

**2016 Risk Assessment Mitigation Phase
Investigation 16-10-015
Workpapers to
Workforce Planning
(Chapter SDG&E-17-WP)**

January 2017



2016 Risk Assessment Mitigation Phase
SDGE-17-WP
Risk: Workforce Planning (O&M)

Line No.	Mitigation	Project/Program	Project/Program Description	Status	Recorded (Directs, 2015 \$000)					Forecast Range (Directs, 2015 \$000)						Forecast Methodology
					2011	2012	2013	2014	2015	2017 Low	2017 High	2018 Low	2018 High	2019 Low	2019 High	
1	Gas Operations ¹	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP/OpQual Welding School Proposed: Supervisor University 	B/P					There were no retirements in critical roles within Gas Operations in 2015	\$ 103	\$ 159	\$ 175	\$ 379	\$ 203	\$ 434	Zero-Based
2	Gas Operations Subtotal				-	-	-	-	-	103	159	175	379	203	434	
3	Customer Service Field (CSF) and Smart Meter	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP/OpQual Appliance Mechanic 4 Week Class training: Fundamentals of Natural Gas, Electric Troubleshooting, Carbon Monoxide Investigations, Leak Investigations, Purging Large Meter Set 3 year Apprentice Electric Meter Tester Program Service Tech Training Annual Refresher/Compliance Training Proposed: Future Metering School Proposed: Future Knowledge Transfer Program 	B/P						446	948	463	969	611	1,154	
4	CSF and Smart Meter Subtotal				-	-	-	-	343	446	948	463	969	611	1,154	
5	Kearny Maintenance and Operations	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP Job Shadowing Relay classes/school 	B						27	69	26	68	23	63	Zero-Based
6	Kearny Maintenance and Operations Subtotal				-	-	-	-	21	27	69	26	68	23	63	
7	Electric Regional Operations	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP Apprentice Lineman Program Fault Finder Class Relief Fault Finder Class Service Planner Class C&O Planner Class Customer Project Planner Class Troubleshooter Training Program Apprentice Lineman Program Working Foreman Development Program CPUC General Order 165 - Corrective Maintenance Program (GO165) Requirement 	B						1,269	2,786	1,496	3,070	1,903	3,578	Zero-Based
8	Electric Regional Operations Subtotal				-	-	-	-	1,069	1,269	2,786	1,496	3,070	1,903	3,578	
9	Electric Grid Operations	Leadership and technical classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP Engineer Summer Intern Program Management Advisory Group (MAG Team); Interns & Associates Job Knowledge Sharing Program 	B						20	35	17	31	14	28	Zero-Based
10	Electric Grid Operations Subtotal				-	-	-	-	13	20	35	17	31	14	28	

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					2011	2012	2013	2014	2015	2017 Low	2017 High	2018 Low	2018 High	2019 Low	2019 High	
11	Construction Services	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP/OpQual Monthly Staff/Safety Meeting Training Proposed: Create New Contractor Administrator Training Modules to Perform Training at Monthly Meetings Proposed: Temporary Upgrades of Employees 	B/P					5	49	555	49	554	50	555	Zero-Based
12	Construction Services Subtotal				-	-	-	-	5	49	555	49	554	50	555	
13	Electric Distribution Operations	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP Joint Transmission System Operator (TSO)/Distribution System Operator (DSO) Training Program 	B					There were no retirements in critical roles within Electric Distribution Operations in 2015	41	51	35	41	31	38	Zero-Based
14	Electric Distribution Operations Subtotal				-	-	-	-	-	41	51	35	41	31	38	
15	Electric Transmission and Distribution Engineering ¹	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP/OpQual SDG&E Project Management/Planner Training Class On the Job training Mentoring Supervisor Toolkit (now called High Performing Leader I) Leadership Classes Proposed: Utility Technology Training Program Proposed: Substation Design Training Program Proposed: Utilize External Engineering Contractors Proposed: Formalize QA/QC program 	B/P					327	687	966	684	963	767	1,066	Zero-Based
16	Electric Transmission and Distribution Engineering Subtotal				-	-	-	-	327	687	966	684	963	767	1,066	
17	Human Resources (HR) - Organizational Effectiveness	Leadership training programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions	<ul style="list-style-type: none"> Workforce Planning Efforts/Labor Succession Planning Efforts/Labor Proposed: Supervisor Effectiveness Program 	B/P					76	92	231	32	121	32	121	Zero-Based
18	HR - Organizational Effectiveness Subtotal				-	-	-	-	76	92	231	32	121	32	121	
19	TOTAL				\$ -	\$ -	\$ -	\$ -	\$ 1,854	\$ 2,734	\$ 5,800	\$ 2,977	\$ 6,196	\$ 3,634	\$ 7,037	

Notes:

- Baseline (B) and Proposed (P).
- Numbers in risk chapter tables may differ due to rounding.
- The purpose of Risk Assessment Mitigation Phase (RAMP) is not to request funding. Any funding requests will be made in the General Rate Case (GRC). The forecasts for mitigations are not for funding purposes, but are rather to provide a range for the future GRC filing. This range will be refined with supporting testimony in the GRC.

¹ Controls/Mitigations for which numbers in risk chapter tables may differ due to calculation errors.

2016 Risk Assessment Mitigation Phase
SDGE-17-WP
Risk: Workforce Planning (GRC Total - O&M)

Line No.	Mitigation	Project/Program	Project/Program Description	Status	Recorded (Directs, 2015 \$000)					Non-GRC 2015	O&M Total 2015	Forecast Range (Directs, 2015 \$000)						Non-GRC 2019 Low	Non-GRC 2019 High	O&M Total 2019 Low	O&M Total 2019 High
					GRC 2011	GRC 2012	GRC 2013	GRC 2014	GRC 2015			GRC 2017 Low	GRC 2017 High	GRC 2018 Low	GRC 2018 High	GRC 2019 Low	GRC 2019 High				
1	Gas Operations ¹	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> • Annual ESCMP/OpQual • Welding School • Proposed: Supervisor University 	B/P	-	-	-	-	There were no retirements in critical roles within Gas Operations in 2015	\$ -	\$ -	\$ 62	\$ 95	\$ 105	\$ 227	\$ 122	\$ 260	\$ 81	\$ 174	\$ 203	\$ 434
2	Gas Operations Subtotal				-	-	-	-	-	-	-	62	95	105	227	122	260	81	174	203	434
3	Customer Service Field (CSF) and Smart Meter	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> • Annual ESCMP/OpQual • Appliance Mechanic 4 Week Class training: Fundamentals of Natural Gas, Electric Troubleshooting, Carbon Monoxide Investigations, Leak Investigations, Purging Large Meter Set • 3 year Apprentice Electric Meter Tester Program • Service Tech Training • Annual Refresher/Compliance Training • Proposed: Future Metering School • Proposed: Future Knowledge Transfer Program 	B/P					268	75	343	348	739	361	756	477	900	134	254	611	1,154
4	CSF and Smart Meter Subtotal				-	-	-	-	268	75	343	348	739	361	756	477	900	134	254	611	1,154
5	Kearny Maintenance and Operations	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> • Annual ESCMP • Job Shadowing • Relay classes/school 	B					3	18	21	4	10	4	10	3	9	20	54	23	63
6	Kearny Maintenance and Operations Subtotal				-	-	-	-	3	18	21	4	10	4	10	3	9	20	54	23	63
7	Electric Regional Operations	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> • Annual ESCMP • Apprentice Lineman Program • Fault Finder Class • Relief Fault Finder Class • Service Planner Class • C&O Planner Class • Customer Project Planner Class • Troubleshooter Training Program • Apprentice Lineman Program • Working Foreman Development Program • CPUC General Order 165 - Corrective Maintenance Program (GO165) Requirement 	B					1,058	11	1,069	1,256	2,758	1,481	3,039	1,884	3,542	19	36	1,903	3,578
8	Electric Regional Operations Subtotal				-	-	-	-	1,058	11	1,069	1,256	2,758	1,481	3,039	1,884	3,542	19	36	1,903	3,578
9	Electric Grid Operations	Leadership and technical classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> • Annual ESCMP • Engineer Summer Intern Program • Management Advisory Group (MAG Team); Interns & Associates • Job Knowledge Sharing Program 	B					2	11	13	3	5	3	5	2	4	12	24	14	28
10	Electric Grid Operations Subtotal				-	-	-	-	2	11	13	3	5	3	5	2	4	12	24	14	28

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					GRC 2011	GRC 2012	GRC 2013	GRC 2014	GRC 2015			GRC 2017 Low	GRC 2017 High	GRC 2018 Low	GRC 2018 High	GRC 2019 Low	GRC 2019 High				
11	Construction Services	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP/OpQual Monthly Staff/Safety Meeting Training Proposed: Create New Contractor Administrator Training Modules to Perform Training at Monthly Meetings Proposed: Temporary Upgrades of Employees 	B/P					1	5	5	5	56	5	55	5	56	45	500	50	555
12	Construction Services Subtotal				-	-	-	-	1	5	5	5	56	5	55	5	56	45	500	50	555
13	Electric Distribution Operations	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP Joint Transmission System Operator (TSO)/Distribution System Operator (DSO) Training Program 	B					There were no retirements in critical roles within Electric Distribution Operations in 2015	-	-	29	36	25	29	22	27	9	11	31	38
14	Electric Distribution Operations Subtotal				-	-	-	-	-	-	-	29	36	25	29	22	27	9	11	31	38
15	Electric Transmission and Distribution Engineering ¹	Compliance, technical, and leadership training classes and programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions.	<ul style="list-style-type: none"> Annual ESCMP/OpQual SDG&E Project Management/Planner Training Class On the Job training Mentoring Supervisor Toolkit (now called High Performing Leader I) Leadership Classes Proposed: Utility Technology Training Program Proposed: Substation Design Training Program Proposed: Utilize External Engineering Contractors Proposed: Formalize QA/QC program 	B/P					65	262	327	137	193	137	193	153	213	614	853	767	1,066
16	Electric Transmission and Distribution Engineering Subtotal				-	-	-	-	65	262	327	137	193	137	193	153	213	614	853	767	1,066
17	Human Resources (HR) - Organizational Effectiveness	Leadership training programs. See Chapter SDG&E-17 RAMP report, sections 5 & 6 for detailed descriptions	<ul style="list-style-type: none"> Workforce Planning Efforts/Labor Succession Planning Efforts/Labor Proposed: Supervisor Effectiveness Program 	B/P					-	76	76	92	231	32	121	32	121	-	-	32	121
18	HR - Organizational Effectiveness Subtotal				-	-	-	-	-	76	76	92	231	32	121	32	121	-	-	32	121
19	TOTAL				\$ -	\$ -	\$ -	\$ -	\$ 1,397	\$ 457	\$ 1,854	\$ 1,936	\$ 4,124	\$ 2,152	\$ 4,435	\$ 2,700	\$ 5,133	\$ 934	\$ 1,904	\$ 3,634	\$ 7,037

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