Application No: A. 11-11-002
Exhibit No.:
Witness: David Bisi

In the Matter of the Application of San Diego Gas & Electric Company (U 902 G) and Southern California Gas Company (U 904 G) for Authority to Revise Their Rates Effective January 1, 2013, in Their Triennial Cost Allocation Proceeding.	A.11-11-002 (Filed November 1, 2011)

SUPPLEMENTAL DIRECT TESTIMONY

OF DAVID BISI

SAN DIEGO GAS & ELECTRIC COMPANY

AND

SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

March 16, 2012

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SUPPLEMENTAL DIRECT TESTIMONY

OF DAVID BISI

I. QUALIFICATIONS

My name is David M. Bisi. I am employed by Southern California Gas Company (SoCalGas) as the Gas Transmission Planning Department Manager. My business address is 555 West Fifth Street, Los Angeles, California, 90013-1011.

I received a Bachelor of Science degree in Mechanical Engineering from the University of California at Irvine in 1989. I have been employed by SoCalGas since 1989, and have held positions within the Engineering, Customer Services, and Gas Transmission departments.

I have held my current position since April, 2002. My current responsibilities include the management of the Gas Transmission Planning Department responsible for the design and planning of SoCalGas' and San Diego Gas & Electric Company's (SDG&E's) gas transmission and storage systems. As such, I am responsible for: ensuring that the transmission system meets the California Public Utilities Commission (Commission)-mandated design standards for core and noncore firm service over a 25 year forecast period; recommending improvements and additions as necessary; monitoring the changing dynamics of the gas transmission system as new load centers develop and new supply receipt points are created; alerting management when operating precautions or changes become necessary; performing short-term capacity analyses for customer service requests from the transmission system; evaluating system impacts from storage expansion projects and new product offerings to customers; and developing staff to maintain continuity and consistency in system planning.

I have previously testified before the Commission.

II. PURPOSE

The purpose of this supplemental direct testimony is to update SoCalGas' and SDG&E's direct testimony in response to the direction provided by Commissioner Florio in his February 24, 2012 Assigned Commissioner's Scoping Memo and Ruling (Scoping Memo).[1] This supplemental testimony is to help respond to questions raised by Indicated Producers related to Issue #3 (Backbone-Only rates for new Backbone Transmission Service Customers). Specifically, my testimony clarifies the definition of backbone and local transmission pipeline used by SoCalGas and SDG&E as presented in the Prepared Direct Testimony of Sim-Cheng Fung, and describes the process SoCalGas' and SDG&E's engineers used to classify our transmission pipelines as backbone or local. I will also compare SoCalGas' and SDG&E's proposed backbone and local transmission system definition to that adopted by the Commission for Pacific Gas and Electric Company (PG&E).

III. SOCALGAS/SDG&E TRANSMISSION SYSTEM

SoCalGas and SDG&E own and operate an integrated gas transmission system consisting of pipeline and storage facilities. With their network of transmission pipelines and four interconnected storage fields, SoCalGas and SDG&E deliver natural gas to over five million residential and business customers.

A map of the SoCalGas transmission system is attached as Figure 1. The transmission system extends from the Colorado River on the eastern end of SoCalGas' approximately 20,000 square mile service territory, to the Pacific Coast on the western end; from Tulare County in the north, to the U.S./Mexico border in the south (excluding parts of San Diego County).

[1] Page 10 of the Scoping Memo identifies seven issues/topic areas where intervenors have requested additional justification and calculations, and directs SoCalGas and SDG&E to update and expand their testimony and workpapers to address the concerns identified in the protests.

The SoCalGas transmission system was initially designed to receive and redeliver gas from the east, to the load centers in the Los Angeles basin, Imperial Valley, San Joaquin Valley, north coastal areas, and San Diego County. As our customers sought to access new supply sources in Canada and the Rocky Mountain region, we modified our system to concurrently accept deliveries from the north. As a result, the system today can accept up to 3,875 million cubic feet per day (MMcfd) of interstate and local California supplies on a firm basis. Primary supply sources are the southwestern United States, the Rocky Mountain region, Canada, and California on- and off-shore production. The interstate pipelines that supply the SoCalGas transmission system are El Paso Natural Gas Company (El Paso), North Baja Pipeline (North Baja), Transwestern Pipeline Company (Transwestern), Kern River Gas Transmission Company (Kern River), Mojave Pipeline Company (Mojave), Questar Southern Trails Pipeline Company (Southern Trails), and Gas Transmission Northwest via PG&E's intrastate system (PG&E/GTN). The SoCalGas transmission system interconnects with El Paso at the Colorado River near Needles and Blythe, California, with North Baja near Blythe, California, and with Transwestern and Southern Trails near Needles, California. SoCalGas also interconnects with the common Kern/Mojave pipeline at Wheeler Ridge in the San Joaquin Valley and at Kramer Junction in the high desert. At Kern River Station in the San Joaquin Valley, SoCalGas maintains a major interconnect with the PG&E intrastate pipeline system, and receives PG&E/GTN deliveries at that location.

SoCalGas operates four storage fields that interconnect with its transmission system. These storage fields -- Aliso Canyon, Honor Rancho, La Goleta, and Playa del Rey -- are located near the primary load centers of the SoCalGas system. Together they have a combined inventory

capacity of 135.1 billion cubic feet (Bcf), a combined firm injection capacity of 850 MMcfd, and a combined firm withdrawal capacity of 3,195 MMcfd.

A schematic of the SDG&E gas transmission system is shown in Figure 2. The SDG&E gas transmission system consists primarily of two high-pressure large diameter pipelines that extend south from Rainbow Station, located at the Riverside/San Diego County border. Both pipelines terminate at the San Diego metropolitan area.

The pipelines are interconnected approximately at their midpoint and again near their southern terminus. The northern cross-tie runs between Carlsbad and Escondido, with the southern cross-tie running through Miramar.

A large diameter pipeline extends from the cross-tie at Miramar to Santee. At Santee, another large diameter pipeline extends to the Otay Mesa metering station at the U.S./Mexico border. At Otay Mesa, the SDG&E system interconnects with the Transportadora de Gas Natural, S.R.L. pipeline, providing another receipt point for supplies into the SoCalGas/SDG&E system.

A small diameter, lower pressure pipeline owned by SoCalGas also extends south from Orange County down to San Diego.

Two compressor stations are also a part of the SDG&E gas transmission system. SDG&E's Moreno compressor station, located in Moreno Valley, boosts pressure into the SoCalGas transmission lines serving Rainbow Station. A much smaller compressor station is located at Rainbow Station.

SDG&E has no storage fields in its service territory.

FIGURE 1

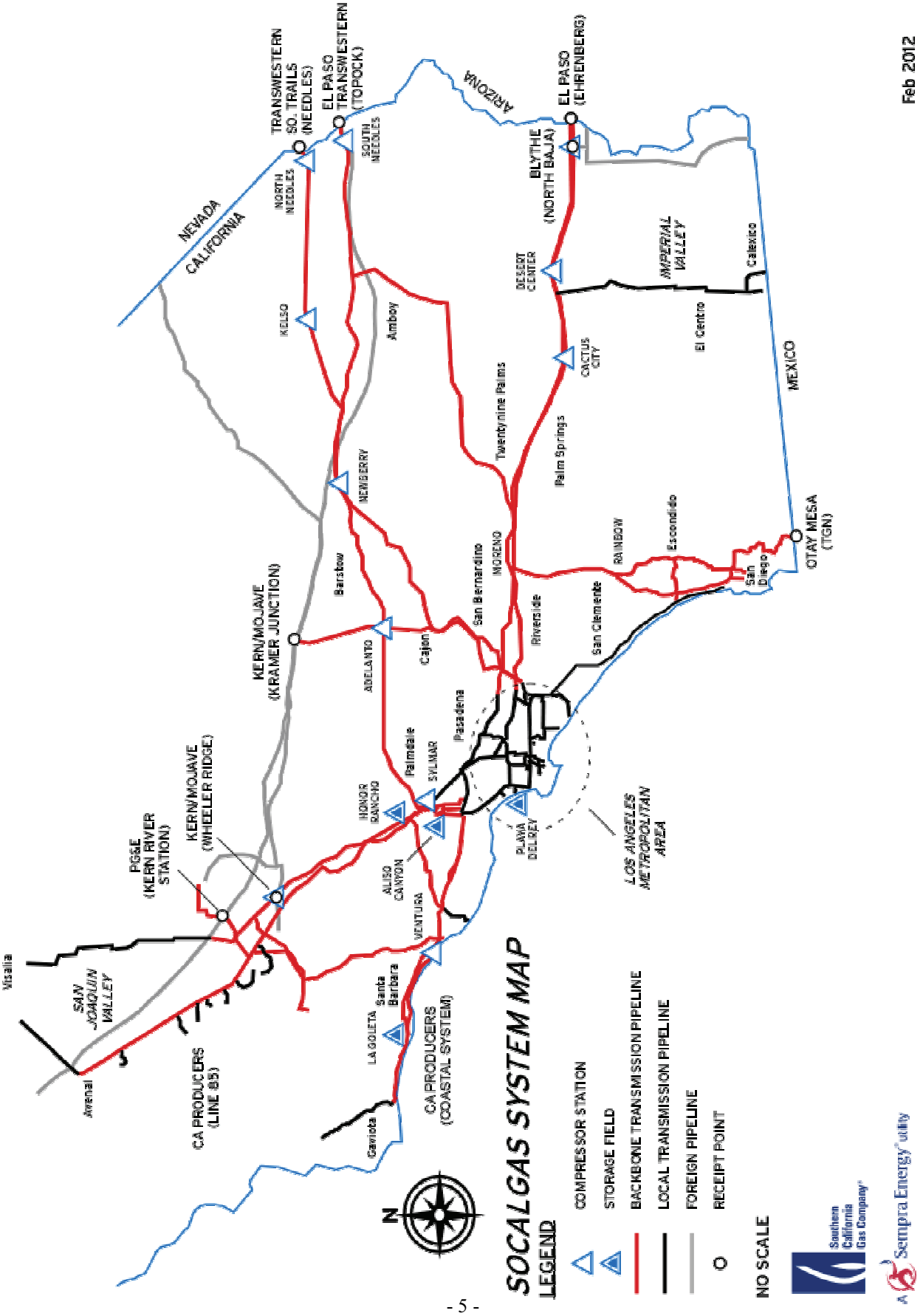
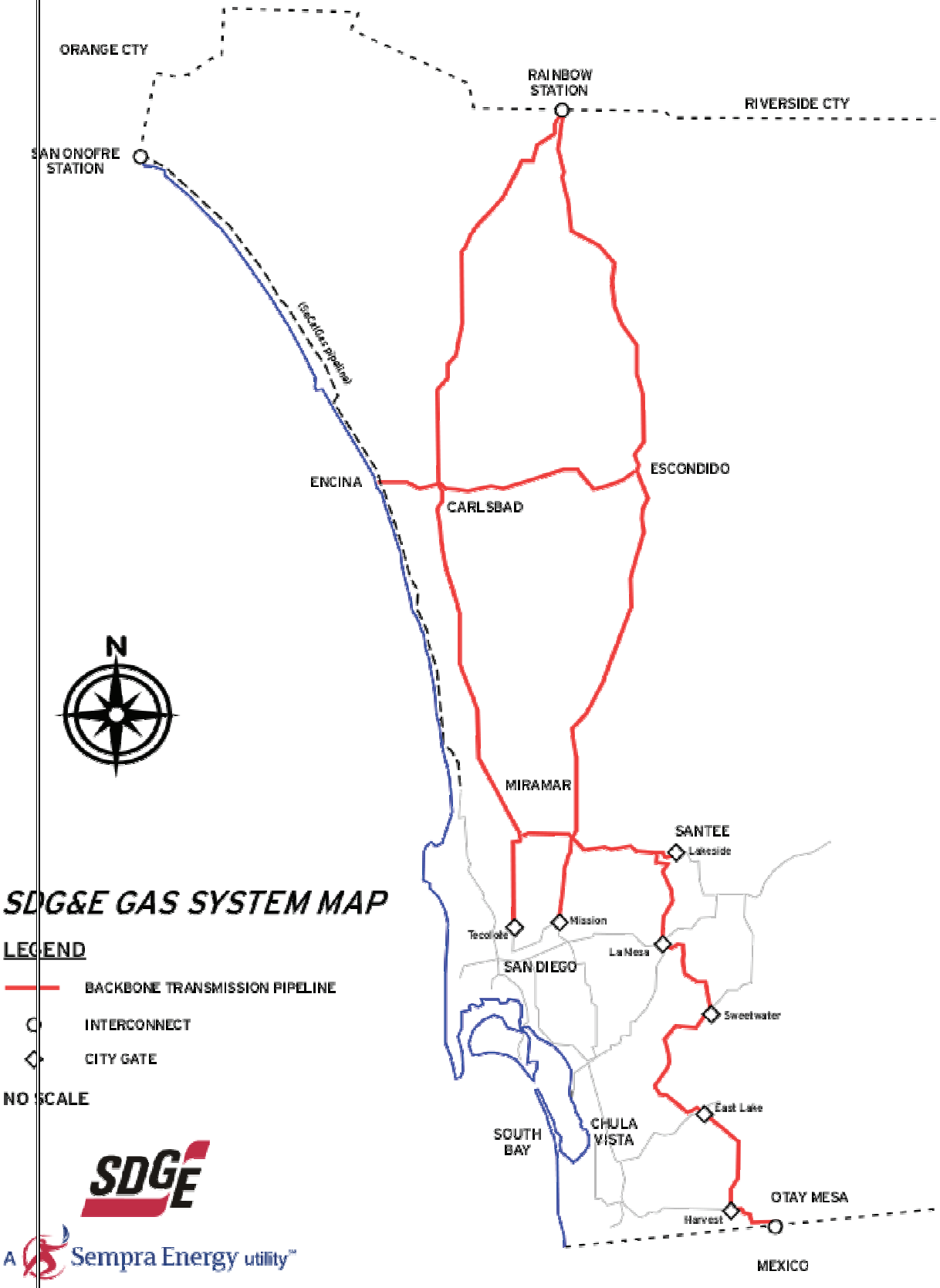

SOCALGAS SYSTEM MAP
LEGEND
COMPRESSOR STATION
STORAGE FIELD
BACKBONE TRANSMISSION PIPELINE
LOCAL TRANSMISSION PIPELINE
FOREIGN PIPELINE
RECEIPT POINT
NO SCALE
N
NEVADA
CALIFORNIA
ARIZONA
MEXICO
TRANSWESTERN SO. TRAILS (NEEDLES)
EL PASO TRANSWESTERN (TOPOCK)
EL PASO (EHRENBERG)
NORTH NEEDLES
SOUTH NEEDLES
BLYTHE (NORTH BAJA)
KELSO
Amboy
DESERT CENTER
IMPERIAL VALLEY
Calexico
El Centro
CACTUS CITY
Palm Springs
Twentynine Palms
NEWBERRY
Barstow
KERN/MOJAVE (KRAMER JUNCTION)
ADELANTO
Cajon
San Bernardino
MORENO
Riverside
San Clemente
RAINBOW
Escondido
San Diego
OTAY MESA (TGN)
PG&E (KERN RIVER STATION)
KERN/MOJAVE (WHEELER RIDGE)
HONOR RANCHO
Palmdale
SYLMAR
Pasadena
ALISO CANYON
VENTURA
PLAYA DEL REY
LOS ANGELES METROPOLITAN AREA
Visalia
SAN JOAQUIN VALLEY
Arvinal
CA PRODUCERS (LINE 85)
LA GOLETA
Santa Barbara
Gaviota
CA PRODUCERS (COASTAL SYSTEM)
Southern California Gas Company
Sempra Energy utility
Feb 2012

FIGURE 2


ORANGE CTY
RAINBOW STATION
RIVERSIDE CTY
SAN ONOFRE STATION
(SoCalGas Pipeline)
ENCINA
ESCONDIDO
CARLSBAD
N
MIRAMAR
SANTEE
Lakeside
Mission
Tecolote
La Mesa
SAN DIEGO
Sweetwater
East Lake
SOUTH BAY
CHULA VISTA
OTAY MESA
Harvest
MEXICO
SDG&E GAS SYSTEM MAP
LEGEND
BACKBONE TRANSMISSION PIPELINE
INTERCONNECT
CITY GATE
NO SCALE
SDGE
A Sempra Energy utility™
Feb 2012

IV. METHODOLOGY USED TO CLASSIFY BACKBONE AND LOCAL PIPELINES

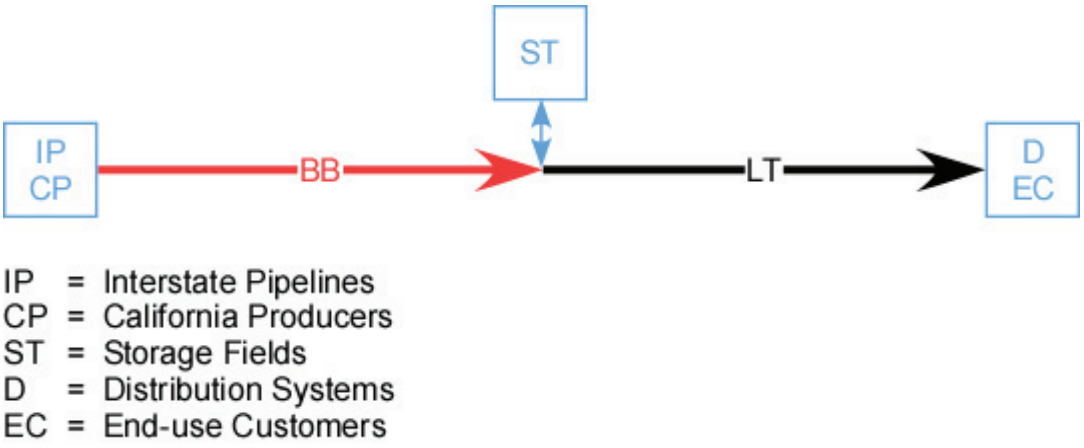
Figures 1 and 2 also show which parts of the SoCalGas/SDG&E transmission system are considered "backbone" and "local" transmission. As described in Ms. Fung's testimony and further explained in our response to the Indicated Producers' 1st Data Request in this proceeding, SoCalGas and SDG&E rely on functional definitions to classify the pipeline in their transmission system. These functional definitions are:

Backbone transmission: pipelines which receive gas supply from interstate pipelines and local California producers, and redeliver that supply to the local transmission system and storage.

Local transmission: pipelines which receive gas supply from the backbone transmission system or storage, and redeliver that supply to the distribution system and end-use customers.

Figure 3 below illustrates these definitions:

FIGURE 3



In Figure 3, gas supply is received from interstate pipelines and California producers, and transported across the backbone transmission pipeline system to our storage fields and the local

transmission pipeline system. From there, supplies are transported across the local transmission pipeline system to the distribution systems and end-use customers. The function of transporting supplies from interstate pipelines and California producers to the local transmission system is what defines a pipeline as a backbone transmission pipeline. Similarly, the function of transporting supplies from the backbone transmission system to distribution and end-use customers is what defines a pipeline as a local transmission pipeline. No other criteria -- such as diameter, pressure, length, or number of customers served -- figure into the classification of a pipeline as backbone or local transmission.

To determine the primary function of a particular pipeline, SoCalGas and SDG&E's engineers -- the same engineers responsible for the long-term plan and design of the transmission system -- examined every pipeline in the transmission plant account for both utilities, and used their knowledge of the design, operation, and flow on the SoCalGas and SDG&E system to classify each pipeline. The backbone and local transmission pipelines are listed in Appendix D of Ms. Fung's direct testimony.[2] Some pipelines, such as Line 324 and Line 2001, are listed both as backbone and local transmission pipeline. This is because the pipeline changes primary function from transporting supply from receipt points to redelivering supply to distribution systems at some point along the pipeline, such as by joining a highly interconnected network of pipelines or branching off from the backbone system as a single-feed pipeline to a geographic area. Again, the point where the function changes was determined by SoCalGas and SDG&E engineers using their knowledge of the transmission system.

These functional definitions and methodology were first used by SoCalGas and SDG&E in the Comprehensive Settlement Agreement (CSA) of the Gas Industry Restructuring (GIR)

[2] As Ms. Fung states in her testimony, all of the pipeline in SDG&E's transmission plant perform the backbone transmission function.

proceeding (I.99-07-003). Although never implemented, the CSA was approved by the Commission in D.01-12-018, and Indicated Producers were a signatory to the CSA. Appendix A to the CSA (which is attached to this testimony as Attachment 1) identifies SoCalGas' backbone transmission facilities when the CSA was executed. When compared with Appendix D from Ms. Fung's direct testimony, it is easily seen that the pipelines classified as backbone and local transmission have changed very little since the CSA.

Finally, every pipeline that SoCalGas and SDG&E have identified as a backbone transmission pipeline does not need to interconnect directly with an interstate pipeline. As shown in Figure 1, SoCalGas and SDG&E have only eight receipt points but more than 80 backbone transmission pipelines per Appendix D of Ms. Fung's direct testimony. However, every backbone pipeline forms part of a contiguous pipeline network which ultimately interconnects all eight of the receipt points, as is also shown in Figure 1.

V. COMPARISON WITH PG&E

PG&E's Gas Rule No. 1 defines backbone and local transmission pipelines:

> **BACKBONE TRANSMISSION SYSTEM:** *The system used to transport gas from PG&E's interconnection with interstate pipelines, other local distribution companies, and the California gas fields to PG&E's local transmission and distribution system.* The Backbone Transmission System is comprised of Lines 401, Line 400, Line 300, Line 303, Line 319, Line 107, Line 2, Line 131 from the Antioch Terminal to the Milpitas Terminal, and Line 114 from the Antioch Terminal to the Livermore Junction, including all associated

compressors, control stations (terminals), metering, valves, individual line taps, cross-ties and other minor facilities.

LOCAL TRANSMISSION SYSTEM: *The term Local Transmission System includes the pipeline used to accept gas from the Backbone Transmission System, and transport it to the Distribution System.* For PG&E, the Local Transmission System consists of all numbered (i.e., named) pipelines that are not considered part of the Backbone Transmission System, and Distribution Feeder Mains (DFMs), with a maximum operating pressure of greater than 60 (sixty) pounds per square inch.[3]

As can be seen, the functional definitions PG&E uses for its backbone and local transmission system are similar to the definitions used by SoCalGas and SDG&E, and have been used by PG&E since approval of their first Gas Accord in D.97-08-055. Clearly, the concept of these functional definitions cannot be considered "new" in this application, and by now should not be confusing to other parties.

A map of the PG&E backbone and local transmission system is shown in Figure 4. As can be seen, the PG&E system has many of the same characteristics as the SoCalGas and SDG&E systems shown in Figures 1 and 2. Receipt points are connected with the backbone transmission pipelines, and local transmission pipelines are concentrated in and around the load centers of northern California – just as SoCalGas' are concentrated around the Los Angeles Basin.

[3] PG&E Gas Rule No. 1 (emphasis added).

FIGURE 4

(source: PG&E Pipe Ranger)

This concludes my supplemental direct testimony.

ATTACHMENT 1

Appendix A to Comprehensive Gas OII Settlement Agreement for Southern California Gas Company and San Diego Gas & Electric Company dated April 17, 2000, I.99-07-003

APPENDIX A

IDENTIFICATION AND MAP OF SOCALGAS BACKBONE TRANSMISSION FACILITIES

FOR GIR SETTLEMENT ONLY

Southern California Gas Company

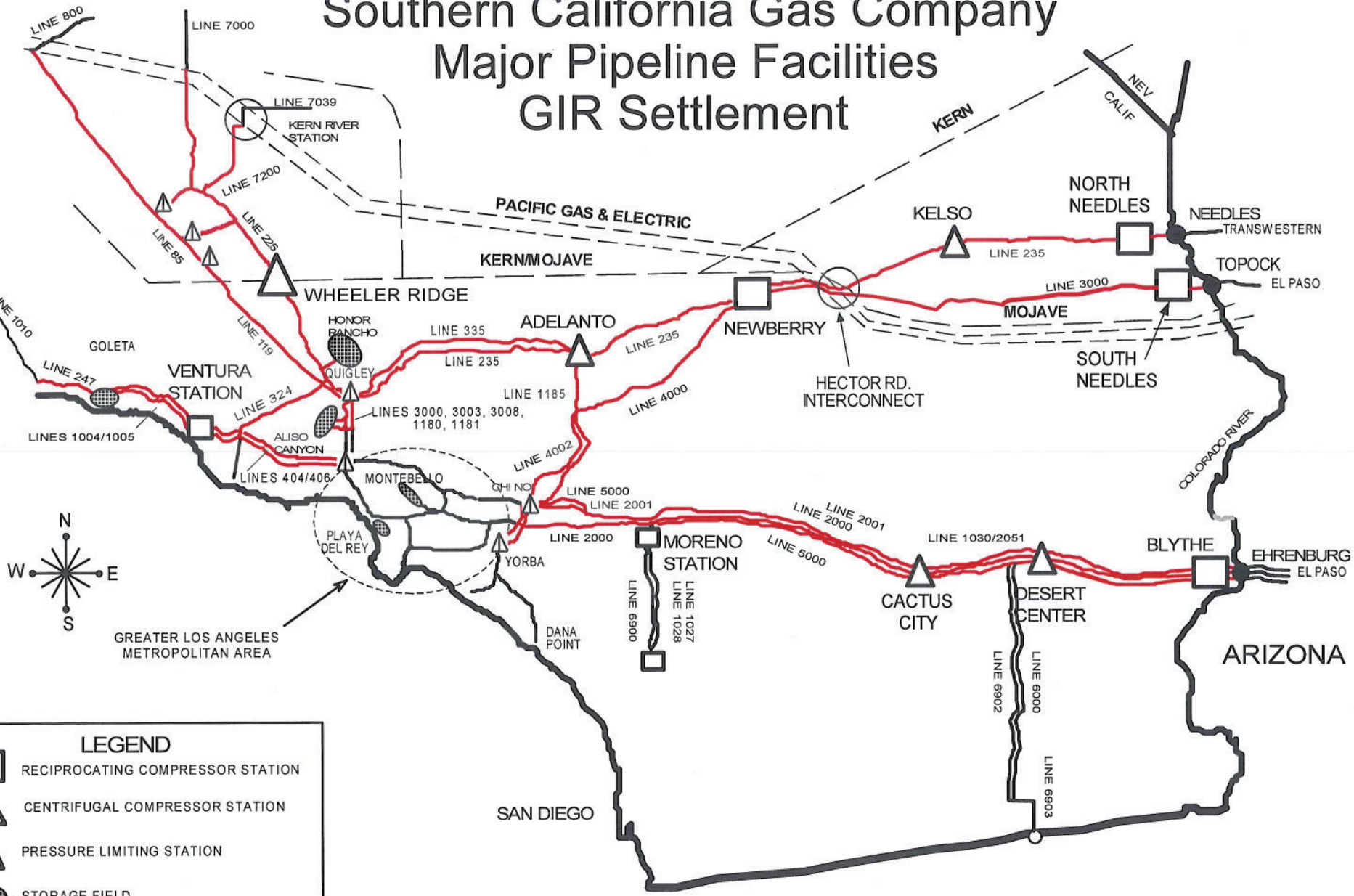
BACKBONE TRANSMISSION SYSTEM

Compressor Stations - All Backbone		
Adelanto	Kelso	South Needles
Blythe	Newberry	Ventura
Cactus City	North Needles	Wheeler Ridge
Desert Center		

Backbone Pipelines	
53	1185
80.90	1186
85	1187
90	1190
103	1201
119	1215
169	1216
173	1221
203	2000
225	2001
235	2005
245	2051
247	3000
293	3003
294	3006
300	3008
303	3009
309	4000
321	4002
324	5000
335	5010
404	5012
406	5015
963	5034
1004	5036
1005	5041
1030	5043
1031	7053
1134	7200
1180	8100
1181	8109

Local Pipelines			
12	1021	1220	7044
104	1022	1230	7049
115	1023	1231	7051
133	1024	2000	7052
145	1025	2001	7054
214	1026	2002	7055
222	1027	2003	7056
324	1028	2006	7058
325	1029	2007	7059
404	1129	2008	7067
406	1132	3000	8032
407	1150	3001	8038
408	1159	3002	8045
512	1167	3003	
765	1170	3004	
767	1171	3005	
775	1172	3007	
800	1173	5001	
965	1174	5002	
967	1175	6000	
1003	1176	6001	
1010	1192	6900	
1011	1200	6901	
1013	1202	6902	
1014	1203	6903	
1015	1205	7000	
1016	1207	7025	
1017	1209	7038	
1018	1211	7039	
1019	1218	7042	
1020	1219	7043	

Southern California Gas Company
Major Pipeline Facilities
GIR Settlement



LEGEND

- RECIPROCATING COMPRESSOR STATION
- CENTRIFUGAL COMPRESSOR STATION
- PRESSURE LIMITING STATION
- STORAGE FIELD
- LOCAL TRANSMISSION
- TRANSMISSION BACKBONE

4/00

NOT TO SCALE