

Application No: A.18-11-XXX  
Exhibit No: \_\_\_\_\_  
Witness: H. Mejia

Application of Southern California Gas  
Company (U 904 G) and San Diego Gas &  
Electric Company (U 902 G) for Review of  
Costs Incurred in Executing Pipeline Safety  
Enhancement Plan

Application A.18-11-XXX

**CHAPTER IV**  
**DIRECT TESTIMONY OF HUGO MEJIA**  
**(VALVE ENHANCEMENT PLAN)**  
**ON BEHALF OF**  
**SOUTHERN CALIFORNIA GAS COMPANY**  
**AND**  
**SAN DIEGO GAS & ELECTRIC COMPANY**  
**BEFORE THE PUBLIC UTILITIES COMMISSION**  
**OF THE STATE OF CALIFORNIA**

November 13, 2018

**TABLE OF CONTENTS**

	<b><u>PAGE</u></b>
I. PURPOSE AND OVERVIEW OF TESTIMONY.....	1
II. OVERVIEW OF THE VALVE ENHANCEMENT PLAN.....	1
III. VALVE PROJECT EXECUTION PROCESS.....	3
IV. CHANGES IN DESIGN SCOPE AND CONSTRUCTION.....	4
V. COMPLETED VALVE PROJECTS.....	5
VI. CONSTRUCTION CONTRACTORS.....	6
VII. CONCLUSION.....	7
VIII. WITNESS QUALIFICATIONS.....	8

1 **I. PURPOSE AND OVERVIEW OF TESTIMONY**

2 The purpose of my testimony is to provide an overview of Southern California Gas  
3 Company (SoCalGas) and San Diego Gas & Electric Company's (SDG&E) Valve Enhancement  
4 Plan (Valve Plan), to demonstrate SoCalGas and SDG&E's prudent management and execution  
5 of the completed valve projects presented for review in this Application, and the reasonableness  
6 of approximately \$137.1 million in capital expenditures for the 39 valve projects included for  
7 review in this Application.

8 **II. OVERVIEW OF THE VALVE ENHANCEMENT PLAN**

9 SoCalGas and SDG&E's Valve Enhancement Plan was prepared in response to the  
10 Commission's directive to address retrofiting pipelines to install automated or remote controlled  
11 shut-off valves, where appropriate.<sup>1</sup> The Valve Enhancement Plan enhances the safety of  
12 SoCalGas and SDG&E's gas transmission system by installing new automated valves and  
13 upgrading existing valve infrastructure to enable the rapid detection of a significant change in  
14 pipeline pressure and remote isolation and depressurization of a transmission pipeline in the  
15 event of a pipeline rupture.<sup>2</sup>

16 The Valve Enhancement Plan enhances public safety by reducing the time required to  
17 detect a drop in pipeline pressure and isolate a pipeline segment in the event of a rupture or other  
18 unplanned gas release. This reduces the time the public and first responders could encounter a  
19 large volume of natural gas exiting a ruptured pipeline. The automation and/or remote control<sup>3</sup>

---

<sup>1</sup> D.11-06-017 at 21.

<sup>2</sup> In Rulemaking (R.) 11-02-019, SoCalGas and SDG&E proposed to enhance their pipeline valve infrastructure to support the automatic and remote isolation and depressurization of specific sections of their transmission pipeline system in 30 minutes or less.

<sup>3</sup> A remote control valve (RCV) is a valve equipped with electric or gas powered actuators to operate (open or close) the valve based on an order (signal) from a remote location, such as a gas control room.

1 of large transmission valves provides the ability to isolate and manage multiple pipeline sections  
2 simultaneously in the event of a wide-scale natural disaster or complex terrorist/sabotage event,  
3 or any other situation where a mobile workforce may be limited in executing timely valve  
4 operation.

5 To accomplish the foregoing, the Valve Enhancement Plan focuses on the installation of  
6 valves to isolate transmission pipelines routed in Class 3 and 4 and High Consequence Area  
7 (HCA)<sup>4</sup> locations with the following characteristics:

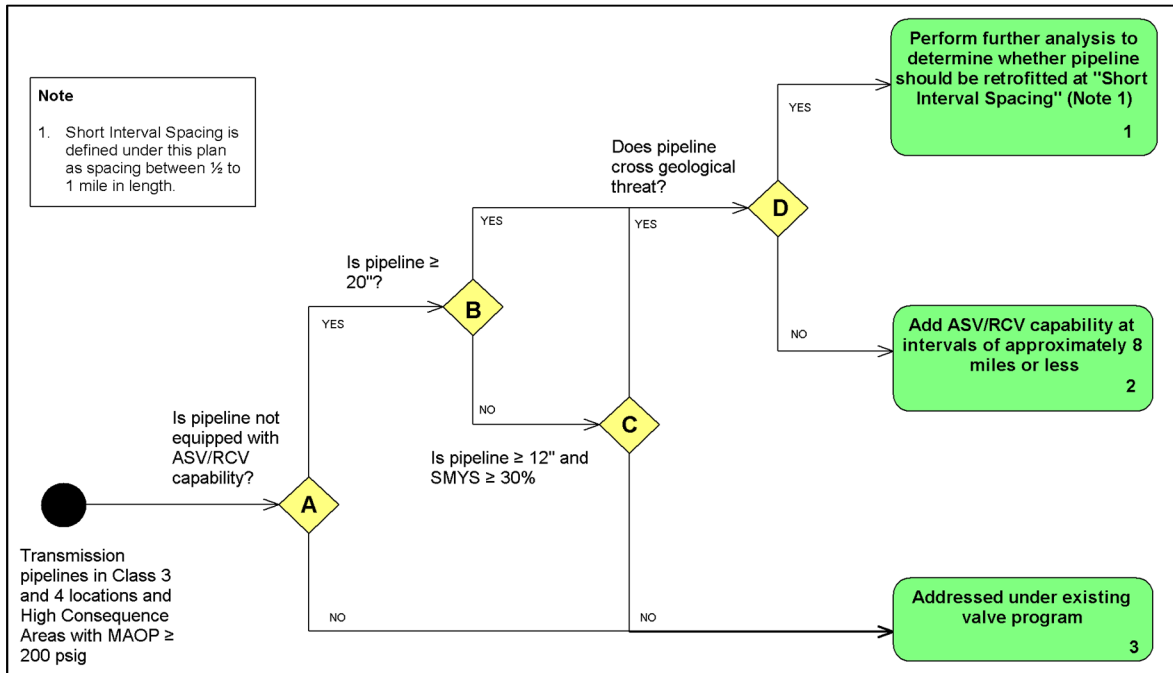
- 8 • 12 inches or greater in diameter, operating at a Maximum Allowable Operating  
9 Pressure (MAOP) that produces pipeline stresses in excess of 30% of Specified  
10 Minimum Yield Stress (SMYS); or
- 11 • 20 inches or greater in diameter, operating at an MAOP that produces pipeline  
12 stresses in excess of 20% of SMYS.

13 Additional valves are installed on pipelines that are 12 inches or greater in diameter and  
14 are subject to identified geologic risks, including pipelines traversing active earthquake faults  
15 where engineering analysis suggests reduced valve spacing intervals could provide added system  
16 reliability and/or enhances public safety. The Valve Enhancement Plan evaluation process and  
17 scope are illustrated in Figure 1:  
18

---

<sup>4</sup> High consequence area is defined as a location that is specially defined in pipeline safety regulations as an area where pipeline releases could have greater consequences to health and safety or the environment. Regulations require a pipeline operator to take specific steps to ensure the integrity of a pipeline for which a release could affect an HCA and, thereby, the protection of the HCA.

1 **Figure 1: Evaluation Process for Transmission Pipeline Valve Safety Optimization<sup>5</sup>**



2

3 **III. VALVE PROJECT EXECUTION PROCESS**

4 The valve project execution process is similar to that of PSEP pipeline projects. PSEP

5 pipeline projects follow the Stage Gate Review Process discussed in Chapter II (Phillips). For

6 valves, a modified Stage Gate Review Process is utilized. For both types of projects, the Stage

7 Gate Review Process provides project execution consistency and gives PSEP management a

8 structured approach to review and approve projects at strategic points during the project life

9 cycle. The Stage Gate Review Process for valve projects is outlined below.

10 **Stages 1 and 2: Project initiation and initial site visit for assessment - SoCalGas and**

11 **SDG&E verify proposed valve modifications, installations, and/or design changes based**

12 **on field conditions.**

<sup>5</sup> A.11-11-002/R.11-02-019 Amended Testimony of SoCalGas/SDG&E at 80 and Amended Pipeline Safety Enhancement Plan at 26.

1       **Stage 3: Preliminary planning and estimate development** - Preliminary design efforts  
2       are conducted and a Stage 3 cost estimate is developed.

3       **Stage 4: Detailed design and procurement** - Detailed drawings are developed, the  
4       material procurement process is initiated, and permits to commence construction work  
5       are acquired.

6       **Stage 5: Construction, contractor selection** - Construction activities are initiated to  
7       complete the project; this includes coordination with Gas Operations to coordinate any  
8       required shut-in and tie-in activities.

9       **Stage 6: Commissioning** – Valve project teams conduct a commissioning process that  
10      includes a Site Acceptance Test. The Site Acceptance Test is necessary to obtain  
11      agreement from Gas Operations that the valve project is complete before turnover.

12      **Stage 7: Closeout** - Project documentation is completed. This includes completion  
13      drawings and material reconciliation for final records.

#### 14   **IV.    CHANGES IN DESIGN SCOPE AND CONSTRUCTION**

15           The workpapers supporting this Application outline the activities that occur in Stages 1,  
16   2, 3, and 4 under the section entitled Engineering, Design, and Planning. Since a key deliverable  
17   in Stage 3 is a preliminary project estimate, SoCalGas and SDG&E note in the workpapers if a  
18   design scope change occurred after Stage 3. The same approach is used to describe changes that  
19   occurred during construction, but after the construction contracts were awarded. This is to help  
20   facilitate the Commission’s review of project costs for reasonableness.

21           Additionally, the workpapers outline the cost for each valve project. Valve projects are  
22   typically capital projects; however, some valve projects may have an O&M cost component.

**V. COMPLETED VALVE PROJECTS**

In an effort to improve project efficiency and maximize the cost effectiveness of Valve Enhancement Plan safety investments, where practicable, SoCalGas and SDG&E group individual valve projects into “bundles.” The bundling of valve projects allows for the management of several valve enhancement projects that are close in proximity as a single larger project. This promotes efficient management and coordination of design and construction activities for valve enhancement projects. The 39 bundled valve projects presented for review in this Application reflect work completed at 104 individual valve project sites.

**Table 1 –Individual and Bundled Valve Projects - Scope and Costs (in \$000s)**

Bundled Valve Project	Scope	Total Costs
Alhambra Station Valve Enhancement Project	2 Valves/ 1 FM <sup>6</sup>	\$3,588
Aviation & Boardwalk Valve Enhancement Project	2 Valves	\$7,397
Banning 5000 Valve Enhancement Project Bundle	2 Valves	\$2,410
El Segundo Valve Enhancement Project	2 Valves	\$7,488
Haynes Station Valve Enhancement Project	3 Valves	\$1,750
Honor Ranch Valve Enhancement Project Bundle	4 Valves	\$1,486
Indio Valve Enhancement Project Bundle	4 Valves	\$2,858
Lampson Valve Enhancement Project Bundle	4 Valves	\$9,632
Line 1005 Santa Barbara Valve Enhancement Project	1 Valve	\$516
Line 1014 Brea Valve Enhancement Project Bundle	4 Valves/2 CV <sup>7</sup>	\$7,297
Line 1018 Dana Point Valve Enhancement Project	1 Valve	\$734
Line 1020 Valve Enhancement Project	1 Valve	\$1,664
Line 1600 Valve Enhancement Project Bundle	16 Valves/2 FM	\$707
Line 2000 Beaumont Riverside Valve Enhancement Project Bundle	3 Valves	\$2,786
Line 2001 Riverside Valve Enhancement Project Bundle	3 Valves/2 CV	\$2,479
Line 2001 West Section 10 and 11 Valve Enhancement Project	1 Valve	\$1,545
Line 2003 East Valve Enhancement Project Bundle	5 Valves/2 CV	\$4,436
Line 2003 West Valve Enhancement Project Bundle	2 Valves/4 CV	\$3,930
Line 225 Valve Enhancement Project Bundle	2 Valves/1 CV	\$2,575
Line 235-335 East Valve Enhancement Project Bundle	7 Valves	\$3,894
Line 3010 Valve Enhancement Project Bundle	9 Valves	\$276
Line 3600 Valve Enhancement Project Bundle	12 Valves	\$5,295

<sup>6</sup> FM refers to flow meter.

<sup>7</sup> CV refers to check valve.

<b>Bundled Valve Project</b>	<b>Scope</b>	<b>Total Costs</b>
Line 4000 Benson and 7th Valve Project	1 Valve	\$1,612
Line 4000 MP 45.36 Valve Enhancement Project	1 Valve	\$1,257
Line 4000 MP 53.00 Valve Enhancement Project	1 Valve/ 2 CV	\$1,370
Line 4000 MP 80.08 Valve Enhancement Project	1 Valve/ 2 CV	\$1,245
Line 4002 Fontana Valve Enhancement Project	1 Valve	\$1,259
Line 404 Ventura Valve Project Bundle	4 Valves	\$4,646
Line 404-406 Ventura 2016 Valve Enhancement Project Bundle	3 Valves	\$974
Line 406 Ventura Valve Enhancement Project Bundle	5 Valves	\$3,902
Line 49-28 Valve Enhancement Project	1 Valve	\$1,658
Line 6916 Valve Enhancement Project Bundle	3 Valves	\$2,788
Line 7000 Valve Enhancement Project Bundle	2 Valves	\$1,843
New Desert Valve Enhancement Project Bundle	7 Valves	\$10,529
Newhall Valve Enhancement Project Bundle	7 Valves	\$15,886
Orange Valve Enhancement Project Bundle	3 Valves	\$5,326
Questar Taps Valve Enhancement Project	6 Valves	\$1,768
Rainbow Valve Enhancement Project Bundle	10 Valves	\$5,207
Sepulveda Station Valve Enhancement Project	1 Valve/ 1 FM	\$1,038
<b>Total</b>	<b>147 Valves</b>	<b>\$137,051</b>

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13

**VI. CONSTRUCTION CONTRACTORS**

The majority of the valve projects presented for review in this Application utilized both mechanical and electrical contractors for construction. Generally, the valve projects’ mechanical work is included in the overall bid process for Performance Partnership Program activities within a certain region. Mechanical contractor work for projects with construction start dates after implementation of the Performance Partnership Program were assigned to the specific Performance Partner selected for the region.

The selection of electrical contractors to perform work relating to controls, wiring, communication, and electrical construction activities is also required to execute a valve automation project. SoCalGas and SDG&E solicited competitive bids on rates from seven qualified electrical contractors across four geographic regions, and selected three of these contractors to be the “Alliance” contractors for electrical construction activities on PSEP valve



1 projects. Alliance Contractors are assigned projects based on workload and geographic  
2 considerations. Similar to the Performance Partnership Program concept, utilization of Alliance  
3 Contractors enables SoCalGas and SDG&E to work with dedicated construction crews assigned  
4 to PSEP valve projects to facilitate workflow management and achieve knowledge efficiencies.

## 5 **VII. CONCLUSION**

6 My testimony describes the valve enhancement projects and related costs that are  
7 presented for review in this Application. These costs were incurred to accomplish the  
8 Commission's and SoCalGas and SDG&E's safety enhancement objectives. Additional project-  
9 specific detail and supporting information documenting the reasonableness of the costs incurred  
10 are contained in the workpapers supporting this Application and demonstrate prudent project  
11 execution and the reasonableness of incurred costs. SoCalGas and SDG&E request the  
12 Commission find that the valve projects were managed and executed prudently, find the  
13 associated costs reasonable, and approve related rate recovery.

14 This concludes my prepared Direct Testimony.

1 **VIII. WITNESS QUALIFICATIONS**

2 My name is Hugo Mejia. I have been employed by Southern California Gas Company  
3 since 1990. I have held various positions at SoCalGas in the Engineering, Environmental,  
4 Transmission, Storage, and PSEP organizations. These roles included working as the  
5 Engineering Analysis Center Manager, Environmental Services Manager, Gas Transmission  
6 Technical Services Manager, Senior Engineer in Storage Operations and PSEP Project and  
7 Execution Manager.

8 I am currently employed as the Manager in Major Programs, Regulatory Compliance, and  
9 Controls. My principal responsibility is managing close-out activities for all PSEP projects and  
10 Phase 2 Implementation.

11 I received a Bachelor's Degree in Engineering from California State University,  
12 Northridge and I am a Registered Mechanical Engineer in the State of California.

13 I have previously testified before the Commission.