 2015  
(DOLLARS IN MILLIONS)**

<u>Line No.</u>	<u>Item</u>	<u>Amount</u>
1	Operating Revenue	\$3,613
2	Operating Expenses	<u>3,073</u>
3	Net Operating Income	<u><u>\$540</u></u>
4	Weighted Average Rate Base	\$4,471
5	Rate of Return*	7.79%

\*Authorized Cost of Capital

## Appendix N

### SoCalGas Summary of Earnings

**SOUTHERN CALIFORNIA GAS COMPANY  
SUMMARY OF EARNINGS  
NINE MONTHS ENDED SEPTEMBER 30, 2015  
(DOLLARS IN MILLIONS)**

<u>Line No.</u>	<u>Item</u>	<u>Amount</u>
1	Operating Revenue	\$2,440
2	Operating Expenses	<u>2,129</u>
3	Net Operating Income	<u><u>\$310</u></u>
4	Weighted Average Rate Base	\$3,607
5	Rate of Return*	8.02%

\*Authorized Cost of Capital