Company: San Diego Gas & Electric Company (U902M)
Proceeding: 2016 General Rate Case
Application: A.14-11-___
Exhibit: SDG&E-18

SDG&E

DIRECT TESTIMONY OF R. SCOTT PEARSON

(ENVIRONMENTAL SERVICES)

November 2014

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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SUMMARY

ENVIRONMENTAL			
Shown in Thousands of 2013 Dollars	**2013 Adjusted-Recorded**	**TY2016 Estimated**	**Change**
Total Non-Shared	4,167	4,658	491
Total Shared Services (Incurred)	4,189	4,615	426
Total O&M	**8,356**	**9,273**	**917**

Summary of Requests

- SDG&E's Environmental Services Department is requesting adoption of its 2016 Test Year forecast of $9.273 million for operations and maintenance (O&M) expenses.
- Requesting authorization to continue the New Environmental Regulatory Balancing Account (NERBA) with three proposed updates: the removal of cap-and-trade related costs and the addition of two new environmental costs associated with forecasted activities.
- Requesting costs for water quality compliance items and programmatic permits which can streamline the permitting process, provide uniform compliance requirements and reduce project costs.
- Requesting costs for environmental compliance tools and resources, such as, improved greenhouse gas reporting tools, the addition of one archaeologist for cultural resources support and one biologist for natural resources support and identified consultant support to meet regulatory and operational requirements.
- Provides environmental policy support for other operational witnesses who sponsor costs that are impacted by environmental regulations and pressures.

SDG&E DIRECT TESTIMONY OF R. SCOTT PEARSON
(ENVIRONMENTAL SERVICES)

I. INTRODUCTION

A. Summary of Costs

I sponsor the Test Year (TY) 2016 forecasts for O&M costs for both non-shared and shared services associated with the Environmental Services area for SDG&E. I do not sponsor any capital projects. Table 1 summarizes my sponsored costs.

TABLE 1

Test Year 2016 Summary of Total Costs

ENVIRONMENTAL			
Shown in Thousands of 2013 Dollars	**2013 Adjusted-Recorded**	**TY2016 Estimated**	**Change**
Total Non-Shared	4,167	4,658	491
Total Shared Services (Incurred)	4,189	4,615	426
Total O&M	**8,356**	**9,273**	**917**

In addition to this testimony, please also refer to my workpapers, Ex. SDG&E-18-WP, for additional information on the activities described herein.

B. Summary of Activities

Environmental Services oversees compliance for federal, state, regional and local environmental statutes, rules and regulations, including laws protecting air quality, water quality, hazardous materials, waste, cultural resources, land planning and natural resources. Environmental Services' responsibilities include tracking and analyzing the final versions of environmental regulations; developing compliance policies, procedures and tools; developing and supporting sustainability efforts; developing and delivering training material; developing and implementing internal quality assurance and quality control procedures; screening planned projects (including proposed real and personal property transactions) for environmental compliance and efforts to avoid and/or minimize project environmental impacts, soils contamination considerations and permitting needs; providing compliance oversight; and developing and obtaining environmental permits and plans. Environmental Services also manages a California certified environmental laboratory, two SDG&E treatment, storage and disposal facilities (TSDFs), the remediation of contaminated soils at current and former utility sites, and responds to emergency release events.

C. Importance of Environmental Protection and Compliance

SDG&E believes in being a responsible environmental steward and operating in compliance with all applicable environmental laws and regulations. Protecting biodiversity and ecosystems is also an important component of our environmental compliance activities. In all our operations, we work to comply with applicable laws and regulations related to protecting individual species and their habitats.

SDG&E also believes that environmental protection and providing safe, reliable and affordable energy are not mutually exclusive. We strive to avoid environmental impacts in our operations, and, when avoidance is not possible, to minimize impacts. SDG&E minimizes environmental impacts and risks with its comprehensive, multifaceted approach of clear guidance, training, early project environmental review, assessment, auditing, field monitoring, compliance certification and emergency response. Environmental Services has a published library of environmental field standards and procedures and company-specific employee training. Environmental Services leverages Geographic Information System (GIS) mapping technology to screen and review all planned projects that have the potential to disturb soil for potential environmental impacts. Early involvement in the planning and design phases helps to identify environmental issues at a time they can be better avoided or minimized. Biological and cultural monitoring is conducted as needed. Annually, Environmental Services, along with the Safety department, conduct an internal certification of program compliance and identify opportunities for process improvement.

Key components of our environmental compliance management program include internal assessments to help support and ensure compliance; a hazardous waste vendor audit program; and rigorous environmental contract terms and conditions for our vendors. Additionally, subject matter experts within Environmental Services analyze the potential impacts of proposed regulations as well as provide early planning for compliance with new regulations. Field-based environmental representatives are located at certain SDG&E sites to support day-to-day operations. A governance program is in place that partners with operations management and crews to focus on compliance requirements and leading practices. Environmental Services also include 24-hour on-call environmental subject matter experts to assist field operations.

There are numerous acronyms for the various programs, agencies and requirements encountered by Environmental Services and described in this testimony. In addition to describing the acronym in this text, I have included a Glossary of Acronyms in an appendix as a reference.

D. Support To/From Other Witnesses

In addition to sponsoring my own organization's costs, I also provide business or policy justification for the following other witnesses who sponsor operational costs driven by environmental regulation or pressures:

- Mr. James Seifert, witness for Real Estate, Land & Facilities (Ex. SDG&E-17), supporting the capital cost for water quality-related Municipal Separate Storm Sewer System (MS4) permit requirements;
- Ms. Carmen Herrera, witness for Fleet Services (Ex. SDG&E-16), supporting costs for the California Air Resources Board's (CARB's) Portable Engine Airborne Toxic Control Measure (ATCM) compliance and one vehicle add for Environmental Services in 2016;
- Mr. Jonathan Woldemariam, witness for Electric Distribution O&M (Ex. SDG&E-10) supporting sulfur hexafluoride (SF_6) compliance costs;
- Mr. John Jenkins, witness for Electric Distribution Capital (Ex. SDG&E-09), supporting the SF_6 switch replacement project;
- Mr. John Dagg, witness for Gas Transmission (Ex. SDG&E-05), supporting Regional Clean Air Incentives Market (RECLAIM) credits cost, water quality fees, and greenhouse gas emission reduction as part of Senate Bill 1371 (SB1371) costs for the Moreno compressor station (Moreno).

This business/policy support is addressed after the discussion of my sponsored costs, in Section IV of my testimony. I also included a Witness Matrix for SDG&E Environmental Policy and Costs in Appendix A.

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II. NON-SHARED COSTS

A. Introduction

Environmental Services' non-shared O&M costs support Environmental Compliance and refundable NERBA cost center activities for SDG&E. Table 2 summarizes the total non-shared O&M forecasts for the listed cost categories.

TABLE 2

Non-Shared O&M Summary of Costs

ENVIRONMENTAL			
Shown in Thousands of 2013 Dollars			
Categories of Management	**2013 Adjusted-Recorded**	**TY2016 Estimated**	**Change**
A. Environmental Compliance	3,381	3,649	268
B. New Environmental Reg Balancing Acct (NERBA)	786	1,009	223
Total	**4,167**	**4,658**	**491**

B. Environmental Compliance

1. Description of Costs and Activities

The compliance activities in this non-shared O&M cost category include management of hazardous waste and TSDF operations, oversight of daily environmental compliance activities, and permits and support for compliance with all operations and maintenance activities relating to the Sunrise Powerlink, and its associated facilities, to ensure compliance with the environmental permitting for that project. This cost category currently has 20.2 full-time equivalents (FTEs) performing this work. This cost center also records non-labor expenses for fees and assessments associated with these compliance activities.

2. Forecast Method

A base year forecasting methodology, plus incremental upward and downward pressures, was used to forecast labor and non-labor costs for Environmental Services. This method, which was used in SDG&E's 2012 GRC and is again most appropriate in this GRC, identifies specific new environmental regulatory and program-related requirements and costs impacting the company during the GRC period which are incremental to historically incurred costs. Traditional averaging or trending based on historically recorded costs would fail to capture these incremental costs forecasted for TY 2016. Starting with base year represents a conservative base upon which to apply forecasted incremental cost pressures described below, and captures the cost

efficiencies implemented in 2013 such as reduction in administrative expenses and strategic contracting efficiencies.

3. Cost Drivers

The upward financial pressures identified in this cost category ($268K) are for labor adjustments for full-year funding (+2.4 FTEs) and non-labor costs for water quality permit fee increases and for applications for herbicide use on Bureau of Land Management (BLM) lands in support of SDG&E's pole brushing activities. The fulfillment of this request will result in 22.6 FTEs in this cost category, and represents an incremental labor increase of $162K.

Non-shared cost pressures are attributed to water quality permitting fee increases ($7K) and consulting costs driven by BLM environmental assessments ($99K), resulting in a TY increase of $106K. The cost increase for water agency permit fee increases are supported in my workpapers in 1EV000.000 and detailed in supplemental workpapers (Ex. SDG&E-18-WP).

BLM requires SDG&E to obtain a Pesticide Use Permit in order to apply herbicides around the bases of the electric distribution poles located on BLM lands. SDG&E's Vegetation Management program currently applies herbicide around the base of its distribution poles, as needed, to minimize growth of weeds and reduce fire hazards. SDG&E has 62 electric distribution poles located on federal lands managed by the BLM in SDG&E's service territory. BLM is requiring a Pesticide Use Permit for integrated pest management including the use of herbicides on BLM lands. The Pesticide Use Permit process requires the applicant to prepare and submit an Environmental Assessment (EA). Environmental Services will utilize a consultant to develop the EA documents for the Pesticide Use Permit. The cost increase for BLM environmental assessments are supported in my workpapers in 1EV000.000 and supplemental workpaper (Ex. SDG&E-18-WP).

C. NERBA

1. Description of Costs and Activities

a. Background

In the 2012 GRC, SDG&E proposed creation of a two-way balancing account to record costs associated with certain new and proposed environmental rules or regulations. The Commission authorized the NERBA, which was implemented through adoption of Advice Letter 2496-E (SDG&E electric) and 2205-G (SDG&E gas). The currently authorized NERBA costs include (1) Assembly Bill 32 (AB32) Administration Fees; (2) Gas Cap and Trade related costs;

(3) Subpart W of Part 98 of Title 40 of the Code of Federal Regulations (CFR); and, (4) Polychlorinated Biphenyls (PCB) Phase-Out. The intent of the NERBA is to record costs meeting the following key criteria: (1) uncertainty as to the scope, magnitude, and mechanics of the compliance requirements associated with new, proposed, or evolving environmental rules or regulations; and (2) potential for incurring significant incremental costs.

b. Proposal

Environmental Services is requesting that the existing NERBA two-way balancing account be authorized to continue during this GRC cycle with the following three updates:

1. Removal of the Gas Cap and Trade related costs from the NERBA, upon the condition that the Commission authorize recording of these costs pursuant to Rulemaking (R.) 14-03-003.[1] Because the rulemaking is an active proceeding that deals squarely with Gas Cap and Trade, it is appropriate and logical to transition these costs and related ratemaking proposals to R.14-03-003. To facilitate this proposal, SDG&E has removed any historical/forecasted costs from the GRC. However, until a final decision is reached in the rulemaking, and a mechanism is adopted and implemented to record Gas Cap and Trade related costs, SDG&E will continue to use NERBA to record these costs, and will use the advice letter process to facilitate any transfer or disposition of NERBA balances.
2. Inclusion of O&M and capital costs for compliance with the new MS4 permit as new costs to be recorded in the NERBA for inclusion into rates. The MS4 O&M costs are sponsored by me in this testimony. The MS4 capital costs relate to facilities and are therefore sponsored by Mr. Seifert (Ex. SDG&E-17). A discussion of the MS4 permit related costs are described in the cost drivers section.
3. Inclusion of costs for Leak Detection and Repair (LDAR) program activities as new costs to be recorded in the NERBA for inclusion into rates. A discussion of the LDAR related costs are described in the cost drivers section.

A complete snapshot of SDG&E's proposed NERBA is shown below.

[1] R.14-03-003, Order Instituting Rulemaking to Address Natural Gas Distribution Utility Cost and Revenue Issues Associated with Greenhouse Gas Emissions, March 13, 2014.

NERBA Item	2016 Cost ($000)	Status	Witness Reference
AB32 Administrative Fees – Electric	$310	Continue in 2016 GRC period	Scott Pearson
AB32 Administrative Fees - Gas	$560	Continue in 2016 GRC period	Scott Pearson
Subpart W	$3	Continue in 2016 GRC period	Scott Pearson
PCB Phase Out	$75	Continue in 2016 GRC period	Scott Pearson
MS4 – O&M	$19	Add to NERBA	Scott Pearson
MS4 - Capital	$6,348	Add to NERBA	James Seifert
LDAR	$42	Add to NERBA	Scott Pearson
LDAR	$74	Add to NERBA	John Dagg
Gas Cap and Trade	N/A	Remove from NERBA	Scott Pearson

The regulatory accounting for the NERBA is addressed by Ms. Norma Jasso, witness for Regulatory Accounts (Ex. SDG&E-35).

2. Forecast Method

A base year forecast methodology, plus incremental upward pressures, was used to determine cost requirements for NERBA as a cost category. As stated earlier, Gas Cap and Trade related costs have been removed from 2013 recorded costs pursuant to our proposal to remove this item from NERBA for TY 2016. The proposed new additions to NERBA (MS4 O&M and Capital and LDAR) are treated as incremental costs to the base year amount.

As NERBA items are not readily predictable given the attributes for NERBA inclusion described earlier, traditional averaging of historical costs would be less reliable than using base year as a starting point. For instance, for cost center 1EV000.001 (RNERBA Environmental Fees – Electric Refundable) and 1EV000.002 (RNERBA Environmental Fees – Gas Refundable), a 3-year linear trend produced a negative number which is not a valid forecast result and was therefore rejected. A 5-year average would produce an inappropriately low forecast because it would not reflect AB32 Administrative Fees in 2009 historical costs since this fee began to be incurred in 2010. Because the NERBA is proposed as a 2-way balancing account, any over- or under-collections will be reconciled and adjusted in rates.

3. Cost Drivers

The following contribute to the upward incremental cost changes of $223K for NERBA, to bring a total forecasted amount of $1.009 million in 2016:

- 1EV000.001: NERBA – Environmental Fees – Electric Refundable $181K
  - AB32 Administrative Fees (Electric) $87K
  - MS4 Permit $19K
  - PCB Phase Out $75K
- 1EV000.002: NERBA – Environmental Fees – Gas Refundable ($42K)
  - LDAR $42K

AB32 Administrative Fees: Since 2010, SDG&E has paid administrative fees as required by the California's Global Warming Solutions Act of 2006, referred to as "AB32." These fees are for the CARB to recover its costs to implement AB32. AB32 requires public utility gas corporations, such as SDG&E, to pay annual administrative fees for each therm of natural gas they deliver to any end user in California, excluding natural gas delivered to electric generating facilities and to wholesale providers. AB32 requires electric generating facilities located in California, such as SDG&E's Palomar Power Plant, to pay annual administrative fees for each megawatt per hour (MW-hr) of net power generated by the combustion of natural gas. This is reported pursuant to CARB's mandatory greenhouse gas (GHG) reporting rule. AB32 generally requires electricity importers (defined as an owner of electricity generated outside of California as it is delivered to the first point of delivery in California) to pay administrative fees for each MW-hr of imported electricity reported pursuant to CARB's mandatory GHG reporting rule if the electricity is from unspecified sources or the combustion of fossil fuels. SDG&E's AB32 Administrative Fees are currently tracked in the NERBA. SDG&E estimates increases to the electric AB32 Administrative Fees because of added carbon-based energy sources to its portfolio to offset zero emission nuclear power. SDG&E is not seeking additional dollars for the gas AB32 Administrative Fees beyond the base year level. See workpapers for 1EV000.001, Ex. SDG&E-18-WP.

PCB Phase Out/ PCB Reassessment of Use Authorization: In SDG&E's 2012 GRC, SDG&E was authorized to record in the NERBA the costs associated with a final Environmental Protection Agency (EPA) rule on the phase-out of PCBs. The rule remains in the "Advance Notice of Proposed Rulemaking" phase with the Notice of Proposed Rulemaking projected to be issued February 2015. SDG&E requests that its authorization to record the costs associated with the final EPA rule on the phase-out of PCBs continue during this GRC period for inclusion into rates. SDG&E requires a consultant to analyze impacts of PCB Phase Out of electrical

equipment and scope and develop an implementation plan once final rule is adopted. See workpapers for 1EV000.001, Ex. SDG&E-18-WP.

MS4 Permit: On May 8, 2013, the San Diego Regional Water Quality Control Board (RWQCB) adopted a revised MS4 Permit, which includes new requirements for the cities located within San Diego County and Orange County and for the San Diego Unified Port District, San Diego County Regional Airport Authority and the Orange County Flood Control District (collectively, the copermittees). This permit requires each of the copermittees to reduce the discharge of pollutants in storm water to the "Maximum Extent Practicable" through requirements for construction activities and for areas of existing development (e.g., commercial and industrial facilities).

The MS4 Permit requires each copermittee to develop and implement "jurisdictional" requirements including best management practices (BMPs) and other requirements for new development and redevelopment projects and for existing developments. The copermittees need to develop these requirements no later than June 2015 and implement them during the fall of 2015. The MS4 Permit also requires copermittees to develop and implement watershed based plans (Water Quality Improvement Plans or WQIPs) that identify "priority water bodies" that need further protection and/or restoration, and strategies for such protection and/or restoration. We expect these strategies to result in more restrictive requirements within watersheds to reduce pollutants from specified types of discharges and/or more generally from all types of discharges.

Requirements for post-construction BMPs are more restrictive in the new MS4 Permit, which should result in increased costs for construction, and operation and maintenance of post-construction BMPs. In some cases, projects could require additional land to accommodate the post-construction BMPs. Further, post-construction BMPs under certain circumstances may also be required for linear construction projects. The San Diego County copermittees must develop their jurisdictional plans and WQIPs by June 2015, with their implementation expected in the fall of 2015. For the Orange County copermittees, development and implementation of their jurisdictional plans and WQIP are expected to occur in 2016. Because SDG&E's facilities and operations are located largely within the San Diego RWQCB boundaries, SDG&E's facilities and operations will be subject to the new requirements established by the copermittees. The copermittee's specific requirements are under development now and may change over time based on new information developed under the WQIPs. New and/or more stringent structural and/or

non-structural BMPs would probably be required in locations where waters have been designated by the San Diego RWQCB to be an "impaired water body" pursuant to section 303(d) of the federal Clean Water Act. For example, SDG&E's Metro Construction and Operations center is located adjacent to Chollas Creek in south San Diego that has been designated as an impaired water body. For purposes of this GRC, SDG&E estimated the potential capital cost to cover outdoor storage areas (if this were to be required for compliance) at its Metro Construction and Operations center. Environmental Services will also require the support of a consultant to analyze the impacts of copermittee jurisdictional and WQIPs requirements on SDG&E facilities and operations.

Due to the uncertainty of their future copermittee requirements, SDG&E is requesting that the costs associated with MS4 Permit requirements be included in rates and subject to two-way balancing account treatment in the NERBA.

LDAR: A new regulatory requirement, SB1371, was enacted September 2014. The requirements of SB1371 differ from a similar requirement under EPA Subpart W for fugitive emission monitoring that addresses distribution facilities downstream of major equipment such as compressors, regulator stations and valves. Because the scope and anticipated costs cannot be predicted with certainty at this time, SDG&E is proposing to include an LDAR Program in NERBA with a reasonable estimate of costs, as discussed below.

SB1371 requires the Commission to adopt rules and procedures to reduce emissions of natural gas pursuant to the California Global Warming Solutions Act of 2006. SB1371 regulates natural gas leakage abatement for commission-regulated gas pipeline facilities that are intrastate natural gas transmission and distribution lines. Additionally, CARB's recent updates to the AB32 Climate Change Scoping Plan indicate the desire to minimize methane emissions from natural gas transmission and distribution systems by developing regulations to reduce GHG fugitive emissions. The requirements of SB1371 differ from current requirements under EPA Subpart W for fugitive emission monitoring and leak detection. SB1371 establishes a reduction program that would require rigorous leak testing and repairs to minimize gas distribution system leaks and any associated fugitive methane emissions.

Because the final conditions of the requirements in SB1371 are not exactly known, SDG&E is requesting that the costs associated with SB1371 be included in rates and subject to two-way balancing account treatment in the NERBA.

III. SHARED COSTS

A. Introduction

Environmental Services' shared O&M costs support environmental compliance and oversight activities for SDG&E. Table 3 summarizes the total shared O&M forecasts for the listed cost categories.

TABLE 3

Shared O&M Summary of Costs

ENVIRONMENTAL			
Shown in Thousands of 2013 Dollars Incurred Costs (100% Level)			
Categories of Management	**2013 Adjusted-Recorded**	**TY2016 Estimated**	**Change**
A. Hazardous Materials & Waste Management	446	312	-134
B. Environmental Lab & Site Assessment	1,193	1,245	52
C. Environmental Programs	1,317	1,721	404
D. Policy, Oversight & Compliance Management	1,233	1,337	104
Total Shared Services (Incurred)	**4,189**	**4,615**	**426**

I am sponsoring the forecasts on a total incurred basis, as well as the shared services allocation percentages related to those costs. Those percentages are presented in my shared services workpapers, along with a description explaining the activities being allocated (Ex. SDG&E-18-WP). The dollar amounts allocated to affiliates are presented in our Shared Services Policy and Procedures testimony (Ex. SDG&E-26 (Diancin)).

B. Hazardous Materials & Waste Management

1. Description of Costs and Activities

The compliance activities in this shared O&M cost category include oversight of the hazardous waste and TSDF operations and had 4.4 FTEs in the base year with a subsequent 3 FTE reduction (-3.0 FTEs), for a net of 1.4 FTEs in 2016. This results in an incremental

decrease of $222K. The non-labor TDSF permit fee renewal will result in an incremental increase of $88K.

2. Forecast Method

A base year forecast methodology, plus incremental upward and downward pressures, was used to determine cost requirements. This method is most appropriate because it identifies specific environmental regulatory changes and their related costs impacting the company during the GRC period. The specific cost drivers are best applied to a conservative base year level and would not be captured in traditional averaging or trending. Overall, this cost center had a 30% reduction in cost from 2013 to 2016 using our base year forecast methodology.

3. Cost Drivers

The non-labor cost driver is for renewal of the permit for the TSDF. SDG&E operates two hazardous waste TSDFs to efficiently consolidate and manage its hazardous wastes for the company. The TSDF located at the Miramar site has a Standardized Series B permit that expires on August 5, 2017. We require a consultant to support development of the TSDF permit renewal application, associated technical documents, agency meetings and inquiries and public outreach. The permit development process will begin in 2016. See workpapers for cost center 2100-0206.000 and supplemental workpapers (Ex. SDG&E-18-WP).

C. Environmental Lab and Site Assessment

1. Description of Costs and Activities

The compliance activities in this shared O&M cost category include operation of SDG&E's California State Certified Environmental Analysis Laboratory and site assessment program activities. This cost category currently has 10.3 FTEs to perform these compliance activities.

2. Forecast Method

A base year forecast methodology, plus incremental upward and downward pressures, was used to determine cost requirements. This method is most appropriate because it identifies specific environmental regulatory changes and their related costs impacting the company during the GRC period. The specific cost drivers are best applied to a conservative base year level and would not be captured in traditional averaging or trending.

3. Cost Drivers

The upward financial pressures identified in this cost category of $52K are for labor adjustments for full year funding (+0.4 FTE) and non-labor upward costs for mitigation O&M and the reduction for the hydrogen generator implementation. The fulfillment of this request will result in 10.7 FTEs. The following breaks down the components of the $52K increase for this cost category.

- Labor full year funding (0.4 FTE) $48K
- Site Assessment & Mitigation O&M Costs $13K
- Hydrogen Generator (cost reduction) ($ 9K)

The net upward financial pressure identified in this cost category for labor full-year funding and site assessment and mitigation operations and maintenance costs is partially offset by a cost savings from implementation of a hydrogen generator.

Site Assessment & Mitigation O&M Costs: The Hazardous Substance Cleanup Cost Account (HSCCA) provides a uniform methodology for allocating costs and cost recovery associated with covered hazardous substance-related activities, including hazardous substance cleanup and litigation, and related insurance recoveries, as set forth in D.94-05-020. The costs include operating and maintenance costs for the first ten years following inclusion of a site under the definition of covered hazardous substance cleanup costs. After year ten, the costs covered by the HSCCA are shifted to standard operating and maintenance costs for Environmental Services. SDG&E has two sites, Solana Beach Burn Site and Kearny, that have reached the ten-year mark.

Hydrogen Generator: The implementation of a hydrogen generator will reduce SDG&E's Environmental laboratory annual materials expenses for the purchase of compressed helium and hydrogen used as a laboratory analytical instrument carrier gas. See workpapers for cost center 2100-0632.000 and supplemental workpapers (Ex. SDG&E-18-WP).

D. Environmental Programs

1. Description of Costs and Activities

The compliance activities in this shared O&M cost category include subject matter experts in air and water quality, biological resources, cultural resources and land planning who obtain environmental permits, conduct project screening for potential environmental impacts, review proposed regulations, and provide compliance guidance and oversight. This cost category currently has 9.2 FTEs to perform these compliance activities.

2. Forecast Method

A base year forecast methodology, plus incremental upward pressures, was used to determine cost requirements. This method is most appropriate because it identifies specific environmental regulatory changes and their related costs impacting the company during the GRC period. The specific cost drivers are best applied to a conservative base year level and would not be captured in traditional averaging or trending.

3. Cost Drivers

The upward financial pressures identified in this cost category of $404K are for labor adjustments for full year funding (+2.0 FTEs), labor costs for adding cultural and natural resources staff support (+0.6 FTE) and water quality support and non-labor costs for greenhouse gas reporting support. The fulfillment of this request will result in 11.8 FTEs. The following breaks down the components of the $404K increase for this cost category:

- Labor full year funding (2.0 FTE) $166K
- Cultural & Natural Resource FTE Adds (0.6 FTE) $ 46K
- State Water Resources Control Board (SWRCB) Industrial Stormwater Permit Update $ 15K
- State Water Resources Control Board Programmatic 401 Certification for Linear Projects $147K
- Vault De-watering Permit Renewal $ 20K
- Greenhouse Gas Reporting Support $ 10K

The requested incremental costs cost drivers support adequate staffing and expertise to perform the work under this cost category, as well as to incur costs for greenhouse gas reporting process tools/support and water quality compliance requirements. See workpapers for cost center 2100-3022.000 (Ex. SDG&E-18-WP).

Cultural and Natural Resources: The San Diego region is a "hotspot" for biodiversity and threatened and endangered species management. The region has more rare, threatened, and endangered species than any comparable land area in the continental United States[2]. To help protect California's precious resources and support compliance, SDG&E conducts environmental reviews of its construction, operations and maintenance activities and projects that have the

[2] USDA Forest Service, San Diego Association of Governments Region, Tech Rep. PSW-GTR-187. 2003

potential to disturb soil and may result in an environmental impact. This review process involves multiple environmental disciplines, tracks and documents permitting requirements and compliance issues. Early involvement in the planning and designing phase helps to identify related environmental issues in order to avoid and minimize environmental impacts. Once all necessary environmental permits and/or plans have been obtained an environmental release is provided for the specific work activity/project.

Cultural resources are evaluated during the environmental review process to determine the remains or traces left by prehistoric or historic peoples who have inhabited the San Diego region. According to San Diego County Guidelines archaeological evidence reveals that San Diego County has a long cultural history and cultural resources are found throughout the County. Criteria used to conduct cultural resource reviews are based on the California Environmental Quality Act (CEQA), and the federal, state, and local Registers of Historical Resources.

Natural resources are also reviewed in order to reduce, avoid or otherwise mitigate any potential impacts and to comply with SDG&E's Natural Community Conservation Plan (NCCP). The NCCP is designed to sustain biodiversity and preserve species for the long-term conservation of species, habitat, and broader-scale natural communities. Identification of cultural and natural resource areas allows SDG&E to modify project designs prior to starting work activities. These modifications provide major benefits for the environment. The appropriate NCCP operational protocols for work activities and projects are determined and documented. An increase has occurred in the number of construction, operation and maintenance work activities requiring an environmental review over the past three years (from 4,000 activities reviewed in 2011 to ~11,000 reviewed in 2013). Additional increase in environmental reviews for this GRC is expected with added utility pole programs. Therefore, additional cultural and natural resource reviews will be required. In order to support this increase in work load, Environmental Services requires one additional cultural resources specialist and one additional biologist [each FTE is 25% O&M; 75% Capital].

Greenhouse Gas Reporting: SDG&E conducts both voluntary and mandatory reporting of its GHG inventory. Initially, SDG&E's voluntary GHG inventory reporting was to The California Climate Action Registry, now known as The Climate Registry. SDG&E also voluntarily reports its sulfur hexafluoride (SF_6) inventories for facilities not subject to federal mandatory reporting to the United States EPA SF_6 Partnership Program. SDG&E conducts its

federal mandatory GHG reporting in accordance with EPA's GHG Mandatory Reporting Rule. Additionally, SDG&E conducts its state mandatory GHG reporting for the CARB regulation for mandatory reporting of GHG, the CARB regulation for reducing SF_6 and the CARB Refrigerant Management Program. SDG&E needs consultant support to compile and review GHG reports at peak times.

General Industrial Storm Water Permit: On April 1, 2014, the California State Water Resources Control Board (SWRCB) adopted the Industrial Storm Water General Permit Order 2014-0057-DWQ (Industrial General Permit). The Industrial General Permit is a National Pollutant Discharge Elimination System (NPDES) permit pursuant to the Clean Water Act that regulates discharges associated with ten broad categories of industrial activities. The Industrial General Permit requires the implementation of management measures that will achieve the performance standard of "best available technology economically achievable" and "best conventional pollutant control technology." SDG&E has three facilities (Palomar Energy Center, Kearny and Miramar) subject to the requirements of an Industrial Storm Water General Permit. To meet the proposed changes to this permit, SDG&E requires consultant support to amend the facilities' Storm Water Pollution Prevention Plans, increase in the sampling and testing frequencies at each of the facilities and to provide additional reporting to the SWRCB.

Vault De-watering Permit: A new NPDES permit for discharges from utility vaults and underground structures to surface waters was adopted by the SWRCB on October 21, 2014. SDG&E requires consultant support to address new requirements including development or modification of the Pollution Prevention Plan, Special Study work plans and additional monitoring, reporting and sampling.

Water Quality Programmatic Permits: Federal and state water quality laws and regulations require SDG&E to obtain prior authorization through permits and/or certifications from the applicable water quality agencies (e.g., SWRCB, Army Corps of Engineers (ACOE)) for some of SDG&E's O&M and construction activities. Obtaining permits and certifications for each individual project can lead to project delays and inconsistent permit requirements, and can result in increased costs for projects. By contrast, programmatic permits can be used for multiple projects and establish standard application and approval processes and uniform compliance requirements which provide for more certain approval times and consistency in permit requirements between projects and can reduce project costs. Because of the advantages of

programmatic permits, SDG&E is working with other companies in California to obtain two different types of programmatic permits from the SWRCB.

SDG&E needs funding for its share of the consultant costs associated with the development of the following water quality programmatic permits: 1) Programmatic Section 401 Water Quality Certification and associated Waste Discharge Requirements (WDRs) for natural gas, electric and telecommunications linear projects; and 2) Programmatic NPDES discharge permit for natural gas projects.

Some of SDG&E's natural gas and electric O&M and construction activities, even after implementing avoidance measures, will disturb areas regulated as "jurisdictional waters" (e.g., streams, rivers) under federal and/or state water quality laws. Work in such jurisdictional waters requires a permit under section 404 of the Clean Water Act. Each Section 404 permit must have an accompanying Section 401 Water Quality Certification (WQC) issued by the SWRCB. California WDRs are also required for similar "dredge or fill-type" impacts to state-only jurisdictional waters. Similar activities and similar permitting is required of other companies that conduct linear underground/ overhead projects in California. To facilitate permitting for these activities, reduce permitting delays and to obtain uniform permit requirements throughout the state, a number of companies (e.g., gas, electric and telecommunications) will request a programmatic Section 401 WQC and associated WDRs from the SWRCB. The costs to develop these permits will be shared by the participating companies.

Natural gas pipeline O&M and construction activities require trenching and excavation to uncover existing buried pipelines and/or installation of new pipelines. In some cases, when trenching and excavation occurs, groundwater is encountered and must be removed to complete these activities. Further, required hydrostatic pressure tests of new or existing pipelines generates wastewater, for which we would generally need a permit to discharge it to surface waters. Similar activities and similar permitting is required of all of the major gas pipeline operators in the state of California. To facilitate permitting for these activities and other pipeline activities, and to obtain uniform permit requirements throughout the state, SDG&E, in partnership with Southern California Gas Company (SoCalGas) and Pacific Gas and Electric Company, is requesting one or more NPDES programmatic permits from the SWRCB. These permits focus only on wastewater discharges from natural gas facility activities. Costs are to

fund third party consultants to develop a statewide, programmatic NPDES permit(s) for construction and maintenance work on natural gas facilities.

E. Environmental Policy, Oversight & Compliance Management

1. Description of Costs and Activities

The compliance activities in this shared O&M cost category include executive oversight function for both SDG&E and SoCalGas Operations Support, overall leadership and direction to Environmental Services department and the Environmental Strategy department. There are three cost centers in this cost category: 2100-3282.000 – Environmental Strategy & Sustainability Manager, 2100-3588.000 – VP Operations Support, and, 2100-3589.000 – Environmental Services Director. In total, this cost category currently has 8.7 FTEs.

2. Forecast Method

A base year forecast methodology, plus incremental upward pressures, was used to determine cost requirements. This method is most appropriate because it identifies specific environmental regulatory changes and their related costs impacting the company during the GRC period. These are costs related to staffing of the management activities for Environmental Services and for executive oversight over the Environmental departments at SDG&E and SoCalGas. The incremental upward pressures, which are attributed to reflecting full year funding for these FTE positions, are best applied to a conservative base year level of costs.

3. Cost Drivers

The upward pressures are for labor adjustments for full year funding (+0.8 FTE). The fulfillment of this request will result in 9.5 FTEs. The following breaks down the components of the $104K increase for this cost category:

- Labor full year funding for Environmental Strategy & Sustainability (Cost center 2100-3282.000) (0.4 FTE) $34K
- Labor full year funding for VP Operations Support (Cost Center 2100-3588.000) (0.4 FTE) $70K

See workpapers for cost centers 2100-3282.000, 2100-3588.000 and 2100-3589.000 (see Ex. SDG&E-18-WP).

IV. SUPPORT FOR OTHER COST WITNESSES

A. MS4 Capital (support for J. Seifert - Real Estate, Land and Facilities)

The MS4 permit policy is fully described in the NERBA section of my testimony. The capital expenditures forecasts sponsored by Mr. Seifert are prompted by the forecasted MS4 permitting requirements which we project will require stormwater remediation facilities to be constructed at multiple SDG&E sites. Mr. Seifert's testimony and workpapers sponsor such costs for one of our facilities known as the Metro Construction and Operations center.

B. ATCM and Vehicle Add (support for C. Herrera - Fleet)

1. ATCM

On January 1, 2013, the CARB's Portable Engine Airborne Toxic Control Measure (ATCM) fleet emission standards went into effect. Pursuant to the ATCM regulations, portable diesel engines must meet certain fleet average emission standards for diesel particulate matter (PM) by January 1, 2017 and 2020. In order to meet these standards, SDG&E Fleet Services must replace and/or retrofit a number of their portable engines in advance of 2017.

The CARB's Portable Diesel Engine ATCM requires that companies meet specific diesel PM average emissions standards for their fleet of diesel portable engines (rated at 50 Horsepower (HP) or greater). The following horsepower classes each have their own fleet average standard: less than 175 HP; 175 – 750 HP; and more than 750 HP. The standards went into effect on January 1, 2013 and get progressively more stringent in 2017 and 2020. For example, the fleet average PM standard for portable engines in the under 175 HP class is 0.3 grams/HP per hour (HP-hr) for 2013. The standards in 2017 and 2020 for this class are 0.18 and 0.04 grams/HP-hr respectively. CARB's goal is to have all portable engines meet defined levels of PM emissions by 2020 (i.e., equivalent to PM emissions from engines that are controlled by a diesel particulate filter). SDG&E's existing fleet of 50 portable diesel engines already meets the 2013 PM standard. However SDG&E's Fleet Services will have to make some adjustments (e.g., retire older units and/or retrofit them with diesel particulate filters) to the portable engine fleet in order to meet the 2017 and 2020 standards.

2. Dedicated Vehicle for Environmental Operations

The Environmental Operations group is responsible for the environmental compliance of more than 200 SDG&E facilities in the company's service territory. Responsibilities and requirements at these facilities include maintaining and updating environmental permits and

plans, training employees in environmental compliance, performing mandatory environmental sampling, testing, reporting and record keeping, conducting environmental self-assessments, and facilitating environmental agency inspections. These responsibilities and requirements lead to multiple visits to these facilities each year. Our facilities are located in urban, rural and remote areas, requiring a company vehicle that is capable of travel on rough terrain.

Environmental Operations is striving to improve compliance oversight in the field by shifting one environmental specialist from office support work to field support work and redistributing the current geographic territories and work duties for the field environmental specialists. Environmental Operations plans on making this change effective January 1, 2016. At that time, this field environmental support employee will require a company vehicle to perform their duties.

C. SF_6 (support for J. Woldemariam - Electric Distribution (O&M) and J. Jenkins – Electric Distribution (Capital))

SDG&E is required to prepare and submit an annual report for SF_6 emissions in accordance with Subpart DD of the EPA's GHG Mandatory Reporting Rule (MRR). Additionally, SDG&E also has to comply with CARB's *Regulation for Reducing Sulfur Hexafluoride (SF_6) Emissions from Gas Insulated Switchgear* (as part of the AB32 requirements) and the SF_6 emission rate limits and annual reporting requirements therein. SF_6 is a potent GHG with a global warming potential (GWP) 22,800 times that of carbon dioxide (CO_2). Although SF_6 is emitted in smaller quantities than many other greenhouse gases, its atmospheric lifetime of 3,200 years causes it to accumulate in the earth's atmosphere for centuries. Because of its unique dielectric properties, electric utilities rely on SF_6 in electric power systems for voltage electrical insulation, current interruption, and arc quenching in the distribution of electricity. While SF_6 should theoretically remain contained within equipment, in reality, the gas may be emitted into the atmosphere inadvertently if leaks should develop during various stages of the equipment's lifecycle.

Under Subpart DD, owners or operators of electric power system facilities with a total nameplate capacity that exceeds 17,280 pounds of SF_6 must report emissions of SF_6 from the use of electrical distribution equipment. Electric power system facilities include electric power distribution systems that operate gas-insulated substations, circuit breakers, switchgear, gas-insulated lines or power transformers. Pursuant to Subpart DD, SDG&E has to calculate entity-

wide SF_6 losses from its system (using a mass-balance approach of SF_6 purchases made, amounts sent to be recycled, and increase in nameplate capacity of equipment), and follow the specified procedures for quality assurance, recordkeeping and reporting. Reports are due annually on March 31 for data collected in the previous calendar year. Subpart DD was enforced starting January 2011, with the first SF_6 report submitted in September 2012 (for the 2011 emissions year).

In order to maintain continued compliance with EPA's Subpart DD and CARB's SF_6 rule, SDG&E has to track closely the usage and disbursement of SF_6 (and installation and removal of SF_6 gas insulated distribution switchgear equipment) in its system. This process is labor intensive and requires retrieval of information from various internal databases and coordination with field personnel. In order to achieve higher efficiencies, implement a more robust quality assurance program, reduce the risk of errors, and make progress toward achieving and sustaining the CARB mandated SF_6 emission rate of 1 percent (by 2020), additional software tools and staffing resources will be needed. In addition, field surveys will be needed to maintain an updated inventory of gas insulated switchgear equipment. SDG&E's Electric Distribution Engineering group has identified the incremental costs associated with the additional resources and measures that will be needed to maintain continued compliance with the SF_6 rules. The Electric Distribution Engineering group has also developed a program, to proactively replace SF_6 distribution switches with non-SF_6 alternatives, which is described in more detail in the testimony of Mr. John Jenkins (see Ex. SDG&E-09).

D. RECLAIM Credits/ SWRCB/ SB1371 (support for J. Dagg - Gas Transmission)

The South Coast Air Quality Management District (SCAQMD) administers RECLAIM to reduce the emissions of oxides of nitrogen (NOx) and oxides of sulfur (SOx) within the South Coast Air Basin, as defined by the CARB. The RECLAIM market incentive program operates under the authority of SCAQMD pursuant to Regulation XX and Rules 2000 – 2020 (as amended May 6, 2005). SDG&E has been a participant in this program since its inception on January 1, 1994, which includes flexible options for emission reduction including add-on controls, equipment modifications, reformulated products, operational changes, shutdowns, and the purchase of excess emission reduction credits.

For each compliance year, SDG&E requires the purchase of RECLAIM Trading Credits (RTCs) whenever reported NOx emissions exceed credit holdings for operating Moreno.

Mr. Dagg is also sponsoring O&M costs for the California State Water Resources Control Board's annual permit fees for the Moreno Compressor Station, which are related to water quality mandates. Earlier in my non-shared costs section, I discussed the underlying environmental policies for this item in justification of my sponsored costs. That discussion also supports Mr. Dagg's forecasted costs.

Mr. Dagg is sponsoring O&M costs to reduce greenhouse gas emissions in anticipation of legislative and regulatory methane reduction requirements as discussed earlier in this testimony. SB1371 requires the Commission to adopt rules and procedures governing the operation, maintenance, repair and replacement of Commission-regulated gas pipeline facilities. Mr. Dagg addresses the costs forecasted for Gas Transmission pursuant to SB1371.

V. CONCLUSION

My testimony and workpapers provide support for the costs I sponsor for Environmental Services, and the reasonableness of the methodologies used to derive those costs. The Test Year forecasts represent a modest and justified increase over base year costs, and I respectfully ask the Commission to fully fund our important work so SDG&E can continue to meet its obligations to applicable regulations and environmental stewardship. This concludes my prepared direct testimony.

VI. WITNESS QUALIFICATIONS

My name is R. Scott Pearson. My business address is 8335 Century Park Ct., San Diego, California, 92123. My current position is Director of Environmental Services under the Operations Support organization. The Environmental Services organization provides services to SDG&E. I joined Sempra Energy, the parent company of SDG&E in 2008, where I served as senior environmental counsel. I have been in my current position at SDG&E since June 2011.

I hold a Bachelors of Science Degree in Business and Management from University of Redlands and a Juris Doctor degree from University of California at Los Angeles, School of Law.

I have not previously testified before the Commission.

APPENDIX A - Witness Matrix for SDG&E Environmental Policy and Costs

Witness Matrix for SDG&E Environmental Policy and Costs				
#	Issue	AREA	Witness Sponsor for Envt'l Policy	Witness Sponsor for Envt'l Cost
1	Portable Engines Airborne Toxic Control Measures	Fleet Services	Pearson, Scott (SDG&E-18)	Herrera, Carmen (SDG&E-16 and SDG&E-16-WP)
2	Fleet Vehicle Add for Environmental Services (2016)	Fleet Services	Pearson, Scott (SDG&E-18)	Herrera, Carmen (SDG&E-16 and SDG&E-16-WP)
3	Bureau of Land Management (BLM) Pesticide Use Permit	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
4	GHG Reporting Procedures Matrix	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
5	GHG Reporting Support Consultant	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
6	Greenhouse Gas Emission Reduction (SB 1371 / LDAR - NERBA)	Gas Transmission	Pearson, Scott (SDG&E-18)	Dagg, John (SDG&E-05; SDG&E-05-WP)
7	Hydrogen Generator implementation	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
8	Labor Adjustments/Transfers	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
9	Miramar Treatment, Storage & Disposal Facility Permit Renewal	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
10	Natural/Cultural Resources Support (0.5 FTE O&M add)	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
11	NERBA – AB32 Admin Fees - Electric	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
12	NERBA - Leak Detection and Repair (LDAR) Program	Env Service	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
13	NERBA - Municipal Separate Storm Sewer Systems (MS4s)	Env Services RE & Facilities	Pearson, Scott (SDG&E-18)	Seifert, James (Capital) (SDG&E-17-CWP) Pearson, Scott (O&M) (SDG&E-18-WP)
14	NERBA – PCB Authorization	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
15	NERBA – Regulatory Accounts	Env Services Regulatory Accounts	Pearson, Scott (SDG&E-18)	Jasso, Norma (SDG&E-35)
16	NERBA (REMOVED) – AB32 Cap & Trade Allowances	Dollars removed from GRC	Pearson, Scott (SDG&E-18)	N/A
17	Site Assessment & Mitigation O&M costs (2 sites)	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
18	South Coast Air Quality Management District Reclaim Trading Credits for Moreno Compressor Station	Gas Transmission	Pearson, Scott (SDG&E-18)	Dagg, John (SDG&E-05; SDG&E-05-WP)

Witness Matrix for SDG&E Environmental Policy and Costs				
#	**Issue**	**AREA**	**Witness Sponsor for Envt'l Policy**	**Witness Sponsor for Envt'l Cost**
19	State Water Resources Control Board –Increase in Water Quality Annual Permit & Certification Fees	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP) Dagg, John (SDG&E-05-WP)
20	State Water Resources Control Board Discharge Permits (Natural Gas)	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
21	State Water Resources Control Board Industrial Stormwater Permit Renewal	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
22	State Water Resources Control Board Programmatic 401 Certification For Linear Projects	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)
23	Sulfur Hexafluoride (SF_6) compliance costs (O&M)	Env Services Electric Distrib	Pearson, Scott (SDG&E-18)	Woldemariam, Jonathan (SDGE-10; SDG&E-10-WP)
24	SF_6 switch replacement project (Capital)	Env Services Electric Distrib-Capital	Pearson, Scott (SDG&E-18)	Jenkins, John (SDGE-09; SDG&E-09-CWP)
25	Vault Dewatering Permit Renewal	Env Services	Pearson, Scott (SDG&E-18)	Pearson, Scott (SDG&E-18-WP)

APPENDIX B - GLOSSARY OF ACRONYMS

AB	Assembly Bill
ACOE	Army Corps of Engineers
ATCM	Airborne Toxic Control Measures
BLM	Bureau of Land Management
BMP	Best Management Practice
CARB	California Air Resources Board
CO2	Carbon Dioxide
EA	Environmental Assessment
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
HSCCA	Hazardous Substance Cleanup Cost Account
LDAR	Leak Detection and Repair
MS4	Municipal Separate Storm Sewer System
NERBA	New Environmental Regulatory Balancing Account
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated biphenyls
PM	Particulate Matter
RECLAIM	Regional Clean Air Incentives Market
RTC	RECLAIM Trading Credit
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur Hexafluoride
SOx	Sulfur Oxides
SWRCB	California State Water Resources Control Board
TSDF	Treatment Storage and Disposal Facility
WDR	Waste Discharge Requirement
WQC	Water Quality Certification
WQIP	Water Quality Improvement Plan