

Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2019 General Rate Case
Application: A.17-10-_____
Exhibit: SDG&E-22

SDG&E

**DIRECT TESTIMONY OF R. DALE TATTERSALL
(REAL ESTATE, LAND SERVICES AND FACILITIES)**

October 6, 2017

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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**SDG&E DIRECT TESTIMONY OF R. DALE TATTERSALL
(REAL ESTATE, LAND SERVICES AND FACILITIES)**

SUMMARY

REAL ESTATE & FACILITIES (In 2016 \$)	2016 Adjusted- Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
Total Non-Shared Services	26,274	27,881	1,607
Total Shared Services (Incurred)	6,502	6,288	-214
Total O&M	32,776	34,169	1,393

FACILITIES/OTHER (In 2016 \$)	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
Total CAPITAL	54,699	68,502	80,249

Summary of Requests

Real Estate, Land & Facilities (REL&F) forecasts San Diego Gas & Electric Company (SDG&E) expenses for Rents and Operating Expenses, Corporate Real Estate, Real Estate Planning, Facility Operations, Land Services, Real Estate Resources and associated Capital Programs. Notable factors that influence costs in REL&F are:

- Rents reflect continued current escalation rates on leases.
- Facility Operations maintenance costs have been optimized due to cost efficiencies that are reflected in the forecast.
- Capital Programs costs reflect increased compliance, safety, and security related improvements, aging infrastructure, and facilities geographic consolidation strategy.

**SDG&E DIRECT TESTIMONY OF R. DALE TATTERSALL
(REAL ESTATE, LAND SERVICES AND FACILITIES)**

I. INTRODUCTION

A. Summary of REL&F Costs and Activities

My testimony supports the Test Year 2019 forecasts for operations and maintenance (O&M) costs for both non-shared and shared services, and capital costs for the forecast years 2017, 2018, and 2019, associated with the REL&F area for SDG&E. Table RDT-1 summarizes my sponsored costs.

**Table RDT-1
Summary of REL&F Costs and Activities**

REAL ESTATE & FACILITIES (In 2016 \$)	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
Total Non-Shared Services	26,274	27,881	1,607
Total Shared Services (Incurred)	6,502	6,288	-214
Total O&M	32,776	34,169	1,393

FACILITIES/OTHER (In 2016 \$)	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
Total CAPITAL	54,699	68,502	80,249

The following provides a breakdown of the major functional activities of the REL&F organization for both the shared and non-shared services portion of operating costs. REL&F is a utility shared services organization headed by (a) manager(s) who oversee(s) activities performed at both SDG&E and Southern California Gas Company (SoCalGas) (collectively referred to as Utilities). REL&F provides services for the benefit of the utilities as well as Sempra Energy's Corporate Center and non-utility affiliates. REL&F is responsible for the administration of real estate, facilities, capital construction and land services for a combined building footprint portfolio of 1.375 million square feet separated by the following companies:

SDG&E: 1.05 million sq. ft.

Corporate Center: 0.325 million sq. ft.

REL&F plans, acquires, builds, and maintains the operating and non-operating real estate and facility assets in support of the delivery of gas and electric energy and services to our

1 customers. The REL&F organization works closely with internal customers to maximize the use
2 of the real property portfolio.

3 The scope of this testimony covers REL&F's costs for SDG&E and Corporate Center only.
4 REL&F activities consist of the following seven major cost categories:

- 5 (1) Rents and Operating Expenses - are split between shared and non-shared
6 facilities. The non-shared service portion of rents is associated with rent for
7 telecommunication sites, branch offices, an environmental laboratory,
8 office, multi-use, and customer service facilities, trailers, and right of way
9 easements.
- 10 (2) Corporate Real Estate - provides transaction management for leased/owned
11 real property, and other real estate asset management activities.
- 12 (3) Real Estate Planning - provides short term planning (move management)
13 and long range strategic planning.
- 14 (4) Facility Operations - provides O&M support for facilities, such as general
15 offices, bases, multi-use sites, and telecommunication sites and branch
16 offices, which all support the reliable delivery of electricity and gas to
17 SDG&E customers.
- 18 (5) Land Services - acquires, inspects, maintains, and protects right of ways
19 which are land assets, including: permanent easements, licenses, and leases
20 that contain electric and gas infrastructure. Land Services also records all
21 legal documents pertaining to the utility's land rights and provides land
22 survey activity.
- 23 (6) Capital Programs Planning & Construction - develops, prioritizes, and
24 forecasts facilities capital project budget requirements, constructs or
25 improves current and future buildings, replaces or improves support
26 infrastructure to maintain system integrity and meet operational needs,
27 installs upgrades to offset maintenance costs, supports long-term facilities
28 consolidation and efficiencies strategies, and supports sustainability
29 practices.
- 30 (7) Real Estate Resources – provides support to Land Services, Real Estate,
31 Capital Programs Planning & Construction, and Facilities by designing and

1 implementing technology tools through an integrated work management
2 system known as Archibus. Archibus is used by employees to capture
3 support requests and manage real estate assets and facilities preventative
4 maintenance. The Real Estate Resources team supports the Land Services
5 group and their Geographic Information System (GIS) system, which
6 integrates global positioning and facilities data, hardware, and software to
7 assist in the analysis and display of geographically referenced information.
8 Updating CAD file land layers to reference easements and right of ways and
9 a variety of other real estate assets is an example of an ongoing support
10 item.

11 **B. Summary of Risk Assessment Mitigation Phase-Related Costs**

12 Certain of the costs supported in my testimony are driven by activities described in
13 SoCalGas and SDG&E's November 30, 2016 Risk Assessment Mitigation Phase (RAMP) Report.¹
14 The RAMP Report presented an assessment of the key safety risks of SoCalGas and SDG&E and
15 proposed plans for mitigating those risks. As discussed in the Risk Management testimony
16 chapters of Diana Day and Jamie York (Ex. SCG-02/SDG&E-02, Chapters 1 and 3, respectively),
17 the costs of risk-mitigation projects and programs were translated from that RAMP Report into the
18 individual witness areas.

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

23 Tables RDT-2 and RDT-3 provide a summary, organized by RAMP risk, of the Capital and
24 O&M RAMP-related costs supported by my testimony:
25

¹ I.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.

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**Table RDT-2
Summary of RAMP Capital Costs**

FACILITIES/OTHER (In 2016 \$)			
RAMP Risk Chapter	2017 Estimated RAMP Total (000s)	2018 Estimated RAMP Total (000s)	2019 Estimated RAMP Total (000s)
SDG&E-3 Employee, Contractor and Public Safety	456	1,504	2,146
SDG&E-5 Major Disturbance to Electrical Service (Blackout) SDG&E-6 Fail to Blackstart	5,199	11,062	0
SDG&E-9 Workplace Violence	4,553	3,471	4,047
Total Capital	10,208	16,037	6,193

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**Table RDT-3
Summary of RAMP O&M Costs**

REAL ESTATE & FACILITIES (In 2016 \$)			
RAMP Risk Chapter	2016 Embedded Base Costs (000s)	TY 2019 Estimated Incremental (000s)	Total (000s)
SDG&E-9 Workplace Violence	2,643	931	3,574
Total O&M	2,643	931	3,574

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SDG&E’s Risk Management and Policy witness, Diana Day (Ex. 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 facilities 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 SCG and SDG&E Chapter 3, the utilities kicked off the Fueling Our Future (FOF) initiative in May 2016, to identify and implement efficient operations improvements (See direct testimony of Hal Snyder and Randall Clark (Ex. SCG-03/SDG&E-03)). My testimony includes the forecasts for both one-time FOF implementation costs as well as on-going O&M benefits that will be realized through various efficiencies and optimization in the workplace. Many of the efficiencies will be achieved through adoption of new technology or through the increased

1 use of systems such as Archibus, Maximo, EzMax, Interactive Voice Response or centralized
2 dashboard tracking and reporting tools.

3 Many benefits will be achieved through the optimization of the existing portfolio of
4 suppliers and vendors and their corresponding contracts currently used by the SDG&E Facilities
5 Department. Examples include weighing “insourcing” versus “outsourcing” maintenance tasks,
6 re-bidding and/or renegotiating existing contracts, vendor consolidation, category management,
7 and strategic sourcing.

8 Table RDT-4 provides a summary of the FOF cost efficiencies described in my testimony:

9 **Table RDT-4**
10 **Summary of FOF Costs**

REAL ESTATE & FACILITIES (In 2016 \$)	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
FOF O&M			
FOF-Implementation	0	446	0
FOF-Ongoing/<Benefits>	-269	-1,013	-1,265
Total O&M	-269	-567	-1,265

11 **D. Organization of Testimony**

12 My testimony is organized as follows:

- 13 • Section I provides an overview of the testimony.
- 14 • Section II provides detailed information about RELF’s RAMP-related costs
15 and initiatives, as well as activities that promote the company’s safety
16 culture.
- 17 • Section III provides detailed information regarding non-shared costs for
18 O&M cost activities for Facilities Operations, Land Services, Right of Way,
19 and Rents.
- 20 • Section IV provides detailed information regarding shared costs for cost
21 activities such as Operating Expenses, Facility Operations, Corporate Real
22 Estate, Capital Programs, and RE Planning.
- 23 • Section V concludes the testimony.
- 24

1 **II. RISK ASSESSMENT MITIGATION PHASE AND SAFETY CULTURE**

2 **A. RAMP**

3 As illustrated in Table RDT-2 and RDT-3, a portion of my requested funds are linked to
4 mitigating safety risks that have been identified in the RAMP Report. These risks are further
5 described in the table below:

6 **Table RDT-5**
7 **RAMP Risk Chapter Description**

RAMP Risk	Description
SDG&E-3 Employee, Contractor and Public Safety	This is the risk of non-adherence to safety programs, policies and procedures, which may result in severe harm to employees, contractors and the general public.
SDG&E-9 Workplace Violence	The risk involves a violent incident related to the workplace, resulting in emotional or physical harm to an employee(s) or third parties.
SDG&E-5 Major Disturbance to Electrical Service (e.g., Blackout)	The risk of a blackout or major loss of electric service throughout the SDG&E service territory. The loss of the electric power could occur in a large area, or across the entirety of the SDG&E service territory. The impact of a blackout can vary significantly depending on its extent and duration.
SDG&E-6 Fail to Blackstart	This risk covers the inability to restore electric services to customers in the SDG&E service territory following a disturbance or an event in which the SDG&E service territory suffers a complete blackout or shut down condition.

8
9 These risks influenced my GRC request through the identification of capital projects and
10 programs that have the objective of improving the safety and security of both private and public
11 company facilities, and improving electric service continuity within our territory. Additionally, the
12 Workplace Violence risk influenced the identification of additional, contracted security staffing
13 needs across the service territory. My forecasted costs include funding projects and programs that
14 help to mitigate these RAMP risks. I considered RAMP mitigation costs embedded as part of
15 traditional and historic activities, as well as forecasted RAMP-incremental costs. These forecasts,
16 which can be found in my workpapers listed in Table RDT-6 below, are also addressed in more

1 detail in subsequent sections of this testimony. Note that the entirety of forecasted dollars in each
 2 workpaper listed is considered a RAMP mitigation cost.

3 **Table RDT-6**
 4 **RAMP Capital Detail**

FACILITIES/OTHER (In 2016 \$)			
SDG&E-3 Employee, Contractor and Public Safety	2017 Estimated RAMP Total (000s)	2018 Estimated RAMP Total (000s)	2019 Estimated RAMP Total (000s)
00703A.001, RAMP - Incremental Environmental/Safety Blanket 2017 - 2019	456	1,504	2,146
Total	456	1,504	2,146
SDG&E-5 Major Disturbance to Electrical Service (Blackout)	2017 Estimated RAMP Total (000s)	2018 Estimated RAMP Total (000s)	2019 Estimated RAMP Total (000s)
16766A.001, RAMP - Incremental Mission Control Modernization	5,199	11,062	0
Total	5,199	11,062	0
SDG&E-6 Fail to Blackstart	2017 Estimated RAMP Total (000s)	2018 Estimated RAMP Total (000s)	2019 Estimated RAMP Total (000s)
16766A.001, RAMP - Incremental Mission Control Modernization (Costs are already included in SDG&E-5 Major Disturbance to Electrical Service (Blackout))	0	0	0
Total	0	0	0
SDG&E-9 Workplace Violence	2017 Estimated RAMP Total (000s)	2018 Estimated RAMP Total (000s)	2019 Estimated RAMP Total (000s)
00707A.001, RAMP - Incremental Security Blanket 2017 - 2019	1,760	3,401	4,047
16767A.001, RAMP - Incremental Mission Control Critical Asset Security Hardening	2,793	70	0
Total	4,553	3,471	4,047

5 **Table RDT-7**
 6 **RAMP O&M Detail**
 7

REAL ESTATE & FACILITIES (In 2016 \$)			
	2016 Embedded Base Costs (000s)	TY 2019 Estimated Incremental (000s)	Total (000s)
1RE001.000, SDGE Facility Operations	2,643	931	3,574
Total	2,643	931	3,574

1 As the tables above demonstrate, the RAMP risk mitigation efforts are associated with
2 specific programs or projects. SDG&E conducted an evaluation of historical program and project
3 costs related to mitigating these risks and the findings contributed to the results of the RAMP
4 Report.

5 While the RAMP Report was the starting point for consideration of the risk mitigation
6 efforts and costs, the evaluation of programs and projects continued beyond the RAMP Report
7 analysis in preparing this GRC request. Also considered were known or anticipated changes in
8 program or project scope and schedule, availability of resources, overlaps or synergies of
9 mitigation efforts, and shared costs or benefits. The costs of risk mitigation sponsored in my
10 testimony may therefore differ from those first identified in the RAMP Report.

11 My request supports the on-going management of these risks, which could pose significant
12 safety, reliability, and financial consequences to our customers and employees. The anticipated
13 risk reduction benefits that may be achieved by my request are summarized below by risk, as well
14 as alternatives that were considered.

15 **1. SDG&E – 9 Workplace Violence**

16 My request includes efforts to mitigate workplace violence risk by increasing security with
17 both physical (card readers, cameras, and access control, including physical barricades and
18 mantraps) and human elements (quantity and quality of security officers and personnel). These
19 mitigations may further reduce the risk of workplace violence by (1) preventing would-be violent
20 perpetrators from entering into SDG&E facilities and (2) isolating and controlling perpetrators in
21 the event of a security breach.

22 Security enhancements to infrastructure and security guards posted at company facilities
23 each improve access control, intrusion detection, and interdiction capabilities, to deter, detect,
24 delay, or help prevent undesirable events at company facilities. Depending on the facility, several
25 physical security system upgrades have been completed, including, but not limited to,
26 improvements with access control, intrusion detection systems, and interdiction capabilities.

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

1 Physical security tradeoffs were considered as alternatives and were evaluated for these
2 mitigations. Physical security systems (cameras, fences, etc.) and guards may be used as
3 alternatives to each other in some locations for some threats. This would mean that some
4 Company locations would only have security guards while others would only have security
5 systems. The potential benefit to this alternative is a reduction in costs; however, it would also
6 increase the risk exposure. Accordingly, this alternative was dismissed in favor of the mitigations
7 discussed above. Implementing physical security systems and guards together reinforce each other,
8 and often provides increased risk reduction.

9 **2. SDG&E – 3 Employee and Customer Safety**

10 My incremental request includes risk mitigation efforts described above for workplace
11 violence, as well as increased pedestrian traffic controls and warning systems, security fencing
12 projects, improved parking lot lighting, and new or improved hazardous material storage areas,
13 storm water runoff filtration systems, and accumulated vault water treatment systems, all of which
14 may further reduce the risk of employee/customer safety incidents. The alternatives to
15 implementing the risk mitigation efforts noted above would be constructing alternate vehicle or
16 pedestrian pathways or points of ingress/egress, relocating valuable materials or critical operations
17 to alternate sites with pre-existing security enhancements, restricting parking hours, contracting for
18 and disposing of hazardous waste disposal on a per job basis, or bearing the risk of fines.
19 Constructing alternate pedestrian and traffic routes on a property, or relocating elements of an
20 operation, would be less cost effective than implementing the site-based mitigations described
21 above. Addressing hazardous material storage and disposal is also more cost-effectively addressed
22 in volume and from a centralized location than incrementally from each job location, where
23 extended crew and vendor time would increase costs.

1 **3. SDG&E – 5 and SDG&E – 6 Major Disturbance to Electrical Service**
2 **(Blackout)/ Fail to Black Start**

3 My request includes the risk mitigation efforts of upgrading our transmission energy
4 management system controls, which will allow operators (GRID) to respond to adverse conditions
5 more quickly and enhance reliability.²

6 **4. RAMP Conclusion**

7 When developing this proposed request, I considered all proposed projects or initiatives,
8 relative to their merit in mitigating the above three RAMP risks. Our customers will be safer
9 because of our investments in RAMP mitigation efforts. They will experience enhanced security
10 when visiting both private and public facilities, will live in an environment wherein the ecology is
11 valued and protected from any potential deleterious impacts of our business, and will be justified
12 in having minimal concern over the loss of electric power service.

13 **B. Safety Culture**

14 SDG&E is committed to providing safe and reliable service to its customers. Our safety-
15 first culture focuses on public, customer, and employee safety, and this commitment is embedded
16 in every aspect of our work.

17 The REL&F activities support numerous departments and segments of the company.
18 Because of the breadth of our activities, we are in a unique position to enhance SDG&E’s safety
19 culture. REL&F operations and maintenance fosters SDG&E’s safety culture by identifying safety
20 risks, assigning specific projects and efforts to correct and mitigate those risks, and developing
21 sustainable installations that prioritize safety.

22 Our current risk assessments have identified key areas of focus, including: (a) reduction of
23 workplace violence to protect employees and the public; (b) implementation of employee and
24 public safety measures to improve conditions at our facilities; (c) installation of infrastructure
25 hardening to facilitate the continuous reliable operations of our transmission and distribution
26 systems; and (d) enhancement of our emergency response to any service interruptions.

27 Specifically, safety-related capital investments may include facilities hardening by improving
28 physical security applications such as card readers for access control, video cameras and recording

² The Transmission Energy Management System modernization project is further discussed in the November 2016 SDG&E RAMP Report, Chapters SDG&E-5 and SDG&E-6. For the capital expenditures related to this risk mitigation effort, please see my testimony at Section V.M.1, *infra*.

1 devices, turnstiles and hardware for egress and ingress control, and traffic and pedestrian controls
2 to prevent accidents.

3 Unfortunately, due to changing environmental and societal conditions, the possibility of
4 workplace violence is a reality that must be addressed. Our efforts include the physical security
5 assets mentioned above, and also encompass a human application designed to reduce the chances
6 of an event within our workplace or properties. The human application improves the quality and
7 increases the availability of our security guard services and employee workplace violence training,
8 which features active shooter simulations.

9 RELF's capital construction efforts help to mitigate the possibility of an interruption to
10 reliable services by ensuring that our utility infrastructure has the proper emergency backup
11 equipment, such as UPS and emergency generators to keep critical systems operational. The
12 reliable operation of the transmission grid and electrical distribution systems depends, in part, on
13 the proper equipment to monitor the system conditions in real time. This ensures our operations
14 staff can respond to any event that requires immediate actions or intervention. REL&F has
15 partnered with our engineering and operations staff to implement state of the art equipment and
16 controls installations at critical points within our system to help mitigate against the possibility of
17 having a black start scenario.

18 **III. NON-SHARED COSTS**

19 Non-shared services are activities that are performed by a utility solely for its own
20 benefit. Corporate Center provides certain services to the utilities and to other subsidiaries. For
21 purposes of this general rate case, SDG&E treats costs for services received from Corporate
22 Center as non-shared services costs, consistent with any other outside vendor costs incurred by
23 the utility. Table RDT-8 summarizes the total non-shared O&M forecasts for the listed cost
24 categories.

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**Table RDT-8
Non-Shared O&M Summary of Costs**

REAL ESTATE & FACILITIES (In 2016 \$)			
Categories of Management	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
A. FACILITY OPERATIONS	8,307	8,377	70
B. LAND SERVICES	939	693	-246
C. RENTS AND OPERATING EXPENSES	17,028	18,811	1,783
Total Non-Shared Services	26,274	27,881	1,607

3
4

A. Facility Operations

5

The summary of my request for non-shared Facility Operations is shown in Table RDT-9:

6
7

**Table RDT-9
Non-Shared Facility Operations**

REAL ESTATE & FACILITIES (In 2016 \$)			
FACILITY OPERATIONS	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
FACILITY OPERATIONS	8,307	8,377	70
Total	8,307	8,377	70

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1. Description of Costs and Underlying Activities

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Facility Operations provides O&M support (described in more detail below) for utility facilities including general offices, construction and operations centers, telecommunications sites, warehouse, and branch/bill payment offices. Maintenance support is either done by company employees or by contracted services. The organization provides facility operations services to SDG&E and the Sempra Energy Corporate Center. The costs reflected above represent only the non-shared activities.

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Facility services include the negotiation and management of contracted services such as security, janitorial, landscaping, trash, and pest control. In addition to these contracted services, the utility hires contractors for services such as electrical, mechanical, structural, conveyance systems (elevators), heating, ventilation and air conditioning (HVAC) systems, roofs, parking lot asphalt and concrete, fire safety systems, security and access control systems, back-up emergency

1 generators, uninterruptable power systems, underground fuel storage tanks, and fuel pumps and
2 garage equipment, including hoists and cranes.

3 Facility Operations cost changes from 2016 through 2019 continue to be primarily driven
4 by the increases in maintenance costs associated with increased commodity and labor costs. Labor
5 cost increases are primarily due to: (1) increases in contracted union labor and benefits, and
6 (2) increases in the statutory minimum wage. As SDG&E's infrastructure ages, costs for typical
7 repairs increase, especially when there are new system maintenance requirements to meet new
8 environmental standards. Specific drivers for cost increases are as follows:

- 9 • Maintenance on and increased capacity of security and access control
10 systems to meet the North American Electric Reliability Corporation –
11 Critical Infrastructure Protection (NERC-CIP) requirements and to respond
12 to geopolitical events and trends.
- 13 • Cost increases due to maintenance of additional back-up emergency
14 generators and uninterruptable power systems at critical facilities.
- 15 • Cost increases related to storm water management as a result of
16 environmental requirements at sites with Storm Water Protection Plans and
17 Storm Water Management Plans, as described in the testimony of Nancy
18 Clancy. (Ex. SDG&E-23)
- 19 • Cost increases relating to aging infrastructure, such as asphalt, concrete,
20 flooring, equipment, and painted structures, due to the requirement to test all
21 materials for lead and asbestos prior to conducting work that will disturb the
22 material.

23 The following summarizes the key categories of non-shared facilities.

24 **a. Construction and Operating Centers/Customer Service**
25 **Operations**

26 These facilities are the operating bases for SDG&E distribution, transmission, and
27 customer service crews that provide energy delivery to customers. The nine (9) locations are the
28 following sites:

- 29 a) Beach Cities;
- 30 b) Eastern;
- 31 c) North Coast;

- d) North East;
- e) Metro;
- f) Orange County;
- g) Kearny;
- h) Mt. Empire; and
- i) Ramona.

b. Branch Offices

This category represents four (4) separately leased payment offices and two (2) SDG&E-owned customer service locations to facilitate bill payment and customer walk-in inquiries.

c. Multi-Use or Special Purpose Facilities

The multi-use or special purpose category consists of:

- a) Miramar facility provides storage capacity for electric and gas distribution equipment, and houses various meter shops and office space for gas distribution, fleet operations, logistics, and environmental operations.
- b) Mission Control and Skills Training Center facility provides both classroom and field training for SDG&E personnel and the control center for distribution system operations, transmission system operations, and telecommunications.
- c) Palomar generation is a combined cycle power plant that includes an office, warehouse, shop, maintenance, and water treatment facility.
- d) Kearny is a multi-use electric construction and maintenance facility for term hazardous waste (e.g., polychlorinated biphenyl or “PCB”) storage.
- e) Greencraig I & II. Greencraig I houses a variety of administrative functions and overflow space to accommodate short term, project-driven relocations and temporary facilities during major facility remodels. Greencraig II will also serve in the same capacity, but in the long term will house employees subject to centralization in the Kearny Mesa area as a part of Facilities’ consolidation strategy.
- f) Kearny Offsite Asset Warehouse is used primarily for indoor storage in support of Kearny and administrative office space for a variety of administrative and field employees.

- 1 g) Moreno Valley Compressor Station is a facility in our portfolio that operates and
2 maintains the safe flow of natural gas resources into our infrastructure to serve our
3 customers.
- 4 h) Alpine Yard & Remote Field Office is a strategically located facility that operates
5 as office space for personnel working on projects in our eastern service territory and
6 also provides storage and laydown areas for various construction projects.
- 7 i) Alpine Way Escondido is a research and development lab environment used for the
8 study and testing of emerging technologies being considered for deployment in
9 energy delivery, storage, information, security, and clean transportation.
- 10 j) Gillespie Field is an aircraft hangar that houses our Aviation Services group and
11 associated equipment. The hangar has office space and storage area for aircraft that
12 are used to patrol various remote areas of our electrical transmission and
13 distribution assets and gas infrastructure, and on occasion provide emergency
14 assistance with fire suppression activities.

15 d. Office Space

16 Most leased and owned sites fall under the non-shared service category; however, there are
17 a few shared facilities, including the Rancho Bernardo (RB) Data Center and Century Park
18 Complex, which house SDG&E employees who provide services across the organization in
19 compliance with the Affiliate Transaction Rules.

20 2. Forecast Method

21 A three-year historical average was selected as the basis for our TY 2019 forecast. The
22 three-year historical average was used as it more accurately represents year-over-year cost
23 variations, particularly with respect to security costs, which have been subject to accelerated
24 increase over the last three years – a trend that is expected to continue through 2019. There are
25 also increases in the costs of labor, maintenance, repairs, and contracted janitorial services.

26 3. Cost Drivers

27 The cost drivers continue to include: security; labor required to manage the infrastructure;
28 non-labor costs for maintenance, repairs, materials, electricity, and water costs; contracted
29 janitorial and landscaping services; and yard sweeping costs for the facilities. As part of our
30 funding request, we have recognized operational savings and efficiencies associated with FOF and,
31 as referenced in Section I.B. - Summary of Risk Assessment Mitigation Phase-Related Costs, we

1 have considered that a significant cost driver for 2019 is the increase for contracted security
 2 services at both manned and unmanned facilities at SDG&E. Much of the increase stems from the
 3 addition of 24/7 security at all mission critical substation facilities. The 2019 incremental cost
 4 increase of \$931K for security services has been mitigated by \$1,265K in FOF benefits which are
 5 highlighted in Section I.C. – Summary of Costs Related to Fueling our Future.

6 **B. Land Services**

7 The summary of my request for non-shared Land Services Right of Way is shown in Table
 8 RDT-10:

9 **Table RDT-10**
 10 **Non-Shared Land Services**

REAL ESTATE & FACILITIES (In 2016 \$)			
B. LAND SERVICES	2016 Adjusted- Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. LAND SERVICES	939	693	-246
Total	939	693	-246

11 **1. Description of Costs and Underlying Activities**

12 Land Services is responsible for the acquisition and negotiation of land rights in the form of
 13 easements, rights of way, licenses and leases for electric and gas distribution and transmission
 14 operating asset requirements, including overhead and underground gas and electric facilities,
 15 electric substations, switching facilities, and gas regulator stations, etc. New or expiring land
 16 rights for distribution and gas or electric capacity/reliability projects generate a need to acquire
 17 land rights from property owners. License or lease agreements that are not in perpetuity are
 18 secured and re-negotiated when facility installations traverse lands owned by Bureau of Land
 19 Management, U.S. Forest Service, and Bureau of Indian Affairs/Native American reservations, as
 20 well as military bases, ports, and, in some cases, railroads.

21 **a. Land Management**

22 Land Management responds to infractions (*e.g.*, vehicle removal, gate/lock installation, or
 23 relocation of propane tanks under lines) of CPUC General Order operating standards and utility-
 24 developed standards related to land rights (in the form of fee ownership, easements, licenses, and
 25 leases) for electric and gas distribution and transmission operating asset requirements, including
 26 overhead and underground gas and electric facilities, electric substations, switching facilities, and
 27

1 gas regulator stations, etc. Land Management also negotiates rights-of-way and easements, or
2 assists in property acquisitions, necessary for electric and gas energy delivery facilities, and
3 ensures and maintains the necessary access to those facilities. Full and unrestricted access ensures
4 the Company's ability to properly maintain gas and electric distribution and transmission corridors,
5 electric substations, gas regulator stations, as well as perimeter and security fencing around these
6 sites. Land Managers also communicate with customers when maintenance activity will be
7 occurring on or near their property, and address the infractions relating to permanent or non-
8 permanent structures that encroach the easement or access of utility vehicles to infrastructure.

9 **b. Land Services Records and Survey**

10 The Records department conducts all records research for new business activity. This
11 research is utilized to interpret the existing land rights and to determine if new land rights need to
12 be acquired. Land Survey support is responsible for the management, service delivery, and quality
13 assurance oversight of survey contractors. The Land Survey Department coordinates survey crews
14 for many SDG&E departments and projects, reviews project designs to ensure adequate land rights
15 are in place for projects, and ensures that the quality of the deliverables meets the utility and
16 industry standards. Land Survey also provides training for vendors and SDG&E departments,
17 including Engineering groups and Project Management customer extension planners. Surveyors
18 and new business right of way agents assist customer planners by locating property lines,
19 governmental locations, and franchise areas, and generally instructing new planners and right of
20 way agents on the basics of encumbering property with easements for customer extensions.

21 **2. Forecast Method**

22 The forecast method developed for this cost category is the 3-year historical average,
23 adjusted for anticipated staff reductions through TY 2019. The 3-year average most closely
24 reflects recent trends and anticipated budgetary needs for the forecast period 2017 – 2019.

25 **3. Cost Drivers**

26 The costs behind this forecast are driven primarily by labor resources, professional
27 services, records retention, and materials required to effectively manage Land Service operations.
28 The TY 2019 estimates include a forecasted \$50,000 labor reduction resulting from four
29 employees accepting our voluntary retirement enhancement program (VREP), which was offered
30 internally to eligible employees in Q4 2016. These four positions are not anticipated to be back-

1 filled. The cost reduction associated with these employees is attributable to their involvement with
2 O&M activities, only.

3 **C. Rents and Operating Expenses**

4 The summary of my request for non-shared Rents and Operating Expenses is shown in
5 Table RDT-11:

6 **Table RDT-11**
7 **Non-Shared Rents and Operating Expenses**

REAL ESTATE & FACILITIES (In 2016 \$)			
C. RENTS AND OPERATING EXPENSES	2016 Adjusted- Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. RENTS - SDG&E	17,028	18,811	1,783
Total	17,028	18,811	1,783

8 **1. Description of Costs and Underlying Activities**

9 The non-shared services portion of rents is associated with rent for administrative offices,
10 telecommunications sites, branch offices, an environmental laboratory, office, multi-use and
11 customer service facilities, trailers, and right of way easements. All rents, except for right of way
12 easements, are expected to increase by an average of 5% per year based on a combination of
13 contractual increases and landlord estimates for operating expense increases. Right of way
14 easements are expected to increase by an average of 10% per year based upon estimates received,
15 including recent escalations for large properties, such as Bureau of Land Management (BLM) land
16 and the railroads.

17 **2. Forecast Method**

18 The forecast method developed for this cost category is the zero-based method because it is
19 based upon the contractual provisions of the lease agreements and the historical operating expense
20 cost increases passed through by the landlords.

21 **3. Cost Drivers**

22 The cost drivers are contractual rents along with contracted services and materials
23 associated with leased facilities that are incurred by the owners of leased properties and charged to

1 SDG&E through operating expense billings.³ The increase from BY 2016 to TY 2019 is due to
2 changes in the facilities occupied by SDG&E. While there were efficiencies achieved through the
3 consolidation of the Lightwave and Rancho Bernardo Annex facilities into the Century Park (CP)
4 East and Annex facilities, there were net increases in rents driven by the addition of Greencraig,
5 Caspian and the Kearny Offsite Warehouse.

6 **IV. SHARED COSTS**

7 **A. Introduction**

8 As described in the testimony of James Vanderhye (Ex. SDG&E-32), shared services are
9 activities performed by a utility shared services department (*i.e.*, functional area) for the benefit of:
10 (i) SDG&E or SoCalGas, (ii) Sempra Energy Corporate Center, and/or (iii) any unregulated
11 subsidiaries. The utility providing shared services allocates and bills incurred costs to the entity or
12 entities receiving those services.

13 The shared services portion of REL&F includes the support that the organization provides
14 for its shared facilities and services. The functional support groups within REL&F that provide
15 shared services include the following:

16 Facility Operations

17 Facility Operations

18 Work Management

19 Corporate Real Estate

20 Transaction Management

21 Lease Administration

22 Capital Programs

23 Capital Programs – Corporate Center Projects

24 Capital Planning

25 Real Estate – Planning

³ Due to a change in accounting rules, SDG&E 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 to 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, SDG&E anticipates providing updated numbers during the GRC update phase in 2018.

1 Space Planning & Standards
 2 Facility Advisors
 3 Move Management
 4 Real Estate – Resources
 5 Computer Aided Facility Management
 6 Corporate Center Maintenance
 7 Facility Operations
 8 Work Management

9 Table RDT-12 summarizes the total shared O&M forecasts for the listed cost categories.

10 **Table RDT-12**
 11 **Shared O&M Summary of Costs**

REAL ESTATE & FACILITIES (In 2016 \$)			
(In 2016 \$) Incurred Costs (100% Level)			
Categories of Management	2016 Adjusted- Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
A. FACILITY OPERATIONS	1,358	1,287	-71
B. CORPORATE REAL ESTATE	677	646	-31
C. CAPITAL PROGRAMS	148	129	-19
D. REAL ESTATE - PLANNING	1,037	1,073	36
E. REAL ESTATE - RESOURCES	491	491	0
F. CORPORATE CENTER MAINTENANCE	2,791	2,662	-129
Total Shared Services (Incurred)	6,502	6,288	-214

12 I am sponsoring the forecasts on a total incurred costs basis, as well as the shared services
 13 allocation percentages related to those costs. Those percentages are presented in my shared
 14 services workpapers, along with a description explaining the activities being allocated. (See Ex.
 15 SDG&E-22-WP.) The dollar amounts allocated to affiliates are presented in our Shared Services
 16 & Shared Assets Billing, Segmentation, & Capital Reassignments testimony. (See Ex. 32
 17 SDG&E/ Vanderhye.)

18 **B. Facility Operations**

19 The summary of my request for shared Facility Operations is shown in Table RDT-13:
 20

**Table RDT-13
Facility Operations**

REAL ESTATE & FACILITIES (In 2016 \$)			
(In 2016 \$) Incurred Costs (100% Level)			
A. FACILITY OPERATIONS	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. FACILITY OPERATIONS	1,358	1,287	-71
Incurring Costs Total	1,358	1,287	-71

1. Description of Costs and Underlying Activities

Facility Operations shared services costs pertain to Sempra Energy Headquarters building (HQ) utilities, facilities manager operation and administrative costs, and the Rancho Bernardo Data Center (RBDC) and Annex.

The Facilities – Manager costs include the section manager, two (2) management and one (1) associate employee’s labor, related non-labor expense, and departmental support expense items.

The RB Data Center costs include all maintenance expense items for the Rancho Bernardo Data Center facilities. The RB Data Center is the key SDG&E shared facility because of its critical contribution to the continued safety and reliability of our operations. This is a shared information technology facility of approximately 90,000 square feet housing over 250 employees who serve SDG&E, SoCalGas, Corporate Center, and certain affiliates. Maintenance costs are shared based upon usage studies provided by the information technology department.

2. Forecast Method

The three-year historical average is most appropriate because it takes into account the most recent trends in both labor and non-labor costs required to operate this area.

3. Cost Drivers

The cost drivers behind this forecast are driven primarily by labor resources and materials required to effectively manage Facility Operations.

C. Corporate Real Estate

The summary of my request for shared Corporate Real Estate is shown in Table RDT-14:

**Table RDT-14
Corporate Real Estate**

REAL ESTATE & FACILITIES (In 2016 \$)			
(In 2016 \$) Incurred Costs (100% Level)			
B. CORPORATE REAL ESTATE	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. REAL ESTATE - ADMINISTRATION	677	646	-31
Incurring Costs Total	677	646	-31

1. Description of Costs and Underlying Activities

The Corporate Real Estate Manager provides strategic asset management, transaction management, lease negotiation, and administration services for SDG&E, Corporate Center, and other affiliates upon request. Any transaction support or due diligence to ensure the utility is acquiring leased or owned real property at the best possible terms and conditions is the primary responsibility of Corporate Real Estate. The utility facility portfolio includes low and high-rise office buildings, construction and operating centers, bases, telecommunications sites, data centers, fleet garages and warehouses, and bill payment branch offices.

2. Forecast Method

The forecast method used for this category is the 5-year historical average. This method is the most representative of the types of costs experienced for this activity, incorporating the multi-year variability that is inherent to market fluctuations, economic conditions, and changing business drivers encountered in this field.

3. Cost Drivers

The cost drivers behind this forecast are driven primarily by labor resources, services, and materials required to effectively manage Corporate Real Estate. The TY 2019 estimates include a forecasted \$78,000 labor reduction resulting from one employee accepting our VREP, which was offered internally to eligible employees in Q4 2016. This position is not anticipated to be back-filled.

D. Capital Programs

The summary of my request for shared O&M related to Capital Programs is shown in Table RDT-15:

**Table RDT-15
Summary of Capital Programs**

Capital Programs (In 2016 \$) Incurred Costs (100% Level)			
C. CAPITAL PROGRAMS	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. CAPITAL PROGRAMS	148	129	-19
Incurring Costs Total	148	129	-19

1. Description of Costs and Underlying Activities

This organization is responsible for overall budgeting, scheduling, tracking, and implementation planning for the annual Facilities Capital Project Plan that is generated internally from our group’s approved projects list.

2. Forecast Method

The forecast method used for this category is the 3-year historical average. The 3-year historical average accurately reflects the costs associated with current staffing level and non-labor requirements for the 2017 – 2019 forecast period.

3. Cost Drivers

The costs for this forecast are driven primarily by labor resources, professional services, and materials required to effectively manage Capital Programs.

E. Real Estate Planning

The summary of my request for shared Real Estate Planning is shown in Table RDT-16:

**TABLE RDT-16
Real Estate Planning**

(In 2016 \$) Incurred Costs (100% Level)			
D. REAL ESTATE – PLANNING	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. REAL ESTATE – PLANNING	1,037	1,073	36
Incurring Costs Total	1,037	1,073	36

1. Description of Costs and Underlying Activities

The Real Estate Planning group provides space planning services to SDG&E and Corporate Center. Long-term facility space plans are developed with operating and support departments and

alternatives are explored with respect to property acquisitions and facility expansions or upgrades, as well as surplus property assessment and disposition. This group also coordinates employee moves involving furniture and equipment. In addition, this group works with business unit leaders to assist in developing an annual Facilities Capital Project Plan, based on current business priorities.

2. Forecast Method

The forecast method used for this category is the 3-year historical average. This method was selected as being the most representative of the types of costs experienced for this activity, such as lease expirations and terminations, associated tenant improvements, and remodeling of existing spaces for densification and improved workflow efficiencies/adjacencies.

3. Cost Drivers

The costs for this forecast are driven primarily by labor resources and materials required to effectively address continuous improvements and changes required for the Real Estate portfolio.

F. Real Estate Resources

The summary of my request for shared Real Estate Resources is shown in Table RDT-17:

**Table RDT-17
Real Estate Resources**

(In 2016 \$) Incurred Costs (100% Level)			
E. REAL ESTATE - RESOURCES	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. REAL ESTATE – RESOURCES	491	491	0
Incurred Costs Total	491	491	0

1. Description of Costs and Underlying Activities

Real Estate Resources supports the workplace technology tools known as Integrated Work Management Software (IWMS). IWMS enables an integrated approach towards effectively managing all aspects of Corporate Real Estate: Project Management, Maintenance Management, Sustainability Management, Space Planning, Portfolio Management, Lease Management, Work Order Management, and Transactions Management and Reporting, which support the building portfolio and specific project based activities of these groups. The integration allows REL&F staff and SDG&E employees access to information in a centralized and user friendly database to

1 manage their facilities, real estate, and land services needs efficiently via a common interactive
2 systems portal.

3 **2. Forecast Method**

4 The forecast method used for this category is base-year recorded. This method was
5 selected as the 2016 recorded costs most accurately reflect the expected staffing level and non-
6 labor requirements such as software licensing for the 2017 – 2019 forecast period.

7 **3. Cost Drivers**

8 The costs for this forecast are driven primarily by labor resources and materials required to
9 effectively and continuously update and service self-developed software applications, which are
10 necessary for the effective management of the Real Estate portfolio.

11 **G. Corporate Facilities Maintenance**

12 The summary of my request for Corporate Facilities Maintenance is shown in Table RDT-
13 18:

14 **Table RDT-18**
15 **Corporate Facilities Maintenance**

(In 2016 \$) Incurred Costs (100% Level)			
F. CORPORATE CENTER MAINTENANCE	2016 Adjusted-Recorded (000s)	TY 2019 Estimated (000s)	Change (000s)
1. CORPORATE MAINTENANCE	2,791	2,662	-129
Incurred Costs Total	2,791	2,662	-129

16 **1. Description of Costs and Underlying Activities**

17 Corporate Facilities Maintenance manages building maintenance services for HQ on behalf
18 of Sempra Energy. Through affiliate billing orders, all associated maintenance costs are allocated
19 to the Corporate Center.

20 **2. Forecast Method**

21 The forecast method developed for this cost category uses a 3-year average. This method
22 is the most representative of the types of costs experienced for this activity, incorporating the
23 multi-year variability that is inherent in this type of work.

24 **3. Cost Drivers**

25 The costs for this forecast are driven primarily by services and materials required to
26 effectively manage Corporate Facility Maintenance.

1 **V. CAPITAL**

2 Our focus on hardening and reinforcing the systems serving our facilities will help ensure
 3 that we continue to deliver safe, reliable energy to our customers by improving critical power
 4 infrastructure and mechanical components required for consistent operational readiness. Keeping
 5 our customers and employees safe from various environmental, societal, and operational
 6 conditions requires that we invest in our portfolio. Capital requirements have also been considered
 7 for implementing our strategy to consolidate our geographic footprint within the Kearny Mesa area
 8 to improve efficiencies within the enterprise by leveraging adjacencies and decreasing distances
 9 between resources. This strategy also improves our safety and environment by reducing the
 10 number of miles our employees need to drive in between facilities and in turn reducing greenhouse
 11 gas emissions and our overall carbon footprint.

12 Table RDT-19 summarizes the total capital forecasts for 2017, 2018, and 2019.

13 **Table RDT-19**
 14 **Facilities Capital**

FACILITIES/OTHER (In 2016 \$)			
	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
Total CAPITAL	54,699	68,502	80,249

FACILITIES/OTHER (In 2016 \$)			
Categories of Management	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
A. LAND BLANKET	302	302	302
B. STRUCTURES & IMPROVEMENTS	1,935	4,861	4,822
C. SAFETY/ENVIRONMENTAL	909	1,504	2,146
D. MISC EQUIPMENT	1,956	3,475	2,065
E. SECURITY SYSTEMS	1,760	3,401	4,047
F. INFRASTRUCTURE & RELIABILITY	1,560	1,947	6,651
G. REMODELS/RECONFIGURATIONS /RELOCATIONS	5,605	12,984	24,155
H. BUSINESS UNIT EXPANSIONS	10,446	19,068	16,623
I. ALTERNATIVE ENERGY SYSTEMS	2,625	2,814	5,724
J. ARCHIBUS BUSINESS SYSTEMS IMPROVEMENTS	756	1,008	504

FACILITIES/OTHER (In 2016 \$)			
Categories of Management	Estimated 2017 (000s)	Estimated 2018 (000s)	Estimated 2019 (000s)
K. CP6 CUSTOMER CALL CENTER IMPROVEMENTS	2,592	0	0
L. RBDC SERVER RM #1 CRAC UNIT REPLACEMENTS	1,528	0	0
M. TRANSMISSION ENERGY MGT SYSTEM IMPROVEMENTS	5,199	11,062	0
N. MISSION CONTROL CRITICAL ASSET SECURITY HARDENING	2,793	70	0
O. CP EAST TENANT IMPROVEMENTS	10,943	4,494	4,947
P. MORENO VALLEY IMPROVEMENTS	586	0	0
Q. RBDC POWER RELIABILITY IMPROVEMENTS	3,204	1,512	8,263
Total	54,699	68,502	80,249

1
2 The SDG&E Capital summary forecast for 2017, 2018, and 2019 are \$54.699 million,
3 \$68.502 million, and \$80.249 million, respectively. The capital summary includes blanket projects
4 (aggregations of individual projects with a cost of less than \$1 million, with few exceptions) and
5 specific projects with a total multi-year cost over \$1 million (including costs incurred in 2016, if
6 applicable). The table only includes those facility projects in the Commission's jurisdiction. Costs
7 shown are direct costs inclusive of employee labor and corresponding vacation and sick leave.

8 The key drivers for SDG&E facility capital projects are:

- 9 (1) Regulatory compliance and the necessity for our facilities to support the operational
10 reliability and safety of our electric and gas assets;
- 11 (2) Continuous improvements, changes, and technological advances in our industry that
12 require investments in our Real Estate portfolio to facilitate the current and future
13 trends in the functions of facilities such as: space requirements, equipment,
14 environmental considerations such as Indoor Air Quality (IAQ), demographics of a
15 changing workforce, and external geopolitical factors that impact the safety and
16 security of our customers, employees, and systems;
- 17 (3) Environmentally focused upgrades for facility energy efficiency, sustainability in
18 operations, and improvements to existing office sites and branch offices for an
19 improved customer experience;

- (4) Strengthening and improving the existing aging infrastructure for emergency generator systems, HVAC, plumbing, electrical, repaving, and other structural upgrades;
- (5) Implementation of a strategic plan to consolidate facilities and personnel for increased adjacencies and efficiencies.

A breakdown of the costs contained in each of the budget codes shown is provided in the associated capital work papers (Ex. SDG&E-22-CWP). Detailed discussion of each of these budget codes follows.

A. Land Blanket (Budget Code: 700)

**Table RDT-20
Land Blanket**

A. LAND BLANKET	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Land Blanket 2017 - 2019	302	302	302
Total	302	302	302

1. Description

This budget funds minor maintenance and landscape projects on fee owned unoccupied property to adequately support Company operations, manage and protect Company property, and maintain or improve the value of Company real property. The funding provides the opportunity to maintain and/or improve the rate of return on rental, lease, or sale of Company property, thereby increasing revenue and reducing customer rates.

2. Forecast Method

The forecast method developed for this cost category is a combination of zero-based and historical-based. This method is most appropriate because it depends on evolving maintenance requirements, internal customer business requirements (planned and unplanned), changing conditions and reliability of equipment, new code requirements, and vendor estimates.

3. Cost Drivers

The underlying cost drivers for these capital projects depend on many factors, the main one being the scope of the individual projects. The projects in this blanket are used to replace or improve fencing, drainage systems, perimeter walls, landscaping, and retaining walls at electric substations. Due to the increased water shortages in Southern California, typical landscaping projects have evolved from removal of diseased plants to complete removal of existing plant

1 materials and irrigation systems and replacement with drought tolerant plants and drip irrigation
2 systems. Documentation of these cost drivers is included in the capital work papers. (See Ex.
3 SDG&E-22-CWP.)

4 **B. Structures & Improvements Blanket (Budget Code: 701)**

5 **Table RDT-21**
6 **Structures & Improvements Blanket**

B. STRUCTURES & IMPROVEMENTS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Structures & Improvement Blanket 2017 - 2019	1,935	4,861	4,822
Total	1,935	4,861	4,822

7
8 **1. Description**

9 This budget funds minor building and/or site modifications, upgrades, and improvements to
10 adequately support corporate business initiatives, to extend the life of the asset, or increase the
11 functionality of a building or site. Small projects under \$1 million are bundled when possible for
12 economies of scale in sourcing. These projects vary year to year based on need, but address the
13 capital replacement or addition of basic, individual interior and exterior facilities construction
14 components, including lighting, fencing, manual gates, paving, roofing, flooring, windows, and
15 storage racking or sheds. Each year's requirements are prioritized to manage and protect facility
16 assets, keep employees safe, and optimize real estate value. Scope of work may include
17 modernization projects and/or offer best alternatives for cost avoidance compared to other
18 scenarios.

19 **2. Forecast Method**

20 The forecast method developed for this cost category is a combination of zero-based and
21 historical-based. This method is most appropriate because it depends on evolving maintenance
22 requirements or changing conditions such as leaking roofs, cracked or settling paving, frayed or
23 torn carpet, failing gate motors or need for increased storage capacity, new code requirements such
24 as lighting efficiency, and vendor estimates.

25 **3. Cost Drivers**

26 The underlying cost drivers for these capital projects depend on evolving maintenance
27 requirements, internal customer business requirements (planned and unplanned), changing

1 conditions and reliability of equipment, new code requirements, and vendor estimates.
 2 Documentation of these cost drivers is included in the capital work papers. (See Ex. SDG&E-22-
 3 CWP.)

4 **C. Safety/Environmental blanket (Budget Code: 703)**

5 **Table RDT-22**
 6 **Safety/Environmental Blanket**

C. SAFETY/ENVIRONMENTAL	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Environmental/Safety Blanket 2017 – 2019	909	1,504	2,146
Total	909	1,504	2,146

7
 8 **1. Description**

9 This budget includes RAMP related expenditures in its entirety, and funds building and
 10 system modifications, site upgrades, and other facility improvements necessary to comply with
 11 safety and environmental code or regulations, or implement best practices towards mitigating risk
 12 to the environment or safety of employees or the public. Small projects under \$1 million are
 13 bundled when possible for economies of scale in sourcing. These projects vary year to year based
 14 on changes to existing or proposed new regulations. Common project types covered in this budget
 15 code are improvements to meet storm water management regulations. Storm water compliance
 16 includes physical changes to the site, such as drainage control, curbs and berms, and coverings to
 17 manage the flow of storm water and other best management practices. Concrete pads, hazardous
 18 waste storage and other requirements to mitigate environmental risk are covered in this blanket.
 19 Safety projects vary in nature, but can include communication systems, fall protection, or other
 20 improvements to reduce employee risk. Underground storage tank compliance issues and
 21 enhanced vapor recovery system upgrades to the fueling systems are also covered under this
 22 blanket.

23 **2. Forecast Method**

24 The forecast method developed for this cost category is combination of zero-based and
 25 historical-based. This method is most appropriate because it depends on evolving maintenance
 26 requirements, internal risk assessments, changing site conditions, new code requirements, and
 27 vendor estimates.

1 **3. Cost Drivers**

2 The underlying cost drivers for these capital projects depend on evolving maintenance
3 requirements, internal risk assessments, changing site conditions, new code requirements, and
4 vendor estimates. Documentation of these cost drivers is included in the capital work papers. (See
5 Ex. SDG&E-22-CWP.)

6 **D. Miscellaneous Equipment blanket (Budget Code: 705)**

7 **Table RDT-23**
8 **Miscellaneous Equipment blanket**

D. MISC EQUIPMENT	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Misc. Equipment Blanket 2017 - 2019	1,956	3,475	2,065
Total	1,956	3,475	2,065

9 **1. Description**

10 This budget funds the purchase and installation of miscellaneous equipment that does not
11 fall under the scope of any other capital project. This equipment supports the effective operations
12 of the requesting department. The blanket benefits numerous departments throughout the
13 Company by funding equipment purchases, both planned and unplanned due to breakdowns, which
14 enable employees to work efficiently and effectively. Included in this budget code are new or
15 replacement equipment, such as kitchen, audio visual, specialized mechanical equipment used in
16 the fleet garages (reels, jacks or hoists), and lab equipment for sampling of soils and wastewater.

17 **2. Forecast Method**

18 The forecast method developed for this cost category is combination of zero-based and
19 historical-based. This method is most appropriate because it depends on evolving maintenance
20 requirements, internal customer business requirements (planned and unplanned), changing
21 conditions and reliability of equipment, new code requirements, and vendor estimates.

22 **3. Cost Drivers**

23 The underlying cost drivers for these capital projects depend on evolving maintenance
24 requirements, internal customer business requirements (planned and unplanned), changing
25 conditions and reliability of equipment, new code requirements, and vendor estimates.
26 Documentation of these cost drivers is included in the capital work papers. (See Ex. SDG&E-22-
27 CWP.)
28

1 Documentation of these cost drivers is included in the capital work papers. (See Ex. SDG&E-22-
2 CWP.)

3 **G. Remodels and Reconfigurations (Budget Code: 709)**

4 **Table RDT-26**
5 **Remodels and Reconfigurations Blanket**

G. REMODELS/RECONFIGURATIONS/RELOCATIONS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Remodel/Relocate/Reconfig Blanket 2017 - 2019	5,605	12,984	24,155
Total	5,605	12,984	24,155

6
7 **1. Description**

8 This budget funds changes to occupied facilities needed to provide adequate and efficient
9 office space and work environments for employees. Requirements are based on business needs
10 and functionality requirements to meet business and resource objectives. Space standards and
11 guidelines are used to manage space allocations and modifications effectively in reconfigurations.
12 Ergonomics are considered in the upgrades to provide improved working conditions and safety for
13 employees.

14 **2. Forecast Method**

15 The forecast method developed for this cost category is combination of zero-based and
16 historical-based. This method is most appropriate because it depends on internal customer
17 business requirements (planned and unplanned), changing employment conditions, and vendor
18 estimates.

19 **3. Cost Drivers**

20 The underlying cost drivers for these capital projects depend on internal customer business
21 requirements (planned and unplanned), changing employment conditions, emerging company
22 initiatives or major project needs, facility consolidation strategies, aged conditions of existing
23 work areas, spatial and workflow efficiencies, market pricing for construction and furniture, and
24 associated vendor estimates. To address these drivers, and as shown in the Table RDT-26
25 estimated annual forecasts, SDG&E proposes to proceed with a program of constructing tenant
26 improvements and furnishing replacements and technology improvements at several facilities.
27 Significant projects that are included in this program are further elaborated in the workpapers and
28 highlighted herein. The 2017 estimated forecast includes the CP Annex Plus project, which will
29 provide technology infrastructure upgrades and a complete demolition and remodel of roughly

1 10,000 sq. ft. of office space, and the Mission Telecom Remodel project, which will improve the
 2 existing 20+ year old Mission Telecom Facility, repurposing the interior space from general office
 3 to a training facility for Grid Operations. The estimated cost of these two projects is roughly \$4
 4 million. The 2018 estimated forecast includes a comprehensive remodel of the existing 20+ year
 5 old first and second floors of Building 5 at the Century Park Headquarters campus. This project is
 6 part of a phased plan of improvements to all buildings on the campus, and has an estimated cost of
 7 \$10.2 million. The 2019 estimated forecast includes a comprehensive remodel of the existing 20+
 8 year old first and second floors of Building 4 at the Century Park Headquarters campus, which is
 9 also part of the phased plan and has an estimated value of \$16 million. The 2019 forecast also
 10 includes an additional three projects: (1) refurbishing a locker and restroom facility at the
 11 Northeast Construction & Operations Center (estimated cost of \$1.2 million); (2) replacement of
 12 the 2nd floor furniture and finishes at the Orange County Construction and Operations
 13 Administrative Office Building (estimated cost of \$1.3 million); and (3) remodeling of the
 14 Emergency Operations Center in Building 6 at the Century Park Headquarters campus (estimated
 15 cost of \$2.8 million). Within the 2019 estimated forecast, the combined cost of these four projects
 16 is \$21.3 million. The general objective of these office space remodels is to create more efficient
 17 space utilization through the densification of work stations and the creation of collaborative project
 18 team areas, and to provide healthier, safer environments for employees. Additional documentation
 19 of these cost drivers is included in the capital work papers. (See Ex. SDG&E-22-CWP.)

20 **H. Business Unit Expansions (Budget Code: 710)**

21 **Table RDT-27**
 22 **Business Unit Expansions Blanket**

H. BUSINESS UNIT EXPANSIONS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Business Unit Expansion Blanket 2017 - 2019	10,446	19,068	16,623
Total	10,446	19,068	16,623

23 **1. Description**

24 The purpose of this blanket is to fund building and facility expansions and improvements
 25 that are necessary to adequately support growing corporate business objectives and initiatives. The
 26 projects identified include master planning, expansion, relocation, building construction and
 27 facility consolidation projects at various company buildings/facilities. These projects are designed

1 to satisfy current and future space requirements to appropriately house employees and provide
2 expanded workspace and storage capacities to keep pace with company growth.

3 **2. Forecast Method**

4 The forecast method developed for this cost category is combination of zero-based and
5 historical-based. This method is most appropriate because it depends on internal customer
6 business requirements (planned and unplanned), changing employment conditions, and vendor
7 estimates.

8 **3. Cost Drivers**

9 The underlying cost drivers for these capital projects depend on internal customer business
10 requirements (planned and unplanned), changing employment conditions, emerging company
11 initiatives or major project needs, facility consolidation strategies, aged conditions of existing
12 work areas, spatial and workflow efficiencies, market pricing for construction and furniture, and
13 associated vendor estimates. To address these drivers, and as shown in the Table RDT-27
14 estimated annual forecasts, SDG&E proposes to proceed with a program of improvements to
15 leased facilities, operational expansions and associated improvements within our portfolio, and
16 strategic planning for new or relocated facilities or properties. Significant projects that are
17 included in this program are further described in the workpapers and highlighted herein. The 2017
18 and 2018 estimated forecasts include tenant improvements to the Greencraig II facility, with an
19 estimated cost of \$8.6 million and \$13.9 million, respectively, for the two years. The project
20 includes expansion of an existing 2nd floor mezzanine area and tenant improvement construction
21 across the entire, expanded building area of 91,000 sq. ft. The 2018 and 2019 estimated forecasts
22 include expansions to the Mission Skills Training and Miramar Welding Room facilities, which
23 are necessary to provide continued training of field personnel for work on electric and gas energy
24 delivery facilities. Cumulatively across both years, the estimated costs of the Mission Skills
25 Training and Miramar Welding Room Expansion projects are roughly \$5 million and \$4 million,
26 respectively. The 2018 and 2019 estimated forecasts also include estimated strategic planning,
27 design and permitting costs for development of the Kearny Master Plan and relocation and
28 consolidation of critical command center facilities. The Kearny Master Plan seeks to optimize
29 existing operations on the property, accommodate future growth, and consolidate employees from
30 other locations. The Critical Facility Consolidation & Expansion project aims to unify critical 24/7
31 operations control functions into a singular facility, constructed with a high level of seismic

1 resistivity and physical security measures to increase the hardening and protection of these
 2 facilities and internal assets. Cumulatively across both years, the estimated costs of the Kearny
 3 Master Plan and Critical Facility Consolidation & Expansion projects are \$3.5 million and
 4 \$5million, respectively. Additional documentation of these cost drivers is included in the capital
 5 work papers. (See Ex. SDG&E-22-CWP.)

6 **I. Alternative Energy System Allowance (Budget Code: 08729)**

7 **Table RDT-28**
 8 **Alternative Energy System Allowance**

I. ALTERNATIVE ENERGY SYSTEMS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Alternative Energy Program	2,625	2,814	5,724
Total	2,625	2,814	5,724

9
 10 **1. Description**

11 The purpose of this blanket is to implement installations of electric vehicle chargers and
 12 hybrid plug-in receptacles at occupied facilities across the SDG&E territory, both fee owned and
 13 leased, for charging of both fleet and employee electric and hybrid vehicles (energy cost at
 14 employee expense).

15 **2. Forecast Method**

16 The forecast method developed for this cost category is combination of zero-based and
 17 historical-based. This method is most appropriate because it depends on evolving maintenance
 18 and operational requirements and vendor estimates.

19 **3. Cost Drivers**

20 The underlying cost drivers for these capital projects depend on evolving maintenance and
 21 operational requirements and vendor estimates. Documentation of these cost drivers is included in
 22 the capital work papers. (See Ex. SDG&E-22-CWP.)

23 **J. Land Services Archibus System (Budget Code: 13746)**

24 **Table RDT-29**
 25 **Land Services Archibus System**

J. ARCHIBUS BUSINESS SYSTEMS IMPROVEMENTS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
ARCHIBUS BUSINESS SYSTEMS IMPROVEMENTS	756	1,008	504
Total	756	1,008	504

1 **1. Description**

2 As stated earlier, Archibus is an integrated work management system used by Real Estate
3 & Facilities employees to capture support requests and manage real estate assets and facilities
4 preventative maintenance. The Archibus Project, first launched in 2013, automates and develops
5 best management practices around several of the shared services support systems used within the
6 Corporate Real Estate & Planning and Facilities departments. Project activities include document
7 scanning of legacy information, and updating, revision or development of new work tracking
8 systems, including document management, financial, scheduling and work flow processes. The
9 design of each operating module within the system includes the ability to prepare extracts and
10 reports used for metrics and other key performance indicators as necessary. The project has
11 completed implementation of modules in support of Capital Project Management, Land
12 Management & Entitlements, Move Management, and Lease Administration. The project will
13 continue with the development of operating modules for Real Estate Planning, Facilities
14 Operations, and Furniture Services.

15 Integrated systems such as Archibus facilitate cost avoidance returns in the long term.
16 Legacy systems need to be updated and processes need to be re-engineered to meet increased
17 demand on existing and new information. Data increases knowledge, which drives efficiency and
18 allows for better management of tools and resources. New systems enhance best practices and
19 compliment “good work habits” that support such change. Engineering new business tools and
20 controls supports our customer needs, but we must also manage real property assets and
21 commodities. The project’s primary focus on design and requirements is to support the processes
22 of the Real Estate & Facilities staff, but also to share the new systems and relevant information
23 with our customers. Creating systems that allow our customers access to the information
24 empowers them to make more informed decisions and work at their own pace.

25 **2. Forecast Method**

26 The forecast method developed for this cost category is zero-based. This method is most
27 appropriate because it depends on equipment, software requirements, and vendor estimates.

28 **3. Cost Drivers**

29 The underlying cost drivers for these capital projects depend on requirements for
30 equipment, end user operational requirements, software requirements, and vendor estimates.

1 Documentation of these cost drivers is included in the capital workpapers. (See Ex. SDG&E-22-
2 CWP.)

3 **K. CP6-2 Customer Call Center Tenant Improvements (Budget Code:14753)**

4 **Table RDT-30**
5 **CP6-2 Customer Call Center Tenant Improvements**

K. CP6 CUSTOMER CALL CENTER IMPROVEMENTS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
CP 6-2 Remodel	2,592	0	0
Total	2,592	0	0

6
7 **1. Description**

8 The project will improve the existing 20+ year old Customer Call Center on the second
9 floor of Century Park Building 6, through the implementation of roughly 35,000 square feet of
10 tenant improvement construction and new furnishings.

11 The project will create more efficient space utilization through the densification of work
12 stations and the creation of collaborative project team areas. The cost and flexibility of spatial
13 reconfiguration will be significantly enhanced through the use of demountable wall and raised
14 floor systems. Motorized, adjustable work surfaces will be provided to allow for employee
15 movement and stretching while working, thereby reducing the risk of muscle fatigue and stiffness
16 during the work day. Improved daylighting within the space will reduce the risk of eye strain in
17 this monitor intensive environment.

18 **2. Forecast Method**

19 The forecast method developed for this cost category is zero-based. This method is most
20 appropriate because it depends on actual vendor and internal labor costs and estimates.

21 **3. Cost Drivers**

22 The underlying cost drivers for these capital projects depend on requirements for
23 equipment, code requirements, and vendor estimates. Documentation of these cost drivers is in the
24 capital work papers. (See Ex. SDG&E-22-CWP.)
25

1 **P. Moreno Valley Admin Bldg Tenant Improvements (Budget Code: 16770)**

2 **Table RDT-35**
3 **Moreno Valley Admin Bldg Tenant Improvements**

P. MORENO VALLEY IMPROVEMENTS	Estimated 2017(000s)	Estimated 2018(000s)	Estimated 2019(000s)
Moreno Admin Bldg Back-up Power Improvements	586	0	0
Total	586	0	0

4
5 **1. Description**

6 The project will provide tenant improvements to roughly 7,300 square feet of this critical
7 Administrative Office building, which houses the operations room and supporting office functions
8 that oversee the flow of high pressure natural gas to the service territory from northern sources.

9 The facility has not been remodeled or refreshed since its original construction in the
10 1980's, and the purpose of the project is to remodel and rehabilitate the facility for reliability,
11 compliance safety, and improved maintenance purposes. The surrounding office support
12 functions, restrooms, and locker rooms will be improved. HVAC systems will be replaced and the
13 surrounding office space furniture will be upgraded to current ergonomic standards. Restrooms
14 and shower facilities will be brought to compliance with current American Disability Act
15 requirements.

16 **2. Forecast Method**

17 The forecast method developed for this cost category is zero-based. This method is most
18 appropriate because it depends on equipment requirements, actual vendor and internal labor costs,
19 and estimated vendor and internal labor costs.

20 **3. Cost Drivers**

21 The underlying cost drivers for these capital projects depend on equipment requirements,
22 code requirements, and vendor estimates. Documentation of these cost drivers is included in the
23 capital work papers. (See Ex. SDG&E-22-CWP.)

1 **VI. CONCLUSION**

2 This testimony describes the activities of SDG&E’s REL&F functions, and presents the
3 forecast for both existing and reasonably anticipated new expenses for the GRC test year 2019.

4 This testimony and my workpapers demonstrate the justification for the requested funding so that
5 SDG&E can continue to meet its obligations to acquire, operate and maintain its properties and
6 facilities in a reasonable, safe, and responsible manner. I request the Commission approve funding
7 for the expenses presented here.

8 This concludes my prepared direct testimony.

9

1 **VII. WITNESS QUALIFICATIONS**

2 My name is R. Dale Tattersall, Manager – Facilities for SDG&E. The combined
3 departments of my organization are responsible for managing all of the facilities operations,
4 maintenance, capital construction improvements and/or repairs and the acquisition of rights to
5 access land containing electric and/or gas utility assets. The shared services within my
6 organization include real estate services for planning and facilities operations, maintenance, and
7 capital programs for Corporate Headquarters.

8 I have a Bachelor’s Degree from the University of Arizona, Tucson, majoring in Public
9 Administration, and a Masters of Business Administration Finance from California Lutheran
10 University, Thousand Oaks. I have a broad background in construction, contracting, project
11 management, and the energy engineering field.

12 At Sempra Energy, I have held numerous key technical and managerial positions with
13 increasing responsibility in Commercial and Industrial Customer Services, Supply Management –
14 Electric/Gas Portfolio, and Facilities Operations. In these various positions, I was responsible for
15 energy efficiency projects at federal facilities, managing the sourcing, contracts, and spend for the
16 utility in all electric and gas related purchasing, and the daily operations of our facilities including
17 capital improvements, repairs, and land services responsibilities to support the organization.

18 I have held my current position as Manager –Facilities since December 20, 2014.

19 I have not previously testified before the Commission.

1
2
3

APPENDIX A
GLOSSARY OF ACRONYMS

BLM	Bureau of Land Management
CP	Century Park
CRAC	Computer Room Air Conditioning
CRAHs	Computer Room Air Handling-Type Units
FOF	Fueling Our Future
GIS	Geographic Information System
GRC	General Rate Case
HVAC	Heating, Ventilation and Air Conditioning
HQ	Sempra Energy Headquarters building
IAQ	Indoor Air Quality
IWMS	Integrated Work Management Software
NERC-CIP	North American Electric Reliability Corporation – Critical Infrastructure Protection
O&M	Operations & Maintenance
PCB	Polychlorinated biphenyl
RAMP	Risk Assessment Mitigation Phase
RB	Rancho Bernardo
RBDC	Rancho Bernardo Data Center
REL&F	Real Estate, Land and Facilities
SDG&E	San Diego Gas & Electric Company
SoCalGas	Southern California Gas Company
UPS	Uninterruptable Power Systems
VREP	Voluntary Retirement Enhancement Program

4