Application No: A.13-12-013
Exhibit No.:
Witness: Gwen Marelli

Application of Southern California Gas Company (U 904 G) and San Diego Gas & Electric Company (U 902 G) For Authority To Recover North-South Project Revenue Requirement In Customer Rates And For Approval Of Related Cost Allocation And Rate Design Proposals	A.13-12-013 (Filed December 20, 2013)

UPDATED DIRECT TESTIMONY OF

GWEN MARELLI

SOUTHERN CALIFORNIA GAS COMPANY

AND

SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

November 12, 2014

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UPDATED DIRECT TESTIMONY OF GWEN MARELLI

I. PURPOSE

The purpose of my direct testimony is to explain why, from the perspective of the director charged with the day-to-day responsibility for obtaining the supplies to meet minimum flow requirements on the Southern California Gas Company (SoCalGas) Southern Transmission System (Southern System), the North-South Project (consisting of new pipeline and compression) proposed by SoCalGas and San Diego Gas and Electric Company (SDG&E) is necessary.

II. BACKGROUND

A. SOUTHERN SYSTEM MINIMUM FLOW REQUIREMENT

As discussed by Mr. Bisi, one portion of our interconnected transmission system – SoCalGas' Southern Transmission System (Southern System) – requires minimum flowing supplies each day. Without these minimum supplies, reliability would be compromised, and customers on the Southern System would face supply-based curtailments on a regular basis.

The need for minimum flows on the Southern System is created by the fact that, unlike other portions of SoCalGas' system, physical flows delivered to the Southern System are needed on a regular basis, and only a portion of the system's needs can be served by flows from other portions of the system. As the California Public Utilities Commission (Commission) accurately explained in Resolution G-3468, "SoCalGas needs a certain minimum amount (which can vary depending upon conditions) of flowing supplies on its Southern System to operate effectively."[1] The Southern System minimum flow requirement for any particular day is based in large part upon customer demand on the Southern System, minus the limited amount of flowing supplies that SoCalGas is able to flow from its Northern System to its Southern System. To the extent that

[1] Resolution G-3468, pp. 2-3.

customer deliveries into its Southern System fall short of the minimum flow requirement SoCalGas must provide additional supplies in order to keep the system operating.[2]

If not enough gas arrives into the Southern System on a given day, the System Operator will not have enough gas to meet the load and also have enough gas to meet the next day's needs. This is especially true on the Southern System since it does not have access to our storage fields. "Pack and draft" means the System Operator will store gas supply in its transmission lines during the hours of low demand ("packing") and then use that gas during the hours of high demand, reducing the amount of gas in the system ("drafting"). When this occurs, the system starts the day in a negative situation, which limits the operator's abilities to handle the normal daily swings and greatly limits the options before curtailing customers.

It is frequently not in the economic interest of shippers to deliver supplies into the Southern System, even when they have the pipeline capacity to do so. The Commission does not require any of SoCalGas' customers to bring supplies into either Blythe or Otay Mesa, the two Southern System receipt points. As a result, SoCalGas frequently needs to provide flowing supplies for the Southern System in order to meet the system minimums established by the SoCalGas Gas Control Department.

B. RESPONSIBILITY FOR OBTAINING SUPPLIES TO MEET SOUTHERN SYSTEM MINIMUM FLOW REQUIREMENT

On December 6, 2007, the Commission issued D.07-12-019, which approved the transfer of the responsibility for managing minimum flow requirements for system reliability from Gas Acquisition to the System Operator.[3]

[2] Note that minimum flow requirements do not simply equal Southern System demand less customer deliveries into the Southern System and those limited volumes that can be transported from the Northern System. The state of the system, expectations of customer demand, and weather forecasts are also factors. The System Operator takes all of this into account when it determines the Southern System minimum flowing supply requirement and what level of additional supply purchases are required.

SoCalGas' Gas Acquisition Department (Gas Acquisition) had previously assured such flowing supplies, using core customer assets. When Gas Acquisition needed to purchase additional spot supplies to meet minimum flow requirements at Blythe beyond 355 million cubic feet per day (MMcfd), its incremental costs to do so were recorded in a memorandum account.

In D.07-12-019 the Commission directed the System Operator to take over the responsibility for managing these minimum flows as of April 1, 2009. D.07-12-019 also adopted SoCalGas' and SDG&E's request for certain System Operator tools to help maintain system reliability.

C. PAST COSTS OF MEETING SOUTHERN SYSTEM MINIMUM FLOW REQUIREMENTS

Prior to 2009, the average minimum flow required at Blythe was approximately 355 MMcfd. Gas Acquisition was responsible for this level of base load at Blythe. The Blythe Operational Flow Requirement Memorandum Account (BOFRMA) averaged $3.4 million/year over the 2006-2008 period.[4]

Table 1 below shows SoCalGas' average yearly cost to support the Southern System since the transfer of responsibility to the System Operator in April 2009. Figure 1 illustrates that the total costs (SRMA net costs plus BTS discounts) have been approximately doubling every year.

[3] D.07-12-019 mimeo, at 116 (Ordering Paragraph No. 15). Although the Decision refers to "Gas Acquisition Department," the tariffs that were filed in that proceeding and later proceedings use the phrase "Utility Gas Procurement Department." Both terms refer to the same group. The System Operator is broadly defined to constitute the SoCalGas departments responsible for the operation of its transmission system, including storage, hub services, pooling services receipt point access, off-system deliveries, and system reliability. It does not include Gas Acquisition. *See* D.07-12-019, mimeo, at 58. *See also* SoCalGas Rule 41(2).

[4] See Table 1 of Musich Supplemental TCAP Testimony, September 2012.

Table 1 - Costs of Southern System Support Post Transfer to Operator ($MM)

	Purchases Mdth	SRMA Costs	IT BTS Ehrenberg Discounts	Total Costs
Sept 2009-Aug 2010	11,166*	$2.2	0	$2.2*
Sept 2010-Aug 2011	1,045	$3.8	0	$3.8
Sept 2011-Aug 2012	6,858	$2.2	$6.9	$9.1
Sept 2012- Aug 2013	19,320	$7.9	$12.1	$20.0

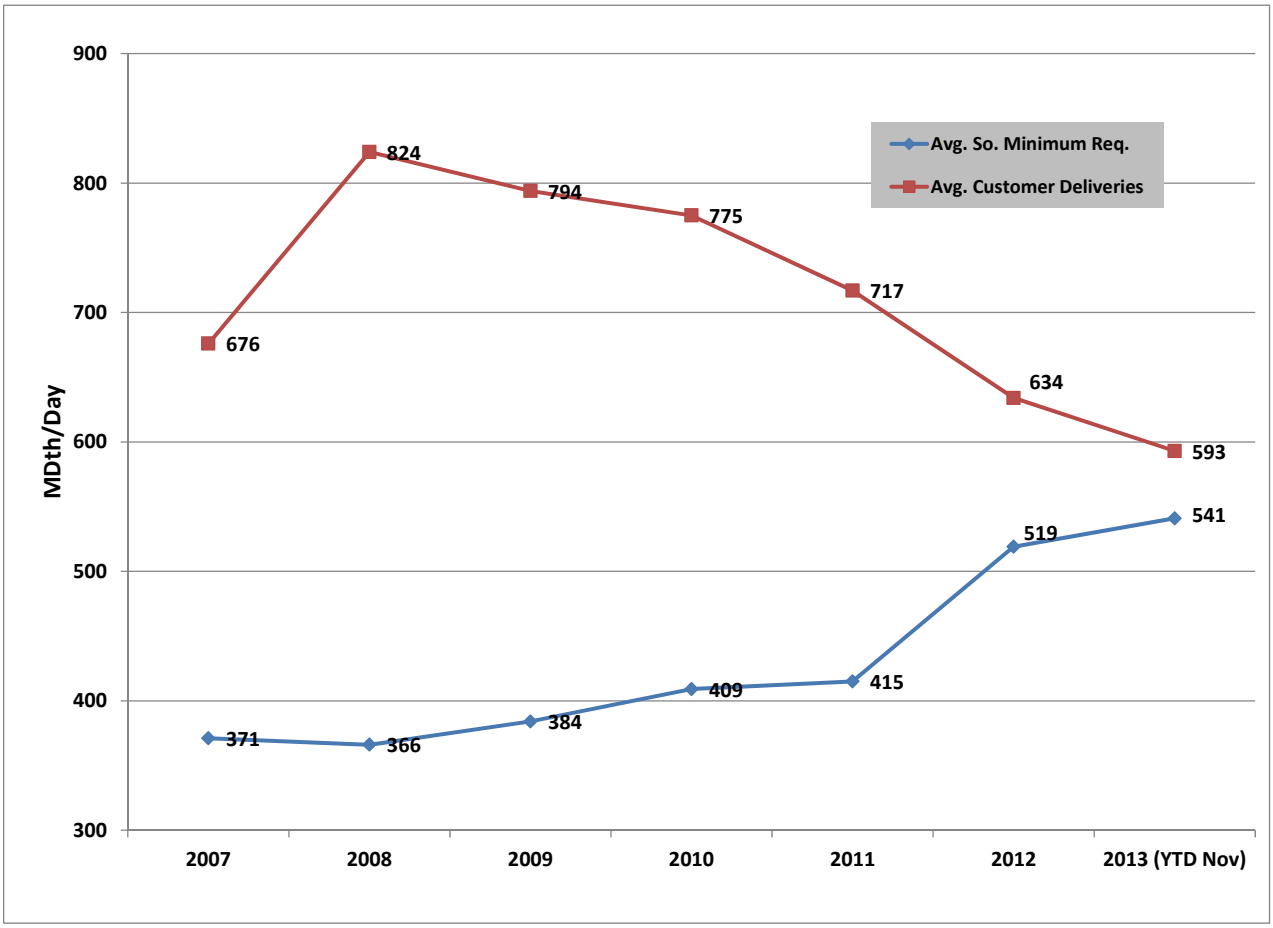
*96% of these supplies were baseload winter supplies approved in G-3435.

Despite the transfer of responsibility in 2009, gas procurement costs for core customers have still been adversely affected when responsible for 15-55% (depending on daily actuals) of the southern system minimum under the Memorandum in Lieu of Contract (MILC) arrangement. In order to meet their obligations under these arrangements, Gas Acquisition purchased El Paso South Mainline capacity to Ehrenberg at a 15 cent/dth reservation charge premium over other interstate pipeline alternatives. This translates to a $16 million/year cost impact.[5]

As Figure 1 below demonstrates, the Southern System minimum rose from an annual average level of 366 Mdth/d in 2008 to the current 541 Mdth/d level. Conversely, customer deliveries into the Southern System dropped from an annual average level exceeding 800 Mdth/d in 2008 to 593 Mdth/d in 2013 (YTD November).

[5] $0.15/dth x approx. 300 Mdth/day x 365 days = $16 million.

Figure 1 – Southern System Minimums and Deliveries



III. FUTURE COSTS OF MEETING SOUTHERN SYSTEM MINIMUM FLOW REQUIREMENT

As discussed above, Southern System support costs have been rising during the past few years. SoCalGas and SDG&E expect this trend to continue.

As discussed by Mr. Chaudhury, we believe that customer deliveries to the Southern System will continue to drop as supplies transported on El Paso's South Mainline are diverted to the anticipated higher-value Mexican markets. Accordingly, greater volumes of Southern System support purchases by SoCalGas' System Operator are likely to be needed in the future.

As competition for these supplies increases, the net cost of our Southern System support purchases is also likely to increase.

Note that the above only addresses increased costs for Southern System support purchases. To the extent that a lack of flowing supplies results in future curtailments of Southern System customers, the costs to our customers in terms of lost productivity could be much greater than just the direct costs incurred by SoCalGas. For example, supply-related curtailments which affect electric generators located on the Southern System could result in substantial overall statewide costs and consequences.

IV. THREATS TO SOUTHERN SYSTEM RELIABILITY WILL INCREASE

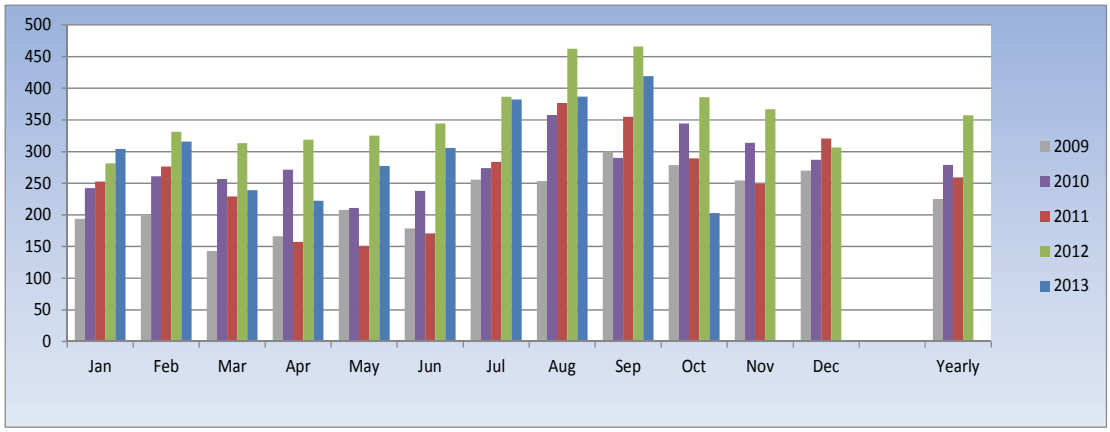
A. SIGNIFICANT VOLUMES WILL FLOW TO MEXICO RATHER THAN CALIFORNIA

As discussed by Mr. Chaudhury, substantial future increases in exports of natural gas from the United States to Mexico are likely, and many of those volumes are likely to flow to Mexico via El Paso's South Mainline. These substantial future flows to Mexico over the El Paso South Mainline will likely further reduce flows into Blythe.

B. SOUTHERN SYSTEM ELECTRIC GENERATION DEMAND IS EXPECTED TO CONTINUE TO BE ROBUST

Since the closure of the San Onofre Nuclear Generating Station (SONGS), demand by Southern System electric generators has increased by approximately 80-100 MMcfd, as demonstrated in Figure 2 below.

Figure 2 - Historical EG Demand on Southern System
(SONGS Outage began in January 2012)



Although some of the available 2,150 MW of lost SONGS power will likely be met by out-of-state generation, expected increases in overall electric generation demand lead us to believe that Southern System demand will not decline below recent (2012/13) levels.

Since the SONGS outage began in early 2012, SoCalGas and SDG&E have seen strong electric generation (EG) demand on their systems, and there are a number of gas-fired generation projects proposed for our service territories.

These projects are likely to place additional supply-related strains on the Southern System. SoCalGas and SDG&E experienced a preview of these potential issues during the week of December 9, 2013. As discussed in more detail below, cold weather and high on-system EG demand, led to combined core and noncore demand that was well in excess of local system capabilities. By working closely with CAISO, SoCalGas and SDG&E were able to weather those particular challenges without curtailing interruptible or firm deliveries to customers. But in the future we may not be so fortunate, particularly if new gas-fired generation projects are constructed in our Southern System.

V. THESE ARE NOT ABSTRACT RELIABILITY CONCERNS

Essentially all of the flowing supplies that arrive at Southern System receipt points are sourced from one pipeline – El Paso.[6] I will describe some recent Southern System reliability problems that have occurred because of this situation.

A. FEBRUARY 2011 SOUTHERN SYSTEM CURTAILMENT

During the Southwest Cold Weather Event of February 1-5, 2011, extreme cold weather caused well freeze offs upstream of the SoCalGas system. Gas deliveries into the SoCalGas system were at a historic low *throughout* the SoCalGas territory, yet the ensuing curtailment was confined to the Southern System because the demand in the remainder of the system was met by storage withdrawals.

On February 2, 2011, El Paso Natural Gas Company (El Paso) issued an emergency Critical Operating Condition (COC) for a draft condition on its entire system effective Gas Day February 2, 2011.[7] El Paso advised that the COC would remain in effect until further notice. In accordance with Rule No. 41, the Operational Hub secured additional supplies to meet the minimum supply requirement of that system at both Ehrenberg and Otay Mesa. SoCalGas' Operational Hub found that supplies were being bid away by East-of-California customers served by the apparently more distressed El Paso system. In accordance with Rule No. 41, Gas Acquisition was also asked to make best efforts to secure more supply for the Southern System. Despite all of these efforts, the demand on the Southern System continued to outstrip the diminished supply being provided to that system, resulting in severe drafting of the SoCalGas and SDG&E pipeline network. By noon of February 3rd, after all available incremental supplies could

[6] Transportadora de Gas Natural de Baja California (TGN) also has the capability to deliver supply at Otay Mesa. However, that receipt point is typically not utilized by our customers for economic reasons.
[7] "Draft" refers to the use of gas stored in a pipeline to meet customer demand. When a pipeline is drafted, the operating pressure decreases. Because a pipeline operator must maintain minimum operating pressures at all times, the ability to draft a pipeline is limited.

be secured, Gas Control determined that a curtailment of at least 200 MMcfd of load was required. In the early afternoon SoCalGas and SDG&E initiated the curtailment of interruptible and some firm noncore load in the affected area in accordance with SoCalGas Rule No. 23 and SDG&E Rule No. 14.

Operational issues on the Southern System generally happen quickly and unexpectedly. In the situation that occurred in February of 2011, the Southern System went from no issues to curtailment in approximately 24 hours. The following section discusses some of the supply-related near curtailments of Southern System noncore customers that have occurred recently.

B. SUPPLY-RELATED NEAR MISSES

1. JANUARY 2013

On January 14 and 15, 2013, extreme cold weather brought a record high gas usage for SDG&E and a near record high for SoCalGas. The combined high core loads and high EG load put the Southern System under extreme stress, especially in the morning and early evening. SoCalGas and SDG&E called for a curtailment watch. We were able to narrowly avoid noncore curtailment by working closely with CAISO, putting out conservation messages and bringing gas in through Otay Mesa.

2. JUNE-JULY 2013

From June 29 to July 3, 2013, a heat wave brought record high temperatures and along with them very high EG burns in the Southern System. There were numerous requests made to the California Energy Hub for additional supplies during this time period. On August 29 through September 6, the Southern System was again subject to a heat wave with very high EG burns and numerous requests for supplies. Noncore curtailment was a likely possibility throughout these heat related events.

3. DECEMBER 2013

In early December of 2013, Winter Storm Cleon brought cold temperatures to Southern California and much of the United States. As a result, gas was selling for higher prices east of California. On December 6, 2013, total receipts into SoCalGas' system were only about 1.4 BCF, despite a system load of 4.4 BCF, with the difference being supplied by storage. SoCalGas and SDG&E called for curtailment of standby procurement service, which requires customers and marketers to bring 90% of their burn into the system, either via flowing supply or from storage withdrawals.[8] The cold weather continued until December 11, 2013, and the curtailment of standby service continued for the whole period. On the evening of December 9, during the last scheduling cycle of the day (Cycle 4 – Intraday 2), scheduled deliveries into the Southern System were unexpectedly cut, resulting in a 42,000 dth shortfall of the Southern System minimum requirement. In response to less gas arriving than the minimum requirement, a curtailment watch was called, first for the Rainbow Corridor/SDG&E system and later for the entire Southern System and the coastal Los Angeles Basin. Throughout this time period the rest of the SoCalGas/SDG&E system needs were largely met with storage, an option not available to the severely taxed Southern System. Fortunately, working with CAISO and with gas/electric conservation messages, the load on the Southern System was reduced enough to avoid curtailment of service to our noncore customers, but the inability to get storage gas was largely responsible for the curtailment watch for this area.

What may not be apparent to those outside the company is the amount of stress placed on the Southern System in each of these cases, or how close we came to curtailments. As prudent operators, we want and need a reasonable margin for error when cold weather blankets the desert Southwest or nuclear power plants in Arizona trip offline, and we currently run out of headroom

[8] SoCalGas Advice Letter 4576 dated December 6, 2013.

far too quickly on the Southern System. In the rest of our system, access to storage supplies and multiple receipt points makes it far less likely that customers will be subject to a curtailment event. We need the same options for the Southern System. Likewise, SoCalGas is constantly making operational adjustments in response to pipeline integrity testing, Pipeline Safety Enhancement Plan, Transmission Integrity Management Program, and Distribution Integrity Management Program related work, and routine maintenance of our system. We generally do this work seamlessly, and without inconvenience to our customers -- in fact, in many cases customers are not even aware the work is being done. Access to storage supplies and multiple receipt points will help enable SoCalGas and SDG&E to provide the same level of uninterrupted service to Southern System customers.

C. SOUTHERN SYSTEM OPERATIONAL ISSUES

The design capacity of the Blythe receipt point is 1.2 Bcf/d, and it interconnects with three SoCalGas transmission lines -- Line 2000, Line 2001 and Line 5000. This receipt point capacity can be and currently is reduced by pipeline maintenance or other issues. In September of 2010, following the San Bruno explosion on PG&E's system, SoCalGas voluntarily reduced the operating pressure on Line 2000, reducing the receipt capacity at Blythe to 1,000 MMcfd. In September of 2013 anomalies were found on Line 2001, causing SoCalGas to reduce Blythe receipt point capacity to 750 MMcfd. Had these reductions been necessary during the prior week, when the Southern System minimum was over 750 MMcfd, the System Operator would have needed to receive gas through Otay Mesa in order to maintain system integrity and avoid curtailment of Southern System noncore customers -- assuming that enough interruptible capacity would have been available on the three pipelines between El Paso and Otay Mesa, namely North

Baja, Baja Norte, and TGN.[9] If, however, the North-South Project had been in service, Gas Control could have simply moved gas from our Honor Rancho storage field or a variety of northern sources including our Kramer Junction, Needles, and Topock receipt points. This project will allow us to deal with rapidly changing operational concerns, reducing the risk of curtailment for our noncore customers.

VI. EFFORTS BY SOCALGAS TO MITIGATE THE SOUTHERN SYSTEM PROBLEM

In D.07-12-019, the Commission also adopted the request by SoCalGas, SDG&E, and SCE for System Operator tools for maintaining system reliability.[10] These tools are as follows:

> (a) The ability of the System Operator to buy and sell gas on a spot basis, as needed, to maintain system reliability.
>
> (b) Authority to conduct requests for offers (RFO) or open season process consistent with the System Operator needs.
>
> (c) Authority to approve an expedited Advice Letter approval process for contracts that result from a RFO or open season process.[11]

The System Operator regularly uses its ability to buy and sell spot gas to maintain minimum flows on the Southern System. These purchases and sales are discussed in detail in annual advice filings by SoCalGas.[12]

The System Operator has used the RFO process to enter into baseload contracts for Southern System support, and SoCalGas has sought and obtained authorization for additional System Operator tools to help maintain Southern System minimum flows. SoCalGas has discounted Backbone Transportation Service (BTS) to encourage shippers to bring gas into the

[9] These pipelines serve primarily Mexican electric generation load and are therefore a summer peaking system, so it is possible not enough capacity would have been available to meet our needs. If that were the case, we would have had no choice but to curtail service to Southern System noncore customers.
[10] D.07-12-019, mimeo., at 67 and 112 (Ordering Paragraph No. 16).
[11] D.07-12-019, mimeo., at 112 (Ordering Paragraph No. 16).
[12] *See* Resolutions G-3462, G-3467, and G-3480.

Southern System. And in late 2012, SoCalGas put a pipeline into service, Line 6916, that enables additional supplies delivered at South Needles to reach the Southern System, providing another source of supply to the Southern System. The efforts by SoCalGas above and beyond spot purchases and sales are described below.

A. BASELOAD CONTRACTS

In March of 2009, SoCalGas sought approval of five baseload contract proposals for Southern System support,[13] and in September of 2009, the Commission approved three of the five contracts for the December 2009 through February 2010 period.[14] In August of 2012, SoCalGas requested approval of four baseload contract proposals for Southern System support for the December 2012 through March 2013 period.[15] In May of 2013 -- after the terms of the baseload proposals had expired -- the Commission approved three of the four proposed contracts.[16] The resolution acknowledged that the approval came too late for those particular proposed agreements, but provided guidance for the structure of possible future baseload contracts for Southern System support.

In July of 2013, SoCalGas filed Advice Letter 4516, requesting that during the next five years, baseload supply contracts that meet the criteria articulated by the Commission in Resolution G-3477 be deemed reasonable. On October 7, 2013, the Commission issued Resolution G-3487 approving Advice Letter 4516, with two modifications to SoCalGas' proposal: (1) three year period of authorization (rather than the five years proposed by SoCalGas), and (2) clarification that baseload contracts are to be made one season at a time.

[13] These proposals were received in response to a RFO issued by SoCalGas on December 1, 2008.
[14] Resolution G-3435.
[15] These proposals were received in response to a RFO issued by SoCalGas on July 17, 2012.
[16] Resolution G-3477.

B. MOVEMENT OF SUPPLIES FROM BLYTHE TO OTAY MESA

In Resolution G-3474, the Commission approved SoCalGas' request for an additional tool allowing the System Operator to move supply from Blythe, California, to Otay Mesa, California, to help maintain minimum flows on its Southern System. This request was triggered by instances in which supplies were needed at the far end of the Southern System in order to maintain minimum system pressures, and supplies delivered at Blythe were not a reasonable substitute. By enabling the System Operator to move supplies from one receipt point to another, if cost effective, rather than simply purchasing the needed supplies at Otay Mesa, this authority should reduce the costs paid by ratepayers to deliver supplies at Otay Mesa to preserve Southern System reliability.

C. MILCS WITH GAS ACQUISITION

As previously mentioned, in order to help maintain Southern System reliability at a reasonable cost, the SoCalGas System Operator has entered into a series of Commission-authorized MILCs[17] with Gas Acquisition. Under these MILCs, the bundled core agrees to deliver a specified share of the Southern System minimum flow requirement, and in return is relieved from Southern System support costs incurred by the SoCalGas System Operator.

The most recent MILC between the System Operator and Gas Acquisition was approved by the Commission on October 31, 2013.[18] Under this Third Revised MILC, the bundled core will be relieved of any System Reliability Memorandum Account (SRMA) costs incurred by the System Operator on days on which Gas Acquisition delivers the bundled core's actual share of the Southern System Minimum Flow Requirement to the Southern System.[19] Gas Acquisition will be responsible for a proportionate share of SRMA costs incurred by the System Operator on days on

[17] Because these agreements are between two departments of the same legal entity, the terms are documented in a MILC rather than a traditional contract.
[18] *See* Resolution G-3485.
[19] Resolution G-3485 at 1.

which Gas Acquisition does not deliver supplies to meet bundled core's daily share of the Southern System Minimum Flow Requirement. Unlike the first two MILCs, this Third MILC will continue for three consecutive one-year terms, ending not later than October 31, 2016, unless cancelled by Gas Acquisition or the System Operator or superseded by an intervening Commission decision.[20]

D. BTS DISCOUNTS

Rate Schedule G-BTS authorizes SoCalGas to offer discounted Backbone Transportation Service (BTS) capacity. SoCalGas has been using this authority to discount Southern Zone interruptible BTS capacity in order to encourage flows into the Southern System.[21]

SoCalGas has also requested authorization to revise Schedule G-BTS to allow discounted firm G-BTS contracts without alternate receipt point rights.[22] This proposed change would enable SoCalGas' System Operator to offer discounted Southern Zone firm BTS capacity in order to further encourage flows into the Southern System. SoCalGas believes that this ability would enable it to attract the same or higher level of customer supplies at Southern System receipt points with lower overall levels of discounting. This particular proposal was approved by the Commission in August of 2014 in Resolution G-3488.

E. ADDITION OF LINE 6916

SoCalGas acquired the California portion of the Questar Southern Trails pipeline between Essex and Twentynine Palms. Together with a previously-acquired section of that pipeline between Twentynine Palms and Cabazon, SoCalGas upgraded the line, remediated environmental contamination from Questar's operations, and converted the line into an interconnection linking

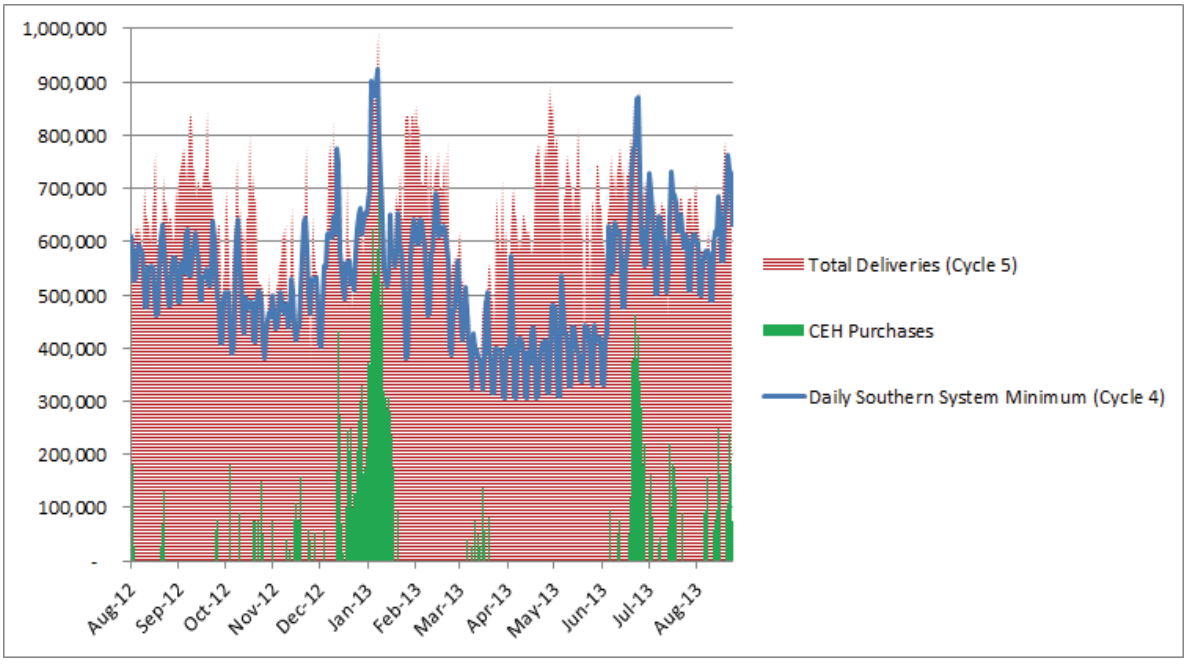
[20] Resolution G-3485 at 2.
[21] These discounts are recovered from other backbone transmission rights purchasers via the Backbone Transmission Balancing Account (BTBA) and higher BTS rates.
[22] *See* AL 4517 dated July 2, 2013.

SoCalGas' Northern Transmission Zone with the Southern Transmission Zone. This new transmission facility, called Line 6916, consists of 115 miles of 16-inch diameter pipeline capable of transporting up to 80 MMcfd between the two systems when needed operationally, reducing the flowing supply requirement at Blythe on a 1:1 basis. Line 6916 went into service on December 20, 2012.

F. THESE MITIGATION EFFORTS WILL NOT SOLVE THE SOUTHERN SYSTEM PROBLEM

Each of the mitigation efforts described above, other than the addition of Line 6916, is a short-term effort to reduce the cost of providing Southern System support for our customers. None of these efforts will deal with the long-term Southern System support issues described above and in the testimony of Mr. Cho. As can be seen in Figure 3 below, at times the System Operator is delivering the majority of supplies to the Southern System.

Figure 3 - Maintaining Southern System Deliveries



As gas supplies at Blythe and Otay Mesa become more scarce and more expensive, BTS discounts, baseload contracts, and even future MILCs with Gas Acquisition will not solve the reliability and cost issues we will be facing.

By contrast, Line 6916 is a true long-term reliability solution that decreases the Southern System minimum. But with a capacity of up to 80 MMcfd, Line 6916 is only part of the solution. For the reasons I will now discuss, additional physical solutions to the Southern System problem are necessary in order to provide Southern System customers with the reliability they deserve at a reasonable cost.

VII. NON-PHYSICAL SOLUTIONS WILL NOT SOLVE THE PROBLEM

SoCalGas and SDG&E have looked at a number of potential non-physical solutions to the impending supply-related Southern System cost and reliability problems. None of these potential non-physical solutions provide the tools we need.

A. CONTRACTING FOR UPSTREAM SUPPLIES

One potential option for dealing with future Southern System supply issues is for SoCalGas to contract for basin supplies and interstate capacity to meet anticipated Southern System flow requirements. This option would not provide the needed reliability benefits.

Even with basin supplies and matching interstate capacity, Southern System customers would be at the mercy of supply-related problems outside of California, just as they are today. If, for example, force majeure conditions shut in the supply basins (as they did in February of 2011), or the interstate pipeline we have contracted with experiences operational problems, the Southern System will not receive the supplies it needs. Even after substantial expenditures to lock in long-term supplies and interstate transportation, we will essentially be in the same situation we are in today, at least from a reliability standpoint.

Putting SoCalGas back in the position of entering into long-term transportation arrangements on behalf of its noncore customers runs contrary to two decades of natural gas deregulation. If it really made operational and economic sense, SoCalGas and SDG&E could potentially see the wisdom in changing course to this limited extent and contracting for interstate transportation capacity on a limited basis to meet the needs of Southern System customers. But for the reasons just discussed, this option does not work operationally.

B. TRANSFER OF SOUTHERN SYSTEM MINIMUM RESPONSIBILITY BACK TO GAS ACQUISITION

SoCalGas and SDG&E anticipate that certain interested parties may argue that the impending Southern System supply and reliability issues could be solved by transferring the Southern System support obligation back to SoCalGas' Gas Acquisition Department, which procures supplies for all bundled SoCalGas and SDG&E core customers.[23] However, re-transferring the responsibility back to Gas Acquisition would undermine the Commission's goal of putting bundled core customers on a more equal footing with noncore customers. This also would not be a reasonable response to the supply and reliability problems that our Southern System customers will be facing.

The amount of additional flowing supplies that SoCalGas must provide in order to keep the Southern System operating is independent of which department within SoCalGas provides those supplies. Likewise, the amount of supplies available to SoCalGas in order to keep the Southern System operating is also independent of which department within SoCalGas provides those supplies. Put another way, the impending Southern System supply and reliability issues will be

[23] D.07-12-019 authorized the consolidation of the core portfolios of SoCalGas and SDG&E into one single portfolio managed by SoCalGas.

the same no matter whether Gas Acquisition or the System Operator is responsible for Southern System support.

C. SOUTHERN SYSTEM MINIMUM FLOW REQUIREMENT

SoCalGas and SDG&E also considered the merits of supplementing or replacing the existing System Operator tools with a minimum flowing supply requirement for all end-use customers. In D.07-12-019, the Commission recognized the possibility that a minimum flow obligation may be necessary to help ensure reliability on the Southern System:

> Additionally, the System Operator would seek through separate application or a petition for modification of D.06-12-031 to impose some form of minimum delivery requirement for customers. A form of minimum flow obligation could be attached to holders of the recently approved firm receipt point access rights. If that type of minimum flow obligation was deemed to be a necessary and appropriate tool of the System Operator to manage its system reliability, Applicants would file a petition for modification of D.06-12-031 or a new application, explaining the rationale for such minimum flow obligation and how it would be implemented.[24]

In A.08-02-001, SoCalGas and SDG&E's most recent Biennial Cost Allocation Proceeding (BCAP), SoCalGas and SDG&E proposed a minimum flow obligation that would have required all customers to deliver up to 20 percent of their gas usage to the Southern System under certain specified circumstances (Southern System Flow Order).[25] Under this prior proposal:

> The Utilities' Gas Control Department would be able to call a Southern System Flow Order (SSFO) on end-use customers to flow supply through Blythe or Otay Mesa equal to up to 20 percent of their gas usage that day. The daily percentage may vary between days and is based on the actual need after the Utilities have exercised their other approved tools. The applicable percentage would be posted on SoCalGas' Electronic Bulletin Board (EBB) when the SSFO is called.[26]

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[24] D.07-12-019, mimeo., at 63-64.
[25] A.08-02-001, Prepared Direct Testimony of Rodger Schwecke on behalf of SDG&E and SoCalGas, December 5, 2008, pp. 17-20.
[26] Under this proposal, the System Operator would still remain responsible for meeting any Southern System minimum flow requirements that are not met by customer flows into the Southern System. *See*

A number of intervenors in our previous BCAP proceeding opposed this particular proposal, and SoCalGas and SDG&E ultimately decided to drop it as part of an overall settlement of issues in Phase 2 of the 2009 BCAP proceeding.[27]

SoCalGas and SDG&E believe that there may be merit to requiring all end-use customers to bring some portion of their gas usage into the Southern System. But this would be too small a bandage for too great a potential wound. If SoCalGas and SDG&E are not able to obtain flowing supplies at Blythe, then it is unlikely that our customers will be able to do so either, no matter how large the potential financial penalty for noncompliance. Only a physical upgrade that enables storage gas to reach the Southern System will provide Southern System customers with the same level of reliability received by customers located on the rest of the SoCalGas and SDG&E system.

As discussed above, SoCalGas has instituted a number of short-term tools such as the MILC with Gas Acquisition and baseload agreements that will hopefully be enough to provide safe and reliable service for our Southern System customers until the North-South Project is put into service. If it appears that this will not be the case, SoCalGas and SDG&E will consider whether to once again propose a Southern System minimum flowing supply requirement for all end-use customers. But we do not believe that the time is ripe for such a proposal.

D. A PHYSICAL SOLUTION IS NEEDED

Currently, the Southern System is essentially dependent on a single receipt point, Blythe, which customers generally do not wish to use for economic reasons. This single receipt point is likely to become even more underutilized in the future, potentially resulting in both higher system support purchases by the System Operator and higher prices for the gas we are able to purchase.

A.08-02-001, Prepared Direct Testimony of Rodger Schwecke on behalf of SDG&E and SoCalGas, December 5, 2008, p. 18.

[27] D.09-11-006, Appendix A, Section II.K. SoCalGas also presented this approach to our customers at our annual Customer Forum in 2013 and related post-Forum workshops, and it does not appear to have gained in popularity during the intervening years.

As discussed above, Blythe has been the source of reliability issues in the past. As explained by Mr. Cho, SoCalGas and SDG&E customers will always be at risk of curtailment if there are significant problems on one or more of the interstate pipelines connected to our system.

Southern System customers need to have access to supplies from SoCalGas' storage fields and other receipt points, and such access can only be achieved through *physical* upgrades. In order to more fully integrate the SoCalGas Northern and Southern Transmission Zones, and to mitigate the need for flowing gas supply requirements on the Southern System, SoCalGas should be authorized to recover in rates the cost of the North-South Project.

E. THE NORTH-SOUTH PROJECT IS THE BEST PHYSICAL SOLUTION

Mr. Bisi describes in detail the three infrastructure alternatives that we examined: River Route, Cross Desert, and North-South. All three alternatives would add approximately 800 MMcfd of North-to-South flow capacity on the SoCalGas system, which would effectively eliminate the Southern System minimum flow requirement. Cross Desert was eliminated due to its high cost. The River Route also has a higher estimated cost than the North-South Project ($769 million v. $621 million). In addition, the North-South Project has at least two significant advantages over the River Route.

First and foremost, the North-South Project, unlike the River Route option, would provide Southern System customers with access to supplies from storage and additional receipt points (Wheeler Ridge, Kern River Station, and Kramer Junction), which would increase the reliability of service to these customers. This is our primary reason for proposing the North-South Project, and the reason that contractual alternatives do not work. As explained above, Southern System customers should not be at the mercy of supply-related problems outside of California as they are today. With the River Route option, if force majeure conditions shut in the supply basins or one

or more of the interstate pipeline serving Southern California experiences operational problems, the Southern System may not receive the supplies it needs.

Second, unlike the River Route, the North-South Proposal would expand SoCalGas' firm backbone capacity from 3,875 MMcfd to 4,175 MMcfd. It will allow the North Desert Zonal capacity (the sum of all the various current receipt point capacities within that zone) to be increased from its current 1,590 MMcfd level to 1,890 MMcfd -- without impacting the 1,210 MMcfd capacity of the Southern Zone. This preserves the option for customers to fully use existing Southern Zone receipt capabilities if and when supplies delivered into the Southern System are economic.

Another potential physical option for dealing with future Southern System supply issues is for SoCalGas to purchase existing facilities from another entity. In the past we have made such purchases when they have made operational and economic sense. As discussed above, SoCalGas purchased the Southern Trails pipeline from Questar, upgraded the line, and remediated environmental contamination from Questar's operations. That upgraded pipeline went into service as SoCalGas Line 6916 in December of 2012. Line 6916 provides a new connection between SoCalGas' Northern Zone and Southern Zone transmission systems that, depending upon scheduled supplies, allows the Southern System minimum flow requirements to be reduced by up to 80 MMcfd.

SoCalGas does not believe, however, that there presently are any physical facilities it could purchase that would provide a reasonable and economic solution to impending supply-related Southern System cost and reliability problems. First, no pipeline facilities in Southern California are currently being offered to the marketplace for sale, at least publicly. Such facilities might of course become available if "the price is right." But the price of existing physical facilities useful to SoCalGas may be expensive, and may offer little or no savings over new construction.

More important, however, is the fact that none of the existing facilities owned by other companies would provide the same operational benefits. For example, Kinder Morgan owns Line 1903, a 30-inch 88 mile pipeline running from Cadiz to Ehrenberg. Even if this line were available for purchase, it would have the same operational drawbacks as the River Route discussed below. Namely, it would not provide the Southern System with access to storage supplies, and would leave Southern System customers vulnerable to well freeze offs and other upstream problems. In addition, this alternative could only transport up to 500 MMcfd -- perhaps enough for most days, but not enough for our design criteria of 800 MMcfd.

The North-South Project originally included three elements: (1) a new 36-inch diameter pipeline approximately 60 miles long, from Adelanto Compressor Station to the Moreno Pressure Limiting Station, (2) rebuilding of the existing Adelanto Compressor Station with approximately 30,000 HP of compression, and (3) an additional 31 miles of new pipeline from Whitewater Station to Moreno. After careful consideration, SoCalGas is reducing the scope of the proposed project. SoCalGas is continuing to pursue the first two elements of the project, namely the Adelanto-to-Moreno pipeline and the rebuild of the Adelanto Compressor Station. But SoCalGas will no longer be moving forward with the proposed 31-mile Moreno-to-Whitewater pipeline portion of the project.

As explained in the Updated Testimony of David Bisi, the Moreno-to-Whitewater pipeline portion of the project would only be needed to ensure that no flowing supplies will be required at Blythe even under the demand scenario used by SoCalGas -- a 1-in-10 year cold day demand forecast for core customers along with the connected capacity for existing large noncore and electric generation customers. As explained by Mr. Bisi, if the other two portions of the North-South Project are constructed, SoCalGas would only need 100 MMcf/d of flowing supplies at Blythe under that demand scenario. Moreover, under a more traditional 1-in-10 year cold day

demand forecast for both core and noncore customers, no flowing supplies would be needed at Blythe once the Adelanto-to-Moreno pipeline and the rebuild of the Adelanto Compressor Station are placed into service.

As explained in our Application, SoCalGas and SDG&E are strongly concerned about the reliability needs of Southern System customers, and the potential for future supply-related curtailments on the Southern System. The two remaining portions of the North-South Project – the Adelanto-to-Moreno pipeline and the Adelanto compressor upgrade – will provide that needed supply reliability under all conditions up to the very robust demand scenario – 1-in-10 cold day *plus* all connected capacity for existing large noncore and electric generation customers -- we used to develop our proposal. As a result, SoCalGas and SDG&E are choosing to focus our efforts on these two elements of the project.

By eliminating over $186 million in forecasted expenditures, this scope reduction will substantially reduce the cost of the project while providing Southern System customers with almost all of the proposed benefits of our original proposal.[1] As noted by Mr. Buczkowski, this scope reduction should also simplify environmental review, permitting, and land acquisition, and reduce project risks.

SoCalGas and SDG&E continue to believe that the proposed Moreno-to-Whitewater portion of the project would be a useful reliability improvement. Ideally, SoCalGas and SDG&E would like for SoCalGas to be able to serve Southern System customers without relying on any flowing supplies at Blythe. However, SoCalGas and SDG&E believe that this limited and infrequent cold-day flowing supply requirement can be dealt with, at least in the short-to-medium term, by means other than the Moreno-to-Whitewater pipeline.

[1] As explained by Mr. Buczkowski, the Moreno-to-Whitewater pipeline was originally estimated to cost $186.1 million, and this estimate was provided before SoCalGas refined route and cost inputs, as we have now done for the remaining portions of the project. An updated estimated for the Moreno-to-Whitewater portion of the Project would likely be well above $186.1 million.

SoCalGas and SDG&E will be giving careful consideration to potential ways to deal with 1-in-10 cold day flowing supply requirements at Blythe, but we are not including any such proposals in the current application. Instead, we should be able to satisfy such requirements, at least in the short-and-medium term, through means other than physical system improvements. Any such proposals would have a substantially shorter anticipated lead time than the remaining elements of the North-South Project, and would be presented to the Commission via a separate application or advice filing.

For each of the reasons I have just described, the North-South Project is the best physical response to long-term Southern System reliability needs.

F. SOCALGAS SHOULD CONTINUE TO BE RESPONSIBLE FOR MINIMUM FLOWS ON THE SOUTHERN SYSTEM EVEN AFTER THE NORTH-SOUTH PROJECT IS PUT INTO SERVICE

Even if the North-South Project is constructed and put into service, the System Operator should retain its existing Rule 41 authority to procure minimum flowing supplies for the Southern System. Once the North-South project is in place, SoCalGas does not envision needing to procure flowing supplies for the Southern System on a regular basis. However, emergencies calling for additional flowing supplies could potentially arise (e.g., high burns on the Southern System combined with pipeline outages on the Northern System), and SoCalGas believes it would be prudent for its System Operator to retain authority to procure flowing supplies for the Southern System.

VIII. THE COMMISSION SHOULD EXPEDITIOUSLY AUTHORIZE RATE RECOVERY OF NORTH-SOUTH PROJECT COSTS

As discussed above, using a combination of tools the SoCalGas System Operator has been able to meet Southern System flowing supply needs in all but one instance, and the cost to meet

those needs has been fairly reasonable. This situation is not likely to continue. With Southern System support costs increasing and customer deliveries into the Southern System decreasing, Southern System support costs are bound to increase, and future supply-related curtailments are very likely -- unless we take steps now to develop the necessary physical infrastructure. Because of the long lead time needed to develop a project of this magnitude, we need to act *now* to deal with supply-related risks Southern System customers will face in the future.

The time to deal with Southern System reliability concerns in the next decade and beyond is now, not when supply-related curtailments on the Southern System start to become a regular occurrence. Accordingly, SoCalGas and SDG&E request that the Commission process this application expeditiously.

IX. NO BACKBONE-ONLY RATE PROPOSAL

In the 2013 SoCalGas and SDG&E Triennial Cost Allocation Proceeding (TCAP) currently pending before the Commission (A.11-11-002), SoCalGas, SDG&E, and almost all other active parties have submitted for Commission approval a proposed settlement of certain Phase 2 issues.[28] One of the agreed-upon provisions in this settlement relates to a backbone-only rate proposal by SoCalGas:

> SoCalGas shall withdraw its proposal for backbone-only rates from this proceeding. If SoCalGas chooses to resubmit a proposal for backbone only rates prior to the next TCAP, it will do so in its upcoming application relating to Southern System issues (see Section 6 below). If the Southern System application does not propose a backbone-only rate, the application will address why SoCalGas chose not to re-propose it in the application. Nothing in this Settlement is intended to predetermine the potential

[28] *See Joint Motion of SoCalGas, SDG&E, Division of Ratepayer Advocates, The Utility Reform Network, Southern California Edison Company, Southern California Generation Coalition, Indicated Producers, California Manufacturers and Technology Association, the City of Long Beach, and Southwest Gas Corporation for Adoption of Settlement Agreement for Certain Phase 2 Issues* dated March 27, 2013 (Joint Motion).

availability of a backbone-only rate as a result of the upcoming application.[29]

Consistent with this settlement provision, SoCalGas is addressing the issue of a possible backbone-only rate in this current application.

SoCalGas currently does not have a backbone-only rate, and SoCalGas is not proposing the establishment of a backbone-only rate at this time. During our 2013 TCAP proceeding, it became clear that there are a number of potential issues with such a rate, including whether such a rate would be offered only to incremental load connecting to the SoCalGas and SDG&E integrated backbone transmission system, or whether existing load could switch to such a rate, and, if so, what the potential negative effect on the rates of our other customers would be. Upon due reflection, SoCalGas believes that the potential harm from offering such a rate to existing customer load outweighs the potential benefits that might be achieved by offering such a rate to attract new customer load. Accordingly, SoCalGas is not proposing the establishment of a new backbone-only rate in this proceeding.

X. QUALIFICATIONS

My name is Gwen Marelli. My business address is 555 West Fifth Street, Los Angeles, California 90013. I am employed by SoCalGas as Director of Energy Markets and Capacity Products for SoCalGas and SDG&E.

I received a Masters of Business Administration degree from Pepperdine University's Graziadio School of Business and Management in 1990 and a Bachelor of Science degree in Mechanical Engineering from the University of California, San Diego in 1986. I have been employed by SoCalGas since 1991. I have been in my current position since August of 2014. In my current position, I manage service to the largest gas customers of SoCalGas, specifically large

[29] Attachment A to Joint Motion at p. 4.

electric generators, Enhanced Oil Recovery customers, and wholesale customers. I also manage the unbundled storage program, the California Energy Hub, and the Gas Scheduling Group. I oversee minimum flowing supply purchases and maintenance-related supply purchases, scheduling and nominations on the integrated SoCalGas and SDG&E transmission system, SoCalGas' Electronic Bulletin Board, and SoCalGas and SDG&E's interconnection and operational balancing agreements with suppliers delivering natural gas into our system. I also manage the Gas Transmission Planning Department for both utilities.

Prior to my current position, I was the Directory of Commercial and Industrial Services from 2011 through 2014, Director of Customer Operations from 2010 through 2011, the Director of Customer Services from 2009 through 2010, and the Director of Customer Research, Strategy and Communications from 2006 through 2009. I joined SoCalGas in 1991 as an Energy Sales Engineer and held positions of increasing responsibility until my promotion to Director in 2006. Prior to joining SoCalGas, I held positions in the engineering discipline at Bechtel Western Power Company and McDonnell Douglas Corporation.

This concludes my updated prepared direct testimony.