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

SoCalGas

A Sempra Energy utility

2019 General Rate Case - APP
INDEX OF WORKPAPERS

Exhibit SCG-14-CWP - TIMP & DIMP

DOCUMENT	PAGE

Overall Summary For Exhibit No. SCG-14-CWP

	Area:	TIMP & DIMP
	Witness:	Maria T. Martinez

	In 2016 $ (000)		
	Adjusted-Forecast		
	2017	**2018**	**2019**
A. TIMP	50,801	50,801	55,000
B. DIMP	74,383	74,383	160,000
Total	**125,184**	**125,184**	**215,000**

Note: Totals may include rounding differences.

Area:	TIMP & DIMP
Witness:	Maria T. Martinez
Category:	A. TIMP
Workpaper:	VARIOUS

Summary for Category: A. TIMP

	In 2016$ (000)			
	Adjusted-Recorded	**Adjusted-Forecast**		
	2016	**2017**	**2018**	**2019**
Labor	2,083	4,209	4,209	4,209
Non-Labor	36,140	46,592	46,592	50,791
NSE	0	0	0	0
Total	**38,223**	**50,801**	**50,801**	**55,000**
FTE	20.0	48.0	48.0	48.0

002760 Projs to Sup Trans. - PIP

Labor	-18	577	577	577
Non-Labor	90	4,503	4,503	4,503
NSE	0	0	0	0
Total	**72**	**5,080**	**5,080**	**5,080**
FTE	-0.1	7.0	7.0	7.0

P03120 GT PL Rpls / Externally Driven

Labor	2,101	3,632	3,632	3,632
Non-Labor	36,050	42,089	42,089	46,288
NSE	0	0	0	0
Total	**38,151**	**45,721**	**45,721**	**49,920**
FTE	20.1	41.0	41.0	41.0

Note: Totals may include rounding differences.

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 Method		Adjusted Recorded					Adjusted Forecast		
Years		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		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:

Note: Totals may include rounding differences.

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**			**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	Labor	NLbr	NSE	Total	FTE	RefID
2017 Total		0	0	0	0	0.0	
2018 Total		0	0	0	0	0.0	
2019 Total		0	0	0	0	0.0	

Note: Totals may include rounding differences.

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**	**0**
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (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
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 (Constant 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
Note: Totals may include rounding differences.

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 $(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

Note: Totals may include rounding differences.

**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

Note: Totals may include rounding differences.

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)

	2017	2018	2019
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 Method		Adjusted Recorded					Adjusted Forecast		
Years		**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
Total		**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

Note: Totals may include rounding differences.

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**			**Forecast Adjustments**			**Adjusted-Forecast**		
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**	**4,199**	**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	Labor	NLbr	NSE	Total	FTE	RefID
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 expecting increase in TIMP capital activity						
2019 Total		0	4,199	0	4,199	0.0	

Note: Totals may include rounding differences.

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:

	2012 ($000)	2013 ($000)	2014 ($000)	2015 ($000)	2016 ($000)
Recorded (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
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
Total	**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
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 $)					
Labor	484	581	431	354	297
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	**484**	**581**	**431**	**354**	**297**
FTE	4.9	5.5	4.0	3.2	2.9
Escalation to 2016$					
Labor	-58	-44	-66	-19	0
Non-Labor	-670	-515	-699	-275	0
NSE	0	0	0	0	0
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**
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
Note: Totals may include rounding differences.

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

Year	Adj_Group	Labor	NLbr	NSE	Total	FTE	RefID

Note: Totals may include rounding differences.

**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

Note: Totals may include rounding differences.

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)

	2017	2018	2019
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

Note: Totals may include rounding differences.

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)

	2017	2018	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**	**0**	**3,700**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

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)

	2017	2018	2019
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$ (000)			
	Adjusted-Recorded	**Adjusted-Forecast**		
	2016	**2017**	**2018**	**2019**
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

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

Note: Totals may include rounding differences.

**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 Method		Adjusted Recorded					Adjusted Forecast		
Years		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
Total		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

Note: Totals may include rounding differences.

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**			**Forecast Adjustments**			**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

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	RefID
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 DREAMS capital for 2019 expecting to ramp up the amount of miles replacing.

| **2019 Total** | | 0 | 85,617 | 0 | 85,617 | 0.0 | |

Note: Totals may include rounding differences.

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:

	2012 ($000)	2013 ($000)	2014 ($000)	2015 ($000)	2016 ($000)
Recorded (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
Total	**2,570**	**6,770**	**13,748**	**30,386**	**59,871**
FTE	1.3	6.1	23.3	47.3	70.3
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**	**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
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 $)					
Labor	16	87	325	672	983
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	**16**	**87**	**325**	**672**	**983**
FTE	0.2	1.0	3.9	7.9	11.9
Escalation to 2016$					
Labor	-2	-6	-50	-36	0
Non-Labor	-41	-67	-252	-198	0
NSE	0	0	0	0	0
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**
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
Note: Totals may include rounding differences.

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

Note: Totals may include rounding differences.

**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

Note: Totals may include rounding differences.

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)

	2017	2018	2019
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

Note: Totals may include rounding differences.

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)

	2017	2018	2019
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

Note: Totals may include rounding differences.

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

<div style="border:1px solid black">

Risk/Mitigation:

  Risk: none

  Mitigation: na

</div>

<div style="border:1px solid black">

Forecast CPUC Cost Estimates ($000)

	2017	2018	2019
Low	0	0	0
High	0	0	0

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

Work Type: Mandated

Work Type Citation: na

</div>

<div style="border:1px solid black">

Historical Embedded Cost Estimates ($000)

  Embedded Costs: 0

  Explanation:

</div>

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

Note: Totals may include rounding differences.

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)

	2017	2018	2019
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: Mandated

Work Type Citation: na

Historical Embedded Cost Estimates ($000)

Embedded Costs: 0

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