Company: Southern California Gas Company (U 904 G)
Proceeding: 2019 General Rate Case
Application: A.17-10-008
Exhibit: SCG-23-R

REVISED

SOCALGAS

DIRECT TESTIMONY OF CARMEN L. HERRERA

FLEET SERVICES & FACILITY OPERATIONS

December 2017

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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LIST OF ACRONYMS

SUMMARY

O&M	2016 ($000)	2019 ($000)	Change
Non-Shared	**57,124**	**90,751**	**33,627**
Shared	**5,736**	**6,345**	**609**
Total	**62,860**	**97,096**	**34,236**

Capital	2017 ($000)	2018 ($000)	2019 ($000)
	42,416	**73,569**	**82,372**

Summary of Requests

- Southern California Gas Company's (SoCalGas or the Company) total Test Year (TY) 2019 estimated Operations and Maintenance (O&M) expenses for Fleet Services and Facility Operations, including non-shared and shared services, is $97.096 million. The TY 2019 request includes $75.006 million for Fleet Services operations, and $22.090 million for Facility Operations
    - Fleet Services' O&M request of $75.006 million, an increase from base year of $30.816 million, is driven primarily by costs to: (1) replace standard vehicles; (2) purchase Alternative Fuel Vehicles (AFV) consistent with the Energy Policy Act (EPAct);[1] (3) replace diesel units to comply with the California Air Resources Board (CARB) Truck and Bus Regulations;[2] and 4) purchase additional vehicles needed to support gas distribution, engineering, transmission and storage, and customer services field.
    - Facility operations' request of $22.090 million, an increase from base year of $3.420 million is driven primarily by: (1) strategic space planning requirements; and (2) training of facility maintenance personnel.
- SoCalGas forecasts capital costs of $42.416 million, $73.569 million, and $82.372 million for 2017, 2018, and 2019, respectively. These capital cost projections are for (1) infrastructure & other asset improvements

[1] U.S. Dep't of Energy, Alternate Fuel Transportation Program, 10 C.F.R. pt. 90 (2007), https://epact.energy.gov/pdfs/alt_compliance_rule.pdf.
[2] California Air Resources Board, Statewide Truck and Bus Regulations, (Dec. 11, 2008), https://www.arb.ca.gov/regact/2008/truckbus08/truckbus08.htm.

(including RAMP costs to improve physical security; (2) safety & environmental costs; (3) construction of the new Bakersfield multi-use facility; (4) energy management systems; (5) fleet projects; and (6) adding and refurbishing Natural Gas Vehicle (NGV) Refueling Stations to advance the Company's fleet greening initiative.

REVISED SOCALGAS DIRECT TESTIMONY OF CARMEN L. HERRERA
FLEET SERVICES AND FACILITY OPERATIONS

I. INTRODUCTION

A. Summary of Support Services Costs and Activities

In this testimony, I sponsor SoCalGas' Fleet Services and Facility Operations non-shared and shared services estimated O&M expenses for TY 2019 O&M costs are organized by non-shared and shared services. For TY 2019 non-shared services, Fleet Services and Facility Operations requests $90.751 million in O&M expense, an increase of $33.627 million above 2016 adjusted-recorded costs. For TY 2019, shared Fleet Services requests $2.500 million, an increase of $264,000 from 2016 adjusted recorded costs; and, shared Facility Operations requests $3.845 million, an increase of $345,000 from 2016 adjusted-recorded costs.

I also sponsor the Facility Operations capital request. For TY 2019, the Facility Operations capital request is $42.416 million in 2017, $73.569 million in 2018, and $82.372 million in 2019. Table CLH-1 below summarizes my sponsored costs.

TABLE CLH-1
Southern California Gas Company
Test Year 2019 Summary of Total Costs

Non-Shared Services	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
A. Ownership Costs	20,342	45,561	25,219
B. Maintenance Operations	21,110	25,845	4,735
C. Fleet Management	502	1,100	598
D. Facility Operations	15,170	18,245	3,075
Total Non-Shared Services	**57,124**	**90,751**	**33,627**

Shared Services	2016 Adjusted-Recorded	TY2019 Estimated	Change (000s)
A. Shared Fleet Management	2,236	2,500	264
B. Shared Facility Operations	3,500	3,845	345
Total Shared Services (Incurred)	**5,736**	**6,345**	**609**

Capital	2016 Adjusted-Recorded	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
A. Infrastructure & Improvements	24,066	24,243	45,863	59,923
B. Safety & Environmental	268	2,450	2,075	2,000
C. Bakersfield Multi-Use Facility	0	7,000	7,000	0
D. Facility Energy Management Systems	0	1,000	500	0
E. Fleet Projects	40	548	2,194	1,650
F. NGV Refueling Stations	5,663	7,175	15,937	18,799
Total	**30,037**	**42,416**	**73,569**	**82,372**

1. Fleet Services

Fleet Services acquires, maintains, repairs, and salvages vehicles and related equipment to support the delivery of energy to 21.6 million consumers through 5.9 million gas meters in more than 500 communities. Fleet Services manages a mix of vehicles consisting of over-the-road (OTR) vehicles such as automobiles; light, medium, and heavy duty trucks; and non-over-the-road (Non-OTR) vehicles such as power operated equipment, including trailers and forklifts. Fleet Services provides daily critical support to the gas distribution and transmission operating crews, advanced meter operations, customer services field operations, and the Company's capital construction program. The intent of this section of my testimony is to describe the key activities performed by the Fleet Services organization and to provide context for Fleet Services' general rate case (GRC) request.

The key activities of Fleet Services include the following:

a) Provide the necessary quantity, type, and configuration of vehicles and equipment required daily by gas operations to meet new business demands, respond to gas service outages and service requests, support infrastructure replacement, and conduct the corrective maintenance programs central to maintaining reliable service.

b) Maintain vehicles and equipment to reliably meet daily availability requirements for operations to provide swift response to any issues with the gas infrastructure as well as new business demands. This requires that vehicles be available for use 24 hours a day, 7 days a week.

c) Manage the vehicle and equipment asset portfolio through the design, acquisition, financing, and replacement of vehicles.

d) Implement standardization of fleet equipment and technological changes in vehicles to effectively manage acquisition costs and maintenance costs.

e) Provide specialized equipment and manage fuel acquisition and maintenance operations.

f) Implement Fleet Services' systems and processes to minimize the costs and optimize operations.

g) Comply with federal, state and local laws pertaining to air quality, waste, hazardous materials, natural resources, safety, and alternative-fuel vehicles. The following laws particularly impact Fleet Services:

- EPAct requirements regarding the federally mandated procurement of alternative-fuel vehicles. As an Alternative Fuel Provider fleet, 90% of the SoCalGas' annual light duty vehicle purchases are required under the EPAct to be approved alternative-fuel vehicles.[3] To achieve the 90% annual requirement, SoCalGas plans to continue buying alternative-fuel vehicles that are sold at a premium. If SoCalGas cannot achieve the 90% annual requirement, SoCalGas may need to purchase EPAct credits.
- Evolving California Air Resources Board (CARB) regulations requiring the reduction of diesel emissions by replacing diesel vehicles and off-road equipment necessitates that SoCalGas replace a large number of vehicles over the next couple of years.[4]
- Evolving California Highway Patrol (CHP) mandated training and other

[3] U.S. Dep't of Energy, Alternate Fuel Transportation Program, 10 C.F.R. pt. 90 (2007), https://epact.energy.gov/pdfs/alt_compliance_rule.pdf.

[4] California Air Resources Board, Airborne Toxic Control Measures, https://www.arb.ca.gov/toxics/atcm/atcm.htm.

regulations applicable to heavy-duty fleet vehicles and equipment such as Basic Inspections of Terminals (BIT) requires SoCalGas provide additional training to employees who regularly use vehicles in conducting SoCalGas business.[5]

- Occupational Safety and Health Administration (OSHA) and Cal OSHA mandated inspections, training, and other regulations applicable to Fleet Services' operations and equipment acquisition.
- Other Environmental Protection Agency (EPA) requirements governing air quality, water quality, waste, hazardous materials, safety, and natural resources, including mandated inspections and repairs applicable to underground storage tanks, aboveground storage tanks, fuel island components, and hazardous waste stream management create ongoing needs to renovate and improve our infrastructure to maintain compliance.

h) Maintain proper training of Fleet Services Maintenance Technicians.

i) Comply with hazardous waste disposal requirements of fleet materials.

j) Evaluate changes in technology, regulation, and operational trends so that they can be appropriately incorporated into all Fleet Services related plans and activities.

2. Facility Operations

The Company's territory encompasses approximately 20,000 square miles over diverse terrain throughout Central and Southern California – from Visalia, to Arizona, to the Mexican border. Facility Operations' responsibilities include the operations and maintenance of SoCalGas' facilities throughout this service territory. Facility Operations' responsibilities encompass 1.7 million square feet comprised of 80 staffed locations including general offices, bases, multi-use sites, branch offices, and telecommunication sites. Facility Operations is also tasked with providing the organization with safe, compliant, reliable, and suitable working environments for its employees. The intent of this section of my testimony is to describe the key activities performed by Facility Operations and to provide context for Facility Operations' GRC request.

[5] Dep't of California Highway Patrol, Welcome to BIT, The Basic Inspection of Terminals Program, https://www.chp.ca.gov/CommercialVehicleSectionSite/Documents/O%20chp800h.pdf

The following is a summary of some key activities for Facility Operations:

a) Management of services and processes that support the core business of SoCalGas.

b) Provide working environments that are safe, compliant, reliable, and suitable for its employees and their activities throughout the SoCalGas territory.

c) Provide safe and ADA compliant access to our customers and employees at SoCalGas' branch offices.

d) Comply with federal, state, and local statutes and regulations pertaining, but not limited to, air quality, hazardous materials management, fire life safety, and natural resources.

e) Maintain proper training of facility maintenance personnel to comply with any applicable rules and regulations.

f) Conduct regular preventative maintenance of SoCalGas facilities and grounds for energy efficiency, environmental, and safety purposes.

g) Meet the standards set by various air quality management districts that regulate emergency standby generators, boilers and Heating Ventilation and Air Conditioning (HVAC) equipment.

h) Maintain and manage hazardous material business plans regulated by local Certified Unified Program Agencies (CUPA).

i) Other compliance/regulatory items include:

- Reciprocating Internal Combustion Engines / National Emission Standards for Hazardous Air Pollutants (RICE/NESHAPS) maintenance requirements for our standby emergency generators.
- Air quality management districts and Cal OSHA's asbestos containing building material abatement and management.
- California Code of Regulations Title 22 heavy metal in surface coating compliance. Any construction or disturbance of building materials can be costly in order to maintain compliance with Title 22.
- Title 24 of the California Code of Regulations, known as the California Building Standards Code, contains the regulations that govern the construction of buildings in California. Any construction that must comply with Title 24 regulation could be costly due to the use of new energy

efficient technologies and construction methods.

- California's Equal Restroom Access Act (ERAA) requires all single-user toilet facilities in any business establishment be identified as "all-gender" toilet facilities which requires remodeling by SoCalGas.[6]
- Zero Net Energy (ZNE) state mandate to reduce greenhouse gas emissions and to conserve energy resources for all new and existing buildings by 2030.[7] All new commercial buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy needs.

3. Support To/From Other Witnesses

My testimony also references the testimony of several other witnesses, either in support of their testimony or as referential support for mine:

Diana Day, Risk Management and Policy- Ex. SCG-02/SDG&E-02

- Hal Snyder and Randall Clark; Fueling our Future – Ex. SCG-03/SDG&E-03
- Gina Orozco-Mejia; Gas Distribution – Ex. SCG-04
- Omar Rivera; Gas System Integrity – Ex. SCG-05
- Neil Navin; Underground Storage – Ex. SCG-10
- Andrew Steinberg; Aliso Incident Expenditure Requirements – Ex. SCG-12
- Devin Zornizer; Gas Control and System Operations/Planning – Ex. SCG-13
- Rene Garcia; Advanced Metering Infrastructure Project – Ex. SCG-17
- Gwen Marelli; Customer Service Field & Meter Reading - Ex. SCG-18

[6] Cal. Health & Safety Code §118600 (codifying AB 1732).
[7] California Energy Commission, 2015 Integrated Energy Policy Report, Pg. 41. http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-01/TN212017_20160629T154354_2015_Integrated_Energy_Policy_Report_Small_File_Size.pdf

- Denita Willoughby; Supply Management, Logistics, and Supplier Diversity – Ex. SCG-22/SDG&E-20
- James Vanderhye; Shared Services – Ex. SCG-34/SDG&E-32

B. Summary of Safety and Risk-Related Costs

Certain costs supported in my testimony are driven by activities described in SoCalGas and SDG&E's November 30, 2016 RAMP Report.[8] The RAMP report presented an assessment of the key safety risks of SoCalGas and SDG&E as well as proposed plans for mitigating those risks. As discussed in the Risk Management testimony chapters of Diana Day and Jamie York (Exhibit SCG-02/SDG&E-02, Chapters 1 and 3, respectively), the costs of risk-mitigation projects and programs were translated from that RAMP Report into the individual witness areas.

The scope, schedule, resource requirements and synergies of RAMP-related projects and programs continued to be evaluated throughout preparation of GRC forecasts; therefore, the final representation of RAMP costs may differ from the ranges shown in the original RAMP Report.

Table CLH-2 below provides a summary of the RAMP-related costs supported in my testimony:

TABLE CLH-2
Southern California Gas Company
Summary of RAMP Safety-Related Costs

FLEET & FACILITIES (In 2016 $)			
RAMP Risk Chapter	**2017 Estimated Incremental (000s)**	**2018 Estimated Incremental (000s)**	**2019 Estimated Incremental (000s)**
SCG-2 Employee, Contractor, Customer and Public Safety	**0**	**185**	**185**
SCG-5 Workplace Violence	**0**	**236**	**236**
SCG-6 Physical Security of Critical Gas Infrastructure	**0**	**811**	**811**
Total O&M	**0**	**1,232**	**1,232**

[8] 16-10-015/I.16-10-016 Risk Assessment and Mitigation Phase Report of San Diego Gas & Electric Company and Southern California Gas Company, November 30, 2016. Please also refer to Exhibit SCG-02/SDG&E-02, Chapter 1 (Diana Day) for more details regarding the utilities' RAMP Report.

RAMP- CAPITAL	2017 Estimated RAMP Total (000s)	2018 Estimated RAMP Total (000s)	2019 Estimated RAMP Total (000s)
SCG-5 Workplace Violence	**0**	**600**	**600**
Total Capital	**0**	**600**	**600**

Ms. Day (Ex. SCG-02/SDG&E-02, Chapter 1) describes how safety and security risks are assessed and factored into cost decisions on an enterprise-wide basis. My testimony includes costs to mitigate risks primarily faced by Fleet Services and Facility Operations that are associated with public and employee safety, system reliability, regulatory and legislative compliance, and pipeline system integrity. Specific risks, mitigating measures and associated costs are further discussed in Section II of my testimony.

C. Summary of Costs Related to Fueling our Future (FOF)

As described in the Fueling Our Future Policy testimony of Hal Snyder and Randall Clark (Exhibit SCG-03/SDG&E-03), the utilities kicked off the Fueling Our Future (FOF) initiative in May 2016 to examine operations across the company and identify opportunities for efficiency improvements. Ideas were generated, reviewed, analyzed, and targeted for implementation from 2017 through 2019. Further, through the FOF initiative, Fleet Services and Facility Operations focused on creative ideas to modernize its businesses through automation, system upgrades and process improvements. For instance, through the implementation of a new Fleet Services enterprise system, SoCalGas Fleet Services is now able to more precisely capture data (parts invoices, lease records, vehicle service records, etc.) through automation. Utilizing automated data capture not only increases data accuracy but it also increases its reporting efficiency and decision making process. Further, Facility Operations is in the process of implementing an enterprise system of its own to streamline work-order management process flow and provide cost transparency across all levels of the organization. These measures combined with the other Fleet Services and Facility Operations FOF efficiencies will help create cost efficiencies totaling over two million dollars reflected in Fleet Services and Facility Operations' 2019 TY request.

Table CLH-3 provides a summary of SoCalGas' Fleet Services and Facility Operations FOF cost efficiencies covered in my testimony. These FOF costs have been removed from my forecast and are further described in my testimony and workpapers.

TABLE CLH-3
Southern California Gas Company
Summary of FOF Costs

FLEET & FACILITIES (In 2016 $)			
FOF O&M	**Estimated 2017 (000s)**	**Estimated 2018 (000s)**	**Estimated 2019 (000s)**
FOF-Implementation	72	905	0
FOF-Ongoing Benefits	-246	-1,491	-2,050
Total O&M	**-174**	**-586**	**-2,050**

D. Summary of Aliso-Related Costs

In compliance with Decision (D.)16-06-054,[9] the Aliso Incident Expenditure Requirements testimony of Andrew Steinberg (Exhibit SCG-12) describes the process undertaken to ensure the TY 2019 forecasts do not include the additional costs from the Aliso Canyon Storage Facility gas leak incident (Aliso Incident) and demonstrates that the itemized recorded costs are removed from the historical information used by the impacted GRC witnesses.

As a result of removing historical costs related to the Aliso Incident from Fleet Services and Facility Operations adjusted recorded data, and in tandem with the forecasting method(s) employed and described herein, additional costs of the Aliso Incident response are not included as a component of my TY 2019 funding request. Historical Fleet Services and Facility Operations costs related to the Aliso Incident are removed as adjustments in my workpapers, Ex. SCG-23-WP and also identified in Table CLH-4.

[9] Decision (D.)16-06-054, Ordering Paragraph 12, at 332 and Conclusion of Law 75 at 324.

TABLE CLH-4
Southern California Gas Company
Summary of Excluded Aliso-Related Costs

FLEET & FACILITIES			
Workpaper	**2015 Adjustment (000s)**	**2016 Adjustment (000s)**	**Total (000s)**
Total Non-Shared	**0**	**0**	**0**
FLEET MANAGEMENT & SUPPORT	0	-32	-32
Total Shared Services	**0**	**-32**	**-32**
Total O&M	**0**	**-32**	**-32**

E. Summary of Costs Related to Advanced Metering Infrastructure (AMI) Integration into TY 2019

By TY 2019, SoCalGas' AMI deployment will be completed and therefore the cost associated with the deployment and post-deployment phases, including the related O&M benefits, will no longer be recorded to the AMI balancing account. In this GRC, AMI operating impacts will be integrated into base business operations for the first time. Accordingly, I have incorporated forecasts and explanations for the associated on-going benefits for Fleet Services and Facility Operations into my testimony. In addition, in the Advanced Metering Infrastructure Policy testimony of Rene Garcia (Exhibit SCG-17), SoCalGas is proposing an on-going maintenance and operations team required to monitor, operate, maintain, and optimize the Advanced Meter system (Advanced Meter Operations).

II. RISK ASSESMENT MITAGATION PHASE AND SAFETY CULTURE

As illustrated in Table CLH-2, above, part of the forecast for Fleet Services and Facility Operations is linked to mitigating safety risks identified in the RAMP Report. These risks are further described in table CLH-5 below:

TABLE CLH-5
Southern California Gas Company
Summary of RAMP Risk

RAMP Risk	Description
SCG-2 Employee, Contractor, Customer and Public Safety	The Employee, Contractor, Customer, and Public Safety risk covers the risk of conditions and practices which may result in severe harm to employee, contractor, customer, and/or public safety such as

	driving, customer premises, and appliance conditions, as well as non-adherence to company safety policies, procedures, and programs.
SCG-5 Workplace Violence	The Workplace Violence risk involves violent incidents related to the workplace, resulting in emotional or physical harm to an employee(s) or third parties. The purpose is to maintain the safety of employees, contractors, and the public, as well as the Companies' facilities, through the use of systems, personnel, policies, and procedures.
SCG-6 Physical Security of Critical Gas Infrastructure	The risk of damage to critical gas infrastructure involves damage caused by intentional acts, including but not limited to theft, robbery, burglary, vandalism, disgruntled individuals or groups, terrorism, trespassing, etc., which results in a gas leak, fire, explosion, and/or outages.

While developing the GRC forecasts, SoCalGas evaluated the scope, schedule and resource requirement, and synergies of RAMP- related projects and programs to determine costs already covered in the base year and those that are incremental increases expected in the Test Year 2019. RAMP-related costs and activity descriptions are further described in Sections III and IV below, as well as in my workpapers. Table CLH-6 also provides a summary of RAMP-related operations and maintenance costs by workpaper number.

TABLE CLH-6
Southern California Gas Company
RAMP Risk Summary of Cost

GAS SYSTEM INTEGRITY (In 2016 $)			
SCG-2 Employee, Contractor, Customer and Public Safety	**2016 Embedded Base Costs (000s)**	**TY2019 Estimated Incremental (000s)**	**Total (000s)**
2RF003.001 - Amortization	0	140	140

2RF003.002 - Interest	0	45	45
Total		**185**	**185**
SCG-5 Workplace Violence	**2016 Embedded Base Costs (000s)**	**TY2019 Estimated Incremental (000s)**	**Total (000s)**
2RF004.000 - Facility Operations - Contract Security		220	220
2RF004.000 - Facility Operations - Physical Security Systems		16	16
Total		**236**	**236**
SCG-6 Physical Security of Critical Gas Infrastructure	**2016 Embedded Base Costs (000s)**	**TY2019 Estimated Incremental (000s)**	**Total (000s)**
2RF004.000 - Facility Operations - Contract Security		800	800
2RF004.000 - Facility Operations - Site Security Review		11	11
Total		**811**	**811**
Total O&M		**1,232**	**1,232**
RAMP - Capital	**2016 Embedded Base Costs (000s)**	**TY2019 Estimated Incremental (000s)**	**Total (000s)**
653D - RAMP Incremental Facility Security		600	600
Total Capital		**600**	**600**

For each of these mitigation efforts, an evaluation was made to determine the portion, if any, that was already performed as part of historical activities (i.e., embedded base costs) and the portion, if any, that was incremental to base year activities. Furthermore, for the incremental

activities, a review was completed to determine if any portion of incremental activity was part of the workgroup's base forecast methodology (i.e., base year, trending, averaging, etc.). The result was what SoCalGas considers to be a true representation of incremental increases over the base year.

While the starting point for consideration of the risk mitigation efforts and costs was the RAMP Report, further evaluation resulted in changes to the scope, schedule, and costs. Therefore, the incremental costs of risk mitigation sponsored in my testimony differs from those first identified in the RAMP Report.

My incremental request supports the on-going management of these risks which could pose significant safety, reliability, and financial consequences to our customers and employees. The anticipated risk reduction benefits that may be achieved by my incremental ask are summarized in Sections III (shared costs) and IV (capital) of my testimony.

SoCalGas Fleet Services and Facility Operations assesses and mitigates risk to the public, employees, and infrastructure as part of its activities. SoCalGas Fleet Services and Facility Operations will continue to do so within the new RAMP framework, which will keep the Commission and the public informed as to how risk assessment and mitigation activities are occurring within the utilities. In developing this GRC request, priority was given to these key safety risks to assess which risk mitigation activities Fleet Services and Facility Operations currently performs and what incremental efforts are needed to further mitigate these risks. Fleet Services and Facility Operations addresses the above RAMP risks as follows:

A. SCG-2 - Risk to Employee, Contractor, Customer, and Public Safety

The Employee, Contractor, Customer, and Public Safety risk chapter covers the risk of conditions and practices which may result in severe harm to employee, contractor, customer, and/or public safety such as driving, customer premises, and appliance conditions, as well as non-adherence to Company safety policies, procedures, and programs. As further described in the Gas Control and System Operations/Planning testimony of Devin Zornizer (Exhibit SCG-13), the Emergency Services department manages Company-wide emergency preparedness via the maintenance of Emergency Response Plans and Business Resumption Plans. Emergency Services is responsible for emergency incident reporting, maintenance of mutual assistance plans, staffing the Emergency Operations Center, conducting Incident Command Center (ICS)

and Incident Management System (IMS) training, and coordinating liaison meetings with First Responders.

In support of the Emergency Response Plan, SoCalGas is requesting three emergency command vehicles. The use of an Emergency Command Vehicle Center is a concept used by various agencies (e.g., fire, police) including other utilities (e.g., PG&E, SDG&E) in the event of an incident such as an earthquake or wild fire. The Emergency Command Vehicle Centers will be able to provide Company field employees and first responders (e.g., fire, police, and other public officials) a place to have onsite meetings, as well as allowing them access to communication tools (e.g., phone, satellite, internet) and mapping and printing capabilities. For more information regarding the Emergency Command Vehicle Centers and alternatives to RAMP Chapter SCG-2 considered by the Company, please see the testimony of Mr. Zornizer (Ex. SCG-13).

B. SCG-5 Workplace Violence

The Workplace Violence section impacts my area due to our many staffed facilities. The workplace violence risk to these locations involves a violent incident related to the workplace, resulting in emotional or physical harm to an employee(s) or third parties. SoCalGas' baseline mitigation plan for this risk consists of: (1) Physical Security Systems and Contract Security and (2) Planning, Awareness, and Incident Management. These controls focus on safety-related impacts (i.e., Health, Safety, and Environment) per guidance provided by the California Public Utilities Commission (Commission or CPUC), as well as controls and mitigations that may address reliability.[10] SoCalGas' proposed mitigation plan is comprised of both baseline and new mitigation activities which include enhancements in the following areas:

- Physical Security Systems and Contract Security
  - Install or upgrade access control and detection capabilities at all facilities
  - Add security guards to locations and comply with new laws enacted since the baseline evaluation that increase labor costs

Security enhancements to infrastructure and security guards posted at Company facilities each improve access control, intrusion detection, and interdiction capabilities, to deter, detect,

[10] D.16-08-018 at 39.

delay, or help prevent undesirable events at Company facilities. Depending on the facility, several physical security system upgrades have been completed, including, but not limited to, improvements in access control, intrusion detection systems, and interdiction capabilities.

In addition to security systems, SoCalGas employs contract security (security guards) to secure and physically protect assets and people. These security guards are located at critical facilities and work locations. Company policies and procedures outline physical security procedures, including access control, officer post orders, and incident reporting.

Alternatives Considered:

To address the Workplace Violence risk, Corporate Security focused on the security of every staffed SoCalGas facility. During SoCalGas' development of security systems, physical security systems (cameras, fences, etc.) and guards were considered as alternatives to each other in some locations for some threats. This would mean that some Company locations would only have security guards while others would only have security systems. The potential benefit to this alternative is a reduction of costs; however, it would also increase the risk exposure. Accordingly, this alternative was dismissed in favor of the mitigations discussed above. Implementing physical security systems and guards together often provides increased risk reduction and a back-up to one another.

C. SCG-6 Physical Security of Critical Infrastructure

Similar to workplace violence risk which focuses on staffed facilities, the Physical Security of Critical Infrastructure risk involves damage caused by intentional acts, including but not limited to theft, robbery, burglary, vandalism, disgruntled individuals or groups, terrorism, trespassing, etc., which results in a gas leak, fire, explosion, and/or outages to unstaffed SoCalGas facilities.

The controls in this chapter focus on safety-related impacts (e.g., Health, Safety, and Environment), as well as controls and mitigations that may address reliability. Based on the foregoing assessment, SoCalGas proposed future mitigations. For Physical Security, SoCalGas proposes to continue the control categories, identified above, and included in the request is the following enhancement and additional mitigation within the control categories listed below:

- <u>Physical Security Systems and Contract Security</u>
    - Install or upgrade access control and detection capabilities at all facilities
    - Add security guards to locations

Physical security systems provide protection enhancements to infrastructure to improve access control, intrusion detection, and interdiction capabilities to deter, detect, delay, or prevent undesirable events at Company facilities. The type and extent of security upgrades varies by facility, but several have been completed, including, fences, gates, and cameras.

In addition to security systems, SoCalGas employs contract security (security guards) to secure and physically protect assets and people. These security guards are located at critical facilities and work locations. Company policies and procedures outline physical security procedures, including access control, officer post orders, and incident reporting.

Alternatives Considered:

The Physical Security of Critical Infrastructure focuses on the security of unstaffed facilities such as gas compressor station, gas meter locations, and gas storage facilities. During SoCalGas' development of security systems, physical security systems (cameras, fences, etc.) and guards were considered as alternatives to each other in some locations for some threats. This would mean that some company locations would only have security guards while others would only have security systems. The potential benefit to this alternative is a reduction of costs; however, it would also increase the risk exposure. Accordingly, this alternative was dismissed in favor of the mitigations discussed above. Implementing physical security systems and guards together often provides increased risk reduction and a back-up to one another.

D. Safety Culture

SoCalGas' longstanding commitment to safety focuses on three primary areas – (i) employee safety, (ii) customer safety, and (iii) public safety. This safety focus is embedded in the full spectrum of Fleet Services and Facility Operations' activities– from initial employee training, to the installation, operation and maintenance of our utility infrastructure, and to our commitment to provide safe and reliable service to our customers.

SoCalGas Fleet Services and Facility Operations regularly assesses its safety culture and encourages two-way communication between employees and management as a means of identifying and managing safety risks. At SoCalGas, safety is a core value so we provide all employees with the training necessary to safely perform their job responsibilities.

Facility Operations' responsibilities include the provision of safe, compliant, reliable, and suitable working environments for its employees and their activities throughout the SoCalGas territory. SoCalGas' forecast of expenses for Facility Operations is needed to support SoCalGas'

commitment to provide safe work areas by, for example: (1) providing safe and ADA compliant access to our customers and employees at SoCalGas' branch offices; (2) complying with federal, state and local statutes and regulations pertaining, but not limited to, air quality, hazardous materials management, fire, life, safety, and natural resources; and (3) conducting regular preventative maintenance of SoCalGas facilities and grounds.

III. NON-SHARED COSTS

"Non-Shared Services" are activities that are performed by a utility solely for its own benefit. Corporate Center provides certain services to the utilities and to other subsidiaries. For purposes of this general rate case, SoCalGas treats costs for services received from Corporate Center as Non-Shared Services costs, consistent with any other outside vendor costs incurred by the utility.

For TY 2019, Fleet Services and Facility Operations Non-Shared Services requests $90.751 million, an increase of $33.627 million above 2016 adjusted-recorded costs. Non-Shared costs for Fleet Services include the O&M costs to acquire, maintain, repair, and salvage more than 5,400 vehicles and power operated equipment. Non-shared costs for Facility Operations includes the operation and maintenance of SoCalGas facilities, which include 1.7 million square feet (comprised of 80 staffed locations of general offices, bases, multi-use sites, branch offices, and telecommunication sites). Table CLH-7 below summarizes the total non-shared O&M forecasts for the listed cost categories.

TABLE CLH-7
Southern California Gas Company
Non-Shared O&M Summary of Costs

Non-Shared Services	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
A. Ownership Costs	20,342	45,561	25,219
B. Maintenance Operations	21,110	25,845	4,735
C. Fleet Management	502	1,100	598
D. Facility Operations	15,170	18,245	3,075
Total	**57,124**	**90,751**	**33,627**

A. Ownership Cost

For TY 2019, the ownership O&M request is $45.561 million, an increase of $25.219 million above 2016 adjusted-recorded costs, as summarized on Table CLH-8

below. A majority of this request is for the replacement of heavy duty vehicle that comply with state Airborne Toxics Control Measure (ATCM). These vehicles are scheduled to be purchased in the 2017 through 2019 period.

TABLE CLH-8
Southern California Gas Company
Ownership O&M Summary of Costs

Ownership	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
1. Amortization	17,761	35,175	17,414
2. Interest	1,604	5,956	4,352
3. Salvage	(813)	(1,754)	(941)
4. License Fees & Sales Tax	1,790	6,184	4,394
Total	**20,342**	**45,561**	**25,219**

1. Description of Costs and Underlying Activities

Fleet Services performs the following operating activities: acquires, maintains, repairs, and salvages vehicles and related equipment to support the reliable and safe delivery of gas to SoCalGas customers. Fleet Services provides daily critical support to the gas distribution and transmission operating crews, customer services field operations, and the capital construction program.

SoCalGas lease-finances its vehicles and incurs annual repayment of principal and interest (amortization) for each vehicle over the term of each lease.[11] Replacement scheduling is based on the targeted useful life of vehicles by various classes. Ownership costs for each year are forecasted using a cash-flow model.

The SoCalGas fleet consists of over 5,400 vehicles and power-operated equipment. The fleet composition at the end of 2016 is shown in Table CLH-9 below:

[11] Due to a change in accounting rules, SoCalGas expects to modify how it records leases in 2019, as required by U.S. GAAP. In general, most leases are expected to be recorded on the balance sheet as lease assets with offsetting lease liabilities, as opposed to current accounting treatment which has no such balance sheet recognition of operating leases. For example, this accounting change is expected impact both real estate and fleet leases, and could result in more contractual arrangements meeting the U.S. GAAP definition of a lease. Since this change will not occur until 2019 and the implementation of the new standard is not complete, SoCalGas anticipates providing updated numbers during the GRC update phase in 2018.

Table CLH-9
Southern California Gas Company
SoCalGas Vehicle Types
(Year-End 2016)

VEHICLE TYPES	No. of Units
Automobiles	**381**
Compact Trucks & Vans	**535**
Light Duty Trucks & Vans	**2,882**
Medium Duty Trucks & Vans	**565**
Heavy Duty Trucks & Vans	**76**
Subtotal over-the-road (OTR)	**4,439**
Trailers	**675**
Construction Equipment	**289**
Subtotal non-over-the-road (NON-OTR)	**964**
Total	**5,403**

As noted above, SoCalGas lease finances its fleet of vehicles. The ownership cost category is comprised of: (1) amortization; (2) interest; (3) salvage; and (4) license fees and use sales tax.[12] Below is a description of the components of ownership costs:

Amortization

SoCalGas' amortization request consists of the annual repayment of principal for the fleet Services leases composed of active lease obligations and new lease obligations for replacements or additional vehicles as needed by the operating groups. Replacement scheduling is based on

[12] SoCalGas has entered into a new fleet finance arrangement with a new vendor. As of the time of this filing, the impact of the new interest rate agreement is unknown. The forecast in this testimony is based on existing agreement terms.

targeted useful life of vehicles by various classes. Amortization costs for each year are forecasted for 2017 through 2019. Fleet Services projects the pay-down of active lease obligations and applies specified lease duration terms and associated interest to new fleet assets scheduled to be placed in service during each forecast year. Refer to my workpapers entitled, "Amortization," Exhibit SCG-23-WP, for supplemental information on this topic.

The total TY 2019 request is $35.175 million which is comprised of the following: (1) $17.727 million (or 50%) of the 2019 amortization forecast total is for committed financing of existing vehicles and replacements currently under purchase order; (2) $6.553 million (or 19%) of the 2019 amortization forecast total is for replacements scheduled to be purchased in the 2017 through 2019 period; (3) $4.587 million (or 13%) of the 2019 amortization forecast total is for incremental vehicle additions requested by operating departments; (4) $4.468 million (or 13%) of the 2019 amortization forecast total is state mandated heavy duty diesel vehicle ATCM replacements; and (5) $1.841 million (or 5%) of the 2019 amortization forecast is for Alternative-Fuel Vehicles that are purchased at a premium account. For more information, please see supplemental Amortization workpaper, Exhibit SCG-23-WP.

The key challenge facing SoCalGas' Fleet Services organization in the coming years is the technological change driven by emissions reduction requirements and enhancing the Company's goal of reducing its carbon footprint. In prior years, SoCalGas' Fleet Services organization could address regulatory changes through diesel particulate filters (i.e., retrofits). However, as discussed in detail below, these retrofits are no longer allowed. For instance, CARB requirements for ATCM requires early replacement of heavy duty vehicles.[13] Further, California's landmark climate change law, the Global Warming Solutions Act (AB 32), set the state on an aggressive path toward significantly reducing greenhouse gas (GHG) emissions and improving the environment.[14] These in turn contribute to the upward pressures on Fleet Services' costs. Accordingly, SoCalGas has begun to replace these vehicles to comply with regulatory requirements.

In addition, SoCalGas is supporting California's state initiatives to reduce California's petroleum use by up to 50 percent by 2030, and achieve greenhouse gas (GHG) emission

[13] California Air Resources Board, Statewide Truck and Bus Regulations, (Dec. 11, 2008), https://www.arb.ca.gov/regact/2008/truckbus08/truckbus08.htm.
[14] California Air Resources Board, First Update to the Climate Change Scoping Plan 46 (May 2014), http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

reduction targets of 40 percent below 1990 levels by 2030, with continued progress towards an 80 percent reduction by 2050.[15] SoCalGas proposes to support the state initiative to grow its natural gas fleet by replacing traditional petroleum and diesel vehicles with natural gas vehicles. SoCalGas expects to reduce approximately 29,500 metric tons of greenhouse gases over 5 years which is the equivalent to reducing greenhouse gas emissions from 6,200 passenger vehicles driven for one year. Natural gas is the cleanest burning alternative transportation fuel that can economically power light-, medium-, and heavy-duty vehicle applications.[16] 27% of SoCalGas' fleet is comprised of alternative-fuel vehicles, an increase of 13% from 2012. Further, SoCalGas' goal is to have a majority alternative-fuel fleet, as noted in my Amortization workpapers, Exhibit SCG-23-WP. Finally, in the recently approved Air Quality Management Plan (AQMP), the AQMP stated the following regarding transportation fuel:

> Transitioning to cleaner transportation technologies will involve major costs, but also have significant public health and climate change benefits. Adopting a plan with sufficient measures to attain the ozone and [Particulate Matter (PM) 2.5] air quality standards is not only required by federal law, but will also improve public health and mitigate climate change. By transitioning to cleaner transportation technologies, NOx and PM2.5 emissions from transportation sources will be reduced, subsequently resulting in cleaner air quality, lower health risk across the region, and reductions in toxic risk and GHGs along goods-movement corridors. Not meeting air quality standards would not only have negative public health consequences, but would also have adverse economic impacts on the region due to potential federal sanctions.[17]

This regulatory framework must be considered within the business context. The transportation sector accounts for 36% of GHG emissions in California.[18] The majority of emissions in the transportation sector are from on-road vehicles, which consist of light-duty vehicles (cars, motorcycles, and light-duty trucks) and heavy-duty vehicles (heavy-duty trucks,

[15] California Air Resources Board, Mobile Source Strategy 5 (May 2016), https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.pdf.
[16] Natural Gas Vehicles for America, Environmental Benefits, https://www.ngvamerica.org/natural-gas/environmental-benefits.
[17] South Coast Air Quality Management District, Final 2016 Air Quality Management Plan 4-9 to 4-10 (Mar. 2017), http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15.
[18] California Air Resources Board, First Update to the Climate Change Scoping Plan 46 (May 2014), http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

buses, and motorhomes) powered by petroleum or diesel.[19] In order to capture the benefits of reducing emissions from the millions of cars and trucks on California's roads today, the State has taken steps to enable widespread and accelerated adoption of Alternative Fuel Vehicles and the infrastructure to support them.

Interest

All replacement and incremental vehicle additions are forecasted to be financed under lease arrangements with floating interest rates.[20]

Salvage

Vehicles are sold for salvage at the end of their useful life. Any net proceeds are credited back to Fleet Services offsetting the incremental acquisition costs of replacement vehicles.

License Fees and Sales Tax

License fees payable to the State of California each year are a function of the age and composition of the fleet during that year, and consist of several components based on vehicle weight, capacities, age, purchase price, and location.

To prevent paying excess sales tax at the time of transferring title, the Company has revised the way it pays sales tax on vehicle leases by incorporating sales tax into its monthly lease payments. Previously, SoCalGas paid sales tax for vehicles up front. The change was necessary to avoid double payment of sales taxes in the event that vehicles are later purchased by SoCalGas.

Mitigation of RAMP Risk SCG-2 Employee, Contractor, Customer and Public Safety

For TY 2019, SoCalGas forecasted $0.185 million for three emergency command vehicle centers that will be strategically placed within our service territory in the event of an incident. Currently, SoCalGas does not have an emergency command vehicle center to support incidents in the field within its service territory. As such, SoCalGas plans to lease three emergency command vehicle centers in support of Emergency Services. For more information, please see the RAMP and Safety Culture Section II above and the testimony of Mr. Zornizer

[19] California Air Resources Board, 2016 California GHG Emission Inventory 4 (June 27, 2016), https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf.

[20] SoCalGas has entered into a new fleet finance arrangement with a new vendor. As of the time of this filing, the impact of the new interest rate agreement is unknown. The forecast in this testimony is based on existing agreement terms.

(Ex. SCG-13). Table CLH- 10 below summarizes this cost.

Table CLH-10
Southern California Gas Company
RAMP

FLEET & FACILITIES (In 2016 $)			
Employee, Contractor, Customer and Public Safety	**2016 Embedded Base Costs (000s)**	**TY2019 Estimated Incremental (000s)**	**Total (000s)**
2RF003.001, Amortization	0	140	140
2RF003.002, Interest	0	45	45
Total	**0**	**185**	**185**

2. Forecast Method

For TY 2019, SoCalGas forecasted $45.561 million for non-shared Fleet Services ownership costs. SoCalGas' forecasted amount is mostly due to committed financing of existing vehicles and the need for additional fleet replacement vehicles to support gas distribution, transmission and storage, and customer field services. Operating departments estimate the need for 319 additional vehicles over the three-year period, 2017, 2018, and 2019. The increase in vehicles also impacts the costs for associated services such as: (1) maintenance and fuel costs and (2) activities required to meet compliance. Additionally, there are increased costs due to the increase in purchases of Compressed Natural Gas (CNG) vehicles that are purchased at a premium as well as increased costs to satisfy CARB environmental requirements related to the replacement of diesel heavy duty vehicles. These estimates for the ownership cost categories are derived using a zero-based method, as explained below.

Amortization

A zero-based forecast is appropriate because costs vary according to lease amortization schedules for units currently in the fleet or new units added. Therefore, historical trends or averages will not properly represent the costs. Costs are determined based on each vehicle lease schedule. The cost associated with lease amortization for 2017 through 2019 is based on year-end 2016 actual vehicles under lease financing, actual vehicles under purchase order, the planned replacement vehicles scheduled each year, and requested incremental vehicle additions each year. The increase in amortization costs in 2019 is primarily due to replacement vehicles, following the required replacement lifecycles and the requests for incremental vehicles required by other

SoCalGas business units. Further, CARB requirements for ATCM requires early replacement of heavy duty vehicles, which contribute significantly to upward pressures on Fleet Services costs. As noted above, in prior years, SoCalGas' Fleet Services organization could address ATCM requirements through diesel particulate filters (i.e., retrofits). However, these retrofits are no longer allowed, and SoCalGas must begin its efforts to replace these vehicles in order to commence compliance with regulatory requirements.

Additionally, as an Alternative Fuel Provider fleet, 90% of the SoCalGas annual light duty vehicle purchases are required under the EPAct to be approved alternative-fueled vehicles.[21] To achieve the 90% annual requirement, SoCalGas plans to continue buying alternative fuel vehicles that are sold at a premium. SoCalGas' fleet, specifically, all the over-the-road vehicles, is aging. At the end of 2016, 1,679 vehicles, or 42% of SoCalGas' over-the-road fleet vehicles, were 8 years and older. As a practice, SoCalGas replaces over-the-road vehicles once they enter the seven-to ten-year mark. SoCalGas engages in this practice in order to minimize maintenance costs and downtime as the fleet ages and becomes less reliable. More information is included in my Amortization workpapers, Exhibit SCG-23-WP.

Interest

A zero-based forecast is appropriate because interest costs vary according to lease amortization balances for units currently in the fleet or new units added. Therefore, historical trends or averages will not properly represent the costs. Costs are determined based on each vehicle lease balance. This method is appropriate because interest costs in each forecast year are based on monthly outstanding balances multiplied by the London Interbank Offered Rate (LIBOR) contained in the Global Insight Forecast for the payment month, then summed for the year. More information is included in my workpapers entitled, "Interest," Exhibit SCG-23-WP. Use of alternate forecast method(s) or certain historical data is not appropriate because interest calculations are tied to the forecasted outstanding balances, and these balances vary year-to-year depending on the number and value of leases.

[21] U.S. Dep't of Energy, Alternate Fuel Transportation Program, 10 C.F.R. pt. 90 (2007), https://epact.energy.gov/pdfs/alt_compliance_rule.pdf.

Salvage

A zero-based forecast is appropriate because estimates of salvage proceeds for each forecast year are determined by multiplying the number of vehicles expected to be replaced during the year by the salvage received based on the 5-year average per-unit salvage amount. Use of alternate forecast method(s) or certain historical trends is not appropriate because the value of the salvage proceeds is directly related to the forecasted number of vehicle replacements. More information is included in my workpapers entitled, "Salvage," Exhibit SCG-23-WP.

License Fees and Sales Tax

A zero-based forecast, where the five-year ratio of license fees to amortization is used to determine the license fee costs, is the most reasonable forecasting method because historical trends or averages will not properly represent the costs for licenses fees. This methodology is considered reasonable as the calculation to replicate the California Department of Motor Vehicles (DMV) formulae for SoCalGas' fleet, which is comprised of more than five thousand fleet vehicles, is complex.[22] This estimating method has proven a reasonable approximation.

In addition, a zero-based forecast is used for sales tax as historical trends or averages will not properly represent the costs for this spend. Sales tax applies to fair rental value for all periods during which mobile transportation equipment is leased. The lessor must pay tax at the rate in effect at the time the equipment is leased, including the periods during the first lease of the equipment and all periods during any subsequent leases of the equipment.[23] Historical trends or averages are not used to forecast because the lease amortization costs vary depending on units currently in the fleet or for new units added.

Finally, beginning January 1, 2018, the DMV's base registration fee will increase due to a new "transportation improvement fee." The fee increase will range from $25 to $175, depending on the value of the vehicle.[24] More information is included in my workpapers entitled, "License Fees," Exhibit SCG-23-WP.

[22] California Dep't of Motor Vehicles, Registration Related Fees, https://www.dmv.ca.gov/pubs/brochures/fast_facts/ffvr34.htm#reg.
[23] California State Bd. of Equalization, Sales and Use Tax Regulations: Article 15. Leases of Tangible Personal Property, http://www.boe.ca.gov/lawguides/business/current/btlg/vol1/sutr/1661.html.
[24] S.B.-1, Transportation Funding (Cal. 2017), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1.

3. Cost Drivers

The cost drivers behind this forecast are attributable to the cost and timing of replacement vehicles; additional vehicles needed to support gas distribution, transmission, and customer field services; future interest rate increases; and environmental and regulatory compliance-related costs associated with the purchase and maintenance of vehicles and power-operated equipment.[25] These drivers are discussed in greater detail in my workpapers, Exhibit SCG-23-WP, including information on the replacement of 870 vehicles need for ATCM compliance.

Additionally, as an Alternative Fuel Provider fleet, 90% of the SoCalGas annual light duty vehicle purchases are required under the EPAct to be approved alternative-fueled vehicles.[26] To achieve the 90% annual requirement, SoCalGas plans to continue buying alternative-fuel vehicles that are sold at a premium. If SoCalGas cannot achieve the 90% annual requirement, SoCalGas may need to purchase EPAct credits.

B. Maintenance Operations

For TY 2019, the Maintenance Operations O&M request is $25.845 million, an increase of $4.735 million above 2016 adjusted-recorded costs, as summarized in Table CLH-11 below.

TABLE CLH-11
Southern California Gas Company
Maintenance Operations O&M Summary of Costs
(Thousands of 2016 dollars)

Maintenance Operations	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
1. Maintenance Operations	11,414	13,342	1,928
2. Automotive Fuels	9,696	12,503	2,807
Total	**21,110**	**25,845**	**4,735**

[25] It is important to note that Fleet Services has also focused on creative ideas to modernize its business through automation in order to create cost efficiencies, as discussed in more detail in the Fueling our Future section of my testimony.
[26] U.S. Department of Energy; EPAct Fleet Information & Regulations.

1. Description of Costs and Underlying Activities

Inspection and maintenance are carried out in 48 garage locations distributed throughout the SoCalGas territory. The Maintenance Operations organization performs vehicle safety inspections and other routine maintenance, replaces worn and defective parts, and repairs damaged vehicles. In addition, this group facilitates compliance with applicable federal, state, and local environmental, safety, and emissions regulations. Technician labor and training costs are included in this forecast.

The cost of fuel is a function of both price and quantity consumed. While improved fuel economy units will likely have a beneficial impact on fuel costs, the price of the fuel will remain the dominant factor.

2. Forecast Method

A five-year historical average is appropriate to forecast Maintenance Operations O&M and to forecast the automotive fuel consumption because the use of five-year averaging is generally recognized as a reasonable and valid methodology where costs fluctuate from year to year.

The five-year average is appropriate for Maintenance Operations' and automotive fuels forecast because costs for Maintenance Operations are prone to fluctuations due to the volatility in commodity prices. SoCalGas cannot predict the changes in commodity prices and must therefore rely on averaging to arrive at a reasonable cost estimate. In the TY 2016 GRC, a 3-year average was selected as more appropriate than a 5-year average for Maintenance Operations and automotive fuel due to costs in 2009 being an anomaly as the nation recovered from a recession.[27] More information is included in my workpapers entitled, "Maintenance Operations," Exhibit SCG-23-WP.

Costs for automotive fuel are prone to fluctuations because of the volatility of fuel prices due to political, social, and economic concerns. The use of alternate forecast method(s) is not applicable because of the fluctuations in the price of fuel. Such volatility makes predicting the forward-cost of fuel over an extended period of time difficult. The cost of fuel is a function of both price and quantity consumed. Fuel prices will remain the dominate factor and a historical 5-year average annual fuel cost is a reasonable predictor of cost. Additionally, SoCalGas' fuel

[27] The National Bureau of Economic Research reported that the recession ended in June 2009. Business Cycle Dating Committee, The National Bureau of Economic Research (Sept. 20, 2010), http://www.nber.org/cycles/sept2010.html.

forecast includes the costs for the recently approved California legislation to increase the excise tax on gasoline and diesel by 12 and 20 cents per gallon, respectively. Further, the sales tax on diesel is increasing four percentage points from the current 5.75% to 9.75%.[28] More information is included in my workpapers entitled, "Maintenance Operations and Automotive Fuels," Exhibit SCG-23-WP.

3. Cost Drivers

The cost drivers behind this forecast include the maintenance and repair costs associated with a fleet of more than 5,000 vehicles and power-operated equipment, including technician labor, technical training, replacement parts, and contracted repair services.[29] The cost driver for this request also includes backfilling positions to match the Fleet Services organizations historic staffing levels in order to meet the continued work load increases. The majority of Fleet Services vacant positions are due to retirements that SoCalGas plans to backfill. Increased work load is due to the implementation and training of: (1) SoCalGas' smog program for vehicle models 2000 and newer and (2) a newly revised CHP 2016 BIT program. Fleet Services conducts audits to maintain compliance with CHP's BIT program which includes the review of vehicle and employee driver records. To comply with the new revisions, SoCalGas will have to inspect an additional 13 terminals and 560 vehicles due to the reduced vehicle weight requirement of the program (from 26,000 pounds Gross Vehicle Weight (GVW) to 10,001 pounds GVW). Further, all BIT vehicles between 10,001-26,000 pounds GVW require a 90-day safety inspection which was not previously required.[30]

Further, the cost of gasoline and diesel fuel has been volatile due to global issues which impact fuel sources. For example, in the last five years the cost of diesel has fluctuated an average of 35%. Additionally, the cost of reformulated gasoline has fluctuated by 29% as demonstrated by the data provided by the U.S. Energy Information Administration.[31]

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[28] S.B.-1, Transportation Funding (Cal. 2017), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1.

[29] It is important to note that Fleet Services has also focused on creative ideas to modernize its business through automation in order to create cost efficiencies, as discussed in more detail in the Fueling our Future section of my testimony.

[30] Dep't of California Highway Patrol, Welcome to BIT, The Basic Inspection of Terminals Program, https://www.chp.ca.gov/CommercialVehicleSectionSite/Documents/O%20chp800h.pdf.

[31] U.S. Energy Information Administration, Petroleum & Other Liquids (Sept. 18, 2017), http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_r50_a.htm.

Starting November 1, 2017, new California legislation will increase the base excise tax by 12 cents per gallon for gasoline, 20 cents per gallon for diesel. Additionally, the sales tax on diesel is increasing four percentage points from the current 5.75% to 9.75%.[32]

There are incremental vehicles that also impact vehicle maintenance and fuel expense. These cost drivers are further described in my Maintenance Operations and Automotive Fuels workpapers, Exhibit SCG-23-WP.

C. C. Fleet Management

For TY 2019, Fleet Management requests $ 1.100 million, an increase of $0.598 million above 2016 adjusted-recorded costs, as summarized on Table CLH-12 below.

TABLE CLH-12
Southern California Gas Company
Fleet Management O&M Summary of Costs
(Thousands of 2016 dollars)

	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
1. Maintenance Management	502	1,100	**598**
Total	**502**	**1,100**	**598**

1. Description of Cost and Underlying Activities

This activity consists of all the Fleet Services management staff which includes the allocated portion of the Fleet Services Director as well as garage management. The following are some of the activities that are performed by Maintenance Management:

- Garage management and oversight
- Parts and inventory control
- The collection of employee commutation fees for take home fleet vehicles

2. Forecast Method

A five-year historical average was used as the basis for our TY 2019 forecast. The five-year historical average is most appropriate because recorded costs for this activity have fluctuated in the past five years. In addition, this methodology accurately reflects the current

[32] S.B.-1, Transportation Funding (Cal. 2017), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1.

and future staffing levels and the recent economic trends.

3. Cost Drivers

The cost drivers behind this forecast include the labor required to provide supervision and management to the Maintenance Operations organization and the collection of employee commutation fees for take home fleet vehicles.[33] Cost drivers also include backfilling three Fleet Services supervisors and one incremental Fleet Services supervisor to appropriately support SoCalGas' new smog program and incremental forecasted activities, including inventory and parts management under the new system processes. In addition, the cost drivers for this request are due to the need to provide supervision and oversight for the following areas: (1) SoCalGas' smog program for vehicles models 2000 and newer; (2) a newly updated CHP 2016 BIT program, described earlier; and (3) a training program to support the 13% increase of AFV's from 2012 and increased complexity of modern fleet vehicles. SoCalGas' mix of vehicle types adds to the complexity of training SoCalGas technicians to appropriately service the mix of vehicles with both new and old technologies.

D. Facility Operations

For TY 2019, the Facility Operations O&M request is $18.245 million, an increase of $3.075 million above 2016 adjusted-recorded costs, as summarized on Table CLH-13 below.

TABLE CLH-13
Southern California Gas Company
Facility Operations O&M Summary of Costs
(Thousands of 2016 dollars)

	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
Facility Operations	15,170	18,245	3,075
Total	**15,170**	**18,245**	**3,075**

[33] It is important to note that Fleet Services has also focused on creative ideas to modernize its business through automation in order to create cost efficiencies, as discussed in more detail in the Fueling our Future section of my testimony.

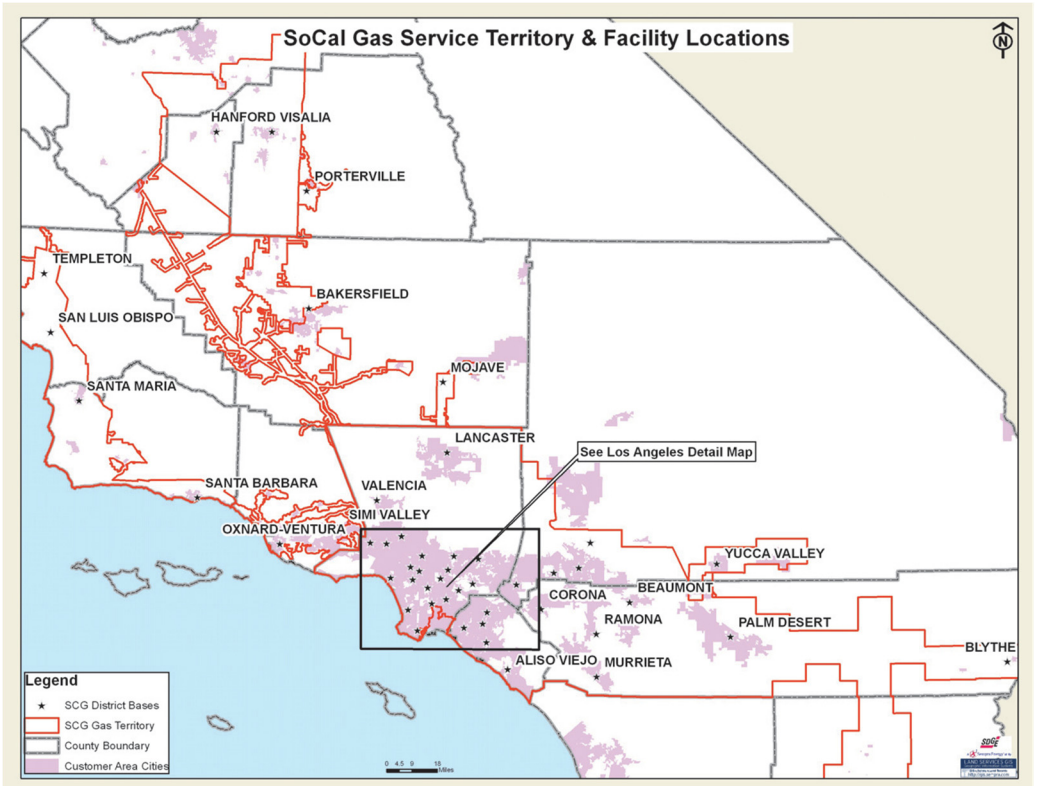
1. Description of Costs and Underlying Activities

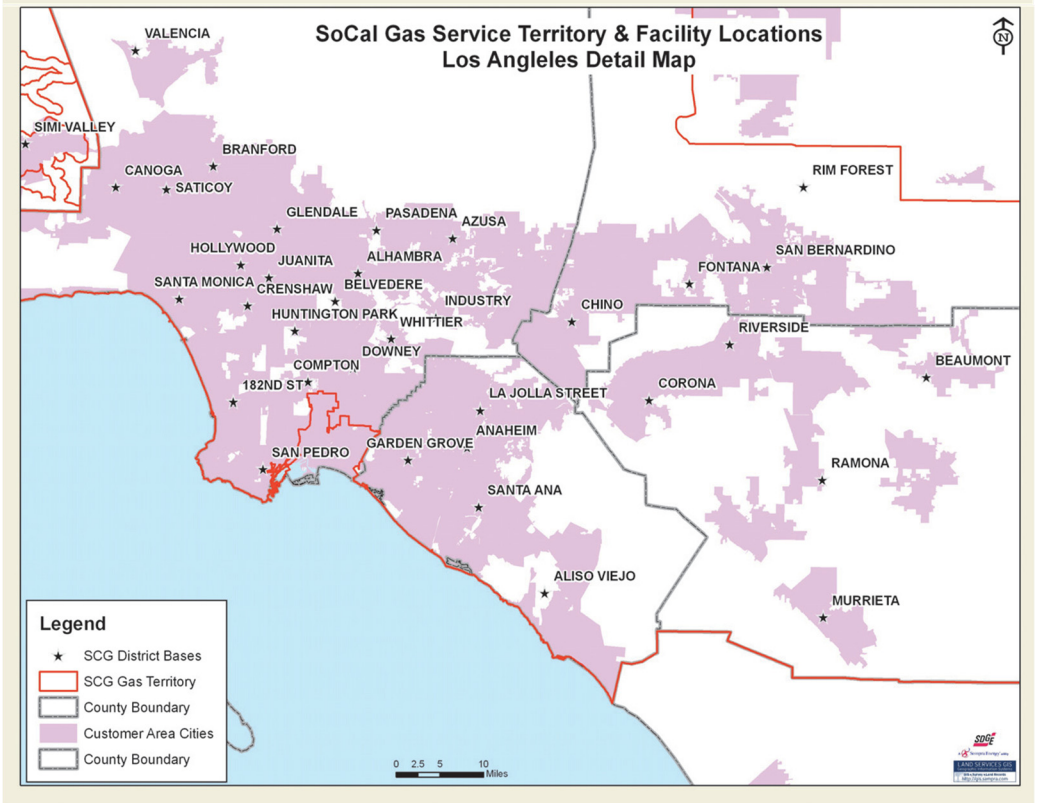
As shown in Table CLH-14 below, Facility Operations provides operations and maintenance of SoCalGas facilities in order to provide a safe work environment for our employees at 80 owned and staffed utility facilities, which averages 47 years of age. The operations are comprised of operating bases, regional headquarters, branch offices, and multi-use facilities. Facility Operations also provides operations and maintenance to 37 telecommunication sites, 38 leased branch offices, and the leased Gas Company Tower headquarters. This activity includes the allocated portion of the Facility Operations director who provides overall leadership and direction to the Facility Operations organization. More information is included in my workpapers entitled, "Director Support Services," Exhibit SCG-23-WP.

TABLE CLH-14
Southern California Gas Company
SoCalGas Owned Facilities

	# Sites	Sq. Ft.	Average Age
Operating Bases	64	868,414	46
Branch Offices	6	14,598	69
Multi-Use	6	593,670	44
Regional HQ	4	239,858	29
Total	**80**	**1,716,540**	**47**

The following maps illustrate the location of the SoCalGas facilities, followed by a description of each facility type.


SoCal Gas Service Territory & Facility Locations
HANFORD VISALIA
PORTERVILLE
TEMPLETON
BAKERSFIELD
SAN LUIS OBISPO
MOJAVE
SANTA MARIA
LANCASTER
See Los Angeles Detail Map
SANTA BARBARA
VALENCIA
SIMI VALLEY
OXNARD-VENTURA
YUCCA VALLEY
CORONA
BEAUMONT
RAMONA
PALM DESERT
BLYTHE
ALISO VIEJO
MURRIETA
Legend
SCG District Bases
SCG Gas Territory
County Boundary
Customer Area Cities


SoCal Gas Service Territory & Facility Locations
Los Angeles Detail Map
VALENCIA
SIMI VALLEY
BRANFORD
CANOGA
SATICOY
RIM FOREST
GLENDALE
PASADENA
AZUSA
HOLLYWOOD
JUANITA
ALHAMBRA
SAN BERNARDINO
FONTANA
SANTA MONICA
CRENSHAW
BELVEDERE
INDUSTRY
CHINO
HUNTINGTON PARK
WHITTIER
RIVERSIDE
DOWNEY
BEAUMONT
COMPTON
182ND ST
LA JOLLA STREET
CORONA
ANAHEIM
GARDEN GROVE
SAN PEDRO
RAMONA
SANTA ANA
ALISO VIEJO
MURRIETA
Legend
SCG District Bases
SCG Gas Territory
County Boundary
Customer Area Cities
County Boundary

The following is a description of facility types in Facility Operations:

- Operating Bases: These facilities house the SoCalGas operations activities. They support gas distribution and transmission crews, customer service field operations, advance meter operations, and storage operations that provide services to SoCalGas customers.
- Regional Headquarters/Other Office Facilities: These offices consist of Regional Headquarters buildings to house a number of administrative functions that support distribution and customer service field operations, and transmission/storage operations. In addition, this category includes two customer call centers and the Monterey Park (MPK) facility (which is a shared site with SDG&E and is discussed under Shared Facility Operations later in this testimony) that houses various activities for Information Technology (IT), billing, and payment processing.
- Branch Offices: This category represents payment offices for customer service to support bill payment and customer walk-in inquiries and service requests.
- Multi-Use Facilities: These facilities provide various support functions for SoCalGas. They provide storage capacity for gas distribution material and equipment, various meter repair and fabrication shops, office space for gas distribution, gas transmission, Fleet Services operations, and environmental solutions. Pipeline welding and classroom training for customer service employees are also provided at a multi-use site. SoCalGas also operates a testing lab at its Pico Rivera site to support environmental compliance and material testing and evaluation services for air quality and compressor services, applied technology, and chemical analysis. In addition, this category includes the SoCalGas Energy Resource Center (ERC).
- Gas Company Tower (GCT): This shared facility is the primary SoCalGas administrative office space, which is located in downtown Los Angeles.
- Telecommunication Sites: The sites contain the radio network and dispatch infrastructure for Company operations, handling both data and voice communications.

2. Forecast Method

A five-year historical average is appropriate because multi-year averaging is recognized as a reasonable and valid methodology where costs fluctuate from year to year and costs in this area have fluctuated in the past few years. Therefore, SoCalGas relies on averaging of five years to arrive at a reasonable cost estimate. In the TY 2016 GRC, a 3-year average was selected as more appropriate than a 5-year average for Facility Operations due to costs in 2009 being an anomaly as the nation recovered from a recession. More information is included in my workpapers entitled, "Facility Operations," Exhibit SCG-23-WP.

3. 4. Cost Drivers

The cost drivers include labor required to manage the infrastructure and non-labor costs associated with maintenance, repairs, materials, electricity, and water costs. Cost drivers also include contracted services for janitorial, landscaping, and yard sweeping for the facilities. The increase from the base year is driven by the need to add: (1) resources for space planning requirements; (2) training for Facility Operations mechanics to meet required maintenance and repairs on buildings; and (3) tools and equipment needed to evolve with the ever changing new technology. Further, SoCalGas must adhere to the following new state mandated building changes: (1) green building requirements (Title 24, ZNE) and (2) gender neutral restroom requirements. Finally, SoCalGas will need to increase the use of contracted services due to the loss of staff requirements to meet our facilities maintenance and operation needs.

Finally, the cost drivers for SoCalGas' RAMP mitigations are as follows:

- **SCG-2 Risk to Employee, Contractor, Customer, and Public Safety**

For more information regarding the cost drivers for SCG-2, please see the testimony of Mr. Zornizer (Ex. SCG-13).

- **SCG-5 Workplace Violence and SCG-6 Workplace Violence**

The cost drivers to fund necessary physical security improvements at various staffed facilities include: (1) fencing; (2) camera systems; (3) gates; (4) contracted security guards; and (5) security equipment.

IV. SHARED COSTS

A. Introduction

As described in the Shared Services and Shared Assets Billing, Segmentation, and Capital Reassignments testimony of James Vanderhye (Exhibit SCG-34/SDG&E-32), Shared Services are activities performed by a utility shared services department (*i.e.*, shared Fleet Services) for the benefit of: (i) SDG&E or SoCalGas, (ii) Sempra Energy Corporate Center, and/or (iii) any unregulated subsidiaries. The utility providing Shared Services allocates and bills incurred costs to the entity or entities receiving those services.

Table CLH-15 summarizes the total shared O&M forecasts for the listed cost categories.

TABLE CLH-15
Southern California Gas Company
Shared O&M Summary of Costs

Shared Services	2016 Adjusted-Recorded (000s)	TY2019 Estimated (000s)	Change (000s)
A. Shared Fleet Management	2,236	2,500	264
B. Shared Facility Operations	3,500	3,845	345
Total Shared Services (Incurred)	**5,736**	**6,345**	**609**

The forecast reflects the total costs incurred as well as the shared services allocation percentages related to those costs. Those percentages are presented in the Shared Services workpapers, Exhibit SCG-23-WP, along with a description explaining the activities being allocated. The dollar amounts allocated to affiliates are presented by Mr. Vanderhye (Ex. SCG-34/SDG&E-32).

B. Shared Fleet Management

TABLE CLH-16
Southern California Gas Company

Shared Services	2016 Adjusted-Recorded	TY 2019 Estimated	Change
A. Shared Fleet Management	2,236	2,500	264
Total	**2,236**	**2,500**	**264**

1. Description of Costs and Underlying Activities

This activity consists of the Fleet Services management staff which includes an allocated portion of the Fleet Services Director as well as management and technology systems that provide technical support.

The following is a summary of some of the activities that are performed by Fleet Management:

- Vehicle design specification and up-fitting
- Quality assurance inspection services
- Vehicle replacement management
- Quality assurance, Environmental Compliance
- Training for Fleet Services Technicians
- Fuel ordering and management
- Fleet System and technology management
- Continuous improvement

2. Forecast Method

A three-year historical average was used as the basis for our TY 2019 forecast. The 3-year average most accurately reflects the most recent changes in staffing levels and shared support between SoCalGas and SDG&E. This forecast includes backfilling one FTE for a Fleet Services Maintenance advisor, backfilling one FTE for a vehicle quality assurance specialist, one incremental FTE for a trainer to support the new SMOG program, one incremental FTE for a Fleet Services compliance specialist to support the full life-cycle of the Fleet Services' assets, and one incremental FTE for a technology and Fleet Services maintenance trainer.

Further, SoCalGas used a 3-year average for shared Cost Centers to reflect the consolidation of SDG&E and SoCalGas fleets in 2014. The 3-year forecast is most appropriate since this represents the current and future direction of Fleet Services.

3. Cost Drivers

The cost drivers behind this forecast include labor for backfilling one Fleet Services advisor, backfilling one vehicle quality assurance specialist, one incremental trainer, one incremental compliance specialist, one incremental technology and maintenance trainer, and the costs to maintain the Fleet Services systems.

Additionally, this forecast includes the labor required to process data analysis through the implementation of a new Fleet Services' enterprise system. Fleet Services is now able to more

precisely capture data (parts invoices, lease records, vehicle service records, etc.) through automation and streamlined procedures including the use of new tablet and handheld devices which provide benefits in the fleet garages. Utilizing automated data capture not only increases data accuracy but it also increases Fleet Services' reporting efficiency and decision making process. However, Fleet Services requires greater analysis and an appropriate resource to manage our increased collection of data. Fleet Services' current resource levels cannot continue to maintain the true operating needs of the organization and excessive overtime due to retirements is not a sustainable option.

Further, due to the implementation of the smog program and CHP BIT program, Fleet Services must conduct audits to maintain compliance which, in the case of the BIT program, includes the review of vehicle and employee driver records. To comply with the new revisions, SoCalGas will have to inspect an additional 13 terminals and 560 vehicles due to the reduced vehicle weight requirement of the program (from 26,000 pounds GVW to 10,001 pounds GVW). Further, all BIT vehicles between 10,001-26,000 pounds GVW require a 90-day safety inspection which was not previously required.[34]

C. Shared Facility Operations

The costs for each category are summarized below in Table CLH-17.

TABLE CLH-17
Southern California Gas Company
Summary of O&M Shared Facility Operations
(Thousands of 2016 dollars)

Shared Facility Operations	2016 Adjusted-Recorded	TY 2019 Estimated	Change
Facilities – Monterey Park	2,300	2,332	31
Facilities - Gas Company Tower	1,200	1,513	313
Incurred Costs Total	**3,500**	**3,845**	**345**

1. Description of Costs and Underlying Activities

This request is necessary to fund shared Facility Operations at SoCalGas. As summarized in the above Table CLH-16, the forecast for TY 2019 is $3.845 million, which is a $0.345 million increase. The purpose of this request is to continue to fund two major locations, the MPK and

[34] Dep't of California Highway Patrol, Welcome to BIT, The Basic Inspection of Terminals Program, https://www.chp.ca.gov/CommercialVehicleSectionSite/Documents/O%20chp800h.pdf.

GCT costs. The forecast is comprised of the following: MPK, $2.332 million and GCT, $1.513 million.

The majority of the Shared Services activities in the Facility Operations area reflect costs for shared management or operational costs that overlap between SDG&E, SoCalGas, and the Sempra Energy Corporate Center.

The following is a summary of the SoCalGas cost centers:

Monterey Park

This cost center contains Facility Operations which houses the data center, maintenance expenses (e.g., mechanics and a manager, Facility Operations non-labor expenses such as general maintenance, janitorial, landscaping, and security maintenance) and a new employee learning center.

These costs are allocated back to SDG&E and Corporate Center based on the amount of space used and the respective Shared Services percentages of each occupying utility. The data center allocation method, however, uses Local Area Network (LAN) identifications (applied to the electric costs of the data center) to compute the allocation percentages. More information is included in my workpapers entitled, "Facilities Monterey Park Mgr," Exhibit SCG-23-WP.

Gas Company Tower

This cost center contains Facility Operations and maintenance expenses (e.g., mechanic and manager labor, Facility Operations non-labor expenses such as general maintenance, janitorial, and security maintenance) for GCT. More information is included in my workpapers entitled, "Facilities GCT," Exhibit SCG-23-WP. These costs are allocated back to SDG&E and Corporate Center based on the amount of space used and the respective Shared Services percentages of each occupying utility.

2. Forecast Method

A four-year average represents a reasonable methodology to estimate operational needs for Monterey Park for TY 2019 because the new employee learning center was completed in 2013 and costs are expected to track the variations during the four-year period preceding TY 2016. More information is included in my workpapers, SCG-23- Facilities Monterey Park Mgr.

SoCalGas used a five-year average for GCT Facility Operations compared to base year in the 2016 GRC filing because a new lease was in effect as of November 2011 making the use of a five-year average inappropriate for the TY 2016 GRC.

3. Cost Drivers

The cost drivers for these activities include labor required to manage the infrastructure and non-labor costs for maintenance, repairs, materials, electricity, and water costs, and contracted services for janitorial, landscaping, and yard sweeping costs for these facilities. In addition, the GCT had conference room reservation upgrades and security cost increases.[35]

V. CAPITAL

TABLE CLH-18
Southern California Gas Company
Summary of Capital Fleet and Facility Operations

(Thousands of 2016 dollars) FACILITIES (In 2016 $)	2016 Adjusted-Recorded (000s)	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
Total CAPITAL	**30,037**	**42,416**	**73,569**	**82,372**

A. Introduction

For TY 2019, the capital expenditures request, summarized in Table CLH-19 below, is $42.416 million in 2017, $73.569 million in 2018, and $82.372 million in 2019. The capital expenditures forecast includes cost required to: (1) maintain infrastructure and operational integrity in a safe and efficient manner; (2) renovate SoCalGas buildings to meet government mandated Zero Net Energy requirements; (3) support sustainability efforts (e.g., conserve water, energy); (4) install Facility Energy Management Systems; and (5) cover costs for NGV refueling stations.

Capital expenditures costs are broken out into the following categories: (1) Infrastructure & Improvements; (2) Safety & Environmental; (3) Bakersfield Multi-Use facility; (4) Facility Energy Management Systems; (5) Fleet Projects; and (6) NGV Refueling Stations. See Table CLH-18 below for a summary of costs.

[35] It is important to note that Fleet Services has also focused on creative ideas to modernize its business through automation in order to create cost efficiencies, as discussed in more detail in the Fueling our Future section of my testimony.

TABLE CLH-19
Southern California Gas Company
Summary of Capital Fleet and Facility Operations
(Thousands of 2016 dollars)

FACILITIES (In 2016 $)	2016 Adjusted-Recorded	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
A. Infrastructure & Improvement	24,066	24,243	45,863	59,923
B. Safety & Environmental	268	2,450	2,075	2,000
C. Bakersfield Multi-Use Facility	0	7,000	7,000	0
D. Facility Energy Management Systems	0	1,000	500	0
E. Fleet Projects	40	548	2,194	1,650
F. NGV Refueling Stations	5,663	7,175	15,937	18,799
Total	**30,037**	**42,416**	**73,569**	**82,372**

B. Infrastructure & Improvements

For TY 2019, the Infrastructure & Improvements capital request is $24.243 million in 2017, $45.863 million in 2018, and $59.923 million in 2019. These costs are further separated into the following cost subcategories: (1) Infrastructure & Improvements; (2) Facility Renovations; (3) Sustainability Projects; and (4) Physical Security Infrastructure Enhancements (i.e.,RAMP). These costs are summarized in Table CLH-20 below.

TABLE CLH-20
Southern California Gas Company
Summary of Capital Infrastructure & Improvements
(Thousands of 2016 dollars)

A. Infrastructure & Improvement	2016 Adjusted-Recorded	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
1. Infrastructure & Improvements	24,066	18,914	20,649	18,935
2.Facility Renovations	0	3,880	21,514	37,138
3. Sustainability Projects	0	1,449	3,100	3,250
4. Physical Security Infrastructure Enhancements (RAMP)	0	0	600	600
Total	**24,066**	**24,243**	**45,863**	**59,923**

1. Description

This request is necessary to fund basic facility improvements and facility renovations to adequately support business operations, extend the life of Company assets, protect employees and Company property, adhere to codes and regulations, enhance safety and environmental compliance, ensure facilities meet business requirements, and minimize environmental impact.

a. Infrastructure & Improvements

The Infrastructure & Improvements forecast funds necessary facility improvements and equipment upgrades to adequately support business operations. SoCalGas Facility Operations identifies facilities to be repaired or improved, as needed, based on the criticality of the facility, the age of the asset, and the implications for delay and/or failure to complete the replacement or upgrade. Similar projects are bundled for economies of scale to obtain better pricing in sourcing. Construction calculations are supported by industry professionals, including licensed architects and designers, construction industry professionals, and IT domain experts using standard construction estimation practices. These specific details are found in my workpapers entitled, "Infrastructure & Improvements," Exhibit SCG-23-CWP.

b. Facility Renovations

Facility renovations are necessary because of aging facilities that no longer meet workforce space requirements. These renovations will support SoCalGas' changing workplace requirements and improve the functionality of our buildings and/or sites, which support the work patterns of SoCalGas employees. Included in this ask are capital improvements for Pico Rivera, Anaheim, Chatsworth, and Compton. These facility renovation improvement requests were included in the prior GRC (TY 2016); however, SoCalGas refocused certain projects during the previous GRC cycle, allocating a million dollars over the awarded amount to focus on accelerating the greening of our fleet through the construction and renovation of our NGV refueling stations. In addition, due to projected growth of business and need in the San Joaquin Valley and customer needs arising in the Bakersfield area, SoCalGas refocused its construction effort to a new Bakersfield multi-use facility which began in 2017. The new Bakersfield multi-use facility will also house a training facility for SoCalGas employees based in the northern portion of our territory supporting the San Joaquin Valley area.

In addition to our pressing needs to address both NGV refueling and the Bakersfield multi-use facility, SoCalGas must also make facility renovations at the Pico Rivera, Anaheim, Chatsworth and Compton bases as well adding a new logistics warehouse. Renovations are also needed at Monterey Park due to Gas Control's relocation. These renovations will support SoCalGas' changing workplace requirements and improve the functionality of our buildings and/or sites, which support the work patterns of SoCalGas employees. SoCalGas needs facilities that provide flexibility so that the space can evolve as people, technology, and business needs change over time. These improvements typically include space reconfiguration, building modifications, technology, and furniture upgrades.

c. Sustainability Projects

The overall objective of the Company's sustainability efforts is to minimize its environmental footprint while containing costs. In support of this objective, SoCalGas requests funding to install: (1) solar systems at additional facilities to generate renewable energy from solar photovoltaic panels, which will partially offset rising electricity costs; and (2) xeriscape at additional facilities to improve water conservation. Specific details regarding these projects are found in my workpapers entitled, "Sustainability Projects," Exhibit SCG-23-CWP.

d. Physical Security Infrastructure Enhancements (RAMP)

Physical security at Company locations is a priority for SoCalGas. SoCalGas plans to enhance existing security infrastructure at various staffed facilities with the goal of minimizing security threats to office and branch locations and employees. As discussed in RAMP Chapter SCG-2 (Employee, Contractor, Customer, and Public Safety), this risk area covers the risk of conditions and practices which may result in severe harm to employees, contractors, and/or the public which can occur on company facilities. Additionally, in outlining our concerns with Workplace Violence, RAMP Chapter SCG-5/SDGE-9, SoCalGas explained that it intended to enhance physical security at Company facilities by, among other things, installing and updating access control and detection capabilities. Accordingly, SoCalGas will add additional security cameras, improve perimeter fencing and controlled access points at various facilities.

2. Forecast Method

a. Infrastructure & Improvements

The forecast for Infrastructure & Improvements was determined using the aggregate

current replacement value (CRV) of SoCalGas-owned buildings and applying a capital renewal rate based on an industry benchmarking index that supports the investment necessary to maintain our existing infrastructures. SoCalGas applied an index from the International Facility Management Association (IFMA) Utility Council benchmarking study to the CRV (study conducted every 5 years).[36] The IFMA benchmarking study indicated capital renewal ranges from 1.16% to 3.77% for current year capital and 1.21% to 4.52% for 5-year average capital.[37] Taking into consideration the IFMA ranges above, in conjunction with the condition and average age of the properties (47 years), my forecast approach applies the midpoint of current year capital renewal rate range, 2.5% to our current replacement value to determine the forecasted amount. My forecast approach recognizes that facilities require ongoing investments to maintain their functional and operational integrity, as the conditions continually deteriorate over time. This method is most appropriate because it is based on industry standards and reputable industry benchmarking index. More information is included in my Infrastructure & Improvements workpapers, Exhibit SCG-23-CWP.

b. Facility Renovations, Sustainability Projects, and Physical Security Infrastructure Enhancements (RAMP)

The forecasts for Facility Renovations, Sustainability Projects, and RAMP were developed using a zero-based methodology. This method is most appropriate because these costs are new and SoCalGas does not have recorded historical costs for these exact projects making the use of alternate methodology inappropriate. SoCalGas estimates these costs based on the specific scope of work, equipment needs, software requirements, vendor estimates and in cases where similar projects have been completed, historical costs for those projects are used to estimate future project costs. More information is included in my capital workpapers entitled, "Facility Renovations," Exhibit SCG-23-CWP.

3. Cost Drivers

The underlying cost drivers for this capital request are facility improvements and equipment upgrades such as:

- Boilers
- Chillers
- Water Heaters
- Cooling Towers

[36] International Facility Management Association Utilities Council, 2014 Facilities Benchmarking Study Using 2013 Data (May 31, 2014).
[37] International Facility Management Association Utilities Council, Capital Renewal Supplemental Data to 2014 Facilities Benchmarking Study Using 2013 Data (May 31, 2014) (using 2012 data).

- Flooring & Carpeting
- Generators
- Air Handlers
- Stormwater Protection
- HVAC Systems
- Lighting
- Plumbing
- Electrical
- Water Pathogens Management Program
- Security Integrity
- Ceiling Tiles
- Parking Lots

- Parking Lots - Focus will be placed on parking lots which contain cracks and low spots which over time and could create safety concerns with foot traffic walking in the existing parking lots, as well as the integrity of the surface where top cover degradation leads to accelerated deterioration of the underlying ground.
- Chillers – Parts for older chillers are becoming harder to procure and costs to maintain are not economical. Additionally, some replacements may require redesign and piping configurations.
- HVAC -Systems which have been identified as under-performing or nearing the end of their useful life cycle. Additionally, some replacements may require new electrical controls and other components.
- Title 24 of the California Code of Regulations, known as the California Building Standards Code – these regulations govern the construction of buildings in California. Title 24 requires the use of new energy efficient technologies and construction methods. Compliance with Title upwardly impacts construction costs.
- Zero Net Energy (ZNE) – this state mandate requires the reduction of greenhouse gas emissions and the conservation of energy resources for all new and existing buildings by 2030. All new commercial buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need.
- Energy Management System – Allow Facility Operations management to more efficiently use electricity and reduce energy consumption at SoCalGas facilities by allowing Facility Operations managers to monitor, measure, and control electrical building loads.
- Gender-neutral Restrooms – California's ERAA requires all single-user toilet

facilities in any business establishment be identified as "all-gender" toilet facilities.[38]

- Water Pathogens Management Program – implemented to replace swamp coolers, water heaters, and other related equipment to optimize employee safety at fleet garages.

a. Facility Renovations

Facility renovations improvements are projected over multiple years due to their magnitude and complexity. The underlying cost drivers are included in my Facility Renovations workpapers, Exhibit SCG-23-CWP. These renovations include:

- Facility redesign, space reconfiguration, technology, and furniture upgrades. More information regarding these cost drivers are included in my Facility Renovations workpapers, Exhibit SCG-23-CWP.
- Physical Relocation of Gas Control Facility – Cost to fund the planning, permitting, construction, and relocation of a new Gas Control Center. Workforce increases within the Gas Control and SCADA departments have resulted in the need for additional improvements, space reconfigurations, and building modifications that will allow SoCalGas to support future business requirements and increase functionality. The existing building facility and site cannot accommodate these requirements and necessary functionality. SoCalGas proposes a new multi-use facility which will have the capacity to accommodate this expansion for additional control room activities such as the Distribution Operations Control Center. For more details see the testimony of Mr. Zornizer, (Ex. SCG-12).
- Logistics Warehouse – Costs to locate, plan, and expand an existing Logistics Warehouse to accommodate increasing diameter pipe and increasing inventory requirements. For more details, see the Supply Management, Logistics, and Supplier Diversity testimony of Denita Willoughby (Exhibit SCG-22/SDG&E-20).

[38] Cal. Health & Safety Code §118600 (codifying AB 1732).

- Technical academic training facility – Costs to locate, plan, and develop a technical academic training facility. For more details, see the Gas System Integrity testimony of Omar Rivera (Exhibit SCG-05).

The underlying cost drivers for these capital projects relate to project requirements and vendor estimates for specific work performed.

b. Sustainability Projects

Sustainability is a key factor in SoCalGas' business planning. SoCalGas' sustainability efforts are to improve energy conservation and to reduce SoCalGas' carbon footprint. The goal is to become a sustainable corporation that improves cost containment while protecting the environment and improving the lives of those with whom we share it. In support of this objective, SoCalGas requests funding to install: (1) solar systems at various facilities to generate renewable energy from solar photovoltaic panels, which will partially offset rising electricity costs; (2) water conservation projects at various facilities, which include xeriscaping and other drought tolerant projects; and (3) LED lighting conversions at various facilities which are safer, more durable, and longer lasting and consume far less electricity than incandescent bulbs. SoCalGas' initiative offers an opportunity for SoCalGas to bring innovation, leadership and sustainability to company operations.

Xeriscape conversions, which are also called drought-tolerant landscape conversions, requires the removal of more water intensive grass/turf landscapes and replacement with native and drought-tolerant plants that can survive without any irrigation. This process can involve the removal of vegetation and old irrigation systems, replacing them with native trees and water efficient irrigation systems. The majority of our water consumption at company sites is used for landscape irrigation. By converting grass and turf to drought-tolerant plants, we can greatly reduce water consumption.

The solar projects included in this capital request improve energy conservation and reduce our carbon footprint. Additionally, these projects provide an opportunity to partially offset rising electrical costs. The power generated by the solar PV system will provide more energy security by lowering our energy consumption. Details regarding SoCalGas sustainable projects can be found in my capital workpapers, Exhibit SCG-23-CWP.

c. Physical Security Infrastructure Enhancements (RAMP)

SoCalGas is requesting $0.600 million in 2018, and $0.600 million in 2019 to fund necessary physical security improvements at various facilities associated with the mitigation of security upgrades and improvements to various facilities. These include installing, replacing, or upgrading existing physical security measures including fencing, camera systems, gates, and security equipment as described in my RAMP section II above. The underlying cost drivers for this capital project relate to project requirements and vendor estimates for specific work performed.

C. Safety and Environmental

SoCalGas is requesting $2.450 million in 2017, $2.075 million in 2018, and $2 million 2019 for projects to improve safety and to comply with environmental regulations. The request is summarized in Table CLH-21 below.

TABLE CLH-21
Southern California Gas Company
Summary of Capital Safety & Environmental
(Thousands of 2016 dollars)

B. Safety & Environmental	2016 Adjusted-Recorded	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
1. Safety & Environmental	268	2,450	2,075	2,000
Total	**268**	**2,450**	**2,075**	**2,000**

1. Description

The Safety & Environmental request is necessary to comply with mandated American with Disabilities (ADA) improvements to the San Luis Obispo and Santa Barbara facility which will improve customer access and accessibility to this branch office as well as to perform earthquake/seismic retrofits at various facilities throughout the service territory.

2. Forecast Methodology

The forecast method developed for this cost category is zero-based. This method is most appropriate because each project has been estimated based on unique and specific scope and budgetary considerations. SoCalGas estimates these costs based on the specific scope of work, equipment needs, vendor estimates, and in cases where similar projects have been completed,

historical costs for those projects are used to estimate future project costs. More information is included in my workpapers entitled, "Safety & Environmental," Exhibit SCG-23-CWP.

3. Cost Drivers

The underlying cost drivers for these capital project relate to project requirements and vendor estimates for specific work performed. Further, SoCalGas' must comply with applicable federal, state, and local laws and regulations. More information for these cost drivers is included in my Safety & Environmental workpapers, Exhibit SCG-23-CWP.

D. Bakersfield Multi-Use Facility

SoCalGas is requesting $7 million in 2017 and $7 million in 2018, as summarized on Table CLH-22 below, for the planning, permitting, construction, and commissioning of a new multi-use facility.

TABLE CLH-22
Summary of Capital Bakersfield
(Thousands of 2016 dollars)

C. Bakersfield	2016 Adjusted-Recorded	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
1. Bakersfield Multi-Use Facility	0	7,000	7,000	0
Total	**0**	**7,000**	**7,000**	**0**

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1. Description

This request is necessary to fund the planning, permitting, and construction of a new Bakersfield multi-use facility. Continuous customer expansion in this service territory requires a larger multi-use facility that the current 2.66-acre site cannot accommodate. Growth in the San Joaquin Valley population increases reliance on energy and incumbent infrastructure provided by SoCalGas. Additionally, a priority for SoCalGas is meeting the energy needs of San Joaquin Valley low income residents who stand to benefit greatly by affordable, reliable access to connected gas service. The multi-use Bakersfield facility will have the capacity to service the 20-year growth projection in the San Joaquin Valley.

Further, SoCalGas is including an NGV refueling station for onsite fleet and public fueling in order to expand its NGV refueling network of stations to serve the trucking sector along the transportation corridor. Additionally, a new NGV refueling station will further support

the greening of our fleet.

The functions of the facility will include: (1) a District Operations Base for company field crews; (2) a remote training facility for San Joaquin area employees that will reduce lodging requirements and travel to the Los Angeles area; (3) a Customer Demonstration Center to display emerging gas and energy efficiency technologies; and (4) a meeting hub for San Joaquin Valley area with adequate conferencing capabilities. The site will be built in compliance with Zero Net Energy standards and include photovoltaic solar panels.

2. Forecast Methodology

The forecast for Bakersfield was developed using a zero-based methodology. This method is most appropriate because these costs are new and SoCalGas does not have recorded historical cost for this exact project with these exact specifications making the use of alternate methodology inappropriate. SoCalGas estimates these costs based on the specific scope of work, equipment needs, software requirements, vendor estimates, and in cases where similar projects have been completed, historical costs for those projects are used to estimate future project costs. More information is included in my workpapers entitled, "Bakersfield," Exhibit SCG-23-CWP.

3. Cost Drivers

The underlying cost drivers for this capital request is comprised of $7 million in 2017 and $7 million in 2018 required to fund planning, engineering, permitting, and construction of a new multi-use facility, including the following activities:

- internal labor, permitting, and environmental services
- furniture, IT equipment, and A/V equipment
- project management
- architectural and engineering services
- construction

E. Facility Energy Management Systems

For TY 2019, the facility energy management system upgrade capital request is $1 million in 2017 and $0.5 million in 2018, as summarized on Table CLH-23 below, to upgrade existing or install new systems to improve energy management of lighting and HVAC systems.

TABLE CLH-23

Southern California Gas Company
Summary of Capital Facility Energy Management Systems
(Thousands of 2016 dollars)

D. Facility Energy Management System	2016 Adjusted-Recorded	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
1. Facility Energy Management Systems	0	1,000	500	0
Total	**0**	**1,000**	**500**	**0**

1. Description

SoCalGas plans to install Energy Management System's (EMS) at any sites that do not have an EMS in place. EMS consists of software and hardware that are integrated with the building's HVAC and lighting systems. Depending on whether the EMS is wireless or analog, wiring may also be required to connect the EMS with a site's building systems. The purpose of an energy management system is to allow facility management to more efficiently use electricity and reduce energy consumption at SoCalGas facilities by allowing facility managers to monitor, measure, and control electrical building loads. Energy management systems can be used to centrally control devices like HVAC and lighting systems across multiple physical locations.

2. Forecast Method

The forecast for the facility energy management system was developed using a zero-based methodology. This method is most appropriate because these costs are new and SoCalGas does not have recorded historical cost for these exact projects with these exact specifications making the use of alternate methodology inappropriate. SoCalGas estimates these costs based on the specific scope of work, equipment needs, software requirements, vendor estimates and in cases where similar projects have been completed, historical costs for those projects are used to estimate future project costs. More information is included in my workpapers entitled, "Facility Management Energy Systems," Exhibit SCG-23-CWP.

3. Cost Drivers

The underlying cost drivers for this capital request is comprised of $1.5 million to fund the installation of EMS at the remaining sites that do not already have energy management systems. This includes the installation of wireless or wired systems that may need to be

connected to a building's HVAC and lighting systems as well as software that is used in parallel with these systems by facility management staff.

F. Fleet Projects

For TY 2019, the Fleet Projects capital request is $0.548 million in 2017, $2.194 million in 2018, and $1.65 million in 2019, as summarized on Table CLH-24 below, to fund new/replacement Fleet Services' capital tools and equipment, a new Fleet Services training facility, and replace Underground Storage Tanks (USTs) in a systematic way.

TABLE CLH-24
Southern California Gas Company
Summary of Capital Fleet Projects
(Thousands of 2016 dollars)

E. Fleet Projects	2016 Adjusted-Recorded	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
1. Fleet Projects	40	548	2,194	1,650

1. Description

SoCalGas plans to replace Fleet Services' capital tools and equipment as existing tools become obsolete or as vehicle technology requires the replacement of existing tools to accommodate new vehicle technology. These tools include equipment such as tire changing and balancing machines, diagnostic tools, and emissions related equipment across 48 SoCalGas garages.

SoCalGas moved its fleet operation from Monterey Park to Pico Rivera and no longer has a training facility for Fleet Services technicians. The new Fleet Services training facility will house equipment and training tools needed to appropriately train technicians in new vehicle technologies such as NGV/CNG compliance & safety, SMOG, and other automotive practices.

SoCalGas is also renewing our request to replace Underground Storage Tanks (UST). SoCalGas continues to maintain its existing USTs in compliance with regulatory requirements, and these USTs have undergone and passed routine inspections. Resource constraints limited our ability to execute on the UST removal and replacements as proposed in the last GRC (TY 2016). SoCalGas refocused certain projects during the previous GRC cycle, allocating a million dollars over the awarded amount to focus on growing our green fleet through the construction and renovation of our NGV refueling stations. In addition, and as previously discussed in more detail,

due to projected growth of business in the San Joaquin Valley and customer needs arising in the Bakersfield area, SoCalGas reprioritized construction of a new Bakersfield multi-use facility which began in 2017.

$1.046 million in 2018 and $1.402 million in 2019 are needed to fund the replacement of seven (7) USTs. These seven (7) USTs were chosen for replacement because their design utilize a suction based system which makes them less reliable than a comparable UST that incorporates a pump mechanism.[39] SoCalGas is also proposing to standardize unleaded tanks to a 15,000-gallon capacity to maintain adequate inventory levels, allow for emergency response fuel requirements, and to allow for a more strategic ordering process to ensure fuel is purchased at the best possible price at the time of ordering. Diesel tanks will be standardized to ensure the fuel inventory is used in no more than six months to prevent the degradation of the diesel fuel, algae contamination, or sludge buildup. The work will include UST and piping removal and replacement, which will require upgrades to meet the Assembly Bill (AB) 2481 standard,[40] to remove and replace obsolete dispenser, and Under Dispenser Containment (UDC) removal and replacement to also meet AB 2481 standards.

2. Forecast Methodology

The forecast for Fleet Projects was developed using a zero-based methodology. This method is most appropriate because these costs are new and SoCalGas does not have recorded historical cost for these exact projects making the use of alternate methodology inappropriate. SoCalGas estimates these costs based on the specific scope of work, equipment needs, software requirements, vendor estimates and in cases where similar projects have been completed, historical costs for those projects are used to estimate future project costs. More information is included in my workpapers entitled, "Fleet Projects," Exhibit SCG-23-CWP.

3. Cost Drivers

The cost drivers are for the above-referenced projects. SoCalGas is requesting $0.300 million in 2017and $0.900 million in 2018 to fund a new Fleet Services training center associated with Fleet Services operations move from Monterey Park to Pico Rivera and no

[39] SoCalGas is establishing a routine replacement plan for all USTs in its system and under this replacement plan will prioritize USTs based on age, starting with the 38 USTs placed in service prior to 1987. The seven USTs proposed in this GRC are a subset of the 38.
[40] A.B. 2481 (Cal. Feb. 21, 2002), http://www.waterboards.ca.gov/ust/regulatory/ab2481_status.shtml.

longer has an appropriate facility. SoCalGas is requesting $0.248 million for each year from 2017 to 2019 are needed to fund new/replacement tools and equipment. Finally, SoCalGas is requesting $1.046 million in 2018 and $1.402 million in 2019 are needed to fund UST replacements.

G. NGV Refueling Stations

For TY 2019, the NGV Refueling Stations request is $7.175 million in 2017, $15.937 million in 2018, and $18.799 million in 2019, as summarized on Table CLH-25 below, to upgrade existing NGV stations and plan, design, and build eight new NGV refueling stations.

TABLE CLH-25
Southern California Gas Company
Summary of Capital NGV Refueling Stations
(Thousands of 2016 dollars)

F. NGV Refueling Stations	2016 Adjusted-Recorded	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
1. NGV Refueling Stations	5,663	7,175	15,937	18,799
Total	**5,663**	**7,175**	**15,937**	**18,799**

1. Description

SoCalGas continues to work toward its target of a majority NGV fleet and is targeting over 1,300 AFV's by 2020. SoCalGas will be leading by example, and in turn, preserving its investment in NGV fueling infrastructure for the next generation of natural gas vehicles.

SoCalGas currently owns and operates 27 NGV fleet refueling stations. 12 of these stations provide refueling access for utility operations as well as access for public vehicle fueling. This work will affect similar improvements to access points for both utility vehicle refueling and public refueling of NGVs. The requested capital will fund the following enhancements to SoCalGas' current infrastructure:

1. Replacement and upgrade of compression and related fueling assets to contend with aging equipment, some of which need to be upgraded to meet changing industry standard for operation including data security;
2. Upgraded stations to meet the refueling requirements of heavy duty CNG vehicles;
3. Increase fueling capacity due to the increased number of fleet vehicles served by our internal stations as well as the needed expansion of fueling capabilities to additional SoCalGas operating bases;

4. Added fueling capacity at three existing publicly accessible and heavy use stations;
5. Secondary compression at select SoCalGas NGV fleet-public fueling stations to improve reliability and capacity;
6. Standardization of critical equipment at SoCalGas NGV stations to improve reliability and reduce return-to-service time;
7. Upgrade of existing fleet-public fueling station driveways and fueling islands to allow access for larger fleet vehicles;
8. Replacement of outdated NGV fuel dispensers with latest-generation equipment, which will provide for added reliability and data security for fleet-public fueling;
9. Design, construction, and commissioning of eight new NGV fueling stations at strategic locations throughout SoCalGas service territory;
10. Expand SoCalGas' utilization of existing NGV fleet vehicles; and
11. Support an increase in the number and type of NGV vehicles to be operated by the Company.

These stations will also support public vehicle fueling in new geographic areas to promote expanded public use of CNG as an environmentally-friendly vehicle fuel alternative. The specific details regarding these refueling stations are found in my workpapers entitled, "NGV Refueling Stations," Exhibit SCG-23-CWP.

2. Forecast Method

The forecast for NGV Refueling Stations was developed using a zero-based methodology. This method is most appropriate because these costs are new and SoCalGas does not have recorded historical cost for these exact projects making the use of alternative methodology inappropriate. SoCalGas estimates these costs based on the specific scope of work, equipment needs, software requirements, vendor estimates, and in cases where similar projects have been completed, historical costs for those projects are used to estimate future project costs. More information is included in my NGV Refueling Stations workpapers, Exhibit SCG-23-CWP.

3. Cost Drivers

The underlying cost drivers for this capital project are planning, engineering, equipment, and installation costs to support the projects. See my NGV Refueling Stations workpapers, Exhibit SCG-23-CWP, for more information.

VI. CONCLUSION

Fleet Services and Facility Operations provide the underlying tools and support necessary to field crews who not only maintain the reliability and safety of our gas systems, but are often the first contact between the customer and the Company. The quality of our fleet maintenance & equipment, while enabling productive work, is also fundamental to the safety of our work crews permitting them to restore service, provide services to new customers, and perform routine inspection and maintenance. The requested forecast for Fleet Services and Facility Operations is essential to the continuation of our efforts and commitment to public and employee safety.

SoCalGas requests that the Commission adopt the O&M and Capital forecasts presented in this testimony. The forecasts were carefully developed and represent a prudent level of funding for the critical activities to take place in this GRC term. The amounts requested for TY 2019 for Fleet Services and Facility Operations are necessary to meet the needs of SoCalGas. Where applicable, they are based on an evaluation of cost trends adjusted for known incremental increases and decreases and then forecasted for the 2017 through 2019 period. This concludes my prepared direct testimony.

VII. WITNESS QUALIFICATIONS

My name is Carmen L. Herrera. My business address is 8101 S. Rosemead Blvd., Pico Rivera, CA 90660. I am employed by Southern California Gas Company (SoCalGas), as the Director of Support Services responsible for overseeing Fleet Services for SoCalGas and SDG&E, and Facility Operations and Capital Programs for SoCalGas. I have been in this position since 2011.

I received a Bachelor's of Science in Business Administration from the University of Southern California and hold an inactive Certified Public Accountant license. I have been employed by SoCalGas, SDG&E, and/or Sempra Energy in various positions and responsibilities since 2001. My experience is in numerous areas including Financial Planning, Supplier Diversity, Facilities Maintenance, Construction, Land Management Services, and Corporate Compliance. I have previously testified before the Commission.

LIST OF ACRONYMS

ACRONYM	DEFINITION
AB	Assembly Bill
AB32	Global Warming Solutions Act
ADA	Americans With Disabilities Act
AFV	Alternate Fuel Vehicle
ATCM	Airborne Toxic Control Measure
AQMP	Air Quality Management Plan
AMI	Advanced Meter Infrastructure
BIT	Basic Inspection of Terminals
CARB	California Air Resources Board
CUPA	Certified Unified Program Agencies
CalOSHA	California Occupational Safety and Health Administration
CHP	California Highway Patrol
CNG	Compressed Natural Gas
CPUC	California Public Utilities Commission
CRV	Current Replacement Value
DMV	Department of Motor Vehicles
EMS	Energy Management System
EPA	U.S. Environmental Protection Agency
EPAact	Energy Policy Act
ERC	Energy Resource Center
ERAA	Equal Restroom Access Act
FOF	Fueling Our Future
FTE	Full-time Equivalent
GCT	Gas Company Tower
GHG	Greenhouse Gas
GVW	Gross Vehicle Weight
HVAC	Heating Ventilation and Air Conditioning
ICS	Incident Command Center
IFMA	International Facility Management Association

IMS	Incident Management System
IT	Information Technology
LAN	Local Area Network
LIBOR	London Interbank Offered Rate
MPK	Monterey Park
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NGV	Natural Gas Vehicle
Non-OTR	Non-over-the-road vehicles such as trailers and forklifts
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
OTR	Over-the-road vehicles such as automobiles and trucks
PM	Particulate Matter
RAMP	Risk Assessment Mitigation Phase
RICE	Reciprocating Internal Combustion Engines (frequently as RICE/'NESHAPS)
SCAQMD	South Coast Air Quality Management District
SCG	Southern California Gas Company
SoCalGas	Southern California Gas Company
T&S	Transmission & Storage
UDC	Under Dispenser Containment
UST	Underground Storage Tank
ZNE	Zero Net Energy

SCG 2019 GRC Testimony Revision Log – December 2017

Exhibit	Witness	Page	Line or Table	Revision Detail
SCG-23	*Carmen Herrera*	*CLH-25*	*22*	Changed "Finally, beginning January 1, 2018, the DMV's base registration fee of $53 will increase due to a new "transportation improvement fee."" to "Finally, beginning January 1, 2018, the DMV's base registration fee will increase due to a new "transportation improvement fee.""