Application of SOUTHERN CALIFORNIA GAS)
COMPANY for authority to update its gas revenue)
requirement and base rates)
effective January 1, 2019 (U 904-G)	_)
Application No. 17-10	
Exhibit No · (SCG-14-CWP)	

CAPITAL WORKPAPERS TO PREPARED DIRECT TESTIMONY OF MARIA T. MARTINEZ ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

OCTOBER 2017



2019 General Rate Case - APP INDEX OF WORKPAPERS

Exhibit SCG-14-CWP - TIMP & DIMP

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Overall Summary For Exhibit No. SCG-14-CWP

Area: TIMP & DIMP

Witness: Maria T. Martinez

A. TIMP

B. DIMP

 In 2016 \$ (000)

 Adjusted-Forecast

 2017
 2018
 2019

 50,801
 50,801
 55,000

 74,383
 74,383
 160,000

 125,184
 125,184
 215,000

Total

Area: TIMP & DIMP Witness: Maria T. Martinez

A. TIMP Category: **VARIOUS** Workpaper:

Summa

	In 2016\$ (0	000)	
Adjusted-Recorded		Adjusted-Forecast	
2016	2017	2018	2019
2,083	4,209	4,209	4,209
36,140	46,592	46,592	50,791
0	0	0	0
38,223	50,801	50,801	55,000
20.0	48.0	48.0	48.0
- PIP			
-18	577	577	577
90	4,503	4,503	4,503
0	0	0	0
72	5,080	5,080	5,080
-0.1	7.0	7.0	7.0
ally Driven			
2,101	3,632	3,632	3,632
36,050	42,089	42,089	46,288
0	0	0	0
38,151	45,721	45,721	49,920
20.1	41.0	41.0	41.0
	2016 2,083 36,140 0 38,223 20.0 - PIP -18 90 0 72 -0.1 ally Driven 2,101 36,050 0 38,151	Adjusted-Recorded 2016 2017 2,083 4,209 36,140 46,592 0 0 38,223 50,801 20.0 48.0 -PIP -18 577 90 4,503 0 0 72 5,080 -0.1 7.0 rally Driven 2,101 3,632 36,050 42,089 0 0 38,151 45,721	2016 2017 2018 2,083 4,209 4,209 36,140 46,592 46,592 0 0 0 38,223 50,801 50,801 20.0 48.0 48.0 -PIP -18 577 577 90 4,503 4,503 0 0 0 72 5,080 5,080 -0.1 7.0 7.0 rally Driven 2,101 3,632 3,632 36,050 42,089 42,089 0 0 0 0 38,151 45,721 45,721

Beginning of Workpaper Group 002760 - Projs to Sup Trans. - PIP

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Summary of Results (Constant 2016 \$ in 000s):

Forecast N	Method	Adjusted Recorded			Adjı	sted Fored	ast		
Years	3	2012	2013	2014	2015	2016	2017	2018	2019
Labor	Zero-Based	29	0	19	39	-18	577	577	577
Non-Labor	Zero-Based	41	4	168	153	90	4,503	4,503	4,503
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total	I	70	4	187	192	71	5,080	5,080	5,080
FTE	Zero-Based	0.2	0.0	0.2	0.4	-0.1	7.0	7.0	7.0

Business Purpose:

Physical Description:

Project Justification:

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Forecast Methodology:

Labor - Zero-Based

Zero Based forecast method was used because TIMP is driven by which pipe segments need to be assessed in the particular year during the required 7 year period.

Non-Labor - Zero-Based

Zero Based forecast method was used because TIMP is driven by which pipe segments need to be assessed in the particular year during the required 7 year period.

NSE - Zero-Based

Zero Based forecast method was used because TIMP is driven by which pipe segments need to be assessed in the particular year during the required 7 year period.

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Summary of Adjustments to Forecast

	In 2016 \$ (000)										
Forecast	Method	Base Forecast			Forecast Adjustments			Ac	Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019	
Labor	Zero-Based	577	577	577	0	0	0	577	577	577	
Non-Labor	Zero-Based	4,503	4,503	4,503	0	0	0	4,503	4,503	4,503	
NSE	Zero-Based	0	0	0	0	0	0	0	0	0	
Total		5,080	5,080	5,080	0	0	0	5,080	5,080	5,080	
FTE	Zero-Based	7.0	7.0	7.0	0.0	0.0	0.0	7.0	7.0	7.0	

Forecast Adjustment Details

Year Adj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>ReflD</u>
2017 Total	0	0	0	0	0.0	
2018 Total	0	0	0	0	0.0	
2019 Total	0	0	0	0	0.0	

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Determination of Adjusted-Recorded:

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	25	0	17	34	-16
Non-Labor	42	4	172	154	90
NSE	0	0	0	0	0
Total	67	4	188	188	74
FTE	0.2	0.0	0.2	0.3	-0.1
Adjustments (Nominal \$)	**				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nom	inal \$)				
Labor	25	0	17	34	-16
Non-Labor	42	4	172	154	90
NSE	0	0	0	0	0
Total	67	4	188	188	74
FTE	0.2	0.0	0.2	0.3	-0.1
Vacation & Sick (Nominal	\$)				
Labor	4	0	3	5	-3
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	4	0	3	5	-3
FTE	0.0	0.0	0.0	0.1	0.0
Escalation to 2016\$					
Labor	0	0	0	0	0
Non-Labor	-1	0	-4	-1	0
NSE	0	0	0	0	0
Total	-1	0	-4	-1	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Cons	stant 2016\$)				
Labor	29	0	19	39	-18
Non-Labor	41	4	168	153	90
NSE	0	0	0	0	0
Total	70	4	187	192	71
FTE	0.2	0.0	0.2	0.4	-0.1

^{*} After company-wide exclusions of Non-GRC costs

^{**} Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Summary of Adjustments to Recorded:

			In Nominal \$(0	000)		
	Years	2012	2013	2014	2015	2016
Labor		0	0	0	0	0
Non-Labor		0	0	0	0	0
NSE		0	0	0	0	0
	Total		0	0	0	0
FTE		0.0	0.0	0.0	0.0	0.0

<u>Year Adj Group Labor NLbr NSE Total FTE ReflD</u>	Year	Adj Group	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	FTE	<u>RefID</u>	
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Beginning of Workpaper Sub Details for Workpaper Group 002760

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Workpaper Detail: 002760.001 - RAMP - Base BC 276 is TIMP Capital

In-Service Date: Not Applicable

Description:

RAMP - Base TIMP ILI capital work

	Forecast In 2016 \$(000)								
	Years	2017	2018	2019					
Labor		577	577	577					
Non-Labor		4,503	4,503	4,503					
NSE		0	0	0					
	Total	5,080	5,080	5,080					
FTE		7.0	7.0	7.0					

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00276.0
Category: A. TIMP
Category-Sub: 1. TI - Dist

Workpaper Group: 002760 - Projs to Sup Trans. - PIP

Workpaper Detail: 002760.001 - RAMP - Base BC 276 is TIMP Capital

RAMP Item # 1

RAMP Chapter: SCG-4

Program Name: TIMP - ILI & ECDA

Program Description: cleaning and assessing internal conditions of high pressure pipelines

Risk/Mitigation:

Risk: catastrophic damage involving high pressure pipeline failure

Mitigation: TIMP is closely monitored and given high priority, frequent audits are conducted

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	40,000	40,000	44,000
High	60,000	60,000	66,000

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Work Type: Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 4217

Explanation:

Beginning of Workpaper Group P03120 - GT PL Rpls / Externally Driven

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Summary of Results (Constant 2016 \$ in 000s):

Forecast I	Method		Adjusted Recorded				Adju	sted Forec	ast
Years	S	2012	2013	2014	2015	2016	2017	2018	2019
Labor	Zero-Based	3,448	4,034	3,005	2,525	2,101	3,632	3,632	3,632
Non-Labor	Zero-Based	39,910	47,668	31,932	36,222	36,050	42,089	42,089	46,288
NSE	Zero-Based	0	0	0	0	0	0	0	0
Tota	I	43,358	51,702	34,937	38,747	38,152	45,721	45,721	49,920
FTE	Zero-Based	34.2	37.8	27.7	22.4	20.1	41.0	41.0	41.0

Business Purpose:

na

Physical Description:

na

Project Justification:

na

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Forecast Methodology:

Labor - Zero-Based

Zero Based forecast metho was used because TIMP is driven by which pipe segments need to be assed in the particular year during the required 7 year period.

Non-Labor - Zero-Based

Zero Based forecast metho was used because TIMP is driven by which pipe segments need to be assed in the particular year during the required 7 year period.

NSE - Zero-Based

Zero Based forecast metho was used because TIMP is driven by which pipe segments need to be assed in the particular year during the required 7 year period.

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Summary of Adjustments to Forecast

	In 2016 \$ (000)									
Forecast Method Base Forecast			For	ecast Adju	ıstments	Ad	justed-For	ecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Zero-Based	3,632	3,632	3,632	0	0	0	3,632	3,632	3,632
Non-Labor	Zero-Based	42,089	42,089	42,089	0	0	4,199	42,089	42,089	46,288
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		45,721	45,721	45,721	0	0		45,721	45,721	49,920
FTE	Zero-Based	41.0	41.0	41.0	0.0	0.0	0.0	41.0	41.0	41.0

Forecast Adjustment Details

Year Adj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>RefID</u>
2017 Total	0	0	0	0	0.0	
2018 Total	0	0	0	0	0.0	
2019 Other	0	4,199	0	4,199	0.0	TPDLB20161205111203920
Explanation: In 2019 ex	xpecting increa	se in TIMP c	apital activity			
2019 Total	0	4,199	0	4,199	0.0	

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Determination of Adjusted-Recorded:

Recorded (Nominal S)* Labor A0,581 48,183 32,631 36,497 36,050 NSE 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Adjustments (Nominal S)** Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal S)** Labor 3,022 3,497 2,640 2,190 1,804 Non-Labor 40,581 48,183 32,631 36,497 36,505 NSE 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Vacation & Sick (Nominal S)** Labor 484 581 431 354 297 Non-Labor 0 0 0 0 0 Total 484 581 431 354 297 Non-Labor 0 0 0 0 0 Total 484 581 431 354 297 Non-Labor 0 0 0 0 0 Total 484 581 431 354 297 Non-Labor 484 581 431 354 297 Non-Labor 5,68 5,69 5,50 0 Total 484 581 431 354 297 FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ Labor -58 -44 -66 -19 0 NSE 0 0 0 0 0 Total 728 558 766 294 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016S) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 3,940 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016S) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 3,940 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 Total 43,358 51,702 34,837 38,477 38,152 FTE 34.2 37.8 27.7 22.4 20.1		2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Non-Labor 40,581 48,183 32,631 36,97 36,080 NSE 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Adjustments (Nominal \$)*** Labor 0 0 0 0 0 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 FTE 0.0 0.0 0 0 0 Recorded-Adjusted (Nominal \$) 0 0 0 0 0 Recorded-Adjusted (Nominal \$) 48,183 32,631 36,497 36,050 Recorded-Adjusted (Nominal \$) 48,183 32,631 36,497 36,050 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0	Recorded (Nominal \$)*					
NSE 0 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 37,254 Adjustments (Nominal \$)*** 2 32.3 23.7 19.2 17.2 Adjustments (Nominal \$)*** 30 0 0 0 0 0 0 Non-Labor 0 0 0 0 0 0 0 0 Recorded-Adjusted (Nominal \$) 40.5 0		3,022	3,497	2,640	2,190	1,804
Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Adjustments (Nominal \$)*** Labor 0 0 0 0 0 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 FTE 0.0 0.0 0 0 0 0 0 0 Recorded-Adjusted (Nominal \$)** *** *** *** *** *** 0		40,581	48,183	32,631	36,497	36,050
FTE 29.3 32.3 23.7 19.2 17.2 Adjustments (Nominal \$) *** Labor 0 0 0 0 0 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0 0 0 Recorded-Adjusted (Nominal \$) Use of the contract of the co	NSE	0	0	0	0	0
Adjustments (Nominal \$) ** Labor 0		43,602	51,679	35,271	38,687	37,854
Labor 0 0 0 0 0 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 Total 0 0 0 0 0 FTE 0.0 0.0 0.0 0 0 Recorded-Adjusted (Nominal \$) U U 0 0 0 0 0 Labor 3,022 3,497 2,640 2,190 1,804 0	FTE	29.3	32.3	23.7	19.2	17.2
Non-Labor 0	Adjustments (Nominal \$) *	**				
NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Labor 3,022 3,497 2,640 2,190 1,804 Non-Labor 40,581 48,183 32,631 36,497 36,050 NSE 0 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2	Labor	0	0	0	0	0
Total 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Labor 3,022 3,497 2,640 2,190 1,804 Non-Labor 40,581 48,183 32,631 36,497 36,050 NSE 0 <td>Non-Labor</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	Non-Labor	0	0	0	0	0
FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Labor 3,022 3,497 2,640 2,190 1,804 Non-Labor 40,581 48,183 32,631 36,497 36,050 NSE 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Vacation & Sick (Nominal \$) Vacation & Sick (Nominal \$) 8 431 354 297 Non-Labor 0	NSE	0	0	0	0	0
Recorded-Adjusted (Nominal \$)	Total	0	0	0	0	0
Labor 3,022 3,497 2,640 2,190 1,804 Non-Labor 40,581 48,183 32,631 36,497 36,050 NSE 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Vacation & Sick (Nominal \$) Labor 484 581 431 354 297 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 FTE 4.9 5.5 4.0 3.2 2.9 25 2.9 25 2.0 2.0 2.0 2.0 0	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor	Recorded-Adjusted (Nomi	inal \$)				
NSE 0 0 0 0 0 0 Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Vacation & Sick (Nominal \$) Use of the color o	Labor	3,022	3,497	2,640	2,190	1,804
Total 43,602 51,679 35,271 38,687 37,854 FTE 29.3 32.3 23.7 19.2 17.2 Vacation & Sick (Nominal \$) Labor 484 581 431 354 297 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 484 581 431 354 297 0		40,581	48,183	32,631	36,497	36,050
FTE 29.3 32.3 23.7 19.2 17.2 Vacation & Sick (Nominal \$) Labor 484 581 431 354 297 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 FTE 4.9 5.5 4.0 3.2 2.9 2.9 Escalation to 2016\$	NSE	0	0	0	0	0
Vacation & Sick (Nominal \$) Labor 484 581 431 354 297 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 Total 484 581 431 354 297 FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ - 4.0 3.2 2.9 Escalation to 2016\$ -44 -66 -19 0 NSE 0 0 0 0 0 NSE 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) -294 0 0 Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0	Total	43,602	51,679	35,271	38,687	37,854
Labor 484 581 431 354 297 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 Total 484 581 431 354 297 FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ Labor -58 -44 -66 -19 0 NSE 0 0 0 0 0 NSE 0 0 0 0 0 Total -728 -558 -765 -294 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0	FTE	29.3	32.3	23.7	19.2	17.2
Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 Total 484 581 431 354 297 FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ Escalation to 2016\$ Labor -58 -44 -66 -19 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,15	Vacation & Sick (Nominal	\$)				
NSE 0 0 0 0 0 Total 484 581 431 354 297 FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ Labor -58 -44 -66 -19 0 Non-Labor -670 -515 -699 -275 0 NSE 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$)	Labor	484	581	431	354	297
Total 484 581 431 354 297 FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ Labor -58 -44 -66 -19 0 Non-Labor -670 -515 -699 -275 0 NSE 0 0 0 0 0 Total -728 -558 -765 -294 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$)		0	0	0	0	0
FTE 4.9 5.5 4.0 3.2 2.9 Escalation to 2016\$ Labor -58 -44 -66 -19 0 Non-Labor -670 -515 -699 -275 0 NSE 0 0 0 0 0 Total -728 -558 -765 -294 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	NSE	0	0	0	0	0
Escalation to 2016\$ Labor		484	581	431	354	297
Labor -58 -44 -66 -19 0 Non-Labor -670 -515 -699 -275 0 NSE 0 0 0 0 0 0 Total -728 -558 -765 -294 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	FTE	4.9	5.5	4.0	3.2	2.9
Non-Labor -670 -515 -699 -275 0 NSE 0 0 0 0 0 Total -728 -558 -765 -294 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	Escalation to 2016\$					
NSE 0 0 0 0 0 0 Total -728 -558 -765 -294 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	Labor	-58	-44	-66	-19	0
Total -728 -558 -765 -294 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	Non-Labor	-670	-515	-699	-275	0
FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	NSE	0	0	0	0	0
Recorded-Adjusted (Constant 2016\$) Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152		-728	-558	-765	-294	0
Labor 3,448 4,034 3,005 2,525 2,101 Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 39,910 47,668 31,932 36,222 36,050 NSE 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152	Recorded-Adjusted (Cons	tant 2016\$)				
NSE 0 0 0 0 0 0 0 0 Total 43,358 51,702 34,937 38,747 38,152		3,448	4,034	3,005	2,525	2,101
Total 43,358 51,702 34,937 38,747 38,152		39,910	47,668	31,932	36,222	36,050
		0	0	0	0	0
FTE 34.2 37.8 27.7 22.4 20.1	Total	43,358	51,702	34,937	38,747	38,152
	FTE	34.2	37.8	27.7	22.4	20.1

^{*} After company-wide exclusions of Non-GRC costs

^{**} Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Summary of Adjustments to Recorded:

In Nominal \$(000)						
	Years	2012	2013	2014	2015	2016
Labor	-	0	0	0	0	0
Non-Labor		0	0	0	0	0
NSE		0	0	0	0	0
	Total	0	0	0	0	0
FTE		0.0	0.0	0.0	0.0	0.0

<u>Year Adj Group Labor NLbr NSE Total FTE ReflD</u>	Year	Adj Group	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	FTE	<u>RefID</u>	
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Beginning of Workpaper Sub Details for Workpaper Group P03120

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: P0312.0

Category: A. TIMP

Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Workpaper Detail: P03120.001 - RAMP - Base BC 312 is Base TIMP

In-Service Date: Not Applicable

Description:

RAMP - Base TIMP capital ILI BC 312

	Forecast In 2016 \$(000)						
	Years	2017	2018	2019			
Labor		3,632	3,632	3,632			
Non-Labor		36,689	38,389	42,588			
NSE		0	0	0			
	Total	40,321	42,021	46,220			
FTE		41.0	41.0	41.0			

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Workpaper Detail: P03120.001 - RAMP - Base BC 312 is Base TIMP

RAMP Item # 1

RAMP Chapter: SCG-4

Program Name: TIMP - ILI, ECDA and P&M measures

Program Description: Cleaning and assessing internal conditions of Hi pressure pipelines

Risk/Mitigation:

Risk: Catastrophic damage involving High Pressure Pipeline Failure

Mitigation: TIMP is closely monitored and given high priority. Frequent audits are conducted.

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	40,000	40,000	44,000
High	60,000	60,000	66,000

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Work Type: Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 38152

Explanation:

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Workpaper Detail: P03120.002 - RAMP - Incremental TIMP Gas High Pressure Enhancement IT

In-Service Date: 12/31/2018

Description:

RAMP - Incremental Gas High Pressure Enhancement IT - this is to enhance GIS application used by TIMP program

Forecast In 2016 \$(000)							
	Years	2017	2018	2019			
Labor		0	0	0			
Non-Labor		5,400	3,700	0			
NSE		0	0	0			
	Total	5,400	3,700	0			
FTE		0.0	0.0	0.0			

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Workpaper Detail: P03120.002 - RAMP - Incremental TIMP Gas High Pressure Enhancement IT

RAMP Item # 1

RAMP Chapter: SCG-8

Program Name: Records Management - collect, enter and maintain records related to operational assets

Program Description: costs to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Risk of not having an effective records management program may result in demonstrate regulatory comp

Mitigation: Info systems costs will modernize and enhance the searchability, traceability and digitalization of

operational assets

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	2019
Low	5,400	3,700	3,700
High	5,400	3,700	3,700

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Construction Start Date: In Service Date:12/31/2018

Work Type: Non-Mandated Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: TIMP started funding of this program in 2017

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Workpaper Detail: P03120.003 - RAMP - Incremental TIMP Gas High Pressure Enhancement IT

In-Service Date: 12/31/2019

Description:

RAMP - Incremental Gas High Pressure Enhancement IT - this is to enhance GIS application used by TIMP program

Forecast In 2016 \$(000)							
	Years	2017	2018	2019			
Labor		0	0	0			
Non-Labor		0	0	3,700			
NSE		0	0	0			
	Total		0	3,700			
FTE		0.0	0.0	0.0			

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: P0312.0
Category: A. TIMP
Category-Sub: 2. TI - Trans

Workpaper Group: P03120 - GT PL Rpls / Externally Driven

Workpaper Detail: P03120.003 - RAMP - Incremental TIMP Gas High Pressure Enhancement IT

RAMP Item # 1

RAMP Chapter: SCG-8

Program Name: Records Management - collect, enter and maintain records related to operation assets

Program Description: costs to collect, enter and maintain records related to operation assets

Risk/Mitigation:

Risk: Risk of not having an effective records management program may result in demonstrate regulation Mitigation: Info systems costs will modernize and enhance the searchability, traceability and digitalization

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Construction Start Date: In Service Date:12/31/2019

Work Type: Non-Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: TIMP started funding of this program in 2017

Area: TIMP & DIMP
Witness: Maria T. Martinez

Category: B. DIMP Workpaper: 002770

Summary for Category: B. DIMP

		In 2016\$ (0	000)	
	Adjusted-Recorded			
	2016	2017	2018	2019
Labor	6,954	1,588	1,588	1,
Non-Labor	53,900	72,795	72,795	158,
NSE	0	0	0	
Total	60,854	74,383	74,383	160,
FTE	82.2	48.0	48.0	4

1,588 158,412

160,000 48.0

0

002770 Distribution	Integrity	Management

Labor	6,954	1,588	1,588	1,588
Non-Labor	53,900	72,795	72,795	158,412
NSE	0	0	0	0
Total	60,854	74,383	74,383	160,000
FTE	82.2	48.0	48.0	48.0

Beginning of Workpaper Group 002770 - Distribution Integrity Management

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Summary of Results (Constant 2016 \$ in 000s):

Forecast I	Method		Adjusted Recorded			Adjusted Forecast			
Years	S	2012	2013	2014	2015	2016	2017	2018	2019
Labor	Zero-Based	113	601	2,264	4,789	6,954	1,588	1,588	1,588
Non-Labor	Zero-Based	2,430	6,182	11,507	26,035	53,900	72,795	72,795	158,412
NSE	Zero-Based	0	0	0	0	0	0	0	0
Tota	I	2,544	6,784	13,771	30,824	60,854	74,383	74,383	160,000
FTE	Zero-Based	1.5	7.1	27.2	55.2	82.2	48.0	48.0	48.0

Business Purpose:

na

Physical Description:

na

Project Justification:

na

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Forecast Methodology:

Labor - Zero-Based

Zero Based forecast method was used. DIMP NSOTA pipeline replacement is based on DREAMS

Non-Labor - Zero-Based

Zero Based forecast method was used. DIMP NSOTA pipeline replacement is based on DREAMS

NSE - Zero-Based

Zero Based forecast method was used. DIMP NSOTA pipeline replacement is based on DREAMS

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Summary of Adjustments to Forecast

	In 2016 \$ (000)									
Forecast Method Base Forecast			For	ecast Adju	ıstments	Ad	Adjusted-Forecast			
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Zero-Based	1,588	1,588	1,588	0	0	0	1,588	1,588	1,588
Non-Labor	Zero-Based	72,795	72,795	72,795	0	0	85,617	72,795	72,795	158,412
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		74,383	74,383	74,383	0	0	85,617	74,383	74,383	160,000
FTE	Zero-Based	48.0	48.0	48.0	0.0	0.0	0.0	48.0	48.0	48.0

Forecast Adjustment Details

Torccast Aujustinent De						
Year Adj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>ReflD</u>
2017 Total	0	0	0	0	0.0	
2018 Total	0	0	0	0	0.0	
2019 Other	0	85,617	0	85,617	0.0	TPDLB20161205111637297
Explanation: In DIMP [OREAMS capita	l for 2019 ex	pecting to rai	mp up the a	mount of mil	les replacing.
2019 Total	0	85,617	0	85,617	0.0	

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Determination of Adjusted-Recorded:

Recorded (Nominal \$)* Labor 99 521 1,989 4,154 5,971 Non-Labor 2,471 6,249 11,759 26,233 53,900 NSE		2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Non-Labor	,					
NSE 0 0 0 0 0 0 Total 2,570 6,770 13,748 30,366 59,871 FTE 1,3 6,1 23.3 47.3 70.3 Adjustments (Nominal \$)*** Value Value Value Value Value Value Value O 0		99	521	1,989	4,154	5,971
Total FTE 2,570 (1.70) 6,770 (1.3,48) 30,366 (5.9,871) 59,871 (1.70) FTE 1.3 6.1 23.3 47.3 70.3 Adjustments (Nominal \$)*** Value Value 0		2,471	6,249	11,759	26,233	53,900
FTE 1.3 6.1 23.3 47.3 70.3 Adjustments (Nominal \$)*** Labor 0	NSE	0	0	0	0	0
Adjustments (Nominal \$) ** Labor 0 <th< td=""><td></td><td>2,570</td><td>6,770</td><td>13,748</td><td>30,386</td><td>59,871</td></th<>		2,570	6,770	13,748	30,386	59,871
Labor 0 0 0 0 0 0 Non-Labor 0 0 0 0 0 0 Total 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Use of the control of the contro	FTE	1.3	6.1	23.3	47.3	70.3
Non-Labor 0 0 0 0 0 0 0 0 0	Adjustments (Nominal \$)	**				
NSE 0 0 0 0 0 Total 0 0 0 0 FTE 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Labor 99 521 1,989 4,154 5,971 Non-Labor 2,471 6,249 11,759 26,233 53,900 NSE 0 0 0 0 0 0 0 Total 2,570 6,770 13,748 30,386 59,871 FTE 1.3 6.1 23.3 47.3 70.3 Vacation & Sick (Nominal \$) 1 87 325 672 983 Non-Labor 16 87 325 672 983 Non-Labor 0 0 0 0 0 FTE 0.2 1.0 3.9 7.9 11.9 Escalation to 2016\$ 2 6 -50 -36 0 N	Labor	0	0	0	0	0
Total 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Labor 99 521 1,989 4,154 5,971 NON-Labor 2,471 6,249 11,759 26,233 53,900 NSE 0 0 0 0 0 0 0 Total 2,570 6,770 13,748 30,386 59,871 70.3 70.3 Vacation & Sick (Nominal \$) 1 23.3 47.3 70.9 11.9 70.3	Non-Labor	0	0	0	0	0
Total FTE 0.0 0.0 0.0 0.0 0.0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) Labor 99 521 1,989 4,154 5,971 Non-Labor 2,471 6,249 11,759 26,233 53,900 NSE 0 0 0 0 0 0 0 Total 2,570 6,770 13,748 30,386 59,871 59,871 59,871 57,871 <t< td=""><td>NSE</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></t<>	NSE	0	0	0	0	0
Recorded-Adjusted (Nominal \$)	Total	0		0	0	0
Labor 99 521 1,989 4,154 5,971 Non-Labor 2,471 6,249 11,759 26,233 53,900 NSE 0 0 0 0 0 0 Total 2,570 6,770 13,748 30,386 59,871 FTE 1.3 6.1 23.3 47.3 70.3 Vacation & Sick (Nominal \$) Labor 16 87 325 672 983 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 16 87 325 672 983 672 983 FTE 0.2 1.0 3.9 7.9 11.9 983 FTE 0.2 1.0 3.9 7.9 11.9 983 Escalation to 2016\$ 2 -6 -50 -36 0 0	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 2,471 6,249 11,759 26,233 53,900 NSE	Recorded-Adjusted (Nom	inal \$)				
NSE	Labor	99	521	1,989	4,154	5,971
Total 2,570 6,770 13,748 30,386 59,871 FTE 1.3 6.1 23.3 47.3 70.3 Vacation & Sick (Nominal \$) Labor 16 87 325 672 983 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 16 87 325 672 983 672 983 FTE 0<	Non-Labor	2,471	6,249	11,759	26,233	53,900
FTE 1.3 6.1 23.3 47.3 70.3 Vacation & Sick (Nominal \$) Labor 16 87 325 672 983 Non-Labor 0 0 0 0 0 0 0 NSE 0 <t< td=""><td>NSE</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></t<>	NSE	0	0	0	0	0
FTE 1.3 6.1 23.3 47.3 70.3 Vacation & Sick (Nominal \$) Labor 16 87 325 672 983 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 Total 16 87 325 672 983 FTE 0.2 1.0 3.9 7.9 11.9 Escalation to 2016\$ Labor -2 -6 -50 -36 0 Non-Labor -41 -67 -252 -198 0 NSE 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) 0 0 0 0 0 Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,90	Total	2,570	6,770	13,748	30,386	59,871
Labor 16 87 325 672 983 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 16 87 325 672 983 679 0	FTE	1.3	6.1	23.3	47.3	70.3
Non-Labor 0	Vacation & Sick (Nominal	\$)				
NSE 0 983 7.9 983 7.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 983 7.9 11.9 9 0 <t< td=""><td>Labor</td><td>16</td><td>87</td><td>325</td><td>672</td><td>983</td></t<>	Labor	16	87	325	672	983
Total 16 87 325 672 983 FTE 0.2 1.0 3.9 7.9 11.9 Escalation to 2016\$ Labor -2 -6 -50 -36 0 Non-Labor -41 -67 -252 -198 0 NSE 0 0 0 0 0 0 Total -43 -73 -302 -234 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Non-Labor	0	0	0	0	0
FTE 0.2 1.0 3.9 7.9 11.9 Escalation to 2016\$ Labor -2 -6 -50 -36 0 Non-Labor -41 -67 -252 -198 0 NSE 0 0 0 0 0 0 Total -43 -73 -302 -234 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	NSE	0	0	0	0	0
Escalation to 2016\$ Labor	Total	16	87	325	672	983
Labor -2 -6 -50 -36 0 Non-Labor -41 -67 -252 -198 0 NSE 0 0 0 0 0 0 Total -43 -73 -302 -234 0 </td <td>FTE</td> <td>0.2</td> <td>1.0</td> <td>3.9</td> <td>7.9</td> <td>11.9</td>	FTE	0.2	1.0	3.9	7.9	11.9
Non-Labor -41 -67 -252 -198 0 NSE 0 0 0 0 0 0 Total -43 -73 -302 -234 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Escalation to 2016\$					
NSE 0 0 0 0 0 0 Total -43 -73 -302 -234 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Labor	-2	-6	-50	-36	0
Total -43 -73 -302 -234 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Non-Labor	-41	-67	-252	-198	0
FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	NSE	0	0	0	0	0
Recorded-Adjusted (Constant 2016\$) Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Total	-43	-73	-302	-234	
Labor 113 601 2,264 4,789 6,954 Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Recorded-Adjusted (Cons	stant 2016\$)				
Non-Labor 2,430 6,182 11,507 26,035 53,900 NSE 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Labor	113	601	2,264	4,789	6,954
NSE 0 0 0 0 0 0 0 Total 2,544 6,784 13,771 30,824 60,854	Non-Labor	2,430	6,182			
Total 2,544 6,784 13,771 30,824 60,854	NSE	0	0			
	Total	2,544	6,784	13,771		60,854
	FTE	1.5	7.1	27.2	55.2	82.2

^{*} After company-wide exclusions of Non-GRC costs

^{**} Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Summary of Adjustments to Recorded:

In Nominal \$(000)						
	Years	2012	2013	2014	2015	2016
Labor	-	0	0	0	0	0
Non-Labor		0	0	0	0	0
NSE		0	0	0	0	0
	Total	0 -	0	0	0	0
FTE		0.0	0.0	0.0	0.0	0.0

Year Adj Group Labor NLbr NSE Total FTE	RefID
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Beginning of Workpaper Sub Details for Workpaper Group 002770

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.001 - RAMP - Base BC 277 is for DIMP DREAMS and GIPP

In-Service Date: Not Applicable

Description:

RAMP - Base DIMP capital both DIMP DREAMS and GIPP

Forecast In 2016 \$(000)								
	Years 2017 2018 2019							
Labor		1,588	1,588	1,588				
Non-Labor		68,595	69,995	59,266				
NSE		0	0	0				
	Total	70,183	71,583	60,854				
FTE		48.0	48.0	48.0				

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.001 - RAMP - Base BC 277 is for DIMP DREAMS and GIPP

RAMP Item # 1

RAMP Chapter: SCG-10

Program Name: DIMP DREAMS and GIPP

Program Description: Risk Evaluation and Monitoring of Distribution Systems, Program in place to protect assets by building

infrastrucure to protect gas equipment

Risk/Mitigation:

Risk: 1,2,4, 9,10

Mitigation: Distribution Integrity management programs are closely monitored and given high priority. Frequent audits

are conducted.

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	73,600	38,600	137,000
High	73,600	38,600	169,000

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Work Type: Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 60854

Explanation:

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.002 - RAMP - Incremental DIMP Gas Distribution enhancement IT

In-Service Date: 12/31/2018

Description:

RAMP - Incremental Gas Distribution Enhancement IT - this is to enhance GIS application used by DIMP program

Forecast In 2016 \$(000)						
	Years	2017	2018	2019		
Labor		0	0	0		
Non-Labor		4,200	2,800	0		
NSE		0	0	0		
	Total	4,200	2,800	0		
FTE		0.0	0.0	0.0		

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.002 - RAMP - Incremental DIMP Gas Distribution enhancement IT

RAMP Item # 1

RAMP Chapter: SCG-8

Program Name: Records Management, maintenance of projects

Program Description: Projects that will modernize and enhance the searchability, traceability and digitalization of Operation

Asset Records

Risk/Mitigation:

Risk: Annual departmental self-assessments

Mitigation: projects that will enhance asset records

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	4,200	2,800	2,800
High	4,200	2,800	2,800

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Work Type: Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: DIMP didn't fund this IT enhancement until 2017

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.003 - RAMP - Incremental BC 277 is for DIMP DREAMS and GIPP

In-Service Date: Not Applicable

Description:

RAMP - Incremental BC 277 is for DIMP DREAMS and GIPP

Forecast In 2016 \$(000)					
	Years	2017	2018	2019	
Labor		0	0	0	
Non-Labor		0	0	96,346	
NSE		0	0	0	
	Total	0	0	96,346	
FTE		0.0	0.0	0.0	

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.003 - RAMP - Incremental BC 277 is for DIMP DREAMS and GIPP

RAMP Item # 1

RAMP Chapter: SCG-4

Program Name: DIMP DREAMS and GIPP
Program Description: DIMP DREAMS and GIPP

Risk/Mitigation:

Risk: none Mitigation: na

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
Hiah	0	0	0

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Work Type: Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Area: TIMP & DIMP
Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.004 - RAMP - Incremental DIMP Gas Distribution enhancement IT

In-Service Date: 12/31/2019

Description:

RAMP - Incremental Gas Distribution Enhancement IT - this is to enhance GIS application used by DIMP program

Forecast In 2016 \$(000)					
	Years	2017	2018	2019	
Labor		0	0	0	
Non-Labor		0	0	2,800	
NSE		0	0	0	
	Total	0	0	2,800	
FTE		0.0	0.0	0.0	

Area: TIMP & DIMP Witness: Maria T. Martinez

Budget Code: 00277.0
Category: B. DIMP
Category-Sub: 1. DIMP

Workpaper Group: 002770 - Distribution Integrity Management

Workpaper Detail: 002770.004 - RAMP - Incremental DIMP Gas Distribution enhancement IT

RAMP Item # 1

RAMP Chapter: SCG-8

Program Name: Records Management, maintenance of projects

Program Description: Projects that will modernize and enhance the searchability, tracability and digitalization

Risk/Mitigation:

Risk: Annual departmental self-assessments

Mitigation: projects that will enchance asset records

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
Hiah	0	0	0

Funding Source: CPUC-GRC Forecast Method: Zero-Based

Construction Start Date: In Service Date:12/31/2019

Work Type: Mandated
Work Type Citation: na

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: DIMP didn't fund this IT enhancement until 2017