Company: San Diego Gas & Electric Company (U902M)
Proceeding: 2016 General Rate Case
Application: A.14-11-003
Exhibit: SDG&E-210

SDG&E

REBUTTAL TESTIMONY OF JONATHAN T. WOLDEMARIAM

ELECTRIC DISTRIBUTION O&M

June 2015

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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ELECTRIC DISTRIBUTION O&M

I. SUMMARY OF DIFFERENCES

TOTAL O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**107,482**	**140,119***	**32,637**
ORA	**107,482**	**116,888**	**9,406**
FEA	**107,482**	**122,270**	**14,788**

* This is the figure shown in testimony. A reduced figure of $137,655 is requested as a result of errata corrections addressed in the "Correction of Errata" section near the end of this rebuttal.

II. INTRODUCTION

The following rebuttal testimony regarding San Diego Gas & Electric Company's (SDG&E) request for electric distribution operations and maintenance (O&M) expenses addresses the following intervenor testimony:

- The Office of Ratepayer Advocates (ORA) April 24, 2015, Report on Electric Distribution Expenses (Exhibit ORA-5, witness Eleanor Jaeger)[1]
- The Federal Executive Agencies (FEA)[2]
- The Coalition of California Utility Employees (CUE)[3]
- San Diego Consumers' Action Network (SDCAN)[4]
- The Utility Consumers' Action Network (UCAN)[5]

In this rebuttal testimony, SDG&E will also address the correction of some errata in Mr. Woldemariam's testimony that was found upon further review or as a result of responding to discovery. These items represent a total of $1,840K to be reduced from the requested funding for Test Year (TY) 2016 for Electric Distribution O&M.

[1] Ex. ORA-5 (Jaeger), Report on the Results of Operations for San Diego Gas & Electric Company Southern California Gas Company Test Year 2016 General Rate Case, SDG&E – Electric Distribution Expenses, April 24, 2015.
[2] Direct Testimony and Exhibit of Ralph C. Smith, CPA, on Behalf of the Department of Defense and All Other Federal Executive Agencies, May 15, 2015.
[3] Prepared Testimony of David Marcus on Behalf of the Coalition of California Utility Employees, May 15, 2015.
[4] SDCAN Evaluation of San Diego Gas and Electric Company's Customer Service and External Affairs Activities, Michael Shames, May 15, 2015.
[5] Testimony of Briana Kobor, Laura Norin, and Mark Fulmer on Behalf of the Utility Consumers' Action Network Concerning Sempra's Revenue Requirement Proposals for San Diego Gas & Electric and SoCalGas, May 15, 2015.

Multiple parties used 2014 recorded costs (actuals) to derive their forecasts, resulting in lower Test Year 2016 forecasts. In comparison, using 2014 actuals and SDG&E's forecasting methodologies results in $128M as opposed to the original total of $138M for Test Year 2016 forecasts. Additionally, in this rebuttal testimony, it should not be assumed that failure to address any individual issue implies any agreement by SDG&E with the proposal made by these or other intervenors. SDG&E believes that the forecasts contained in its direct testimony, performed at the project level, are based on sound estimates of its revenue requirements at the time of testimony preparation.

A. ORA

The Office of Ratepayer Advocates (ORA) issued its report on Electric Distribution Expenses on April 24, 2015.[6] The following is a summary of ORA's forecast for SDG&E's Electric Distribution O&M expenditures compared to SDG&E's Test Year (TY) 2016 forecast:[7]

- ORA's estimate is $33.055 million for Electrical Regional Operations, which is $3.804 million lower than SDG&E's forecast of $36.859 million.
- ORA's estimate is $7.650 million for Troubleshooting, which is $0.315 million lower than SDG&E's forecast of $7.965 million.
- ORA's estimate is $3.660 million for Skills and Compliance Training, which is $1.427 million lower than SDG&E's forecast of $5.087 million.
- ORA's estimate is $0.528 million for Project Management, which is $0.840 million lower than SDG&E's forecast of $1.368 million.
- ORA's estimate is $0.685 million for the Service Order Team, which is $0.198 million lower than SDG&E's forecast of $0.883 million.
- ORA's estimate is $0.226 million for Grid Operations, which is $0.122 million lower than SDG&E's forecast of $0.348 million.
- ORA's estimate is $5.622 million for Substation Construction and Maintenance, which is $1.290 million lower than SDG&E's forecast of $6.912 million.
- ORA's estimate is $11.377 million for Electric Distribution Operations, which is $3.938 million lower than SDG&E's forecast of $15.315 million.

[6] Ex. ORA-5 (Jaeger).
[7] *Id.* at 1-2.

- ORA's estimate is $1.996 million for Distribution Operations/EGISS, which is $0.651 million lower than SDG&E's forecast of $2.647 million.
- ORA's estimate is $1.736 million for Kearny Operations Services, which is $0.503 million lower than SDG&E's forecast of $2.239 million.
- ORA's estimate is $11.667 million for Construction Services, which is $7.198 million lower than SDG&E's forecast of $18.865 million.
- ORA's estimate is $23.858 million for Vegetation Management (Tree Trimming), which is $0.701 million lower than SDG&E's forecast of $24.559 million.
- ORA recommends that the Commission does not adopt SDG&E's proposal for a two-way balancing account for Vegetation Management (Tree Trimming) and instead continues the use of a one-way balancing account.
- ORA's estimate is $1.397 million for Distribution Engineering, which is $0.512 million lower than SDG&E's forecast of $1.909 million.
- ORA's estimate is $0.207 million for Technology Innovation and Development, which is $0.675 million lower than SDG&E's forecast of $0.882 million.
- ORA's estimate is $0.502 million for Reliability and Capacity Analysis, which is $0.116 million lower than SDG&E's forecast of $0.618 million.
- ORA's estimate is $0.140 million for Information Management Support, which is $0.236 million lower than SDG&E's forecast of $0.376 million.
- ORA's estimate is $1.243 million Technology Utilization, which is $0.705 million lower than SDG&E's forecast of $1.948 million.
- ORA does not dispute SDG&E's TY expense forecasts for the following items: Regional Public Affairs, System Protection, Vegetation Management (Pole Brushing), Compliance and Asset Management, Major Projects, Administrative and Management, Officer, Exempt Materials, Small Tools, and Department Overhead Pools (DOH).
- ORA does not oppose SDG&E's proposals for the proposed Electric Reliability Performance Measures.[8]

[8] Ex. ORA-5 (Jaeger) at 56:6-7.

B. FEA

The Federal Executive Agencies (FEA) submitted testimony on May 15, 2015. The following is a summary of FEA's position(s):

- FEA's estimate is $31.157 million for Electrical Regional Operations, which is $5.702 million lower than SDG&E's forecast of $36.859 million.[9]
- FEA's estimate is $11.377 million for Electric Distribution Operations, which is $3.938 million lower than SDG&E's forecast of $15.315 million.[10]
- FEA's estimate is $11.692 million for Construction Services, which is $7.173 million lower than SDG&E's forecast of $18.865 million.[11]
- FEA's estimate is $23.858 million for Vegetation Management (Tree Trimming), which is $0.701 million lower than SDG&E's forecast of $24.559 million.[12]
- FEA's estimate is $3.957 million for Vegetation Management (Pole Brush), which is $0.335 million lower than SDG&E's forecast of $4.292 million.[13]

C. CUE

The Coalition of California Utility Employees (CUE) submitted testimony on May 15, 2015. The following is a summary of CUE's position(s):

- CUE recommends that SDG&E should be required to hire new employees from the outside and/or promote from the inside as appropriate, to deal with the disproportionate drop in the planned number of Troubleshooters[14].

D. SDCAN

The San Diego Consumers' Action Network (SDCAN) submitted testimony on May 15, 2015. The following is a summary of SDCAN's position(s):

- SDCAN's estimate is $.683 million for Regional Public Affairs, which is $1.004 million lower than SDG&E's forecast of $1.687 million.[15]

[9] FEA (Smith) at 61:2-4.
[10] *Id*. at 66:6-7.
[11] *Id*. at 73:6-8.
[12] *Id*. at 73:13-14; 76:10.
[13] *Id*. at 79:10-13.
[14] CUE (Marcus) at 56:7-9.
[15] SDCAN (Shames) at 30-31.

E. UCAN

The Utility Consumers' Action Network (UCAN) submitted testimony on May 15, 2015. The following is a summary of UCAN's position(s):

- UCAN recommends that SDG&E's proposal to convert the Tree-Trimming Balancing Account (TTBA) from a one-way balancing account to a two-way balancing account should be denied.[16]

III. REBUTTAL TO PARTIES' O&M PROPOSALS

A. CONSTRUCTION SERVICES

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**5,226**	**18,865**	**13,639**
ORA	**5,226**	**11,667**	**6,441**
FEA	**5,226**	**11,692**	**6,466**

1. ORA & FEA

The Commission's Safety and Enforcement Division (SED) Report in this proceeding[17] has recognized the importance of instituting workforce safety requirements on contracted work, and even suggests expanding work force safety requirements for contractors.[18] In contrast, ORA's recommended $7.198 million reduction, as well as FEA's recommended $7.173 million reduction from SDG&E's TY 2016 Construction Services forecast would underfund the very operations that manage and oversee safety and design requirements for contracted electric distribution work, including work that will implement SDG&E's Fire Risk Mitigation (FiRM) program. As I explain in my direct testimony, SDG&E's Construction Services cost category includes the following four main groups: Construction Services Construction Management, Construction Services Contracting, Aviation Services, and Fire Coordination and Prevention.[19] These four groups respectively provide: (1) construction management and field oversight of all construction performed by contractors on electric distribution, including safeguarding that all contracted work is built to SDG&E design and safety standards and in accordance with G.O. 95

[16] UCAN (Fulmer) at 77:14-15.
[17] The Commission's Safety and Enforcement Division Risk Assessment Section Staff Report on Southern California Gas Company & San Diego Gas & Electric Company 2016-2018 Consolidated General Rate Case Applications A.14-11-003 and A.14-11-004 ("SED Report").
[18] *See Id*. at 41, 44 at item no. 6.
[19] Ex. SDG&E-10-R (Woldemariam) at JTW-47:3-5.

and G.O. 128, (2) administrative activities associated with construction services-managed construction work, (3) oversight for construction, operations and maintenance activities that involve helicopter and fixed wing aircraft, and (4) a wide range of highly skilled and experienced fire safety and fire preventative services, including design, operational, training and construction expertise and coordination with fire departments and first responders during extreme fire weather events (such as red flag Santa Ana events).[20] ORA and FEA's recommendations do not appear to be consistent with the Commission's and SDG&E's goals of managing fire, safety, and reliability risks.

Fire risk mitigation, reliability and safety, and system growth/capacity needs all contribute to the upward incremental cost changes in the Construction Services category, as my direct testimony describes.[21] SDG&E's service territory is experiencing increased growth in new construction developments, which requires additional electric infrastructure development including additional transformer installations and change-outs to manage safety, security, and reliability risks due to changing electric loads and aging infrastructure. Increased incremental capital spending due to safety, reliability, and fire risk mitigation projects – such as proactive cable replacement, fire hardening projects, deteriorated pole change-outs and upgrades, reconductors and relocations – also cause O&M expenses to increase. SDG&E's TY 2016 labor and non-labor costs are based on a 5-year average, and non-labor cost forecasts include additional "associated with capital" O&M and transformer installations, contracted wildfire strike team fire prevention and suppression services, contract air-crane firefighting costs, hanger lease payments for the aviation services group, and an increase in helicopter use costs.[22]

ORA's argument on Construction Services focuses almost exclusively on the capital spend-related aspect of the Construction Services work group's cost forecasts, [23] claiming that SDG&E did not provide enough support for the capital forecasts from which the O&M forecasts are derived or show how the aforementioned capital forecasts were developed. ORA's Report argues at length that SDG&E's capital forecasts associated with SDG&E's Fire Risk Mitigation (FiRM) program are unsupported,[24] even though ORA's Reports on Electric Distribution Capital

[20] *Id*. atJTW47-48.
[21] *Id*. at JTW-49-50.
[22] *Id*. at JTW-48:20-27.
[23] Ex. ORA-5 (Jaeger) at 36.
[24] *Id*. at 33-39.

largely support SDG&E's FiRM capital requests.[25] ORA and FEA base this claim on data request responses alone, and does not acknowledge that FiRM activities are extensively supported in the testimony and workpapers supporting SDG&E's Application – my direct testimony and workpapers, the direct testimony of John Jenkins (Electric Distribution Capital) and workpapers, and David Geier (Electric Operations Risk Policy).[26] Throughout my direct testimony, I explain how fire risk mitigation creates upward pressure on many O&M cost center categories, including how upward pressure in the Construction Services O&M cost category I support is linked to the FiRM capital projects identified in Mr. Jenkins' testimony. My supporting workpapers provide additional detail regarding these activities. Mr. Jenkins' direct testimony provides extensive support for FiRM capital projects at a high level and in significant detail, in both testimony and supporting workpapers. [27]

Mr. Geier explained how natural conditions outside of SDG&E's control necessitate fire risk management efforts as a top priority in SDG&E's capital fire hardening projects, everyday operational activities, and wind and fire risk emergency response protocol activities:

> *SDG&E continues to address as a top priority the safety and operational risks caused by the extreme Santa Ana wind conditions throughout SDG&E's service territory, given that fire risk is extremely high during wind events, and the consequences of a fire can be catastrophic. SDG&E has implemented fire risk mitigation measures that are unprecedented (in both California and the electric industry) to minimize both the likelihood of fire and any damage caused by fire should an incident occur. Given current severe drought conditions in California[28] and the increasing number of year-round wind events in our service territory, SDG&E has needed to even further increase its fire risk mitigation efforts to adapt to changing field conditions.*[29]

Mr. Geier also identifies the specific importance to fire risk management of SDG&E's Construction Services department, which "houses the Corrective Maintenance Program group, which develops and centrally manages the patrol, inspection and maintenance elements related to

[25] Ex. ORA-6 (Wilson) at 36-37.
[26] Ex. SDG&E-10-R (Jonathan Woldemariam), Ex. SDG&E-09-R (John Jenkins), and Ex. SDG&E-03 (David Geier).
[27] See, for example, Ex, SDG&E-09-R (Jenkins) at JDJ-6-11, JDJ-118-129.
[28] On February 17, 2014, Governor Brown issued a "State of Emergency" due to the ongoing drought; and on February 18, 2014, CPUC Safety Enforcement Division acting director Denise Tyrrell issued a letter directing the utilities to increase inspections in fire threat areas, to re-prioritize corrective action items, and to modify electric system fault protection schemes.
[29] Ex. SDG&E-03 (Geier) at DLG-4:14-22.

the General Order (G.O.) 165 Corrective Maintenance Program (CMP)…[, and] also houses our Fire Coordination and Prevention group."[30]

Thus, in SDG&E's Electric Operations Risk Policy, Capital and O&M testimony, and workpapers – in addition to numerous detailed data request responses – SDG&E has thoroughly explained the purpose, justification and cost components of the FiRM program. SDG&E responded to numerous ORA data requests regarding the FiRM program and references this information in its testimony, including extracts and specific details explaining cost components. In my testimony, I lay the groundwork for the associated O&M costs, as well as producing specific capital project numbers:

> *SDG&E continues to highly prioritize fire and safety risk mitigation. The Company is significantly increasing its capital spending in this area. As capital spending on these projects ramps up, so will the corresponding O&M associated with this work. Construction Services will experience significant increases in O&M expenses primarily related to work completed in association with Fire Risk Mitigation (FiRM) electric distribution capital project numbers 13247 and 14247. As the FiRM capital projects move forward, there will be associated activities that will be charged to O&M accounts. Certain non-capital upfront project activities may be charged to O&M accounts such as data acquisition, records review, LiDAR, 3-dimensional computer modelling, validation of spacing and clearance of wires, and re-creation/validation of old pole loading records. O&M activities anticipated during construction will include costs to transfer existing wire to new poles, re-connecting existing customers' services to a new transformers, and line switching operations; and on an individual basis, upgrading or changing out items such as cross-arms, fuses and other minor components. For additional information regarding the justification and details of the FiRM projects and other capital project work, please refer to the Electric Distribution Capital testimony of John Jenkins*[31].

ORA requested the following in a data request[32]:

> *On WP page 104, SDG&E forecasts an increase of $12.200 million for "O&M associated with capital construction work completed primarily in association with the Fire Risk Mitigation (FiRM) projects." Please refer to question #5 and address the same questions. In addition, please answer the following question:*
> *Is SDG&E's O&M expense forecast directly related to its capital forecast? If yes, please provide the workpapers detailing the link between SDG&E's O&M expenses and capital expenses. Provide all supporting calculations, documentations, explanations.*

[30] *Id*. at DLG-8:29-9:4.
[31] SDG&E-09 (Jenkins).
[32] ORA-SDG&E-DR-002-EJ1, Question 30, please see the Appendix to this rebuttal.

SDG&E responded with the following explanation:

The Fire Risk Mitigation (FiRM) projects have just begun in 2014, so there is no historical data to provide regarding this item. No net increase in FTEs for Construction Services is requested as a result of FiRM.
O&M impact of FiRM activities is based on a percentage of the expected Capital spend for specific grouping of activities within the project.

Projected FiRM Costs	**TY2016 ($000)**
Combo: Wire replacement and selective hardening (2% associated with O&M)	$300
Projects from RIRAT: Hardening, Reconductor, Long Spans (4.5% associated O&M)	$2,300
RIRAT Projects and Pole Loading (4.5% associated O&M plus pole loading O&M cost)	$9,600
TOTAL	**$12,200**

The referenced forecast is directly related to specific activities, as specified in the answer to question #30b.

ORA requested the following additional detail in a data request[33]:

In SDG&E's response to ORA-SDG&E-DR-002-EJ1 Question 30, SDG&E provides projected FiRM costs and states: "O&M impact of FiRM activities is based on a percentage of the expected Capital spend[ing] for specific grouping of activities within the project."

Please provide the exact calculations that were used to develop SDG&E's projected FiRM costs of $0.300 million, $2.400 million, and $9.600 million. Include the exact capital forecasts that were used to develop these O&M expenses, and provide the page number and location that the capital forecasts can be found in the capital testimony. For example, identify the location of the capital forecasts in SDG&E's testimony for "RiRAT Projects and Pole Loading" and show how the identified capital forecasts were used to derive the projected costs of $9.600 million.

SDG&E responded with the following explanation:

As referenced in the response to ORA-SDG&E-002-EJ1 Question 30, the O&M impact of FiRM activities is based on a percentage of the expected Capital spend for specific grouping of activities within the project.

[33] ORA-SDG&E-DR-088-EJ1, please see the Appendix to this rebuttal.

Projected FiRM Costs	TY2016 ($000)
Combo: Wire replacement and selective hardening (2% associated with O&M)	$300
Projects from RIRAT: Hardening, Reconductor, Long Spans (4.5% associated O&M)	$2,300
RIRAT Projects and Pole Loading (4.5% associated O&M plus pole loading O&M cost)	$9,600
TOTAL	**$12,200**

These values are based on the associated O&M expenses in relation to the combined value (directs + indirects) of Capital Budget codes 13247A and 14247A. (Please reference capital workpapers SDG&E-09-CWP/Witness: J. Jenkins pages 756 and 789.)

A portion of the forecasted O&M costs are based on a percentage of the total direct and indirect capital costs for the planned capital work. For 2016, the total O&M impact was based on an initial estimate of $110M total capital spend (direct plus indirects).

Additionally as discussed on page 783 of the reference capital workpapers, Phase 3 of FiRM will address the remaining poles in the Fire Threat Zone (approximately 40,000 poles). For this phase, the distribution facilities will be LiDAR (Light Detection And Ranging) surveyed and PLS-CADD models will be developed for analysis. While LiDAR and PLS-CADD will be used for the early phases of the project, in this case it is being used for analysis and for capital improvement work. The upfront data acquisition and 3-D modeling will be an O&M activity.

The specific O&M calculations are as follows:

Projected FiRM Costs	Capital $ (direct + indirect	% O&M	TY2016 ($000)
Combo: Wire replacement and selective hardening (2% associated with O&M)	$15M	2%	$300
Projects from RIRAT: Hardening, Reconductor, Long Spans (4.5% associated O&M)	$50M	4.5%	$2,300
RIRAT Projects and Pole Loading (4.5% associated O&M plus pole loading O&M cost)	$45M	4.5%	$2,025
LiDAR survey and PLS-CADD computer modelling and analysis (O&M)	N/A	Fixed estimate	$7,575
TOTAL			**$12,200**

In addition to these detailed written responses, SDG&E also communicated with ORA's witness by telephone on March 27, 2015, allowing a free flowing conversation and the

opportunity to ask any questions necessary to obtain understanding and clarification of SDG&E's request. This call resulted in a supplemental data request[34] in which ORA requested the following:

> *Please provide a detailed breakdown of SDG&E's forecast of $7.575 million for LiDAR survey and PLS-CADD computer modelling and analysis(O&M) projected costs and show how each component of the forecast was derived.*

As a result, SDG&E provided the following:

> *SDG&E estimates that during 2016 it will complete Light Detection and Ranging (LiDAR) survey and PLS-CADD computer modeling and analysis for 30,000 of the remaining poles in the Fire Threat Zone (FTZ). The remaining poles will be completed in future years.*
>
> *In order to analyze these poles and associated conductors, accurate 3-dimensional data needs to be gathered. This data is initially acquired through ground or aerial based LiDAR surveys which are processed using computer software to generate a 3-dimensional model for which engineering analysis can be readily performed. Much of this modeling and analysis is performed in PLS-CADD software or using other tools such as O-Calc software.*
>
> *This overall process involves field work to prepare for the LiDAR surveys, the surveys themselves, model generation and engineering analysis. SDG&E anticipates that the results will show that a portion of the existing lines are acceptable and will need no or minor upgrades, while other portions will require capital upgrade work. The upfront data acquisition and 3-dimensional modeling and analysis will be an O&M activity.*
>
> *SDG&E's estimate for this activity was developed based on a "per pole" equivalent unit cost for the primary activities associated with this effort.*

2016 Incremental O&M LiDAR & Pole Loading Calculations					
O&M Cost Breakdown for line/structures in FTZ (30,000 poles)					
Est. Total O&M Cost					
Estimated Cost / Pole			Units (poles)	subtotal	Logic
Est. LIDAR / Survey	$	32.50	30,000	$ 975,000.00	based on $715 / Mile est assuming 22 poles / mile, wire included
Est. Fielding	$	25.00	30,000	$ 750,000.00	based on approx 20 mins / pole @ $75/Hr. bill rate
Est. LIDAR As Built Mapping	$	25.00	30,000	$ 750,000.00	based on approx 20 mins / pole @ $75/Hr. bill rate
Est. engrg analysis/load calcs; PLS-CADD, O-Calc	$	170.00	30,000	$ 5,100,000.00	based on approx 2 Hrs. / pole @ $85/Hr. bill rate
Est. Total Cost / Pole	$	252.50		$ 7,575,000.00	

Given all of the detailed information provided by SDG&E in its direct case and in follow-up data request responses, ORA's claim that SDG&E's data request responses provide "inaccurate or incomplete information"[35] is misguided. For example, ORA claims that SDG&E

[34] ORA- SDG&E-DR-088-EJ1 Supplemental, please see the Appendix to this rebuttal.
[35] *Id*. at 36:13-15.

fails to show how it breaks down its total FiRM capital forecast into specific activities and corresponding capital forecasts of $15 million, $50 million, and $45 million, and that SDG&E does not provide a reference to the capital testimony where the exact forecasts can be found,[36] yet ORA's report references the exact capital budget code descriptions and pages supporting these forecasts – Capital Budget codes 13247A and 14247A, found on pages 756 and 789 of John Jenkins' revised capital workpapers.[37] SDG&E noted that the $15M, $50M and $45M components total to $110M, which corresponds to the aggregate total of the requested FiRM capital spend (directs plus indirects), and the related percentage TY 2016 O&M forecasts totaling $12.2M.[38] SDG&E also provided a detailed explanation and breakdown of the costs and activities making up the $12.2M request including detail of unit pricing, quantities and logic used in the calculations. [39] The data request responses liberally quoted in ORA's report reveal significantly more detailed information than ORA suggests.

In another example, ORA claims that "SDG&E provided no work papers to support the substantial amount of money associated with the O&M request for LiDAR survey and PLS-CADD computer modelling and analysis (O&M),"[40] but then includes significant portions of SDG&E's data request responses that include detailed narrative responses and tables of the cost breakdown explaining the calculation, including cost per pole, number of poles in the fire threat zone, and cost estimates based on poles per mile and/or time estimates, with hourly billing rates.[41] All of this information directly supports SDG&E's calculations and appears to be at the same level of detail ORA and FEA claim to not have.

ORA and FEA also claim that there is a lack of historical spend in FiRM to justify the expenses. As stated in the rebuttal testimony of Mr. John Jenkins for Electric Distribution Capital, the FiRM program is a new focused effort that began in 2014, which will ramp up to its

[36] *Id*. at 34-35.
[37] *Id*. at 35:26-27, quoting SDG&E response to data request ORA-SDG&E-088-EJ1, Q1.
[38] *Id*. at 35:29-32, quoting SDG&E response to data request ORA-SDG&E-088-EJ1, Q1, please see the Appendix to this rebuttal.
[39] *Id*. at 36:11-12, 37-38, quoting SDG&E responses to data requests ORA-SDG&E-088-EJ1, Q1 and Supplemental , please see the Appendix to this rebuttal.
[40] *Id*. at 37:16-18.
[41] *Id*. at 37-38, quoting SDG&E response to data requests ORA-SDG&E-088-EJ1, Q1 Supplemental, please see the Appendix to this rebuttal.

full level in the upcoming years.[42,43] Although historical data can be useful in estimating certain future expenses, for a relatively new but very important program such as FiRM, heavy reliance on historical data is misguided and should not be cause to underfund the program. Funding should be based on the merit of this program going forward, not on historical spend.

The need for this funding is safety-driven and will allow SDG&E to improve safety in the highest fire risk areas, the FTZ. Although ORA and FEA acknowledge the importance of the FiRM program, it recommends that SDG&E's requesting O&M funding for the program be cut in half, from $12.2M to $6.1M, giving no detailed explanation or justification for its rationale of selecting that value.[44,45] Choosing a seemingly arbitrary number to fund FiRM is not in the interest of ratepayers and the communities to whom SDG&E provides safe and reliable service. SDG&E has sufficiently demonstrated the need for this critical safety-focused program and the details behind the funding necessary for this program to be successful. Therefore, ORA and FEA's apparently arbitrary recommendation of a 50% reduction should be rejected and instead, the full request of $12.2M for FiRM related O&M should be granted.

Finally, ORA's claim that costs associated with SDG&E's air crane contract "are already embedded in the 5 year historical average" is an incorrect presumption.[46] SDG&E's testimony and work papers explain and justify that these are incremental expenses for which funding is necessary.[47] Fire risk is now a year-round issue and is continuing to increase with the drought that California has been experiencing. A prime example of this elevated year round risk is the wildfires that SDG&E experienced in its service territory in May 2014. ORA offers no plausible rationale for its recommendation not to fund these fire-related costs. For these reasons, ORA's position should be disregarded and full funding should be granted.

[42] FEA (Smith) 71:6-9.
[43] Ex. SDG&E-209 (Jenkins) at 4.
[44] FEA (Smith) 73:1-4.
[45] Ex. ORA-5 (Jaeger) at 39.
[46] *Id*. at 39:14-17.
[47] Ex. SDG&E-10-R (Woldemariam) at JTW-50.

B. ELECTRIC REGIONAL OPERATIONS (ERO)

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**31,749**	**35,449**	**3,700**
ORA	**31,749**	**33,055**	**1,306**
FEA	**31,749**	**31,157**	**-592**

In this activity an errata item was discovered and is addressed in the "Correction of Errata" section near the end of this rebuttal. As a result of the errata, SDG&E is reducing the test year 2016 forecast for this activity by $1.410 million.

1. ORA

ORA also seeks to reduce SDG&E's fire, wind, safety, and reliability risk management efforts by recommending to underfund the Electric Regional Operations (ERO) organization by $3.804M.[48] ERO includes all electric distribution crews across SDG&E's entire electric distribution system, including electric linemen, apprentices, line assistants, dispatchers, office support personnel, supervisors and management.[49] ERO crews (1) inspect and maintain the electric distribution system in compliance with CPUC General Orders (G.O.) 95, 128, 165, and SDG&E's standards; (2) restore service due to outages; (3) repair service problems; and (4) address other customer issues. ERO compliance training is extensive, and covers ever-evolving regulatory requirements (CPUC, OSHA, State of California) on distribution standards, fleet, safety, and environmental issues, as well as a review of evolving standards and practices. [50]

My direct testimony discusses the cost drivers leading to ERO's upward incremental cost changes: fire risk management, safety and regulatory compliance, workforce development, and public and employee safety, system maintenance, and reliability.[51] My direct testimony explains the extreme Santa Ana winds[52] and severe drought conditions in SDG&E's service territory,[53] which increases the risk of fire as well as the potential destruction that could be caused by a fire. Among activities that have been increasing, ERO implements red flag warning operations during high fire risk weather conditions, elevated wind condition operational procedures and protocol,

[48] Ex. ORA-5 (Jaeger) at 4.
[49] Ex. SDG&E-10-R (Woldemariam) at JTW-8-9.
[50] *Id.* at JTW-9.
[51] *Id*. at JTW-9-15.
[52] *Id*. at JTW-3.
[53] *Id*. at JTW-54.

and conducts safety patrols for restoration of outages.[54] During Red Flag Warnings, SDG&E implements a crew mobilization plan to increase standby staffing such as observers, contracted fire response teams, helicopter surveillance, Electric Troubleshooters and electric construction crews adjacent to identified risks within the service territory, on stand-by, around the clock as appropriate. These fire risk management efforts create upward cost pressures to the ERO organization, but also ultimately save ERO costs and potentially devastating costs to the community. A series of significant fires that took place in May 2014, including in some of the urban coastal communities,[55] damage and potential costs could have been catastrophic. The Poinsettia fire resulted in 600 acres burned, 27 dwellings, 3 commercial buildings, a fatality and $22.5 Million in damages. The Cocos fire resulted in 1,995 acres burned, 40 dwellings and $5.7 Million in damages. Fires on Camp Pendleton during this time also resulted in over 20,000 acres burned on the base. Although, none of these fires were caused by utility equipment, ERO involvement was extensive.

ORA's main argument for cutting ERO's TY 2016 forecasted costs is based on errors that SDG&E has identified and removed from its request.[56] These errors warrant correction, not wholesale disallowances. Contrary to ORA's claims, SDG&E has provided support for its incremental cost increases through a supplemental worksheet detailing the breakdown of costs for ERO in Workpaper 1ED011.000 – Electric Regional Operations. The forecasted costs were derived based on the breakdown of the cost of each incremental element, to demonstrate no double counting of work activities.

ORA used 2014 actuals to develop its forecast. For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, in order to provide for an appropriate amount of funding, given the business requirements identified for Test Year 2016. The intent of the selected forecast methodology was not to pick what was appropriate for 2014, but for 2016. SDG&E recommends its forecast as the preferred method.

2014 had an unusually low spend when compared to previous years' spend. The lower than anticipated spend in 2014 can mainly be attributed to the early and traditionally unseasonal

[54] *Id*. at 11-12.
[55] *Id*. at 3-4.
[56] Ex. ORA-5 (Jaeger) at 5-7.

red flag warnings experienced in May 2014 and an expectation of a "normal" number of red flag warnings during traditional fire season. SDG&E's service territory experienced a lower than average number of red flag warnings during the traditional 2014 fire season and, as a result, experienced lower than anticipated spend. As the drought in California continues, so will associated costs with additional fire risk. It cannot simply be assumed that since drought did not cause additional red flag warnings and associated expenses for 2014, there won't be upward pressures due to additional fire risk in 2015 and 2016. SDG&E's forecast is more appropriate as it anticipates a drier, more fire prone service territory for 2015 and 2016, along with the associated additional expenses.

2. FEA

FEA recommends a reduction of $5.702 million for this activity.[57] FEA justifies this decrease due to ERO's consistently declining non-labor expenses for each year from 2012 to 2014, along with labor cost decreasing each year from 2009 through 2014.[58] FEA recommends the use of 2014 labor cost, coupled with the use of a 3 year average of the most recent years of non-labor expense as a forecasting methodology.[59] As mentioned in the rebuttal to ORA's testimony above, the lower than anticipated spend in 2014 can mainly be attributed to the early and traditionally unseasonal red flag warnings experienced in May 2014 and an expectation of a "normal" number of red flag warnings during traditional fire season. SDG&E's service territory experienced a lower than average number of red flag warnings during the traditional 2014 fire season and, as a result, experienced lower than anticipated spend. As the drought in California continues, so will associated costs with additional fire risk. It cannot simply be assumed that since drought did not cause additional red flag warnings and associated expenses for 2014, there won't be upward pressures due to additional fire risk in 2015 and 2016. SDG&E's forecast is more appropriate as it anticipates a drier, more fire prone service territory for 2015 and 2016, and the associated additional expenses.

[57] FEA (Smith) 61:2-4.
[58] *Id*. at 57:5-6.
[59] *Id*. at 60:9-11.

C. TROUBLESHOOTING

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**7,525**	**7,965**	**440**
ORA	**7,525**	**7,650**	**125**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Troubleshooting work group. ORA states that SDG&E provides no workload analyses to help support the need for the Electric Troubleshooter positions.[60] SDG&E states the cost drivers provided in the testimony[61]: Fire risk mitigation, system growth and workforce development. These individual cost drivers result in upward cost pressures that are quantifiable and identified in the testimony and workpapers.

ORA used 2014 actuals to develop its forecast. For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, in order to provide for an appropriate amount of funding, given the business requirements identified for Test Year 2016. The intent of the selected forecast methodology was to represent the appropriate funding for 2016, not for 2014. SDG&E believes that reliance on historic cost averages neglects the individual merits of important new and necessary programs. SDG&E recommends that the Commission disregard recommendations based solely on those methods, and instead adopt SDG&E's forecasts as the preferred method.

2014 had an unusually low spend when compared to previous years' spend. As the drought in California continues, so will associated costs with additional fire risk. It cannot simply be assumed that since drought did not cause additional red flag warnings and associated expenses for 2014, there won't be upward pressures due to additional fire risk in 2015 and 2016. SDG&E's forecast is more appropriate as it anticipates a drier, more fire prone service territory for 2015 and 2016, and the associated additional expenses.

2. CUE

CUE recommends that SDG&E be required to hire new employees due to CUE's incorrect perception of SDG&E's poor electric reliability. SDG&E disagrees with CUE's

[60] Ex. ORA-5 (Jaeger) at 9-10.
[61] Ex. SDG&E-10 (Woldemariam) at JTW-17-18.

recommendation for a requirement to hire new employees and their assertion in their testimony[62] that:

> *SDG&E has been cutting the number of employees it has to respond to outages at the same time as the number of customers is growing. Not surprisingly, SDG&E's reliability has gotten worse. Future likely retirements threaten to make the situation even worse.*

SDG&E hires employees as needs are identified throughout the year. SDG&E has a highly recognized regional and national electric reliability record as discussed in my testimony[63]and as is further discussed in the written testimony of Mr. Mason Withers.[64] Although electric reliability performance has declined in the last year, it is still in the top tier of utility performance.[65] This record hardly suggests a dramatic downward slide in SDG&E's reliability performance.

CUE recommends that SDG&E should be required to hire new employees from the outside and/or promote from the inside as appropriate, to deal with the disproportionate drop in the planned number of Troubleshooters. SDG&E acknowledges CUE's recommendation but respectfully disagrees with the approach that is recommended. CUE states in its testimony[66] that SDG&E ignores the changing mix of employees and its implications for reliability. Troubleshooters are among the most experienced employees, generally with more experience than lineman. They are also the group SDG&E expects to be hit hardest by retirements. SDG&E projects that almost 30% of the Troubleshooters available to respond to outages as of the end of 2014 will be gone by the beginning of 2016 (11 out of 39), with 28 left for the entire company. However, all of the planned additions will be linemen. Absent any efforts to promote linemen to Troubleshooters, or to hire new Troubleshooters from outside the company, there will be a dramatic drop in the number of Troubleshooters during the next GRC.

SDG&E trains all of its Troubleshooters in-house. The Troubleshooter position is a natural progression for opportunity within SDG&E's lineman ranks. Relief Troubleshooters are experienced linemen that work on the line side (officially counted as linemen) and receive additional training on how to troubleshoot outages and deal with "trouble" situations. Relief Troubleshooters fill shifts as Troubleshooters when there are vacant Troubleshooter shifts or

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[62] CUE (Marcus) at 51:6-9.
[63] Ex. SDG&E-10-R at JTW-4:23 – JTW-5:1.
[64] Ex. SDG&E-240 (Withers).
[65] Id.
[66] CUE (Marcus) at55-56.

during outages, as well as one two-day training shift per week. Relief Troubleshooters are also the pool for the permanent Troubleshooters, which are usually backfilled as permanent Troubleshooters retire or leave the company. CUE's assertion that SDG&E is only hiring linemen is misguided. The linemen that SDG&E are hiring are backfilling lineman positions that became vacant due to some linemen becoming relief Troubleshooters, and those relief Troubleshooters becoming permanent Troubleshooters. The backfill of linemen inherently means that SDG&E is backfilling the vacant Troubleshooter positions that CUE is arguing for.

D. SKILLS AND COMPLIANCE TRAINING

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**3,660**	**5,087**	**1,427**
ORA	**3,660**	**3,660**	**0**

1. ORA

My direct testimony on Skills and Compliance Training provides elaborate detail on SDG&E's need to train and develop its workforce, update and replace aging training infrastructure and equipment, and modernize its training programs to include the latest technological, regulatory, and industry developments.[67] ORA bases its recommendation to lower SDG&E's TY 2016 forecast in this area by $1.427, allowing only SDG&E's 2013 recorded expense of $3.660 million. ORA claims that SDG&E fails to show how forecasted work is different from on-going work activities that are already embedded in the 2013 base year, and mistakenly characterizes the Skills Training and Compliance request as embedded work that is part of routine maintenance of training programs.[68] ORA's argument does not recognize the explicit detail in my direct testimony, which describes SDG&E's funding request as incremental, because it is for the purpose of completely re-designing and re-building training programs.[69]

The Skills and Compliance Training organization is responsible for the development and training of the ERO workforce, which consists of electric field personnel (electric linemen, apprentices, and line assistants), non-electrical support personnel and first line supervision. Skills and Compliance Training uses subject matter experts (SMEs) borrowed from the field to comprise most of the instructor workforce, to promote expert training in SDG&E practices, new

[67] Ex. SDG&E-10-R (Woldemariam) at JTW-19-26.
[68] Ex. ORA-5 (Jaeger) at 10-13.
[69] Ex. SDG&E-10-R (Woldemariam) at 22-26.

technology, current operating procedures and construction standards, and up-to-date compliance with G.O. 95, 128, and 165. The incremental need for additional equipment and training resources are supported in detail in my direct testimony and will not be repeated here, but to cite a few examples, SDG&E requires additional apprentice linemen and Electric Troubleshooters,[70] a new ZONAR tool and SMART board,[71] approximately 25 new structured training programs for ERO job classifications,[72] additional vehicles,[73] and additional personnel required for safety, regulatory, and environmental compliance.[74]

ORA also claims that SDG&E's incremental request is not supported by historical data, but current funding levels only support the cost to deliver (instruct) current training programs and make minimal updates. My direct testimony supports specific needs to update and replace training equipment and to implement workforce development programs that necessitate SDG&E's incremental funding request over historical expenditures. Moreover, SDG&E has demonstrated the need for workforce development due to factors such as rapid technological developments, new regulatory and industry requirements, and an aging workforce. SDG&E's workforce is aging and a number of employees are expected to retire in the coming years. Please see the following question posed by CUE in a data request.[75]

> *For each category of worker identified in response to part (a) of the previous question, please provide:*
>
> *b. The number expected to be eligible for retirement during 2016.*

SDG&E provides the following response:

> *Based on the minimum age of 55 and 5 years of service, 77 employees will be eligible to retire. However, SDG&E's average retirement age is 62.*

[70] *Id*. at 22-23.
[71] *Id*. at 23-24.
[72] *Id*. at 24-25.
[73] *Id*. at 25-26.
[74] *Id*. at 26.
[75] CUE-DR-02, Question 31.b, please see the Appendix to this rebuttal

RETIREMENT ELIGIBLE 2016*	
JOB TITLE	TOTAL
Fault Finding Specialist	5
Lineman	20
Troubleshooter	23
Working Foreman	29
Grand Total	**77**

*Age 55 + 5 Years of Service

This data exemplifies the need for additional resources and equipment dedicated to training the new personnel that will be filling these positions left vacant by possible retirements. These factors require that SDG&E will need to hire, train and develop new employees in the near future above and beyond what has been required in the past.

ORA claims that SDG&E failed to include the reduction of non-labor expense of $0.235M for purchased contract labor brought in-house, and has effectively double-counted these costs.[76] This claim is incorrect. SDG&E has credited the $0.235M amount in its Supplemental Workpapers.[77]

Additionally, ORA erroneously claims that SDG&E has never spent the amount being proposed in this GRC. The funding SDG&E requests is for a three-year project that is incremental to the baseline work that is currently carried out. The incremental funds are primarily for increased labor, not currently on staff, during the project period. Resources with the proper skills and experience in the specialized field of Instructional Design are required to complete the project.

E. PROJECT MANAGEMENT

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**482**	**1,368**	**886**
ORA	**482**	**528**	**46**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Project Management work group. ORA states that SDG&E requested funding for workforce attrition, formal classroom

[76] ORA-5 (Jaeger), pp. 12-13.
[77] SDG&E-10-WP, P96 of P172.

training for new planners and supplemental support staff in the 2012 GRC application.[78] SDG&E didn't receive a decision for the 2012 GRC until 2013, which made it difficult to ramp up training. SDG&E was also in the process of transitioning to new work programs (Graphical Work Design and Construction Planning and Design) and did not believe it would be efficient to train new planners on both the new and old work programs. This highly technical 23-month program involves training on detailed electric distribution system design, and is difficult enough without the introduction of new work programs.

ORA used 2014 actuals to develop its forecast.[79] For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. 2014 had an unusually low spend when compared to previous years' spend. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, given the business requirements identified for Test Year 2016. SDG&E believes that reliance on historic cost averages neglects the individual merits of important new and necessary programs. SDG&E recommends that the Commission disregard recommendations based solely on those methods, and instead adopt SDG&E's forecasts as the preferred method.

F. SERVICE ORDER TEAM

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**846**	**883**	**37**
ORA	**846**	**685**	**161**

1. ORA

ORA used 2014 actuals to develop its forecast. For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. 2014 had an unusually low spend when compared to previous years' spend. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, given the business requirements identified for Test Year 2016. Had ORA used 2013 as their base year, its forecast would be $0.883 million, which is consistent with SDG&E's forecast. SDG&E believes that reliance on historic cost averages neglects the individual merits of important new and

[78] Ex. ORA (Jaeger) at 14-16.
[79] *Id*. at 17.

necessary programs. SDG&E recommends that the Commission disregard recommendations based solely on those methods, and instead adopt SDG&E's forecasts as the preferred method.

G. SUBSTATION CONSTRUCTION AND MAINTENANCE

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**5,896**	**6,710**	**814**
ORA	**5,896**	**5,622**	**-274**

In this activity an errata item was discovered and is addressed in the "Correction of Errata" section near the end of this rebuttal. As a result of the errata, SDG&E is reducing the test year 2016 forecast for this activity by $.202 million.

1. ORA

The Substation Construction and Maintenance section oversees, inspects, and maintains 140 distribution substations on the SDG&E system.[80] This group manages compliance with SDG&E maintenance programs, CPUC and other regulatory programs, and health and safety programs critical to the safe and efficient installation, maintenance and reliability of all distribution substation facilities. ORA claims that SDG&E has not provided sufficient evidence to justify an increase of $1.564 million over 2014 recorded expenses,[81] but my testimony describes the upward cost pressures experienced in this area due to new regulatory and environmental compliance requirements, fire risk management efforts, and required new training.

During elevated fire conditions and Red Flag Warnings, substation electricians are now positioned around the clock in areas determined to have high fire danger (usually at a substation) to expedite response to areas of the service territory that may experience interruption of service or other problems caused by extreme weather conditions, in rotating shifts. SDG&E can continue to expect increased fire risk management activities due to the ongoing drought and frequent Santa Ana wind conditions in San Diego County.

Moreover, with the implementation of G.O. 174, the CPUC has mandated new requirements for mandatory substation inspections, annual documentation of the substation inspection program, and annual reporting summarizing completed and past inspections with the

[80] *Id*. at 34-37.
[81] Ex. ORA-5 (Jaeger) at 20-24.

CPUC. Compliance with G.O. 174 requires an increase in support staff. Additional substation maintenance is also expected to occur as the inspection program continues to evolve and corrective maintenance follow-up activity increases, in order to comply with program requirements.

ORA also claims that because SDG&E does not isolate the work or associated costs embedded in the base year, ORA is unclear how SDG&E can accurately forecast an incremental increase in funding for these activities.[82] SDG&E is able to accurately forecast an incremental increase due to its awareness of required costs per employee in order to fulfill the additional regulatory requirements and an expected high level of safety. SDG&E's request represents the O&M costs that pertain to field activities associated with distribution level equipment and facilities.

ORA uses a 2-year average as its forecast, which is not indicative of the increased workload SDG&E is foreseeing for the Test Year 2016 for the Substation Construction and Maintenance work group.

H. ELECTRIC DISTRIBUTION OPERATIONS

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**10,938**	**15,315**	**4,377**
ORA	**10,938**	**11,377**	**439**
FEA	**10,938**	**11,377**	**439**

1. ORA

The Electric Distribution Operations (EDO) Control Center is responsible for the safe, efficient and reliable delivery of power in SDG&E's service territory, including operational control over planned and unplanned work on the system and emergency operations related to service restoration, Red Flag Warnings, storm response and G.O. 166 requirements.[83] My testimony describes how grid modernization, steady system growth, replacement of aging infrastructure, changing regulatory requirements, and technological advancements has increased the EDO workload. These changes have led to a need for a newly skilled workforce, requiring developmental and refresher training, including training on technology such as the Electric Distribution Operations Systems Services (EDOSS), Supervisory Control and Data Acquisition

[82] *Id*. at 23-24.
[83] Ex. SDG&E-10-R (Woldemariam) at 40-43.

(SCADA), Outage Management System (OMS), and Advanced Distribution Management System and newly planned Back-up Control Center equipment. Additionally, EDO has experienced turnover due to attrition, department transfers and retirements, leading to a need to for SDG&E to invest significantly in the hiring, training and development of its EDO workforce.[84] The Apprentice Distribution System Operator training program is a 2-year program. The first year involves electrical theory, electric system overview, switch plan preparation and training on real-time response to system stress and emergencies. The second year involves on-the-job training with rotating coaches. The apprentices are provided with a binder of activities, pre-requisites and evaluations that must be fulfilled before the close of the program. Apprentices are only successful if they pass all of the requisites and final exam.

SDG&E also plans to hire an additional full-time meteorologist to help with necessary round-the clock fire risk management workload, particularly during Red Flag and Santa Ana wind events.

ORA takes issue with the Test Year O&M forecast for the Electric Distribution Operations work group. ORA claims that for three years, SDG&E has not prioritized filling these vacancies. There is no indication that workload is changing and that SDG&E will fill the ten positions left vacant since 2011. Due to vacancies within EDO, SDG&E has been able to absorb additional fire risk mitigation activities, weather stations, and the GIS Business Solutions team. SDG&E is now working to fill those vacancies due to growing work load and attrition within EDO.

ORA recommends using a 3-year average of historical costs (2012-2014) for Electric Distribution Operations based on the following excerpt from ORA's testimony:

> *SDG&E fails to provide any correlation between forecast costs drivers and the forecast incremental increase of $4.377 million, nor did SDG&E conduct any workload analyses that might justify such a large funding request.* [85]

ORA requested the following information in a data request:

> *Historical costs for Electric Distributions Operations have fluctuated consistently for the past five years, with a 3-year average of $10.300 million and a 5-year average of $10.128 million. In the current GRC, SDG&E is forecasting $15.315 million for its test year. Please explain why SDG&E chose to use a 3-year linear forecast over alternative methodologies, including a 5-year linear forecast.* [86]

[84] *Id*. at 40-43.
[85] ORA-5 (Jaeger), pp. 26, lines9-11.
[86] ORA-SDG&E-DR-002-EJ1, Question 21, please see the Appendix to this rebuttal.

SDG&E responded with the following information in the same data request:

The 3-year linear forecast was chosen due to the creation of Business Solutions and Training Team along with filling vacancies within the control center, both done in 2013. SDG&E started an Apprentice Distribution System Operators (ADSO) class that is a 2-year training program. The 3-year linear forecast is the most representative of future operations. The other forecast methodologies do not account for these recent developments and therefore understate the level of support required to maintain them.[87]

Additionally, ORA requested the following in a data request for further clarification:

In response to DR-002-EJ1 Q24c, SDG&E states: "There were ten vacancies for each of the years of 2011 through 2013. The ten vacancies are all related to the Distribution System Operator (DSO) position." Why has SDG&E waited until now to fill 10 positions that were vacant from 2011 through 2013? What analyses did SDG&E conduct that support SDG&E's need for the 10 employees?[88]

SDG&E provided the following response with the same data request:

In 2011, the operations training supervisor resigned and therefore new DSO training was not conducted. SDG&E attempted to re-assign internal resources to provide the DSO training but was not successful. As a result, SDG&E bid the position externally and made several attempts at hiring personnel with proper qualifications until it was successful in hiring a training supervisor.

The analysis for the additional 10 DSOs is to support SDG&E's need to provide 24/7 coverage for three 8 hour shifts, throughout the year. As well as develop, manage, verify and execute planned and forced outages that occur daily. Along with providing skill, compliance and system training, these positions will provide coverage for vacations and sick leave.[89]

SDG&E provided ORA with the cost drivers for why it needs incremental funding; the additional ten DSOs required for SDG&E to appropriately staff its Electric Distribution Operations control center. It took SDG&E over two years to find a replacement operations training supervisor due to the specialized experience required. This delayed the training of any additional apprentice distribution operators since there was no trainer. In March, 2013, SDG&E started an ADSO class with nine candidates and this class lasted through May, 2015. Only one candidate graduated to become a journeyman distribution system operator. In February, 2015, SDG&E started a new course with nine DSO candidates. These candidates are experienced operators from other utilities that understand the demands of this difficult job. As of May, 2015, all nine candidates are still in training. Attrition has also impacted the need for ten DSOs.

[87] ORA-SDG&E-DR-002-EJ1, Response to Question 21, please see the Appendix to this rebuttal.
[88] ORA-SDG&E-DR-074-EJ1, Question 17, please see the Appendix to this rebuttal.
[89] ORA-SDG&E-DR-074-EJ1, Response to Question 17, please see the Appendix to this rebuttal.

Despite adding one DSO from the ADSO class, EDO had two experienced DSOs transfer out of the group in 2014. The reality of attrition and difficulty with retaining DSOs for this demanding job really emphasizes the need to keep a continuous class going in order to work towards the deficit of ten DSOs. These are real incremental costs that are needed in order to safely and appropriately manage the electric distribution system.

ORA used 2014 actuals to develop its forecast. For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. 2014 had an unusually low spend when compared to previous years' spend. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, given the business requirements identified for Test Year 2016. SDG&E believes that reliance on historic cost averages neglects the individual merits of important new and necessary programs. SDG&E recommends that the Commission disregard recommendations based solely on those methods, and instead adopt SDG&E's forecasts as the preferred method. By comparison, had ORA used a 3-year linear forecast methodology utilizing 2014 actuals, this would result in a 2016 forecast of $11.8 million compared to ORA's forecast of $11.4 million, using a 3-year average and 2014 actuals.

2. FEA

FEA recommends a reduction of $3.938 million for this activity. FEA justifies this decrease due to the up and down fluctuations of EDO expenses each year since 2009, with the years 2012 through 2014 remaining fairly consistent. The fluctuations were a result of vacancies, as explained in the rebuttal to ORA above. SDG&E is now working to fill those vacancies due to growing work load and attrition within EDO.

FEA also takes issue with SDG&E's use of a 3-year linear forecast. FEA's rebuttal testimony quotes material in SDG&E's data request response to FEA-DR-02-Q44 out of context, and FEA's testimony does not repeat their original question.[90] Below is the original question from FEA's data request:

[90] FEA (Smith) at 63.

Q44. Electric Distribution O&M Expense. Refer to Exhibit SDG&E-10-R, pages JTW-40 and 41. a) Provide SDG&E's definition of linear forecast. b) Provide an explanation supporting SDG&E's use of a linear forecast as opposed to a non-linear forecast to project the 2016 TY distribution operations expense. Provide copies of all workpapers used, including output of other forecast methods to project this expense.[91]

The response FEA quotes, which SDG&E provided in the data request response, is appropriate and responsive to the question that was asked. If FEA had asked a different question, such as "Why did SDG&E choose to forecast Distribution Operations Expense using a linear forecast?" SDG&E would have provided a different answer. SDG&E provided the following response when ORA asked for an explanation of why the 3-year linear forecast methodology was chosen:

The 3-year linear forecast was chosen due to the creation of Business Solutions and Training Team along with filling vacancies within the control center, both done in 2013. SDG&E started an Apprentice Distribution System Operators (ADSO) class that is a 2-year training program. The 3-year linear forecast is the most representative of future operations. The other forecast methodologies do not account for these recent developments and therefore understate the level of support required to maintain them.[92]

As with ORA, FEA also recommends the use of a 3-year non-linear average, using the most recent three years.[93] If FEA were to use a 3-year linear forecast methodology utilizing 2014 actuals, this would result in a 2016 forecast of $11.8 million compared to FEA's forecast of $11.4 million, using a 3-year average. SDG&E continues to believe that the use of a linear forecast is appropriate for EDO expenses.

I. DISTRIBUTION OPERATIONS/ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM STANDARDS (EGISS)

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**2,091**	**2,093**	**2**
ORA	**2,091**	**1,996**	**95**

In this activity an errata item was discovered and is addressed in the "Correction of Errata" section near the end of this rebuttal. As a result of the errata, SDG&E is reducing the test year 2016 forecast for this activity by $.652 million.

[91] FEA-DR-02-Q44.
[92] ORA-SDG&E-DR-002-EJ1, Question 21 please see the Appendix to this rebuttal.
[93] FEA (Smith) at , pp. 65.

1. ORA

ORA takes issue with the Test Year O&M forecast for the Distribution Operations/EGISS work group.[94] ORA uses 2014 actuals to develop its forecast. For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. 2014 had an unusually low spend when compared to previous years' spend. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, given the business requirements identified for Test Year 2016. SDG&E recommends its forecast as the preferred method.

J. KEARNY OPERATIONS SERVICES

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**1,838**	**2,239**	**401**
ORA	**1,838**	**1,736**	**-102**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Kearny Operations Services work group.[95] ORA proposes a three year average forecasting method as opposed to a base year forecasting method as SDG&E filed. The three year average forecast does not accurately reflect the state of the Kearny Operations Services group for 2014. This forecast does not reflect the impact of the upward pressures submitted in testimony during the transitional years (2014/2015), in order to get to an appropriate funding level that is most representative of the organization for the Test Year 2016. In testimony, ORA states:

> *"SDG&E overstated its 2014 forecast and fails to show how the transfer of employees into the Kearny Operations Services group has had an impact on expense levels."* [96]

ORA requested the following in a data request:

> *In response to ORA-SDG&E-DR-002-EJ1 Q.26, SDG&E states: "SDG&E's request of $261k represents the transfer of employees into the Kearny Operations Services group during the period of 2013 and 2014. It also reflects a shift in charging allocations from Refundable to O&M due to that transfer." Please show the transfer of expenses from Refundable (transmission) to O&M (distribution). Show that embedded costs for transmission were removed from their previous category or account for SDG&E's TY forecast.*

[94] Ex. ORA (Jaeger) at 30-31.
[95] *Id*. at 31-32.
[96] *Id*. at 32.

SDG&E provided the following response:

In the preparation to forecast SDG&E's expenses for GRC purposes, FERC jurisdiction electric transmission costs are excluded from the historical figures used as the basis for test-year forecasting, they do not originate as distribution expenses which require a transfer. Although SDG&E is not requesting funding for FERC-jurisdiction costs in this GRC, the amount excluded is $261K. There are no recorded expenses to be transferred, rather the expenses are simply booked to the appropriate new accounts once the 'employee transfer' is made.[97]

The preceding data request response pinpoints how the transfer of employees into the Kearny Operations Services group has had an impact on expense levels, just as ORA requested.

K. VEGETATION MANAGEMENT – TREE TRIMMING

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**23,104**	**24,559**	**1,455**
ORA	**23,104**	**23,858**	**754**
FEA	**23,104**	**23,858**	**754**

1. ORA, FEA, and UCAN

ORA, FEA, and UCAN takes issue with the Test Year O&M forecast for Vegetation Management – Tree Trimming work group.[98] Each parties proposes that instead of a two-way balancing account, the continued use of a one-way balancing account, which will protect ratepayers from cost variability and encourage cost efficiency by the utility. SDG&E is concerned with the cost variability related to the tree trimming activities associated with the ongoing drought in California. My testimony speaks to this:

"*On February 17th 2014, Governor Brown issued a "State of Emergency" due to the ongoing drought. Subsequent to that, on February 18th 2014, CPUC Safety Enforcement Division acting director Denise Tyrrell issued a letter to SDG&E regarding this matter. The letter directs the utilities to increase inspections in fire threat areas, re-prioritize corrective action items, and modify electric system fault protection schemes. Considering this letter as it relates to vegetation management, SDG&E will monitor the tree mortality resulting from the drought, assess whether any additional concerns arise beyond what is planned and respond as necessary. SDG&E's proposed two-way balancing account treatment will help to address the significant additional vegetation management costs that may be necessary to protect the public and the system from drought-related risks. These costs are difficult to accurately predict, in part due to the unknown severity and duration of the drought in future years and the potential associated*

[97] ORA-SDG&E-DR-074-EJ1, Question 19, please see the Appendix to this rebuttal.
[98] FEA (Smith) at 73-76; Ex. ORA-5 (Jaeger) at 40-46; UCAN (Fulmer) at 75-77.

vegetation management related costs. SDG&E has not requested additional funding for potential vegetation management cost increases due to the drought in this GRC, but rather relies on its proposed two-way balancing account for vegetation management to mitigate drought-related safety and reliability risks.

Weather and rainfall amounts can have both short-term and long-term impacts on workload. There have been some preliminary forecasts that the winter of 2015 could be a wet and rainy "El Nino" winter season. Should this happen, SDG&E would anticipate a higher than normal year for routine tree pruning and removal, based on a relatively wet rainy season associated with an El Nino event. However, a single year's precipitation may still not be sufficient to help many of the trees recover from the previous years of extended drought and may not improve the situation for 2016 and beyond."[99]

A two way balancing account allows SDG&E to mitigate and manage safety and reliability risks due to drought and fire safety issues, as they are known, so that safe and reliable service can be maintained at a reasonable cost. Additional drivers that can drive variability with tree trimming costs include beetle infestation triggered by the drought, and other environmental conditions. Many times this results in additional biological and cultural monitors, and mitigations for the pruning and removal of certain trees.

As the drought in California continues, so will associated costs with additional fire risk. It cannot simply be assumed that since drought did not cause additional red flag warnings and associated expenses for 2014, there won't be upward pressures due to additional fire risk in 2015 and 2016. A two-way balancing account is more appropriate as it provides a mechanism to permit SDG&E to address emergent conditions that arise and require increased vegetation management activity in a drier, more fire-prone service territory for 2015 and 2016.

L. DISTRIBUTION ENGINEERING

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**1,319**	**1,909**	**590**
ORA	**1,319**	**1,397**	**78**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Distribution Engineering work group.[100] ORA states that SDG&E does not provide any correlation between changing NEM workload and increasing costs. ORA requested the following information in a data request:

[99] SDG&E-10 (Woldemariam), p. 54.
[100] Ex. ORA-5 (Jaeger) at 46-47.

On WP page 52, SDG&E states: "The Net Energy Metering team has seen incredible growth in the number of customers installing solar."

a) Please identify the number of applications that the NEM team has processed for all historical years (2008-2012).

b) Did SDG&E forecast the number of applications it expects to process in the test year? If yes, please provide this information.

c) The statistics provided on Page 68 for "Net Energy Metering (NEM) Application Volume Increases" (including the footnotes) are different than those provided on WP Page 52 for "Forecast Explanations". Please clarify all discrepancies.

d) Please show how changes in the volume of NEM applications over the past 5 years are reflected in historical costs for Distribution Engineering.

SDG&E provided the following response:

a)

Year	Total Annual NEM Authorizations
2008	947
2009	2,688
2010	3,192
2011	3,991
2012	5,259

b) SDG&E forecasts authorizing approximately 29,470 customers in 2016. This forecast is based on 40% growth year-over-year starting with the total number of NEM authorizations in 2013.

c) The difference is wording. The number of applications processed will be higher than the number of applications authorized.

d) The historical cost changes related to the volume of NEM applications cannot be seen in dollars. An NEM employee currently works 10-12 hour days and is not paid for overtime. [101]

Additionally, in 2014, the number of NEM authorization grew 42% to 15,798. To date in 2015, NEM authorizations are up by 50% over 2014. The expectation is that NEM authorizations will continue to grow as the California NEM Cap and federal solar tax credit expiration approach. The increasing costs are directly related to the employees required to process these requests correctly and in a timely manner. SDG&E plans to hire two full time

[101] ORA-SDG&E-DR-008-EJ1, Question 16, please see the Appendix to this rebuttal.

employees for the NEM team. The growth from 2014 has been managed by the same sized team and is not sustainable. In addition to the new full-time hires, additional work will be supplemented by non-labor contracted personnel. Non-labor contracted personnel are needed to manage future growth in NEM as well as anticipated growth in Advanced Energy Storage (AES) applications. The work load is still increasing and employees are still working 10-12 hour days, even with the help of contracted personnel.

M. TECHNOLOGY INNOVATION AND DEVELOPMENT

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**327**	**882**	**555**
ORA	**327**	**207**	**-120**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Technology Innovation and Development work group.[102] ORA argues that SDG&E also requests an incremental increase of $0.250 million for staff positions associated with the Integrated Test Facility (ITF). SDG&E forecast that ITF costs would be incurred starting in 2014. ORA asked SDG&E to provide year-to date ITF expenses and the year-to-date number of staff positions for the ITF, SDG&E responded on March 13, 2015: "There are no year to date recorded O&M expenses for the ITF. There are no staff positions currently assigned to the ITF. A requisition to fill the needed staff positions is currently in progress."[103] SDG&E incorrectly forecast its 2014 ITF expenses and it is unclear when staff positions will be assigned to the ITF. The ITF Team Lead position was filled in 2015, as was correctly stated in SDG&E's response to ORA data request ORA-SDG&E-074-EJ1, Q.32. The requisition to fill the Team Lead position was in progress at the time of the data request and is now currently filled. The ITF will continue to ramp up staffing in 2015.

ORA used 2014 actuals to develop its forecast. For this specific work group, the use of 2014 actuals resulted in a lower forecast for ORA. 2014 had an unusually low spend when compared to previous years' spend. SDG&E's forecasts at the time of the GRC application are based on a snapshot in time. SDG&E's focus was to utilize a representative forecast, given the business requirements identified for Test Year 2016. SDG&E believes that reliance on historic

[102] Ex. ORA-5 (Jaeger) at 48-49.
[103] *Id*. at 49:12-14.

cost averages neglects the individual merits of important new and necessary programs. SDG&E recommends that the Commission disregard recommendations based solely on those methods, and instead adopt SDG&E's forecasts as the preferred method.

N. INFORMATION MANAGEMENT SUPPORT FOR ELECTRIC DISTRIBUTION

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**261**	**376**	**115**
ORA	**261**	**140**	**-121**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Information Management Support for Electric Distribution work group.[104] ORA states that Expenses for the three GWD employees are already embedded in historical costs. ORA requested the following in a data request:

> *SDG&E forecasts an incremental increase of $0.115 million over 2013 recorded expenses for "Three Graphical Work Design (GWD) employees currently in IT to move to EDO." SDG&E states: "These 3 people are currently on capital projects therefore no Distribution O&M has been charged historically" (WP Page 126). Please reference the location in the workpapers where historical costs for the three GWD employees are recorded. Please show if and how SDG&E removed these costs from forecasted capital expenditures in order to account for the employees' move to EDO.*

SDG&E responded with the following:

> *The historical cost for the three GWD employees are recorded in Exh No: SDG&E-19-WP/Witness: S. Mikovits. SDG&E did not remove these costs from forecasted capital expenditures because resources are still required for the completion of the capital projects.* [105]

SDG&E's requested increase of $0.115 million is to account for the transfer of employees from capital projects to O&M, but SDG&E's data request response reveals that the expenses were not moved from IT to EDO. These positions were moved from IT Capital to EDO O&M, which represents an incremental cost for O&M. The transfer of these positions did not cause the headcount to reduce within IT Capital since they were still required within that work group.

[104] *Id*. at 51-53.
[105] ORA-SDG&E-DR-008-EJ1, Question 30, please see the Appendix to this rebuttal.

O. RELIABILITY AND CAPACITY ANALYSIS

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**538**	**618**	**80**
ORA	**538**	**502**	**-36**

1. ORA

ORA takes issue with the Test Year O&M forecast for the Reliability and Capacity Analysis work group.[106] ORA developed its TY forecast of $0.502 million by using a 3-year average (2012-2014) of historical recorded expenses, which uses the most recent historical recorded expenses from 2014. Reliability is important to SDG&E and adequate funding is required in order to continue SDG&E's reliability success. As capital projects increase in order to maintain excellent reliability, the associated O&M will also increase, which SDG&E's forecast takes into account. ORA's use of a 3-year average of historical recorded expenses does not take the increasing workload of these groups into account.

P. REGIONAL PUBLIC AFFAIRS

NON-SHARED O&M - Constant 2013 ($000)			
	Base Year 2013	**Test Year 2016**	**Change**
SDG&E	**1,687**	**1,687**	**0**
SDCAN	**1,687**	**683**	**-1,004**

1. SDCAN

SDCAN's recommendation of $683,000 for funding Regional Public Affairs (RPA) instead of SDG&E's requested amount of $1,687,000[107] inaccurately reflects the historical context for the department's operations. SDG&E's RPA request supported in my direct testimony is based on historical costs from three SDG&E cost centers: RPA, Regional Vice President (RVP) and Economic Development. In responding to SDCAN's referenced data request, SDG&E provided only the RPA cost center budget as requested. SDCAN inaccurately compares this budget information to SDG&E's request for funding. Historical costs for all three cost centers are shown in the chart below and in workpapers accompanying our original testimony:

[106] Ex. ORA-5 (Jaeger) at 50-51.
[107] SDCAN (Shames) at 30-32.

Summary of Results:

	In 2013$ (000) Incurred Costs							
	Adjusted-Recorded					Adjusted-Forecast		
Years	2009	2010	2011	2012	2013	2014	2015	2016
Labor	824	824	753	629	935	935	935	935
Non-Labor	282	591	465	446	752	752	752	752
NSE	0	0	0	0	0	0	0	0
Total	**1,107**	**1,415**	**1,218**	**1,076**	**1,687**	**1,687**	**1,687**	**1,687**
FTE	8.1	7.6	6.8	5.7	8.4	8.4	8.4	8.4

As indicated above, historical spending includes three cost centers RPA, Regional Vice President (RVP) and Economic Development. The forecast was developed from historical spending at $1,687,000 which was also the actual spend in 2013.

The following is additional information on the RVP and Economic Development cost centers: The Regional Vice President (RVP) (supported by an executive assistant) oversees SDG&E's External Affairs operations, including Regional Public Affairs. The RVP provides oversight and greater focus for the activities performed by these groups that are targeted to Company, service territory, and community specific needs and issues. Economic Development programs benefitting our community to recruit, grow, retain businesses and jobs with support on education and access to utility programs through local and regional EDCs.

The following addresses the incorrect assertion by SDCAN whereby the department exists "to engage in activities in support of lobbying and corporate image enhancement." RPA educates officials at the county and city levels about SDG&E issues that may have an impact on its customers, often at the request of those officials. RPA further serves as the point of contact in the communities that SDG&E serves, providing information to stakeholders about SDG&E activities, programs and services, resolving customer complaints and working with under-represented communities. Furthermore, RPA works with local government regarding existing or proposed operations and construction activities. This is RPA's primary function and these examples are not all inclusive of issues RPA works on. These activities can best be described as part of our day-to-day business where we have facilities and serve our customers.

- Franchise compliance with the City of San Diego and City of Chula Vista
- Energy Efficiency program outreach to cities and customers
- Distribution Underground Conversions – System-wide 20 A&C

- Street Light Process Improvement
- Wood to Steel Projects
- Pipeline Safety
- Substation relocation and enhancement projects
- Electric Vehicles
- Emergency planning and response
- Outreach activities for major construction projects, including providing information to community groups, service organizations and business groups
- Summer and Winter Preparedness
- Vegetation Management

In the decision to the prior rate case, the Commission found:

> *"Since no evidence has been presented in this proceeding to suggest that the funding request for regional public affairs involves activities that are of a lobbying nature, or to enhance the corporate image, we do not agree with UCAN's suggestion that D.08-07-046 has not been complied with, or that SDG&E's funding request for this group should be disallowed entirely as a result of such documentation not being included in SDG&E's GRC filing."*[108]

Once again, SDCAN fails to demonstrate evidence that RPA is engaged in lobbying activities, and once again the Commission should find that the expenses for Regional Public Affairs are beneficial to ratepayers, in the public interest, and should be approved for SDG&E.

RPA serves a critical role as a "liaison" between the utility and regional stakeholders, including elected officials, municipal staff, community organizations, and the general public. RPA staff maintains ongoing communications with these stakeholders, and are usually the first point of contact when stakeholders have questions or concerns on issues related to SDG&E. SDG&E, therefore, rejects SDCAN's position and requests that its requested funding of $1,687,000 be approved as submitted.

IV. CORRECTION OF ERRATA

The following errata items were identified upon further review as a result of responding to discovery. These items collectively represent a reduction to the Electric Distribution O&M

[108] D.13-05-010(A.10-12-005 A.10-12-006), May 9, 2013, p. 122. SDCAN is represented by Michael Shames, who represented UCAN in the prior GRC.

requested funding for Test Year 2016 of $2.464 million. SDG&E agrees to reduce its funding

No.	Wkp/Description	Activity	TY2016 Reduction ($000)	Comments
1	1ED011.000 – ERO	Jurisdictional Permitting & OT Drivers	$291	The total amount was included in WP instead of the incremental amount.[109]
2	1ED011.000 – ERO	Traffic Control Expenses	$1,119	The total amount was included in WP instead of the incremental amount.[110]
3	1ED015.000 – Substation C&O	NERC Project Manager	$22	This is a 100% transmission function and should not have been included in the GRC forecast.[111]
4	1ED015.000 – Substation C&O	Equip Operator Washers, Equip Operator Construction	$60	This is a 100% transmission function and should not have been included in the GRC forecast.[112]
5	1ED015.000 – Substation C&O	NERC CIP Cyber Security Regulations	$120	This is a 100% transmission function and should not have been included in the GRC forecast.[113]
6	1ED003.000 – DistOps EGISS	GIS System Maintenance	$652	2016 GIS Maintenance costs are covered under the testimony of Mr. Stephen Mikovits for IT.[114]
7	1ED008.000 – Grid Ops	Electric Control Technician	$200	Only a percentage of this function should have been included in the GRC forecast. This function is mostly transmission.[115]
8	1ED008.000 – Grid Ops	Forecast methodology description for Grid Operations	$0	Base year was used as the forecast methodology, however the labor and non-labor explanations, as well as the testimony incorrectly says that the 3-yr average was used.[116]
Total			**$2,464**	

request for Electric Distribution O&M by this amount.

V. CONCLUSION

To summarize, the parties that submitted proposals for ED O&M were ORA, SDCAN, UCAN, FEA, and CUE. There were several activities that were unchallenged by individual parties, and several challenges on methodology. The largest proposed reduction between SDG&E's test year forecast and an intervener forecast was for the FiRM project within the Construction Services group. Both ORA and FEA recommend more than a $7M reduction to

[109] ORA-SDG&E-DR-074-EJ1, Question 3, please see the Appendix to this rebuttal.
[110] ORA-SDG&E-DR-074-EJ1, Question 4, please see the Appendix to this rebuttal.
[111] ORA-SDG&E-DR-074-EJ1, Question 11, please see the Appendix to this rebuttal.
[112] ORA-SDG&E-DR-074-EJ1, Question 16, please see the Appendix to this rebuttal.
[113] ORA-SDG&E-DR-074-EJ1, Question 15, please see the Appendix to this rebuttal.
[114] ORA-SDG&E-DR-069-PM1, Question 7, please see the Appendix to this rebuttal.
[115] ORA-SDG&E-DR-084-EJ1, Question 4, please see the Appendix to this rebuttal.
[116] ORA-SDG&E-DR-084-EJ1, Question 6, please see the Appendix to this rebuttal.

this critical safety and reliability-based activity. SDG&E disagrees with ORA's claim that SDG&E failed to show the specific activities and how the O&M correlates to the capital forecasts for the FiRM project. As has been demonstrated in my rebuttal, SDG&E has thoroughly explained the purpose, justification and cost components of the FiRM program. SDG&E responded to numerous ORA data requests regarding the FiRM program and references this information in its testimony, including extracts and specific details explaining cost components. In my testimony, I lay the groundwork for the associated O&M costs, as well as producing specific capital project numbers. In addition to these detailed written responses, SDG&E also communicated with ORA's witness by telephone, allowing a free flowing conversation and the opportunity to ask any questions necessary to obtain understanding and clarification of SDG&E's request. This call resulted in a supplemental data request,[117] which SDG&E answered with great detail.

As I stated in my introduction, multiple intervenors used 2014 actuals in their forecasts, resulting in lower Test Year 2016 forecasts. As a comparative view, using 2014 actuals and SDG&E's forecasting methodologies results in $128M vs. the original total of $138M for Test Year 2016 forecasts.

Training classes for the following groups were also contested by multiple intervenors:

- Project Management
- Electric Distribution Operations
- Skills and Compliance Training
- Electric Regional Operations

SDG&E's aging workforce could face many retirements in the near future and there will be a need to train the new employees backfilling these positions. With the use of additional technology in the industry and the use of more complicated equipment, the funding for personnel, equipment, and the development of new training is essential to ensuring safe and reliable power delivery.

ORA, FEA, and UCAN take issue with the Test Year O&M forecast for Vegetation Management – Tree Trimming work group. Each party proposes that instead of a two-way balancing account, SDG&E continue the use of a one-way balancing account. A two-way

[117] ORA- SDG&E-DR-088-EJ1 Supplemental, please see the Appendix to this rebuttal.

balancing account allows SDG&E to react quickly to mitigate and manage emergent safety and reliability risks that are arising due to drought and fire safety issues as they become known, so that safe and reliable service can be maintained at a reasonable cost.

In many cases, SDG&E developed its forecasts using discrete incremental adjustments to the base year or historical costs. ORA's and other intervenors' methods that rely exclusively on historical averages neglect to consider the individual merits of important new and necessary programs. SDG&E recommends that the Commission disregard recommendations based solely on those methods, and instead adopt SDG&E's forecasts as the preferred method.

SDG&E has provided a substantial amount of detail supporting the forecasts, in testimony, workpapers, and data requests. SDG&E expends a great deal of effort to ensure we are providing safe and reliable electric service for our customers. The funding of these activities will allow SDG&E to continue to provide the stellar safe and reliable service that SDG&E currently provides. My direct testimony and workpapers supporting what SDG&E needs to ensure this obligation can be upheld.

This concludes my prepared rebuttal testimony.

APPENDIX A

CCUE-DR-02

CCUE DATA REQUEST
CCUE-SDG&E-DR-02
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: MARCH 9, 2015
DATE RESPONDED: MARCH 27, 2015

31. For each category of worker identified in response to part (a) of the previous question, please provide:

a. The number of workers in that category as of 12/31/14, by worker age (e.g., 50 linemen aged 64, 35 aged 63, 22 aged 62, and so on).
b. The number expected to be eligible for retirement during 2016.
c. The number expected to retire during 2016.
d. The number of replacements expected to be hired during 2016.
e. The expected headcount at the beginning and end of 2016.
f. Any ongoing SDG&E programs or other efforts to deal with the demographic impacts of an aging workforce.
g. Any SDG&E studies of aging workforce issues that addresses any of the categories of workers asked about in this question.

SDG&E Response 31:

a.

WORKERS BY AGE AS OF 12/31/2014

JOB TITLE	<30	30-39	40-49	50-54	55-59	60	61	62	64	66	68	69	70	Grand Total
Fault Finding Specialist				1	4				1					6
Lineman	19	104	51	12	12	2		5	1					206
Troubleshooter		1	11	4	12			5	2	3	1			39
Working Foreman		4	5	5	20	4	1	1				2	1	43
Grand Total	**19**	**109**	**67**	**22**	**48**	**6**	**1**	**11**	**4**	**3**	**1**	**2**	**1**	**294**

b. Based on the minimum age of 55 and 5 years of service, 77 employees will be eligible to retire. However, SDG&E's average retirement age is 62.

RETIREMENT ELIGIBLE 2016*

JOB TITLE	TOTAL
Fault Finding Specialist	5
Lineman	20
Troubleshooter	23
Working Foreman	29
Grand Total	**77**

*Age 55 + 5 Years of Service

CCUE DATA REQUEST
CCUE-SDG&E-DR-02
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: MARCH 9, 2015
DATE RESPONDED: MARCH 27, 2015

SDG&E Response 31:-Continued

c. Assuming retirements will occur at age 62 and beyond, SDG&E estimates that 22 employees may retire.

EXPECTED TO RETIRE 2016*

JOB TITLE	TOTAL
Fault Finding Specialist	1
Lineman	6
Troubleshooter	11
Working Foreman	4
Grand Total	**22**

*Age 62 and retirement eligible

d. Plans are currently being evaluated.

e. Assuming 22 retirements and the addition of 2 Apprentice classes (24 total), SDG&E would expect to have 296 employees at the beginning of 2016.

EXPECTED 2016 HEADCOUNT

Job Title	Headcount	Less Expected Retirements	*Additions	Expected 2016 HC
Fault Finding Specialist	6	-1		5
Lineman	206	-6	24	224
Troubleshooter	39	-11		28
Working Foreman	43	-4		39
Grand Total	**294**	**-22**	**24**	**296**

*2 Apprentice Classes (2*12 = 24)

SDG&E Response 31:-Continued

f. SDG&E's programs and efforts include:

- **Hiring Strategies**
  - College Recruiting: We have robust college recruiting programs for Engineering, Accounting & Finance, and IT. The program includes rotations around the Company as well as an assigned mentor to help them succeed.

  - Partnerships with the Community: A key component that contributes to our successful diversity hiring is building relationships and networking

    with diverse organizations that strive to develop a pipeline of qualified minority, female, veteran and disabled qualified candidates. A few of the ways we support them are by supporting their programs, participating in their conferences, hosting their meetings, providing speakers at their events and helping to build their networks. Additionally, we leverage their membership for candidate sourcing. We also support several military organizations and programs that assist transitioning veterans such as SDSU's Troops to Engineers Program and local military outplacement center.

- **Training Programs**
  All employees are encouraged to participate in training and development programs so they can advance to positions that require more advanced skill sets and technological knowledge.

  - Job Skills: Job Skills training is offered for entry level positions such as Laborers and Energy Service Specialist. Laborer training includes a three week orientation of their tools. The Energy Service Specialist training is comprised of 16 weeks and of that, 7-8 weeks are taking live calls.

  - Apprenticeship Programs: We have Apprenticeship Programs to become a Lineman, Electrician, Welder or Distribution System Operator. These programs are generally three years, and can include night time school work in addition to on-the-job-training. These are union positions and selection to participate is done following the bargaining unit rules.

SDG&E Response 31:-Continued

- Management Training Courses: We have a number of developmental and training courses:
  - for union employees interested in moving into a management position.
  - for new supervisors to learn critical skills to their new role.
  - for managers, directors and executives to more rigorously develop their leadership and communication skills as well as their financial acumen.

- **Developing Future Workforce**
  - Partner with local community, business, and educational organizations to provide vocational training opportunities. An example of this would be our partnership with the "Construction Tech Academy" at Kearny High School. Through this effort, we help educators learn about our industry by offering

    them internships through the summer. SDG&E employees serve as mentors and project advisors for student projects throughout the school year.

  - Energy and Utility Careers Awareness: We work to create a greater awareness of the job and career opportunities that exist at the utilities. An example of this is Careers in Energy Week which helps reinforce the viable opportunities around STEM curriculum within the energy industry through contests and challenges.

g. SDG&E has not performed any recent studies of aging workforce issues.

APPENDIX B

ORA-DR-002-EJ1

ORA DATA REQUEST
ORA-SDG&E-DR-002-EJ1
SDG&E 2016 GRC – A.14-11-XXX
SDG&E RESPONSE
DATE RECEIVED: OCTOBER 6, 2014
DATE RESPONDED: OCTOBER 20, 2014

Electric Distribution Operations (pp.40-43)

21. Historical costs for Electric Distributions Operations have fluctuated consistently for the past five years, with a 3-year average of $10.300 million and a 5-year average of $10.128 million. In the current GRC, SDG&E is forecasting $15.315 million for its test year. Please explain why SDG&E chose to use a 3-year linear forecast over alternative methodologies, including a 5-year linear forecast.

SDG&E Response:

The 3-year linear forecast was chosen due to the creation of Business Solutions and Training Team along with filling vacancies within the control center, both done in 2013. SDG&E started an Apprentice Distribution System Operators (ADSO) class that is a 2-year training program. The 3-year linear forecast is the most representative of future operations. The other forecast methodologies do not account for these recent developments and therefore understate the level of support required to maintain them.

ORA DATA REQUEST
ORA-SDG&E-DR-002-EJ1
SDG&E 2016 GRC – A.14-11-XXX
SDG&E RESPONSE
DATE RECEIVED: OCTOBER 6, 2014
DATE RESPONDED: OCTOBER 20, 2014

30. On WP page 104, SDG&E forecasts an increase of $12.200 million for "O&M associated with capital construction work completed primarily in association with the Fire Risk Mitigation (FiRM) projects." Please refer to question #5 and address the same questions. In addition, please answer the following question:

    c. Is SDG&E's O&M expense forecast directly related to its capital forecast? If yes, please provide the workpapers detailing the link between SDG&E's O&M expenses and capital expenses. Provide all supporting calculations, documentations, explanations.

SDG&E Response:

a. The Fire Risk Mitigation (FiRM) projects have just begun in 2014, so there is no historical data to provide regarding this item. No net increase in FTEs for Construction Services is requested as a result of FiRM.

b. O&M impact of FiRM activities is based on a percentage of the expected Capital spend for specific grouping of activities within the project.

Projected FiRM Costs	**TY2016 ($000)**
Combo: Wire replacement and selective hardening (2% associated with O&M)	$300
Projects from RIRAT: Hardening, Reconductor, Long Spans (4.5% associated O&M)	$2,300
RIRAT Projects and Pole Loading (4.5% associated O&M plus pole loading O&M cost)	$9,600
TOTAL	**$12,200**

c. The referenced forecast is directly related to specific activities, as specified in the answer to question #30b.

APPENDIX C

ORA-DR-008-EJ1

ORA DATA REQUEST
ORA-SDG&E-DR-008-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: NOVEMBER 7, 2014
DATE RESPONDED: NOVEMBER 24, 2014

16. On WP page 52, SDG&E states: "The Net Energy Metering team has seen incredible growth in the number of customers installing solar."
    a. Please identify the number of applications that the NEM team has processed for all historical years (2008-2012).
    b. Did SDG&E forecast the number of applications it expects to process in the test year? If yes, please provide this information.
    c. The statistics provided on Page 68 for "Net Energy Metering (NEM) Application Volume Increases" (including the footnotes) are different than those provided on WP Page 52 for "Forecast Explanations". Please clarify all discrepancies.
    d. Please show how changes in the volume of NEM applications over the past 5 years are reflected in historical costs for Distribution Engineering.

SDG&E Response:

a.

Year	Total Annual NEM Authorizations
2008	947
2009	2,688
2010	3,192
2011	3,991
2012	5,259

b. SDG&E forecasts authorizing approximately 29,470 customers in 2016. This forecast is based on 40% growth year-over-year starting with the total number of NEM authorizations in 2013.
c. The difference is wording. The number of applications processed will be higher than the number of applications authorized.
d. The historical cost changes related to the volume of NEM applications cannot be seen in dollars. An NEM employee currently works 10-12 hour days and is not paid for overtime.

ORA DATA REQUEST
ORA-SDG&E-DR-008-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: NOVEMBER 7, 2014
DATE RESPONDED: NOVEMBER 24, 2014

30. SDG&E forecasts an incremental increase of $0.115 million over 2013 recorded expenses for "Three Graphical Work Design (GWD) employees currently in IT to move to EDO." SDG&E states: "These 3 people are currently on capital projects therefore no Distribution O&M has been charged historically" (WP Page 126). Please reference the location in the workpapers where historical costs for the three GWD employees are recorded. Please show if and how SDG&E removed these costs from forecasted capital expenditures in order to account for the employees' move to EDO.

SDG&E Response:

The historical cost for the three GWD employees are recorded in Exh No: SDG&E-19-WP/Witness: S. Mikovits. SDG&E did not remove these costs from forecasted capital expenditures because resources are still required for the completion of the capital projects.

APPENDIX D

ORA-DR-074-EJ1

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

3. Jurisdictional Permitting and OT Drivers: According to SDG&E's response to ORA-SDG&E-DR-033-EJ1 Q.21a, SDG&E developed its forecast of $387k for total TY non-labor expenses by escalating 2013 recorded costs of $291k by 10% each year. Using SDG&E's proposed forecast method (p. JTW-9), the requested incremental increase over 2013 base year for non-labor costs would be $96k (total TY 2016 forecasted costs of $387k minus 2013 base year costs of $291k). In SDG&E's testimony, SDG&E is requesting an incremental increase of $387k over 2013 base year costs - this is the total cost of the activity and not the incremental amount needed over 2013 recorded expenses. Please confirm if the incremental amount of funding requested by SDG&E should actually be $96k and not $387k. If yes, please correct SDG&E's forecast. If no, please explain why not.

SDG&E Response:

Yes, this is an error. The incremental amount requested for jurisdictional permitting and OT drivers should actually be $96K, not $387K. This will be corrected at hearings.

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

4. Traffic Control Expenses: According to SDG&E's response to ORA-SDG&E-DR-033-EJ1 Q.21b, SDG&E developed its forecast of $1,488,539 for total TY traffic control expenses by escalating 2013 recorded costs of $1,118,361 by 10% each year. Using SDG&E's proposed forecast method (p. JTW-9), the requested incremental increase over 2013 base year for traffic control costs would be $370,178 (TY 2016 forecasted costs of $1,488,539 minus 2013 base year costs of $1,118,361). In SDG&E's testimony, SDG&E is requesting an incremental increase of $1,488,539 over 2013 base year costs - this is the total cost of the activity and not the incremental amount needed over 2013 recorded expenses. Please confirm if the incremental amount of funding requested for Traffic Control Expenses should actually be $370,178 and not $1,488,539. If yes, please correct SDG&E's forecast. If no, please explain why not.

SDG&E Response:

Yes, this is an error. The incremental amount of funding requested for traffic control expenses should actually be $370K, not $1,489K. This will be corrected at hearings.

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

Substation Construction and Maintenance

11. SDG&E forecasts an incremental increase of $0.022 for a NERC Project Manager (WP page 33). Please refer to question #7 and address the same questions. Provide an answer for each part of the question.

SDG&E Response:

a. The NERC Project Manager position is a new position effective 2014 business year; therefore, there were no historical labor and non-labor expenses during the 2009-2013 business years.

b. New NERC CIP cyber security regulations will impact electric substations, structures and lines that will require a manager to manage the implementation and ongoing compliance.

c. The expense is for V&S only. Productive time will be transmission (non-GRC). V&S expenses are forecasted as a percentage of labor salary projected.

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

15. SDG&E forecasts $0.120 million for additional employees for new NERC CIP cyber security regulations (WP page 33). Please refer to question #7 and address the same questions. Provide an answer for each part of the question.

SDG&E Response:

In researching this data request response, SDG&E has determined that this activity is 100% transmission (non-GRC), and therefore the cost for V&S of this activity should not have been included as an incremental upward pressure. This will be corrected at hearings.

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

16. SDG&E forecasts $0.060 million for two equipment operator washers, one equipment operator construction, and one lineman. Please refer to question #7 and address the same questions. Provide an answer for each part of the question.

SDG&E Response:

In researching this data request response, SDG&E has determined that this activity is 100% transmission (non-GRC), and therefore the cost for V&S of this activity should not have been included as an incremental upward pressure. This will be corrected at hearings.

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

Electric Distribution Operations

17. In response to DR-002-EJ1 Q24c, SDG&E states: "There were ten vacancies for each of the years of 2011 through 2013. The ten vacancies are all related to the Distribution System Operator (DSO) position." Why has SDG&E waited until now to fill 10 positions that were vacant from 2011 through 2013? What analyses did SDG&E conduct that support SDG&E's need for the 10 employees?

SDG&E Response:

In 2011, the operations training supervisor resigned and therefore new DSO training was not conducted. SDG&E attempted to re-assign internal resources to provide the DSO training but was not successful. As a result, SDG&E bid the position externally and made several attempts at hiring personnel with proper qualifications until it was successful in hiring a training supervisor.

The analysis for the additional 10 DSOs is to support SDG&Es need to provide 24/7 coverage for three 8 hour shifts, throughout the year. As well as develop, manage, verify and execute planned and forced outages that occur daily. Along with providing skill, compliance and system training, these positions will provide coverage for vacations and sick leave.

ORA DATA REQUEST
ORA-SDG&E-DR-074-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 23, 2015
DATE RESPONDED: MARCH 13, 2015

Kearny Operation Services

19. In response to ORA-SDG&E-DR-002-EJ1 Q.26, SDG&E states: "SDG&E's request of $261k represents the transfer of employees into the Kearny Operations Services group during the period of 2013 and 2014. It also reflects a shift in charging allocations from Refundable to O&M due to that transfer." Please show the transfer of expenses from Refundable (transmission) to O&M (distribution). Show that embedded costs for transmission were removed from their previous category or account for SDG&E's TY forecast.

SDG&E Response:

In the preparation to forecast SDG&E's expenses for GRC purposes, FERC jurisdiction electric transmission costs are excluded from the historical figures used as the basis for test-year forecasting, they do not originate as distribution expenses which require a transfer. Although SDG&E is not requesting funding for FERC-jurisdiction costs in this GRC, the amount excluded is $261K. There are no recorded expenses to be transferred, rather the expenses are simply booked to the appropriate new accounts once the 'employee transfer' is made.

APPENDIX E

ORA-DR-088-EJ1

ORA DATA REQUEST
ORA-SDG&E-DR-088-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: MARCH 13, 2015
DATE RESPONDED: MARCH 25, 2015

Exhibit Reference: SDG&E-10

Subject: Construction Services

Please provide the following:

1. In SDG&E's response to ORA-SDG&E-DR-002-EJ1 Question 30, SDG&E provides projected FiRM costs and states: "O&M impact of FiRM activities is based on a percentage of the expected Capital spend[ing] for specific grouping of activities within the project."

   Please provide the *exact* calculations that were used to develop SDG&E's projected FiRM costs of $0.300 million, $2.400 million, and $9.600 million. Include the *exact* capital forecasts that were used to develop these O&M expenses, and provide the page number and location that the capital forecasts can be found in the capital testimony. For example, identify the location of the capital forecasts in SDG&E's testimony for "RiRAT Projects and Pole Loading" and show how the identified capital forecasts were used to derive the projected costs of $9.600 million.

SDG&E Response 01:

As referenced in the response to ORA-SDG&E-002-EJ1 Question 30, the O&M impact of FiRM activities is based on a percentage of the expected Capital spend for specific grouping of activities within the project.

Projected FiRM Costs	**TY2016 ($000)**
Combo: Wire replacement and selective hardening (2% associated with O&M)	$300
Projects from RIRAT: Hardening, Reconductor, Long Spans (4.5% associated O&M)	$2,300
RIRAT Projects and Pole Loading (4.5% associated O&M plus pole loading O&M cost)	$9,600
TOTAL	**$12,200**

These values are based on the associated O&M expenses in relation to the combined value (directs + indirects) of Capital Budget codes 13247A and 14247A. (Please reference capital workpapers SDG&E-09-CWP/Witness: J. Jenkins pages 756 and 789.)

A portion of the forecasted O&M costs are based on a percentage of the total direct and indirect capital costs for the planned capital work. For 2016, the total O&M impact was based on an initial estimate of $110M total capital spend (direct plus indirects).

SDG&E Response 01:-Continued

Additionally as discussed on page 783 of the reference capital workpapers, Phase 3 of FiRM will address the remaining poles in the Fire Threat Zone (approximately 40,000 poles). For this phase, the distribution facilities will be LiDAR (Light Detection And Ranging) surveyed and PLS-CADD models will be developed for analysis. While LiDAR and PLS-CADD will be used for the early phases of the project, in this case it is being used for analysis and for capital improvement work. The upfront data acquisition and 3-D modeling will be an O&M activity.

The specific O&M calculations are as follows:

Projected FiRM Costs	**Capital $ (direct + indirect**	**% O&M**	**TY2016 ($000)**
Combo: Wire replacement and selective hardening (2% associated with O&M)	$15M	2%	$300
Projects from RIRAT: Hardening, Reconductor, Long Spans (4.5% associated O&M)	$50M	4.5%	$2,300
RIRAT Projects and Pole Loading (4.5% associated O&M plus pole loading O&M cost)	$45M	4.5%	$2,025
LiDAR survey and PLS-CADD computer modelling and analysis (O&M)	N/A	Fixed estimate	$7,575
TOTAL			**$12,200**

APPENDIX F

ORA-DR-088-EJ1-SUPPLEMENTAL

ORA DATA REQUEST
ORA-SDG&E-DR-088-EJ1
SDG&E 2016 GRC – A.14-11-003
SUPPLEMENTAL SDG&E RESPONSE
DATE RECEIVED: MARCH 27, 2015
DATE RESPONDED: APRIL 3, 2015

Exhibit Reference: SDG&E-10

Subject: Referring to SDG&E's response to SDG&E-DR-088-EJ1

Please provide the following:

1. Please provide a detailed breakdown of SDG&E's forecast of $7.575 million for LiDAR survey and PLS-CADD computer modelling and analysis(O&M) projected costs and show how each component of the forecast was derived.

SDG&E Response 1:

SDG&E estimates that during 2016 it will complete Light Detection and Ranging (LiDAR) survey and PLS-CADD computer modeling and analysis for 30,000 of the remaining poles in the Fire Threat Zone (FTZ). The remaining poles will be completed in future years.

In order to analyze these poles and associated conductors, accurate 3-dimensional data needs to be gathered. This data is initially acquired through ground or aerial based LiDAR surveys which are processed using computer software to generate a 3-dimensional model for which engineering analysis can be readily performed. Much of this modeling and analysis is performed in PLS-CADD software or using other tools such as O-Calc software.

This overall process involves field work to prepare for the LiDAR surveys, the surveys themselves, model generation and engineering analysis. SDG&E anticipates that the results will show that a portion of the existing lines are acceptable and will need no or minor upgrades, while other portions will require capital upgrade work. The upfront data acquisition and 3-dimensional modeling and analysis will be an O&M activity.

SDG&E's estimate for this activity was developed based on a "per pole" equivalent unit cost for the primary activities associated with this effort.

2016 Incremental O&M LiDAR & Pole Loading Calculations				
O&M Cost Breakdown for line/structures in FTZ (30,000 poles)				
Est. Total O&M Cost				
Estimated Cost / Pole		Units (poles)	subtotal	Logic
Est. LIDAR / Survey	$ 32.50	30,000	$ 975,000.00	based on $715 / Mile est assuming 22 poles / mile, wire included
Est. Fielding	$ 25.00	30,000	$ 750,000.00	based on approx 20 mins / pole @ $75/Hr. bill rate
Est. LIDAR As Built Mapping	$ 25.00	30,000	$ 750,000.00	based on approx 20 mins / pole @ $75/Hr. bill rate
Est. engrg analysis/load calcs; PLS-CADD, O-Calc	$ 170.00	30,000	$ 5,100,000.00	based on approx 2 Hrs. / pole @ $85/Hr. bill rate
Est. Total Cost / Pole	$ 252.50		$ 7,575,000.00	

APPENDIX G

ORA-DR-069-PM1

ORA DATA REQUEST
ORA-SDG&E-DR-069-PM1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: FEBRUARY 20, 2015
DATE RESPONDED: MARCH 9, 2015
REVISED RESPONSE: APRIL 14, 2015

7. In response to data request ORA-SDG&E-052-PM1, Q.11, Cost Center 2100-3623, SDG&E states under assumptions "Contractual Obligation to support GIS system software. These costs were previously recorded in 2013 and forecasted in 2014-2015 in Electric Operations." Based on this statement please identify in TY 2016 GRC testimony where SDG&E accounted for the transition of costs from Electric Operations to an IT cost center. Include Cost Center(s) and copies of testimony and WP's supporting the transition of costs.

SDG&E Response 07:

Upon further review, it appears that the portion of GIS system software maintenance costs mentioned above was not transitioned out of the testimony and work papers of Electric Distribution, Exhibits SDG&E-10-R and SDG&E-10-WP-R. To correct this, Exhibit SDG&E-10-WP-R, work paper 1ED003.000 will be reduced by $652,000 at the earliest opportunity.

Electric Distribution, Electric Transmission and SDG&E and SoCalGas Distribution Integrity Management Programs (DIMP) also recorded, or will record, a portion of the total GIS system software maintenance costs in 2013, 2014 and 2015. With the exception of Electric Distribution (as mentioned above), these business units did not forecast for the GIS system software maintenance licensing costs in 2016 in this GRC. A breakdown of the annual costs allocated to the four business units is shown in the following table.

As shown in IT's workpaper 2100-3623 Shared Software Development Contracts, the total IT request for GIS software maintenance in 2016 is $2.314 million. This cost will be transitioned over to IT from the four business units described above. The Electric Transmission FERC costs are part of a balancing/memorandum account and are not shown in any other witness area of this GRC.

GIS System Software Maintenance - In 2013 $(000)

Year	Electric Distribution	Electric Transmission (FERC)	SDG&E DIMP	SoCalGas DIMP	Information Technology	Total
2013	519	47	170	1,061	0	1,797
2014	587	52	204	1,272	0	2,115
2015	614	55	213	1,331	0	2,213
2016	0	0	0	0	2,314	2,314

Note: Electric Distribution is shown here with the correction described in the first paragraph of this response.

APPENDIX H

FEA-DR-02

FEA DATA REQUEST
FEA-SDG&E-DR-02
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: APRIL 21, 2015
DATE RESPONDED: MAY 6, 2015

ELECTRIC DISTRIBUTION O&M EXPENSES

FEA 02 - 44. Electric Distribution O&M Expense. Refer to Exhibit SDG&E-10-R, pages JTW-40 and 41. a) Provide SDG&E's definition of linear forecast. b) Provide an explanation supporting SDG&E's use of a linear forecast as opposed to a non-linear forecast to project the 2016 TY distribution operations expense. Provide copies of all workpapers used, including output of other forecast methods to project this expense.

SDG&E Response:

a) For GRC purposes, SDG&E defines a linear forecast as a simple linear regression of least squares; a straight-line forecast using historical data. SDG&E used the built-in functions for linear regression found in Microsoft SQL Server 2008, the underlying database management system on which its forecasting model is built.

b) SDG&E does not attempt to justify a nonlinear forecast as it presupposes an increased complexity between the independent variable(s) and the dependent variable, and poses a much more complex rationale about choosing what order relationship (exponential, inverse, logarithmic etc.) to use. SDG&E's use of trending is a simple linear relationship of first order (y=mx+b) to illustrate the relationship of expense as a function of successive years, rather than to develop complex correlation coefficients for many input variables such as weather, location, load, customer growth and the like. For many situations it is presumed that where multiple independent variables drive the expenses they are reflected historically through the passage of time, and that in certain cases the past is a reasonable indication of future needs. In this method it is straightforward to use the incremental year as the independent variable. There may be no particular rationale to suppose that funding needs are of a nonlinear nature, and it becomes overly complex and burdensome to test the possible permutations of nonlinear types or multivariate inputs.

APPENDIX I

ORA-SDG&E-DR-084-EJ1

ORA DATA REQUEST
ORA-SDG&E-DR-084-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: MARCH 6, 2015
DATE RESPONDED: MARCH 24, 2015

4. On WP page 49, SDG&E forecasts that it will hire one added Electric Control Technician in 2014. Did SDG&E hire an additional ECT in 2014? If yes, please provide the 2014 costs for the ECT and number of months employed. If no, please explain why not.

SDG&E Response:

Yes, an additional ECT was hired and employed seven months in 2014. This additional cost was $8,191. This is due to more capital and transmission work than forecasted.

ORA DATA REQUEST
ORA-SDG&E-DR-084-EJ1
SDG&E 2016 GRC – A.14-11-003
SDG&E RESPONSE
DATE RECEIVED: MARCH 6, 2015
DATE RESPONDED: MARCH 24, 2015

6. Please confirm that SDG&E uses 2013 base year for its forecast methodology and not a 3-year average (see WP page 49).

SDG&E Response:

SDG&E used the 2013 base year forecast methodology for this workgroup. The reference "3-year average" was the incorrect terminology used in the workpapers as well as the testimony. This will be corrected at hearings.