Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2019 General Rate Case
Application: A.17-10-007/008 (cons.)
Exhibit: SDG&E-222

SAN DIEGO GAS & ELECTRIC COMPANY

REBUTTAL TESTIMONY OF R. DALE TATTERSALL

(REAL ESTATE, LAND SERVICES, & FACILITIES)

JUNE 18, 2018

BEFORE THE PUBLIC UITIES COMMISSION
OF THE STATE OF CALIFORNIA

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SDG&E REBUTTAL TESTIMONY OF R. DALE TATTERSALL

(REAL ESTATE, LAND SERVICES, & FACILITIES)

I. SUMMARY OF DIFFERENCES

TOTAL Operations and Maintenance (O&M) - Constant 2016 ($000)			
	Base Year 2016	**Test Year 2019**	**Change**
SDG&E	**$ 32,776**	**$ 34,169**	**$ 1,393**
ORA	**$ 32,776**	**$ 34,169**	**$ 1,393**
TURN	**$ 32,776**	**$ 33,368**	**$ 592**

TOTAL CAPITAL - Constant 2016 ($000)					
	2017	**2018**	**2019**	**Total**	**Variance**
SDG&E	**$ 54,699**	**$ 68,502**	**$ 80,249**	**$ 203,450**	-
ORA	**$ 51,600**[1]	**$ 47,646**	**$ 47,017**	**$ 146,263**	**$ (57,817)**
TURN	**$ 51,600**[2]	**$ 47,646**	**$ 41,960**	**$ 141,206**	**$ (62,244)**

II. INTRODUCTION

This rebuttal testimony regarding SDG&E's request for Real Estate, Land Services and Facilities ("REL&F") addresses the following testimony from other parties:

[1] ORA and TURN recommend the 2017 actual recorded capital expenditures for SDG&E Real Estate and Facilities be adopted as the 2017 authorized forecast. The 2012-2017 historical recorded capital expenditures provided to ORA/TURN for this witness area were understated, because SDG&E inadvertently removed the electric transmission (FERC) component when providing historical capital data to ORA. SDG&E's 2017- 2019 Real Estate & Facilities capital forecasts included in my prepared direct testimony reflect the total forecasted expenditure level (*i.e.*, inclusive of the FERC component). The Second Revised Direct Testimony of James Vanderhye (Ex. SCG-34-2R/SDG&E-32-2R, beginning at p. JV-31, line 10) describes the process of allocating costs to electric functions and the exclusion of FERC costs from the GRC. This exclusion process takes place in the Results of Operation (RO) model. If the 2017 expenditure levels recommended by ORA/TURN are adopted, it would effectively result in a double removal of FERC costs when the RO model FERC exclusion process occurs, because ORA's/TURN's recommended capital expenditure levels are already exclusive of FERC costs. The 2017 SDG&E Real Estate and Facilities actual recorded capital expenditure level inclusive of FERC costs is $59,501,000. SDG&E assumes that this would be the intended ORA/TURN recommendation for 2017 Real Estate and Facilities authorized capital expenditures.

[2] *See* footnote 1 above.

- The Office of Ratepayer Advocates (ORA) as submitted by Mr. Mark Waterworth.[3]
- The Utility Reform Network (TURN), as submitted by Mr. Garrick Jones and Mr. William Marcus.[4]

Please note that the fact that I may not have responded to every issue raised by others in this rebuttal testimony does not mean or imply that SoCalGas agrees with the proposal or contention made by these or other parties. The forecasts contained in SDG&E's direct testimony, performed at the project level, are based on sound estimates of its revenue requirements at the time of testimony preparation.

With respect to O&M, SDG&E submitted direct testimony requesting approval for $34,169,000 in funding for the test year, to support our continuing operations. ORA did not oppose SDG&E's O&M forecast.[5] TURN recommended reductions to O&M in the areas of HQ Rent & Facilities and RB Data Center & Annex. Specifically, TURN recommended:

- A 50% ($379K) reduction in facilities maintenance costs at the RB Data Center and Annex based on the decommissioning of the RB Annex facility.[6]
- That the Commission adopt a four-year average of recorded costs (2014-2017) for the HQ Rent and Facilities Maintenance forecast. The result of this recommendation is an O&M expense forecast of $2.221 million, or a $422,000 reduction to SDG&E's forecast of $2.663 million.[7]

With respect to capital, SDG&E's forecast reflects an increase in anticipated spend that is larger than previous rate cases. One of the major differences in this cycle (2017-2019) is our

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[3] April 13, 2018, ORA Report on SDG&E – Supply Management & Logistics and Supplier Diversity; Fleet Services; Real Estate, Land Services and Facilities; and Environmental Services, Ex. ORA-18 (Ex. ORA-18 (Waterworth)).

[4] May 14, 2018, Prepared Testimony of Garrick F. Jones and William P. Marcus Addressing the Proposals of San Diego Gas & Electric Company and Southern California Gas Company in Their Test Year 2019 General Rate Case on behalf of TURN, Ex. TURN-05 (Ex. TURN-05 (Jones/Marcus)).

[5] Ex. ORA-18 (Waterworth) at 3.

[6] Ex. TURN-05 (Jones/Marcus) at 3.

[7] *Id*. at 3.

need to make significant changes and tenant improvements to our interior spaces and facilities that have not been contemplated in the past. As explained in detail in my direct testimony, the proposed capital investments are needed to improve our facilities to address one or more of the following: (1) an aged facility that has not substantively changed from its original floor plate, purpose or configuration that no longer facilitates operational efficiencies or a collaborative workplace; (2) hardening and upgrading existing infrastructure for increased safety and reliability; (3) the ability to increase densification and space utilization; (4) creating adjacencies that improve productivity, improve energy efficiency, and decrease operating expenses; (5) enhance employee recruitment and retention, and address a changing workforce; and (6) implementation of a geographic consolidation strategy. Finally, in some cases, the improvements to existing facilities may negate the need for a potential costly relocation to a new facility.

ORA's opposition to SDG&E's capital forecast is primarily driven by the assertions that (1) SDG&E was able to start and complete various projects within our "historical capital expenditure . . . both with and without approval in the prior rate cases," and (2) the REL&F capital forecast is "highly discretionary and can change based on management's reprioritization, indicating that although a project is forecasted, does not mean the project will be started and/or completed."[8] Also, despite conceding that "some projects are unknown and the use of averaging is a reasonable basis to forecast," ORA argues that the capital blanket budget code allowances for unforeseen or "as- of- yet specified" projects could create a forecast that is higher than actual because the estimating methodology contains both historical planned and unplanned projects.[9]

This rebuttal testimony will refute ORA's and TURN's arguments and clarify why SDG&E's past performance with forecasting, managing, and executing on capital projects--supports SDG&E's current forecasts instead of those of ORA or TURN. SDG&E's use of unplanned or as-of-yet specified forecasts in blanket budgets is not uncommon, is supported by previous rate cases, and constitutes a reasonable practice. Additionally, the size and complexity of some of the proposed projects in this rate case largely explains the increases in our forecast from the last rate case. It is standard business practice to exercise discretion to manage our

[8] Ex. ORA-18 (Waterworth) at 17.

[9] *Id*. at 18.

overall capital investments, as customer, market, statutory, and regulatory requirements and conditions often evolve in between rate cases.

SDG&E's GRC capital forecasts are based on specific projects identified during our preparation of direct testimony. Over the course of a three-year cycle, some project changes are inevitable and therefore prioritization of existing or new projects should not be misconstrued to diminish the value of the forecast or make the projects discretionary. More noteworthy is that our actual capital costs have exceeded our aggregate capital forecasts by approximately 2% over the 2012 – 2017 period, demonstrating our ability to assess and address the needs of our facilities. The determination of this variance tolerance is exhibited in Section IV.a.1. below.

A. ORA

ORA issued its report on REL&F on April 13, 2018.[10] The following is a summary of ORA's position(s):

- ORA does not oppose SDG&E's TY 2019 O&M forecast.[11]
- ORA recommends using 2017 actual costs as an appropriate forecast of SDG&E's 2017 capital expenditures.[12]
- ORA opposes SDG&E's 2018 forecasted expenditures and recommends a forecast of $2.946 million related to the Structures and Improvements Blanket.[13]
- ORA opposes SDG&E's 2018 and 2019 forecasted expenditures and recommends a forecast of $1.089 million for each year related to the Environmental Safety Blanket.[14]

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[10] Ex. ORA-18 (Waterworth).

[11] *Id*. at 14: 6.

[12] *See* also footnote 1, which explains the correct calculation of actual costs to include FERC transmission costs. Ex. ORA-18 (Waterworth) at 4:11.

[13] Ex. ORA-18 (Waterworth) at 4:14.

[14] *Id*. at 4:17.

- ORA opposes SDG&E’s 2018 and 2019 forecasted expenditures and recommends a forecast of $2.606 million and $696,000 respectively, related to the Miscellaneous Fleet/Equipment Blanket.[15]
- ORA opposes SDG&E’s 2018 and 2019 forecasted expenditures and recommends a forecast of $775,000 and $1.680 million respectively, related to the Security Blanket.[16]
- ORA opposes SDG&E’s 2018 and 2019 forecasted expenditures and recommends a forecast of $615,000 and $5.319 million respectively, related to the Infrastructure Reliability Blanket.[17]
- ORA opposes SDG&E’s 2018 and 2019 forecasted expenditures and recommends a forecast of $2.625 million for each year, related to the Alternate Energy Efficiency Program.[18]
- ORA opposes SDG&E’s 2018 and 2019 forecasted expenditures and recommends a forecast of $7.278 million and $13.109 million respectively, related to the Remodel/Relocate/Reconfigure forecast.[19]
- ORA opposes SDG&E’s 2018 and 2019 forecasted expenditures and recommends a forecast of $16.060 million and $8.608 million respectively, related to the Business Unit Expansion forecast.[20]

B. TURN

TURN submitted testimony on May 14, 2018.[21]

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[15] *Id*. at 4:20.

[16] *Id*. at 5:1.

[17] *Id*. at 5:4.

[18] *Id*. at 5:7.

[19] *Id*. at 5:10.

[20] *Id*. at 5:13.

[21] Ex. TURN-05 (Jones/Marcus).

1. O&M

- TURN proposes removing half, or $379,000 of the forecasted Facilities Operations cost that is related to Rancho Bernardo (RB) Data Center & Annex. The result is a forecast of $379,000.[22]
- TURN recommends that the Commission adopt a four-year average of recorded costs (2014-2017). The result of this recommendation is an O&M expense forecast of $2.221 million, or a $442,000 reduction to SDG&E's forecast of $2.663 million.[23]

2. Capital

TURN agrees with ORA's forecasts for FY2017 and FY2018, and provides supplemental material in support of those forecasts.[24] TURN also proposes capital reductions in addition to ORA's proposals for test year 2019:

- Network Operations Center (NOC) Equipment Improvement (708A.003) - $2.015 million reduction for 2019.[25]
- CP6 EOC Tenant Improvements (709A.004) - $2.664 million reduction for 2019.[26]
- Ramona Construction & Operation (C&O) Expansion Construction (710A.006) - $378,000 reduction for 2019.[27]

TURN's forecast for total expenditures for Real Estate, Land Services, and Facilities in 2019, including ORA's forecast, is $41.960 million, which is $38.289 million less than SDG&E's forecast and $5.057 million less than ORA's. TURN's incremental recommendations affect only the 2019 forecast.

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[22] *Id*. at 3:4.

[23] *Id*. at 3:18.

[24] *Id*. at 4:10.

[25] *Id*. at 4:11.

[26] *Id*. at 4:15.

[27] *Id*. at 4:16.

III. REBUTTAL TO PARTIES' O&M PROPOSALS

A. Non-Shared Services O&M

NON-SHARED O&M - Constant 2016 ($000)			
	Base Year 2016	**Test Year 2019**	**Change**
SDG&E	**$ 26,274**	**$ 27,881**	**$ 1,607**
ORA	**$ 26,274**	**$ 27,881**	**$ 1,607**
TURN	**$ 26,274**	**$ 27,881**	**$ 1,607**

Both ORA and TURN agree with SDG&E's non-shared services forecast. The Commission should adopt SDG&E's forecast as reasonable.

B. Shared Services O&M

SHARED O&M - Constant 2016 ($000)			
	Base Year 2016	**Test Year 2019**	**Change**
SDG&E	**$ 6,502**	**$ 6,288**	**$ (214)**
ORA	**$ 6,502**	**$ 6,288**	**$ (214)**
TURN	**$ 6,502**	**$ 5,632**	**$ (870)**

ORA agrees with SDG&E's forecast for shared services O&M.

1. RB Data Center Annex – TURN Disputed Cost

TURN does not agree with SDG&E's forecast for the RB Data Center & Annex (Cost Center 2100-3610). TURN recommends a 50% (or $379,000) reduction to the $758,000 forecast, asserting that the decommissioning of the RB Annex facility warrants a reduction in costs.

SDG&E disagrees with TURN's recommendation of an arbitrary 50% reduction to the forecast, as the routine operations costs for the RB Annex facility are not contained in cost center 2100-3610, but are contained in workpaper group 1RE003.000 – SDGE Rents. The historical costs and forecast associated with 2100-3610 are almost exclusively for the RB Data Center facility, which is different than the RB Annex. SDG&E has removed the forecast for rents and routine operations costs associated with the RB Annex facility from workpaper group 1RE003.000 in years 2018 and 2019 to reflect the cost of the facility being decommissioned at the end of 2017. SDG&E's response to TURN Data Request SEU-034-Q22a (included in Appendix A) provides a detailed forecast for each shared office location in years 2018 and 2019 and accurately reflects a $0 forecast for the RB Annex office location in both years. Compared to the 2017 forecast of $758,000, 2017 actual costs for the RB Data Center & Annex were $779,000, or $21,000 higher than anticipated; therefore, our forecast should be considered reasonable.

2. HQ Rent and Facilities Maintenance – TURN Disputed Cost

TURN recommends that the Commission adopt a four-year average of recorded costs (2014-2017) for the HQ Rent and Facilities Maintenance forecast.[28] The result of this recommendation is an O&M expense forecast of $2.221 million, or a $442,000 reduction to SDG&E's forecast of $2.663 million.[29]

SDG&E used a 3-year average forecast methodology in the development of the HQ Rent and Facilities Maintenance cost center forecast to reflect the projected level of expenses for this area. Given the larger than originally projected variability in the 2017 actual costs, SDG&E does not dispute TURN's use of a 4-year average as a reasonable forecast methodology for this cost center.

IV. REBUTTAL TO PARTIES' CAPITAL PROPOSALS

TOTAL CAPITAL - Constant 2016 ($000)					
	2017	**2018**	**2019**	**Total**	**Variance**
SDG&E	**$ 54,699**	**$ 68,502**	**$ 80,249**	**$ 203,450**	**-**
ORA	**$51,600[30]**	**$ 47,646**	**$ 47,017**	**$ 146,263**	**$ (57,187)**
TURN	**$51,600[31]**	**$ 47,646**	**$ 41,960**	**$ 141,206**	**$ (62,244)**

A. Land/Structures and Improvement Blankets – 700 & 701

1. ORA

ORA accepts SDG&E's forecast for the 00700A Land Blanket and 00701A Structures and Improvements Blanket, but disputes $2.217 million for the "emergent and as-yet specified (unknown) projects for 2018" forecasted under 00701A.[32] Specifically, ORA disputes SDG&E's use of a three-year average methodology for this blanket that captures both planned and

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[28] *Id*. at 3:18.

[29] *Id*. at 3:18.

[30] *See* footnote 1.

[31] *See* footnote 1.

[32] Ex. ORA-18 (Waterworth) at 18:3.

unplanned projects, which ORA argues "creates a greater degree of risk that the capital budget will be higher than actual."[33]

ORA's rejection of the three-year average methodology is misplaced. Indeed, according to ORA's own testimony, using a historical average of costs "is a reasonable basis to forecast unknown/unplanned projects."[34] ORA's concern that the forecasts will be higher than actual is unfounded, as SDG&E's Real Estate and Facilities capital expenditures have historically met or exceeded GRC forecasts.

The below Table RDT-1 compares historical capital actual expenditures to SDG&E GRC forecasts for the period of 2012 – 2017[35]:

Table RDT-1

Comparison of Cost to SDG&E Forecast (2016 $ 000)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**5-Year Totals**
SDG&E Forecasted (FERC included)	31,634	NA	21,346	42,179	47,091	54,699	**196,948**
Capital Costs (FERC Incl. @ 13%)	39,591	NA	25,086	30,736	46,067	59,501	**200,980**
				Variance Cost to Forecast: 2%			

Relative to forecasting, the variance calculation indicates that SDG&E accurately assesses its facility capital improvement needs, and closely manages its capital spending to those assessments in delivering upon those needs.

While SDG&E has some discretion with respect to project execution, the historical level of expenditures refutes ORA's assertion that adopting SDG&E's forecasts will increase the risk that the capital budget will be higher than actual. To disallow forecasted capital expenditures for certain blankets because they contain currently unknown or unspecified projects is not supported by the aggregate capital spend forecast v. actuals for 2012-2017. Over this time period, we

[33] *Id*. at 18:12.

[34] *Id*. at 18:7.

[35] 2013 capital expenditures were not forecasted in the 2016 GRC; only 2014 – 2016 capital expenditures were forecasted. As such, there is no 2013 forecast or actual expenditures included as a basis for comparison.

managed and executed at or above forecast, which includes allowances for "'unplanned and as yet specified" projects in all years.

As ORA agrees, it is reasonable and prudent business practice that forecasts should consider unforeseen capital projects that may arise between rate cases. Indeed, the Commission has previously approved "blanket" budgets for SDG&E Real Estate and Facilities.[36] ORA's recommendation to not provide some level of funding for unplanned work in 2018 is short-sighted and, from our historical experience, not realistic. SDG&E's request for "unplanned as-yet specified" projects in its 2018 forecast for Budget Code 701 was explained in our response to ORA DR #35, Question 1.c., which is included in Appendix A. It is based on the 3-year historical average for this budget code, less the forecasted values of the four (4) projects identified and planned for completion in 2018, as clarified in our response to ORA DR #35, Question 1.c.[37] In the course of assembling this rebuttal and reviewing applicable supporting data, however, a calculation error was identified for the 3-year historical average for this budget code. The applicable values for years 2014 through 2016 should have been drawn from the table provided in SDG&E's response to ORA DR #35, Question 1.a.,[38] which corrected the historical actual cost values presented in the response to ORA DR #35, Question 1.c. Use of the corrected annual values reduces the 3-year average to $1,789K. Adding FERC costs as 13% raises this average to $2.056K. SDG&E proposes to reduce its originally proposed value for the unplanned and as-yet unspecified of $2.217K to a corrected 3-year average of $2.056K (a reduction of $161K). This update revises SDG&E's forecast for 2018 for budget code 701 from $4,861K to $4,700K. This also revises the total 2018 Facilities Capital forecast from $68,502K to $68,341K. The need to include annual allowances for unplanned and as-yet specified projects, while necessary in all budget codes, is particularly important in 701 to immediately remedy failures or previously undetectable, underlying problems with building structures, roofs, storage racks, paved areas, and site lighting that support SDGE's facilities and operations, and keep employees safe.

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[36] D.13-05-010, 2013 Cal. PUC LEXIS 227, at *1024-1038.

[37] *See* Appendix A.

[38] *See id.*

ORA's presumption that our estimate "will be higher than actual" fails to consider that our forecast could also be lower than actual. The methodology's purportedly "greater degree of risk" applies equally to actuals being over as well as under our capital forecast.

ORA's rationale that their recommended funding approximates 2012-2016 historic expenditures[39] (a five-year average) is not reflective of the increased capital expenditures in 2015-2017. The actual costs in the period (2015-2017) have been higher, and reflect current business operations. Primary drivers of increased costs include: (1) site demolition and improvements for better use of site space for material and equipment storage, (2) storage racking additions, (3) landscaping improvements for water use efficiency and decreased maintenance costs, (4) improved site training facilities, and (5) structural repairs to existing facilities.

B. Safety and Environmental Blanket - 703

1. ORA

ORA takes issue with SDG&E's capital forecast for 00703A Safety and Environmental Blanket. ORA's opposition "is the same argument used for Land/Structures Improvement Blankets"[40] (Budget Codes 700 & 701).

SDG&E disagrees with ORA for the same reasons provided above in Section A regarding the Land/Structures Improvement Blanket. Additionally, SDG&E's costs for Safety and Environmental Budget Code 703 (2014-2016 – 3yr.) reflects increases in the quantity of projects, size, scope, and complexity as compared to (2012-2016 – 5 yr.). This is primarily a result of increased project activity involving site demolition and improvements to enhance vehicular or pedestrian safety, storm water pollution management, upgrades or replacements of fire suppression and alarm systems, and improved fall protection systems. Although costs have increased over the 2015-2017 time period, SDG&E is requesting less funding authorization in this rate case than the previous test year 2016 rate case. As explained in SDG&E's response to ORA DR #122, Question 10.a.,[41] our 2018 allowance for unplanned and as yet specified projects is equal to the 3-year average, and only one additional project estimated at $30K was included in

[39] Ex. ORA-18 (Waterworth) at 18:14.

[40] *Id*. at 19:8.

[41] *See* Appendix A.

this 2018 forecast. For these reasons, SDG&E's use of a 3-year average to forecast 2018 unplanned and as yet specified projects is reasonable.

C. Miscellaneous Equipment Blanket - 705

1. ORA

ORA takes issue with SDG&E's capital forecast for 00705A Miscellaneous Equipment Blanket. ORA's opposition "is the same argument used for Land/Structures Improvement Blanket"[42] (Budget Codes 700 and 701). SDG&E disagrees with ORA for the same reasons provided in Section A, Land/Structures Improvement Blanket above.

SDG&E did not propose a forecast for unplanned and as yet specified projects for this budget code, but rather forecasted for the continuation or establishment of specific programs. Through its responses to ORA DR #35, Questions 3.b. and 3.c.,[43] and ORA DR #122, Question 12.a.,[44] SDG&E clarified the basis of its forecasts for these specific programs. These responses related to the funding of miscellaneous equipment purchases for Fleet garages, a new fuel management system for Fleet, a garage hoist replacement program, and upgraded audio-visual systems.

It is unreasonable to apply historical averages to this budget code as the fuel management system for Fleet, garage hoist replacement program, and upgraded audio-visual system program are newly proposed and will require significant costs. The Fleet related programs will increase the efficiency of vehicle fuel use and improve employee safety while servicing vehicles, and the audio-visual upgrade program will support strategic improvements to office work areas, improving communication and collaboration.

SDG&E thus disagrees with any proposed reductions that ORA bases on lower historical costs or inclusion of unplanned or as yet specified projects.

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[42] Ex. ORA-18 (Waterworth) at 20:2.

[43] *See* Appendix A.

[44] *See id.*

D. Security Systems Blanket - 707

1. ORA

ORA takes issue with SDG&E's capital forecast for 00707A Security Systems Blanket. ORA's opposition "is the same argument used for Land/Structures Improvement Blanket"[45] (Budget Code 700). SDG&E disagrees with ORA for the same reasons provided in Section A, Land/Structures Improvement Blanket above.

As explained in its responses to ORA DR #35, Question 4.b.,[46] and ORA DR #122, Question 13.a.,[47] SDG&E based its 2018 and 2019 allowances for unplanned and as-yet unspecified projects on its RAMP forecast regarding the mitigation of workplace violence. These RAMP forecasts, submitted to the Commission in 2016, were based on a 5-year historical average (2011-2015, FERC included) plus certain known, additional projects. The certain known projects were subtracted from the RAMP forecast in determining the unplanned and as yet specified allowances for 2018 and 2019 and replaced with planned security projects later known at the time of the GRC submittal. Consideration of an allowance for both unplanned and planned projects is particularly appropriate for this budget code given the emphasis placed on RAMP risk mitigation and the resulting anticipated increase in project requests from SDG&E's Corporate Security department to mitigate the workplace violence risk. These requests will include new or improved security, access control and surveillance at the boundaries and within various properties and buildings, and new or improved security operations centers and offices. ORA is recommending less than the 3-year historical average (2013-2015, FERC included) of $1.621M, for each of years 2017-2019, which in and of itself is unreasonable, but also fails to consider SDG&E's plans for increasing its capital outlay to meet its RAMP commitment. SDGE's forecast for this budget code is thus reasonable and should be adopted by the Commission.

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[45] Ex. ORA-18 (Waterworth) at 20:23.

[46] *See* Appendix A.

[47] *See id*.

E. Infrastructure & Reliability Blanket – 708

1. ORA

ORA takes issue with SDG&E's capital forecast for 00708A Infrastructure & Reliability Blanket. ORA's opposition "is the same argument used for Land/Structures Improvement Blanket"[48] (Budget Code 700). SDG&E disagrees with ORA for the same reasons provided in Section A, Land/Structures Improvement Blanket above.

The need to include annual allowances for unplanned and as yet specified projects, while necessary in all budget codes, is particularly crucial in 708 to immediately remedy failures or previously undetectable problems with the many mechanical, electrical, and plumbing systems that support SDGE's facilities and operations. Given its duty to serve, SDG&E must have available funding to maintain business continuity in the event of equipment and infrastructure failures or problems. By recommending the elimination of the allowances for unplanned and yet unspecified projects in 2018 and 2019, ORA is suggesting that necessary planned projects can be deferred in favor of unplanned and as yet specified projects as they arise. With five planned projects exceeding a forecast of $500K each (or $2.5M total) in 2018 and 2019,[49] ORA's recommendation of $3.9M for these 2 years, which excludes the NOC project, is insufficient to support these five projects, other listed projects, and unplanned projects to address failures or other emergency repairs. As an example, a recent test of UPS battery strings at the Rancho Bernardo Data center demonstrated the need to replace the battery strings at a cost of approximately $1.2M. While not known at the time of the GRC submittal, SDG&E is absorbing this cost, as there is no option but to replace the batteries to ensure that this critical facility suffers no loss of business continuity. Given that such large, unplanned, urgent projects may and do arise, SDG&E's 2018 and 2019 forecasts for unplanned and as yet unknown projects are reasonably based on a 3-year average.

2. TURN

SDG&E disagrees with TURN's proposed reductions to our capital forecast for the Infrastructure & Reliability Blanket. TURN does not dispute the need for any of the capital projects proposed in this blanket. Rather, TURN's opposition is based on one of the following

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[48] Ex. ORA-18 (Waterworth) at 21:18.

[49] *See* SDG&E Response to RA DR #35, Question 5.b., included in Appendix A.

reasons: a.) the project is not needed because a potential future project will negate the necessity for investing now, and/or b.) the project will not be "used and useful and in service" by the test year 2019.

a. NOC and EOC

The Network Operations Center (NOC)(708A.003) and Emergency Operations Center (EOC)(709A.004) need improvements for numerous reasons. SDG&E's responses to ORA DR #35, Questions 6.a. through g. and i., explain in detail the reasons why the NOC project is necessary.[50] SDG&E's responses to ORA DR #29, Questions 5.a. through c. and f., explain in detail the reasons why the EOC project is necessary.[51] These two facilities are critical to our operations and they support the safe and reliable delivery of electricity and gas utilities to our customers. TURN's opposition to the improvements forecasted for the NOC and EOC is based solely on the flawed assumption that the Mission Critical Facility Consolidation and Expansion (MCFC&E) project will replace the NOC and EOC and therefore negate the necessity for these capital investments.

TURN misses the key point that the MCFC&E facility is not intended to replace the existing NOC and EOC. The NOC and EOC proposed improvements are for those stand-alone, existing spaces regardless of whether they function in a primary or back-up capacity. If approved, the MCFC&E facility will be the primary location for mission critical activities during events such as red flag warnings, fires, earthquakes, natural disasters, and other emergency situations, with the NOC and EOC serving as back-up locations. Therefore, SDG&E must plan for contingencies (alternate locations, redundant systems) if such an event causes our systems to fail, prevents access to other sites, creates unsafe conditions for employees to work at other sites, or causes interruptions to services for our customers.

TURN also improperly assumes that the MCFC&E project submitted in this rate case (2017-2019) may be approved at some point in the future, making the NOC and EOC capital projects unnecessary. Yet, TURN also recommends and agrees with ORA's testimony to remove the MCFC&E project from consideration because it is "premature" and will "not be used and useful" in the current rate case. TURN thus fails to account for the possibility that the

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[50] *See* Appendix A.

[51] *See id*.

MCFC&E project may not be approved in this rate case. Without the proposed investments in the NOC and EOC, they would be left in a compromised position to serve as responses centers for critical or emergency situations.

In any event, both the NOC and EOC will continue to serve as primary locations until the MCFC&E is operational, which is currently not planned until the next rate case cycle.

F. Remodels/Reconfigurations/Relocations - 709

1. ORA

ORA accepts SDG&E's forecast for the 00709A Remodel/Reconfiguration/Relocation capital expenditures, except the Century Park (CP)-4 and CP-5 refresh projects. ORA's recommendation to eliminate CP-4 and CP-5 refresh projects is based on: the purported lack of "detailed plans" to substantiate the overall intent/scope and specific costs, and that the current facilities are American with Disabilities Act (ADA) compliant and provide a safe and healthy environment for our employees.[52] ORA also argues that because certain projects were completed in the last GRC cycle, "even though not proposed in the 2016 GRC," the proposed CP-4 and CP-5 projects can be funded as a part of the overall enterprise capital authorized allocation.[53]

SDG&E disagrees with ORA's reasoning and recommendation. The CP-4 and CP-5 refresh projects are significant in size and impact; they are neither discretionary nor capable of being absorbed without specific funding allocation. There are multiple, valid reasons for these discreet refresh projects, as outlined in my direct testimony. The projects include numerous tenant improvements to two of our buildings located on our company headquarters. The improvements are needed because: a.) the original floor plan (steel framed walls, existing corridors, offices, conference rooms, lobbies, receptionist areas) has remained unchanged since our original occupancy more than twenty years ago, b.) prior to SDG&E's occupancy, the facilities were designed and configured for multiple tenants, and therefore our facility is not optimized in terms of space utilization and cannot easily be adapted to support organizational and workforce changes, c.) our employees need updated spaces to enable a higher degree of collaboration and increased personal and shared spaces, d.) SDG&E plans to stay in this complex for the long-term and we must make these investments to improve our work environment,

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[52] Ex. ORA-18 (Waterworth) at 24:3.

[53] *Id*. at 24:12.

e.) alternative and comparable properties on the market that could accommodate our current needs for these buildings are considerably more expensive than the forecasted capital expenditures to improve CP-4 and CP-5.

Additionally, studies have shown that employees' satisfaction with their physical environment can lead to an approximately 16% increase in productivity, 18% increase in retention, and 30% increase in attracting talent.[54] For example, "Millennials comprise roughly one-third of today's workforce and will increase to half of the workforce over the next five years."[55] The changing demographics of our workforce compel us to design our facilities to accommodate different work styles or risk losing a growing proportion of the workforce due to disengagement. Both SDG&E's business and the ratepayers will benefit from the improved employee attraction, productivity, and retention that these improvements will create.

While the CP-4 and CP-5 remodel and refresh projects were not included in forecasts to eliminate an ADA compliance issue and/or to correct any employee safety or health deficiencies, these projects are supported by other substantial benefits derived from upgrading the interior spaces with fixtures, furniture systems, and equipment. As discussed in more detail in my direct testimony, the benefits include: (1) increased densification for employees and capacity, (2) more usable square footage, (3) flexible furniture systems that will reduce future costs and time required to reconfigure spaces when organizational/business changes so require, (4) improved employee retention and recruiting, (5) increased energy efficiency and sustainable building materials, (6) improved adjacencies, and (7) more conference, project, and focus rooms to accommodate a collaborative work environment. It is not prudent to wait for an ADA compliance issue or a safety issue to arise before seeking to implement these important benefits.

The absence of specific, detailed plans for the renovations is also not a reason to reject funding for these projects. Indeed, these are significant projects and the capital forecasts for these projects include funding specifically to a) perform the planning and design work required to develop plans for the temporary relocation of employees, b) develop the drawings and specifications necessary to define the scope, c) refine the budgets and d) implement the projects.

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[54] CEB 2014 Real Estate Employee Impact Assessment.

[55] CEB Q3 2014 Business Barometer; CEB 2007–2014 Real Estate Cost and Space Benchmarking; United States Bureau of Labor Statistics, 2013, available at www.bls.gov.

The GRC forecasted costs are based on historical metrics gathered from similar projects,[56] and thus are reasonable.

ORA's recommended budget for 2018 and 2019 is not based on a specific methodology for estimating costs and should be rejected. ORA simply eliminates certain projects (CP4 & CP5 for example) and uses the remaining difference as a basis for estimating future capital investments. ORA's forecast is arbitrary because it does not specify estimated costs for any specific projects.

2. TURN

In addition to agreeing with ORA's forecasts, TURN has taken exception to the CP6 EOC Tenant Improvement project, and recommends disallowance of the SDG&E forecast. SDG&E opposes TURN's position and arguments against the EOC project for the same reasons discussed in Section E.2.A. above – Infrastructure & Reliability Blanket budget code 708. TURN's opposition to the improvements forecasted for the EOC is based solely on the flawed assumption that the MCFC&E project will replace the EOC and therefore negate the necessity for the capital investments. If approved, the MCFC&E facility will be the primary location for mission critical activities during events such as red flag warnings, fires, earthquakes, natural disasters, and other emergency situations, with the EOC serving as a back-up location. The EOC proposed improvements are needed regardless of whether it functions in a primary or back-up capacity. The drivers provided for justifying the EOC project are pressing issues today and require attention in this rate case.

G. Business Unit Expansions - 710

1. ORA

ORA takes issue with SDG&E's capital forecast for 00710A Business Unit Expansion. ORA's opposition "is the same argument used for Land/Structures Improvement Blanket."[57]

SDG&E disagrees with ORA for the same reasons provided in Section A. Land/Structures Improvement Blanket above. As operating departments expand and contract, workflow processes change and business strategies evolve, the nature and shape of facilities need to change as well. The historical unit cost for tenant improvement projects ($232/sf) presented

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[56] *See* SDG&E Response to ORA DR #29, Questions 4.h. and 8.h., included in Appendix A.

[57] Ex. ORA-18 (Waterworth) at 26:27.

by SDG&E in its response to ORA DR #29, Questions 4.h. and 8.h.,[58] indicates that a forecast of $2.5M would allow for approximately 11K square feet of unplanned tenant improvements. This is a very conservative level of unplanned improvements given the size of SDG&E's real estate portfolio.

2. TURN

TURN opposes our Kearny Master Plan Phase I, MCFC&E and Ramona C&O Expansion projects because they are "premature" or may not be "used and useful" in an individual GRC rate case cycle (2017-2019). Large projects of this type (in terms of the capital investment, scope, or complexity) will take more than three (3) years from start to finish to complete. For example, some transmission and substation projects can take several years to complete and the schedule can easily go beyond an individual rate case. Our cost forecasts are limited to only that portion needed to accomplish specific tasks (planning, design, permitting, environmental assessments and pre-construction activities) in this GRC cycle to ensure completion in the next rate case. Our forecasts for these projects reflect our best judgment that these projects will take longer than the Test Year 2019 to complete.

Recognizing TURN's position that forecasted in-service dates do not warrant rate base recovery, SDG&E respectfully requests Commission recognition that SDG&E will be spending capital on these projects in this rate case cycle as required to progress these key initiatives through test year 2019 and beyond.

H. Kearny Master Plan

1. ORA

ORA takes issue with the capital forecast for Kearny Master Plan because "SDG&E cannot accurately forecast a precise total cost estimate for any of the three project phases now. SDG&E anticipates a potential start of implementation activities in 2020 and the next GRC would be the venue requesting approval for implementation funding."[59] Thus, "ORA opposes

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[58] *See* Appendix A.

[59] A.17-10-007/008 – ORA – Waterworth – SDGE Supply Mgmt. Fleet Real Estate (Ex. ORA-18), dated April 13, 2018, pp. 25, line 15.

funding for this project in the current GRC as any funding is premature and any cost recovery be requested in the 2020 GRC."[60]

ORA's argument fails to understand that a project with the scope and size of the Kearny Master Plan takes considerable time to complete—specifically, a greater span than one rate case or three years (2017-2019).

The basic project sequences are as shown in the following Figure RDT-1:

Figure RDT-1

Work Breakdown Structure (WBS)	Est. Start	Est. Finish	
a.) Completing revisions to the master plan	18-Jan	18-Sep	
b.) Programming for occupants and operations	18-Jun	18-Sep	
c.) Design and development documents including construction documents	18-Sep	18-Mar	(2017-2019 GRC)
d.) Submitting for a site use permit with the city of San Diego	18-Mar	19-Jun	
e.) Permit received	19-Jun		
f.) Solicitation of bidders for construction	19-Jun	20-Jan	
g.) Construction (Phase 1-3)	20-Jan	22-Jan	(2020-2022 GRC)
h.) Commissioning	22-Jan	22-Jun	
i.) Closeout	22-Jun	22-Sep	
j.) Occupancy	22-Sep		

The funding requested and forecast in our current rate case reflects the estimated timing and execution of the scope for completing sequences a.) through f.) (*i.e.*, master planning to bid solicitation) by January 2020, to begin construction in the next rate case (2020-2022). Our forecast requests the funding necessary to start pre-construction activities (such as developing accurate design documents and a "precise total cost estimate") and to produce the requisite documentation/planning to ensure we can start construction in the 2020 GRC time frame.

SDG&E cannot complete the Kearny Master Plan project within one rate case for three main reasons:

1. The permitting process with the City of San Diego will require a full site use permit based on the scale of the proposed project(s). Our consultants advise that a

[60] A.17-10-007/008 – ORA – Waterworth – SDGE Supply Mgmt. Fleet Real Estate (Ex. ORA-18), dated April 13, 2018, pp. 25, line 19.

full use site permit could take as long as 2-3 years to obtain from the city. Our estimate of 18 months is aggressive and optimistic.

2. The work must be completed while the site is occupied and remains an active operating base, which further complicates the coordination and scheduling efforts associated with construction and thereby extends the duration of the project.

3. State Assembly Bill 2868 directed the state's 3 largest electric utilities to file applications for programs and investments to accelerate widespread deployment of distributed energy storage systems. SDG&E proposes to fulfill this requirement in part by constructing a 40 MW system within the footprint of its Kearny property. This is necessitating a re-assessment of the current Master Plan for the property, in coordination with the planning and design of the proposed energy storage facility. Completion of plans for the energy storage facility is a prerequisite to completing the re-assessment of the Kearny Master Plan.

2. TURN

Recognizing TURN's (and ORA's) position that this project be considered in the next rate case because it will not be in service by test year 2019, SDG&E respectfully requests Commission recognition that SDG&E will be spending capital on this initiative in this rate case cycle as required to progress it through test year 2019 and beyond.

I. Mission Critical Facility Consolidation & Expansion

1. ORA

ORA takes issue with the capital forecast for Mission Critical Facility Consolidation and Expansion based on the same arguments it makes with respect to the Kearny Master Plan.[61]

As with SDG&E's approach to the Kearny Master Plan, SDG&E submitted its initial capital forecast for Mission Critical Facility Consolidation and Expansion with an understanding that the proposed project scope would take longer to complete than one rate case cycle (2020-2022). SDG&E has provided an estimate for initiating and developing all the necessary pre-construction services in this rate case (2017-2019) to ensure that we can complete the construction within the next rate cycle (2020-2022). The amount of work and resources

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[61] Ex. ORA-18 (Waterworth) at 26:16.

required, along with the complexity of creating a Mission Critical facility, requires at least a five-year cycle, just like the Kearny Master Plan.

2. TURN

Recognizing TURN's (and ORA's) position that this project be considered in the next rate case because it will not be in service by test year 2019, SDG&E respectfully requests Commission recognition that SDG&E will be spending capital on this initiative in this rate case cycle as required to progress it through test year 2019 and beyond.

J. Alternative Energy Systems Blanket – 08729A

1. ORA

ORA takes issue with the capital forecast for 08729A Alternative Energy Systems based on the following reasoning:

> ORA considers the use of 2017 actual as reasonable funding for the installations given the basis of SDG&E's forecast, which is based on the projected increases in employee EV ownership and electric vehicles additions to the Company fleet. With ORA's arguments relative to the addition of fleet as a discretionary item coupled with the difficulties in projecting the number of employee's EV ownership, ORA recommends the Commission adopt ORA's recommendation. In 2018, ORA's recommendation approximates SDG&E's forecasted expenditures, and allows for over 50 percent of 2019 forecasted expenditures.[62]

SDG&E disagrees that the projected increases of Alternative Fuel Vehicles (AFV) for our company fleet and employee's personal ownership are "a discretionary item." Introducing AFV into our fleet is necessary to comply with state and local laws and regulations. For example, AB 32, the California Global Warming Solutions Act of 2006, requires that California reduce greenhouse gas emissions to 1990 levels by 2020. This can only be accomplished with significant contributions from the transportation sector. SDG&E's investments to bolster AFV ownership and usage by customers and employees is clearly supportive of that effort.

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[62] *Id*. at 23:1.

Additionally, SDG&E's investments in AFVs as part of its vehicle fleet meets the requirement under federal law (the Energy Policy Act of 1992[63]) to take older diesel vehicles off the road.[64]

In addition, Governor Brown has signed a state initiative to have 5,000,000 clean vehicles in California by 2030. It is estimated that forty to fifty percent of all green-house gas (GHG) emissions are a direct result of transportation. Our employees are acquiring AFV's as their personal choice of transportation to reduce fossil fuel emissions, reduce dangerous GHG levels, slow climate change, and support various regulatory and statutory initiatives. Thus, neither the investment in these vehicles nor the requisite infrastructure to support them are "discretionary." The capital investment in our Alternative Energy Systems Blanket is helping to fulfill larger societal and environmental objectives that benefit all ratepayers.

Because SDG&E strives to be an exemplary community leader in environmental stewardship, SDG&E fully supports these state initiatives and actively tracks and manages data regarding employee electric vehicle ownership. Through its actions to provide charging infrastructure in step or ahead of anticipated employee EV purchasing growth, SDG&E incents the movement towards clean transportation amongst its employees and, in turn, the community. SDG&E also exemplifies environmental stewardship through its AFV conversion program, and similarly manages data concerning planned programmatic replacements of vehicles at end of useful life with AFV's. Through its response to ORA DR # 122, Question 14a.,[65] SDG&E shared internal data concerning both anticipated employee vehicle growth and its AFV conversion program to demonstrate how its forecast was derived. ORA's recommendation to use 2017 actuals as the basis for the 2018 and 2019 forecast is inadequate in light of this data and the annual program growth necessary to support the State's goals.

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[63] *See* 10 CFR 490, §490.300, Subpart D – Alternative Fuel Provider Vehicle Acquisition Mandate, available at https://www.gpo.gov/fdsys/pkg/CFR-2011-title10-vol3/pdf/CFR-2011-title10-vol3-part490.pdf.

[64] *See* December 2017, Direct Testimony of Carmen L. Herrera, Ex. SDG&E-21 (Ex. SDG&E-21 (Herrera)) at 2.

[65] *See* Appendix A.

V. ADDITIONAL ITEMS

Table RDT-2 - Errata Log

Exhibit	Witness	Page		Line	Revision Detail
SDG&E-22	R. Dale Tattersall	RDT-29		Table RDT-21	Revised the 2018 forecast for Budget Code 701 contained in testimony and SDG&E-22-CWP, page 10. The forecast was revised from $4,861K to $4,700K. This also revises the total 2018 Facilities Capital forecast from $68,502K to $68,341K. Exh. SDG&E-222 at RD2-10 and Appendix A.

VI. CONCLUSION

ORA agrees with SDG&E's forecast for O&M through TY2019. The Commission should adopt SDG&E's forecast as reasonable. TURN's proposed reduction to the RB Annex operating costs should be rejected. SDG&E agrees with TURN's proposed four (4) year average to calculate HQ Rent and Facilities.

ORA and TURN propose substantial reductions SDG&E's capital forecast. These reductions should be denied, as SDG&E has provided sufficient justification and substantiation for our forecast. Our request for capital is higher than previous cases, but these investments are prudent and critical to maintain and redevelop portions of our real estate portfolio that will support our customers and employees for the foreseeable future.

This concludes my rebuttal testimony.

APPENDIX A

Data Requests ORA-SDGE-029

ORA-SDGE-035

ORA-SDGE-122

TURN-DR-034

Source Document	Citation Reference	Page
ORA-SDGE-029-LMW	Question 4.h. and SDG&E Response.	RDT-A-3
ORA-SDGE-029-LMW	Questions 5.a. through c. and f. and SDG&E Responses.	RDT-A-8
ORA-SDGE-029-LMW	Question 8.h. and SDG&E Response.	RDT-A-12
ORA-SDGE-035-LMW	Question 1.c. and SDG&E Response.	RDT-A-17
ORA-SDGE-035-LMW	Questions 3.b. and 3.c. and SDG&E Responses.	RDT-A-20
ORA-SDGE-035-LMW	Question 4.b. and SDG&E Response.	RDT-A-22
ORA-SDGE-035-LMW	Question 5.b. and SDG&E Response.	RDT-A-24
ORA-SDGE-035-LMW	Questions 6.a. through g. and i. and SDG&E Responses.	RDT-A-27
ORA-SDGE-122-LMW	Question 10.a. and SDG&E Response.	RDT-A-30
ORA-SDGE-122-LMW	Question 12.a. and SDG&E Response.	RDT-A-32
ORA-SDGE-122-LMW	Question 13.a. and SDG&E Response.	RDT-A-33
ORA-SDGE-122-LMW	Question 14.a. and SDG&E Response.	RDT-A-35
TURN-SEU-034	Question 22a. and SDG&E Response.	RDT-A-40
CEB 2014 Real Estate Employee Impact Assessment	Entirety of Document	RDT-A-41
CEB Q3 2014 Business Barometer; CEB 2007–2014 Real Estate Cost and Space Benchmarking; United States Bureau of Labor Statistics, 2013, www.bls.gov.	Entirety of Document	RDT-A-42

4. Referring to SDG&E's workpaper page 52, 00709A.003 - CP4 Refresh, please provide the following:

a. SDG&E's current justification for this project indicates a refresh, but shows no real necessity, nor how the ratepayer benefits. Please provide a detailed explanation that shows how each component of the project clearly benefits the ratepayers and is necessary.

b. Detailed plans for the project showing before and after pictures or drawings.

c. A cost/benefit analysis showing how the ratepayers will benefit from a refresh.

d. Outside the floors being more than 20+ years old, provide a justification for why the refresh is necessary for employee's to perform their current functions.

e. If the refresh is not approved, please quantify and justify the $ loss to ratepayers.

f. Has this area ever been remodeled in any capacity? If yes, provide a listing of the upgrades and the cost broken out by type of upgrade and year.

g. How SDG&E's current facilities lack in providing a health and safe environment for their employees.

h. A break out of costs by addition type. For example, cost of demountable walls and raised floors, cost of spatial reconfiguration, cost of sit/adjustable work surfaces, cost of project team areas, cost of new furniture, cost of new audio visual equipment, etc.

i. Is any of the refresh requested to meet ADA compliancy? If so, please provide a description and the cost.

j. Please contact the originator of this data request to arrange a field visit to review the current space, and take pictures to have a record of the current office environment.

k. Does SDG&E need to perform "ALL" the refresh work to obtain LEED certification? If yes, please explain why. If no, what measures could be taken and the cost to use the existing infrastructure to meet LEED certification?

l. What is LEED certification and how does it benefit ratepayers?

m. Does SDG&E currently allow employees to request an ergonomically designed office space? If no, then why. If yes, how is this funded?

SDG&E Response 4:

a. SDG&E's business needs have changed dramatically over the last 20 years, and this project constitutes the first major tenant improvement within the facility during that time frame. The scope generally consists of (1) demolition of the existing floor plans by removing the existing "central spine" of offices and conference rooms to open the floor space, and (2) installation of demountable wall systems, raised floors, new furniture, fixtures, and equipment. The space will be designed to increase utilization by condensing spaces for offices, conference rooms, and individual workstations while simultaneously providing the necessary modularization to change the space as business needs continue to evolve. This increases space utilization and improves cost effectiveness per square foot. Creating strategic adjacencies will now be easier than ever because the space will be designed to house specific groups that work together to increase efficiency. Some benefits from using raised floors include, but are not limited to: a.) ease of access to the building installations from any place at the raised floor if future changes are needed, which ultimately reduces the cost for construction; b.) power, energy, communication and data base systems can be housed within the plenum and are readily available under the floor without the necessity to core drill and run conduit/cabling through the ceiling; and c.) the use of recycled materials can help with LEED certification.

   The benefits of using modular (demountable) wall systems are 1.) cost avoidance, as the ability to re-purpose, relocate, and adapt the system may save money over the term of the lease and beyond, 2.) increased construction speed, as the walls are pre-finished, pre-glazed and pre-wired so that they can be installed in tandem with other building activities, significantly reducing construction schedules. 3.) environmental and sustainability benefits, from improving air quality for employees, to earning points in Leadership in Energy and Environmental Design (LEED); 4.) increased flexibility to change, reconfigure, or relocate walls as business needs and technology dictates. With respect to the project's ergonomic features for workstation standards and peripheral systems supporting our employees, SDG&E believes there will be a positive return on investment for ergonomics programs, especially programs that include ergonomics training, individualized recommendations, and ergonomic furniture that can adjust to fit every user.

b. Detailed plans for this request have not been created as this project is currently in the conceptual phase. Interviews with internal stakeholders are in progress and plans are in the initial stages of development. We will provide conceptual "test fit" floor plans during your site visit on 14 DEC 2017.

SDG&E Response 4:-CONTINUED

c. A quantitative cost/benefit analysis has not been completed for this project. The forecasted costs have been submitted as part of testimony. Cost estimates of approximately $232 per square foot are based on historical data from previous projects of a similar size and nature.

Please reference the benefits outlined in the response to question 4a above.

Additional benefits include a healthier workforce and a reduction in injuries. SDG&E's ergonomic prevention strategy includes an on-going and phased-in upgrade to adjustable desks as buildings are refreshed, with the goal of reducing/eliminating future injuries.

Below is statistical data regarding OSHA recordable and lost time incidents (LTI) related to repetitive motion injuries (RMI) /cumulative trauma (CTD) reported to SDG&E. From 2015 – 2017 there has been a decline in OSHAs and LTIs related to this activity.

OSHA-Rec-Flag	LTI	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Recordable	LTI-YES	8	12	12	11	12	6	8	4	3	5	2	1	0
	LTI-NO	18	18	20	24	11	8	7	1	6	4	7	4	4
Grand Total		26	30	32	35	23	14	15	5	9	9	9	5	4

d. CP4 has not been significantly remodeled in over 20 years and SDG&E's business has changed dramatically during that time. Evolving technology is driving much of our workforce needs, and our work has become increasingly collaborative. This facility needs a significant remodel to accommodate these changed conditions and requirements.

The project is intended to (1) create spaces that improve space utilization through condensing and reconfiguration, (2) increase efficiencies by having work groups adjacent to one another, (3) enhance teamwork via collaboration spaces, and (4) leverage technology to improve our performance. Better utilization of floor space is accomplished by reducing the square footage of individual workstations, and reducing the number of over-sized conference rooms to produce more, smaller breakout and focus rooms to accommodate small teams and workgroups. Creating strategic adjacencies for groups that work together increases efficiencies because the groups are not physically separated by space or the lack of sufficient area. Using technology to perform our jobs is a necessary requirement that is continuously changing and by implementing furniture, fixtures, and equipment in conjunction with building systems (walls, floors) that can adjust because of their modularity will be more cost effective in the future by reducing the cost of facility renovations.

SDG&E Response 4:-CONTINUED

e. A quantification of monetary loss to ratepayers has not been completed, nor is one typically done for this type of project. Please reference responses to 4a-4d for ratepayer benefits.

f. The following table lists remodel projects that have occurred within Century Park, Building 4, within the last 20 years. The table excludes projects exclusively involving improvements to mechanical or electrical systems for the purpose of infrastructure reliability.

CP4 Remodel Project Description	Year Completed	Cost (nominal & unloaded)
Carpet Replacement & Re-Paint at Office Areas	2010	$ 842,945
Flooring & Finish Replacement at Common Areas	2013	$ 1,054,493
Total		**$ 1,897,438**

g. SDG&E's current facilities do provide a safe and healthy environment for our employees. The forecasted projects will support the ability of SDG&E facilities to continue to provide a safe and healthy employee environment and support our initiative for continuous enhancement of employee safety and health.

h. We used historical metrics at a cost per square foot, based on previous tenant improvement projects of similar scale and scope. For this forecast, SDG&E estimates its overall cost/Sq. Ft. to be $232/sf, which is representative of reconfiguring entire floor spaces in excess of 10,000 sf. Typical budget costs (per sf) for each component are estimated as follows, and exclude soft costs such as design and project management fees, and general contractor mark-ups:

Raised floors = $11.40/sf

Audio Visual = $9.55/sf

Furniture, fixtures, equipment = $49.99/sf (includes furniture and sit/stand work surfaces, only)

Demountable walls = $25.93

Project team areas can vary significantly based on square foot area and type of furniture preferred or required by the end users (e.g. large conference tables vs touchdown stations vs training tables vs workbenches or combination thereof). Using the overall cost/sf from above as guidance, project team rooms ranging from a nominal 250 sf to 1000 sf could vary in price between $50K and $250K.

SDG&E Response 4:-CONTINUED

i. The facility is currently ADA compliant to the best of our knowledge, and this project is not being submitted to mitigate or eliminate any ADA deficiency.

j. A site visit is scheduled for 14-15 DEC 2017.

k. The scope and cost of work to obtain LEED certification cannot be estimated until detailed design documentation has been completed and a preliminary LEED scorecard developed. While we believe certain elements of the anticipated scope will benefit LEED scoring, it is possible that additional scope enhancements may be necessary to achieve LEED certification.

l. LEED stands for Leadership in Energy and Environmental Design. Indirectly, the greater societal benefits of developing and building facilities that are energy efficient by saving electricity, water and natural gas, utilizing renewable sources of energy, using sustainable and recycled materials in construction, and operating and maintaining facilities to maximize the return on investment is a benefit to the ratepayers. Reducing waste, carbon footprints and greenhouse gas (GHG) emissions are also a responsibility that we take seriously and is in our collective best interests as climate change continues to be a challenge moving forward.

m. Our ergonomics program is designed to fulfill CA standard 5110 requirements. Internally, we use a "Request for Special Equipment Process," which Safety and Employee Care Services uses to consider individual requests for ergonomic equipment. If the employee's request is approved, the employee's home department fund the improvement. If no, the employee request will not be funded. Our ergonomic prevention strategy includes an on-going and phased-in upgrade to adjustable desks as our buildings are refreshed, with the goal of reducing/eliminating future injuries.

5. Referring to SDG&E's workpaper page 53, 00709A.004 - CP6 EOC Tenant Improvements, please provide the following:

    a. What would the cost be to alter the existing workstations and provide the company's current ergonomic standards? If this can't be done, please provide an explanation as to why?

    b. How do the existing workstations and peripheral equipment (phones, keyboards, storage, etc.) for the emergency responders in the situation room not meet current company ergonomic standards?

    c. Outside the ergonomic concerns, if the floors are not upgraded will this create an environment not suitable for SDG&E's employee's impacting their productivity? If yes, please provide an explanation as to the impacts, and costs of the impacts.

    d. Do SDG&E's current ergonomic standards exceed any nationally recognized standards? If yes, please explain how.

    e. Provide detailed plans for the project.

    f. Provide a cost/benefit analysis showing how the ratepayers will benefit from a remodel.

    g. Provide current pictures of the location subject to remodel and the proposed look after the remodel.

    h. Outside the floors being more than 17+ years old, provide a justification for why the remodel is necessary for employee's to perform their current functions.

    i. If the remodel is not approved, please quantify the $ impact to ratepayers.

    j. Has this area ever been remodeled in any capacity? If yes, provide a listing of the upgrades and the cost.

    k. Provide a breakout of costs by addition type. For example, reconfiguring the raised floor to provide more space between rows of furniture, provide new adjustable work surfaces to allow sit/stand functionality, revise existing electrical work to accommodate the new equipment and reconfigurations, and install new carpet and stair nosing for better wear and visibility.

SDG&E Response 5:

a. This project request is specific to our Emergency Operations Center (EOC). For that reason, the area is not meant to house a typical workstation per employee and is intended to be situational by its function and constructed to address needs during emergencies (e.g., stadium style raised flooring or console-style collaborative "pods"). Therefore, retrofitting the existing workstations is not cost effective and not in alignment in terms of function for the space. Functionally, the Emergency Management and Aviation Services teams have combined into a single reporting group that will occupy space in the EOC. The group currently is housed in five (5) different locations: CP6 – EOC, Mission/Telecom facility, Miramar, Gillespie Field (El Cajon), and CP5. Because of this reorganization, we need to remodel and reconfigure the space to house six (6) employees that have been assigned to consolidate operations into the EOC suite. Repurposing the existing equipment is not cost effective due to the age of the existing furniture, equipment, and revised functions/roles.

b. See our response to question 5a as well. The space, which does not have enough offices/workstations, no longer meets the needs of the workforce that is being reassigned to it as part of a recent reorganization. Also, the systems (furniture/equipment) and technology are antiquated and should be replaced. For example, given the nature of the work that is being performed in the EOC, time is always critical and the speed with which we have situational awareness helps support the safety of our customers and the reliability of our systems. By replacing the existing equipment, we can enhance our emergency responsiveness. Also, during an emergency event, EOC responders can be required to sit at their respective stations for 12 hour shifts, and sometimes longer, depending on their roles and the nature of the event. Stress-related fatigue, repetitive motions, strained eyesight, and overall health and welfare are a concern for the responders. Adjustable chairs, stations, and updated equipment or peripheral systems not only mitigate these types of physical conditions, but improve our ability to perform well over extended periods of time. Our testimony further addresses several different drivers that support our request.

c. Yes, we believe that not retrofitting the raised floor has a negative impact on employee productivity. There are multiple purposes for proposing a remodel of the area. It will create expanded office/workstation space for personnel that are being reassigned from other locations to the EOC. These employees could be assigned to shifts of 12 hours or more, and the retrofit will allow for stretching and expanded movement in place to relieve muscle fatigue and mitigate the risk of repetitive motion injury. Additionally, the collaborative functions of the groups involved in emergency response activities can change during the progress of an event, thus there is a need to support changing adjacencies and groupings through the sub-floor infrastructure.

SDG&E Response 5c:-CONTINUED

Emergency Management is currently dispersed over 5 locations (Mission, Miramar, Gillespie and two separate buildings on the CP campus). This creates significant challenges to our ability to operate effectively and to interface among critical groups during incidents. Not being able to house emergency personnel in the same space(s) can be dangerous and potentially costly in numerous ways.

d. There are no national standards that we are aware of. Our ergonomics program is designed to fulfill CA standard 5110 requirements.

e. This project is conceptual at this point and therefore we do not have detailed construction documents now. We can provide a conceptual floor plan ("test fit") during the site visit scheduled for 14-15 DEC 2017.

f. A quantitative cost/benefit analysis has not been completed for this project. The forecasted costs were based on historical data from past projects of a similar scope. Our estimated costs are $ 426/sf.

   The benefits consist of:
   - Consolidating geographically dispersed personnel into a single location, which increases utilization.
   - Improving efficiencies through adjacencies for groups that need to work together.
   - Enhancing working conditions by mitigating/eliminating physical injuries due to the nature of the work.
   - Improving safety/reliability for customers, employees, and the public by improving our technology/systems.

g. If possible, and in the interests of saving time, we respectfully request that we take pictures of the existing space during the site visit scheduled for 14-15 DEC. As discussed in answer 5e, we have conceptual "test fit" floor plans that can also be provided during the site visit.

h. See responses to questions 5a – c and f. The proposed remodel is necessary for several critical reasons, which are amplified in terms of safety and reliability due to the nature of the work done by the EOC group.

i. A quantification of monetary loss to ratepayers has not been completed. However, the ability to respond to emergency situations and possess the required tools and resources to effectively manage the electric/gas utilities to ensure the public's safety is paramount.

SDG&E Response 5:-CONTINUED

j. The following table lists remodel projects that have occurred within Century Park, Building 6 EOC within the last 20 years. The table excludes projects exclusively involving improvements to mechanical or electrical systems for the purpose of infrastructure reliability.

EOC Remodel Project Description	Year Completed	Cost (nominal & unloaded)
Repurpose/Modify Spaces for Improved Communications	2006	$ 101,574
Improve Ancillary EOC Seminar Rooms	2009	$ 159,289
Total		**$ 260,863**

k. We used historical metrics at a cost per square foot based on previous or planned projects of similar scope. For this forecast estimate our overall cost/Sq. Ft. was $ 426/sf. Typical budget costs (per sf) for each component is estimated as:

Raised floors = $11.40/sf

Audio Visual = $525/sf (includes new situation room video wall and conf. room upgrades)

Furniture, fixtures, equipment (excluding Situation Room) = $49.99/sf (includes furniture and sit/stand work surfaces, only)

Furniture, fixtures, equipment (including Situation Room) = $170.06/sf (includes console "pods", only)

Carpet = $6.99/sf

Electrical = 26.00/sf

8. Referring to SDG&E's workpaper page 57, 00709A.008 - CP5 Refresh, please provide the following:

a. SDG&E's current justification for this project indicates a refresh, but shows no real necessity, nor how the ratepayer benefits. Please provide a detailed explanation that shows how each component of the project clearly benefits the ratepayers and is necessary.

b. Detailed plans for the project showing before and after pictures or drawings.

c. A cost/benefit analysis showing how the ratepayers will benefit from a refresh.

d. Outside the floors being more than 20+ years old, provide a justification for why the refresh is necessary for employee's to perform their current functions.
e. If the refresh is not approved, please quantify and justify the $ loss to

ratepayers.

f. Has this area ever been remodeled in any capacity? If yes, provide a listing of the upgrades and the cost broken out by type of upgrade and year.

g. How SDG&E's current facilities lack in providing a health and safe environment for their employees.

h. A break out of costs by addition type. For example, cost of demountable walls and raised floors, cost of spatial reconfiguration, cost of sit/adjustable work surfaces, cost of project team areas, cost of new furniture, cost of new audio visual equipment, etc.

i. Is any of the refresh requested to meet ADA compliancy? If so, please provide a description and the cost.

j. Please contact the originator of this data request to arrange a field visit to review the current space, and take pictures to have a record of the current office environment.

k. Does SDG&E need to perform "ALL" the refresh work to obtain LEED certification? If yes, please explain why. If no, what measures could be taken and the cost to use the existing infrastructure to meet LEED certification?

l. What is LEED certification and how does it benefit ratepayers?

m. Does SDG&E currently allow employees to request an ergonomically designed office space? If no, then why. If yes, how is this funded?

SDG&E Response 8:

a. SDG&E's business needs have changed dramatically over the last 20 years, and this project constitutes the first major tenant improvement within the facility during that time frame. The scope generally consists of (1) demolition of the existing floor plans by removing the existing "central spine" of offices and conference rooms to open the floor space, and (2) installation of demountable wall systems, raised floors, new furniture, fixtures, and equipment. The space will be designed to increase utilization by condensing spaces for offices, conference rooms, and individual workstations while simultaneously providing the necessary modularization to change the space as business needs continue to evolve. This increases space utilization and improves cost effectiveness per square foot. Creating strategic adjacencies will now be easier than ever because the space will be designed to house specific groups that work together to increase efficiency. Some benefits from using raised floors include, but are not limited to: a.) ease of access to the building installations from any place at the raised floor if future changes are needed, which ultimately reduces the cost for construction; b.) power, energy, communication and data base systems can be housed within the plenum and are readily available under the floor without the necessity to core drill and run conduit/cabling through the ceiling; and c.) the use of recycled materials can help with LEED certification.

   The benefits of using modular (demountable) wall systems are 1.) cost avoidance, as the ability to re-purpose, relocate, and adapt the system may save money over the term of the lease and beyond, 2.) increased construction speed, as the walls are pre-finished, pre-glazed and pre-wired so that they can be installed in tandem with other building activities, significantly reducing construction schedules. 3.) environmental and sustainability benefits, from improving air quality for employees, to earning points in Leadership in Energy and Environmental Design (LEED); 4.) increased flexibility to change, reconfigure, or relocate walls as business needs and technology dictates.

   With respect to the project's ergonomic features for workstation standards and peripheral systems supporting our employees, SDG&E believes there will be a positive return on investment for ergonomics programs, especially programs that include ergonomics training, individualized recommendations, and ergonomic furniture that can adjust to fit every user.

b. We have not created detailed plans for this request to date, as this project is only in the conceptual phase. We are conducting interviews with internal stakeholders and in the initial stages of development. We will provide conceptual "test fit" floor plans during your site visit 14 DEC 2017.

SDG&E Response 8:-CONTINUED

c. The forecasted and estimated costs have been submitted as part of our testimony. We based our cost estimate on historical data from previous projects of a similar nature and the estimate is approximately $232 a square foot.

Also reference the benefits outlined in our answer to question 5a above.

To elaborate in further detail, everyone, including ratepayers, benefits from a healthier workforce. At SDG&E, we have been making progress in reducing employee injuries.

Our ergonomic prevention strategy includes an on-going and phased-in upgrade to adjustable desks as our buildings are refreshed with the goal of reducing/eliminating future injuries.

Below is statistical data regarding OSHA recordable and lost time incidents (LTI) related to repetitive motion injuries (RMI) /cumulative trauma (CTD). From 2015 – 2017 we've seen a decline in OSHAs and LTIs related to this activity.

OSHA-Rec-Flag	LTI	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Recordable	LTI-YES	8	12	12	11	12	6	8	4	3	5	2	1	0
	LTI-NO	18	18	20	24	11	8	7	1	6	4	7	4	4
Grand Total		**26**	**30**	**32**	**35**	**23**	**14**	**15**	**5**	**9**	**9**	**9**	**5**	**4**

d. CP5 has not been significantly remodeled in over 20 years and SDG&E's business has changed dramatically during that time. Evolving technology is driving much of our workforce needs, and our work has become increasingly collaborative. This facility needs a significant remodel to accommodate these changed conditions and requirements.

The project is intended to (1) create spaces that improve space utilization through condensing and reconfiguration, (2) increase efficiencies by having work groups adjacent to one another, (3) enhance teamwork via collaboration spaces, and (4) leverage technology to improve our performance. Better utilization of floor space is accomplished by reducing the square footage of individual workstations, and reducing the number of over-sized conference rooms to produce more, smaller breakout and focus rooms to accommodate small teams and workgroups. Creating strategic adjacencies for groups that work together increases efficiencies because the groups are not physically separated by space or the lack of sufficient area. Using technology to perform our jobs is a necessary requirement that is continuously changing and by implementing furniture, fixtures, and equipment in conjunction with building systems (walls, floors) that can adjust because of their modularity will be more cost effective in the future by reducing the cost of facility renovations.

SDG&E Response 8:-CONTINUED

e. Referring to our response to questions 5a-5d, there are benefits that would not be gained if the refresh is not approved; however, specific quantification of those benefits (or any loss to ratepayers) is not feasible now.

f. The following table lists remodel projects that have occurred within Century Park, Building 4 within the last 20 years. The table excludes projects exclusively involving improvements to mechanical or electrical systems for the purpose of infrastructure reliability.

CP5 Remodel Project Description	Year Completed	Cost (nominal & unloaded)
Carpet Replacement & Re-Paint at Office Areas	2010	$ 758,121
Repurpose Storage Area for Expanded Office Space	2011	$ 66,130
Construct Additional Manager's Office	2011	$ 43,057
Flooring & Finish Replacement at Common Areas	2013	$ 218,228
Total		**$ 1,085,536**

g. Our facilities do provide a safe and healthy environment for our employees, however the requested improvements to the facilities support our initiative for continuous enhancement of employee safety and health.

h. We used historical metrics at a cost per square foot, based on previous tenant improvement projects of similar scale and scope. For this forecast, SDG&E estimates its overall cost/Sq. Ft. to be $232/sf, which is representative of reconfiguring entire floor spaces in excess of 10,000 sf. Typical budget costs (per sf) for each component are estimated as follows, and exclude soft costs such as design and project management fees, and general contractor mark-ups:

Raised floors = $11.40/sf

Audio Visual = $9.55/sf

Furniture, fixtures, equipment = $49.99/sf (includes furniture and sit/stand work surfaces, only)

Demountable walls = $25.93

Project team areas can vary significantly based on square foot area and type of furniture preferred or required by the end users (e.g. large conference tables vs touchdown stations vs training tables vs workbenches or combination thereof). Using the overall cost/sf from above as guidance, project team rooms ranging from a nominal 250 sf to 1000 sf could vary in price between $50K and $250K.

SDG&E Response 8:-CONTINUED

i. The facility now is ADA compliant to the best of our knowledge and this project is not being submitted as means of mitigating or eliminating any ADA deficiency.

j. Site visit is scheduled for 14-15 DEC 2017.

k. The scope and cost of work to obtain LEED certification cannot be estimated until detailed design documentation has been completed and a preliminary LEED scorecard developed. While we believe certain elements of the anticipated scope will benefit LEED scoring, it is possible that additional scope enhancements may be necessary to achieve LEED certification.

l. Leadership in Energy and Environmental Design. (LEED) Indirectly, the greater societal benefits of developing and building facilities that are energy efficient by saving electricity, water and natural gas, utilizing renewable sources of energy, using sustainable and recycled materials in construction, and operating and maintaining facilities to maximize the return on investment is a benefit to the ratepayers. Reducing waste, carbon footprints and greenhouse gas (GHG) emissions are also a responsibility that we take seriously and is in our collective best interests as climate change continues to be a challenge moving forward.

m. Our ergonomics program is designed to fulfill CA standard 5110 requirements. Internally, we use a “Request for Special Equipment Process” which Safety and Employee Care Services uses for individual requests for ergonomic equipment. Our ergonomic prevention strategy includes an on-going and phased in upgrade to adjustable desks as our buildings are refreshed with the goal of reducing/eliminating future injuries

Exhibit Reference: SDG&E-22
SDG&E Witness: Tattersall
Subject: Various Projects
Please provide the following:

1. Referring to SDG&E's workpaper page 13, 00701A.001 - Structures & Improvement Blanket 2017 - 2019, please provide/answer the following:

   a. The historic data for 2012-2016 for this category.

   b. Identify specific projects justifying the increases in the 2018 and 2019 forecasts as compared to the 2017 forecast.

   c. As the methodology used to forecast is a combination of zero based and historic, provide the numeric details as to how this forecast was derived.

SDG&E Response 1:

a. This category includes all projects proposed under Budget Code 00701.0, Workpaper Detail 00701A.001. The nature of projects typically covered under Budget Code 00701.0 is described on page 10 of the workpapers. Generally speaking, Workpaper Detail 00701A.001 provides blanket funding for planned and unknown future projects with estimated values less than $1M, while each of Workpaper Details 00701A.003 and 00709A.004 covers individual, proposed projects with estimated values greater than $1M. As projects greater than $1M are approved and released to proceed, SDG&E typically re-assigns the budget codes to a separate, unique budget code for convenience of internal tracking and reporting. The historical data provided in the table below, therefore, includes projects with costs under budget code 701, as well as those of qualifying scope that have been assigned unique budget codes. Costs are expressed in constant 2016 dollars.

		Constant $ (000)				
Workpaper Detail 000701A.001	Workpaper Title	2012	2013	2014	2015	2016
007010	STRUCTURES & IMPROVEMENTS BLANKET	2418	1862	1228	1319	2819
117390	CP6 INDOOR/OUT DINING AREA RENOVATION	-148	39			
147560	CP SITE IMPROVEMENTS & LANDSCAPING	0	0	3475	1320	0
157630	CP1 FOOD PAVILION	0	0	0	1476	179
Totals		2270	1901	4703	4115	2998

As identified in SDG&E's response to Data Request # 29, Question # 1, a portion of costs attributable to budget code 147610 were erroneously charged to Budget Code 0701.0. The above table reflects the removal of those costs.

SDG&E Response 1 Continued:

b. The below table identifies projects included in our 2017, 2018 and 2019 forecast for Workpaper Detail 00701A.001.

	Forecast $ (000)		
Project Name - Workpaper Detail 000701A.001	**2017**	**2018**	**2019**
Structures & Improvement Blanket	0	2217	0
Beach Cities Main Gate Replacement	15	0	0
Beach Cities Roof Replacement	0	0	260
Beach Cities Warehouse Roof Replacement	0	0	700
Caspian Crane Demo & Site Security	407	0	0
Caspian Racking Installation	200	0	0
CP5 Outdoor Conference Rooms	0	775	0
Eastern C&O New Parking Upgrade	0	0	839
Eastern Roof Replacement	0	0	75
Eastern Warehouse Door Replacement	0	0	30
EIC Entry Door Replacement	0	0	75
Kearny Villa Parking Lot Improvements	250	0	0
Kearny C&O Yard Fencing	0	0	20
Metro 69KV Storage Shed	0	0	250
Metro Parking Lot Improvement	0	0	260
Metro Warehouse Roof Replacement	0	700	0
Miramar Equipment Operations Storage Racks	0	0	125
Mission Control Elevator Replacement	0	0	400
Mission Control IDF Raised Floor Replacement	245	0	0
Mountain Empire Light Pole Replacement	149	0	0
Mt. Empire Yard Improvement	0	0	250
Northeast C&O Driveway Widening	0	466	0
Northeast C&O NW Perimeter Fence Replacement	179	0	0
Northeast Pedestrian Walkway to Alpine Way	75	0	0
Southbay DO Roof Improvement	0	65	0
Subtotals	**1520**	**4223**	**3284**
Vacation & Sick	12	33	26
Totals	**1532**	**4256**	**3310**

c. The numeric details of SDG&E's forecasting methodology are essentially the tabulations of project values included in the response to Question b. above. Included in 2018 is an estimated allowance of $2.2M, proposed to cover emergent and as-yet unspecified projects of a type normally covered by this blanket budget code (i.e., improvements to sitework, building structure or shell components), as well as planning, design and permitting for projects expected in 2019. This is the primary driver of the increased forecast to 2018 and allows for flexibility in addressing unplanned needs beyond the four other projects forecasted for 2018. The allowance is equal to the 3-year average indicated for Budget Code 701 in the below table, less the forecasted values of the four (4) projects planned for completion in 2018. The costs shown in the table include the FERC component of facilities costs.

SDG&E Response 1 Continued:

	GRC Amount	GRC Amount	GRC Amount	GRC Amount	3-year Avg
Budget Code	K4/2014	K4/2015	K4/2016	Overall Result	
00701.0	$ 1,373,729.19	$ 7,989,390.06	$ 3,306,410.19	$ 12,669,529.44	$ 4,223,176.48

The 2019 forecast is composed entirely of projects known and identified. The summation of these projects in 2019 is the driver for the increase beyond 2017 forecast levels.

3. Referring to SDG&E's workpaper page 30, 00705A.001 - Misc. Equipment Blanket 2017 - 2019, please provide/answer the following:

    a. The historic data for 2012-2016 for this category.

    b. Identify specific projects justifying the increase in the 2018 forecasts as compared to the 2017 and 2019 forecasts.

    c. As the methodology used to forecast is a combination of zero based and historic, provide the numeric details as to how this forecast was derived.

SDG&E Response 3:

a. This category includes all projects proposed under Budget Code 00705.0, Workpaper Detail 00705A.001. The nature of projects typically covered under Budget Code 00705.0 is generally described on page 27 of the workpapers. Generally speaking, Workpaper Detail 00705A.001 provides blanket funding for planned and unknown future projects with estimated values less than $1M. The historical data provided in the table below thus includes projects ordinarily covered by this blanket funding. In addition to Budget Code 00705.0, the table captures historical costs for Budget Code 02782.0, as well, which had been used to track Fleet equipment costs prior to 2017. Effective 2017, SDG&E elected to consolidate all capital equipment funding for Facilities and Fleet equipment in to Budget Code 00705.0. Costs are expressed in constant 2016 dollars.

	Constant $ (000)				
Workpaper Detail 000705A.001	**2012**	**2013**	**2014**	**2015**	**2016**
Totals	202	157	1381	774	324

b. The below table identifies projects included in our 2017, 2018 and 2019 forecast for Workpaper Detail 00705A.001.

SDG&E Response 3 Continued:

	Forecast $ (000)		
Project Name - Workpaper Detail 000705A.001	**2017**	**2018**	**2019**
Misc Equipment Blanket Fleet	369	369	369
EOC Videoconference Improvements	40	0	0
Metro Garage Hoist Improvement	500	500	1000
EIC Replace Forklift	0	0	10
EIC Replace Video Conference equipment	0	0	35
EIC Replace/Upgrade Audio/Video Equipment	0	0	25
EIC Replace/Upgrade Audio/Video Equipment	0	50	0
EIC Replace/Upgrade Audio/Video Equipment	0	0	50
EIC Replace Refrigeration Equipment	0	0	15
EIC Replace Refrigeration Equipment	0	15	0
EIC Replace Refrigeration Equipment	0	0	15
Fleet Fuel Management System Upgrades	0	2000	0
Telepresence Equipment Upgrade	533	0	0
Misc AV Upgrades	500	515	530
Subtotals	**1941**	**3449**	**2049**
Vacation & Sick	15	27	16
Totals	**1956**	**3476**	**2065**

c. The numeric details of SDG&E's forecasting methodology are essentially the tabulations of project values included in the response to Question b. above. In years 2017-2019, blanket allowances for each of miscellaneous fleet equipment purchases, garage hoists replacements (carried under Metro Garage Hoist Improvements), and miscellaneous audio-visual equipment systems are included. These allowances are proposed to cover emergent and as-yet unspecified projects for improving or providing new equipment of this nature, creating flexibility for addressing future needs. The allowance for fleet equipment purchases is equal to the 3-year average indicated for Budget Code 02782 in the below table. The costs shown in the table include the FERC component of facilities costs. The other allowances are based on judgment of funding needs from both Facilities and Fleet.

	GRC Amount	GRC Amount	GRC Amount	GRC Amount	3-year Avg
Budget Code	K4/2014	K4/2015	K4/2016	Overall Result	
02782.0	$ 202,649.91	$ 788,798.93	$ 115,436.99	$ 1,106,885.83	$ 368,961.94

SDG&E's forecast for 2018 is larger by comparison to 2017 and 2019 due to a $2M funding allowance for implementation of Fleet's Fuel Management Program. The fuel management project is an upgrade to the existing fuel terminals, on-board vehicle equipment, and software/servers to allow for the controlled dispensing of on-site fuel and vehicle diagnostic code and odometer data capture. The upgrade is required as the existing infrastructure is aging and running on outdated and non-supported software versions that pose a critical risk to on-site fueling operations.

4. Referring to SDG&E's workpaper page 36, 00707A.001 - RAMP - Incremental Security
Blanket 2017 - 2019, please provide/answer the following:

a. The historic data for 2012-2016 for this category.

b. Identify specific projects justifying the increases in the 2018 and 2019 forecasts as compared to the 2017 forecast.

c. As the methodology used to forecast is a combination of zero based and historic, provide the numeric details as to how this forecast was derived.

SDG&E Response 4:

a. This category includes all projects proposed under Budget Code 00707.0, Workpaper Detail 00707A.001. The nature of projects typically covered under Budget Code 00707.0 is generally described on page 33 of the workpapers. Generally speaking, Workpaper Detail 007075A.001 provides blanket funding for planned and unknown future projects with estimated values less than $1M. The historical data provided in the table below thus includes projects ordinarily covered by this blanket funding. Costs are expressed in constant 2016 dollars.

	Constant $ (000)				
Workpaper Detail 000707A.001	**2012**	**2013**	**2014**	**2015**	**2016**
Totals	367	1326	388	1404	2420

b. The below table identifies projects included in our 2017, 2018 and 2019 forecast for Workpaper Detail 00707A.001.

SDG&E Response 4 Continued:

	Forecast $ (000)		
Project Name - Workpaper Detail 000707A.001	**2017**	**2018**	**2019**
NE Perimeter Cameras & Motion Sensors Upgrade	0	0	500
NE Remainder of Perimeter fence	600	0	0
2016 Security Improvements Blanket	0	2626	2367
Eastern Interior Door Installation	25	0	0
EIC Guard Booth/Panic Button Installation	15	0	0
EIC Parking Security Improvement	0	0	225
EIC Security Improvements	0	0	200
Escondido Branch Office Security Improvements	30	0	0
Kearny Guard Shack Installation	20	0	0
Mission Grid Ops Security (Dbl door entry to Grid Control, only)	50	0	0
National City BO Security System Improvements	30	0	0
OCCO Security Upgrades	227	0	0
Miramar Base Security Camera Upgrades	0	0	725
C&O Site Audit Security Upgrades	750	750	0
Subtotals	**1747**	**3376**	**4017**
Vacation & Sick	13	26	31
Totals	**1760**	**3402**	**4048**

The numeric details of SDG&E's forecasting methodology are essentially the tabulations of project values included in the response to Question b. above. The increased forecast to years 2018 and 2019 is primarily due to the forecasted blanket allowances proposed for those years. These allowances are proposed to cover emergent and as-yet unspecified projects for improving or providing new equipment of this nature, creating flexibility for addressing future needs, as well as planning, design and permitting for projects expected in 2019. The allowances were determined by subtracting the value of two projects from RAMP forecasts for 2018 and 2019, which were released to proceed in 2017. These projects were the NE perimeter camera project noted in the first line of the above table and Mission Control Security work addressed through Budget code 16767.

5. Referring to SDG&E's workpaper page 43, 00708A.001 - Infrastructure/Reliability Blanket 2017 - 2019, please provide/answer the following:

   a. The historic data for 2012-2016 for this category.

   b. Identify specific projects justifying the increase in the 2019 forecast as compared to the 2017 and 2018 forecasts.

   c. As the methodology used to forecast is a combination of zero based and historic, provide the numeric details as to how this forecast was derived.

SDG&E Response 5:

a. This category includes all projects proposed under budget code 00708.00, which is generally described on Page 40. The proposed allocation of funding for these projects is described in Workpaper Details 00708A.001 through 00709A.009. Generally speaking, Workpaper Detail 00708A.001 provides blanket funding for planned and unknown future projects with estimated values less than $1M. As projects greater than $1M are approved and released to proceed, SDG&E typically re-assigns the budget codes to a separate, unique budget code for convenience of internal tracking and reporting. The historical data provided in the table below, therefore, includes projects with costs under budget code 708, as well as those of qualifying scope that have been assigned unique budget codes. Costs are expressed in constant 2016 dollars.

		Constant$ (000)				
Budget Code	**Workpaper Title**	**2012**	**2013**	**2014**	**2015**	**2016**
00708A	Remodel/Relocate/Reconfig Blanket	2003	2091	1138	1299	1035
137490	Mission Generator Replacement	0	1305	1624	5	0
147580	RBDC SERVER RM #1 CRAC UNIT REPLACEMENT	0	0	796	123	628
157640	MISSION CONTROL SWITCHGEAR & UPS IMPROVE	0	0	0	1176	136
157650	METRO GODO GENERATOR REPLACEMENT	0	0	0	960	37
	Totals	**2003**	**3396**	**3558**	**3563**	**1836**

b. The below table identifies projects included in the 2017, 2018 and 2019 forecast for Workpaper Detail 00708A.001.

SDG&E Response 5 Continued:

	Forecast $ (000)		
Infrastructure/Reliability Blanket	**2017**	**2018**	**2019**
Infrastructure/Reliability Blanket	400	1332	1332
Beach Cities Generator & ATS Replacement	0	0	500
Beach Cities OGW HVAC Replacement	0	0	40
CP Master Lighting Control System	0	0	750
Eastern C&O Boiler Replacement	0	0	25
Eastern HVAC Replacement	0	0	12
Eastern Microwave Bldg Generator Replacement	0	0	50
Eastern Warehouse HVAC Improvement	0	0	25
Metro EDO UPS Installation	24	0	0
Miramar Bldg B Generator Replacement	0	0	500
MIssion Control SCADA Room	425	0	0
Mission Telecom Halon System Replacement	0	0	174
Ramona Package Unit Replacement	12	0	0
RBDC Halon System Replacement	0	0	555
Southbay DO Split Cooling System Replacement	0	0	124
EIC HVAC Replacement(Coolorados, Aqua Chill)	0	0	75
EIC HVAC Replacement	0	0	50
EIC HVAC Replacement	0	0	50
Replace UPS System Batteries	0	0	15
Unplanned replacments	0	0	0
Century Park Generator Replacement	600	600	0
RBDC Nitrogen System Install	0	0	50
Tierra Del Sol HVAC Replacement	0	0	25
Tierra Del Sol Generator Replacement	0	0	100
North Coast C&O Compressor Replacement	87	0	0
Ramona Generator Installation	0	0	150
Subtotals	**1548**	**1932**	**4602**
Vacation & Sick	12	15	34
Totals	**1560**	**1947**	**4636**

c. The numeric details of SDG&E's forecasting methodology are essentially the tabulations of project values included in the response to Question b. above. The increased forecast to 2019 is primarily due to the inclusion of two generator replacement projects, totaling $1M, as well as a lighting control system upgrade proposed for Century Park, forecast at $750K.

There are also blanket allowances proposed for each of 2018 and 2019, equal to the 3-year average indicated for Budget Code 708 in the table below. The costs shown in the table include the FERC component of facilities costs. These allowances are proposed to cover emergent and as-yet unspecified projects for improving or providing new equipment of this nature, creating flexibility for addressing future needs, as well as planning, design and permitting for projects expected in 2019.

SDG&E Response 5 Continued:

	GRC Amount	GRC Amount	GRC Amount	GRC Amount	3-year Avg
Budget Code	K4/2014	K4/2015	K4/2016	Overall Result	
00708.0	$ 1,282,191.07	$ 1,518,926.93	$ 1,194,977.50	$ 3,996,095.50	$ 1,332,031.83

6. Referring to SDG&E's workpaper page 43, 00708A.003 - Network Operations Center (NOC) Equipment Improvement, please provide/answer the following:

   a. Justification for why this project is considered necessary, and beneficial to ratepayers.

   b. When was the last time a remodel was done?

   c. How old is the A/V equipment?

   d. How poor are the sightlines now and what detriments exist?

   e. What is wrong with the current distribution components?

   f. How old is the ceiling and what is currently wrong with it?

   g. How old is the carpet and what is currently wrong with it?

   h. Provide a breakout of costs by item requested (e.g., upgraded audio visual technologies, reorganization of the space for improved sightlines to visual displays, functional flexibility, conferencing and collaboration, replacement of operator consoles to meet current company ergonomic standards, provision of energy efficient lighting, and replacement of raised floor and sub-floor electrical distribution components, ceilings, carpet and paint).

   i. What are the negative impacts to the ratepayer if the project is not approved? For each impact noted, provide a detailed description of how this impact is negative and the associated costs of such an impact.

SDG&E Response 6:

a. The Network Operations Center (NOC) has not had a significant tenant improvement/remodel in over 10 years. This facility is critical to our operations and the proposed project is intended to improve and increase the operational performance of the systems and SDG&E's personnel required to staff the network. The NOC is a 24/7/365 facility that allows SDG&E's operators to supervise, monitor, and maintain every facet of our network. Some functional areas include troubleshooting, distribution, updating, routing, performance and diagnostics, security, access, and overall integrity to ensure operational reliability and safety for our infrastructure and assets. The current audio-visual technology that supports the operational performance and enables visualization of the network is antiquated, adversely impacting the line of sight, the ability to respond in a timely manner, and the ability to maintain (due to the scarcity of replacement parts). The intent of this project is to improve the responsiveness of our operators, and increase the

SDG&E Response 6 Continued:

reliability, security, and stability of our network by upgrading the existing infrastructure, equipment, and systems that are being used to control sensitive information and data.

b. The space has not been remodeled in over eight (8) years. The last remodel involved furniture replacement, carpet replacement and painting in the Situation Room, only.

c. The audio-visual equipment is approximately eighteen (18) years.

d. The poor sightlines are largely attributable to the outdated audio-visual technology that currently exists in the NOC. The current display wall has a row of large rear-projection type monitors centered at roughly 15’ above the floor level. The monitors are located higher than optimal ergonomic height for seated operators, do not have HD technology and are difficult to see. The viewing angle required in the current configuration is wide, and because rear projection screens focus light towards the on-axis viewer, you can experience light reduction and color uniformity issues on the edges. Below the large monitors are rows of aged CRT monitors that are only useful to front row operators, and are also difficult to see. Both components will be replaced with a singular video wall application.

e. The sub-floor electrical distribution components were installed with the original improvements to the center, which pre-date 1999. The system is outdated and SDG&E intends to implement current plug and play technologies through new floor boxes, furniture and demountable partition interfacing, universal connectors.

f. The ceiling was installed with the original improvements to the center, which pre-date 1999. The space is not served with heating and is excessively cooled due to the heat loads generated by the outdated monitors. The ceiling will be removed to allow access for replacement of the existing air distribution systems, as well.

g. The carpet was last replaced in 2009. It is a high traffic area due to the shift work that occurs 24/7 within the NOC.

h. This proposed project is only conceptual at this time and the detailed design and requirements have not been formulated. The forecast is based on an estimated cost/square foot of $411. This forecast is comparable to that which was provided for improvements to our Century Park Emergency Operations Center, which per the response to Data Request #29, Question 5.k., indicated a cost per square foot for the EOC of $426. Given the similarity of the projects, component costs will thus approximate those provided in the response to Data Request #29, Question 5.k.

i. Given the early conceptual and development stage of this project, it is difficult to quantify the impacts to ratepayers. The benefits described in our response to question 6a will not be realized if there is no upgrade to the Network Operations Center (NOC). This

SDG&E Response 6 Continued:

facility and system is a critical part of our infrastructure. Continuous and efficient network operations allow us to operate our assets with enhanced capabilities because it is our communications backbone. The faster we can collect, analyze, and respond to operational crisis, emergencies, or daily maintenance, the better our performance will be.

10. In response to data request ORA-SDGE-035-LMW Q.2b., related to RAMP Incremental Environmental/Safety Blanket please provide/answer the following:

a. The calculation and how derived for the estimated $1.463 million allowance shown on the table for 2018.

b. Why could SDG&E indicate the specific projects for 2019 (without an allowance), but not 2018?

c. Could SDG&E start some of the projects noted in 2019 in 2018? If no, please explain why?

d. Why are there various projects for the Miramar facility if that facility is going to be consolidated into Greencraig?

e. Identify the projects that are RAMP related, and why they are considered RAMP projects.

f. Why does the first line item say “2016 Environmental Blanket”?

SDG&E Response 10:

a. Please see our response to Question 2.c. from ORA-SDGE-035-LMW. Below is the relevant excerpt from this response, for your convenience.

“The allowance is equal to the 3-year average indicated for Budget Code 703 in the below table. The costs shown in the table include the FERC component of facilities costs”

	GRC Amount	GRC Amount	GRC Amount	GRC Amount	3-year Avg
Budget Code	K4/2014	K4/2015	K4/2016	Overall Result	
00703.0	$ 1,552,309.52	$ 329,514.99	$ 2,506,239.89	$ 4,388,064.40	$ 1,462,688.13

b. Due to budgetary constraints and relative prioritization of environmental/safety projects within the real estate and facilities department, SDG&E has planned to implement specific known projects in 2019, but not in 2018. The scoping and development of these 2019 projects will take place in 2018. It will also be necessary to engage additional resources in 2018 to prepare to deliver the project volume forecasted for 2019. While there are no specific projects planned in 2018, SDG&E has reserved some blanket funds in 2018 for unanticipated, necessary projects that are more urgent than the planned 2019 projects.

SDG&E Response 10 Continued:

c. Yes, we could start some of the 2019 projects in 2018, if the particular project(s) was/were (a) given the proper, internal budget allocation, (b) approved on an enterprise wide basis, and (c) not exceedingly complex, such that we would have the ability to scope, plan, design, permit (subject to agency approval timelines) and build the particular project(s) in 2018.

d. Not all operations are relocating to our Greencraig facility. Our Miramar location consists of a leased portion ("Miramar B"- 75,000 sf) and a portion of property that SDG&E owns (approximately 11 acres). The operational groups staying at Miramar will move into the property we own at the site.

e. Please see our response to Question 2.b. from ORA-SDGE-035-LMW. Below is a tabular list of projects from this response, for your convenience. We consider that all of these projects mitigate safety risk to employees, contractors, or the public.

	Forecast $ (000)		
Project Name - Workpaper Detail 000703A.001	**2017**	**2018**	**2019**
2016 Environmental Blanket	0	1463	0
Beach Cities Storm Drain Improvements	0	0	75
Mtn Empire 90 Day Containment Pad Installation	0	0	150
Northeast Gas Crew Room Secondary Exit Installation	0	30	0
Kearny OWS Improvements	0	0	250
Kearny Stormwater Improvements	0	0	150
Miramar Gas Ops Stormwater Mgmt Improvements	376	0	0
Miramar Inlet Improvements	0	0	100
Miramar C2 Improvement	0	0	50
Miramar Swale A Oil Water Separator	0	0	400
Miramar Swale A Improvement	0	0	100
Northcoast Stormwater Improvements	0	0	50
Mission Site Mitigation	50	0	0
Mission Skills Gas Pipe Replacement	0	0	50
Beach Cities Stormwater Improvements	0	0	25
Metro Sewer Drain Improvements	0	0	50
Eastern Lot Improvements	0	0	250
Miramar Hazmat Facility Expansion	0	0	400
Northeast Ice Machine Site Drainage	27	0	0
EIC External Drainage Improvements	0	0	30
Subtotals	**453**	**1493**	**2130**
Vacation & Sick	3	11	16
Totals	**456**	**1504**	**2146**

f. The use of "2016" in the blanket project description is a typographical error. We budget allowances on an annual basis and inadvertently carried forward the title for our 2016 allocation in to our TY2019 forecast template. Given the opportunity to correct this, the table entry would more appropriately be titled "2017-2019 Environmental Blanket".

12. In response to data request ORA-SDGE-035-LMW Q.3b., related to Miscellaneous Equipment Blanket (Fleet Fuel Management System Upgrades) please provide/answer the following

a. The calculation and how derived for the estimated $2 million funding allowance shown on the table for 2018.

b. A description how the infrastructure is aging and the actual age of the infrastructure

c. A description how the software is outdated and unsupported.

SDG&E Response 12:

a. The below table shows the various cost components and calculation of Facilities' funding allowance for Fleet Fuel Management System Upgrades.

Cost Component	Qty.	Unit Cost	Totals
On Board Vehicle Modules	2100	$ 550	$ 1,155,000
Fuel Island & Tanker Modules	18	$ 22,250	$ 400,500
Trench & Conduit (Garages to FI's)	8	$ 55,563	$ 444,500
			$ 2,000,000

b. The current fuel management system was first installed in 2003 and is now more than 15 years old.

c. SDG&E's existing fuel management system and accompanying IT infrastructure are no longer supported by the vendor, which puts SDG&E at risk of a system failure as there are no server or operating software security patches or updates available. The new fuel management system will provide security for the fueling infrastructure as well as provide accurate vehicle mileage reads which increases Fleet Services reporting and decision-making capabilities.

13. In response to data request ORA-SDGE-035-LMW Q.4b., related to RAMP Incremental Security Blanket please provide/answer the following:

a. The calculation and how derived for the estimated $2.626 million 2018 funding allowance and the estimated $2.367 million 2019 funding allowance. Please also show the RAMP projects that were removed in calculating the allowances.

b. Identify the projects that are RAMP related, and why they are considered RAMP projects.

c. Why does the third line item say "2016 Security Improvements Blanket"?

d. Why is there a project for the Miramar Base Security Camera upgrades if that facility is going to be consolidated into Greencraig?

SDG&E Response 13:

a. Please see our response to Question 4.b. from ORA-SDGE-035-LMW. Below is the relevant excerpt from this response, for your convenience.

"The allowances were determined by subtracting the value of two projects from RAMP forecasts for 2018 and 2019, which were released to proceed in 2017. These projects were the NE perimeter camera project noted in the first line of the above table and Mission Control Security work addressed through Budget code 16767."

Per Workpaper Detail 00707A.001-RAMP (p.37 of 132), our RAMP forecasts were $3,001K and $3,091K for 2018 and 2019, respectively. The two projects were budgeted internally at roughly $1.1M. Because the projects were accelerated to proceed in 2017 due to security concerns, we subtracted $375K and $725K from 2018 and 2019, respectively.

b. Please see our response to Question 4.b. from ORA-SDGE-035-LMW. Below is the tabular list of projects from this response, for your convenience. We consider that all of these projects mitigate the risk of workplace violence to improve the security and safety of our employees, customers, and contractors.

SDG&E Response 13 Continued:

	Forecast $ (000)		
Project Name - Workpaper Detail 000707A.001	**2017**	**2018**	**2019**
NE Perimeter Cameras & Motion Sensors Upgrade	0	0	500
NE Remainder of Perimeter fence	600	0	0
2016 Security Improvements Blanket	0	2626	2367
Eastern Interior Door Installation	25	0	0
EIC Guard Booth/Panic Button Installation	15	0	0
EIC Parking Security Improvement	0	0	225
EIC Security Improvements	0	0	200
Escondido Branch Office Security Improvements	30	0	0
Kearny Guard Shack Installation	20	0	0
Mission Grid Ops Security (Dbl door entry to Grid Control, only)	50	0	0
National City BO Security System Improvements	30	0	0
OCCO Security Upgrades	227	0	0
Miramar Base Security Camera Upgrades	0	0	725
C&O Site Audit Security Upgrades	750	750	0
Subtotals	**1747**	**3376**	**4017**
Vacation & Sick	13	26	31
Totals	**1760**	**3402**	**4048**

c. The use of "2016" in the blanket project description is a typographical error. We budget allowances on an annual basis and inadvertently carried forward the title for our 2016 allocation in to our TY2019 forecast template. Given the opportunity to correct this, the table entry would more appropriately be titled "2017-2019 Security Improvements Blanket".

d. Not all operations are relocating to our Greencraig facility. Our Miramar location consists of a leased portion ("Miramar B"- 75,000 sf) and a portion of property that SDG&E owns (approximately 11 acres). The operational groups staying at Miramar will move into the property we own at the site.

14.In response to data request ORA-SDGE-035-LMW Q.7b., related to Alternative Energy Systems please provide/answer the following:

a. The calculation and how derived for the estimated $2.744 million 2018 funding allowance for the Alternative Energy Program Allowance.

b. The calculation and how derived for the estimated $2.532 million 2019 funding allowance for the Alternative Energy Program Allowance.

c. Why is the $500k forecast for the 2017 Alternative Energy Program Allowance (employee EVs at own cost) so low given this is not a new program?

d. Why is there no forecast for the 2017 Alternative Energy Program Allowance (Fleet EVs) given this is not a new program?

e. For the Alternative Energy Program Allowance (employee EVs at own cost), how are the employees converting their personal vehicles to electric/hybrid types and why should ratepayers pay for employees to convert their vehicles when employees may also benefit from the conversion.

f. For the Alternative Energy Program Allowance (Fleet EVs), how are the vehicles converted to electric and CNG, and what is a general cost per vehicle.

g. For the 376 fleet vehicles, what types are vehicles are these, and is this the total amount of vehicles covering both 2018 and 2019?

h. Does any of the allowance go to charging stations? If yes, how much and broken out by year split between fleet and employee EV?

SDG&E Response 14:

a. The proposed 2018 Alternative Energy System allowance of $2.744M is the proposed funding for providing new vehicle charging infrastructure and equipment in support of two separate programs. These programs aim to provide 1) on-site charging facilities for employee personal vehicles at company properties, and 2) on-site charging facilities for company owned Fleet vehicles at company properties. Per the response to data Request # 35, Question 7.a., the proposed allowances for each program are $1.469M and $1.275M, respectively, with a total 2018 allowance of $2.744M. Note that employees purchase the energy discharged to their personal vehicles.

SDG&E Response 14 Continued:

The forecasts for support of employee vehicles are based on a combination of factors, including the number of employees known to own and commute in electric vehicles, the number of available charging stations., the availability of existing electric infrastructure (many prior installations were designed to expand), the need to provide intermittent charging locations to facilitate travel beyond single-charge range, and anticipated growth of EV owners.

The following table exhibits each of the first two factors. The build-out potential column, which comprises the basis for the forecast, considers the other factors. The table reflects data as of the 4th quarter of 2016. Based on the total build-out potential, a forecasted 176 new charging stations to support employee vehicle charging. The unit cost applied to these chargers was $25,000/ea. Some sites will require new payment kiosks to enable employee use of the chargers, and it was determined that an additional 5 kiosks would be required at approximately $10,000/ea. The calculation of the total forecast for employee vehicle chargers and payment kiosks follows in the table below. Lastly, the value of the funding request was prorated across 2018 and 2019 by a ratio of 1/3 to 2/3, or $1.469M and $2.982M, respectively.

SDG&E Response 14 Continued:

Location	EV Owners	EV Chargers	Delta	Build Out Potential	Added Pay Kiosks
Century Park A bldg. 2	45	10	-35	0	
Century Park B bldg. 2	0	10	10	0	
Century Park C bldg. 2	0	8	8	2	
Century Park D bldg. 1	30	8	-22	2	
Century Park E bldg. 3	28	10	-18	0	
Century Park K South Parking	0	6	6	2	
Century Park L Sorth Parking	0	6	6	4	
Century Park M	0	0	0	10	1
Century Park N	0	0	0	10	1
Century Park O	0	0	0	10	1
Century Park F bldg. 4	37	9	-28	1	
Century Park G bldg. 5	24	10	-14	0	
Century Park H bldg. 6	10	8	-2	2	
Century Park I North Parking	0	10	10	0	
Century Park J North Parking	0	10	10	2	
Century Park General	0	6	6	0	
CP Annex	5	6	1	0	
CP East	0	5	0	5	
CP Fleet	0	0	0	2	
Alpine Major Projects	3	1	-2	0	
Alpine Way Escondido ITF	0	4	4	6	
Beach Cities	2	2	0	8	
Eastern	6	2	-4	5	
Energy Innovation Center	1	1	0	0	
Kearny	4	5	1	6	
Lightwave	18	0	-18	0	
Metro	3	6	3	6	
Miramar C&O	5	5	0	6	
Miramar Energy facility	1	1	0	2	
Mission Control	9	5	-4	5	
Mission Skills	1	4	3	7	
Mision Telecom	1	0	-1	4	1
Mountain Empire	1	2	1	8	
North Coast	2	2	0	8	1
Northeast	4	8	4	7	
Orange County	3	3	0	7	
Palomar- 2 Hydras	0	1	1	9	
Palomar- 2 Hydras	0	1	1	9	
Ramona	0	2	2	8	
Rancho Bernardo Data Center	8	5	-3	5	
South Bay DO		2	0	8	
Total	**251**	**184**	**-74**	**176**	**5**

Employee Charging Program Summary

Build-out costs (176 stations @ $25,000/ea)	$	4,400,000
Pay Kiosk Costs (5 units @ $10,000/ea)	$	50,000
Grand Total 2018-2019	**$**	**4,450,000**
2018 Portion (1/3)	$	1,468,500
2019 Portion (2/3)	$	2,981,500

SDG&E Response 14 Continued:

The forecast for the support of the Fleet EV charging program was based on the Company's anticipated purchase of both electric and plug-in hybrid vehicles for employee business use. Plug-in hybrid vehicles are primarily bucket trucks whose engines are powered by gasoline or diesel, but with boom lifts or other on-board equipment that are powered by stored electricity. Like conventional electric vehicles, the on-board equipment is charged when the vehicles are not in use.

The following table lists the quantities of electric and plug-in hybrid Fleet vehicles anticipated to be purchased in the years 2018 through 2020. The data was provided to Facilities from Fleet in May 2017. The forecasts to support the Fleet EV charging program are based on the total vehicle quantities for years 2018 through 2020, only. The year 2017 was excluded as adequate charging infrastructure and equipment was already in place to support the anticipated 2017 purchases. The total vehicle quantities for years 2018 through 2020 were multiplied by the unit cost per charger of $25,000. The calculation of the total forecast for Fleet vehicle chargers follows in the table below. Lastly, the value of the funding request was prorated across 2018 and 2019 by a ratio of 1/3 to 2/3, or $1.275M and $2.550M, respectively.

VehicleType	**2018**	**2019**	**2020**	**Total 2018-2020**
Pickup	43	34	33	110
IMS-Service Body	9	0	0	9
E-PTO Trouble Trucks/Aerials	10	12	12	34
Electric Total:	**62**	**46**	**45**	**153**

Employee Charging Program Summary

Build-out costs (153 stations @ $25,000/ea)	$	3,825,000
Grand Total 2018-2019	**$**	**3,825,000**
2018 Portion (1/3)	$	1,275,000
2019 Portion (2/3)	$	2,550,000

Returning to Question 14.a., then, the derivation of the estimated $2.744 million 2018 funding is the sum of the 2018 forecast for each of the Employee Personal EV and Fleet EV (electric and plug-in hybrid) on-site charging programs. The estimated 2019 funding is derived in the same way and the calculation for both years is exhibited in the table below.

	2018	**2019**	**Program Totals**
Employee Vehicles	$ 1,468,500	$ 2,981,500	$ 4,450,000
Fleet Vehicles	$ 1,275,000	$ 2,550,000	$ 3,825,000
Annual Totals	**$ 2,743,500**	**$ 5,531,500**	

SDG&E Response 14 Continued:

b. The calculation showing the derivation of the estimated $ 2019 funding for the Alternative Energy Program Allowance is explained in the answer to Question 14.a. above. It appears that there may be a typographical error in the question, as the total 2019 forecasted costs are $5.532M, not $2.532 as stated in the question.

c. The forecast for the 2017 Alternative Energy Program Allowance (employee EV program) is comparatively lower than the 2018 and 2919 forecasts because there were already many specific projects committed to proceed or already being implemented entering 2017. The table provided in our response to DR #35, Question 7.a., lists these projects.

d. As discussed in our response to Question 14.a. above, we did not foresee a need to implement charging infrastructure for anticipated 2017 Fleet EV purchases. Adequate charging infrastructure and equipment was already in place to support the anticipated 2017 purchases.

e. Although our response to DR #35, Question 7.c. refers to employees converting their personal vehicles to electric/hybrid types, the reference was intended to mean that the employee would convert to electric/hybrid types through the lease or purchase of a new personal electric/hybrid vehicle. There are no costs in the SDGE-CWP-22 forecasts applicable to the conversion of gas/diesel powered employee vehicles to electric/hybrid.

f. Although our response to DR #35, Question 7.c & 7.d. refers to the Company converting Fleet vehicles to alternative fuel vehicles (AFVs), the reference was intended to mean that the Company would convert to alternative fuel vehicles (AFVs) through the lease or purchase of new alternative fuel vehicles (AFVs). There are no costs in the SDGE-CWP-22 forecasts applicable to the conversion of gas/diesel powered Fleet vehicles to electric/hybrid alternative fuel vehicles (AFVs).

g. The 376 fleet vehicles, referenced in our response to DR #35, Question 7.e., was stated in the context of a company goal. The vehicle type breakdown would typically only be known and confirmed by the Fleet department. The quantity of Fleet vehicles used in estimating our forecast is clarified in our response to Question 14.a. above, along with a breakdown by vehicle type.

h. The allowances were established to fund electric and plug-in hybrid vehicle charging infrastructure programs, exclusively. Costs to purchase, modify or maintain vehicles are not included. The response to Question 14.a. above provides the year by year split of forecasts between Fleet and employee EV programs.

22. Regarding Q1d – 2017 – 2019 Rent Comparison.xlsx, attached to ORA-SDG&E-32-1d, please provide an Excel file that updates the spreadsheet to include:

a. The recorded annual rent for:

i. Each lease listed in the referenced attachment for each year 2012-2017.

ii. Each lease that generated expense to the utility during the requested timeframe, but is not listed in the referenced file because the agreement (i) expired or was otherwise terminated or (ii) is new since ORA-SDG&E-32-1d was issued. For this, please add line items that contain the facility name and annual expense in each year 2012-2017.

b. A quantification of the base rent (the rent expense before netting out the rent credit) and rent credit amounts for each year that includes the rent credit according to the lease for the leases for which the utility was provided rent credit or "free rent" by the landlord:

c. A cross reference that indicates, as applicable, the buildings whose leases expire as a result of consolidation tied to the buildings that receive the consolidated employees and/or functions.

Utility Response 22:

a. Tab "22a" in the in attachment "TURN-SEU-034_Q22" contains a table which reflects the annual rent for leases listed in the Q1d – 2017 – 2019 Rent Comparison.xlsx. Tab 22a includes all leases that generated expense to the utility during the requested timeframe.

b. Tab "22b" contains a table which quantifies base rent before the netting of tenant reimbursement amortizations and the tentant reimbursement amortizations by year.

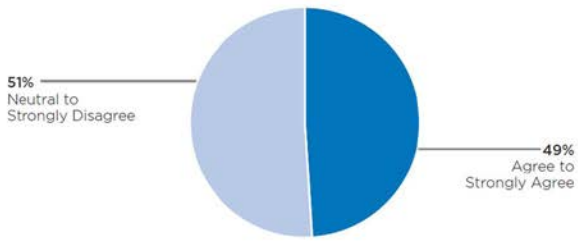
c. The table below cross references the buildings whose leases expire due to consolidation as well as the building that receive the consolidated employees.

Lease Expiration	Employees Moved To:
RB Annex	CP East, CP Annex
Lightwave	CP East, CP Annex
Environmental Lab	Greencraig II

While fewer than half of employees report satisfaction with the workplace, those who are satisfied show significantly higher productivity and retention.

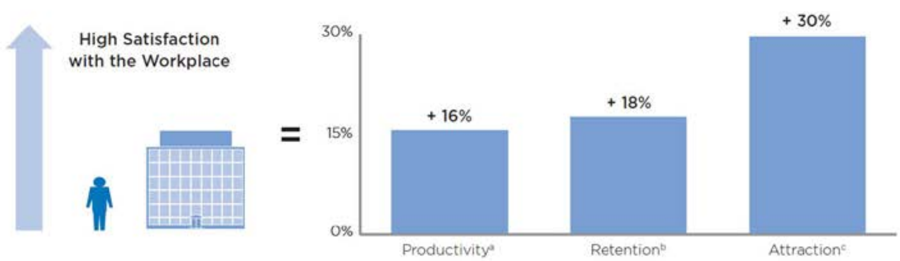
NOT GETTING IT RIGHT FOR MOST EMPLOYEES, WITH SERIOUS CONSEQUENCES

I Am Currently Satisfied with My Physical Workplace
Percentage of Employees Agreeing



n = 800 employees.
Source: CEB 2014 Real Estate Employee Impact Assessment.

Improvement in Employee Outcomes When Employees Are Satisfied with Their Workplace



n = 800 employees.
Source: CEB 2014 Real Estate Employee Impact Assessment.
[a] Measured using CEB's "Enterprise Contribution" metric (see sidebar).
[b] Indexed measure of a series of questions looking at an employee's level of activity looking for a role at a different organization.
[c] Measured based on employee reporting of the workplace as a driver of their choosing to work at their organization.

CEB's Measure of Productivity: Enterprise Contribution

- Individual Performance: Effectiveness achieving individual assignments.
- Network Performance: Effectiveness improving others' performance and using others' contributions to improve own performance.

Importance

Migrating employees to be strong Enterprise Contributors can lead to a 12% increase in profit.

n = 23,339 employees.
Source: CEB 2012 Corporate Leadership Council High Performance Survey.

Heads of CRE are contending with workforce shifts and space constraints that challenge how the workplace fits employee needs.

IS THE WORKPLACE MATCHING EMPLOYEE NEEDS?

Trends Affecting How the Workplace Meets Employee Needs

Changing Workforce Demographics

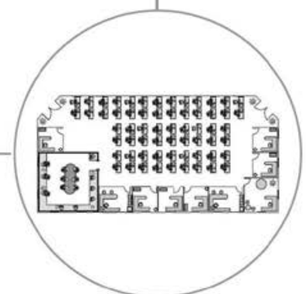
Millennials comprise roughly one-third of today's workforce and will increase to half of the workforce over the next five years.

Implication:
The workplace needs to accommodate the different work styles and design preferences of millennials, or companies risk leaving a growing proportion of the workforce disengaged.

Changing Nature of Work

Employees reported a 67% increase in the amount of work requiring collaboration from 2009 to 2012.

Implication:
The workplace needs to have more and a greater variety of meeting space, or companies risk hours of lost productivity as employees search for the right space to collaborate.



Growing Space Constraints

- Half of all human resources executives anticipate an increase in hiring volume.
- The median square feet per FTE has remained flat since 2007.
- More than 80% of CRE executives anticipate no change or a reduction in owned and rented real estate.

Implication:
At many organizations, CRE is being forced to put more people in less space, leading to trade-offs in space utilization (e.g., smaller workstations closer together, less privacy) that may not meet employee needs.

Source: CEB Q3 2014 Business Barometer; CEB 2007-2014 Real Estate Cost and Space Benchmarking; United States Bureau of Labor Statistics, 2013, www.bls.gov.

APPENDIX B

Glossary of Terms

ADA	Americans with Disabilities Act
AFV	Alternative Fuel Vehicles
C&O	Construction & Operation
CP	Century Park
EOC	Emergency Operations Center
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
MCFC&E	Mission Critical Facility Consolidation and Expansion
NOC	Network Operations Center
O&M	Operations and Maintenance
ORA	The Office of Ratepayer Advocates
RB	Rancho Bernardo
REL&F	Real Estate, Land Services & Facilities
RO	Results of Operation
SDG&E	San Diego Gas & Electric Company
TURN	The Utility Reform Network