Application of SOUTHERN CALIFORNIA GAS COMPANY for authority to update its gas revenue requirement and base rates effective January 1, 2024 (U 904-G)	))))

Application No. 22-05-015

Exhibit No.: (SCG-21-CWP-R)

REVISED CAPITAL WORKPAPERS TO PREPARED DIRECT TESTIMONY OF WILLIAM J. EXON ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

AUGUST 2022

2024 General Rate Case - REVISED

INDEX OF WORKPAPERS

Exhibit SCG-21-CWP-R - INFORMATION TECHNOLOGY

2024 General Rate Case - REVISED

INDEX OF WORKPAPERS

Exhibit SCG-21-CWP-R - INFORMATION TECHNOLOGY

2024 General Rate Case - REVISED

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Exhibit SCG-21-CWP-R - INFORMATION TECHNOLOGY

2024 General Rate Case - REVISED

INDEX OF WORKPAPERS

Exhibit SCG-21-CWP-R - INFORMATION TECHNOLOGY

Overall Summary For Exhibit No. SCG-21-CWP-R

Area: INFORMATION TECHNOLOGY

Witness: William J. Exon

	In 2021 $ (000) Adjusted-Forecast		
	2022	2023	2024
A. Administrative & General	7,953	51,758	32,416
B. Customer Services – Field and Advanced Meter Opera	14,007	12,331	18,180
C. Customer Services – Office Operations	14,522	20,657	15,763
D. Customer Services – Information	3,586	2,565	0
E. Gas Distribution	0	1,835	1,835
F. Gas Engineering	1,053	0	0
G. Gas System Staff & Technology	26,295	41,959	34,399
H. Gas Transmission Operations and Construction	1,162	95	0
I. People and Culture Department	6,705	7,503	7,582
J. Information Technology	148,011	71,067	54,510
K. Safety & Risk Management Systems	12,168	8,911	8,439
L. Supply Management & Supplier Diversity	17,697	10,365	1,703
Total	**253,159**	**229,046**	**174,827**

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: A. Administrative & General
Workpaper: VARIOUS

Summary for Category: A. Administrative & General

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	1,684	4,563	4,916
Non-Labor	0	6,269	47,195	27,500
NSE	0	0	0	0
Total	**0**	**7,953**	**51,758**	**32,416**
FTE	0.0	14.0	38.1	41.0

00756AV Financial Risk Management - Risk Based Decision Making

Labor	0	471	1,177	1,177
Non-Labor	0	1,104	5,575	4,000
NSE	0	0	0	0
Total	**0**	**1,575**	**6,752**	**5,177**
FTE	0.0	3.9	9.8	9.8

00756L SAP Transformation

Labor	0	1,041	2,562	2,562
Non-Labor	0	4,127	40,320	20,000
NSE	0	0	0	0
Total	**0**	**5,168**	**42,882**	**22,562**
FTE	0.0	8.7	21.4	21.4

00756M GRC and Regulatory Complex Search

Labor	0	172	0	0
Non-Labor	0	1,038	0	0
NSE	0	0	0	0
Total	**0**	**1,210**	**0**	**0**
FTE	0.0	1.4	0.0	0.0

00786I SAP S4/HANA - Business Optimization

Labor	0	0	824	1,177
Non-Labor	0	0	1,300	3,500
NSE	0	0	0	0
Total	**0**	**0**	**2,124**	**4,677**
FTE	0.0	0.0	6.9	9.8

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AV - Financial Risk Management - Risk Based Decision Making

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AV - Financial Risk Management - Risk Based Decision Making

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	471	1,177	1,177
Non-Labor	Zero-Based	0	0	0	0	0	1,104	5,575	4,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,575**	**6,752**	**5,177**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.9	9.8	9.8

Business Purpose:

This project improves the Company's ability to manage business activities in a risk informed manner and comply with requirements of CPUC SMAP decision for risk informed decision making. It also improves the integration between RAMP, GRCs and RSAR accountability reporting of cost and risk activity units.

Physical Description:

1) Improve Risk Spend Accountability Report (RSAR) process
2) Improve Risk Assessment Mitigation Stage (RAMP) to GRC integration
3) Enhance SAP accounting to capture costs and units of risk activities
4) Create necessary interfaces to impacted feeder systems: HR, construction planning, and forecasting
5) Automate periodic reporting of RSAR results by organizational units
6) Improve regulatory forecasting and modeling systems

This project impacts one application.
The internal labor costs for this project are driven by various resources such as project managers, business project managers, developers, architects, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software, hardware, software and hardware maintenance, and vendor services for development, integration, and IT quality assurance.
This is a shared asset.

Project Justification:

1) Improve processes and systems needed to comply with new requirements
2) Forecast risk activity metrics and units in GRC filings
3) Track risk mitigation activities using costs, metrics and units within accounting system (SAP)
4) Automate systems to help forecast and report RAMP and safety metrics
5) Establish “risk-informed” budgeting and reporting processes
6) Strengthen company wide risk-informed decision-making culture
7) Align GRC forecasting structure with internal accounting, budgeting and reporting systems

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AV - Financial Risk Management - Risk Based Decision Making

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AV

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AV - Financial Risk Management - Risk Based Decision Making
Workpaper Detail:	00756AV.001 - Financial Risk Management - Risk Based Decision Making Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	471	1,177	1,177
Non-Labor	0	0	0
NSE	0	0	0
Total	**471**	**1,177**	**1,177**
FTE	3.9	9.8	9.8

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AV - Financial Risk Management - Risk Based Decision Making
Workpaper Detail: 00756AV.002 - Financial Risk Management - Risk Based Decision Making NL Services

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,104	500	4,000
NSE	0	0	0
Total	**1,104**	**500**	**4,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AV - Financial Risk Management - Risk Based Decision Making
Workpaper Detail: 00756AV.003 - Financial Risk Management - Risk Based Decision Making HW Purchase

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,500	0
NSE	0	0	0
Total	**0**	**1,500**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AV - Financial Risk Management - Risk Based Decision Making
Workpaper Detail:	00756AV.004 - Financial Risk Management - Risk Based Decision Making SW Purchase
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,000	0
NSE	0	0	0
Total	**0**	**2,000**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AV - Financial Risk Management - Risk Based Decision Making
Workpaper Detail:	00756AV.005 - Financial Risk Management - Risk Based Decision Making HW Maintenance
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	675	0
NSE	0	0	0
Total	**0**	**675**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AV - Financial Risk Management - Risk Based Decision Making
Workpaper Detail:	00756AV.006 - Financial Risk Management - Risk Based Decision Making SW Maintenance
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	900	0
NSE	0	0	0
Total	**0**	**900**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756L - SAP Transformation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756L - SAP Transformation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	1,041	2,562	2,562
Non-Labor	Zero-Based	0	0	0	0	0	4,127	40,320	20,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**5,168**	**42,882**	**22,562**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	8.7	21.4	21.4

Business Purpose:

This project started in 2021. The company has been utilizing SAP's core Enterprise Resource Planning (ERP) system to support business needs. To meet evolving industry needs, the SAP platform has undergone a re-architecture to S4HANA, which aligns with the companies digital transformation strategy. Digital technology, real-time data, intuitive user experience, and continual innovation are some of the key capabilities of this platform and aligns with strategic business and performance goals.

Physical Description:

Phase 1:
1) Establish technical and functional readiness, including deeper analysis to evaluate S4 HANA changes and opportunities to leverage within our environment and to refine and optimize scope for phase 2.

Phase 2:
1) Upgrade the current SAP system to S4HANA including integrations, customizations, and reports.
2) Establish a modern, any-device user interface with embedded operational reporting.
3) Refine business processes driven by mandatory functional changes as well as strategic business transformations.
4) Address impacts with components, products, and connected system through remediation or upgrade.
5) Upgrade hardware.

This project impacts one application platform over the project duration.
The internal labor costs for this project are driven by various resources such as project managers, developers, architects, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware and prepaid maintenance, SaaS subscription, and vendor services for implementation, development, and IT quality assurance.
This is a shared asset.

Project Justification:

1) Increase efficiency across end users through enhanced usability, simplified data model for improved system performance and support, and embedded operational reporting.
2) Finance and accounting benefits with shorter closing cycles and other process efficiences due to a combined finance , costing, asset, material, and profitability ledgers.
3) Infrastructure has more stability, efficiency, and disaster recovery capabilities.
4) Access to the latest products and solutions from SAP and integrated third parties.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756L - SAP Transformation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756L

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756L - SAP Transformation
Workpaper Detail: 00756L.001 - SAP Transformation Labor

In-Service Date: 04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	1,041	2,562	2,562
Non-Labor	0	0	0
NSE	0	0	0
Total	**1,041**	**2,562**	**2,562**
FTE	8.7	21.4	21.4

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756L - SAP Transformation
Workpaper Detail: 00756L.002 - SAP Transformation NL Services

In-Service Date: 04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,003	22,000	20,000
NSE	0	0	0
Total	**3,003**	**22,000**	**20,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756L - SAP Transformation
Workpaper Detail: 00756L.003 - SAP Transformation HW Purchase

In-Service Date: 04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,124	0	0
NSE	0	0	0
Total	**1,124**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756L - SAP Transformation
Workpaper Detail:	00756L.004 - SAP Transformation SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	18,000	0
NSE	0	0	0
Total	**0**	**18,000**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756L - SAP Transformation
Workpaper Detail:	00756L.005 - SAP Transformation HW Maintenance
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	320	0
NSE	0	0	0
Total	**0**	**320**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756M - GRC and Regulatory Complex Search

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756M - GRC and Regulatory Complex Search

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	172	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,038	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,210**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0

Business Purpose:

This project started in 2021. The purpose of this project is to implement a complex and semantic search tool to support the GRC and Regulatory process. The search tool will enable all the business to search on a large repository of GRC-related documents via "semantics" or "meaning". Semantic searching allows a user to search on words that are similar, but not necessarily exact, so that a user can find documents when the user does not know exactly what to search for.

Physical Description:

1) Project to develop custom Natural Language Processing (NLP) search algorithms and Complex Search tool.
2) Implement complex and semantic search use cases to support GRC Data Requests.
3) Develop additional complex search algorithms per prioritized backlog of GRC document types to enable GRC users to find prior GRC-related documents based on semantic meaning, rather than basic keyword searching. These documents are very important for responding to Intervenor data requests in the upcoming GRC.

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as company product owners, AI engineers, IT architects, information security engineers, product delivery managers/leads, and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for application development.
This is a shared asset.

Project Justification:

1) Allow GRC witnesses, planners, case managers and attorneys to find important data from prior regulatory proceedings
2) Improve the probability of compliance to data request response times.
3) Maximize the quality and consistency of responses.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756M - GRC and Regulatory Complex Search

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756M

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756M - GRC and Regulatory Complex Search
Workpaper Detail:	00756M.001 - GRC and Regulatory Complex Search Labor
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	172	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**172**	**0**	**0**
FTE	1.4	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756M - GRC and Regulatory Complex Search
Workpaper Detail:	00756M.002 - GRC and Regulatory Complex Search NL Services
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,038	0	0
NSE	0	0	0
Total	**1,038**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786I - SAP S4/HANA - Business Optimization

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: A. Administrative & General
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00786I - SAP S4/HANA - Business Optimization

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	824	1,177
Non-Labor	Zero-Based	0	0	0	0	0	0	1,300	3,500
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**2,124**	**4,677**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	6.9	9.8

Business Purpose:

The SAP S4/HANA Business Optimization project delivers business value and efficiencies though additional standard options provided in the upgraded version of SAP. The Business Optimization project goes beyond the mandatory changes required to complete the technical upgrade itself. The optimizations leverage state of the art software built around industry best practices and delivers transformational improvements across the Company.

Physical Description:

This scope of this project includes most functional SAP modules such as: Supply Chain, FI/CO/AP, and Plant Maintenance.

This project impacts one application.
The internal labor costs for this project are driven by various resources such as project manager, developers, architect, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for implementation and IT quality assurance .
This is a shared asset.

Project Justification:

Once the technical upgrade is complete, new and improved capabilities specific to each SAP module will be available. Configuration and implementation improvements will increase performance, efficiency, and end user satisfaction and eliminate custom development with standard SAP functions.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786I - SAP S4/HANA - Business Optimization

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786l

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786I - SAP S4/HANA - Business Optimization
Workpaper Detail:	00786I.001 - SAP S4/HANA - Business Optimization Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	824	1,177
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**824**	**1,177**
FTE	0.0	6.9	9.8

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	A. Administrative & General
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786I - SAP S4/HANA - Business Optimization
Workpaper Detail:	00786I.002 - SAP S4/HANA - Business Optimization NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,300	3,500
NSE	0	0	0
Total	**0**	**1,300**	**3,500**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: B. Customer Services – Field and Advanced Meter Opera
Workpaper: VARIOUS

Summary for Category: B. Customer Services – Field and Advanced Meter Opera

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	3,365	5,490	4,278
Non-Labor	0	10,642	6,841	13,902
NSE	0	0	0	0
Total	**0**	**14,007**	**12,331**	**18,180**
FTE	0.0	28.1	45.8	35.7
00754AI Advanced Meter Pole Inspection Upgrade				
Labor	0	191	70	0
Non-Labor	0	109	55	0
NSE	0	0	0	0
Total	**0**	**300**	**125**	**0**
FTE	0.0	1.6	0.6	0.0
00754AK RAMP - PACER Workforce Management Replacement Project				
Labor	0	1,618	5,352	3,431
Non-Labor	0	5,405	6,556	10,342
NSE	0	0	0	0
Total	**0**	**7,023**	**11,908**	**13,773**
FTE	0.0	13.5	44.6	28.6
00754B RAMP - PACER Mobile Upgrade Phase 2				
Labor	0	482	0	0
Non-Labor	0	2,500	0	0
NSE	0	0	0	0
Total	**0**	**2,982**	**0**	**0**
FTE	0.0	4.0	0.0	0.0
00754E RAMP - Advanced Meter Network Exceptions Management and Operations				
Labor	0	191	0	0
Non-Labor	0	834	0	0
NSE	0	0	0	0
Total	**0**	**1,025**	**0**	**0**
FTE	0.0	1.6	0.0	0.0
00754J Data Analysis Reporting Tool (DART) Upgrade				
Labor	0	108	0	0
Non-Labor	0	110	0	0
NSE	0	0	0	0
Total	**0**	**218**	**0**	**0**
FTE	0.0	0.9	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: B. Customer Services – Field and Advanced Meter Opera
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00754Y DART Upgrade Phase II				
Labor	0	206	68	0
Non-Labor	0	390	230	0
NSE	0	0	0	0
Total	**0**	**596**	**298**	**0**
FTE	0.0	1.7	0.6	0.0
00754G Meter Set Assembly Inspection Enhancements Project				
Labor	0	176	0	0
Non-Labor	0	293	0	0
NSE	0	0	0	0
Total	**0**	**469**	**0**	**0**
FTE	0.0	1.5	0.0	0.0
00754H Advanced Meter Web Portal for Third Party Attachments				
Labor	0	99	0	0
Non-Labor	0	165	0	0
NSE	0	0	0	0
Total	**0**	**264**	**0**	**0**
FTE	0.0	0.8	0.0	0.0
00754X Advanced Meter Data Collector Unit Hardware Refresh				
Labor	0	0	0	847
Non-Labor	0	0	0	3,560
NSE	0	0	0	0
Total	**0**	**0**	**0**	**4,407**
FTE	0.0	0.0	0.0	7.1
00755E Call Ahead SMS Text-based Customer Notifications				
Labor	0	294	0	0
Non-Labor	0	836	0	0
NSE	0	0	0	0
Total	**0**	**1,130**	**0**	**0**
FTE	0.0	2.5	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754AI - Advanced Meter Pole Inspection Upgrade

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754AI - Advanced Meter Pole Inspection Upgrade

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	191	70	0
Non-Labor	Zero-Based	0	0	0	0	0	109	55	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**300**	**125**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.6	0.6	0.0

Business Purpose:

Advanced Meter (AM) Data Collector Units (DCUs) and poles are inspected once a year so that any physical observations that may impact optimal operation of the DCU and constitute a safety concern are recorded and remediated. The project introduces an application that will eliminate manual recording of observations by enabling electronic and mobile options to reduce the time it takes to complete the inspections, from capturing the data in the field on paper to transcribing into SAP. It also provides secure access for third party contractors who assist with DCU inspections complete the process more efficiently than the process used today. In addition, the project provides a means to seamlessly communicate and manage incidents related to licensees' equipment.

Physical Description:

The scope of the project is to implement an application that will enable electronic and mobile options to optimize the DCU inspection process via:
1) User friendly interface on mobile device or computer that connects to existing SAP DCU inspection module
2) Provides the capability to complete DCU inspection forms in the field/onsite
3) Preserve data collected when there is no network connectivity. Ability to automatically sync up once network connectivity is restored
4) Preserve existing functionality of SAP inspection system

This project impacts one application.
The internal labor costs for this project are driven by various resources such as project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for project management, development, and testing support.
This is a non-shared asset.

Project Justification:

1) Streamline the DCU pole inspection process and reduces the risk of data entry errors
2) Reduce the overall time to complete the DCU inspection from capturing the data in the field on paper to transcribing into SAP by SoCalGas project managers
3) Enable third party contractors to complete DCU inspections without relying on SoCalGas project managers to do SAP data entry

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AI - Advanced Meter Pole Inspection Upgrade

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754AI

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AI - Advanced Meter Pole Inspection Upgrade
Workpaper Detail:	00754AI.001 - Advanced Meter Pole Inspection Upgrade Labor
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	191	70	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**191**	**70**	**0**
FTE	1.6	0.6	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AI - Advanced Meter Pole Inspection Upgrade
Workpaper Detail:	00754AI.002 - Advanced Meter Pole Inspection Upgrade NL Services
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	104	55	0
NSE	0	0	0
Total	**104**	**55**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AI - Advanced Meter Pole Inspection Upgrade
Workpaper Detail:	00754AI.003 - Advanced Meter Pole Inspection Upgrade SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	5	0	0
NSE	0	0	0
Total	**5**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754AK - RAMP - PACER Workforce Management Replacement Project

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754AK - RAMP - PACER Workforce Management Replacement Project

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	1,618	5,352	3,431
Non-Labor	Zero-Based	0	0	0	0	0	5,405	6,556	10,342
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**7,023**	**11,908**	**13,773**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	13.5	44.6	28.6

Business Purpose:

This proejct retires CSF's 30-year-old legacy Portable Automated Centralized Electronic Retrieval (PACER) WFM mainframe and suite of custom applications and extend the cloud-based solution from IFS/Clevest to support Capacity Planning, Resource Management, Order Scheduling, Appointment Booking, Order Routing and Dispatch. The new WFM solution connects into the recently deployed PACER Mobile solution for the field. Along with the technical systems work this program works with CSF Operations to evaluate, recommend and implement key business and organizational changes that will be required to enable the delivery. The broader program includes business, technical and data readiness along with program management, organizational change management and value realization tracking.

Physical Description:

1) Enable Customer Services Field Operations with IFS/Clevest PSO/WISE and Mobile Workforce Management (MWM) Workspace expanding the existing PACER Mobile Field solution
2) Enable scheduling, optimization, dispatch, and resource management for CSF dispatch and supporting CSF field organization
3) Support CSF Operations in the development and implementation of a new Dispatch organizational model
4) Support CSF Operations in designing options for WFM key business changes
5) Initial integration will be to Legacy CIS & DART using PACER as a pass-through
6) Expand the IFS/Clevest solution to the AWS cloud
7) Integration of Routesmart remains connected to legacy CIS for MSAI order routing creation. The super-order processes in PACER will be eliminated and expanded in IFS/Clevest Workspace
8) Integrate with other SoCalGas systems as required to support identified functions
9) Support Business, Technical and Data Readiness activities
10) Mobilize and Execute Program Management Office, for governance and alignment with the Program Office
11) Enable and Execute Organization Change Management
Support value realization tracking

This project impacts five applications including the PACER, PACER Dispatch, Automated Resourcing Tool (ART), DART, WorkSpace and WorkBook applications.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware and software licenses costs, SaaS subscription and vendor services for configuration, integration, testing and implementation support, and project management.
This is a non-shared asset.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project

Project Justification:

The existing PACER Desktop cannot support the changing business needs, regulatory requirements or the ability to drive efficiency improvements across Customer Service Field. The PACER Mainframe was never envisioned to support the volume or type of work of CSF today. The PACER Mainframe technology is complex, inflexible and costly to modify.
Potential project benefits will be evaluated one year after implementation and stabilization in 2026.
Potential Benefits identified include: retiring Legacy Applications, and Operational Efficiencies with Automation in Planning, Work and Resource Management, Dispatch and Routing, Avoided Dispatch Capacity Expansion, employee roles and responsibilities and skill adjustments as a result of implementing a new operating model and new supporting technology, Reduce Technician Travel Time, Reduction in Field Overtime, and Enhanced fielded order bundling.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754AK

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project
Workpaper Detail:	00754AK.001 - RAMP - PACER Workforce Management Replacement Project Labor (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	1,618	5,352	3,431
Non-Labor	0	0	0
NSE	0	0	0
Total	**1,618**	**5,352**	**3,431**
FTE	13.5	44.6	28.6

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project
Workpaper Detail:	00754AK.002 - RAMP - PACER Workforce Management Replacement Project NL Services (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,436	6,468	10,307
NSE	0	0	0
Total	**3,436**	**6,468**	**10,307**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project
Workpaper Detail:	00754AK.003 - RAMP - PACER Workforce Management Replacement Project SaaS Subscription (Same RAMP item 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,900	0	0
NSE	0	0	0
Total	**1,900**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project
Workpaper Detail:	00754AK.004 - RAMP - PACER Workforce Management Replacement Project HW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	19	38	35
NSE	0	0	0
Total	**19**	**38**	**35**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754AK - RAMP - PACER Workforce Management Replacement Project
Workpaper Detail:	00754AK.005 - RAMP - PACER Workforce Management Replacement Project SW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	50	50	0
NSE	0	0	0
Total	**50**	**50**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754B - RAMP - PACER Mobile Upgrade Phase 2

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754B - RAMP - PACER Mobile Upgrade Phase 2

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	482	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,500	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,982**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0

Business Purpose:

This project started in 2020. It takes a strategic step towards migrating PACER mainframe applications off the mainframe to the Cloud platform. Key components of the existing PACER system are no longer supported or are due for upgrade. Upgrades and enhancements to functionality across all impacted systems provides SoCalGas business benefits and up-to-date technology. This project is a requirement for PACER replacement Phase 3.

Physical Description:

The scope of this project includes replacing and enhancing the legacy Geographical Route Study Display (GRSD) and Geoview applications with Cloud solution. The project implements Emergency (SOS) Orders via the Cloud application during an emergency and manages 'Future Dated Orders' via Cloud application. Additionally, the project enhances the Customer Services Field (CSF) Mobile application. This project also contains costs related to iPhone Hardware Replacement.

This project impacts approximately 2,450 iPhones over the project duration.
The internal labor costs for this project are driven by various resources such as project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software, and vendor services for project management, development, integration, testing, and implementation.
This is a non-shared asset.

Project Justification:

1) Provide business benefits through upgraded and enhanced PACER system
2) Replace iPhone hardware
3) Provide extended communications bandwidth and reliability for field technicians through first responder band 14 network

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754B - RAMP - PACER Mobile Upgrade Phase 2

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754B

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754B - RAMP - PACER Mobile Upgrade Phase 2
Workpaper Detail:	00754B.001 - RAMP - PACER Mobile Upgrade Phase 2 Labor (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	482	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**482**	**0**	**0**
FTE	4.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754B - RAMP - PACER Mobile Upgrade Phase 2
Workpaper Detail:	00754B.002 - RAMP - PACER Mobile Upgrade Phase 2 NL Services (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,060	0	0
NSE	0	0	0
Total	**1,060**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754B - RAMP - PACER Mobile Upgrade Phase 2
Workpaper Detail:	00754B.003 - RAMP - PACER Mobile Upgrade Phase 2 HW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,300	0	0
NSE	0	0	0
Total	**1,300**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754B - RAMP - PACER Mobile Upgrade Phase 2
Workpaper Detail:	00754B.004 - RAMP - PACER Mobile Upgrade Phase 2 SW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	140	0	0
NSE	0	0	0
Total	**140**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754E - RAMP - Advanced Meter Network Exceptions Management and Operations

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754E - RAMP - Advanced Meter Network Exceptions Management and Operations

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	191	0	0
Non-Labor	Zero-Based	0	0	0	0	0	834	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,025**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0

Business Purpose:

This project started in 2020. This project replaces the Advanced Meter Network Exceptions Management and Operations (NEMO) system to continue to meet business demands and maintain active support from IT. The latest version of the NEMO application went live in 2017 as one of the critical systems supporting Advanced Meter Network Operations. NEMO provides automated analysis and reporting to help identify and track network exceptions. In addition, it aggregates data and provides visualization tools to help troubleshoot individual or clustered network issues.

NEMO is a vendor-packaged application that is planned to be sunset by vendor in July 2021 with an additional paid extended support that will be set to expire in July 2022.

A flexible and dynamic technology solution with business capability is required to support the analysis , troubleshooting, data summarization, data rules engine and problem resolution in support of network exceptions management and operations of 6 million Meter Transmission Units (MTUs) and 5,000 DCUs that comprise the SoCalGas Advanced Meter Network.

Physical Description:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754E - RAMP - Advanced Meter Network Exceptions Management and Operations

1) Provide Meter Transmission Unit (MTU) and Data Collector Unit (DCU) Operational Analysis
2) Enable system-wide and regional performance data and metrics and to include both 'point-in- time' and historical trend data
3) Provide dill-down filtering capability to neighborhood-level and individual MTU and DCU details
4)Access to performance comparison tools and various metrics for any MTU and DCU of interest versus surrounding peer devices
5)Provide mapping visualization of MTU and DCU exception information
MTU Alarm and DCU Messages Analysis
6) Availability of 'Direct' alarms and messages sent from MTUs and DCUs including tamper and diagnostic information
7) Enables 'Derived' alarm information based on application of business rules
8) Provides MTU and DCU Maintenance Order Monitoring and Manual Meter Read Metrics
9) Automate analysis of Gas Meter Register and Dial images in comparison to Manual Meter Reads and MTU- Transmitted Reads

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for build, test, and deployment.
This is a non-shared asset.

Project Justification:

This project offers optimal AM network operations to meet company billing and safety demands , improves AM Network maintenance and support , and reduces truck rolls. The project builds new dashboards, reports, and map visualizations on the new system to replace current NEMO application. The project also enhances system functionality and capabilities to meet the growing business needs.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754E - RAMP - Advanced Meter Network Exceptions Management and Operations

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754E

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754E - RAMP - Advanced Meter Network Exceptions Management and Operations
Workpaper Detail:	00754E.001 - RAMP - Advanced Meter Network Exceptions Mgmt and Operations Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	191	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**191**	**0**	**0**
FTE	1.6	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754E - RAMP - Advanced Meter Network Exceptions Management and Operations
Workpaper Detail:	00754E.002 - RAMP - Advanced Meter Network Exceptions Mgmt and Operations NL Srvcs (Same RAMP item 00721A.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	714	0	0
NSE	0	0	0
Total	**714**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754E - RAMP - Advanced Meter Network Exceptions Management and Operations
Workpaper Detail:	00754E.003 - RAMP - Advanced Meter Network Exceptions Mgmt and Ops SaaS Subscr (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	120	0	0
NSE	0	0	0
Total	**120**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754J - Data Analysis Reporting Tool (DART) Upgrade

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754J - Data Analysis Reporting Tool (DART) Upgrade

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	108	0	0
Non-Labor	Zero-Based	0	0	0	0	0	110	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**218**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0

Business Purpose:

This project started in 2021. This project is upgrading the Data Analysis Reporting Tool (DART). DART is a critical reporting application relied upon by the company organizations such as Customer Services Field Operations (CSF), Claims, Safety Management, and Gas Operations. DART is a reporting engine responsible for delivering reports that enable management of multiple critical aspects for Customer Services' Operations. DART is the repository for orders attempted and completed by CSF Operations technicians and for Customer Information System (CIS) data elements necessary to support Work Management and KPI analysis. DART provides KPI reports and is the source of data for CSF Ops GRC data requests. DART currently stores CSF Ops operational data back to 2012.

Physical Description:

1) Upgrade technical software solutions
2) Migrate critical reports
3) Convert field data for GRC data requests
4) Implement processes in support of Data Privacy, Data Management and Access Controls.
5) Evaluate critical, non critical and outdated reports and upgrades to improve performance in the ingestion and storage of files and tables in support of multiple business units including Safety Management and Claims.

DART stores historical information related to:
1) Emergency Logs
2) Field Communications
3) Dispatch Logs
4) Orders
5) Employee Reports
6) Route Studies
7) Daily Time and Activities

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as database administrators, architect, information security engineers, project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for build, testing, and implementation.
This is a non-shared asset.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754J - Data Analysis Reporting Tool (DART) Upgrade

Project Justification:

1) Improve accuracy of CPUC/GRC filing, analysis and rebuttal testimony
2) Increase data integrity, data privacy and security
3) Increase operational efficiency with easier report development and simplified maintenance
4) Upgrade to stay current, supported technology for increased stability and reliability

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754J - Data Analysis Reporting Tool (DART) Upgrade

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754J

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754J - Data Analysis Reporting Tool (DART) Upgrade
Workpaper Detail:	00754J.001 - Data Analysis Reporting Tool (DART) Upgrade Labor
In-Service Date:	04/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	108	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**108**	**0**	**0**
FTE	0.9	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754J - Data Analysis Reporting Tool (DART) Upgrade
Workpaper Detail:	00754J.002 - Data Analysis Reporting Tool (DART) Upgrade NL Services
In-Service Date:	04/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	110	0	0
NSE	0	0	0
Total	**110**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754Y - DART Upgrade Phase II

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754Y - DART Upgrade Phase II

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	206	68	0
Non-Labor	Zero-Based	0	0	0	0	0	390	230	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**596**	**298**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.7	0.6	0.0

Business Purpose:

This project intends to continue to upgrade technical software and technology obsolescence and improve security gaps through the migration of critical reports.

Physical Description:

1) Evaluate and replace four critical data import components to continue to upgrade technology obsolescence and improve security gaps identified during Phase 1 of the DART Upgrade Project
2) Convert, redesign, or abandon non-critical DART Reports to continue transitioning out of the VB.net framework
3) Implement enhancements to monitor and communicate critical data imports and job execution completions

DART stores historical information related to:
1) A1 Emergency Logs
2) Field Communications
3) Dispatch Logs
4) Orders
5) Employee Reports
6) Route Studies
7) Daily Time / Activities

This project impacts one application.
The internal labor costs for this project are driven by various resources such as database administrators, architect, information security engineers, project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for build, testing, and implementation.
This is a non-shared asset.

Project Justification:

1) Increase data integrity, data privacy and security
2) Increase operational visibility with new system health reporting and simplified maintenance for critical imports
3) Mitigate out of support technology for increased stability, reliability and supportability.
4) Support compliance and Key Performance Indicator (KPI) reports that support Customer Services Field (CSF) operation, GRC data requests and allows them to manage critical activities.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754Y - DART Upgrade Phase II

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754Y

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754Y - DART Upgrade Phase II
Workpaper Detail:	00754Y.001 - DART Upgrade Phase II Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	206	68	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**206**	**68**	**0**
FTE	1.7	0.6	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754Y - DART Upgrade Phase II
Workpaper Detail: 00754Y.002 - DART Upgrade Phase II NL Services

In-Service Date: 12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	390	230	0
NSE	0	0	0
Total	**390**	**230**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754G - Meter Set Assembly Inspection Enhancements Project

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754G - Meter Set Assembly Inspection Enhancements Project

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	176	0	0
Non-Labor	Zero-Based	0	0	0	0	0	293	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**469**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0

Business Purpose:

This project started in 2020. The department of Transportation (DOT) Code of Federal Regulations (CFR), requires that each meter set assembly (MSA) be inspected every three years for atmospheric corrosion. Meter readers had historically performed this function, but with the implementation of AMI and as per the Commission's AMI Decision, SoCalGas transitioned this compliance work to a new group, the Meter Set Assembly Inspection (MSAI) organization.

Significant technology enhancements are required at this time for optimal and efficient operations across the MSAI program, including compliance monitoring, audit support, work cycle schedule planning and field and back- office operations.

Physical Description:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754G - Meter Set Assembly Inspection Enhancements Project

Phase 1 Scope:
1) Automation of foundational reports and dashboards for the MSAI program, including audit, compliance monitoring and operational reports for inspections, operational reports for remediations and field performance reports.
2) Short-mid term automation of reports for Remediations to provide immediate short-mid-term relief to the existing process.
3) Several targeted enhancements to CIS with immediate value to the program for remediations, incomplete inspections and inspection eligibility functions.
4) Several targeted enhancement to CIS and PACER to address workflow of orders between the two systems.
5) Enhancement to the inspection eligibility business rules, logic and integration with SAP, M&R GOS facilities, M&R Transmission facilities and company owned facilities, among others.

Phase 2 Scope:
1) Reports and dashboards to enable Quality Assurance process for the Work cycle schedule activities. 1.B: Adjustments to reports and dashboards to enable Quality Assurance process for the Work cycle schedule activities. Adjustments are necessary given evolution of work cycle schedule process and expected architectural and system changes in subsequent releases of Phase 2.
2) Targeted enhancements to the RouteSmart application. Includes configuration changes, enhancements to benchmarking and scheduling functions and revamping the processing performance of the application.
3) Re-design overall RouteSmart-CIS integration architecture to maximize automation, traceability of actions, and persistence of core data necessary to efficiently support scheduling activities. Integration might require implementation of over-arching tool for work cycle scheduling process.

Phase 3 Scope:
1) Major enhancements to the Incomplete Inspections work queue.
2) Major enhancements to the remediations tools and technology in support of its long term processes.

This project impacts approximately 12 applications over the project duration.
The internal labor cos

Project Justification:

This project offers timely and accurate compliance of inspection and remediation schedules and improved compliance monitoring to help mitigate the possibility of scheduling inefficiencies and lead to potential workforce reduction. It also offers Improved accuracy and efficiency in customer appointment scheduling by MORs and reduced and/or more efficient coverage routes, providing additional resources for basic routes and could potentially lead to a workforce reduction.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754G - Meter Set Assembly Inspection Enhancements Project

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754G

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754G - Meter Set Assembly Inspection Enhancements Project
Workpaper Detail:	00754G.001 - Meter Set Assembly Inspection Enhancements Project Labor
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	176	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**176**	**0**	**0**
FTE	1.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754G - Meter Set Assembly Inspection Enhancements Project
Workpaper Detail:	00754G.002 - Meter Set Assembly Inspection Enhancements Project NL Services
In-Service Date:	01/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	293	0	0
NSE	0	0	0
Total	**293**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754H - Advanced Meter Web Portal for Third Party Attachments

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754H - Advanced Meter Web Portal for Third Party Attachments

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	99	0	0
Non-Labor	Zero-Based	0	0	0	0	0	165	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**264**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0

Business Purpose:

This project started in 2020. SoCalGas is developing a process for executing third party attachment requests. SoCalGas does not have a process in place today. 5G technology and utility automation growth is driving an increase in requests for co-location. SoCalGas has received pole attachment requests from various cities and telecom companies.

It implements an automated software solution that shares key pole location data and enable third Party pole attachment requests through a web portal that interfaces with SAP. The software solution leverages workflows for internal approvals and notifications. The solution houses all company pole data in compliance with the current Pole Order Instituting Investigation (OII) Track 1 Decision and licensed agreements.

Physical Description:

The following pole data must be available in electronic format in near real time or within one business day:
1) Unique identifier of pole – Per service territory a pole number and address
2) Pole location information such as: GIS coordinates and/or address
3) High fire threat district and tier category
4) Pole length, class, and material
5) Pole installation date
6) Name of any other joint owners and percentage ownership of each joint owners
7) Intrusive test data
8) Number of pending attachment applications
9) Notice of any pending pole replacement/reinforcement and date when available

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as architect, project manager, developers, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for build and implementation support.
This is a non-shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754H - Advanced Meter Web Portal for Third Party Attachments

This project prepares the Company to meet compliance with CPUC Pole Order Instituting Investigation (OII) and Order Instituting Rulemaking (OIR) and creates a structured process and tools for managing third party applications, and for administering associated license agreements. The project increases safety and enables the integrity of the affected communications and reduces hours and resources to support a manual pole attachment processes. Additionally the project increases access on safety, improves the integrity of the affected communications and electric supply infrastructure, reduces hours to support manual processes, and limits pole attachments in the city's right of way which will improver customer satisfaction.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754H - Advanced Meter Web Portal for Third Party Attachments

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754H

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754H - Advanced Meter Web Portal for Third Party Attachments
Workpaper Detail:	00754H.001 - Advanced Meter Web Portal for Third Party Attachments Labor
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	99	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**99**	**0**	**0**
FTE	0.8	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754H - Advanced Meter Web Portal for Third Party Attachments
Workpaper Detail:	00754H.002 - Advanced Meter Web Portal for Third Party Attachments NL Services
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	100	0	0
NSE	0	0	0
Total	**100**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754H - Advanced Meter Web Portal for Third Party Attachments
Workpaper Detail:	00754H.003 - Advanced Meter Web Portal for Third Party Attachments SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	65	0	0
NSE	0	0	0
Total	**65**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754X - Advanced Meter Data Collector Unit Hardware Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754X - Advanced Meter Data Collector Unit Hardware Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	847
Non-Labor	Zero-Based	0	0	0	0	0	0	0	3,560
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,407**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1

Business Purpose:

The Advanced Meter (AM) network includes approximately 4,600 Data Collector Units (DCUs) which convey meter reads from ~6M Advanced Meter enabled gas meters, as well as safety sensitive pressure monitors and methane sensors, to SoCalGas data centers and IT systems. By 2022, some of these DCUs will have been in place for 10 years or longer. This project considers replacement of the fleet of existing AM DCUs with next generation DCUs to support evolved requirements including safety sensitive pressure monitors, methane sensors and in the future ultrasonic meters.

Physical Description:

This project includes the purchase and field installation of next generation DCUs at all DCU locations across the SoCalGas service territory.

This project impacts approximately 4,600 DCUs.
The internal labor costs for this project are driven by various resources such as engineers, project managers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, and vendor services for site acquisition and installation.
This is a non-shared asset.

Project Justification:

The benefits of this project include enhanced Information Security by leveraging next generation DCU technology. Existing DCUs are all on a technology platform that was designed and manufactured 15-20 years prior to the inception of this project. This is particularly true for two-way DCU communications, which are most critical for our safety sensitive Electronic Pressure Monitor (EPM) installations. This project also provides improved cybersecurity, network capacity and performance.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754X - Advanced Meter Data Collector Unit Hardware Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754X

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754X - Advanced Meter Data Collector Unit Hardware Refresh
Workpaper Detail:	00754X.001 - Advanced Meter Data Collector Unit Hardware Refresh Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	847
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**847**
FTE	0.0	0.0	7.1

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754X - Advanced Meter Data Collector Unit Hardware Refresh
Workpaper Detail:	00754X.002 - Advanced Meter Data Collector Unit Hardware Refresh NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	560
NSE	0	0	0
Total	**0**	**0**	**560**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754X - Advanced Meter Data Collector Unit Hardware Refresh
Workpaper Detail:	00754X.003 - Advanced Meter Data Collector Unit Hardware Refresh HW Purchase
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	3,000
NSE	0	0	0
Total	**0**	**0**	**3,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755E - Call Ahead SMS Text-based Customer Notifications

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00755E - Call Ahead SMS Text-based Customer Notifications

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	294	0	0
Non-Labor	Zero-Based	0	0	0	0	0	836	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,130**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0

Business Purpose:

This project started in 2021. The main objective of this project is to develop an improved customer facing field order notification program based on SMS technology. Without an effective day ahead notification prior to field technician arrival , many customers forget and or miss their appointment, or have the inconvenience of unknown wait times for all day appointments. This can have a negative impact on their opinion of SoCalGas. Additionally, in 2016 the Customer Service Field (CSF) experienced a seven percent Can't Get-in (CGI) rate, because customers were not available on the scheduled order date/time. Missing appointments and extended appointment windows have also lead to increased calls to the call center to confirm existing or reschedule appointments and result in a higher than acceptable rate of CGI's.

Physical Description:

1) Notify customers about appointments a day ahead and allow the customer to confirm or cancel through text on order types that are supported by the current call ahead program
2) Changes to Customer Information System (CIS), MyAccount, and Portable Automated Centralized Electronic Retrieval (PACER) to capture the reached at phone number and provide disclaimer
3) New interfaces to support two way interaction between Company and customers

This project impacts three applications over the project duration.
The internal labor costs for this project are driven by various resources such as architects, project managers, developers, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, and vendor services for configuration, integration, and testing and implementation support.
This is a non-shared asset.

Project Justification:

1) Set foundation for other types of text notifications
2) Increase the ease of doing business with SoCalGas
3) Improve customers satisfaction by providing order related notifications using the customer's preferred channel

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755E - Call Ahead SMS Text-based Customer Notifications

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755E

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755E - Call Ahead SMS Text-based Customer Notifications
Workpaper Detail:	00755E.001 - Call Ahead SMS Text-based Customer Notifications Labor
In-Service Date:	05/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	294	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**294**	**0**	**0**
FTE	2.5	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: B. Customer Services – Field and Advanced Meter Opera
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00755E - Call Ahead SMS Text-based Customer Notifications
Workpaper Detail: 00755E.002 - Call Ahead SMS Text-based Customer Notifications NL Services

In-Service Date: 05/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	696	0	0
NSE	0	0	0
Total	**696**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	B. Customer Services – Field and Advanced Meter Opera
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755E - Call Ahead SMS Text-based Customer Notifications
Workpaper Detail:	00755E.003 - Call Ahead SMS Text-based Customer Notifications SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	140	0	0
NSE	0	0	0
Total	**140**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: C. Customer Services – Office Operations
Workpaper: VARIOUS

Summary for Category: C. Customer Services – Office Operations

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	2,937	3,296	2,118
Non-Labor	0	11,585	17,361	13,645
NSE	0	0	0	0
Total	**0**	**14,522**	**20,657**	**15,763**
FTE	0.0	24.4	27.5	17.6
00754A Speech Analytics and Workforce Management Upgrades				
Labor	0	212	0	0
Non-Labor	0	3,518	0	0
NSE	0	0	0	0
Total	**0**	**3,730**	**0**	**0**
FTE	0.0	1.8	0.0	0.0
00754K Gas Measurement and Analysis System (GMAS)				
Labor	0	541	839	0
Non-Labor	0	2,820	4,000	0
NSE	0	0	0	0
Total	**0**	**3,361**	**4,839**	**0**
FTE	0.0	4.5	7.0	0.0
00754M Major Market to Cloud (M2C) - Billing Viewer				
Labor	0	184	0	0
Non-Labor	0	992	0	51
NSE	0	0	0	0
Total	**0**	**1,176**	**0**	**51**
FTE	0.0	1.5	0.0	0.0
00754T RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation				
Labor	0	0	0	706
Non-Labor	0	0	0	11,300
NSE	0	0	0	0
Total	**0**	**0**	**0**	**12,006**
FTE	0.0	0.0	0.0	5.9
00754V RAMP - Customer Contact Center (CCC) Technology Modernization				
Labor	0	353	1,412	941
Non-Labor	0	900	11,100	1,200
NSE	0	0	0	0
Total	**0**	**1,253**	**12,512**	**2,141**
FTE	0.0	2.9	11.8	7.8

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: C. Customer Services – Office Operations
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00755D Project Monaco				
Labor	0	235	59	0
Non-Labor	0	414	100	0
NSE	0	0	0	0
Total	**0**	**649**	**159**	**0**
FTE	0.0	2.0	0.5	0.0
00755K Intelligent Workload Distribution (IWD)				
Labor	0	36	0	0
Non-Labor	0	137	0	0
NSE	0	0	0	0
Total	**0**	**173**	**0**	**0**
FTE	0.0	0.3	0.0	0.0
00786L CQMX Replacement				
Labor	0	0	0	0
Non-Labor	0	518	94	94
NSE	0	0	0	0
Total	**0**	**518**	**94**	**94**
FTE	0.0	0.0	0.0	0.0
00754D Senate Bill 711 Bill Volatility Project				
Labor	0	697	515	0
Non-Labor	0	800	667	0
NSE	0	0	0	0
Total	**0**	**1,497**	**1,182**	**0**
FTE	0.0	5.8	4.3	0.0
00754I RAMP - Advanced Meter HeadEnd and Meter Data Management System (MDMS) Refresh				
Labor	0	326	0	0
Non-Labor	0	86	0	0
NSE	0	0	0	0
Total	**0**	**412**	**0**	**0**
FTE	0.0	2.7	0.0	0.0
00754Q Centralized Customer Data Management				
Labor	0	353	471	471
Non-Labor	0	1,400	1,400	1,000
NSE	0	0	0	0
Total	**0**	**1,753**	**1,871**	**1,471**
FTE	0.0	2.9	3.9	3.9

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754A - Speech Analytics and Workforce Management Upgrades

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754A - Speech Analytics and Workforce Management Upgrades

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	212	0	0
Non-Labor	Zero-Based	0	0	0	0	0	3,518	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,730**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0

Business Purpose:

This project started in 2020 and supports enhancement to the Customer Contact Center (CCC) to gain better call insights to help drive further reductions in average handle time. Contact centers utilize the workforce management tool for resource scheduling and forecasting, submitting payroll on behalf of the Customer Service Representatives (CSR), and submitting online schedule requests.

Physical Description:

This project implements an advanced speech analytics solution, upgrades the workforce management tool, enables key performance indicators, and upgrades real time activity monitoring.

This project impacts seven applications over the project duration.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software purchase, and vendor services for build and deployment.
This is a shared asset.

Project Justification:

This project reduces average handle time as a result of coaching, metrics, and other incentives. This project also offers visibility into the reasons for unusually high talk time and reduction in average handle time as a result of coaching and counseling.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754A - Speech Analytics and Workforce Management Upgrades

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754A

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754A - Speech Analytics and Workforce Management Upgrades
Workpaper Detail:	00754A.001 - Speech Analytics and Workforce Management Upgrades Labor
In-Service Date:	08/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	212	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**212**	**0**	**0**
FTE	1.8	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754A - Speech Analytics and Workforce Management Upgrades
Workpaper Detail:	00754A.002 - Speech Analytics and Workforce Management Upgrades NL Services
In-Service Date:	08/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,675	0	0
NSE	0	0	0
Total	**1,675**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754A - Speech Analytics and Workforce Management Upgrades
Workpaper Detail:	00754A.003 - Speech Analytics and Workforce Management Upgrades SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,843	0	0
NSE	0	0	0
Total	**1,843**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754K - Gas Measurement and Analysis System (GMAS)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754K - Gas Measurement and Analysis System (GMAS)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	541	839	0
Non-Labor	Zero-Based	0	0	0	0	0	2,820	4,000	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,361**	**4,839**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.5	7.0	0.0

Business Purpose:

This project started in 2021. The Measurement Collection System (MCS) collects gas volumes and gas quality data for both SoCalGas and SDG&E commercial and industrial gas customers. MCS is a client server application used to validate and process the electronically collected gas measurement data. MCS provides measurement data to support multiple critical business areas, including major markets billing, gas acquisition, accounting, supplier daily trading in Envoy, gas control, gas storage, and CPUC reporting. Approximately two thirds of the gas flowing through SoCalGas pipes is measured through MCS, making MCS a critical system.

This project implements a solution leveraging a Meter Data Management System (MDMS) package that replaces the MCS.

Physical Description:

1) Determine the best vendor solution for MCS replacement
2) Replace current MCS functionality with a vendor's MDMS solution
3) Redesign business processes to streamline and improve efficiency , as well as fully utilize the new MDMS functionality
4) Integrate the commercial and industrial device collection software with the new software
5) Develop in-house custom software developed solutions for business requirements not supported by the new MDMS

This project modernizes approximately 16 application interfaces over the project duration.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project manager, developers and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for configuration, testing support, and deployment.
This is a shared asset.

Project Justification:

1) Provide business process redesign to improve business processes
2) Eliminate technical debt by implementing up-to-date software and infrastructure
3) Align with gas industry standards and more accurately calculate corrected volumes and energy with additional blending of RNG and Hydrogen

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754K - Gas Measurement and Analysis System (GMAS)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754K

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754K - Gas Measurement and Analysis System (GMAS)
Workpaper Detail:	00754K.001 - Gas Measurement and Analysis System (GMAS) Labor
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	541	839	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**541**	**839**	**0**
FTE	4.5	7.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754K - Gas Measurement and Analysis System (GMAS)
Workpaper Detail: 00754K.002 - Gas Measurement and Analysis System (GMAS) NL Services

In-Service Date: 12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,860	4,000	0
NSE	0	0	0
Total	**1,860**	**4,000**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754K - Gas Measurement and Analysis System (GMAS)
Workpaper Detail:	00754K.003 - Gas Measurement and Analysis System (GMAS) SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	960	0	0
NSE	0	0	0
Total	**960**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754M - Major Market to Cloud (M2C) - Billing Viewer

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754M - Major Market to Cloud (M2C) - Billing Viewer

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	184	0	0
Non-Labor	Zero-Based	0	0	0	0	0	992	0	51
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,176**	**0**	**51**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0

Business Purpose:

This project started in 2021. It is part of a multi-phase project and this phase pertains to the Bill Viewer migration to Cloud. It also provides cross browser capacity for Customer Contract System (CCS) and Core Aggregator Transportation (CAT) applications.

Physical Description:

1) Deployment of common User Interface (UI) and modules to create rich user experience.
2) Re-architect as a loose coupled system implement in cloudMigrate Bill Viewer to Cloud
3) Provide CCS and Core Aggregator Transportation (CAT) cross browser support across all modern browsers such as: Google Chrome, Safari, and Edge
4) Remove redundant features and optimize business flows

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, and vendor services for configuration, integration, and deployment.
This is a non-shared asset.

Project Justification:

1) Improve customer satisfaction with optimized navigation for ease of access of frequently accessed modules, simplifies business processes, faster time to market for new feature and maintenance releases through reduced effort, cost, and schedule
2) Eliminate vulnerability exposure by updating to modern technology and capability to respond quickly and independently, and adopt robust security inherently supported by Cloud platforms
3) Align with Company Cloud strategy on application agility, resiliency, and availability by deploying to Cloud
4) Reduce potential for future tech debt as it leverages technology advances and innovation to realize current and future business capabilities
5) Improve people and talent

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754M - Major Market to Cloud (M2C) - Billing Viewer

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754M

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754M - Major Market to Cloud (M2C) - Billing Viewer
Workpaper Detail:	00754M.001 - Major Market to Cloud (M2C) - Billing Viewer Labor
In-Service Date:	05/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	184	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**184**	**0**	**0**
FTE	1.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754M - Major Market to Cloud (M2C) - Billing Viewer
Workpaper Detail:	00754M.002 - Major Market to Cloud (M2C) - Billing Viewer NL Services
In-Service Date:	05/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	992	0	0
NSE	0	0	0
Total	**992**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754M - Major Market to Cloud (M2C) - Billing Viewer
Workpaper Detail:	00754M.003 - Major Market to Cloud (M2C) - Billing Viewer SaaS Subscription
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	51
NSE	0	0	0
Total	**0**	**0**	**51**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754T - RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation (AclaraONE)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754T - RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation (AclaraONE)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	706
Non-Labor	Zero-Based	0	0	0	0	0	0	0	11,300
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12,006**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9

Business Purpose:

This project modernizes Advanced Meter (AM) systems by upgrading HeadEnd (HE) and Meter Data Management System (MDMS) to the next generation of Aclara technology, AclaraONE, to meet business demands and support company's Cloud First strategy.

Physical Description:

The project upgrades the Advanced Meter HE and MDMS applications to the next generation of Aclara 's software product, AclaraONE. Many Advanced Meter roadmap items and business opportunities such as upgraded Data Collector Units (DCUs), end-to-end encryption, and support for upgraded Meter Transmission Units (MTUs), methane and cathodic protection have hard dependency with AclaraONE.
The project also modernizes the AM backoffice systems to allow for active IT and vendor support and to meet future company business demands.
This project impacts two applications.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for configuration, integration, and testing and implementation support.
This is a non-shared asset.

Project Justification:

1) Allow AM related business opportunities and roadmap items to be realized as planned
2) Enable AM systems to meet future company business demands in billing and safety areas
3) Modernize AM systems to allow for active IT and vendor support
4) Mitigate interruption of billing process or safety incidents resulted from outdated AM technologies
5) Support company's Cloud First strategy by moving MDMS into the cloud

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754T - RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation (AclaraC

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754T

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754T - RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation (AclaraON
Workpaper Detail:	00754T.001 - RAMP - Adv M HeadEnd and M Data Mgmt Syst Next-Gen (AclaraONE) Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	706
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**706**
FTE	0.0	0.0	5.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754T - RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation (AclaraON
Workpaper Detail:	00754T.002 - RAMP - Adv M HeadEnd and M Data Mgmt Syst Next-Gen (AclaraONE) NL Srvs (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	1,300
NSE	0	0	0
Total	**0**	**0**	**1,300**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754T - RAMP - Advanced Meter HeadEnd and Meter Data Management System Next-Generation (AclaraON
Workpaper Detail:	00754T.003 - RAMP - Adv M HeadEnd and M Data Mgmt Syst Next-Gen (AclaraONE) SaaS Subs (Same RAMP item 00721A.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	10,000
NSE	0	0	0
Total	**0**	**0**	**10,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754V - RAMP - Customer Contact Center (CCC) Technology Modernization

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754V - RAMP - Customer Contact Center (CCC) Technology Modernization

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	353	1,412	941
Non-Labor	Zero-Based	0	0	0	0	0	900	11,100	1,200
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,253**	**12,512**	**2,141**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.9	11.8	7.8

Business Purpose:

This project replaces the on-premise contact center technology platforms with a cloud solution to reduce technology complexity and improve maintainability and reliability. This provides customers resilient, reliable, cross channel services (voice, chat, email, SMS, IVR), artificial inteligence (AI), and natural language processing (NLP) enabled customer experience.

Physical Description:

1) Replace the Company's contact center on-premise solution with a cloud solution and remediate all impacted interfaces, including:
- Telephony voice system
- Callback service
- Voice to email transition application

2) Expand the busiess capability support from cloud to all digital channels
3) Remediate integrations with on-premise customer information system (CIS) and with other on-premise or cloud applications

This project impacts approximately seven legacy systems.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for configuration, integration, and deployment.
This is a non-shared asset.

Project Justification:

1) Simplify contact center technology
2) Leverage cloud technology to provide highly available, scalable, and resillient contact center environment
3) Provide the foundation to create conversational Interactive Voice Response (IVR), chatbots and textbots agent assist with underlying AI and NLP technologies
4) Provide consistent, predictive, personalized cross channel (voice, chat, email, SMS, IVR) enabled user experience to customers
5) Enable agent mobility via softphone, and simplify the deployment and support for work-at-home agents
6) Expand supportability to the agents from other departments including SoCalGas Billing, Credit and Collection departments on the consolidated cloud environment
7) Provide optimized and consolidated dashboards and reports for both real-time and historical views

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754V - RAMP - Customer Contact Center (CCC) Technology Modernization

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754V

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754V - RAMP - Customer Contact Center (CCC) Technology Modernization
Workpaper Detail:	00754V.001 - RAMP - Customer Contact Center (CCC) Technology Modernization Labor (Same RAMP item as 00743A.01)
In-Service Date:	04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	353	1,412	941
Non-Labor	0	0	0
NSE	0	0	0
Total	**353**	**1,412**	**941**
FTE	2.9	11.8	7.8

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754V - RAMP - Customer Contact Center (CCC) Technology Modernization
Workpaper Detail:	00754V.002 - RAMP - Customer Contact Center (CCC) Technology Modernization NL Srvcs (Same RAMP item as 00743A.01)
In-Service Date:	04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	900	1,600	1,200
NSE	0	0	0
Total	**900**	**1,600**	**1,200**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754V - RAMP - Customer Contact Center (CCC) Technology Modernization
Workpaper Detail:	00754V.003 - RAMP - Customer Contact Center (CCC) Technology Modernization SaaS Subs (Same RAMP item 00743A.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	9,500	0
NSE	0	0	0
Total	**0**	**9,500**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755D - Project Monaco

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00755D - Project Monaco

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	235	59	0
Non-Labor	Zero-Based	0	0	0	0	0	414	100	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**649**	**159**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0

Business Purpose:

Sempra's bank solution is anticipated to change from Union Bank. SoCalGas Customer Services banking functions, including general integrations with SoCalGas Customer Information System (CIS), My Accounts and Branch Office Payment Entry Processing (PEP) will need to be updated to continue daily operations.

Physical Description:

1) Support SoCalGas's 5M monthly transactions and California Consumer Privacy Act (CCPA) requirements and standards.
2) Perform ACH web payments and ACH web returns between SoCalGas and Bank for residential and business customer payments made via SoCalGas's My Accounts, including recurring and one-time payments. Ability to maintain a valid list of published routing numbers by the FED for validation use.
3) Perform ACH payments and ACH returns, ACH ARC, Image Cash Letter (ICL), between SoCalGas and the Bank for check payments and interface with BankTec to support image processing for mailed payments and transmission to CIS .
4) Perform ACH payments and ACH returns between SoCalGas and the bank for home banking payments and fund separate return accounts.
5) Support customer check reimbursement daily, perform daily and monthly customer refund check reconciliations, incoming and outgoing wire transfers, separate files for prenotes outbound and transmission files, payment and return files for non-gas transactions, ACH return process shall include standard sub-process such as Notice of Change (NOC) and resubmit, Consolidator for home banking payments outside of FISERV network, accept FISERV deposit money

This project impacts two applications.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for build and testing support.
This is a non-shared asset.

Project Justification:

1) Support Company banking solution with a new bank
2) Continue to provide efficient electronic banking services once the Company switches to the new bank

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00755D - Project Monaco

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755D

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00755D - Project Monaco
Workpaper Detail:	00755D.001 - Project Monaco Labor
In-Service Date:	09/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	235	59	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**235**	**59**	**0**
FTE	2.0	0.5	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00755D - Project Monaco
Workpaper Detail: 00755D.002 - Project Monaco NL Services

In-Service Date: 09/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	414	100	0
NSE	0	0	0
Total	**414**	**100**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755K - Intelligent Workload Distribution (IWD)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00755K - Intelligent Workload Distribution (IWD)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	36	0	0
Non-Labor	Zero-Based	0	0	0	0	0	137	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**173**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Business Purpose:

This project started in 2020. Back-office work is distributed manually on a daily basis by respective department supervisors or team leads for the following departments: Billing, Credit and Collections. Back Office work includes Customer Information System (CIS) Work Queue (WQ). The business faces many challenges and risks in assigning back office work manually. These challenges include a lack of resources and availability to manually distribute work, coach, and monitor employees, no standardized process across multiple business sites to prioritize open work queue items, and no standardized process to evenly allocate work to available employees. Challenges also include the number of handoffs between supervisors and team leads and having no standardized system to control the order in which employees complete their daily work assignments - this item speaks to the cherry picking that occurs today where easier orders are completed by employees first and difficult orders are left in the queue.

The goal of the project is to leverage Genesys Intelligent Workload Distribution (IWD) technology in order to efficiently route and prioritize back office work to available clerks and analysts.

Physical Description:

1) Billing, Credit and Collections Core Residential and Non-Residential CIS Work Queue, Workspace email and phone call routing.
2) Billing Outlook email to be migrated/integrated into Workspace email.
3) Credit and Collections ID validation email/e-fax shall be migrated/integrated into Workspace email.
4) Each business unit can determine their own priority scoring mix and methodology to meet business needs.
5) Business ability to monitor employee status to accept work.
6) Ability to capture and report actual time standards for doing different types of work and feed to NPM/WFM.

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as architect, project manager, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development and implementation.
This is a non-shared asset.

Project Justification:

This project offers automated means for work distribution. With the deployment of this solution, the business has access to agent performance metrics for back office work. Departments can use this information to create and monitor KPIs in real time for CIS Work Queues.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00755K - Intelligent Workload Distribution (IWD)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755K

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00755K - Intelligent Workload Distribution (IWD)
Workpaper Detail:	00755K.001 - Intelligent Workload Distribution (IWD) Labor
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	36	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**36**	**0**	**0**
FTE	0.3	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00755K - Intelligent Workload Distribution (IWD)
Workpaper Detail:	00755K.002 - Intelligent Workload Distribution (IWD) NL Services
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	137	0	0
NSE	0	0	0
Total	**137**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786L - CQMX Replacement

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: C. Customer Services – Office Operations
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00786L - CQMX Replacement

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	518	94	94
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**518**	**94**	**94**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

"This project replaces end of support CQMX software with a new solution. CQMX is software utilized by Data Distribution to prepare mail per USPS standards to obtain postage discounts annually that will be out of support.
"

Physical Description:

This project replaces CQMX Functionality with a new solution. The project interfaces with inserters and accounts for multiple feed inserter jobs, installation, and implementation.

This project impacts one application.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by software, and vendor services for configuration, testing, and implementation.
This is a non-shared asset.

Project Justification:

This project retains the ability to manifest the mail and continue receiving of USPS postage discounts.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786L - CQMX Replacement

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786L

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786L - CQMX Replacement
Workpaper Detail:	00786L.001 - CQMX Replacement NL Services
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	294	94	94
NSE	0	0	0
Total	**294**	**94**	**94**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	C. Customer Services – Office Operations
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786L - CQMX Replacement
Workpaper Detail:	00786L.002 - CQMX Replacement SW Purchase
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	224	0	0
NSE	0	0	0
Total	**224**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754D - Senate Bill 711 Bill Volatility Project

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754D - Senate Bill 711 Bill Volatility Project

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	697	515	0
Non-Labor	Zero-Based	0	0	0	0	0	800	667	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,497**	**1,182**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	5.8	4.3	0.0

Business Purpose:

This project started in 2020. Senate Bill 711 allows the commission to review and revise baseline quantities and define additional baseline seasons in order to minimize bill volatility for residential customers. Baseline changes have been moved to the Tri-Annual Cost Allocation Proceedings (TCAP).

The goal of this project is to meet the legislation's requirements by making system and business process changes including updating the seasonal baseline allowance, adding a new baseline season, and designing and producing a visual representation of usage and cost per tier on the residential customer billing statement. This includes the new SoCalGas Gas Bill format and incorporates the estimation algorithm in the Utility Tariff.

Physical Description:

The project enhances business processes and systems functions for residential gas customers to comply with the regulatory mandates. This includes modifying the baseline season and allowance, updates of the season, and streamlining the baseline allocation entry process. It also changes all impacted application programs and reports in Customer Information System (CIS), Specialized Customer Billing System (SCBS), MyAccount Bill Highlights, and Data Warehouse. The project also includes updating the bill chart presentation to change the gas usage history and to create a new cost graph showing the cost per tier, baseline and over baseline values.

This project impacts three applications over the project duration.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for build, implementation, and testing support.
This is a non-shared asset.

Project Justification:

This project offers compliance to SB 711, an improved customer experience so residential customers can receive billings that are simple and transparent, and a graphical visual presentation of usage and costs to facilitate minimizing residential bill volatility.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754D - Senate Bill 711 Bill Volatility Project

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754D

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754D - Senate Bill 711 Bill Volatility Project
Workpaper Detail: 00754D.001 - Senate Bill 711 Bill Volatility Project Labor

In-Service Date: 04/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	697	515	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**697**	**515**	**0**
FTE	5.8	4.3	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754D - Senate Bill 711 Bill Volatility Project
Workpaper Detail: 00754D.002 - Senate Bill 711 Bill Volatility Project NL Services

In-Service Date: 04/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	800	667	0
NSE	0	0	0
Total	**800**	**667**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754I - RAMP - Advanced Meter HeadEnd and Meter Data Management System (MDMS) Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754I - RAMP - Advanced Meter HeadEnd and Meter Data Management System (MDMS) Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	326	0	0
Non-Labor	Zero-Based	0	0	0	0	0	86	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**412**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0

Business Purpose:

This project started in 2020. The project refreshes the Advanced Meter(AM) HeadEnd and Meter Data Management System (MDMS) applications and the underlying near end of support server and database technologies so that optimal performance and reliability of these business-critical applications to continue meeting current and future business demands. Vendors' mainstream support for AM server operating systems(OS) and database technologies has ended and Extended Support will end in July 2022.

Physical Description:

Advanced Meter HeadEnd and MDMS applications are operating on legacy operating systems (OS) and database technologies that are no longer receiving active support from IT and vendors. The project will upgrade the Advanced Meter HeadEnd and MDMS applications, operating systems and the database technologies to the latest IT and vender-supported versions. The AM HeadEnd refresh effort will be funded by capital budget and the AM MDMS refresh will be an O&M effort. The project offers continuous vendor support and improves reliability of these business-critical applications to meet current and future business demands.

This project impacts two applications over the project duration.
The internal labor costs for this project are driven by various resources such as project managers, technologists, information security engineers and support for testing and implementation. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management.
This is a non-shared asset.

Project Justification:

1) Reduce risk of billing process billing processes or safety incidents
2) Increase active vendors' support for business-critical AM HeadEnd and MDMS applications
3) Provide reliable and accurate AM data for core and non-core billing purposes
4) Provide reliable, timely and accurate pressure data for safety morning
5) Provide reliable and accurate AM data for safety analytics

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754I - RAMP - Advanced Meter HeadEnd and Meter Data Management System (MDMS) Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754I

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754I - RAMP - Advanced Meter HeadEnd and Meter Data Management System (MDMS) Refresh
Workpaper Detail:	00754I.001 - RAMP - Adv Meter HeadEnd and Meter Data Mgmt Syst (MDMS) Refresh Labor (Same RAMP item as 00721A.01)
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	326	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**326**	**0**	**0**
FTE	2.7	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754I - RAMP - Advanced Meter HeadEnd and Meter Data Management System (MDMS) Refresh
Workpaper Detail:	00754I.002 - RAMP - Adv Meter HeadEnd and Meter Data Mgmt Syst (MDMS) Refresh NL Svcs (Same RAMP item 00721A.01)
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	86	0	0
NSE	0	0	0
Total	**86**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754Q - Centralized Customer Data Management

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: C. Customer Services – Office Operations
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00754Q - Centralized Customer Data Management

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	353	471	471
Non-Labor	Zero-Based	0	0	0	0	0	1,400	1,400	1,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,753**	**1,871**	**1,471**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.9	3.9	3.9

Business Purpose:

This project implements more rigorous governance and management practices in support of analytics and customer data privacy. It also provides a more holistic view of the management data lifecycle: who, how, and where data is consumed, compiled, stored, and secured across the data landscape in the Company. This is required to meet all privacy, cybersecurity, and California Consumer Privacy Act (CCPA) requirements in addition to consistency on regulatory and third party reporting.

Physical Description:

The project advances people, process, technology aspects on four key workstreams executed in multiple phases:
1) Data consumer user experience, integrations, and security and privacy
2) Centralized data request and fulfillment management
3) Data store and advanced analytics platforms
4) Data governance

Scope includes:
1) Optimized and consolidated external facing sites with secured access controls and third party integrations, Application Programming Interface (API) enablement, and data transmissions
2) Centralized data request and fulfillment management system with secured access controls and workflows
3) Data and advanced analytics technology roadmap, data repository consolidations, Cloud adoption and migrations, automated reporting and dashboards
4) Establish data council, policies and procedures, and tools in support of customer data governance and management

This project impacts six applications.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, and vendor services for build and testing support.
This is a non-shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00754Q - Centralized Customer Data Management

1) Provide a clear and holistic view of customer data across the Company
2) Increase rigor on customer data governance
3) Advance analytic capabilities to support major initiatives
4) Centralize, standardize, automate and secure data access and other requests
5) Streamline CPUC, audit and CCPA responses
6) Confirm customer data transfers to authorized third parties comply with all privacy, cybersecurity and CCPA requirements, including maintaining records of all customer data transferred for audit and CCPA response purposes .

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00754Q - Centralized Customer Data Management

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754Q

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00754Q - Centralized Customer Data Management
Workpaper Detail:	00754Q.001 - Centralized Customer Data Management Labor
In-Service Date:	07/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	353	471	471
Non-Labor	0	0	0
NSE	0	0	0
Total	**353**	**471**	**471**
FTE	2.9	3.9	3.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00754Q - Centralized Customer Data Management
Workpaper Detail:	00754Q.002 - Centralized Customer Data Management NL Services
In-Service Date:	07/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,400	900	1,000
NSE	0	0	0
Total	**1,400**	**900**	**1,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	C. Customer Services – Office Operations
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00754Q - Centralized Customer Data Management
Workpaper Detail:	00754Q.003 - Centralized Customer Data Management SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	500	0
NSE	0	0	0
Total	**0**	**500**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: D. Customer Services – Information
Workpaper: VARIOUS

Summary for Category: D. Customer Services – Information

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	1,031	774	0
Non-Labor	0	2,555	1,791	0
NSE	0	0	0	0
Total	**0**	**3,586**	**2,565**	**0**
FTE	0.0	8.7	6.5	0.0
00755A Customer Experience Phase 4 (CEP4)				
Labor	0	260	0	0
Non-Labor	0	654	0	0
NSE	0	0	0	0
Total	**0**	**914**	**0**	**0**
FTE	0.0	2.2	0.0	0.0
00755F Customer Experience Phase 5 (CEP5)				
Labor	0	595	774	0
Non-Labor	0	1,226	1,791	0
NSE	0	0	0	0
Total	**0**	**1,821**	**2,565**	**0**
FTE	0.0	5.0	6.5	0.0
00755L Help Center Virtual Assistant				
Labor	0	176	0	0
Non-Labor	0	675	0	0
NSE	0	0	0	0
Total	**0**	**851**	**0**	**0**
FTE	0.0	1.5	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755A - Customer Experience Phase 4 (CEP4)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: D. Customer Services – Information
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00755A - Customer Experience Phase 4 (CEP4)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	260	0	0
Non-Labor	Zero-Based	0	0	0	0	0	654	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**914**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0

Business Purpose:

This project started in 2020. The Customer Experience Project (CEP) Phase 4 is a continuation of CEP 1, CEP 2, and CEP 3. Phase 4 continues to implement self-service enhancements that improves the usability of existing functionality and creates new functionality that allows customers to complete their transaction or retrieve information in the channel of their choice. These enhancements further align the Interactive Voice Response (IVR), Web, and Customer Service Representative (CSR) channels to provide a consistent customer experience.

Physical Description:

1) Update the Billing and Payment and CSO menus to make it easier for customers to navigate through the IVR
2) Streamline the Account Balance task in the IVR to present information in a customer friendly way
3) Create new functionality in the IVR to allow customers to easily retrieve information regarding their account such as checking if an account is enrolled in Automatic Monthly Payments
4) Create new functionality to have the IVR offer customers the option to receive a text message to complete their transaction online.
5) Implement the GAAP multimodal functionality to present and collect information from customers through the use of secure MicroApps while still in the IVR.
6) Clarify customer payment capabilities and clearly delineate the Bill Matrix payment channel from the My Account payment channel .
7) Various improvements to the one-time payment flow, including content clarifications, usability enhancements for managing bank information and those making a payment for multiple accounts.
8) Allow customers that are paperless to understand that they are paperless customers.

This project impacts two applications over the project duration.
The internal labor costs for this project are driven by various resources such as architects, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for build and testing and implementation support.
This is a non-shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755A - Customer Experience Phase 4 (CEP4)

This project offers improved customer experience when interacting with the self-service channels, allows customers to interact in the channel of their choice, aligns information provided to customers across CSR, IVR and Web channels, and improves CSR experience by reducing call handle time. The project increases self-service utilization, paperless adoption, and operational efficiencies by aligning similar functions. Additionally, the project reduces paper, printing and postage expense, improves our payment channel and increases electronic payments so that customer expectations within this high volume touchpoint are met.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755A - Customer Experience Phase 4 (CEP4)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755A

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755A - Customer Experience Phase 4 (CEP4)
Workpaper Detail:	00755A.001 - Customer Experience Phase 4 (CEP4) Labor
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	260	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**260**	**0**	**0**
FTE	2.2	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755A - Customer Experience Phase 4 (CEP4)
Workpaper Detail:	00755A.002 - Customer Experience Phase 4 (CEP4) NL Services
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	654	0	0
NSE	0	0	0
Total	**654**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755F - Customer Experience Phase 5 (CEP5)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: D. Customer Services – Information
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00755F - Customer Experience Phase 5 (CEP5)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	595	774	0
Non-Labor	Zero-Based	0	0	0	0	0	1,226	1,791	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,821**	**2,565**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	5.0	6.5	0.0

Business Purpose:

Customer Experience Phase 5 continues to implement self-service enhancements to improve the usability of existing functionality and create new functionality to allow customers to complete their transaction or retrieve information in the channel of their choice. These enhancements further aligns the SoCalGas, IVR system, web, and Customer Service Representative (CSR) channels to provide a consistent customer experience and improve the overall customer experience. The enhancements to the self-service channels have operational benefits including increasing self-service utilization and paperless enrollment and maintaining and improving the Company web payment and billing channel. The project objectives are improving services shared by the customer facing systems and changes to processes that support those improvements.

Physical Description:

1) Socalgas.com and My Account accessibility upgrade
2) Socalgas.com and My Account search alignment
3) Multi-factor authentication enhancements for continuous security measures
4) Further alignment of SoCalgas.com, IVR, My Account, and CSR channels to provide a consistent customer experience.
5) Enhancements to service orders and appointments, and new order for reporting gas leaks in my account
6) IVR enhancements to promote self service and channel alignment

This project impacts two applications.
The internal labor costs for this project are driven by various resources such as architects, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for build and testing and implementation support.
This is a non-shared asset.

Project Justification:

1) Improve customer experience when interacting with the self-service channels
2) Allow customers to interact in the channel of their choice
3) Align information provided to customers across CSR, IVR and web channels
4) Improve CSR experience by reducing call handle time
5) Increase self-service utilization
6) Increase paperless adoption
7) Improve company payment channel and increase electronic payments to exceed customer expectations within this high volume touchpoint
8) Increase operational efficiencies by aligning similar functions

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755F - Customer Experience Phase 5 (CEP5)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755F

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755F - Customer Experience Phase 5 (CEP5)
Workpaper Detail:	00755F.001 - Customer Experience Phase 5 (CEP5) Labor
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	595	774	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**595**	**774**	**0**
FTE	5.0	6.5	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: D. Customer Services – Information
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00755F - Customer Experience Phase 5 (CEP5)
Workpaper Detail: 00755F.002 - Customer Experience Phase 5 (CEP5) NL Services

In-Service Date: 12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,226	1,791	0
NSE	0	0	0
Total	**1,226**	**1,791**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755L - Help Center Virtual Assistant

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: D. Customer Services – Information
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00755L - Help Center Virtual Assistant

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	176	0	0
Non-Labor	Zero-Based	0	0	0	0	0	675	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**851**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0

Business Purpose:

This project started in 2021. This project will implement a Virtual Assistant accessible on the SoCalGas web site to answer customer questions based on existing Frequently Asked Questions (FAQs). In addition to enhance FAQs content and publication.

Physical Description:

The project Virtual Assistant Scope:
1) Design and implement a pilot on a customer facing Virtual Assistant which can be accessed on the public pages of the SoCalGas.com web site.
2) Create intents and Knowledge bases related to existing FAQs
3) Create Welcome and Small-talk intents
4) Suggest links to customers based on their questions
5) Create Multi-language support (Spanish and English)
6) Create a customer feedback mechanism to allow the virtual assistant to train and improve
7) Configure Analytics capability to track usage
8) Integrate the virtual assistant into SoCalGas.com

The project FAQ Scope:
1) Support SoCalGas in FAQ content production
2) Work with key SoCalGas stakeholders to identify customer pain points not addressed by current FAQs content .
3) Revisit/enhance existing FAQ content
4) Publish new FAQ articles

This project impacts two applications over the project duration.
The internal labor costs for this project are driven by various resources such as architects, project managers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development and implementation.
This is a non-shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755L - Help Center Virtual Assistant

1) Increase customer self-service
2) Innovate on customer experience
3) Establish a foundational capability to be further extended with AI components , voice capabilities and additional use cases
4) Increase customer care efficiency

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755L - Help Center Virtual Assistant

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755L

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755L - Help Center Virtual Assistant
Workpaper Detail:	00755L.001 - Help Center Virtual Assistant Labor
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	176	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**176**	**0**	**0**
FTE	1.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	D. Customer Services – Information
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00755L - Help Center Virtual Assistant
Workpaper Detail:	00755L.002 - Help Center Virtual Assistant NL Services
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	675	0	0
NSE	0	0	0
Total	**675**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: E. Gas Distribution
Workpaper: 00756AU

Summary for Category: E. Gas Distribution

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	0	235	235
Non-Labor	0	0	1,600	1,600
NSE	0	0	0	0
Total	**0**	**0**	**1,835**	**1,835**
FTE	0.0	0.0	2.0	2.0

00756AU RAMP - New Business Management System (NBMS) Replacement

Labor	0	0	235	235
Non-Labor	0	0	1,600	1,600
NSE	0	0	0	0
Total	**0**	**0**	**1,835**	**1,835**
FTE	0.0	0.0	2.0	2.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AU - RAMP - New Business Management System (NBMS) Replacement

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: E. Gas Distribution
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AU - RAMP - New Business Management System (NBMS) Replacement

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	235	235
Non-Labor	Zero-Based	0	0	0	0	0	0	1,600	1,600
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**1,835**	**1,835**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0

Business Purpose:

This is a strategic project to modernize New Business Management System (NBMS). The application is currently hosted on the SoCalGas mainframe and will be replaced and moved to SAP cloud. The disposition of this application to newer technology aligns with the Customer Information System (CIS) replacement initiative.

Physical Description:

1) Replace NBMS Mainframe system with enhancement of existing Construction Planning and Design (CPD) solution in SAP in a phased approach.
2) Transition the functionality of project creation, allowance calculation, project cost, customer contract and establish Gas Network Node (GNN).
3) Replace CIS mainframe system integration with SAP integration.
4) Decommission and/or recreate integrations with NCST, IST, RPA and Datamart
5) Decommission integrations with NBMS and NBMS system.

This project impacts approximately 200 SAP configurations and builds at least 10 interfaces.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, configuration and development.
This is a non-shared asset.

Project Justification:

1) Reduce technical debt
2) Improve data quality as we are reducing integrations and functionality
3) Improve maintainability
4) Improve user experience through advanced user interface and only one application to navigate through end-to-end process
5) Reduce maintenance cost and integration support from cross-functional teams
6) Improve user productivity
7) Reduce hours in user training for additional applications bringing efficiencies and fewer integrations.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	E. Gas Distribution
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AU - RAMP - New Business Management System (NBMS) Replacement

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AU

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	E. Gas Distribution
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AU - RAMP - New Business Management System (NBMS) Replacement
Workpaper Detail:	00756AU.001 - RAMP - New Business Management System (NBMS) Replacement Labor (Same RAMP item as 00721A.01)
In-Service Date:	08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	235	235
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**235**	**235**
FTE	0.0	2.0	2.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	E. Gas Distribution
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AU - RAMP - New Business Management System (NBMS) Replacement
Workpaper Detail:	00756AU.002 - RAMP - New Business Management System (NBMS) Replacement NL Services (Same RAMP item as 00721A.01)
In-Service Date:	08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,600	1,600
NSE	0	0	0
Total	**0**	**1,600**	**1,600**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: F. Gas Engineering
Workpaper: VARIOUS

Summary for Category: F. Gas Engineering

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	99	0	0
Non-Labor	0	954	0	0
NSE	0	0	0	0
Total	**0**	**1,053**	**0**	**0**
FTE	0.0	0.9	0.0	0.0

00756AH RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)

Labor	0	64	0	0
Non-Labor	0	666	0	0
NSE	0	0	0	0
Total	**0**	**730**	**0**	**0**
FTE	0.0	0.6	0.0	0.0

00756N RAMP - Measurement and Reliability Compliance (MRC)

Labor	0	35	0	0
Non-Labor	0	288	0	0
NSE	0	0	0	0
Total	**0**	**323**	**0**	**0**
FTE	0.0	0.3	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AH - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: F. Gas Engineering
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AH - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	64	0	0
Non-Labor	Zero-Based	0	0	0	0	0	666	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**730**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0

Business Purpose:

This project started in 2021 and establishes a system for initiating and processing requests for Distribution Engineering to provide a robust change management solution. The project integrates the following requests into a single intake system:
1) Requests for Engineering Review (RER): New Business, Replacements (DREAMS, DIMP, M&R facilities)
2) Special projects (RNG, NGV, Hydrogen)
3) Gas handling and construction sketch review including professional engineer stamping
4) Pressure Requests: MSA sizing and load profile forms, new business and load change requests
5) Special or Miscellaneous Requests: Gas lost to atmosphere calculation requests including controlled blowdown calculations and third party damage requests from claims

Physical Description:

This project establishes a centralized engineering request system to:
1) Eliminate paper and static e-forms
2) Improve request prioritization
3) Improve tracking of all request types
4) Automate data and information for improved planning
5) Integrate with existing systems such as: SAP/CPD, PRISM, HPPD, TSR, and MyProjects
6) Management of change functionality
7) Resource allocation, reporting, forecasting, and management
8) Request and approval functionality for field changes and RFIs

This project includes approximately 50 enhancements over the project duration.
The internal labor costs for this project are driven by various resources such as project manager and testing resources.
Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AH - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)

1) Improve communication between planning and engineering
2) Provide accurate and automated data integration from existing systems
3) Eliminate data entry errors
4) Facilitate improved planning of construction projects
5) Decrease the amount of time needed to generate the request
6) Offer seamless ability to review related and previous versions of request
7) Provide automatic notifications on status of request
8) Provide new “Chat” functionality integrated into system to facilitate communications between requester and engineering – documented mad stored against the request
9) Offer direct attachment uploads supporting any file format
10) Deliver automatic generation of final approved request in PDF format for record keeping in SAP
11) Automate priority designation based on previously defined SLA for each request type
12) Eliminate the need to maintain separate, time-consuming Excel-based tracking mechanisms
13) Allow for enhancements as continuous process improvements are identified
14) Eliminate the guess-work, repetition, and uncertainty regarding revised requests for any driver

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AH - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AH

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AH - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)
Workpaper Detail:	00756AH.001 - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA) Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	64	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**64**	**0**	**0**
FTE	0.6	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AH - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA)
Workpaper Detail:	00756AH.002 - RAMP - Distributed Engineering Lifecycle Tracking Apps (DELTA) NL Svcs (Same RAMP item 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	666	0	0
NSE	0	0	0
Total	**666**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756N - RAMP - Measurement and Reliability Compliance (MRC)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: F. Gas Engineering
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756N - RAMP - Measurement and Reliability Compliance (MRC)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	35	0	0
Non-Labor	Zero-Based	0	0	0	0	0	288	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**323**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Business Purpose:

This project started in 2021. New Construction Planning and Design (CPD) metrics and order data must be added to Measurement and Reliability (M&R) Compliance reports and KPI's so that visibility into these orders is readily available to meet routine audit and operational requests.

Physical Description:

1) Expand the existing reporting platform implemented by the M&R Compliance Project by adding CPD order data and metrics to M&R compliance KPI's.
2) Enhance existing dashboards and reports by leveraging existing capabilities and resources of: Enterprise SAP HANA platform, SAP Business Objects (BOBJ) reporting platform, GOPA Phase 2 and 3 reports, along with new data integration with source system SAP CPD.

This project delivers approximately 15 compliance reports and KPIs over the project duration.
The internal labor costs for this project are driven by various resources such as business analyst, project manager, developer, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756N - RAMP - Measurement and Reliability Compliance (MRC)

1) Reduce compliance and financial risks associated with data errors caused by manual data collection and inefficient reporting processes.
2) Enable easily accessible, accurate, real-time reports to support routine GRC reports and any business operational process requests.
3) Enable business users to quickly and easily modify and add additional data from the M& R HANA data repository into a standard Business Objects report in support of new regulatory information requests.
4) Increase business insight for more informed decision making, capacity planning, and proactive identification and/or correction of trends by quickly providing new, more detailed, and accurate analytical reports to a wider audience.
5) Eliminate duplicate efforts by standardizing and centralizing the reports into a single reporting system that can be accessed ‘as needed’ by multiple business users.
6) Minimize incremental data extraction effort by leveraging reporting infrastructure.
7) Reduce risks of relying on a single resource for reporting, and eliminates bottlenecks and/or delays by enabling additional resources to obtain and provide reports.
8) Improve confidence in the accuracy of the data and reduces correction re-work by eliminating human errors.
9) Bolster cross-departmental knowledge sharing and collaboration by providing more accessible , easy-to-read, standard reports.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756N - RAMP - Measurement and Reliability Compliance (MRC)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756N

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756N - RAMP - Measurement and Reliability Compliance (MRC)
Workpaper Detail:	00756N.001 - RAMP - Measurement and Reliability Compliance (MRC) Labor (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	35	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**35**	**0**	**0**
FTE	0.3	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	F. Gas Engineering
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756N - RAMP - Measurement and Reliability Compliance (MRC)
Workpaper Detail:	00756N.002 - RAMP - Measurement and Reliability Compliance (MRC) NL Services (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	288	0	0
NSE	0	0	0
Total	**288**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: G. Gas System Staff & Technology
Workpaper: VARIOUS

Summary for Category: G. Gas System Staff & Technology

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	5,171	6,706	5,114
Non-Labor	0	21,124	35,253	29,285
NSE	0	0	0	0
Total	**0**	**26,295**	**41,959**	**34,399**
FTE	0.0	43.3	56.0	42.7
00721A RAMP - Electronic Leak Survey				
Labor	0	68	0	0
Non-Labor	0	805	0	0
NSE	0	0	0	0
Total	**0**	**873**	**0**	**0**
FTE	0.0	0.6	0.0	0.0
00721AA RAMP - Project and Portfolio Management System - Construction - Phase 1				
Labor	0	506	918	471
Non-Labor	0	1,428	3,828	3,000
NSE	0	0	0	0
Total	**0**	**1,934**	**4,746**	**3,471**
FTE	0.0	4.2	7.7	3.9
00721AE RAMP - Project and Portfolio Management System - Storage				
Labor	0	0	0	0
Non-Labor	0	0	0	1,700
NSE	0	0	0	0
Total	**0**	**0**	**0**	**1,700**
FTE	0.0	0.0	0.0	0.0
00721AF RAMP - Project and Portfolio Management System - Transmission				
Labor	0	0	0	0
Non-Labor	0	0	0	1,900
NSE	0	0	0	0
Total	**0**	**0**	**0**	**1,900**
FTE	0.0	0.0	0.0	0.0
00721T RAMP - Electronic Leak Survey - Pipeline Patrol				
Labor	0	0	0	235
Non-Labor	0	0	0	1,015
NSE	0	0	0	0
Total	**0**	**0**	**0**	**1,250**
FTE	0.0	0.0	0.0	2.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: G. Gas System Staff & Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00721V RAMP - Electronic Leak Survey - Transmission Survey and Patrol				
Labor	0	0	0	118
Non-Labor	0	0	0	300
NSE	0	0	0	0
Total	**0**	**0**	**0**	**418**
FTE	0.0	0.0	0.0	1.0
00721Y RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1				
Labor	0	0	394	0
Non-Labor	0	0	2,650	0
NSE	0	0	0	0
Total	**0**	**0**	**3,044**	**0**
FTE	0.0	0.0	3.3	0.0
00756AB RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026				
Labor	0	0	988	1,341
Non-Labor	0	0	5,280	5,133
NSE	0	0	0	0
Total	**0**	**0**	**6,268**	**6,474**
FTE	0.0	0.0	8.2	11.2
00756AS RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditi				
Labor	0	0	265	118
Non-Labor	0	0	800	314
NSE	0	0	0	0
Total	**0**	**0**	**1,065**	**432**
FTE	0.0	0.0	2.2	1.0
00756BB Project and Portfolio Mgmt System - Construction - ES2P (Enterprise Source to Pay) Imp				
Labor	0	0	217	219
Non-Labor	0	0	655	623
NSE	0	0	0	0
Total	**0**	**0**	**872**	**842**
FTE	0.0	0.0	1.8	1.8
00756I RAMP - Gas Materials QA/QC, Field Management and Traceability				
Labor	0	220	0	0
Non-Labor	0	2,424	2,496	2,600
NSE	0	0	0	0
Total	**0**	**2,644**	**2,496**	**2,600**
FTE	0.0	1.8	0.0	0.0
00721U RAMP - GIS Portal and Mobility Enhancements				
Labor	0	776	847	847
Non-Labor	0	1,808	2,600	1,300
NSE	0	0	0	0
Total	**0**	**2,584**	**3,447**	**2,147**
FTE	0.0	6.5	7.1	7.1

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: G. Gas System Staff & Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00756AC RAMP - Records and Document Management System (RDMS) - Gas Operations				
Labor	0	7	0	0
Non-Labor	0	1,588	0	0
NSE	0	0	0	0
Total	**0**	**1,595**	**0**	**0**
FTE	0.0	0.1	0.0	0.0
00756AE RAMP - AVEVA and AutoCAD Enhancements - Phase 2				
Labor	0	781	722	0
Non-Labor	0	1,038	1,002	0
NSE	0	0	0	0
Total	**0**	**1,819**	**1,724**	**0**
FTE	0.0	6.5	6.0	0.0
00756AF RAMP - Work Management and Safety and Regulatory 2022-2023				
Labor	0	218	139	0
Non-Labor	0	520	600	0
NSE	0	0	0	0
Total	**0**	**738**	**739**	**0**
FTE	0.0	1.8	1.2	0.0
00756AJ RAMP - High Pressure Project Record (HPPR) Closeout				
Labor	0	564	0	0
Non-Labor	0	436	1,055	0
NSE	0	0	0	0
Total	**0**	**1,000**	**1,055**	**0**
FTE	0.0	4.7	0.0	0.0
00756AK RAMP - Work Management Program Next Generation Field Service Delivery (FSD)				
Labor	0	59	1,177	1,177
Non-Labor	0	281	8,000	8,000
NSE	0	0	0	0
Total	**0**	**340**	**9,177**	**9,177**
FTE	0.0	0.5	9.8	9.8
00756AM RAMP - Records and Documents Management System (RDMS) - Engineering Project Li				
Labor	0	184	0	0
Non-Labor	0	1,494	0	0
NSE	0	0	0	0
Total	**0**	**1,678**	**0**	**0**
FTE	0.0	1.5	0.0	0.0
00756AN RAMP - Records and Document Management System (RDMS): Closeout Processes				
Labor	0	44	0	0
Non-Labor	0	850	0	0
NSE	0	0	0	0
Total	**0**	**894**	**0**	**0**
FTE	0.0	0.4	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: G. Gas System Staff & Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00756AO RAMP - Pipeline Document Management System (PDMS) System of Record on OpenTe				
Labor	0	55	0	0
Non-Labor	0	1,564	0	0
NSE	0	0	0	0
Total	**0**	**1,619**	**0**	**0**
FTE	0.0	0.5	0.0	0.0
00756AP RAMP - Records and Document Management System (RDMS): TSR-CDM Integration				
Labor	0	38	0	0
Non-Labor	0	650	0	0
NSE	0	0	0	0
Total	**0**	**688**	**0**	**0**
FTE	0.0	0.3	0.0	0.0
00756AQ RAMP - Records and Document Management System (RDMS): OpenText Upgrade and E				
Labor	0	26	0	0
Non-Labor	0	2,100	900	900
NSE	0	0	0	0
Total	**0**	**2,126**	**900**	**900**
FTE	0.0	0.2	0.0	0.0
00756AW RAMP - Transmission - Gas Pipe Asset Management				
Labor	0	294	294	0
Non-Labor	0	500	1,200	0
NSE	0	0	0	0
Total	**0**	**794**	**1,494**	**0**
FTE	0.0	2.5	2.5	0.0
00756F RAMP - Process Information Methane Abatement and Monitoring Support				
Labor	0	56	0	0
Non-Labor	0	408	501	0
NSE	0	0	0	0
Total	**0**	**464**	**501**	**0**
FTE	0.0	0.5	0.0	0.0
00756J RAMP - OpsQual Process Automation				
Labor	0	56	157	0
Non-Labor	0	1,630	1,186	0
NSE	0	0	0	0
Total	**0**	**1,686**	**1,343**	**0**
FTE	0.0	0.5	1.3	0.0
00786H RAMP - Records and Document Management System (RDMS): ProCore – RDMS Integratio				
Labor	0	42	0	0
Non-Labor	0	700	0	0
NSE	0	0	0	0
Total	**0**	**742**	**0**	**0**
FTE	0.0	0.4	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: G. Gas System Staff & Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00756BC RAMP - Asset Investment Planning and Management - Phase 2 Transmission				
Labor	0	0	588	0
Non-Labor	0	0	2,500	0
NSE	0	0	0	0
Total	**0**	**0**	**3,088**	**0**
FTE	0.0	0.0	4.9	0.0
00756BD RAMP - Asset Investment Planning and Management - Phase 3 Facilities				
Labor	0	0	0	588
Non-Labor	0	0	0	2,500
NSE	0	0	0	0
Total	**0**	**0**	**0**	**3,088**
FTE	0.0	0.0	0.0	4.9
00756R RAMP - CLICK Modernization Phase II				
Labor	0	1,177	0	0
Non-Labor	0	900	0	0
NSE	0	0	0	0
Total	**0**	**2,077**	**0**	**0**
FTE	0.0	9.8	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721A - RAMP - Electronic Leak Survey

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721A - RAMP - Electronic Leak Survey

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	68	0	0
Non-Labor	Zero-Based	0	0	0	0	0	805	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**873**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0

Business Purpose:

This project started in 2017. This project focuses on software development, configuration and deployment of Electronic Leak Survey Patrol. This solution supports compliance, safety and efficiency improvement requirements.

Physical Description:

The scope of this project includes the build, development, test and deployment of an Electronic Leak Survey and Patrol functionality. This includes field tablet devices for leak survey, patrol, class location, and encroachment activities and electronic leak survey, patrol and class location maps. This project focuses on an SAP and Maximo maintenance plan, order generation, enhanced integrations and ensuring all pipeline assets have been leak surveyed/patrolled as required and all leak indications and other AOCs are captured as required.

This project impacts approximately 28 districts over the project duration.

The internal labor costs for this project are driven by various resources such as: business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.

The non-labor costs for this project are driven by hardware and software purchases, and vendor services to build and implement a new application.

This is a non-shared asset.

Project Justification:

This project leverages GIS technology and integration with SAP, Click and Maximo to provide an electronic leak survey and patrol application in order to demonstrate compliance with Federal and State regulations.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721A - RAMP - Electronic Leak Survey

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721A

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721A - RAMP - Electronic Leak Survey
Workpaper Detail:	00721A.001 - RAMP - Electronic Leak Survey Labor
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	68	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**68**	**0**	**0**
FTE	0.6	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721A - RAMP - Electronic Leak Survey
Workpaper Detail: 00721A.001 - RAMP - Electronic Leak Survey Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 04

RAMP Line Item Name: Gas Operations Systems Resiliency

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	46,970	55,338	62,869	165,177	109,051	139,342

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.GRC forecast total includes the projects from the following workpapers:00756BA00721A00756C00756F00754B00754E00756I00754I00786A00756N00756O00754T00756R00786C00756U00756Z00756AE00721T00721U00756AF00721V00721Y00721AA00721AE00721AF00754AK00756AK00756AS00756AU00756AW

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Districts	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 28 districts over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721A - RAMP - Electronic Leak Survey
Workpaper Detail:	00721A.002 - RAMP - Electronic Leak Survey NL Services (Same RAMP item as 00721A.01)
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	775	0	0
NSE	0	0	0
Total	**775**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721A - RAMP - Electronic Leak Survey
Workpaper Detail:	00721A.003 - RAMP - Electronic Leak Survey HW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	15	0	0
NSE	0	0	0
Total	**15**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721A - RAMP - Electronic Leak Survey
Workpaper Detail:	00721A.004 - RAMP - Electronic Leak Survey SW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	15	0	0
NSE	0	0	0
Total	**15**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AA - RAMP - Project and Portfolio Management System - Construction - Phase 1

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AA - RAMP - Project and Portfolio Management System - Construction - Phase 1

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	506	918	471
Non-Labor	Zero-Based	0	0	0	0	0	1,428	3,828	3,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,934**	**4,746**	**3,471**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.2	7.7	3.9

Business Purpose:

This project implements a central Project and Portfolio Management System (PPMS) supported by auxiliary systems that enable automation and integration, and improve project outcomes. The PPMS supports the process and deliverables outlined in the Capital Delivery Model (CDM), allows projects to be managed, tracked, and reported consistently, and allows supporting efforts to meet program delivery for large construction programs .

Physical Description:

The Construction organization plans to implement the PPMS in two phases. This project is Phase I, which brings core project management capabilities online in the PPMS. These capabilities include: stage gate management, change management, submittals and request for information (RFIs), in-flight document management, cost forecasting, risk management, contingency management, reporting, safety, permitting, and closeout. Phase I also enables key integrations with other system for actual project costs, baseline project estimates, and project schedules.

This project includes approximately 20 automations.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, DBA, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Gain process efficiencies by including projections of other key elements of forecasting
2) Standardize and automate key project management processes and workflows
3) Consolidate and integrate project data from several disparate systems and spreadsheets into one single source of truth
4) Standardize the collection of data needed to file a reasonableness review to recover program expenditures
5) Standardize the collection of data to support data requests and the organization's regulatory strategy
6) Allow the consistent tracking of project information needed to closeout project within designated time
7) Reduce manual reporting activities that are time and resource intensive and prone to human error
8) Allow greater visibility to project and portfolio data which can be used to make proactive business decisions and process improvements.
9) Gain process efficiencies via integration
10) Improve cost forecast accuracy
12) Decommission existing systems such as the Land Services Database

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AA - RAMP - Project and Portfolio Management System - Construction - Phase 1

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AA

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AA - RAMP - Project and Portfolio Management System - Construction - Phase 1
Workpaper Detail:	00721AA.001 - Project and Portfolio Management System - Construction - Phase 1 Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	506	918	471
Non-Labor	0	0	0
NSE	0	0	0
Total	**506**	**918**	**471**
FTE	4.2	7.7	3.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AA - RAMP - Project and Portfolio Management System - Construction - Phase 1
Workpaper Detail:	00721AA.002 - Project and Portfolio Management System - Construction - Phase 1 NL Svcs (Same RAMP item 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,428	3,828	3,000
NSE	0	0	0
Total	**1,428**	**3,828**	**3,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AE - RAMP - Project and Portfolio Management System - Storage

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AE - RAMP - Project and Portfolio Management System - Storage

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	1,700
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,700**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

The Company would like all gas operations business units to use the same processes and technology to manage construction type projects. To contribute towards the goal of standardizing processes and technology, the Project and Portfolio Management System (PPMS) will be extended to support the Storage organization.

Physical Description:

1) Bring core project management capabilities online in the PPMS. These capabilities include: stage gate management, change management, submittals/RFIs, in-flight document management, cost forecasting, risk management, contingency management, reporting, safety, permitting, and closeout.
2) Enable key integrations with SAP for actual project costs, HCSS HeavyBid for baseline project estimates, and Oracle P6 for project schedules.

This project includes approximately 10 process automations.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Improve process efficiencies
2) Standardize and automate key project management processes and workflows
3) Consolidate and integrate project data from several disparate systems and spreadsheets into one single source of truth
4) Standardize the collection of data needed to file a reasonableness review to recover program expenditures
5) Standardize the collection of data to support data requests and the organization's regulatory strategy
6) Allow the consistent tracking of project information needed to closeout project within 180 days of NOP.
7) Reduce manual reporting activities that are time and resource intensive and prone to human error
8) Allow greater visibility to project and portfolio data which can be used to make proactive business decisions and process improvements.
9) Improve process efficiencies via integration
10) Improve cost forecast accuracy
11) Reduce start-stop activity as a result of better portfolio visibility and accuracy

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AE - RAMP - Project and Portfolio Management System - Storage

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AE

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AE - RAMP - Project and Portfolio Management System - Storage
Workpaper Detail:	00721AE.001 - RAMP - Project and Portfolio Management System - Storage NL Services (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	1,700
NSE	0	0	0
Total	**0**	**0**	**1,700**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AF - RAMP - Project and Portfolio Management System - Transmission

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AF - RAMP - Project and Portfolio Management System - Transmission

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	1,900
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,900**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

The Company would like all gas operations business units to use the same processes and technology to manage construction type projects. To contribute towards the goal of standardizing processes and technology, the Project and Portfolio Management System (PPMS) will be extended to support the Transmission organization.

Physical Description:

1) Bring core project management capabilities online in the PPMS. These capabilities include: stage gate management, change management, submittals/RFIs, in-flight document management, cost forecasting, risk management, contingency management, reporting, safety, permitting, and closeout.
2) Enable key integrations with SAP for actual project costs, HCSS HeavyBid for baseline project estimates, and Oracle P6 for project schedules.

This project includes approximately 10 process automations.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Improve process efficiencies
2) Standardize and automate key project management processes and workflows
3) Consolidate and integrate project data from several disparate systems and spreadsheets into one single source of truth
4) Standardize the collection of data needed to file a reasonableness review to recover program expenditures
5) Standardize the collection of data to support data requests and the organization's regulatory strategy
6) Allow the consistent tracking of project information needed to closeout project within 180 days of NOP.
7) Reduce manual reporting activities that are time and resource intensive and prone to human error
8) Allow greater visibility to project and portfolio data which can be used to make proactive business decisions and process improvements.
9) Improve process efficiencies via integration
10) Improve cost forecast accuracy
11) Reduce start-stop activity as a result of better portfolio visibility and accuracy

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AF - RAMP - Project and Portfolio Management System - Transmission

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AF

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AF - RAMP - Project and Portfolio Management System - Transmission
Workpaper Detail:	00721AF.001 - RAMP - Project and Portfolio Management System - Transmission NL Svcs (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	1,900
NSE	0	0	0
Total	**0**	**0**	**1,900**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721T - RAMP - Electronic Leak Survey - Pipeline Patrol

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721T - RAMP - Electronic Leak Survey - Pipeline Patrol

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	235
Non-Labor	Zero-Based	0	0	0	0	0	0	0	1,015
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,250**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0

Business Purpose:

The Electronic Leak Survey (ELS) project aims to replace the current manual process of leak survey and Patrol using paper maps with electronic process with a mobile iPad application. The initial project phase included routine leak survey for gas distribution, this project will expand the scope to the pipeline patrol work type.

Physical Description:

This project focuses on software development, configuration and deployment of Electronic Leak Survey Patrol for High Pressure Distribution. This solution will support compliance, safety and efficiency improvement requirements.

This project includes build, configuration, test, and deployment of Pipeline Patrol functionality including:
1) Mobile application and Electronic Leak Survey and Patrol maps on mobile device
2) Breadcrumb tracking
3) Capturing leak indications, Abnormal Operating Conductions (AOCs), business districts changes and encroachments data
4) SAP maintenance plan and order generation and enhanced integrations
5) Click form configuration and modification for tablet devices and enhanced integrations
6) Ensuring all pipeline assets have been leak surveyed and patrolled as required and all leak indications and other AOCs are captured as required

This project installs approximately 200 devices.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software licenses, software maintenance, vendor services to support project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721T - RAMP - Electronic Leak Survey - Pipeline Patrol

1) Eliminate printing and review of paper maps
2) Improve efficiency by eliminating manual processes e.g. marking completed segments, footage calculations (CT).
3) Provide ability to track whether all pipelines have been surveyed or patrolled.
4) Simplify completion review process to save time and effort needed by supervisors and clerks to make sure work is complete.
5) Improve geographic evaluation and tracking of leaks, Atmospheric Corrosion (ACOR) and other Abnormal Operating Conditions (AOC) locational data. GIS coordinates for leak location will be auto-populated
6) Utilize breadcrumb data collected along survey path for CPUC audit trail for surveyed pipe and also to meet SB1371 compliance requirements.
7) Eliminate need for users to gather data from various districts for reporting purposes. It will be available at a centralized location for users to generate custom reports.
8) Help implement compliance-consistent leak survey and patrol policy across the organization.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721T - RAMP - Electronic Leak Survey - Pipeline Patrol

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721T

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721T - RAMP - Electronic Leak Survey - Pipeline Patrol
Workpaper Detail:	00721T.001 - RAMP - Electronic Leak Survey - Pipeline Patrol Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	235
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**235**
FTE	0.0	0.0	2.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721T - RAMP - Electronic Leak Survey - Pipeline Patrol
Workpaper Detail:	00721T.002 - RAMP - Electronic Leak Survey - Pipeline Patrol NL Services (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	900
NSE	0	0	0
Total	**0**	**0**	**900**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721T - RAMP - Electronic Leak Survey - Pipeline Patrol
Workpaper Detail: 00721T.003 - RAMP - Electronic Leak Survey - Pipeline Patrol SW Purchase (Same RAMP item as 00721A.01)
In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	100
NSE	0	0	0
Total	**0**	**0**	**100**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721T - RAMP - Electronic Leak Survey - Pipeline Patrol
Workpaper Detail:	00721T.004 - RAMP - Electronic Leak Survey - Pipeline Patrol SW Maintenance (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	15
NSE	0	0	0
Total	**0**	**0**	**15**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721V - RAMP - Electronic Leak Survey - Transmission Survey and Patrol

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721V - RAMP - Electronic Leak Survey - Transmission Survey and Patrol

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	118
Non-Labor	Zero-Based	0	0	0	0	0	0	0	300
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**418**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0

Business Purpose:

The Electronic Leak Survey project aims to replace the current manual process of leak survey and patrol using paper maps with electronic process with a mobile iPad application for the transmission user group.

Physical Description:

The over-arching theme on the proposed project is compliance, safety and timeliness of regulatory request. It will extend existing functionality deployed as part of Electronic Leak Survey Phase 1 that covered Routine Leak Survey and Phase 2 that covered the Pipeline Patrol.
The project focuses on software development, configuration and deployment of Electronic Leak Survey Patrol for Transmission. This solution will support compliance, safety and efficiency improvement requirements.

This project includes build, configuration, test and deployment of transmission patrol functionality including:
1) iPads for leak survey and patrol activities
2) Mobile application and patrol maps on mobile device
3) Breadcrumb tracking
4) Capturing leak Indications, Abnormal Operating Conductions (AOCs), business districts changes, and encroachments data
5) Maximo integrations
6) Click form configuration and modification for tablet devices and enhanced integrations
7) Allowing all pipeline assets to be patrolled as required and all leak indications and other AOCs are captured as required

This project installs approximately 200 devices.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721V - RAMP - Electronic Leak Survey - Transmission Survey and Patrol

1) Eliminate printing and review of thousands of paper maps providing cost savings in – Printing, Transportation, Supplies, Maintenance, Storage and Record Management.
2) Improve efficiency by eliminating manual processes e.g. marking completed segments, footage calculations (CT). It will also provide ability to track whether all pipelines have been surveyed or patrolled.
3) Simplify completion review process will save efforts/time needed by supervisors/clerks to make sure work is complete.
4) Improve geographic evaluation and tracking of leaks, Atmospheric Corrosion (ACOR) and other Abnormal Operating Conditions (AOC) locational data. GIS coordinates for leak location will be auto-populated
5) Utilize breadcrumb data collected along survey path for CPUC audit trail for surveyed pipe and also to meet SB1371 compliance requirements.
6) Eliminate need for users to gather data from various districts for reporting purposes. It will be available at a centralized location for users to generate custom reports.
7) Help implement compliance-consistent leak survey and patrol policy across the organization.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721V - RAMP - Electronic Leak Survey - Transmission Survey and Patrol

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721V

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721V - RAMP - Electronic Leak Survey - Transmission Survey and Patrol
Workpaper Detail:	00721V.001 - RAMP - Electronic Leak Survey - Transmission Survey and Patrol Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	118
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**118**
FTE	0.0	0.0	1.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721V - RAMP - Electronic Leak Survey - Transmission Survey and Patrol
Workpaper Detail:	00721V.002 - RAMP - Electronic Leak Survey - Trans Survey and Patrol NL Services (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	300
NSE	0	0	0
Total	**0**	**0**	**300**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721Y - RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721Y - RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	394	0
Non-Labor	Zero-Based	0	0	0	0	0	0	2,650	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**3,044**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0

Business Purpose:

The Distribution organization is responsible for delivering projects that improve the long-term safety and reliability of our natural gas distribution system. Our organization manages approximately 150 major capital projects and $250-300 million of project spend annually. Distribution major capital projects range in size with individual project spend upwards of $1 million. Today, the Distribution organization lacks the tools and systems to track project data housed outside of CPD/SAP. This concept document implements a central Project and Portfolio Management System (PPMS) supported by best-in-class auxiliary systems that enable automation, integration, and improve project outcomes. The PPMS supports the process and deliverables outlined in the Capital Delivery Model (CDM) and allows projects to be managed and tracked consistently.

The project acquires technology to support the execution of projects within the Construction Organization. The project identifies a Project Portfolio Management System (PPMS) which is the heart of the overall Construction Technology Roadmap. The PPMS will be extended to support Major Capital Gas Distribution projects. This project is implemented in two phases.

Physical Description:

1) Bring core project management capabilities online in the PPMS. These capabilities include: stage gate management, change management, submittals/RFIs, in-flight document management, cost forecasting, risk management, contingency management, reporting, safety, permitting, and closeout.
2) Enable key integrations with SAP for actual project costs, HCSS HeavyBid for baseline project estimates, and Oracle P6 for project schedules.
3) Gas Distribution plans to extend and configure the Construction Organization's PPMS system to support our organization and our implementation of the Capital Delivery Model (CDM).

This project includes approximately 20 automations.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Y - RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1

1) Improve process efficiency
2) Standardize and automate key project management processes and workflows
3) Consolidate and integrate project data from several disparate systems and spreadsheets into one single source of truth
4) Standardize the collection of data needed to file a reasonableness review to recover program expenditures
5) Standardize the collection of data to support data requests and the organization's regulatory strategy
6) Allow the consistent tracking of project information needed to closeout project within 180 days of NOP.
7) Reduce manual reporting activities that are time and resource intensive and prone to human error
8) Allow greater visibility to project and portfolio data which can be used to make proactive business decisions and process improvements.
9) Gain process efficiencies via integration
10) Improve cost forecast accuracy
11) Reduce start-stop activity as a result of better portfolio visibility and accuracy
12) Decommission existing systems
13) Improve cost estimating to incorporate cost overages, actuals and lessons learned to create more accurate and precise cost estimates for cashflow translating into future unit and contract discussions and/or customer driven project estimates

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Y - RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721Y

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Y - RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1
Workpaper Detail:	00721Y.001 - RAMP - Project and Portfolio Mgmt System - Gas Dist - Phase 1 Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	394	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**394**	**0**
FTE	0.0	3.3	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Y - RAMP - Project and Portfolio Management System - Gas Distribution - Phase 1
Workpaper Detail:	00721Y.002 - RAMP - Project and Portfolio Mgmt System - Gas Dist - Phase 1 NL Svcs (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,650	0
NSE	0	0	0
Total	**0**	**2,650**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AB - RAMP - Records and Document Management System (RDMS) Phase V
2022 - 2026

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AB - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	988	1,341
Non-Labor	Zero-Based	0	0	0	0	0	0	5,280	5,133
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**6,268**	**6,474**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	8.2	11.2

Business Purpose:

This project includes enhancements to the existing Gas Operations records and document management system (RDMS) and adds new business. It provides technology capabilities for unstructured or non-database content to allow the business to manage company records effectively.

Physical Description:

1) Consolidation of various records and document management systems to OpenText platform
2) Continued operation and support of the OpenText RDMS platform and applications
3) Automation of additional document types using autoclassification tools
4) Additional initiatives, as identified and prioritized by Asset Management, Information Governance and the Operations Technology Governance process

This project consolidates approximately 20 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Deliver easier search and retrieval of construction documents and records
2) Establish a consistent process and system for project documents and records such as permits and engineering drawings
3) Improve security of compliance documents
4) Enable efficient record retention management

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AB - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AB

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AB - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026
Workpaper Detail:	00756AB.001 - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026 Labor
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	988	1,341
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**988**	**1,341**
FTE	0.0	8.2	11.2

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AB - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026
Workpaper Detail:	00756AB.001 - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026 Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-1 Asset and Records Management

RAMP Line Item ID: 03

RAMP Line Item Name: Information Management Systems

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	11,772	8,223	7,374	27,369	59,100	75,517

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.GRC forecast total includes the projects from the following workpapers:00756AB00756AC00756AH00756AI00756AJ00756AM00756AN00756AO00756AP00786H00756AQ

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Enhancements	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 20 enhancements over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AB - RAMP - Records and Document Management System (RDMS) Phase V 2022 - 2026
Workpaper Detail:	00756AB.002 - RAMP - Records and Doc Mgmt System (RDMS) Phase V 2022-2026 NL Srvcs (Same RAMP item as 00756AB.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	5,280	5,133
NSE	0	0	0
Total	**0**	**5,280**	**5,133**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AS - RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditions (AOC)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AS - RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditions (AOC)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	265	118
Non-Labor	Zero-Based	0	0	0	0	0	0	800	314
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**1,065**	**432**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.0

Business Purpose:

The Electronic Leak Survey (ELS) project aims to replace the current manual process of leak survey and patrol using paper maps with electronic process with a mobile iPad application for gas distribution field users. This project will include special leak surveys to the scope of the ELS program and will also provide end to end functionality for Abnormal Operating Conditions (AOC) functionality.

Physical Description:

This project includes the build, configuration, test and deployment of Special leak survey functionality including:
1) Leverage existing ELS Mobile application deployed on mobile device (iPad mini) and Breadcrumb Tracking
2) Capture and record conditions found during special leak survey that require follow-up such as leak Indications or other Abnormal Operating Conditions (AOCs)
3) Automated SAP WO order generation for conditions found that require follow-up including AOCs and enhanced integrations
4) Capability to create special leak surveys on demand and ensuring all identified pipelines are leak surveyed before completion
5) Leverage GIS capacity to quickly identify locations requiring special leak survey and generate leak survey work orders

This project includes approximately 56 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AS - RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditions (AOC)

1) Create Leakage Clerical capacity and cost savings associated with plotting, printing, reviews, and mailing of paper-based leak survey maps. Eliminates paper maps that are lost and result in re-work.
2) Reduce risk and wait times for leak survey maps during significant events increasing safety, improving productivity, and enabling field personnel to respond more quickly to significant events such as system overpressure, earth movement, fires, floods, etc.
3) Automate the leak survey process in Distribution creating efficiency, flexibility in cross district assignment and routing, and better utilization of workforce since there is no longer dependency on paper maps.
4) Streamline, simplify, and integrate processes across several workgroups that will save effort, time and improve business controls.
5) Integrate with SAP and improved geographic location data, tracking of leaks, and other Abnormal Operating Conditions (AOC) that require follow-up. GIS coordinates will be auto populated.
5) Utilize breadcrumb data collected along survey path to verify completions, demonstrate compliance, and meet SB1371 BP20B requirements.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AS - RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditions (AOC)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AS

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AS - RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditions (AOC
Workpaper Detail:	00756AS.001 - RAMP - Elec Leak Surv -Special Leak Surv and Abnormal Op Cond (AOC) Labor (Same RAMP item 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	265	118
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**265**	**118**
FTE	0.0	2.2	1.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AS - RAMP - Electronic Leak Survey - Special Leak Survey and Abnormal Operating Conditions (AOC
Workpaper Detail:	00756AS.002 - RAMP - Elec Leak Surv-Special Leak Surv and Abnor Op Cond (AOC) NL Srvcs (Same RAMP item 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	800	314
NSE	0	0	0
Total	**0**	**800**	**314**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756BB - Project and Portfolio Mgmt System - Construction - ES2P (Enterprise Source to Pay) Implementation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756BB - Project and Portfolio Mgmt System - Construction - ES2P (Enterprise Source to Pay) Implementation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	217	219
Non-Labor	Zero-Based	0	0	0	0	0	0	655	623
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**872**	**842**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8

Business Purpose:

The project extends the Enterprise Source to Pay (ES2P) technology to support the Construction organizations business requirement and makes changes to optimize the Construction organization processes. The construction organizations processes are currently managed through an aging SAP module that is nearing end of support and is no longer included in the newer SAP version to which the utility must migrate.

Physical Description:

The ES2P project implements out of the box functions of SAP Ariba for all of Construction and out of the box functions of FieldGlass for the Pipeline Safety Enhancements Plan (PSEP) portfolio within Construction. The enhancements or customizations objective is to meet Construction specific requirements. This includes the creation of additional reports or system functions needed to support data requests, regulatory, or cost recovery and reasonableness reviews. In addition it includes Fieldglass customizations to support the rollout to other non-PSEP portfolios.

This project replaces one system.
The internal labor costs for this project are driven by various resources such as project managers, architects, developers, business analysts, and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for IT quality assurance.
This is a shared asset.

Project Justification:

1) Standardize business processes within the Construction organization
2) Allow for consistent collection of data and reporting to support data requests, the organization's regulatory strategy, and cost recovery and reasonableness reviews

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756BB - Project and Portfolio Mgmt System - Construction - ES2P (Enterprise Source to Pay) Implementat

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756BB

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756BB - Project and Portfolio Mgmt System - Construction - ES2P (Enterprise Source to Pay) Impleme
Workpaper Detail:	00756BB.001 - Project and Portfolio Mgmt System - Const - ES2P (Enterprise Source to Pay) Implementation Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	217	219
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**217**	**219**
FTE	0.0	1.8	1.8

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756BB - Project and Portfolio Mgmt System - Construction - ES2P (Enterprise Source to Pay) Impleme
Workpaper Detail:	00756BB.002 - Project and Portfolio Mgmt System - Const - ES2P (Enterprise Source to Pay) Implementation NL Srvcs
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	655	623
NSE	0	0	0
Total	**0**	**655**	**623**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756I - RAMP - Gas Materials QA/QC, Field Management and Traceability

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756I - RAMP - Gas Materials QA/QC, Field Management and Traceability

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	220	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,424	2,496	2,600
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,644**	**2,496**	**2,600**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0

Business Purpose:

"This project started in 2020. Traceability of key materials through supply chain is required for regulatory compliance and operational safety. The objective of the Material Traceability initiative is to improve visibility and traceability of pipe , pipe fittings, and other pipeline materials through supply chain. It also provides the ability to centrally track these materials to the issued job and deliver mechanisms to track discrepant materials or any 'where used' lists to recall the product. Multiple phases of the Material Traceability capabilities have already been implemented thus far .
Additional enhancements are required to support traceability of the materials post engineering and procurement and reconciliation of close out processes to improve Quality Assurance and Quality Control (QA/QC) processes and Field Material Management capabilities. "

Physical Description:

This project scope extends the material traceability capabilities to cover the following functionalities:
1) Company level system solution for gas materials QA/QC
2) Field material management enhancements including a digitized solution to track and trace materials beyond goods issue
3) Warehouse material management enhancements to support material traceability
4) Capabilities to integrate IOS devices such as mobile devices, sensors, phones, tablets and augmented reality, and wearable technology

This project includes approximately 50 enhancements over the project duration.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor service for project management, development and implementation.
This is a shared asset.

Project Justification:

This project offers reduced time spent verifying shipment data , reduced project uncertainty and risk of overrun, reduced risk of downtimes while incurring contractor costs, and improved traceability visibility.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756I - RAMP - Gas Materials QA/QC, Field Management and Traceability

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756l

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756I - RAMP - Gas Materials QA/QC, Field Management and Traceability
Workpaper Detail:	00756I.001 - RAMP - Gas Materials QA/QC, Field Management and Traceability Labor (Same RAMP item as 00721A.01)
In-Service Date:	04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	220	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**220**	**0**	**0**
FTE	1.8	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756I - RAMP - Gas Materials QA/QC, Field Management and Traceability
Workpaper Detail:	00756I.002 - RAMP - Gas Materials QA/QC, Field Management and Traceability NL Srvcs (Same RAMP item as 00721A.01)
In-Service Date:	04/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,424	2,496	2,600
NSE	0	0	0
Total	**2,424**	**2,496**	**2,600**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721U - RAMP - GIS Portal and Mobility Enhancements

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00721U - RAMP - GIS Portal and Mobility Enhancements

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	776	847	847
Non-Labor	Zero-Based	0	0	0	0	0	1,808	2,600	1,300
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,584**	**3,447**	**2,147**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	6.5	7.1	7.1

Business Purpose:

The Construction organization is responsible for delivering projects that supports the long-term safety and reliability of the companies natural gas system. The Construction organization manages hundreds of projects ranging in size from less than $1 million to more than $100 million. Today, the Construction organization uses 41 mostly disparate tools and systems to track project data.

The project continues the implementation of Gas Geographic Information System (GIS) application solutions to support operations, regulatory and compliance reporting and safety. This project is required to support and demonstrate safety and compliance with Federal and State regulations. The project focuses on software development, configuration and data model enhancements of the existing Gas GIS systems. These Gas GIS application solutions will support system wide users, compliance, safety and emergency response, and efficiency improvement project requirements.

Physical Description:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721U - RAMP - GIS Portal and Mobility Enhancements

1) Provide synchronization of medium pressure asset data across GIS and SAP
2) Provide a single source for viewing all medium pressure asset data, including equipment assets, maintenance history, electronic documentation and real-time reads.
3) Provide additional Portal Applications, platform enhancements
4) Provide additional Mobile Applications for field capture of data
5) Provide support for Mobile As-Building technology which documents differences between project plans and project execution.
6) Provide Mobile GIS Integration with Operations Work Management
7) Provide Mobile GIS Support for mobile devices (phones and tablets)
8) Provide support for GIS product upgrades for High Pressure (HP) Utility and Pipeline Data Model (UPDM) and Epoch Mobile
9) Provide support for GIS data analytics
10) Provide integration and support for drone and imagery
11) Provide support for OSI/PI integration
12) Provide support for Emergency Operations Center (EOC) activities
13) Provide support for on-premise and cloud Information Technology and Information Security initiatives
14) Provide portal support for control center initiatives prioritizing situational awareness, real time data access, and time series

This project includes approximately 100 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software, and vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

The project includes technical and functional application solutions to allow the Company to meet regulatory compliance and reporting and safety requirements.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721U - RAMP - GIS Portal and Mobility Enhancements

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721U

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721U - RAMP - GIS Portal and Mobility Enhancements
Workpaper Detail:	00721U.001 - RAMP - GIS Portal and Mobility Enhancements Labor (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	776	847	847
Non-Labor	0	0	0
NSE	0	0	0
Total	**776**	**847**	**847**
FTE	6.5	7.1	7.1

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721U - RAMP - GIS Portal and Mobility Enhancements
Workpaper Detail:	00721U.002 - RAMP - GIS Portal and Mobility Enhancements NL Services (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,533	2,600	1,300
NSE	0	0	0
Total	**1,533**	**2,600**	**1,300**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721U - RAMP - GIS Portal and Mobility Enhancements
Workpaper Detail:	00721U.003 - RAMP - GIS Portal and Mobility Enhancements HW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	25	0	0
NSE	0	0	0
Total	**25**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721U - RAMP - GIS Portal and Mobility Enhancements
Workpaper Detail:	00721U.004 - RAMP - GIS Portal and Mobility Enhancements SW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	250	0	0
NSE	0	0	0
Total	**250**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AC - RAMP - Records and Document Management System (RDMS) - Gas Operations

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AC - RAMP - Records and Document Management System (RDMS) - Gas Operations

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	7	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,588	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,595**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

Business Purpose:

This project started in 2021. This project will consolidate, modernize and decommission the existing Records and Document Management Systems and Processes, and replaced with OpenText content server platform.

Physical Description:

1) Implement a project document management process similar to SoCalGas's CDM
2) Plan integrations from ProCore to SoCalGas CDM
3) Develop ingestion plan for legacy SDG&E HP and MP project documents

This project impacts 25 enhancements over the project duration.
The internal labor costs for this project are driven by various resources such as project managers and testing resources.
Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development and implementation.
This is a shared asset.

Project Justification:

1) Improve the search and retrieval of project documents
2) Create consistent process and system for project documents
3) Improve security of compliance documents
4) Offer record retention management

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AC - RAMP - Records and Document Management System (RDMS) - Gas Operations

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AC

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AC - RAMP - Records and Document Management System (RDMS) - Gas Operations
Workpaper Detail:	00756AC.001 - RAMP - Records and Document Management System (RDMS) - Gas Ops Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	7	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**7**	**0**	**0**
FTE	0.1	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AC - RAMP - Records and Document Management System (RDMS) - Gas Operations
Workpaper Detail:	00756AC.002 - RAMP - Records and Doc Management System (RDMS) - Gas Ops NL Srvcs (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,588	0	0
NSE	0	0	0
Total	**1,588**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AE - RAMP - AVEVA and AutoCAD Enhancements - Phase 2

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AE - RAMP - AVEVA and AutoCAD Enhancements - Phase 2

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	781	722	0
Non-Labor	Zero-Based	0	0	0	0	0	1,038	1,002	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,819**	**1,724**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	6.5	6.0	0.0

Business Purpose:

The project continues the implementation of Gas Computer Aided Design (CAD) application solutions to support operations and to support and demonstrate safety and compliance with Federal and State regulations. The project focuses on software development, configuration and data model enhancements of the existing Gas CAD systems.
The objective of the project is to improve information management in transitioning data from design through project closeout for high pressure, medium pressure and storage integrity and safety management.

Physical Description:

1) Enhance AUD (AutoCAD) design tools in support of high pressure, medium pressure, linear asset designs and provide integration to the system architecture
2) Provide access to standard SAP materials from engineering design tools including AutoCAD , Plant 3D and AVEVA IED
3) Expand the AVEVA net configuration to support a wider range of use cases . Utilizing the GIS Portal, provide access to spatially referenced assets, specifically for storage risk and integrity management and internal corrosion inspection information
4) Provide infrastructure and asset referencing tools for above ground 3D images for above ground infrastructure such as compressor stations, regulator stations and storage facilities
5) Provide information for design validation as well as document management for downstream processes and applications
6) Provide integration and support for drone and storage field and compressor station scanning
7) Provide support for Mobile As-building
8) Provide support for design data sheet reporting from AVEVA and AutoCAD

This project includes approximately 100 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

The project includes technical and functional application solutions allowing the Company to meet safety and regulatory compliance and reporting requirements.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AE - RAMP - AVEVA and AutoCAD Enhancements - Phase 2

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AE

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AE - RAMP - AVEVA and AutoCAD Enhancements - Phase 2
Workpaper Detail:	00756AE.001 - RAMP - AVEVA and AutoCAD Enhancements - Phase 2 Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	781	722	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**781**	**722**	**0**
FTE	6.5	6.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AE - RAMP - AVEVA and AutoCAD Enhancements - Phase 2
Workpaper Detail:	00756AE.002 - RAMP - AVEVA and AutoCAD Enhancements - Phase 2 NL Services (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,038	1,002	0
NSE	0	0	0
Total	**1,038**	**1,002**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AF - RAMP - Work Management and Safety and Regulatory 2022-2023

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AF - RAMP - Work Management and Safety and Regulatory 2022-2023

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	218	139	0
Non-Labor	Zero-Based	0	0	0	0	0	520	600	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**738**	**739**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.8	1.2	0.0

Business Purpose:

The Work Management project includes various enhancements related to safety and regulatory updates . It will improve efficiencies and existing work processes by providing a means for the correct data to be collected and workarounds to be minimized.

Physical Description:

1) Update form 4040 leak repair to accommodate large leak and re-evaluate changes.
2) Create new mat code for re-evaluating leaks awaiting perm.
3) Repair RISER - Installations, removal, replacements and coating detail needs to be captured in service history. The installation date of the riser and when the riser is removed or replaced is not tracked. Need to add fields to service history that will track and enable the accurate maintenance of the riser and history.
4) Additional bundle of work management enhancements for both CPD and M&I workflows are included.
5) Migrate existing KorTerra company ticketing solution from on-premise to Microsoft cloud solution increasing maintenance and reporting efficiencies.
6) Considerations for TOB Initiatives i.e. duration and overall recommended enhancements.

This project includes approximately 200 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) The Work Management project will enhance the field reporting of coding and re-evaluating leaks over our facilities.
2) Prevent orders from being out of compliance due to data errors collected from the field.
3) Accounting corrections will allow for correct costs to automatically flow over to completed jobs in SAP and minimize backend corrections which currently must be done manually.
4) Improved business process by providing a means for the correct data to be collected and work arounds to be minimized.
5) Improved user experience.
6) Will reduce O&M and create efficiencies in field and back office.
7) KorTerra' s Cloud implementation scales instantly with no additional infrastructure costs or delays .
8) Infrastructure – cloud subscribers need only provide internet access to the cloud, no other infrastructure is necessary, it is all provided and maintained by KorTerra and Microsoft.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AF - RAMP - Work Management and Safety and Regulatory 2022-2023

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AF

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AF - RAMP - Work Management and Safety and Regulatory 2022-2023
Workpaper Detail:	00756AF.001 - RAMP - Work Management and Safety and Regulatory 2022-2023 Labor (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	218	139	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**218**	**139**	**0**
FTE	1.8	1.2	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AF - RAMP - Work Management and Safety and Regulatory 2022-2023
Workpaper Detail:	00756AF.002 - RAMP - Work Management and Safety and Regulatory 2022-2023 NL Services (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	520	600	0
NSE	0	0	0
Total	**520**	**600**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AJ - RAMP - High Pressure Project Record (HPPR) Closeout

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AJ - RAMP - High Pressure Project Record (HPPR) Closeout

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	564	0	0
Non-Labor	Zero-Based	0	0	0	0	0	436	1,055	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,000**	**1,055**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0

Business Purpose:

This project will implement technology to support business processes for the High Pressure Project Record (HPPR) Closeout across Construction, Distribution, Storage PMO, Storage Well Lateral, and Transmission. This will help standardize the HPPR Closeout process. This is for HPPR Closeout for Non-CDM Projects.

Physical Description:

1) Implement technology to support the business process for HPPR Closeout across Construction, Distribution, Storage PMO, Storage Well Lateral, and Transmission for Non-CDM Projects.

This project includes approximately 56 deployments.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, and vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Improve HPPR Closeout process by implementing a tool that can be utilized across departments.
2) Save time in processing HP Projects from time to complete HPPR closeout and update Geographic Information System (GIS).
3) Develop standardized metrics across business units to measure the time to complete HP Closeout and implement process improvements.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AJ - RAMP - High Pressure Project Record (HPPR) Closeout

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AJ

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AJ - RAMP - High Pressure Project Record (HPPR) Closeout
Workpaper Detail:	00756AJ.001 - RAMP - High Pressure Project Record (HPPR) Closeout Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	564	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**564**	**0**	**0**
FTE	4.7	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AJ - RAMP - High Pressure Project Record (HPPR) Closeout
Workpaper Detail:	00756AJ.002 - RAMP - High Pressure Project Record (HPPR) Closeout NL Srvcs (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	329	1,055	0
NSE	0	0	0
Total	**329**	**1,055**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AJ - RAMP - High Pressure Project Record (HPPR) Closeout
Workpaper Detail:	00756AJ.003 - RAMP - High Pressure Project Record (HPPR) Closeout HW Purchase (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	107	0	0
NSE	0	0	0
Total	**107**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AK - RAMP - Work Management Program Next Generation Field Service Delivery (FSD)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AK - RAMP - Work Management Program Next Generation Field Service Delivery (FSD)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	59	1,177	1,177
Non-Labor	Zero-Based	0	0	0	0	0	281	8,000	8,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**340**	**9,177**	**9,177**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.5	9.8	9.8

Business Purpose:

This project replaces the existing IBM Maximo and CLICK Mobile solutions which reach end of support in December of 2023. This project aligns processes across business, systems and technology and transitions to a modern workforce management and mobile platform.

Physical Description:

The work management program creates a single view of work across energy infrastructure and delivers a modern and agile work management solution enabling our teams to be efficient and safe while meeting customer expectations . Enable data insights to achieve growth and performance that align to company sustainability priorities.

This project impacts approximately 1400 employees.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

1) Simplifiy and modernize work management solution
2) Enhance and align schedule, dispatch, and mobility processes
3) Transform user experience across field and back-office roles
4) Achieve reliable and accessible work and asset data insights

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AK - RAMP - Work Management Program Next Generation Field Service Delivery (FSD)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AK

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AK - RAMP - Work Management Program Next Generation Field Service Delivery (FSD)
Workpaper Detail:	00756AK.001 - RAMP - Work Mgmt Program Next Gen Field Service Delivery (FSD) Labor (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	59	1,177	1,177
Non-Labor	0	0	0
NSE	0	0	0
Total	**59**	**1,177**	**1,177**
FTE	0.5	9.8	9.8

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AK - RAMP - Work Management Program Next Generation Field Service Delivery (FSD)
Workpaper Detail:	00756AK.002 - RAMP - Work Mgmt Program Next Gen Field Srv Delivery (FSD) NL Services (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	281	8,000	8,000
NSE	0	0	0
Total	**281**	**8,000**	**8,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AM - RAMP - Records and Documents Management System (RDMS) - Engineering Project Life Cycle

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AM - RAMP - Records and Documents Management System (RDMS) - Engineering Project Life Cycle

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	184	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,494	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,678**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0

Business Purpose:

Project Engineering requests are currently received through MyProjects, emails, voice and text messages from all business units. This project creates a common, centralized process for intake requests and develops a dynamic case management system to assign the tasks to various engineering disciplines as needed.

Physical Description:

1) Develop a dynamic case management system with task assignment and workflows for engineering project execution
2) Develop a system for the intake, management and execution of work requests to the Gas Engineering teams
3) Design an integration approach for interfaces to other project planning systems such as PPMS
4) Develop a vault for managing controlled engineering drawings for plants, pipelines, and facilities
5) Develop workspaces for signing out or creating documents, making controlled modifications, and signing revisions into the vault
6) Create processes for review and approval that include automatic assignment of roles using a distribution matrix

This project includes approximately 50 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

The current MyProjects product does not have the ability for dynamic case management and document repository. Projects are tracked manually in Excel and tasks are assigned via emails. This system currently lacks transparency and client dashboards to view status updates. The requests are uncoordinated, inefficient and the resulting work products are decentralized and not preserved properly as key documents and records.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AM - RAMP - Records and Documents Management System (RDMS) - Engineering Project Life Cycle

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AM

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AM - RAMP - Records and Documents Management System (RDMS) - Engineering Project Life Cycle
Workpaper Detail:	00756AM.001 - RAMP - Records and Docs Mgmt System (RDMS) - Eng Pro Life Cycle Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	184	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**184**	**0**	**0**
FTE	1.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AM - RAMP - Records and Documents Management System (RDMS) - Engineering Project Life Cycle
Workpaper Detail:	00756AM.002 - RAMP - Records and Docs Mgmt System (RDMS) - Eng Pro Life Cycle NL Srvcs (Same RAMP item 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,494	0	0
NSE	0	0	0
Total	**1,494**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AN - RAMP - Records and Document Management System (RDMS): Closeout Processes

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AN - RAMP - Records and Document Management System (RDMS): Closeout Processes

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	44	0	0
Non-Labor	Zero-Based	0	0	0	0	0	850	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**894**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Business Purpose:

This project implements technology to support business processes for High Pressure Project Record (HPPR) Closeout across multiple business units such as: Construction, Distribution, Storage, and Transmission. This effort standardizes the HPPR Closeout process. This project also allows for a uniform methodology in performing HPPR Closeout to monitor and track HP Projects to achieve target timelines for submitting required paperwork per Gas Standard for Completion Drawings , and Survey Data Files.

Physical Description:

1) Develop CloseOut workflows in OpenText CDM
2) Train users on the use of OpenText CDM for close out activities

This project includes approximately 50 enhancements.
The internal labor costs for this project are driven by various resources such as project manager and testing resources.
Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Improve HPPR Closeout process by implementing a tool that can be utilized across departments.
2) Save time in processing HP Projects from time to complete HPPR Closeout and update Geographic Information System (GIS).
3) Develop standardized metrics across business units to measure the time to complete HP Closeout and implement process improvements.
4) Enable move of system of record from PDMS to OpenText
5) Aid cleanup of PDMS data by removing a redundant entry point
6) Remove barriers for adopting CDM

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AN - RAMP - Records and Document Management System (RDMS): Closeout Processes

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AN

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AN - RAMP - Records and Document Management System (RDMS): Closeout Processes
Workpaper Detail:	00756AN.001 - RAMP - Records and Doc Mgmt System (RDMS): Closeout Processes Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	44	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**44**	**0**	**0**
FTE	0.4	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AN - RAMP - Records and Document Management System (RDMS): Closeout Processes
Workpaper Detail:	00756AN.002 - RAMP - Records and Doc Mgmt System (RDMS): Closeout Processes NL Srvcs (Same RAMP item 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	850	0	0
NSE	0	0	0
Total	**850**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AO - RAMP - Pipeline Document Management System (PDMS) System of Record on OpenText

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AO - RAMP - Pipeline Document Management System (PDMS) System of Record on OpenText

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	55	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,564	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,619**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0

Business Purpose:

This project will move the Pipeline Document Management System (PDMS) system of record to OpenText.

Physical Description:

1) Update policies and procedures referencing PDMS on Eccentex as system of record
2) Modify submission channels from external applications into PDMS
3) Analysis of PDMS content using ShinyDrive
4) Catalog, taxonomy and search improvements to PDMS project records
5) Reverse proxy to maintain accessibility of record through PDMS ID

This project includes approximately 50 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

1) Allow retirement of PDMS on the Eccentex platform
2) Assure existing systems that currently feed PDMS can continue to operate once Eccentex DMS is decommissioned

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AO - RAMP - Pipeline Document Management System (PDMS) System of Record on OpenText

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AO

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AO - RAMP - Pipeline Document Management System (PDMS) System of Record on OpenText
Workpaper Detail:	00756AO.001 - RAMP - Pipeline Doc Mgmt System (PDMS) System of Record on OpenText Labor (Same RAMP 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	55	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**55**	**0**	**0**
FTE	0.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AO - RAMP - Pipeline Document Management System (PDMS) System of Record on OpenText
Workpaper Detail:	00756AO.002 - RAMP - Pipeline Doc Mgmt System (PDMS) System of Record on OpenTextt NL Srvcs (Same RAMP 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,564	0	0
NSE	0	0	0
Total	**1,564**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AP - RAMP - Records and Document Management System (RDMS): TSR-CDM Integration

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AP - RAMP - Records and Document Management System (RDMS): TSR-CDM Integration

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	38	0	0
Non-Labor	Zero-Based	0	0	0	0	0	650	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**688**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Business Purpose:

This project integrates Transmission Service Request (TSR) solution with OpenText Capital Delivery Model (CDM) to streamline and automate business processes between planning and records management tools. It also improves data integrity by building new integrations.

Physical Description:

1) Develop integration interface to allow TSR documents to be pushed to CDM in OpenText
2) Align metadata and taxonomy

This project includes approximately 5 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

1) Reduce document classification errors
2) Allow CDM review processes to be used for Transmission
3) Allow eventual retirement of MyProjects

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AP - RAMP - Records and Document Management System (RDMS): TSR-CDM Integration

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AP

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AP - RAMP - Records and Document Management System (RDMS): TSR-CDM Integration
Workpaper Detail:	00756AP.001 - RAMP - Records and Doc Mgmt System (RDMS): TSR-CDM Integration Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	38	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**38**	**0**	**0**
FTE	0.3	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AP - RAMP - Records and Document Management System (RDMS): TSR-CDM Integration
Workpaper Detail:	00756AP.002 - RAMP - Records and Doc Mgmt System (RDMS): TSR-CDM Integ NL Services (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	650	0	0
NSE	0	0	0
Total	**650**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AQ - RAMP - Records and Document Management System (RDMS): OpenText Upgrade and Enhancements

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AQ - RAMP - Records and Document Management System (RDMS): OpenText Upgrade and Enhancemen

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	26	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,100	900	900
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,126**	**900**	**900**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

Business Purpose:

The OpenText RDMS system runs on a two-year-old software version using an Oracle database. This software version is on an older architecture with a limited resource pool for expansion modules. SoCalGas is currently operating at the maximum threshold with limited ability to architecturally expand. This project consists of an OpenText version upgrade, including database system changes, code remediation, and new business enhancements and features.

Physical Description:

1) Upgrade OpenText content server
2) Remediate any codebase incompatibilities
3) Deliver high-priority business functional enhancements
4) Install and configure additional adaptability search tools

This project includes approximately 50 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

1) Allow expansion of tools and capabilities
2) Deliver high priority business enhancements
3) Improve system stability and supportability
4) Eliminate scalability constraints

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AQ - RAMP - Records and Document Management System (RDMS): OpenText Upgrade and Enhance

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AQ

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AQ - RAMP - Records and Document Management System (RDMS): OpenText Upgrade and Enhancem
Workpaper Detail:	00756AQ.001 - RAMP - Rcrd and Doc Mgmt Sys (RDMS): OpenText Upgrade and Enhanc Labor (Same RAMP item 00756AB.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	26	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**26**	**0**	**0**
FTE	0.2	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AQ - RAMP - Records and Document Management System (RDMS): OpenText Upgrade and Enhancem
Workpaper Detail:	00756AQ.002 - RAMP - Rcrd and Doc Mgmt Sys (RDMS): OpenText Upgrade and Enhan NL Srvcs (Same RAMP item 00756AB.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,100	900	900
NSE	0	0	0
Total	**2,100**	**900**	**900**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AW - RAMP - Transmission - Gas Pipe Asset Management

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AW - RAMP - Transmission - Gas Pipe Asset Management

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	294	294	0
Non-Labor	Zero-Based	0	0	0	0	0	500	1,200	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**794**	**1,494**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.5	2.5	0.0

Business Purpose:

This project builds the capability to capture Pipe GPS attributes and push the data to GGIS.

Physical Description:

The goal of the project is the capture of Pipe GPS data including pipe location, elevation change, direction change, pipe diameter change, etc. to integrate with GGIS. The automation will reduce data errors and improve user experience.

This project includes approximately 50 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software purchase, prepaid hardware maintenance cost, and vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Increase consistency in data collection
2) Increase accuracy of as-built data
3) Reduce time to collect and share as-built data
4) Reduce time to map data in GIS
5) Reduce duplication of work

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AW - RAMP - Transmission - Gas Pipe Asset Management

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AW

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AW - RAMP - Transmission - Gas Pipe Asset Management
Workpaper Detail:	00756AW.001 - RAMP - Transmission - Gas Pipe Asset Management Labor (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	294	294	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**294**	**294**	**0**
FTE	2.5	2.5	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AW - RAMP - Transmission - Gas Pipe Asset Management
Workpaper Detail:	00756AW.002 - RAMP - Transmission - Gas Pipe Asset Management NL Services (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	250	1,000	0
NSE	0	0	0
Total	**250**	**1,000**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AW - RAMP - Transmission - Gas Pipe Asset Management
Workpaper Detail:	00756AW.003 - RAMP - Transmission - Gas Pipe Asset Management HW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	200	0	0
NSE	0	0	0
Total	**200**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AW - RAMP - Transmission - Gas Pipe Asset Management
Workpaper Detail:	00756AW.004 - RAMP - Transmission - Gas Pipe Asset Management SW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	50	0	0
NSE	0	0	0
Total	**50**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AW - RAMP - Transmission - Gas Pipe Asset Management
Workpaper Detail:	00756AW.005 - RAMP - Transmission - Gas Pipe Asset Management HW Maintenance (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	200	0
NSE	0	0	0
Total	**0**	**200**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756F - RAMP - Process Information Methane Abatement and Monitoring Support

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756F - RAMP - Process Information Methane Abatement and Monitoring Support

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	56	0	0
Non-Labor	Zero-Based	0	0	0	0	0	408	501	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**464**	**501**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0

Business Purpose:

This project started in 2020. The objective of this project is to leverage an enterprise solution to enhance the existing infrastructure and improve system reliability and integration with other platforms. The ultimate goal is to improve company compliance with Federal and State regulatory requirements, pipeline safety and customer satisfaction.

Physical Description:

The scope of this project includes extending an enterprise solution to the Gas Operations organization and integrating operational data with new software to support advanced and predictive analytics.

This project includes approximately 20 enhancements over the project duration.
The internal labor costs for this project are driven by various resources such as business analysts, project manager and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

This project improves the ability to drive more accurate and timely data- driven analytic decisions and improve system's reliability, pipeline safety, and customer satisfaction.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756F - RAMP - Process Information Methane Abatement and Monitoring Support

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756F

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756F - RAMP - Process Information Methane Abatement and Monitoring Support
Workpaper Detail:	00756F.001 - RAMP - Process Information Methane Abatement and Monitoring Support Labor (Same RAMP item 00721A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	56	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**56**	**0**	**0**
FTE	0.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756F - RAMP - Process Information Methane Abatement and Monitoring Support
Workpaper Detail:	00756F.002 - RAMP - Process Information Methane Abatement and Monitoring Supp NL Svcs (Same RAMP item 00721A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	408	501	0
NSE	0	0	0
Total	**408**	**501**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756J - RAMP - OpsQual Process Automation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756J - RAMP - OpsQual Process Automation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	56	157	0
Non-Labor	Zero-Based	0	0	0	0	0	1,630	1,186	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,686**	**1,343**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.5	1.3	0.0

Business Purpose:

This project started in 2020 and focuses on Operator Qualification (OpsQual/OQ) Process Automation, Integration and Conversion Process Automation. Operator Qualification testing is inefficient and operates on paper based processes which generate 200,000 paper records per year. Additionally, verifying employee qualifications through the record of qualification system is also inefficient. Changes to employee qualification status are not instantaneous and processes to show employees "No Longer Performing" tasks are not automated and may create compliance related issues when an employee is no longer performing tasks.

This project creates a modern training system for Gas Operations Training that provides just-in-time, modular, self-paced, individualized instruction to field employees that can be delivered anywhere, anytime.

Physical Description:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756J - RAMP - OpsQual Process Automation

The current system leaves many opportunities for data entry error and grading inaccuracy due to its manual nature. OQ is proposing adopting vendor solutions to:
1) Automate delivery of preparatory material for task-specific qualifications, and automate and integrate OQ knowledge and performance tests in VeriSource and SAP.
2) Analyze existing testing content to implement the knowledge and performance testing to employees through electronic testing and eliminating paper-based testing.
3) Automate the No Longer Performing process to have instant updates to SAP when employees are no longer performing tasks
4) Automate suspension and disqualification of OQ task for employees not passing or No Longer Performing OQ tasks.

Operations Training Center Upgrade Scope:
1) Learning centers in each of the bases – study carrels with computers so represented employees can do eLearning. This would allow some training to be done at their base, eliminating some travel expenses.
2) Smartboards in each classroom
3) Video, audio production and editing equipment
4) HoloLens equipment and software for virtual reality and augmented reality training
5) Tablets for all classrooms
6) Authoring software for creating eLearning content
7) Backhoe simulators – full fidelity simulation for operating a backhoe
8) Welding simulators
9) Panopto – Sempra YouTube type video system
10)Mobile learning center – A vehicle equipped with study carrels and computers, training props, etc.
11) QR Code system – Place QR code stickers on equipment, scan the code with a mobile device and view a video on how to operate the device.

This project includes approximately 50 enhancements over the project duration.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for pr

Project Justification:

This project provides remote and/or classroom network access and a greatly enhanced qualification verification process. Testing and Qualification records will be organized into one online location for employees.? The project offers significant efficiency gains in time spent administering and grading OQ tests, makes the entire OQ process become paperless, enables us to collect data and develop metrics for monitoring continuous improvement, and provides an automated work management system.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756J - RAMP - OpsQual Process Automation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756J

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756J - RAMP - OpsQual Process Automation
Workpaper Detail:	00756J.001 - RAMP - OpsQual Process Automation Labor
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	56	157	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**56**	**157**	**0**
FTE	0.5	1.3	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756J - RAMP - OpsQual Process Automation
Workpaper Detail: 00756J.001 - RAMP - OpsQual Process Automation Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-1 Asset and Records Management

RAMP Line Item ID: 02

RAMP Line Item Name: Operational Compliance and Oversight

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	1,686	1,343	0	3,029	0	0

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Enhancements	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 50 enhancements over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756J - RAMP - OpsQual Process Automation
Workpaper Detail:	00756J.002 - RAMP - OpsQual Process Automation NL Services (Same RAMP item as 00756J.01)
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,630	986	0
NSE	0	0	0
Total	**1,630**	**986**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756J - RAMP - OpsQual Process Automation
Workpaper Detail:	00756J.003 - RAMP - OpsQual Process Automation SaaS Subscription (Same RAMP item as 00756J.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	200	0
NSE	0	0	0
Total	**0**	**200**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786H - RAMP - Records and Document Management System (RDMS): ProCore – RDMS Integration

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: G. Gas System Staff & Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786H - RAMP - Records and Document Management System (RDMS): ProCore – RDMS Integration

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	42	0	0
Non-Labor	Zero-Based	0	0	0	0	0	700	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**742**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Business Purpose:

This project will integrate SoCalGas planning tool (ProCore) with OpenText Records and Document Management System (RDMS) to streamline and automate business processes between planning and records management tools.

Physical Description:

1) Develop integration interface to allow ProCore documents to be pushed to OpenText
2) Align and reconcile document taxonomies and metadata
3) Develop reusable conduit for integrations
4) Implement integration process for Construction projects that have used Construction project management system (ProCore) for project document management.

This project includes approximately 10 enhancements.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

1) Streamline process for Construction project users, assuring record completeness and data integrity
2) Provide reusable closeout documentation process for SoCalGas projects

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786H - RAMP - Records and Document Management System (RDMS): ProCore – RDMS Integration

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786H

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786H - RAMP - Records and Document Management System (RDMS): ProCore – RDMS Integration
Workpaper Detail:	00786H.001 - RAMP - Records and Doc Mgmt System (RDMS): ProCore RDMS Integ Labor (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	42	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**42**	**0**	**0**
FTE	0.4	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	G. Gas System Staff & Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786H - RAMP - Records and Document Management System (RDMS): ProCore – RDMS Integration
Workpaper Detail:	00786H.002 - RAMP - Rcrd and Doc Mgmt Sys (RDMS): ProCore RDMS Integ NL Services (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	700	0	0
NSE	0	0	0
Total	**700**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756BC - RAMP - Asset Investment Planning and Management - Phase 2 Transmission

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00756BC - RAMP - Asset Investment Planning and Management - Phase 2 Transmission

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	588	0
Non-Labor	Zero-Based	0	0	0	0	0	0	2,500	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**3,088**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0

Business Purpose:

'SoCalGas performs prioritization of asset related projects manually using spreadsheets and input from SMEs. This process has a rating system in which SMEs must score a project in multiple areas using a scale of zero to three. This scoring is not interpreted uniformly across the organization, making it very challenging to determine risk and value associated with investments. It also limits how value and risk are quantified across asset families and does not incorporate a way to determine how much time a project can be deferred based on the scoring method. SoCalGas also does not have a method to document risk or how risk was reduced by making investments. SoCalGas has multiple departments that quantify risk using different methods, which creates confusion in regulatory filings.

This project is a continuation of the Asset Investment Planning and Management (AIPM) Phase 1 – Distribution. Phase 1 focused on Distribution business unit and in the phase 2, Transmission business unit will be the focus

Physical Description:

AIPM bridges asset and risk management, finance, and corporate strategy. AIPM will provide a common decision criteria to consistently estimate the likelihood of an event or failure. It also will more accurately quantify the consequence of a failure across safety, reliability, and financial metrics. It will help SoCalGas determine where and when to invest in infrastructure to deliver the greatest value and drive achievement of strategic goals. The Copperleaf C55 solution will assist SoCalGas with its asset investment prioritization by optimizing and managing the portfolio of investments to determine the investment strategy that will deliver the greatest value, and to predict the long-term needs of the asset base to proactively manage risk. AIPM will provide common decision-making criteria to the Transmission business units related capital projects.

This project includes approximately 50 process automations.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Centralize and streamline risk quantification across the Transmission business unit
2) Create a pathway to optimize investment planning
3) Create auditable documentation for regulatory reporting and risk calculation criteria
4) Improve efficiencies across the planning process
5) Manage all transmission asset and investment data in a single collaborative and controlled platform

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756BC - RAMP - Asset Investment Planning and Management - Phase 2 Transmission

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756BC

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756BC - RAMP - Asset Investment Planning and Management - Phase 2 Transmission
Workpaper Detail:	00756BC.001 - RAMP - Asset Investment Planning and Management - Phase 2 Trans Labor (Same RAMP item as 00756AG.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	588	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**588**	**0**
FTE	0.0	4.9	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756BC - RAMP - Asset Investment Planning and Management - Phase 2 Transmission
Workpaper Detail:	00756BC.002 - RAMP - Asset Investment Planning and Management - Phase 2 Trans NL Svcs (Same RAMP item 00756AG.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,500	0
NSE	0	0	0
Total	**0**	**2,500**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756BD - RAMP - Asset Investment Planning and Management - Phase 3 Facilities

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00756BD - RAMP - Asset Investment Planning and Management - Phase 3 Facilities

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	588
Non-Labor	Zero-Based	0	0	0	0	0	0	0	2,500
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,088**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9

Business Purpose:

SoCalGas performs prioritization of asset related projects manually using spreadsheets and input from SMEs. This process has a rating system in which SMEs must score a project in multiple areas using a scale of zero to three. This scoring is not interpreted uniformly across the organization, making it very challenging to determine risk and value associated with investments. It also limits how value and risk are quantified across asset families and does not incorporate a way to determine how much time a project can be deferred based on the scoring method. SoCalGas also does not have a method to document risk or how risk was reduced by making investments. SoCalGas has multiple departments that quantify risk using different methods, which creates confusion in regulatory filings.

This is a continuation of the Asset Investment Planning and Management (AIPM) program and in this phase the focus is on "Facilities" business unit.

Physical Description:

AIPM bridges asset and risk management, finance, and corporate strategy. AIPM will provide a common decision criteria to consistently estimate the likelihood of an event or failure. It also will more accurately quantify the consequence of a failure across safety, reliability, and financial metrics. It will help SoCalGas determine where and when to invest in infrastructure to deliver the greatest value and drive achievement of strategic goals. The Copperleaf C55 solution will assist SoCalGas with its asset investment prioritization by optimizing and managing the portfolio of investments to determine the investment strategy that will deliver the greatest value, and to predict the long-term needs of the asset base to proactively manage risk. AIPM will provide common decision-making criteria to the Facilities business units related capital projects.

This project includes approximately 50 process automations.
The internal labor costs for this project are driven by various resources such as business analysts, project managers, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

1) Centralize and streamline risk quantification across the Facilities business unit
2) Create a pathway to optimize investment planning
3) Create auditable documentation for regulatory reporting and risk calculation criteria
4) Improve efficiencies across the planning process
5) Manage all facilities asset and investment data in a single collaborative and controlled platform

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756BD - RAMP - Asset Investment Planning and Management - Phase 3 Facilities

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756BD

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00756BD - RAMP - Asset Investment Planning and Management - Phase 3 Facilities
Workpaper Detail: 00756BD.001 - RAMP - Asset Investment Planning and Mgmt - Phase 3 Facilities Labor (Same RAMP item as 00756AG.01)
In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	588
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**588**
FTE	0.0	0.0	4.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756BD - RAMP - Asset Investment Planning and Management - Phase 3 Facilities
Workpaper Detail:	00756BD.002 - RAMP - Asset Investment Planning and Mgmt - Phase 3 Facilities NL Srvcs (Same RAMP item 00756AG.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	2,500
NSE	0	0	0
Total	**0**	**0**	**2,500**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756R - RAMP - CLICK Modernization Phase II

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: G. Gas System Staff & Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756R - RAMP - CLICK Modernization Phase II

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	1,177	0	0
Non-Labor	Zero-Based	0	0	0	0	0	900	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,077**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0

Business Purpose:

This project started in 2021. This is Phase 2 of a two phase project. This phase will focus primarily on migrating the remaining Gas Distribution users from Click Mobile Classic and Schedule version 8.1 to Click Mobile Touch and Schedule version 8.3. This project focuses on rebuilding existing Click forms in 8.3, and replacing the current pdf processes which have caused ongoing and time consuming client support and redundant data capturing to allow compliance driven work orders to be maintained and available for audit inspections. The pdf replacement includes building new Click forms to collect data captured on today's pdfs, updating SAP interfaces to send and receive former pdf data, and eliminating manual upload of pdfs not automatically sent from mobile units. In addition, upgrading to Click Mobile Touch will provide mobile users improved forms in an application that can run on both Windows and iOS devices.

Physical Description:

1) Rebuild all remaining Gas forms used by Gas Distribution in Click Mobile 8.3
2) Replace all remaining pdfs with Click Mobile forms
3) Update SAP interfaces to send and receive the data in over 110 work types to support the new Click forms.

This project includes approximately 25 enhancements over the project duration.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a non-shared asset.

Project Justification:

This project removes the manual process of retrieving pdfs in Click Mobile and uploading them into SAP and improves process efficiencies allowing for changes and enhancements in Click Touch and additional Click releases throughout the year benefitting the field users with the most up to date information.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756R - RAMP - CLICK Modernization Phase II

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756R

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756R - RAMP - CLICK Modernization Phase II
Workpaper Detail:	00756R.001 - RAMP - CLICK Modernization Phase II Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	1,177	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**1,177**	**0**	**0**
FTE	9.8	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	G. Gas System Staff & Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756R - RAMP - CLICK Modernization Phase II
Workpaper Detail:	00756R.002 - RAMP - CLICK Modernization Phase II NL Services (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	900	0	0
NSE	0	0	0
Total	**900**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: H. Gas Transmission Operations and Construction
Workpaper: VARIOUS

Summary for Category: H. Gas Transmission Operations and Construction

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	359	45	0
Non-Labor	0	803	50	0
NSE	0	0	0	0
Total	**0**	**1,162**	**95**	**0**
FTE	0.0	3.0	0.4	0.0
00754L Envoy Polymer Upgrade				
Labor	0	118	0	0
Non-Labor	0	380	0	0
NSE	0	0	0	0
Total	**0**	**498**	**0**	**0**
FTE	0.0	1.0	0.0	0.0
00754N Envoy Renewable Natural Gas (RNG)				
Labor	0	241	45	0
Non-Labor	0	423	50	0
NSE	0	0	0	0
Total	**0**	**664**	**95**	**0**
FTE	0.0	2.0	0.4	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754L - Envoy Polymer Upgrade

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: H. Gas Transmission Operations and Construction
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00754L - Envoy Polymer Upgrade

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	118	0	0
Non-Labor	Zero-Based	0	0	0	0	0	380	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**498**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0

Business Purpose:

This project started in 2021. Envoy GUI is based on the Polymer 1 framework to support mobile devices and multiple browsers. However, Polymer 1 has been out of support and requires upgrades so that the ENVOY application continues to be available and supported. The continued delay of the Envoy 3.0 project commencement, which included modernizing the Envoy GUI framework, has resulted in a setback for the Polymer 1 upgrade. The Envoy GUI framework needs to be migrated to a supported GUI framework for continuous availability.

Physical Description:

1) Envoy GUI based on Polymer 1 will be migrated to new Framework.
2) Envoy code repository will also be migrated to Microsoft Azure DevOps.
3) Over 1200 UI templates on Polymer 1 must be upgraded to prevent malfunction or lack of support for security patches

This project upgrades one application over the project duration.
The internal labor costs for this project are driven by various resources such as architect, information security engineers, project manager, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for configuration and deployment.
This is a shared asset.

Project Justification:

1) Reduce risk of malfunction with unsupported technology
2) Reduce security compliance challenges by employing the current and more secure framework
3) Enhance useability with latest features available in the new framework

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	H. Gas Transmission Operations and Construction
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754L - Envoy Polymer Upgrade

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754L

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	H. Gas Transmission Operations and Construction
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754L - Envoy Polymer Upgrade
Workpaper Detail:	00754L.001 - Envoy Polymer Upgrade Labor
In-Service Date:	05/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	118	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**118**	**0**	**0**
FTE	1.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	H. Gas Transmission Operations and Construction
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00754L - Envoy Polymer Upgrade
Workpaper Detail:	00754L.002 - Envoy Polymer Upgrade NL Services
In-Service Date:	05/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	380	0	0
NSE	0	0	0
Total	**380**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00754N - Envoy Renewable Natural Gas (RNG)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: H. Gas Transmission Operations and Construction
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754N - Envoy Renewable Natural Gas (RNG)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	241	45	0
Non-Labor	Zero-Based	0	0	0	0	0	423	50	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**664**	**95**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.0	0.4	0.0

Business Purpose:

This project adds or changes the creation of California Production-Renewable Natural Gas (CP-RNG) sub zones such as Wheeler, Northern, Southern to solve the localized capacity conflict for the addition of RNG producers into pipeline systems.

Physical Description:

1) Create three new CP-RNG sub zones for Northern, Southern and Wheeler Ridge
2) Allocate Firm Capacity based on the CP's interconnect capacity
3) Zone capacity at the interconnecting receipt points would be reduced by the capacity allocated to CP-RNG sub zones.
4) Create new Backbone Transportation Service (BTS) contracts in CCS for each of the CP-RNG sub zones.
5) Changes significant nomination, confirmation and allocation processes
6) Changes to various producer reports, screens and control processes.

This project impacts one applications.
The internal labor costs for this project are driven by various resources such as project managers, developers, and testing analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for configuration, and testing and implementation support.
This is a shared asset.

Project Justification:

1) Meet CPUC compliance by Q1 2023
2) Facilitate and promote efficient RNG capacity trades in the pipeline systems
3) Localize RNG BTS contracts for Wheeler Ridge, Norther and Southern zones
4) Provide new and updated reports and notifications to pipeline operators and RNG producers with latest capacity including RNG

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	H. Gas Transmission Operations and Construction
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754N - Envoy Renewable Natural Gas (RNG)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00754N

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00754.0
Category:	H. Gas Transmission Operations and Construction
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00754N - Envoy Renewable Natural Gas (RNG)
Workpaper Detail:	00754N.001 - Envoy Renewable Natural Gas (RNG) Labor
In-Service Date:	08/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	241	45	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**241**	**45**	**0**
FTE	2.0	0.4	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00754.0
Category: H. Gas Transmission Operations and Construction
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00754N - Envoy Renewable Natural Gas (RNG)
Workpaper Detail: 00754N.002 - Envoy Renewable Natural Gas (RNG) NL Services

In-Service Date: 08/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	423	50	0
NSE	0	0	0
Total	**423**	**50**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: I. People and Culture Department
Workpaper: VARIOUS

Summary for Category: I. People and Culture Department

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	1,130	1,083	882
Non-Labor	0	5,575	6,420	6,700
NSE	0	0	0	0
Total	**0**	**6,705**	**7,503**	**7,582**
FTE	0.0	9.4	9.0	7.4

00756A Employee Care Services Workers Comp Refresh

Labor	0	476	24	0
Non-Labor	0	1,236	20	0
NSE	0	0	0	0
Total	**0**	**1,712**	**44**	**0**
FTE	0.0	4.0	0.2	0.0

00756X HR and Corporate Center Data and Application Modernization

Labor	0	341	588	588
Non-Labor	0	2,893	4,000	3,000
NSE	0	0	0	0
Total	**0**	**3,234**	**4,588**	**3,588**
FTE	0.0	2.8	4.9	4.9

00786K HR Employee Lifecycle

Labor	0	313	471	294
Non-Labor	0	1,446	2,400	500
NSE	0	0	0	0
Total	**0**	**1,759**	**2,871**	**794**
FTE	0.0	2.6	3.9	2.5

00786M HR Workforce Planning Tool

Labor	0	0	0	0
Non-Labor	0	0	0	3,200
NSE	0	0	0	0
Total	**0**	**0**	**0**	**3,200**
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756A - Employee Care Services Workers Comp Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: I. People and Culture Department
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756A - Employee Care Services Workers Comp Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	476	24	0
Non-Labor	Zero-Based	0	0	0	0	0	1,236	20	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,712**	**44**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.0	0.2	0.0

Business Purpose:

This project started in 2019. ECS business functions require a large number of manual activities because the legacy system lacks modern capabilities such as analytics, dashboards, Artificial Intelligence (AI), and digital engagement. This project replaces the legacy Employee Care Services (ECS) on-premise software. ECS supports workers compensation claims management and employee leave management along with integrations with other systems.

Physical Description:

The scope of this project includes a replacement solution to optimize the business process for the ECS organization.

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as project manager, developers, architect, and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for configuration, integration, implementation, and IT quality assurance.
This is a shared asset.

Project Justification:

Replacing the current software brings improved efficiencies and enables modern capabilities , such as analytics, dashboards, and digital engagement.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756A - Employee Care Services Workers Comp Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756A

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756A - Employee Care Services Workers Comp Refresh
Workpaper Detail:	00756A.001 - Employee Care Services Workers Comp Refresh Labor
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	476	24	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**476**	**24**	**0**
FTE	4.0	0.2	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756A - Employee Care Services Workers Comp Refresh
Workpaper Detail:	00756A.002 - Employee Care Services Workers Comp Refresh NL Services
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	741	20	0
NSE	0	0	0
Total	**741**	**20**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756A - Employee Care Services Workers Comp Refresh
Workpaper Detail:	00756A.003 - Employee Care Services Workers Comp Refresh SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	495	0	0
NSE	0	0	0
Total	**495**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756X - HR and Corporate Center Data and Application Modernization

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: I. People and Culture Department
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756X - HR and Corporate Center Data and Application Modernization

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	341	588	588
Non-Labor	Zero-Based	0	0	0	0	0	2,893	4,000	3,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,234**	**4,588**	**3,588**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.8	4.9	4.9

Business Purpose:

This project develops cloud applications and data services to replace on-premise applications and processes for Human Resources (HR) and Sempra shared services to improve cybersecurity complaince, system reliability, and productivity.

Physical Description:

1) Modernize high value cloud application opportunities and maximize value of data through self-service tools, artifical intelligence (AI) and Machine Learning for HR and Sempra shared services
2) Build-out "Data as a Service" to allow for secure and high-availability to HR data sources for consumption by IT applications
3) Enable self-service data and governance for reporting
4) Rebuild of on-premise application on the cloud to improve technology lifecycle management by staying on current software versions that will increase operational efficiency and cybersecurity compliance .
5) Improve applications for business processes, operations, and simplify architecture
6) Implement robotic process automation and chatbots for business efficiencies

This project impacts approximately 20 applications.
The internal labor costs for this project are driven by various resources such as project managers, architects, developers, business analysts, and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for implementation and IT quality assurance .
This is a shared asset.

Project Justification:

1) Reduce vulnerabilities by moving legacy technologies to secure cloud services
2) Improve talent acquisition and resume screening
3) Enhance employee onboarding experience
4) Build skills through co-development
5) Decommission on-prem solutions and simplifying architectures, making internal capacity available for strategic efforts
6) Move all HR data, services, and applications to cloud
7) Self-service enablement

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756X - HR and Corporate Center Data and Application Modernization

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756X

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756X - HR and Corporate Center Data and Application Modernization
Workpaper Detail:	00756X.001 - HR and Corporate Center Data and Application Modernization Labor
In-Service Date:	08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	341	588	588
Non-Labor	0	0	0
NSE	0	0	0
Total	**341**	**588**	**588**
FTE	2.8	4.9	4.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	I. People and Culture Department
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756X - HR and Corporate Center Data and Application Modernization
Workpaper Detail:	00756X.002 - HR and Corporate Center Data and Application Modernization NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,893	4,000	3,000
NSE	0	0	0
Total	**2,893**	**4,000**	**3,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786K - HR Employee Lifecycle

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: I. People and Culture Department
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786K - HR Employee Lifecycle

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	313	471	294
Non-Labor	Zero-Based	0	0	0	0	0	1,446	2,400	500
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,759**	**2,871**	**794**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.6	3.9	2.5

Business Purpose:

This project analyzes the Employee Lifecyle from onboarding to offboarding. It identifies solutions to minimize manual processes while improving user experience and automate confirmation of de-provisioning of access. This project addresses both companies and includes additional enhancements to existing platforms.

Physical Description:

1) Onboarding and offboarding to improve ease-of-use and grant and revoke access appropriately.
2) Work with the departments across the systems such as: My Access, security, and audit to evaluate and implement enhancements and automations to improve the employee lifecycle and reduce compliance risks.

This project impacts approximately 14,500 employees.
The internal labor costs for this project are driven by various resources such as project managers, developers, and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for automation and deployment.
This is a shared asset.

Project Justification:

1) Improve employee experience
2) Improve supervisor experience
3) Improve security compliance
4) Implement automation and workflows
5) Reduce audit findings

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	I. People and Culture Department
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786K - HR Employee Lifecycle

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786K

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	I. People and Culture Department
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786K - HR Employee Lifecycle
Workpaper Detail:	00786K.001 - HR Employee Lifecycle Labor
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	313	471	294
Non-Labor	0	0	0
NSE	0	0	0
Total	**313**	**471**	**294**
FTE	2.6	3.9	2.5

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: I. People and Culture Department
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786K - HR Employee Lifecycle
Workpaper Detail: 00786K.002 - HR Employee Lifecycle NL Services

In-Service Date: 06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,346	2,400	500
NSE	0	0	0
Total	**1,346**	**2,400**	**500**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: I. People and Culture Department
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786K - HR Employee Lifecycle
Workpaper Detail: 00786K.003 - HR Employee Lifecycle SaaS Subscription

In-Service Date: 06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	100	0	0
NSE	0	0	0
Total	**100**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786M - HR Workforce Planning Tool

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: I. People and Culture Department
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00786M - HR Workforce Planning Tool

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	3,200
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,200**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

This project implements a SaaS solution to improve the process of analyzing, forecasting, and planning workforce supply and demand so that the right people are in the right place with the right skills to address changing business needs.

Physical Description:

1) Employ the Request for Proposal (RFP) process to evaluate and select a workforce solution.
2) Partner with the appropriate teams to evaluate and implement the new solution.

This project impacts one application.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by SaaS subscription and vendor services for implementation and IT quality assurance.
This is a shared asset.

Project Justification:

1) Improve acquisition and retention of talented employees
2) Identify and address talent gaps before they impact the Company
3) Improve recruiting process
4) Drive talent investments

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	I. People and Culture Department
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786M - HR Workforce Planning Tool

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786M

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: I. People and Culture Department
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00786M - HR Workforce Planning Tool
Workpaper Detail: 00786M.001 - HR Workforce Planning Tool NL Services

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	2,000
NSE	0	0	0
Total	**0**	**0**	**2,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	I. People and Culture Department
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786M - HR Workforce Planning Tool
Workpaper Detail:	00786M.002 - HR Workforce Planning Tool SaaS Subscription
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	1,200
NSE	0	0	0
Total	**0**	**0**	**1,200**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

Summary for Category: J. Information Technology

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	7,691	6,106	5,782
Non-Labor	0	140,320	64,961	48,728
NSE	0	0	0	0
Total	**0**	**148,011**	**71,067**	**54,510**
FTE	0.0	64.5	50.5	48.3
00721AJ RAMP - Application Monitoring Refresh				
Labor	0	88	0	588
Non-Labor	0	2,106	0	4,000
NSE	0	0	0	0
Total	**0**	**2,194**	**0**	**4,588**
FTE	0.0	0.7	0.0	4.9
00721AL RAMP - Compute Capacity Expansion 2023				
Labor	0	0	60	0
Non-Labor	0	0	5,975	0
NSE	0	0	0	0
Total	**0**	**0**	**6,035**	**0**
FTE	0.0	0.0	0.5	0.0
00721AM RAMP - Network Infrastructure Extension				
Labor	0	0	0	0
Non-Labor	0	3,900	3,900	0
NSE	0	0	0	0
Total	**0**	**3,900**	**3,900**	**0**
FTE	0.0	0.0	0.0	0.0
00721AQ Enterprise Voice System Refresh				
Labor	0	55	0	0
Non-Labor	0	4,124	794	0
NSE	0	0	0	0
Total	**0**	**4,179**	**794**	**0**
FTE	0.0	0.5	0.0	0.0
00721AR Routine Small Cap 2022-2024				
Labor	0	0	0	0
Non-Labor	0	300	300	300
NSE	0	0	0	0
Total	**0**	**300**	**300**	**300**
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00721AS RAMP - Cloud Foundation				
Labor	0	412	412	412
Non-Labor	0	5,150	5,150	5,150
NSE	0	0	0	0
Total	**0**	**5,562**	**5,562**	**5,562**
FTE	0.0	3.4	3.4	3.4
00721B RAMP - Compute Capacity Bulk Buy				
Labor	0	19	0	0
Non-Labor	0	35	0	0
NSE	0	0	0	0
Total	**0**	**54**	**0**	**0**
FTE	0.0	0.2	0.0	0.0
00721C RAMP - Backup and Recovery Capacity Expansion 2022				
Labor	0	29	0	0
Non-Labor	0	1,109	0	0
NSE	0	0	0	0
Total	**0**	**1,138**	**0**	**0**
FTE	0.0	0.2	0.0	0.0
00721D RAMP - Recovery Vault Expansion 2023				
Labor	0	0	29	0
Non-Labor	0	0	1,077	0
NSE	0	0	0	0
Total	**0**	**0**	**1,106**	**0**
FTE	0.0	0.0	0.2	0.0
00721G RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023				
Labor	0	0	29	0
Non-Labor	0	0	281	0
NSE	0	0	0	0
Total	**0**	**0**	**310**	**0**
FTE	0.0	0.0	0.2	0.0
00721H RAMP - Compute Capacity Expansion 2022				
Labor	0	0	25	0
Non-Labor	0	0	3,442	0
NSE	0	0	0	0
Total	**0**	**0**	**3,467**	**0**
FTE	0.0	0.0	0.2	0.0
00721I RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Ma				
Labor	0	98	0	0
Non-Labor	0	3,043	0	0
NSE	0	0	0	0
Total	**0**	**3,141**	**0**	**0**
FTE	0.0	0.8	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00721L RAMP - Infrastructure Monitoring Implementation				
Labor	0	574	805	205
Non-Labor	0	1,353	1,972	0
NSE	0	0	0	0
Total	**0**	**1,927**	**2,777**	**205**
FTE	0.0	4.8	6.7	1.7
00721N RAMP - Backup and Recovery Hardware Refresh				
Labor	0	0	74	0
Non-Labor	0	0	2,260	0
NSE	0	0	0	0
Total	**0**	**0**	**2,334**	**0**
FTE	0.0	0.0	0.6	0.0
00721O RAMP - Recovery Vault Expansion 2024				
Labor	0	0	0	35
Non-Labor	0	0	0	1,077
NSE	0	0	0	0
Total	**0**	**0**	**0**	**1,112**
FTE	0.0	0.0	0.0	0.3
00721P RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024				
Labor	0	0	0	18
Non-Labor	0	0	0	277
NSE	0	0	0	0
Total	**0**	**0**	**0**	**295**
FTE	0.0	0.0	0.0	0.2
00721Q RAMP - Compute Database Hardware Capacity Expansion 2023				
Labor	0	0	71	0
Non-Labor	0	0	2,059	0
NSE	0	0	0	0
Total	**0**	**0**	**2,130**	**0**
FTE	0.0	0.0	0.4	0.0
00721R RAMP - Compute Infrastructure Refresh 2024				
Labor	0	0	0	314
Non-Labor	0	0	0	8,076
NSE	0	0	0	0
Total	**0**	**0**	**0**	**8,390**
FTE	0.0	0.0	0.0	2.6
00721W RAMP - Upgrade Legacy Environment Storage				
Labor	0	175	0	0
Non-Labor	0	7,143	0	0
NSE	0	0	0	0
Total	**0**	**7,318**	**0**	**0**
FTE	0.0	1.5	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00721X RAMP - Legacy Hardware Refresh 2022				
Labor	0	355	0	0
Non-Labor	0	2,610	0	0
NSE	0	0	0	0
Total	**0**	**2,965**	**0**	**0**
FTE	0.0	3.0	0.0	0.0
00743A RAMP - Wide Area Network (WAN) and Private Network Refresh				
Labor	0	176	218	225
Non-Labor	0	2,515	1,500	2,250
NSE	0	0	0	0
Total	**0**	**2,691**	**1,718**	**2,475**
FTE	0.0	1.5	1.8	1.9
00743B RAMP - Local Area Network Upgrade				
Labor	0	1,145	1,078	1,087
Non-Labor	0	5,535	4,976	5,050
NSE	0	0	0	0
Total	**0**	**6,680**	**6,054**	**6,137**
FTE	0.0	9.5	9.0	9.1
00743E RAMP - Microwave Radio Network Remediation				
Labor	0	160	125	0
Non-Labor	0	3,579	0	0
NSE	0	0	0	0
Total	**0**	**3,739**	**125**	**0**
FTE	0.0	1.3	1.0	0.0
00743F RAMP - Emergency Response Command Center Enhancement				
Labor	0	287	0	0
Non-Labor	0	45	0	1
NSE	0	0	0	0
Total	**0**	**332**	**0**	**1**
FTE	0.0	2.9	0.0	0.0
00743H RAMP - Remote Site Technology Refresh				
Labor	0	41	0	0
Non-Labor	0	375	13	0
NSE	0	0	0	0
Total	**0**	**416**	**13**	**0**
FTE	0.0	0.3	0.0	0.0
00743J RAMP - Supervisory Control and Data Acquisition Network Refresh Project				
Labor	0	101	151	155
Non-Labor	0	977	340	340
NSE	0	0	0	0
Total	**0**	**1,078**	**491**	**495**
FTE	0.0	0.8	1.3	1.3

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00756E Electronic Data Interface Exchange - Web Methods Modernization				
Labor	0	94	74	44
Non-Labor	0	3,935	3,080	1,629
NSE	0	0	0	0
Total	**0**	**4,029**	**3,154**	**1,673**
FTE	0.0	0.8	0.6	0.4
00756H App Modernization and Vulnerability Reduction Phase II				
Labor	0	324	0	0
Non-Labor	0	800	0	0
NSE	0	0	0	0
Total	**0**	**1,124**	**0**	**0**
FTE	0.0	2.7	0.0	0.0
00756Q ServiceNow Service Mapping				
Labor	0	0	706	235
Non-Labor	0	0	5,500	1,800
NSE	0	0	0	0
Total	**0**	**0**	**6,206**	**2,035**
FTE	0.0	0.0	5.9	2.0
00756S Content Server Replacement				
Labor	0	206	0	0
Non-Labor	0	4,701	0	0
NSE	0	0	0	0
Total	**0**	**4,907**	**0**	**0**
FTE	0.0	1.7	0.0	0.0
00756T Foundations Analytics Service				
Labor	0	424	424	424
Non-Labor	0	4,150	3,100	2,370
NSE	0	0	0	0
Total	**0**	**4,574**	**3,524**	**2,794**
FTE	0.0	3.5	3.5	3.5
00721AP RAMP - Identity and Access Management (IAM) Cloud				
Labor	0	176	412	588
Non-Labor	0	1,850	3,650	2,700
NSE	0	0	0	0
Total	**0**	**2,026**	**4,062**	**3,288**
FTE	0.0	1.5	3.4	4.9
00755M Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Re				
Labor	0	76	0	0
Non-Labor	0	208	0	0
NSE	0	0	0	0
Total	**0**	**284**	**0**	**0**
FTE	0.0	0.6	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00756AI RAMP - System Enhancements and Workflow Management				
Labor	0	0	0	0
Non-Labor	0	700	0	0
NSE	0	0	0	0
Total	**0**	**700**	**0**	**0**
FTE	0.0	0.0	0.0	0.0
00756V App Modernization and Vulnerability Reduction Phase II				
Labor	0	18	588	588
Non-Labor	0	5,030	4,000	4,000
NSE	0	0	0	0
Total	**0**	**5,048**	**4,588**	**4,588**
FTE	0.0	0.2	4.9	4.9
00721AO Enterprise Radio Media Workstation Replacement				
Labor	0	146	0	0
Non-Labor	0	1,086	0	0
NSE	0	0	0	0
Total	**0**	**1,232**	**0**	**0**
FTE	0.0	1.2	0.0	0.0
00721E RAMP - Digital Workspace				
Labor	0	426	0	0
Non-Labor	0	19,312	0	0
NSE	0	0	0	0
Total	**0**	**19,738**	**0**	**0**
FTE	0.0	3.6	0.0	0.0
00721K Mobile Phone Refresh 2022				
Labor	0	588	0	0
Non-Labor	0	5,800	0	0
NSE	0	0	0	0
Total	**0**	**6,388**	**0**	**0**
FTE	0.0	4.9	0.0	0.0
00743I RAMP - Call Recording System Refresh				
Labor	0	248	0	0
Non-Labor	0	73	0	0
NSE	0	0	0	0
Total	**0**	**321**	**0**	**0**
FTE	0.0	2.1	0.0	0.0
00756Y Microsoft Enterprise Agreement 2022-2025				
Labor	0	0	0	0
Non-Labor	0	28,000	0	0
NSE	0	0	0	0
Total	**0**	**28,000**	**0**	**0**
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00756AA Business Adaptation Tech and Digitalization				
Labor	0	0	162	178
Non-Labor	0	0	1,219	1,364
NSE	0	0	0	0
Total	**0**	**0**	**1,381**	**1,542**
FTE	0.0	0.0	1.4	1.5
00756AG RAMP - Asset Investment Planning and Management (AIPM)				
Labor	0	528	0	0
Non-Labor	0	2,192	0	0
NSE	0	0	0	0
Total	**0**	**2,720**	**0**	**0**
FTE	0.0	4.4	0.0	0.0
00756BA RAMP - Energy Transition Digital Twin				
Labor	0	89	133	133
Non-Labor	0	2,258	1,301	1,301
NSE	0	0	0	0
Total	**0**	**2,347**	**1,434**	**1,434**
FTE	0.0	0.7	1.1	1.1
00756U RAMP - Situational Awareness Dashboards 2022-2023				
Labor	0	0	0	0
Non-Labor	0	880	1,760	0
NSE	0	0	0	0
Total	**0**	**880**	**1,760**	**0**
FTE	0.0	0.0	0.0	0.0
00756Z RAMP - Digital Integration				
Labor	0	181	134	157
Non-Labor	0	1,869	1,027	1,203
NSE	0	0	0	0
Total	**0**	**2,050**	**1,161**	**1,360**
FTE	0.0	1.5	1.1	1.3
00786A RAMP - Application Factory				
Labor	0	0	0	0
Non-Labor	0	3,749	0	0
NSE	0	0	0	0
Total	**0**	**3,749**	**0**	**0**
FTE	0.0	0.0	0.0	0.0
00786B Digital Process Automation				
Labor	0	219	142	142
Non-Labor	0	7,398	3,905	3,905
NSE	0	0	0	0
Total	**0**	**7,617**	**4,047**	**4,047**
FTE	0.0	1.8	1.2	1.2

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: J. Information Technology
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00786C RAMP - Decision Analytics and Automation				
Labor	0	233	254	254
Non-Labor	0	2,430	2,380	1,935
NSE	0	0	0	0
Total	**0**	**2,663**	**2,634**	**2,189**
FTE	0.0	1.9	2.1	2.1

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AJ - RAMP - Application Monitoring Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AJ - RAMP - Application Monitoring Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	88	0	588
Non-Labor	Zero-Based	0	0	0	0	0	2,106	0	4,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,194**	**0**	**4,588**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.7	0.0	4.9

Business Purpose:

This project started in 2020. This project replaces end of support hardware and storage related to infrastructure and application monitoring to retain data for a longer period of time and improve IT operational efficiency by performing software upgrades.

Physical Description:

1) Refreshes aging infrastructure in the primary data center to increase capacity and reliability.
2) Adds infrastructure to the secondary data center, providing failover capability.
3) Enhances company monitoring capabilities by building core easy to use situational awareness dashboards for all IT domains to use.

This project impacts approximately 50 servers over the project duration.
The internal labor costs for this project are driven by various resources such as network engineers and project managers.
Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, hardware, and prepaid maintenance.
This is a shared asset.

Project Justification:

1) Replace end of support hardware
2) Increase storage capacity to retain data for a longer period of time
3) Reduce risk by hosting infrastructure and application monitoring storage multiple data centers
4) Improve IT operational efficiency by performing software upgrades.
5) Enhance root cause analysis by reducing time spent on problem and incident identification, improve data driven decision making, and improves ability to recommend long-term solutions

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AJ - RAMP - Application Monitoring Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AJ

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AJ - RAMP - Application Monitoring Refresh
Workpaper Detail:	00721AJ.001 - RAMP - Application Monitoring Refresh Labor
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	88	0	588
Non-Labor	0	0	0
NSE	0	0	0
Total	**88**	**0**	**588**
FTE	0.7	0.0	4.9

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AJ - RAMP - Application Monitoring Refresh
Workpaper Detail: 00721AJ.001 - RAMP - Application Monitoring Refresh Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 03

RAMP Line Item Name: Monitoring Systems and Services

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	8,021	6,677	4,793	19,491	7,070	9,033

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.GRC forecast total includes the projects from the following workpapers:00721AM00721AJ00721L

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Servers	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 50 servers over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AJ - RAMP - Application Monitoring Refresh
Workpaper Detail:	00721AJ.002 - RAMP - Application Monitoring Refresh NL Services (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,056	0	0
NSE	0	0	0
Total	**2,056**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AJ - RAMP - Application Monitoring Refresh
Workpaper Detail:	00721AJ.003 - RAMP - Application Monitoring Refresh HW Purchase (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	44	0	4,000
NSE	0	0	0
Total	**44**	**0**	**4,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AJ - RAMP - Application Monitoring Refresh
Workpaper Detail:	00721AJ.004 - RAMP - Application Monitoring Refresh HW Maintenance (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	6	0	0
NSE	0	0	0
Total	**6**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AL - RAMP - Compute Capacity Expansion 2023

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AL - RAMP - Compute Capacity Expansion 2023

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	60	0
Non-Labor	Zero-Based	0	0	0	0	0	0	5,975	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**6,035**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0

Business Purpose:

Compute related infrastructure are growing at a higher rate than initially planned. This project expands IT infrastructure capacity to meet demand from new projects and future growth.

Physical Description:

This project includes the purchase of capacity, in the form of nodes, to keep in line with future growth.

This project installs approximately 30 vxRack nodes.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware and software, vendor services, and hardware and software prepaid maintenance costs.
This is a shared asset.

Project Justification:

"This project meets IT infrastructure demands and enables other IT projects to move forward . Keeping compute capacity above threshold values is critical for reliable business continuity to mitigate the risk of outages and emergency purchases.

"

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AL

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023
Workpaper Detail:	00721AL.001 - RAMP - Compute Capacity Expansion 2023 Labor (Same RAMP item as 00721B.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	60	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**60**	**0**
FTE	0.0	0.5	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023
Workpaper Detail:	00721AL.002 - RAMP - Compute Capacity Expansion 2023 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	296	0
NSE	0	0	0
Total	**0**	**296**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023
Workpaper Detail:	00721AL.003 - RAMP - Compute Capacity Expansion 2023 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,230	0
NSE	0	0	0
Total	**0**	**2,230**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023
Workpaper Detail:	00721AL.004 - RAMP - Compute Capacity Expansion 2023 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,295	0
NSE	0	0	0
Total	**0**	**2,295**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023
Workpaper Detail:	00721AL.005 - RAMP - Compute Capacity Expansion 2023 HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	810	0
NSE	0	0	0
Total	**0**	**810**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AL - RAMP - Compute Capacity Expansion 2023
Workpaper Detail:	00721AL.006 - RAMP - Compute Capacity Expansion 2023 SW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	344	0
NSE	0	0	0
Total	**0**	**344**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AM - RAMP - Network Infrastructure Extension

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AM - RAMP - Network Infrastructure Extension

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	3,900	3,900	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,900**	**3,900**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

This project started in 2020 and extends existing infrastructure to improve network traffic monitoring capabilities , providing visibility into the primary and secondary data center networks. This includes visibility into all types of environments, including physical, virtual, and cloud environments. It also provides a platform to structure and analyze network traffic in real time to improve network performance insights and detect anomalies.

Physical Description:

The scope of this project includes extending network infrastructure by installing physical and virtual network Traffic Access Points (TAPs) to create an exact copy of all bi-directional network traffic.
The project enables constrcution of the unstructured data in real time and conversation reconstruction and digitization. The project also extracts relevant metadata and uses real-time streaming analytics platform and cloud-based machine learning for behavioral analytics. It also sends aggregated feeds and includes self service capabilities.

This project impacts approximately 468 physical network connections and 315 virtual network connections over the project duration.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by software, vendor services for installation and configuration, and software prepaid maintenance costs.
This is a shared asset.

Project Justification:

The project provides a platform to structure and analyze network traffic in real time to improve network performance insights and detect anomalies.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AM - RAMP - Network Infrastructure Extension

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AM

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AM - RAMP - Network Infrastructure Extension
Workpaper Detail: 00721AM.001 - RAMP - Network Infrastructure Extension NL Services (Same RAMP item as 00721AJ.01)
In-Service Date: 08/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	400	200	0
NSE	0	0	0
Total	**400**	**200**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AM - RAMP - Network Infrastructure Extension
Workpaper Detail:	00721AM.002 - RAMP - Network Infrastructure Extension HW Purchase (Same RAMP item as 00721AJ.01)
In-Service Date:	08/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,000	0	0
NSE	0	0	0
Total	**1,000**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AM - RAMP - Network Infrastructure Extension
Workpaper Detail:	00721AM.003 - RAMP - Network Infrastructure Extension SW Purchase (Same RAMP item as 00721AJ.01)
In-Service Date:	08/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,200	2,800	0
NSE	0	0	0
Total	**2,200**	**2,800**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AM - RAMP - Network Infrastructure Extension
Workpaper Detail:	00721AM.004 - RAMP - Network Infrastructure Extension HW Maintenance (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	900	0
NSE	0	0	0
Total	**0**	**900**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AM - RAMP - Network Infrastructure Extension
Workpaper Detail:	00721AM.005 - RAMP - Network Infrastructure Extension SW Maintenance (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	300	0	0
NSE	0	0	0
Total	**300**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AQ - Enterprise Voice System Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AQ - Enterprise Voice System Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	55	0	0
Non-Labor	Zero-Based	0	0	0	0	0	4,124	794	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**4,179**	**794**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0

Business Purpose:

This project started in 2021. This project replaces an aging voice system to support Electric Grid, Gas Control, and other business units needing complex voice applications. The system has reached end of support and must be refreshed.

Physical Description:

The scope of this project includes refreshing an enterprise voice system to the latest software and hardware.

This project impacts nine servers over the project duration.
The internal labor costs for this project are driven by various resources such as information security engineers, network engineers, project managers, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software, hardware and software prepaid maintenance, vendor services for implementation, and SaaS subscription.
This is a shared asset.

Project Justification:

This project provides continued software support and license add-on as needed.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AQ - Enterprise Voice System Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AQ

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AQ - Enterprise Voice System Refresh
Workpaper Detail: 00721AQ.001 - Enterprise Voice System Refresh Labor

In-Service Date: 03/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	2022	2023	2024
Labor	55	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**55**	**0**	**0**
FTE	0.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AQ - Enterprise Voice System Refresh
Workpaper Detail:	00721AQ.002 - Enterprise Voice System Refresh NL Services
In-Service Date:	03/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	690	0	0
NSE	0	0	0
Total	**690**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AQ - Enterprise Voice System Refresh
Workpaper Detail: 00721AQ.003 - Enterprise Voice System Refresh HW Purchase

In-Service Date: 03/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	372	0	0
NSE	0	0	0
Total	**372**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AQ - Enterprise Voice System Refresh
Workpaper Detail: 00721AQ.004 - Enterprise Voice System Refresh SW Purchase

In-Service Date: 03/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,295	0	0
NSE	0	0	0
Total	**2,295**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AQ - Enterprise Voice System Refresh
Workpaper Detail:	00721AQ.005 - Enterprise Voice System Refresh SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	710	0
NSE	0	0	0
Total	**0**	**710**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AQ - Enterprise Voice System Refresh
Workpaper Detail:	00721AQ.006 - Enterprise Voice System Refresh HW Maintenance
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	84	0
NSE	0	0	0
Total	**0**	**84**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AQ - Enterprise Voice System Refresh
Workpaper Detail:	00721AQ.007 - Enterprise Voice System Refresh SW Maintenance
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	767	0	0
NSE	0	0	0
Total	**767**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AR - Routine Small Cap 2022-2024

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AR - Routine Small Cap 2022-2024

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	300	300	300
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**300**	**300**	**300**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

This project started in 2020. This project addresses routine customer operational issues, network improvements, information security, faster service delivery, collaboration, and innovation.

Physical Description:

The primary use of this project is to purchase replacements for defective, broken, or expired infrastructure. This includes hardware and hardware labor only.

This project includes multiple releases addressing specific business requirements.
There are no internal labor costs for this project.
The non-labor costs for these releases are driven by hardware costs, project management and technology implementation of hardware.
This is a non-shared asset.

Project Justification:

This project makes improvements to the overall performance of the network, thereby making it easier for employees to do their job more effectively and efficiently.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AR - Routine Small Cap 2022-2024

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AR

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AR - Routine Small Cap 2022-2024
Workpaper Detail: 00721AR.001 - Routine Small Cap 2022-2024 NL Services

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	300	300	300
NSE	0	0	0
Total	**300**	**300**	**300**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AS - RAMP - Cloud Foundation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AS - RAMP - Cloud Foundation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	412	412	412
Non-Labor	Zero-Based	0	0	0	0	0	5,150	5,150	5,150
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**5,562**	**5,562**	**5,562**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4

Business Purpose:

'This project establishes a bridge from on-premise capabilities to cloud services. It provides a hybrid cloud environment capable of quickly provisioning or recovering IT services to more efficiently support business needs.

Examples of demand for additional cloud services from business units include where applicable:
1) Infrastructure as a Service (IaaS) - Data archiving, disaster recovery, business continuity
2) Platform as a Service (PaaS) - Database as a Service, Analytics, Web application development
3) Software as a Service (SaaS) – Standardized on-boarding and integration support

Physical Description:

1) Establish bridge for up to three new cloud providers that align to established governance
2) Design and build suitable workloads to verified cloud providers
3) Prepare select Business Applications for cloud enablement.
4) Establish minimum baseline funding for key cloud service providers
5) Implement cloud resources in service catalog
6) Update security and performance monitoring tools
7) Redesign security, operations and content management policies
8) Develop design patterns, templates, and other development accelerators to deploy and administer cloud services

This project activates three cloud environments over the project duration.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services and SaaS subscription costs.
This is a shared asset.

Project Justification:

1) Align with data center modernization
2) Offer greater breadth of IT services and delivery agility through enhanced innovation
3) Improve reliability through high availability of applications for disaster recovery or performance spikes
4) Automate provisioning, monitoring, cost allocation and deprovisioning of services and licenses

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AS - RAMP - Cloud Foundation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AS

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AS - RAMP - Cloud Foundation
Workpaper Detail:	00721AS.001 - RAMP - Cloud Foundation Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	412	412	412
Non-Labor	0	0	0
NSE	0	0	0
Total	**412**	**412**	**412**
FTE	3.4	3.4	3.4

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721AS - RAMP - Cloud Foundation
Workpaper Detail: 00721AS.001 - RAMP - Cloud Foundation Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 06

RAMP Line Item Name: IT Service Continuity

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	5,562	5,562	5,562	16,686	14,455	18,470

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Environments	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 3 environments over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721AS - RAMP - Cloud Foundation
Workpaper Detail:	00721AS.002 - RAMP - Cloud Foundation NL Services (Same RAMP item as 00721AS.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	5,150	5,150	5,150
NSE	0	0	0
Total	**5,150**	**5,150**	**5,150**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721B - RAMP - Compute Capacity Bulk Buy

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721B - RAMP - Compute Capacity Bulk Buy

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	19	0	0
Non-Labor	Zero-Based	0	0	0	0	0	35	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**54**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

Business Purpose:

This project started in 2021. This project addresses the growing demand for storage, capacity, and licensing to support infrastructure workloads.

Physical Description:

This project includes storage expansion and software for both the primary and secondary data centers.

This project includes approximately 13 units of infrastructure hardware over the project duration.

The internal labor costs for this project are driven by various resources such as project manager, and infrastructure technologists. Internal labor roles and allocations may vary.

The non-labor costs for this project are driven by vendor services costs.

This is a shared asset.

Project Justification:

This project meets existing and forecasted business needs and proactively manages demand and supply for compute.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721B - RAMP - Compute Capacity Bulk Buy

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721B

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721B - RAMP - Compute Capacity Bulk Buy
Workpaper Detail: 00721B.001 - RAMP - Compute Capacity Bulk Buy Labor

In-Service Date: 12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	19	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**19**	**0**	**0**
FTE	0.2	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721B - RAMP - Compute Capacity Bulk Buy
Workpaper Detail: 00721B.001 - RAMP - Compute Capacity Bulk Buy Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 01

RAMP Line Item Name: Datacenter Modernization

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	14,616	15,382	9,797	39,795	65,534	83,738

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.GRC forecast total includes the projects from the following workpapers:00721B00721C00721D00721G00721H00721I00721N00721O00721P00721Q00721R00721W00721X00721AL

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Hardware	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work is approximately13 hardware units over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721B - RAMP - Compute Capacity Bulk Buy
Workpaper Detail: 00721B.002 - RAMP - Compute Capacity Bulk Buy NL Services (Same RAMP item as 00721B.01)

In-Service Date: 12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	35	0	0
NSE	0	0	0
Total	**35**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721C - RAMP - Backup and Recovery Capacity Expansion 2022

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721C - RAMP - Backup and Recovery Capacity Expansion 2022

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	29	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,109	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,138**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

Business Purpose:

This project expands backup and recovery capacity. As the volume of data increases in production, we need to increase the backup storage correspondingly. This project includes implementation of required software and associated licenses.

Physical Description:

The project scope includes the purchase of capacity for data protection and implementation of data management backup.

This project impacts two data centers and adds approximately 50 TB of capacity at each.
The internal labor costs for this project are driven by various resources such as information security engineers and technologists to implement software in multiple environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by required software and associated licenses, hardware and software maintenance and vendor services to support implementation.
This is a shared asset.

Project Justification:

This project meets infrastructure demands and enables other IT projects to move forward.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721C - RAMP - Backup and Recovery Capacity Expansion 2022

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721C

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721C - RAMP - Backup and Recovery Capacity Expansion 2022
Workpaper Detail:	00721C.001 - RAMP - Backup and Recovery Capacity Expansion 2022 Labor (Same RAMP item as 00721B.01)
In-Service Date:	09/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	29	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**29**	**0**	**0**
FTE	0.2	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721C - RAMP - Backup and Recovery Capacity Expansion 2022
Workpaper Detail:	00721C.002 - RAMP - Backup and Recovery Capacity Expansion 2022 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	09/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	966	0	0
NSE	0	0	0
Total	**966**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721C - RAMP - Backup and Recovery Capacity Expansion 2022
Workpaper Detail:	00721C.003 - RAMP - Backup and Recovery Capacity Expansion 2022 HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	80	0	0
NSE	0	0	0
Total	**80**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721C - RAMP - Backup and Recovery Capacity Expansion 2022
Workpaper Detail:	00721C.004 - RAMP - Backup and Recovery Capacity Expansion 2022 SW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	63	0	0
NSE	0	0	0
Total	**63**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721D - RAMP - Recovery Vault Expansion 2023

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721D - RAMP - Recovery Vault Expansion 2023

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	29	0
Non-Labor	Zero-Based	0	0	0	0	0	0	1,077	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**1,106**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0

Business Purpose:

This project expands capacity for improved cybersecurity protection. It also implements cyber vault for workloads in cloud to provide immutable copies of backup data as the last line of defense of cybersecurity. The size of the vault needs to be expanded as we expand backup and recovery capacity.

Physical Description:

This project purchases capacity for primary and secondary data centers and implements cyber vault for workloads in cloud.

This project impacts two data centers and adds approximately 50 TB of capacity at each data center.
The internal labor costs for this project are driven by various resources such as information security engineer and technologists to support implementation of hardware and software in company environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, vendor services, and hardware, software and prepaid maintenance costs.
This is a shared asset.

Project Justification:

This project meets infrastructure demands and enables other IT projects to move forward.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721D - RAMP - Recovery Vault Expansion 2023

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721D

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721D - RAMP - Recovery Vault Expansion 2023
Workpaper Detail: 00721D.001 - RAMP - Recovery Vault Expansion 2023 Labor (Same RAMP item as 00721B.01)

In-Service Date: 11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	29	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**29**	**0**
FTE	0.0	0.2	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721D - RAMP - Recovery Vault Expansion 2023
Workpaper Detail:	00721D.002 - RAMP - Recovery Vault Expansion 2023 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	914	0
NSE	0	0	0
Total	**0**	**914**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721D - RAMP - Recovery Vault Expansion 2023
Workpaper Detail:	00721D.003 - RAMP - Recovery Vault Expansion 2023 SaaS Subscription (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	10	0
NSE	0	0	0
Total	**0**	**10**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721D - RAMP - Recovery Vault Expansion 2023
Workpaper Detail:	00721D.004 - RAMP - Recovery Vault Expansion 2023 HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	90	0
NSE	0	0	0
Total	**0**	**90**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721D - RAMP - Recovery Vault Expansion 2023
Workpaper Detail:	00721D.005 - RAMP - Recovery Vault Expansion 2023 SW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	63	0
NSE	0	0	0
Total	**0**	**63**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	29	0
Non-Labor	Zero-Based	0	0	0	0	0	0	281	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**310**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0

Business Purpose:

This project expands capacity for improved cyber security protection and implements cyber vault into cloud. The capacity of the vault needs to be expanded as data increases in Network Attached Storage (NAS).

Physical Description:

This project purchases additional NAS capacity at primary and secondary data centers and explores and implements cyber vault in cloud.

This project impacts two data centers and adds approximately 500 TB of capacity at each in scope data center.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, architects, and technologists to implement software in company environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, hardware and software licenses, vendor services to support implementation, and hardware and software maintenance.
This is a shared asset.

Project Justification:

This project meets infrastructure demands and enables other IT projects to move forward.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721G

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.001 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 Labor (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	29	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**29**	**0**
FTE	0.0	0.2	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.002 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	59	0
NSE	0	0	0
Total	**0**	**59**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.003 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	105	0
NSE	0	0	0
Total	**0**	**105**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.004 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	84	0
NSE	0	0	0
Total	**0**	**84**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.005 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 SaaS Subs (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	6	0
NSE	0	0	0
Total	**0**	**6**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.006 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 HW Maint (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	15	0
NSE	0	0	0
Total	**0**	**15**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721G - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2023
Workpaper Detail:	00721G.007 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2023 SW Maint (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	12	0
NSE	0	0	0
Total	**0**	**12**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721H - RAMP - Compute Capacity Expansion 2022

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721H - RAMP - Compute Capacity Expansion 2022

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	25	0
Non-Labor	Zero-Based	0	0	0	0	0	0	3,442	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**3,467**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0

Business Purpose:

Compute related infrastructure is growing at a higher rate than initially planned. This project expands IT infrastructure capacity to meet demand from new projects and future growth.

Physical Description:

This project includes the purchase of capacity, in the form of nodes, to keep in line with future growth.

This project installs approximately 30 vxRack nodes.

The internal labor costs for this project are driven by various resources such as project managers, information security engineers, architects, and technologists to implement software in multiple environments.Internal labor roles and allocations may vary.

The non-labor costs for this project are driven by vendor services to support implementation.

This is a shared asset.

Project Justification:

This project meets IT infrastructure demands and enables other IT projects to move forward . Keeping compute capacity above threshold values is critical for reliable business continuity to mitigate risk of outages and emergency purchases.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721H - RAMP - Compute Capacity Expansion 2022

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721H

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721H - RAMP - Compute Capacity Expansion 2022
Workpaper Detail:	00721H.001 - RAMP - Compute Capacity Expansion 2022 Labor (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	25	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**25**	**0**
FTE	0.0	0.2	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721H - RAMP - Compute Capacity Expansion 2022
Workpaper Detail:	00721H.002 - RAMP - Compute Capacity Expansion 2022 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	3,442	0
NSE	0	0	0
Total	**0**	**3,442**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2022

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 202

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	98	0	0
Non-Labor	Zero-Based	0	0	0	0	0	3,043	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,141**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0

Business Purpose:

This project expands database related hardware capacity to support additional storage and compute requirements for database servers. Additionally, this project aims to build demand management capabilities through the creation of tools to support infrastructure demand planning.

Physical Description:

The scope of this project includes the purchase of hardware at the primary and secondary data centers for database servers. Additionally, this project builds infrastructure demand management capability through the development of tools to collect demand information, and create forecasts to match demand and capacity.

This project installs five blades at each data center for a total of 10 blades.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, database administrators, and technologists to implement software in multiple environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by required hardware and software license costs, hardware and software prepaid maintenance costs, and vendor services for installation of hardware.
This is a shared asset.

Project Justification:

This project meets infrastructure demands and enables other IT projects to move forward.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721I

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2
Workpaper Detail:	00721I.001 - RAMP - Compute Db Hdw Cpty Exp and Infra Demand Mgmt 2022 Labor (Same RAMP item as 00721B.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	98	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**98**	**0**	**0**
FTE	0.8	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2
Workpaper Detail:	00721I.002 - RAMP - Compute Db Hdw Cpty Exp and Infra Demand Mgmt 2022 NL Svcs (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	989	0	0
NSE	0	0	0
Total	**989**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2
Workpaper Detail:	00721I.003 - RAMP - Compute Db Hdw Cpty Exp and Infra Demand Mgmt 2022 HW Purch (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	850	0	0
NSE	0	0	0
Total	**850**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2
Workpaper Detail:	00721I.004 - RAMP - Compute Db Hdw Cpty Exp and Infra Demand Mgmt 2022 SW Purch (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	445	0	0
NSE	0	0	0
Total	**445**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2
Workpaper Detail:	00721I.005 - RAMP - Compute Db Hdw Cpty Exp and Infra Demand Mgmt 2022 HW Maint (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	67	0	0
NSE	0	0	0
Total	**67**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721I - RAMP - Compute Database Hardware Capacity Expansion and Infrastructure Demand Management 2
Workpaper Detail:	00721I.006 - RAMP - Compute Db Hdw Cpty Exp and Infra Demand Mgmt 2022 SW Maint (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	692	0	0
NSE	0	0	0
Total	**692**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721L - RAMP - Infrastructure Monitoring Implementation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721L - RAMP - Infrastructure Monitoring Implementation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	574	805	205
Non-Labor	Zero-Based	0	0	0	0	0	1,353	1,972	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,927**	**2,777**	**205**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.8	6.7	1.7

Business Purpose:

This project enables infrastructure teams to have a comprehensive and holistic view of their technology stack and how it impacts business outcomes.

Physical Description:

1) Create a dynamic and always available asset inventory as a foundation for monitoring ?
2) Establish monitoring thresholds with alert criteria for compute, memory, interface utilization
3) Configure all devices to send SNMP traps to monitoring tools
4) Reconcile inventory and add all devices to management and authorization tools
5) Create Network Operations Center (NOC) reports for analysis and troubleshooting
6) Integrate existing network alerts from AKIPS into Event Correlation tool
7) Enable analysis of NOC usage of data/information with recommendations for improvement
8) Enable analysis of NOC Incident Management Process with recommendations for improvement
9) Create capacity planning reports based on utilization metrics
10) Correlate all existing data into a single pane of glass

This project onboards and monitors approximately 1,780 applications.
The internal labor costs for this project are driven by various resources such as architects, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software purchase, prepaid software maintenance, and vendor services.
This is a shared asset.

Project Justification:

1) Identify and mitigate issues proactively
2) Keep applications continually available by minimizing downtime and maximizing operational performance
3) Improve end-user experience and customer satisfaction

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721L - RAMP - Infrastructure Monitoring Implementation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721L

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721L - RAMP - Infrastructure Monitoring Implementation
Workpaper Detail:	00721L.001 - RAMP - Infrastructure Monitoring Implementation Labor (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	574	805	205
Non-Labor	0	0	0
NSE	0	0	0
Total	**574**	**805**	**205**
FTE	4.8	6.7	1.7

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721L - RAMP - Infrastructure Monitoring Implementation
Workpaper Detail:	00721L.002 - RAMP - Infrastructure Monitoring Implementation NL Services (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	918	1,372	0
NSE	0	0	0
Total	**918**	**1,372**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721L - RAMP - Infrastructure Monitoring Implementation
Workpaper Detail:	00721L.003 - RAMP - Infrastructure Monitoring Implementation SW Purchase (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	300	600	0
NSE	0	0	0
Total	**300**	**600**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721L - RAMP - Infrastructure Monitoring Implementation
Workpaper Detail:	00721L.004 - RAMP - Infrastructure Monitoring Implementation SW Maintenance (Same RAMP item as 00721AJ.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	135	0	0
NSE	0	0	0
Total	**135**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721N - RAMP - Backup and Recovery Hardware Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721N - RAMP - Backup and Recovery Hardware Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	74	0
Non-Labor	Zero-Based	0	0	0	0	0	0	2,260	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**2,334**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0

Business Purpose:

This project purchases new backup and recovery hardware to replace existing out of support hardware. This enables data protection for both data centers

Physical Description:

This project purchases new enterprise backup and recovery hardware for primary and secondary data centers.

This project impacts two data centers.
The internal labor costs for this project are driven by various resources such as project managers, technicians, and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, hardware, and hardware prepaid maintenance costs. In addition, the project will leverage a contractor project manager to support management of the project.
This is a shared asset.

Project Justification:

This project improves infrastructure reliability and supportability and provides the ability for business applications to have a data backup solution to meet their service continuity requirements.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721N - RAMP - Backup and Recovery Hardware Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721N

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721N - RAMP - Backup and Recovery Hardware Refresh
Workpaper Detail:	00721N.001 - RAMP - Backup and Recovery Hardware Refresh Labor (Same RAMP item as 00721B.01)
In-Service Date:	10/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	74	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**74**	**0**
FTE	0.0	0.6	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721N - RAMP - Backup and Recovery Hardware Refresh
Workpaper Detail:	00721N.002 - RAMP - Backup and Recovery Hardware Refresh NL Services (Same RAMP item as 00721B.01)
In-Service Date:	10/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	360	0
NSE	0	0	0
Total	**0**	**360**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721N - RAMP - Backup and Recovery Hardware Refresh
Workpaper Detail:	00721N.003 - RAMP - Backup and Recovery Hardware Refresh HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	10/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,615	0
NSE	0	0	0
Total	**0**	**1,615**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721N - RAMP - Backup and Recovery Hardware Refresh
Workpaper Detail:	00721N.004 - RAMP - Backup and Recovery Hardware Refresh HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	285	0
NSE	0	0	0
Total	**0**	**285**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721O - RAMP - Recovery Vault Expansion 2024

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721O - RAMP - Recovery Vault Expansion 2024

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	35
Non-Labor	Zero-Based	0	0	0	0	0	0	0	1,077
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,112**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Business Purpose:

This project enables customers to share their data from multiple facilities with third-party provided software, energy management systems, Mobile Apps, EE programs and demand response programs.

Physical Description:

This project purchases capacity for primary and secondary data centers and implements cyber vault for workloads in cloud.

This project impacts two data centers and adds approximately 50 TB of capacity at each.
The internal labor costs for this project are driven by various resources such as information security engineers, and technologists to implement software and hardware in company environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware and software, SaaS subscription, vendor services to support implementation, and hardware and software prepaid maintenance costs.
This is a shared asset.

Project Justification:

This project empowers customers to fulfill their own energy efficiency and sustainability initiatives and programs that leverage gas smart meter data.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721O - RAMP - Recovery Vault Expansion 2024

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721O

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail:	00721O.001 - RAMP - Recovery Vault Expansion 2024 Labor (Same RAMP item as 00721B.01)
In-Service Date:	10/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	35
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**35**
FTE	0.0	0.0	0.3

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail: 00721O.002 - RAMP - Recovery Vault Expansion 2024 NL Services (Same RAMP item as 00721B.01)
In-Service Date: 10/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	64
NSE	0	0	0
Total	**0**	**0**	**64**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail: 00721O.003 - RAMP - Recovery Vault Expansion 2024 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date: 10/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	510
NSE	0	0	0
Total	**0**	**0**	**510**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail: 00721O.004 - RAMP - Recovery Vault Expansion 2024 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date: 10/31/2024

Description:

TBD

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	340
NSE	0	0	0
Total	**0**	**0**	**340**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail:	00721O.005 - RAMP - Recovery Vault Expansion 2024 SaaS Subscription (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	10
NSE	0	0	0
Total	**0**	**0**	**10**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail:	00721O.006 - RAMP - Recovery Vault Expansion 2024 HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	90
NSE	0	0	0
Total	**0**	**0**	**90**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721O - RAMP - Recovery Vault Expansion 2024
Workpaper Detail:	00721O.007 - RAMP - Recovery Vault Expansion 2024 SW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	63
NSE	0	0	0
Total	**0**	**0**	**63**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	18
Non-Labor	Zero-Based	0	0	0	0	0	0	0	277
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**295**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

Business Purpose:

This project expands capacity for improved cyber security protection and implements cyber vault into cloud. The capacity of the vault needs to be expanded as data increases in Network Attached Storage (NAS).

Physical Description:

This project purchases additional NAS capacity at primary and secondary data centers and explores and implements cyber vault in cloud.

This project impacts two data centers and adds approximately 500 TB of capacity at each in-scope datacenter.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, hardware and software, vendor services to support implementation, and hardware and software maintenance.
This is a shared asset.

Project Justification:

This project meets infrastructure demands and enables other IT projects to move forward.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721P

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.001 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 Labor (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	18
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**18**
FTE	0.0	0.0	0.2

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.002 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	64
NSE	0	0	0
Total	**0**	**0**	**64**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.003 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	100
NSE	0	0	0
Total	**0**	**0**	**100**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.004 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	80
NSE	0	0	0
Total	**0**	**0**	**80**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.005 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 SaaS Subs (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	6
NSE	0	0	0
Total	**0**	**0**	**6**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.006 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 HW Maint (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	15
NSE	0	0	0
Total	**0**	**0**	**15**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721P - RAMP - Network Attached Storage Cyber Vault Capacity Expansion 2024
Workpaper Detail:	00721P.007 - RAMP - Net Attached Storage Cyber Vault Capacity Exp 2024 SW Maint (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	12
NSE	0	0	0
Total	**0**	**0**	**12**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	71	0
Non-Labor	Zero-Based	0	0	0	0	0	0	2,059	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**2,130**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0

Business Purpose:

This project expands capacity for Oracle and SQL Database server hardware . Databases are used to house business critical data utilized by company business applications.

Physical Description:

The scope of this project is to expand hardware capacity for database servers by adding physical blades in IT infrastructure .

This project installs five blades at each data center, or a total of 10 blades.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, database administrators, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by required hardware, software licenses, vendor services for installation of hardware, and hardware prepaid maintenance costs.
This is a shared asset.

Project Justification:

This project meets IT infrastructure demands and enables other IT projects to move forward . Database capacity needs to be expanded as databases grow organically with expanding business applications to mitigate the risk of outages and emergency purchases.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721Q

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023
Workpaper Detail:	00721Q.001 - RAMP - Compute Database Hardware Capacity Expansion 2023 Labor (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	71	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**71**	**0**
FTE	0.0	0.4	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023
Workpaper Detail:	00721Q.002 - RAMP - Compute Database Hardware Capacity Expansion 2023 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	231	0
NSE	0	0	0
Total	**0**	**231**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023
Workpaper Detail:	00721Q.003 - RAMP - Compute Database Hardware Capacity Expansion 2023 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	850	0
NSE	0	0	0
Total	**0**	**850**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023
Workpaper Detail:	00721Q.004 - RAMP - Compute Database Hardware Capacity Expansion 2023 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	850	0
NSE	0	0	0
Total	**0**	**850**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721Q - RAMP - Compute Database Hardware Capacity Expansion 2023
Workpaper Detail:	00721Q.005 - RAMP - Compute Database Hardware Capacity Expansion 2023 HW Maintenance (Same RAMP item 00721B.01)
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	128	0
NSE	0	0	0
Total	**0**	**128**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721R - RAMP - Compute Infrastructure Refresh 2024

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721R - RAMP - Compute Infrastructure Refresh 2024

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	314
Non-Labor	Zero-Based	0	0	0	0	0	0	0	8,076
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8,390**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6

Business Purpose:

This project refreshes the existing company infrastructure hardware to maintain supportability and reliability. As compute and storage related hardware ages, it eventually reaches its useful asset life and subsequent end of support.

Physical Description:

The scope of this project includes the replacement of end of support compute and storage related infrastructure hardware at two datacenters.

The scope of this project is to install infrastructure hardware at two data centers.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, netwrok engineers, architects (internal and external), analysts (external), database administraitors, and technologists to implement hardware in company environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by required hardware and software, vendor services, and hardware and software prepaid maintenance costs.
This is a shared asset.

Project Justification:

This project offers a reliable and well supported infrastructure footprint by being proactive in managing technical debt and mitigates the risk of continuously maintaining unsupported hardware.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721R - RAMP - Compute Infrastructure Refresh 2024

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721R

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721R - RAMP - Compute Infrastructure Refresh 2024
Workpaper Detail:	00721R.001 - RAMP - Compute Infrastructure Refresh 2024 Labor (Same RAMP item as 00721B.01)
In-Service Date:	08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	314
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**0**	**314**
FTE	0.0	0.0	2.6

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721R - RAMP - Compute Infrastructure Refresh 2024
Workpaper Detail: 00721R.002 - RAMP - Compute Infrastructure Refresh 2024 NL Services (Same RAMP item as 00721B.01)
In-Service Date: 08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	948
NSE	0	0	0
Total	**0**	**0**	**948**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721R - RAMP - Compute Infrastructure Refresh 2024
Workpaper Detail:	00721R.003 - RAMP - Compute Infrastructure Refresh 2024 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	3,188
NSE	0	0	0
Total	**0**	**0**	**3,188**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721R - RAMP - Compute Infrastructure Refresh 2024
Workpaper Detail:	00721R.004 - RAMP - Compute Infrastructure Refresh 2024 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	08/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	40
NSE	0	0	0
Total	**0**	**0**	**40**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721R - RAMP - Compute Infrastructure Refresh 2024
Workpaper Detail:	00721R.005 - RAMP - Compute Infrastructure Refresh 2024 HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	3,750
NSE	0	0	0
Total	**0**	**0**	**3,750**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721R - RAMP - Compute Infrastructure Refresh 2024
Workpaper Detail:	00721R.006 - RAMP - Compute Infrastructure Refresh 2024 SW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	0	150
NSE	0	0	0
Total	**0**	**0**	**150**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721W - RAMP - Upgrade Legacy Environment Storage

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721W - RAMP - Upgrade Legacy Environment Storage

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	175	0	0
Non-Labor	Zero-Based	0	0	0	0	0	7,143	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**7,318**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0

Business Purpose:

The legacy environments are currently backed by storage that does not align with the IT strategic roadmap . This project replaces the Storage Area Network (SAN) solution with the standard utilized by cloud and infrastructure.

Physical Description:

The scope of this project includes the upgrade of SAN storage arrays at both data centers.

This project impacts two data centers and adds approximately 8000 units of storage.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, and technologists to implement hardware in company environments. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware costs, vendor services to support implementation, and hardware prepaid maintenance costs.
This is a shared asset.

Project Justification:

This project adds standard measurable capacity within storage and enables the transition to cloud.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721W - RAMP - Upgrade Legacy Environment Storage

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721W

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721W - RAMP - Upgrade Legacy Environment Storage
Workpaper Detail:	00721W.001 - RAMP - Upgrade Legacy Environment Storage Labor (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	175	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**175**	**0**	**0**
FTE	1.5	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721W - RAMP - Upgrade Legacy Environment Storage
Workpaper Detail:	00721W.002 - RAMP - Upgrade Legacy Environment Storage NL Services (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	164	0	0
NSE	0	0	0
Total	**164**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721W - RAMP - Upgrade Legacy Environment Storage
Workpaper Detail:	00721W.003 - RAMP - Upgrade Legacy Environment Storage HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	4,500	0	0
NSE	0	0	0
Total	**4,500**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721W - RAMP - Upgrade Legacy Environment Storage
Workpaper Detail:	00721W.004 - RAMP - Upgrade Legacy Environment Storage HW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,479	0	0
NSE	0	0	0
Total	**2,479**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721X - RAMP - Legacy Hardware Refresh 2022

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00721X - RAMP - Legacy Hardware Refresh 2022

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	355	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,610	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,965**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0

Business Purpose:

Certain IBM hardware in the SAP legacy HANA environment reaches end of support in 2022. This project refreshes this aging hardware and aligns with the IT strategic roadmap.

Physical Description:

The scope of this project includes refreshing the aging IBM hardware with the latest IBM hardware.

This project installs two IBM servers.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware and software, software prepaid maintenance costs, and vendor services.
This is a shared asset.

Project Justification:

This project provides a more reliable environment with supported hardware.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721X - RAMP - Legacy Hardware Refresh 2022

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721X

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721X - RAMP - Legacy Hardware Refresh 2022
Workpaper Detail:	00721X.001 - RAMP - Legacy Hardware Refresh 2022 Labor (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	355	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**355**	**0**	**0**
FTE	3.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721X - RAMP - Legacy Hardware Refresh 2022
Workpaper Detail:	00721X.002 - RAMP - Legacy Hardware Refresh 2022 NL Services (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	49	0	0
NSE	0	0	0
Total	**49**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721X - RAMP - Legacy Hardware Refresh 2022
Workpaper Detail:	00721X.003 - RAMP - Legacy Hardware Refresh 2022 HW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,121	0	0
NSE	0	0	0
Total	**2,121**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721X - RAMP - Legacy Hardware Refresh 2022
Workpaper Detail:	00721X.004 - RAMP - Legacy Hardware Refresh 2022 SW Purchase (Same RAMP item as 00721B.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	108	0	0
NSE	0	0	0
Total	**108**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00721X - RAMP - Legacy Hardware Refresh 2022
Workpaper Detail:	00721X.005 - RAMP - Legacy Hardware Refresh 2022 SW Maintenance (Same RAMP item as 00721B.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	332	0	0
NSE	0	0	0
Total	**332**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	176	218	225
Non-Labor	Zero-Based	0	0	0	0	0	2,515	1,500	2,250
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,691**	**1,718**	**2,475**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	1.8	1.9

Business Purpose:

This project started in 2018. This project upgrades microwave radio backbone links, and replaces aging Wide Area Newtwork (WAN) routers.

Physical Description:

1) Upgrade microwave radio backbone links to provide network redundancy and added capacity.
2) Replace end of support devices.
3) Replace older DC battery backup to numerous company sites.

This project includes two microwave path upgrades and two tower retrofits in 2022. The units of measure for 2023 and 2024 are to be determined; forecasts reflect planned remaining work to be done.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, and technologists. Internal labor roles and allocations may vary.
The non-labor cost drivers for this project include but are not limited to vendor services for project management and analyst support to install and upgrade microwave paths and tower retrofits, hardware, and hardware prepaid maintenance costs.
This is a non-shared asset.

Project Justification:

1) Lower Mean Time to Resolution (MTTR) through proactive monitoring and alerting
2) Provide a higher level of service level agreement to end clients
3) Decrease risk to the business by reducing outages caused by aging equipment
4) Replace out-dated microwave radio equipment and enable native Internet Protocol (IP) connectivity at each of the sites to support Multi Protocol Label Switching (MPLS) protocol
5) Provide additional bandwidth to existing microwave radio paths to support IP intensive applications and facilities .
6) Refresh existing microwave radio equipment to vendor supportable levels
7) Reduce complexity of operational support by implementing a single network management system
8) Lower risk at sites due to the possibility of a tower collapsing

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743A

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh
Workpaper Detail:	00743A.001 - RAMP - Wide Area Network (WAN) and Private Network Refresh Labor
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	176	218	225
Non-Labor	0	0	0
NSE	0	0	0
Total	**176**	**218**	**225**
FTE	1.5	1.8	1.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh
Workpaper Detail:	00743A.001 - RAMP - Wide Area Network (WAN) and Private Network Refresh Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 02

RAMP Line Item Name: Network & Voice System Resiliency

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	16,510	20,913	11,249	48,672	40,176	51,335

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.GRC forecast total includes the projects from the following workpapers:00743A00743B00743J00743H00743E00743I00754V00743F

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Microware Paths, Tower Retrofit	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 2 microwave path upgrades, and 2 tower retrofits over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh
Workpaper Detail:	00743A.002 - RAMP - Wide Area Network (WAN) and Private Network Refresh NL Svcs (Same RAMP item as 00743A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,500	1,000	1,750
NSE	0	0	0
Total	**2,500**	**1,000**	**1,750**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh
Workpaper Detail:	00743A.003 - RAMP - Wide Area Network (WAN) and Private Network Refresh HW Purchase (Same RAMP item as 00743A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	500	500
NSE	0	0	0
Total	**0**	**500**	**500**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743A - RAMP - Wide Area Network (WAN) and Private Network Refresh
Workpaper Detail:	00743A.004 - RAMP - Wide Area Network (WAN) and Private Network Refresh HW Maint (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	15	0	0
NSE	0	0	0
Total	**15**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743B - RAMP - Local Area Network Upgrade

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743B - RAMP - Local Area Network Upgrade

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	1,145	1,078	1,087
Non-Labor	Zero-Based	0	0	0	0	0	5,535	4,976	5,050
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**6,680**	**6,054**	**6,137**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	9.5	9.0	9.1

Business Purpose:

This project started in 2021 and replaces the existing Local Area Network (LAN) equipment including switches and Wireless Access Points (WAP). The work includes new cabling, power, and WAPs for better site coverage. The project will also replace end of support battery backup systems at remote sites.

Physical Description:

The scope of this project includes the replacement of LAN switches and Wireless Access Points at SoCalGas territory .
This project also includes the upgrade and expansion of remote access points infrastructure and end points.

This project upgrades approximately 300 sites in 2022. The units of measure for 2023 and 2024 are to be determined; forecasts reflect planned remaining work to be done.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software, hardware prepaid maintenance, and vendor services under multiple contracts to support project management, network engineering, and to configure, install, and implement infrastructure hardware.
This is a shared asset.

Project Justification:

This project enables proactive monitoring and alerting, improves wireless access points coverage and service level agreements, reduces outages, and improves operational support and backup.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743B - RAMP - Local Area Network Upgrade

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743B

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743B - RAMP - Local Area Network Upgrade
Workpaper Detail: 00743B.001 - RAMP - Local Area Network Upgrade Labor (Same RAMP item as 00743A.01)

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	1,145	1,078	1,087
Non-Labor	0	0	0
NSE	0	0	0
Total	**1,145**	**1,078**	**1,087**
FTE	9.5	9.0	9.1

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743B - RAMP - Local Area Network Upgrade
Workpaper Detail: 00743B.002 - RAMP - Local Area Network Upgrade NL Services (Same RAMP item as 00743A.01)

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	4,309	4,176	3,950
NSE	0	0	0
Total	**4,309**	**4,176**	**3,950**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743B - RAMP - Local Area Network Upgrade
Workpaper Detail:	00743B.003 - RAMP - Local Area Network Upgrade HW Purchase (Same RAMP item as 00743A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	414	800	1,100
NSE	0	0	0
Total	**414**	**800**	**1,100**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743B - RAMP - Local Area Network Upgrade
Workpaper Detail: 00743B.004 - RAMP - Local Area Network Upgrade SW Purchase (Same RAMP item as 00743A.01)

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	77	0	0
NSE	0	0	0
Total	**77**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743B - RAMP - Local Area Network Upgrade
Workpaper Detail:	00743B.005 - RAMP - Local Area Network Upgrade HW Maintenance (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	735	0	0
NSE	0	0	0
Total	**735**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743E - RAMP - Microwave Radio Network Remediation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743E - RAMP - Microwave Radio Network Remediation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	160	125	0
Non-Labor	Zero-Based	0	0	0	0	0	3,579	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,739**	**125**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.3	1.0	0.0

Business Purpose:

This project started in 2021. This project implements protections to the 6 GHz microwave radio communications network by adding, upgrading, and refreshing microwave paths, performing audit and correction, and implementing frequency assurance service tools to monitor interference actively across network.

Physical Description:

The scope of this project is to implement protections to the 6 GHz radio network, including:
1) Radio spectrum rebanding and relocation
2) Out of band backup radio links
3) Federal Communications Commission (FCC) database and license audits
4) Optimize interference analysis software

This project impacts approximately 56 network sites over the project duration.
The internal labor costs for this project are driven by various resources such as project managers, technicians, and engineers for design and implementation. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, hardware, and prepaid maintenance costs. In addition, the project will leverage a contractor project manager to support management of the project.
This is a non-shared asset.

Project Justification:

This project is essential to mitigating impending interference to the critical radio network. This project also enhances performance and reliability of critical radio network.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743E - RAMP - Microwave Radio Network Remediation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743E

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743E - RAMP - Microwave Radio Network Remediation
Workpaper Detail:	00743E.001 - RAMP - Microwave Radio Network Remediation Labor (Same RAMP item as 00743A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	160	125	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**160**	**125**	**0**
FTE	1.3	1.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743E - RAMP - Microwave Radio Network Remediation
Workpaper Detail:	00743E.002 - RAMP - Microwave Radio Network Remediation NL Services (Same RAMP item as 00743A.01)
In-Service Date:	12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,460	0	0
NSE	0	0	0
Total	**3,460**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743E - RAMP - Microwave Radio Network Remediation
Workpaper Detail:	00743E.003 - RAMP - Microwave Radio Network Remediation HW Maintenance (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	119	0	0
NSE	0	0	0
Total	**119**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743F - RAMP - Emergency Response Command Center Enhancement

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743F - RAMP - Emergency Response Command Center Enhancement

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	287	0	0
Non-Labor	Zero-Based	0	0	0	0	0	45	0	1
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**332**	**0**	**1**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0

Business Purpose:

This project enhances communications for Mobile Command Units (MCU) for emergency response. These enhancements include cellular internet, improved virtual private network and wide area network communications, switch upgrades, Wi-Fi access points, satellite communications and out of band Management for remote monitoring and support of said systems.

Physical Description:

The scope of this project includes cellular internet, improved virtual private network and wide area network communications, switch upgrades, Wi-Fi access points and satellite communications as well as out of band management systems for remote monitoring and support.

This project upgrades two MCU's.
The internal labor costs for this project are driven by various resources such as project managers, architects, and analysts.
Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services.
This is a non-shared asset.

Project Justification:

This project provides improved, reliable and redundant communication systems for command centers.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743F - RAMP - Emergency Response Command Center Enhancement

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743F

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743F - RAMP - Emergency Response Command Center Enhancement
Workpaper Detail:	00743F.001 - RAMP - Emergency Response Command Center Enhancement Labor (Same RAMP item as 00743A.01)
In-Service Date:	01/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	287	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**287**	**0**	**0**
FTE	2.9	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743F - RAMP - Emergency Response Command Center Enhancement
Workpaper Detail:	00743F.002 - RAMP - Emergency Response Command Center Enhancement NL Svcs (Same RAMP item as 00743A.01)
In-Service Date:	01/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	45	0	1
NSE	0	0	0
Total	**45**	**0**	**1**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743H - RAMP - Remote Site Technology Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743H - RAMP - Remote Site Technology Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	41	0	0
Non-Labor	Zero-Based	0	0	0	0	0	375	13	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**416**	**13**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Business Purpose:

This project started in 2021. This project refreshs out of support hardware, software and data protection at remote site to improve reliability and resiliency.

Physical Description:

1) Assess remote sites to see if they require a hardware server refresh on site or a virtual server replacement in the Company data center.
2) Includes IT supported servers
3) Operational Technology (OT) servers are out of scope for this project because they are not supported by the IT group .

This project includes approximately 24 sites over the project duration.
The internal labor costs for this project are driven by various resources such as project managers and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for site assessment and analysis.
This is a shared asset.

Project Justification:

This project improves reliability and availability and improves operational support.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743H - RAMP - Remote Site Technology Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743H

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743H - RAMP - Remote Site Technology Refresh
Workpaper Detail:	00743H.001 - RAMP - Remote Site Technology Refresh Labor (Same RAMP item as 00743A.01)
In-Service Date:	01/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	41	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**41**	**0**	**0**
FTE	0.3	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743H - RAMP - Remote Site Technology Refresh
Workpaper Detail:	00743H.002 - RAMP - Remote Site Technology Refresh NL Services (Same RAMP item as 00743A.01)
In-Service Date:	01/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	375	13	0
NSE	0	0	0
Total	**375**	**13**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	101	151	155
Non-Labor	Zero-Based	0	0	0	0	0	977	340	340
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,078**	**491**	**495**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.8	1.3	1.3

Business Purpose:

This project started in 2020. This project upgrades Supervisory Control and Data Acquisition (SCADA) infrastructure and replaces end of support services at numerous locations. This increases bandwidth capacity to better meet business need.

Physical Description:

The scope of this project includes rearchitecting the existing network design and migrating to a robust, redundant and reliable network. This project also upgrades existing circuits to provide additional capacity.

This project replaces approximately 30 telecom circuits over the project duration.
The internal labor costs for this project are driven by various resources such as project managers, information security engineers, network engineers, architects, and technologists. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, hardware and hardware prepaid maintenance.
This is a non-shared asset.

Project Justification:

1) Remediate audit findings of end of support hardware
2) Reduce operational risk
3) Meet reliability standards using updated hardware and architecture
4) Meet increased demand for higher traffic on the network
5) Improve security using standard network hardware

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743J

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project
Workpaper Detail:	00743J.001 - RAMP - Supervisory Control and Data Acq Network Refresh Project Labor (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	101	151	155
Non-Labor	0	0	0
NSE	0	0	0
Total	**101**	**151**	**155**
FTE	0.8	1.3	1.3

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project
Workpaper Detail:	00743J.002 - RAMP - Supervisory Control and Data Acq Network Refresh Project NL Srv (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	582	240	240
NSE	0	0	0
Total	**582**	**240**	**240**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project
Workpaper Detail:	00743J.003 - RAMP -Supervisory Control and Data Acq Net Refresh Project HW Purchase (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	300	100	100
NSE	0	0	0
Total	**300**	**100**	**100**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00743J - RAMP - Supervisory Control and Data Acquisition Network Refresh Project
Workpaper Detail:	00743J.004 - RAMP-Supervisory Control and Data Acq Network Refresh Project HW Maint (Same RAMP item as 00743A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	95	0	0
NSE	0	0	0
Total	**95**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756E - Electronic Data Interface Exchange - Web Methods Modernization

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756E - Electronic Data Interface Exchange - Web Methods Modernization

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	94	74	44
Non-Labor	Zero-Based	0	0	0	0	0	3,935	3,080	1,629
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**4,029**	**3,154**	**1,673**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.4

Business Purpose:

This project started in 2020. The software utilized by the Electronic Data Interchange (EDIX) team, is out of support and needs to be upgraded.

Physical Description:

The scope of this project includes replacing the legacy, non-supported EDIX webMethods software with the redesigned webMethods Managed File Transfer (MFT) platform in order to address security vulnerabilities. This project replaces business interfaces, and plans for cloud-enablement capabilities.

This project impacts one application over the project duration.
The internal labor costs for this project are driven by various resources such as architects, developers, analysts, EDIX subject-matter experts, and project managers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, software and prepaid maintenance to support development and deployment of the upgraded platform, technical change management and coordination.
This is a shared asset.

Project Justification:

This project includes maintaining the ability to continue conducting business with internal clients and external partners. Additionally, the project optimizes customer experience as a reliable integration service provider.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756E - Electronic Data Interface Exchange - Web Methods Modernization

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756E

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756E - Electronic Data Interface Exchange - Web Methods Modernization
Workpaper Detail: 00756E.001 - Electronic Data Interface Exchange - Web Methods Modernization Labor

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	94	74	44
Non-Labor	0	0	0
NSE	0	0	0
Total	**94**	**74**	**44**
FTE	0.8	0.6	0.4

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756E - Electronic Data Interface Exchange - Web Methods Modernization
Workpaper Detail:	00756E.002 - Electronic Data Interface Exchange - Web Methods Modernization NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,440	3,080	1,629
NSE	0	0	0
Total	**3,440**	**3,080**	**1,629**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756E - Electronic Data Interface Exchange - Web Methods Modernization
Workpaper Detail:	00756E.003 - Electronic Data Interface Exchange - Web Methods Modernization SW Maintenance
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	495	0	0
NSE	0	0	0
Total	**495**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756H - App Modernization and Vulnerability Reduction Phase II

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756H - App Modernization and Vulnerability Reduction Phase II

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	324	0	0
Non-Labor	Zero-Based	0	0	0	0	0	800	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,124**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0

Business Purpose:

This project started in 2021 and focuses on vulnerability reduction and modernization of server operating systems including both Windows and Linux. These servers support many business critical applications.

Physical Description:

The scope of this project includes providing a sustainable cybersecurity vulnerability solution by addressing the underlying obsolescence across the application portfolio. It also includes redeveloping SoCalGas applications on a sustainable cloud platform.

This project impacts seven applications over the project duration.
The internal labor costs for this project are driven by various resources such as project manager, developers, architect, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for implementation and IT quality assurance .
This is a shared asset.

Project Justification:

This project provides improvements in system reliability, data security, productivity, maintenance costs, and scalability.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756H - App Modernization and Vulnerability Reduction Phase II

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756H

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756H - App Modernization and Vulnerability Reduction Phase II
Workpaper Detail:	00756H.001 - App Modernization and Vulnerability Reduction Phase II Labor
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	324	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**324**	**0**	**0**
FTE	2.7	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756H - App Modernization and Vulnerability Reduction Phase II
Workpaper Detail:	00756H.002 - App Modernization and Vulnerability Reduction Phase II NL Services
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	800	0	0
NSE	0	0	0
Total	**800**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756Q - ServiceNow Service Mapping

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756Q - ServiceNow Service Mapping

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	706	235
Non-Labor	Zero-Based	0	0	0	0	0	0	5,500	1,800
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**6,206**	**2,035**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	5.9	2.0

Business Purpose:

This project implements a service mapping solution which allows us to provide a business centric view of our systems rather than at the component level.

Physical Description:

The scope of this project is to install and implement a service mapping module. The module provides entry points into services and allows for discovery of process identification and dependencies. Once discovered the project team will work with application owners to rationalize data through an iterative process.

This project impacts approximately 350 applications.
The internal labor costs for this project are driven by various resources such as architects, analysts and project managers.
Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, and SaaS subscription.
This is a shared asset.

Project Justification:

This project offers users self service capabilities without interacting with a live agent and enables performance analytics.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756Q - ServiceNow Service Mapping

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756Q

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756Q - ServiceNow Service Mapping
Workpaper Detail:	00756Q.001 - ServiceNow Service Mapping Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	706	235
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**706**	**235**
FTE	0.0	5.9	2.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756Q - ServiceNow Service Mapping
Workpaper Detail:	00756Q.002 - ServiceNow Service Mapping NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	3,500	1,800
NSE	0	0	0
Total	**0**	**3,500**	**1,800**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756Q - ServiceNow Service Mapping
Workpaper Detail:	00756Q.003 - ServiceNow Service Mapping SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,000	0
NSE	0	0	0
Total	**0**	**2,000**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756S - Content Server Replacement

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756S - Content Server Replacement

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	206	0	0
Non-Labor	Zero-Based	0	0	0	0	0	4,701	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**4,907**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0

Business Purpose:

This project replaces SAP content server with SAP OpenText solution, a leading content management platform. The SAP content server is used to store document images for various business processes within SAP.The Company has maximized the servers capabilities and requires a replacement solution.

Physical Description:

1) Replace SAP content server with SAP OpenText solution
2) Transfer all documents and images
3) Implement OpenText content management solution capabilities

This project enhances one application.
The internal labor costs for this project are driven by various resources such as project managers, developers, architects, and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software, prepaid software maintenance, and vendor services for implementation and IT quality assurance.
This is a shared asset.

Project Justification:

1) Replace legacy technology to modernize and align with enterprise and vendor roadmap.
2) Provide required document management capabilities and enhanced functionalities to support SAP users
3) Improve user experience

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756S - Content Server Replacement

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756S

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756S - Content Server Replacement
Workpaper Detail:	00756S.001 - Content Server Replacement Labor
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	206	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**206**	**0**	**0**
FTE	1.7	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756S - Content Server Replacement
Workpaper Detail:	00756S.002 - Content Server Replacement NL Services
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	331	0	0
NSE	0	0	0
Total	**331**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756S - Content Server Replacement
Workpaper Detail:	00756S.003 - Content Server Replacement SW Purchase
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,800	0	0
NSE	0	0	0
Total	**3,800**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756S - Content Server Replacement
Workpaper Detail:	00756S.004 - Content Server Replacement SW Maintenance
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	570	0	0
NSE	0	0	0
Total	**570**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756T - Foundations Analytics Service

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756T - Foundations Analytics Service

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	424	424	424
Non-Labor	Zero-Based	0	0	0	0	0	4,150	3,100	2,370
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**4,574**	**3,524**	**2,794**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.5	3.5	3.5

Business Purpose:

This project started in 2021 and provides a centralized data foundation for business self-service analytics and a common dictionary across the Company. The project builds a solid data foundation and provides analytics services in visualization and advanced analytics. The functional areas of focus are Customer Services, Gas Operations and Engineering, Fleet, Environmental, Safety, Support Services and Supply Management. This project builds the data foundation to support reporting needed for safety and compliance.

Physical Description:

The Scope of this project includes data engineering and reporting services for:
1) Customer Services Analytics supports primarily Customer Services clients
2) Gas Operations Analytics supports Gas Distribution, Engineering and System Integrity, Constructions, Control Center Modernization and Gas Transmission and Storage
3) Shared Services Analytics supports Safety, Supply Chain and Support Services

Data engineering and reporting services include:
1) Integrating data from multiple source systems into a central repository
2) Developing data models
3) Building views to expose data
4) Cataloging data
5) Developing visualizations and reports to provide data insights

The scope also includes system enhancements and elimination of technical debt supported by the Analytics teams .

This project impacts approximately 45 applicaitons over the project duration.
The internal labor costs for this project are driven by various resources such as company product owners, IT architects, information security engineers, product delivery managers and leads, and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for application development, project managers, cloud implementation costs and some software licenses.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756T - Foundations Analytics Service

1) Create operational efficiencies by centralizing data for reporting and analytics purposes and enabling self service by implementing data catalog.
2) Build out the data foundation with key data from various source systems to accelerate data analytics and reporting.
3) Enhance data insights and data-driven decision support for company leadership due to increased accessibility and timeliness of data foundation
4) Broaden and secure access to data and remediate business risks by protecting sensitive data and managing data quality
5) Improve data-literacy and accelerated adoption of advanced analytics for business stakeholders to address business challenges.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756T - Foundations Analytics Service

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756T

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756T - Foundations Analytics Service
Workpaper Detail:	00756T.001 - Foundations Analytics Service Labor
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	424	424	424
Non-Labor	0	0	0
NSE	0	0	0
Total	**424**	**424**	**424**
FTE	3.5	3.5	3.5

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756T - Foundations Analytics Service
Workpaper Detail:	00756T.002 - Foundations Analytics Service NL Services
In-Service Date:	11/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	4,150	3,100	2,370
NSE	0	0	0
Total	**4,150**	**3,100**	**2,370**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AP - RAMP - Identity and Access Management (IAM) Cloud

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00721AP - RAMP - Identity and Access Management (IAM) Cloud

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	176	412	588
Non-Labor	Zero-Based	0	0	0	0	0	1,850	3,650	2,700
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,026**	**4,062**	**3,288**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	3.4	4.9

Business Purpose:

"The project implements an Identity and Access Management (IAM) IAM cloud solution. The IAM Cloud platform enables productivity, provides day one access for all identities in the environment, and secures identity. It also centralizes the identity lifecycle, minimizes redundant cost, supports IT wide modernization and innovation, and reduces complexities across platforms.
"

Physical Description:

The project implements an IAM cloud solution and builds and deploys the following capabilities:
1) Password-less authentication
2) Cloud Integration
3) Cloud Identity Lifecycle Management
4) Business-to-Business (B2B)
5) Identity Risk Scoring - artificial intelligence (AI) Driven
6) Role-Based Access Control (RBAC), Attribute-Based Access Control (ABAC) - AI Driven

This project converts the Company on-premise IAM solution to a cloud solution.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services and SaaS subscription costs.
This is a shared asset.

Project Justification:

This project provides software decommissioning for redundant solutions and entails quicker identity lifecycle events, centralized platform management, and improved security controls for company cloud identity presence.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721AP - RAMP - Identity and Access Management (IAM) Cloud

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AP

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721AP - RAMP - Identity and Access Management (IAM) Cloud
Workpaper Detail:	00721AP.001 - RAMP - Identity and Access Management (IAM) Cloud Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	176	412	588
Non-Labor	0	0	0
NSE	0	0	0
Total	**176**	**412**	**588**
FTE	1.5	3.4	4.9

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00721AP - RAMP - Identity and Access Management (IAM) Cloud
Workpaper Detail: 00721AP.001 - RAMP - Identity and Access Management (IAM) Cloud Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 07

RAMP Line Item Name: Cloud Resiliency Services

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	2,026	4,062	3,288	9,376	3,129	3,999

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 TBD	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
TBD

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721AP - RAMP - Identity and Access Management (IAM) Cloud
Workpaper Detail:	00721AP.002 - RAMP - Identity and Access Management (IAM) Cloud NL Services (Same RAMP item as 00721AP.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,850	3,150	1,700
NSE	0	0	0
Total	**1,850**	**3,150**	**1,700**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00721AP - RAMP - Identity and Access Management (IAM) Cloud
Workpaper Detail:	00721AP.003 - RAMP - Identity and Access Management (IAM) Cloud SaaS Subscription (Same RAMP item as 00721AP.01)
In-Service Date:	06/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	500	1,000
NSE	0	0	0
Total	**0**	**500**	**1,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00755M - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00755.0
Category: J. Information Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00755M - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	76	0	0
Non-Labor	Zero-Based	0	0	0	0	0	208	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**284**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0

Business Purpose:

This project started in 2020. The primary objective of the project is to leverage the Company's private secured network to remediate the security vulnerabilities with our current dial up and IP based Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) communications.

Physical Description:

The primary objective of the project is to leverage the Company's private secured network, such as the Advanced Meter network backhaul, established with cellular carriers in order to remediate the security vulnerabilities with our current IP based communications implementation and old analog dial-up modems. Currently the Measurement Collection System (MCS) collects gas volumes and gas quality data from Advanced Meter HeadEnd and Meter Data Management System (MDMS), IP modems and old analog dial-up modems. The project implements security remediation and device segmentation to secure IP based communications via the Advanced Meter Network and upgrades existing IP based modems to be able to communicate over 4G (LTE). It will also replace old analog dialup modems with new IP modems and phase out analog phone lines, analog dialup modems and EdgePort appliances.

This project includes approximately 275 device deployments over the project duration.
The internal labor costs for this project are driven by various resources such as information security engineers, project manager, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software, and vendor services for development and implementation.
This is a non-shared asset.

Project Justification:

This project reduces the risk of a customer data security breach. It also enables continued IP based communications for noncore volumes and gas quality.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00755M - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediatior

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00755M

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00755M - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediation
Workpaper Detail:	00755M.001 - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediation Labor
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	76	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**76**	**0**	**0**
FTE	0.6	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00755M - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediation
Workpaper Detail:	00755M.002 - Electronic Volume Correctors (EVC) and Gas Chromatographs Telecom Security Remediation NL Services
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	108	0	0
NSE	0	0	0
Total	**108**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00755.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00755M - Electronic Volume Correctors (EVC) and Gas Chromatographs (GC) Telecom Security Remediation
Workpaper Detail:	00755M.003 - Electronic Volume Correctors (EVC) and Gas Chromatographs Telecom Security Remediation SW Purchase
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	100	0	0
NSE	0	0	0
Total	**100**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AI - RAMP - System Enhancements and Workflow Management

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756AI - RAMP - System Enhancements and Workflow Management

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	700	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**700**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

This project focusses on enhancement, development, implementation and support activities for multiple systems.

Physical Description:

The scope of this project includes technical and functional improvements for business process automation, including document and workflow management capabilities and the configuration of new workflows.

This project impacts approximately 50 enhancements.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

This project provides technical and functional application solutions and offers the ability to complete regulatory reporting.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AI - RAMP - System Enhancements and Workflow Management

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AI

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756AI - RAMP - System Enhancements and Workflow Management
Workpaper Detail:	00756AI.001 - RAMP - System Enhancements and Workflow Management NL Srvcs (Same RAMP item as 00756AB.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	700	0	0
NSE	0	0	0
Total	**700**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756V - App Modernization and Vulnerability Reduction Phase II

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756V - App Modernization and Vulnerability Reduction Phase II

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	18	588	588
Non-Labor	Zero-Based	0	0	0	0	0	5,030	4,000	4,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**5,048**	**4,588**	**4,588**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.2	4.9	4.9

Business Purpose:

This project started in 2021 and focuses on modernizing the server operating systems and vulnerability reduction for business critical application.

Physical Description:

1) Provide standardized and consolidated technology platform by addressing the underlying obsolescence across SoCalGas application portfolio through technology modernization and rationalization and deployment overhead reduction.
2) Provide a sustainable security vulnerability solution
3) Redevelop the following applications on a sustainable cloud platform:
- Affiliate Transactions (Affiliate Compliance)
- Asset Retirement
- DBE Spend Reporting
- EOS Requirements
- iPMP – SoCalGas
- MobiControl
- New Construction Status Tracker (NCST)
- Reveal (COTS)
- Safety and Environmental Product Approvals (SEPA)
- Application Modernization Infrastructure and Common Application Programming Interface (API)

This project impacts approximately 10 applications over the project duration.
The internal labor costs for this project are driven by various resources such as project managers and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for implementation, development, and IT quality assurance.
This is a shared asset.

Project Justification:

1) Allow easy to manage software development by providing common application components
2) Support higher reusability
3) Allow for easy upgrades with evolving user requirements on common frameworks
4) Enable agnostic approach to support future technology trends
5) Standardize user experiences for faster adoption
6) Amplify the extensibility of common services and packaged products

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756V - App Modernization and Vulnerability Reduction Phase II

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756V

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756V - App Modernization and Vulnerability Reduction Phase II
Workpaper Detail:	00756V.001 - App Modernization and Vulnerability Reduction Phase II Labor
In-Service Date:	09/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	18	588	588
Non-Labor	0	0	0
NSE	0	0	0
Total	**18**	**588**	**588**
FTE	0.2	4.9	4.9

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756V - App Modernization and Vulnerability Reduction Phase II
Workpaper Detail:	00756V.002 - App Modernization and Vulnerability Reduction Phase II NL Services
In-Service Date:	09/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	5,030	4,000	4,000
NSE	0	0	0
Total	**5,030**	**4,000**	**4,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721AO - Enterprise Radio Media Workstation Replacement

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721AO - Enterprise Radio Media Workstation Replacement

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	146	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,086	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,232**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0

Business Purpose:

This project upgrades existing enterprise radio media workstations positioned at Monterey Park, Pico Rivera and other remote locations.

Physical Description:

The scope of this project includes upgrading software and existing consoles positioned at Monterey Park, Pico Rivera and other remote locations.

This project upgrades approximately 111 existing media workstations.
The internal labor costs for this project are driven by various resources such as operations project managers, and production operations engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware costs, and vendor services to support implementation.
This is a shared asset.

Project Justification:

This upgrade provides continued operational support.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721AO - Enterprise Radio Media Workstation Replacement

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721AO

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721AO - Enterprise Radio Media Workstation Replacement
Workpaper Detail:	00721AO.001 - Enterprise Radio Media Workstation Replacement Labor
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	146	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**146**	**0**	**0**
FTE	1.2	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721AO - Enterprise Radio Media Workstation Replacement
Workpaper Detail:	00721AO.002 - Enterprise Radio Media Workstation Replacement NL Services
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	303	0	0
NSE	0	0	0
Total	**303**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721AO - Enterprise Radio Media Workstation Replacement
Workpaper Detail: 00721AO.003 - Enterprise Radio Media Workstation Replacement HW Purchase

In-Service Date: 06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	783	0	0
NSE	0	0	0
Total	**783**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721E - RAMP - Digital Workspace

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721E - RAMP - Digital Workspace

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	426	0	0
Non-Labor	Zero-Based	0	0	0	0	0	19,312	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**19,738**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0

Business Purpose:

This project started in 2021 and procures, configures, and deploys workstations to company employees. These workstations include a combination of desktops and laptops with a docking station.

Physical Description:

The scope of this project includes procuring, configuring, and deploying workstations and establishing a centralized workspace management to deploy images, patches, and upgrades.

This project deploys approximately 7,800 devices over the project duration.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers, developers, and analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software, vendor services, and prepaid maintenance costs.
This is a non-shared asset.

Project Justification:

This project improves client experience, operational efficiency and reduces the risk of technology obsolescence. The project also increases mobility and flexibility for office workers by replacing some desktops with laptops.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721E - RAMP - Digital Workspace

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721E

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721E - RAMP - Digital Workspace
Workpaper Detail:	00721E.001 - RAMP - Digital Workspace Labor
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	426	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**426**	**0**	**0**
FTE	3.6	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721E - RAMP - Digital Workspace
Workpaper Detail: 00721E.001 - RAMP - Digital Workspace Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 05

RAMP Line Item Name: End User Access and Supporting Services

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	19,738	0	0	19,738	30,419	38,869

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Devices	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately7800 devices over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721E - RAMP - Digital Workspace
Workpaper Detail:	00721E.002 - RAMP - Digital Workspace NL Services (Same RAMP item as 00721E.01)
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	5,060	0	0
NSE	0	0	0
Total	**5,060**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721E - RAMP - Digital Workspace
Workpaper Detail: 00721E.003 - RAMP - Digital Workspace HW Purchase (Same RAMP item as 00721E.01)

In-Service Date: 03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	11,500	0	0
NSE	0	0	0
Total	**11,500**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721E - RAMP - Digital Workspace
Workpaper Detail: 00721E.004 - RAMP - Digital Workspace SW Purchase (Same RAMP item as 00721E.01)

In-Service Date: 12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	40	0	0
NSE	0	0	0
Total	**40**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721E - RAMP - Digital Workspace
Workpaper Detail:	00721E.005 - RAMP - Digital Workspace HW Maintenance (Same RAMP item as 00721E.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,700	0	0
NSE	0	0	0
Total	**2,700**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721E - RAMP - Digital Workspace
Workpaper Detail:	00721E.006 - RAMP - Digital Workspace SW Maintenance (Same RAMP item as 00721E.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	12	0	0
NSE	0	0	0
Total	**12**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00721K - Mobile Phone Refresh 2022

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00721.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00721K - Mobile Phone Refresh 2022

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	588	0	0
Non-Labor	Zero-Based	0	0	0	0	0	5,800	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**6,388**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0

Business Purpose:

This project refreshes existing company owned smart phones and purchases company owned devices for those currently receiving the mobile phone stipend.

Physical Description:

This project refreshes company owned iPhones and transitions employees to company owned devices.

This project impacts the replacement of approximately 2,200 mobile devices.
The internal labor costs for this project are driven by various resources such as project managers, analysts, and contract services. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, hardware maintenance, and vendor services.
This is a shared asset.

Project Justification:

This project moves away from personally owned phones and permits tighter security controls on the devices.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721K - Mobile Phone Refresh 2022

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00721K

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721K - Mobile Phone Refresh 2022
Workpaper Detail:	00721K.001 - Mobile Phone Refresh 2022 Labor
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	588	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**588**	**0**	**0**
FTE	4.9	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721K - Mobile Phone Refresh 2022
Workpaper Detail:	00721K.002 - Mobile Phone Refresh 2022 NL Services
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	700	0	0
NSE	0	0	0
Total	**700**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721K - Mobile Phone Refresh 2022
Workpaper Detail:	00721K.003 - Mobile Phone Refresh 2022 HW Purchase
In-Service Date:	03/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	4,500	0	0
NSE	0	0	0
Total	**4,500**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00721.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00721K - Mobile Phone Refresh 2022
Workpaper Detail:	00721K.004 - Mobile Phone Refresh 2022 HW Maintenance
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	600	0	0
NSE	0	0	0
Total	**600**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00743I - RAMP - Call Recording System Refresh

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00743.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00743I - RAMP - Call Recording System Refresh

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	248	0	0
Non-Labor	Zero-Based	0	0	0	0	0	73	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**321**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0

Business Purpose:

This project started in 2021 and implements mandatory call recording capabilities. This would separate recordings by functional need and utilize the current system for the Company call center, while migrating compliance recording to the new platform.

Physical Description:

The scope of this project includes the implementation of a call recording management system to record compliance mandated radio and telephone calls.

This project includes implementation of approximately 17 servers over the project duration.
The internal labor costs for this project are driven by implementation. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services.
This is a shared asset.

Project Justification:

This project provides a more robust recording system to meet compliance requirements and has the ability to use dedicated recording servers where necessary.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00743I - RAMP - Call Recording System Refresh

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00743l

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00743I - RAMP - Call Recording System Refresh
Workpaper Detail:	00743I.001 - RAMP - Call Recording System Refresh Labor (Same RAMP item as 00743A.01)
In-Service Date:	07/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	248	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**248**	**0**	**0**
FTE	2.1	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00743.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00743I - RAMP - Call Recording System Refresh
Workpaper Detail:	00743I.002 - RAMP - Call Recording System Refresh NL Services (Same RAMP item as 00743A.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	73	0	0
NSE	0	0	0
Total	**73**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756Y - Microsoft Enterprise Agreement 2022-2025

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 3. Transform How We Work
Workpaper Group: 00756Y - Microsoft Enterprise Agreement 2022-2025

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	28,000	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**28,000**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

This project covers licensing and subscriptions required for select Microsoft software products across the Company. A Microsoft license is essential and required for each employee and contractor to enable productivity and complete common digital tasks in the workplace.

Physical Description:

The Microsoft Enterprise Agreement (EA) covers select software and subscriptions used company-wide including:
1) Microsoft 365 (formerly Office 365)
2) Desktop and server Operating Systems
3) System Center Configuration Manager
4) SQL server licensing
5) Visual Studio
6) Power Business Inteligence (BI) Premium
7) Remote Desktop Services

This is a required licensing and subscription project.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by Microsoft product licensing and prepaid SaaS subscription.
This is a shared asset.

Project Justification:

This project meets required licensing to promote collaboration, productivity, security, infrastructure, and monitoring. If we do not renew prior to 12/2022 we have a significant risk to company operations and will be out of compliance with Microsoft.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756Y - Microsoft Enterprise Agreement 2022-2025

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756Y

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	3. Transform How We Work
Workpaper Group:	00756Y - Microsoft Enterprise Agreement 2022-2025
Workpaper Detail:	00756Y.001 - Microsoft Enterprise Agreement 2022-2025 SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	28,000	0	0
NSE	0	0	0
Total	**28,000**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AA - Business Adaptation Tech and Digitalization

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756AA - Business Adaptation Tech and Digitalization

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	162	178
Non-Labor	Zero-Based	0	0	0	0	0	0	1,219	1,364
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**1,381**	**1,542**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.5

Business Purpose:

This project implements various emerging technology to provide scalable business capabilities that align with the Company's digital transformation and digital acceleration goals.

Physical Description:

The scope of this project includes testing, development, and implementation of digital capabilites such as advanced artificial intelligence (AI), Internet of Things (IoT), and blockchain technology for customer transactions.

This project impacts four applications in the business application portfolio by adding new apps and technology
The internal labor costs for this project are driven by various resources such as company product owners, IT architects, information security engineers, product delivery managers and leads and business analysts . Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development, cloud implementation costs and SaaS licenses.
This is a non-shared SoCalGas asset.

Project Justification:

This project enables asset and operational data visualization to improve company operational planning and risk management capabilities. This project also modernizes the way we track customer transactions to support operations.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756AA - Business Adaptation Tech and Digitalization

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AA

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756AA - Business Adaptation Tech and Digitalization
Workpaper Detail: 00756AA.001 - Business Adaptation Tech and Digitalization Labor

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	162	178
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**162**	**178**
FTE	0.0	1.4	1.5

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756AA - Business Adaptation Tech and Digitalization
Workpaper Detail:	00756AA.002 - Business Adaptation Tech and Digitalization NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,219	1,364
NSE	0	0	0
Total	**0**	**1,219**	**1,364**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AG - RAMP - Asset Investment Planning and Management (AIPM)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756AG - RAMP - Asset Investment Planning and Management (AIPM)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	528	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,192	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,720**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0

Business Purpose:

This project started in 2021. This project bridges asset and risk management, finance, and Sempra strategy. This project determines where and when to invest in company assets to deliver the greatest value and drive the achievement of strategic goals, leveraging advanced analytic practices.

Physical Description:

The scope of this project includes implementation of multiple project phases.

Phase 1 Project Scope:
1) Provide an asset and risk registry repository for Distribution pipeline assets that can be analyzed, displayed and profiled for risk type and risk level.
2) Provide an investment repository to assess varying Distribution needs and drivers by addressing asset degradation, risks and service levels, system growth, regulatory requirements, etc.
3) Build interfaces between enterprise platforms and Copperleaf so existing asset health and financial data can be utilized.
4) Develop Multi-Attribute Value Frameworks to consistently assess value of investments and align decisions to the strategic priorities of our organization.

Phase 2 Project Scope:
1) Implement Transmission Integrity and Safety Management Project (TIMP)
2) Implement Facilities Integrity and Safety Management Project (FIMP)
3) Implement Storage Integrity and Safety Management Project (SIMP)

This project includes approximately twenty risk models over the project duration.
The internal labor costs for this project are driven by various resources such as business analysts, project manager, developers, and testing resources. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for project management, development and implementation.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756AG - RAMP - Asset Investment Planning and Management (AIPM)

1) Increase our portfolio value by optimizing our investment decisions and creating/managing investment plans that deliver the greatest value.
2) Increase efficiencies around capital project planning and execution by establishing a streamlined approach on prioritizing asset replacements and quantifying risk.
3) Reduce regulatory filing efforts by establishing a uniform, consistent approach to quantify and document risk reduction for every investment decision.
4) Align capital investment decisions to strategic objectives, industry best practices and a risk-based/data driven methodology.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756AG - RAMP - Asset Investment Planning and Management (AIPM)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AG

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756AG - RAMP - Asset Investment Planning and Management (AIPM)
Workpaper Detail:	00756AG.001 - RAMP - Asset Investment Planning and Management (AIPM) Labor
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	528	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**528**	**0**	**0**
FTE	4.4	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756AG - RAMP - Asset Investment Planning and Management (AIPM)
Workpaper Detail: 00756AG.001 - RAMP - Asset Investment Planning and Management (AIPM) Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-1 Asset and Records Management

RAMP Line Item ID: 06

RAMP Line Item Name: Asset Investment Planning (AIP) Tool

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	2,720	3,088	3,088	8,896	2,248	9,740

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.GRC forecast total includes the projects from the following workpapers:00756AG00756BC00756BD

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Risk Models	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work units are approximately 20 risk models over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756AG - RAMP - Asset Investment Planning and Management (AIPM)
Workpaper Detail:	00756AG.002 - RAMP - Asset Investment Planning and Management (AIPM) NL Srvcs (Same RAMP item as 00756AG.01)
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,192	0	0
NSE	0	0	0
Total	**2,192**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756BA - RAMP - Energy Transition Digital Twin

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756BA - RAMP - Energy Transition Digital Twin

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	89	133	133
Non-Labor	Zero-Based	0	0	0	0	0	2,258	1,301	1,301
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,347**	**1,434**	**1,434**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.7	1.1	1.1

Business Purpose:

This project drives company sustainability objectives for energy transition by establishing a capability that leverages internal and external data sources to inform high impact decisions on the path to net zero. This includes digital models of physical environments such as vehicles and buildings. The machine learning and artificial intelligence (AI) technology will be utilized to determine ways to reduce the carbon footprint of our fleet and industrial applications.

Physical Description:

1) Fleet Decarbonization - Emissions detection to identify our Fleet's impact on the community
2) Industrial Clusers - Identification of opportunities to scale low-carbon technologies in partnership with multiple participants across SoCalGas
3) Heat Island Identification - Identify select urban areas that would benefit from planting a "tree in the right place" in order to reduce the utilization of energy to cool off those areas.

This project will utilize a combination of machine learning, artificial intelligence and data to run simulated environments that can be manipulated to model the effects of specific changes on these environments.

This project impacts the three use cases above.
The internal labor costs for this project are driven by various resources such as company product owners, IT architects, information security engineers, product delivery managers and leads and business analysts . Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development, project managers, cloud implementation costs and SaaS licenses.
This is a non-shared SoCalGas asset.

Project Justification:

This project enables company alignment with net zero goals by providing models that can be used to implement solutions that will help reduce company emissions and carbon footprint.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756BA - RAMP - Energy Transition Digital Twin

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756BA

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756BA - RAMP - Energy Transition Digital Twin
Workpaper Detail:	00756BA.001 - RAMP - Energy Transition Digital Twin Labor (Same RAMP item as 00721A.01)
In-Service Date:	09/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	89	133	133
Non-Labor	0	0	0
NSE	0	0	0
Total	**89**	**133**	**133**
FTE	0.7	1.1	1.1

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756BA - RAMP - Energy Transition Digital Twin
Workpaper Detail:	00756BA.002 - RAMP - Energy Transition Digital Twin NL Services (Same RAMP item as 00721A.01)
In-Service Date:	09/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,898	1,301	1,301
NSE	0	0	0
Total	**1,898**	**1,301**	**1,301**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756BA - RAMP - Energy Transition Digital Twin
Workpaper Detail:	00756BA.003 - RAMP - Energy Transition Digital Twin SaaS Subscription (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	360	0	0
NSE	0	0	0
Total	**360**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756U - RAMP - Situational Awareness Dashboards 2022-2023

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756U - RAMP - Situational Awareness Dashboards 2022-2023

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	880	1,760	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**880**	**1,760**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

This project develops operational situational awareness and executive dashboards that drive efficient operational decision making by focusing on high value, low effort, near real time dashboard uses cases that are at the core of the utilities operations with a goal of maximizing value and speed to value.

Physical Description:

This project delivers dashboards to drive operational efficiencies through the reduction of manual processes across the Company and promotes self service and advanced visualization techniques.

This project impacts approximately 12 applications and dashboards.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by vendor services for development.
This is a non-shared asset.

Project Justification:

This project improves timeliness and completeness of data available to support decision making and safety and compliance.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756U - RAMP - Situational Awareness Dashboards 2022-2023

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756U

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756U - RAMP - Situational Awareness Dashboards 2022-2023
Workpaper Detail:	00756U.001 - RAMP - Situational Awareness Dashboards 2022-2023 NL Services (Same RAMP item as 00721A.01)
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	880	1,760	0
NSE	0	0	0
Total	**880**	**1,760**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756Z - RAMP - Digital Integration

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756Z - RAMP - Digital Integration

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	181	134	157
Non-Labor	Zero-Based	0	0	0	0	0	1,869	1,027	1,203
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,050**	**1,161**	**1,360**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.5	1.1	1.3

Business Purpose:

This project addresses the integration of cloud-based capabilities with internal and other external systems while modernizing the security and enhancing the performance of the integration platform. This project also implements a self-service integration capability that expedites the deployment of new business solutions across the Company.

Physical Description:

This project enhances our integration platform and enables IT to deliver rapid business value by implementing new integration and self-service capabilities for both on-premise and cloud applications.

This project impacts four applications.
The internal labor costs for this project are driven by various resources such as company product owners, IT architects, information security engineers, product delivery managers and leads and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development and implementation, as well as SaaS licenses.
This is a shared asset.

Project Justification:

This project improves speed to business value, improves technology reliability, reduces technical debt and risks that would be otherwise driven by each initiative pursuing their own integration solutions.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756Z - RAMP - Digital Integration

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756Z

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756Z - RAMP - Digital Integration
Workpaper Detail:	00756Z.001 - RAMP - Digital Integration Labor (Same RAMP item as 00721A.01)
In-Service Date:	09/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	181	134	157
Non-Labor	0	0	0
NSE	0	0	0
Total	**181**	**134**	**157**
FTE	1.5	1.1	1.3

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756Z - RAMP - Digital Integration
Workpaper Detail:	00756Z.002 - RAMP - Digital Integration NL Services (Same RAMP item as 00721A.01)
In-Service Date:	09/30/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,602	1,027	1,203
NSE	0	0	0
Total	**1,602**	**1,027**	**1,203**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756Z - RAMP - Digital Integration
Workpaper Detail:	00756Z.003 - RAMP - Digital Integration SaaS Subscription (Same RAMP item as 00721A.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	267	0	0
NSE	0	0	0
Total	**267**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786A - RAMP - Application Factory

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00786A - RAMP - Application Factory

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	3,749	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**3,749**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

"This project started in 2021. This project includes multiple applications to be developed including workflow automations and natural language processing capabilities on the cloud.
"

Physical Description:

This project implements a factory model to develop and implement new sets of business applications that are currently in our app development backlog, into a cloud environment in order to provide enhanced security, resiliency and functionality to these business assets.

This project impacts four applications.
There are no internal labor costs for this project.
The non-labor costs for this project are driven by vendor services for application development and cloud implementation.
This is a shared asset.

Project Justification:

"This project enables the rapid development and deployment of new solutions, with enhanced security, resiliency and accessibility, in support of transforming the way we do business.
"

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786A - RAMP - Application Factory

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786A

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786A - RAMP - Application Factory
Workpaper Detail:	00786A.001 - RAMP - Application Factory NL Services (Same RAMP item as 00721A.01)
In-Service Date:	11/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,749	0	0
NSE	0	0	0
Total	**3,749**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786B - Digital Process Automation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00786B - Digital Process Automation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	219	142	142
Non-Labor	Zero-Based	0	0	0	0	0	7,398	3,905	3,905
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**7,617**	**4,047**	**4,047**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.8	1.2	1.2

Business Purpose:

This project includes various system enhancements to address the backlog of opportunities to automate company processes currently performed by staff through process automation technology.

Physical Description:

This project addresses high value automation opportunities utilizing:
1) Robotic process automation to reduce manual business processes and create labor capacity for strategic work
2) Business process management to deliver applications that manage workflows and approvals in a standardized, simplified application
3) Application factory to deliver custom and dynamic applications that leverage the Cloud to deliver business value
4) Application modernization of legacy web applications on cloud

This project impacts approximately 25 applications.
The internal labor costs for this project are driven by various resources such as company product owners, IT architects, information security engineers, product delivery managers/leads and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by software, vendor services for development, project management, cloud implementation cost, and SaaS subscription.
This is a shared asset.

Project Justification:

1) Improve process accuracy, timeliness, quality and standardization
2) Improve process security and compliance
3) Enhance process controls and consistency
4) Improve digitization and efficiency of workflows, traceability and document storage
5) Provides secure access to online and offline applications
6) Enable high volume data processing
7) Enable access to business processes through mobile devices

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786B - Digital Process Automation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786B

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786B - Digital Process Automation
Workpaper Detail:	00786B.001 - Digital Process Automation Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	219	142	142
Non-Labor	0	0	0
NSE	0	0	0
Total	**219**	**142**	**142**
FTE	1.8	1.2	1.2

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786B - Digital Process Automation
Workpaper Detail:	00786B.002 - Digital Process Automation NL Services
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	5,928	2,705	3,905
NSE	0	0	0
Total	**5,928**	**2,705**	**3,905**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786B - Digital Process Automation
Workpaper Detail:	00786B.003 - Digital Process Automation SW Purchase
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,200	0
NSE	0	0	0
Total	**0**	**1,200**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786B - Digital Process Automation
Workpaper Detail:	00786B.004 - Digital Process Automation SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,470	0	0
NSE	0	0	0
Total	**1,470**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786C - RAMP - Decision Analytics and Automation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00786C - RAMP - Decision Analytics and Automation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	233	254	254
Non-Labor	Zero-Based	0	0	0	0	0	2,430	2,380	1,935
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,663**	**2,634**	**2,189**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.9	2.1	2.1

Business Purpose:

The purpose of this project is to implement a cloud platform to deploy machine learning models at scale.

Physical Description:

This project includes a Machine Learning Operations (MLOps) group, that includes people, process, and cloud enabled technology. Additionally, this project enables evaluation of machine learning models and testing hypothesis and continuous monitoring and evaluation of model integrity.

This project impacts six applications.
The internal labor costs for this project are driven by various resources such as company data scientists, IT architects, information security engineers, product delivery managers and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for development.
This is a non-shared asset.

Project Justification:

1) Support a variety of use cases across the Company in the areas of safety, compliance and innovation.
2) Reduce security risk by centralizing deployment of analytics use-cases on one platform.
3) Enable a more rigorous and systematic way to evaluate models and test hypothesis.
4) Provide a mechanism to continuously monitor and evaluate model integrity.
5) Minimize the reliance on internal central IT teams to provision compute resources to train or tune , deploy, and support models.
6) Accelerate the deployment of critical analytical use-cases so that the business can benefit from them.
7) Reduce security risk by centralizing deployment of analytics use-cases on one platform.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786C - RAMP - Decision Analytics and Automation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786C

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: J. Information Technology
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00786C - RAMP - Decision Analytics and Automation
Workpaper Detail: 00786C.001 - RAMP - Decision Analytics and Automation Labor (Same RAMP item as 00721A.01)

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	233	254	254
Non-Labor	0	0	0
NSE	0	0	0
Total	**233**	**254**	**254**
FTE	1.9	2.1	2.1

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	J. Information Technology
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00786C - RAMP - Decision Analytics and Automation
Workpaper Detail:	00786C.002 - RAMP - Decision Analytics and Automation NL Services (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	2,430	2,380	1,935
NSE	0	0	0
Total	**2,430**	**2,380**	**1,935**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: K. Safety & Risk Management Systems
Workpaper: VARIOUS

Summary for Category: K. Safety & Risk Management Systems

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	1,217	1,581	1,314
Non-Labor	0	10,951	7,330	7,125
NSE	0	0	0	0
Total	**0**	**12,168**	**8,911**	**8,439**
FTE	0.0	10.1	13.1	10.9
00756AX RAMP - Noggin 2.0 Core Implementation				
Labor	0	317	593	137
Non-Labor	0	2,602	2,145	1,125
NSE	0	0	0	0
Total	**0**	**2,919**	**2,738**	**1,262**
FTE	0.0	2.6	4.9	1.1
00756O RAMP - Environmental Health and Safety Management Modernization Phase 2				
Labor	0	706	988	1,177
Non-Labor	0	6,120	5,185	6,000
NSE	0	0	0	0
Total	**0**	**6,826**	**6,173**	**7,177**
FTE	0.0	5.9	8.2	9.8
00756C RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1				
Labor	0	194	0	0
Non-Labor	0	2,229	0	0
NSE	0	0	0	0
Total	**0**	**2,423**	**0**	**0**
FTE	0.0	1.6	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756AX - RAMP - Noggin 2.0 Core Implementation

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: K. Safety & Risk Management Systems
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AX - RAMP - Noggin 2.0 Core Implementation

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	317	593	137
Non-Labor	Zero-Based	0	0	0	0	0	2,602	2,145	1,125
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,919**	**2,738**	**1,262**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.6	4.9	1.1

Business Purpose:

"The Noggin system phase 1, implemented in 2019, supports mission critical functions in the Emergency Operations Center (EOC) for tracking, managing, and reporting incidents. This existing SaaS solution reaches end contract in 2023 with an option for a yearly renewal. The Noggin Phase 3 project implements and configures a newer version of the vendor cloud software which offers more robust performance and newer modules such as the business continuity and crisis module.
"

Physical Description:

1) Digitize incident forms
2) Build workflows, dashboards, and notifications to provide situational awareness and automated reporting functionalities to address business and compliance requirements.
3) Digitize the business continuity and crisis modules

This project impacts one application.
The internal labor costs for this project are driven by various resources such as IT project managers , business managers, and business systems analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, vendor services for system configuration, system testing, and project implementation support.
This is a non-shared asset.

Project Justification:

This project continues to meet mandatory business requirements by digitalizing SoCalGas specific incident management forms, workflows, and dashboards to support streamlined business processes and ease of use for approximately 1,000 SoCalGas end users.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AX - RAMP - Noggin 2.0 Core Implementation

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756AX

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AX - RAMP - Noggin 2.0 Core Implementation
Workpaper Detail:	00756AX.001 - RAMP - Noggin 2.0 Core Implementation Labor
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	317	593	137
Non-Labor	0	0	0
NSE	0	0	0
Total	**317**	**593**	**137**
FTE	2.6	4.9	1.1

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: K. Safety & Risk Management Systems
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756AX - RAMP - Noggin 2.0 Core Implementation
Workpaper Detail: 00756AX.001 - RAMP - Noggin 2.0 Core Implementation Labor

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-CFF-4 Foundational Technology Systems

RAMP Line Item ID: 08

RAMP Line Item Name: Emergency Operations Center (EOC) Technology Resiliency

Tranche(s): Tranche1: Overall

GRC Forecast Cost Estimates ($000)

	2021 Historical Embedded Costs (2021 $)	2022 Forecast (2021 $)	2023 Forecast (2021 $)	2024 Forecast (2021 $)	2022 to 2024 Forecast (2021 $)	2022 to 2024 RAMP Range (2020 Incurred $) Low	High
Tranche 1 Cost Estimate	0	2,919	2,738	1,262	6,919	3,505	4,478

Cost Estimate Changes from RAMP:
RAMP high/low range incorporates the allocated splits for intercompany shared projects, whereas the GRC forecast reflects total projected cost.

GRC Work Unit/Activity Level Estimates

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2022 to 2024 Forecast Activities	2022 to 2024 RAMP Range Activities Low	High
Tranche 1 Application	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:
Units were not defined during RAMP filing because we were unable to break it out by year , subsequently, the total work unit is approximately 1 application over the project duration.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:
TBD

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AX - RAMP - Noggin 2.0 Core Implementation
Workpaper Detail:	00756AX.002 - RAMP - Noggin 2.0 Core Implementation NL Services (Same RAMP item as 00756AX.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,102	2,145	1,125
NSE	0	0	0
Total	**1,102**	**2,145**	**1,125**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756AX - RAMP - Noggin 2.0 Core Implementation
Workpaper Detail:	00756AX.003 - RAMP - Noggin 2.0 Core Implementation SaaS Subscription (Same RAMP item as 00756AX.01)
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,500	0	0
NSE	0	0	0
Total	**1,500**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756O - RAMP - Environmental Health and Safety Management Modernization Phase 2

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: K. Safety & Risk Management Systems
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756O - RAMP - Environmental Health and Safety Management Modernization Phase 2

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	706	988	1,177
Non-Labor	Zero-Based	0	0	0	0	0	6,120	5,185	6,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**6,826**	**6,173**	**7,177**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	5.9	8.2	9.8

Business Purpose:

ThThere are multiple applications utilized by Environmental, Health and Safety with cyber security compliance challenges, technology obsolescence and redundancy. This project utilizes the Company SAP Enterprise Resource Planning (ERP) system to replace these systems to eliminate identified security risks and technical obsolescence. This project improves operational efficiency and delivers significant improvements in functionality and user satisfaction . There are multiple processes across different business units that can be consolidated onto a single enterprise platform that creates efficiencies and reduces total cost of ownership.

Physical Description:

1) Serious Injury and Fatality (SIF) questionnaire reactive and proactive applications
2) Safety Observation and Reporting (SOAR)
3) Industrial Hygiene
4) Safety Observations / Field Audit Collection Tool (FACT)
5) Pipeline safety incidents
6) Contractor safety incidents
7) Pipeline QA Assessments
8) Fleet Maintenance
9) CCC Ergonomics
10) SafetyNet and Fastfield
11) Notice of Violation
12) BBS Adaptive Solutions
13) Environmental Tracking System Release Two
14) Ignition Management Release Two

This project impacts approximately 14 applications.
The internal labor costs for this project are driven by various resources such as architects, information security engineers, project managers, developers, and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for configuration, development, integration, testing, implementation, and IT quality assurance.
This is a shared asset.

Project Justification:

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756O - RAMP - Environmental Health and Safety Management Modernization Phase 2

Project Benefits:
1) Deliver significant improvements in business functionality, user satisfaction, analytics, and mobile access.
2) Meet company safety goals by providing an enterprise wide Safety and Environmental solution.
3) Reduce incident rates and increase compliance.
4) Address known cyber security challenges and remove known technical obsolescence.
5) Eliminate redundant customized capabilities with a standard ERP solution.
7) Simplify production support by leveraging a configured ERP solution.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756O - RAMP - Environmental Health and Safety Management Modernization Phase 2

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756O

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756O - RAMP - Environmental Health and Safety Management Modernization Phase 2
Workpaper Detail:	00756O.001 - RAMP - Envr Health and Safety Mgmt Modernization Phase 2 Labor (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	706	988	1,177
Non-Labor	0	0	0
NSE	0	0	0
Total	**706**	**988**	**1,177**
FTE	5.9	8.2	9.8

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756O - RAMP - Environmental Health and Safety Management Modernization Phase 2
Workpaper Detail:	00756O.002 - RAMP - Envr Health and Safety Mgmt Modernization Phase 2 NL Srvcs (Same RAMP item as 00721A.01)
In-Service Date:	12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	6,120	5,185	6,000
NSE	0	0	0
Total	**6,120**	**5,185**	**6,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756C - RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: K. Safety & Risk Management Systems
Category-Sub: 4. Accelerate Digital
Workpaper Group: 00756C - RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	194	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,229	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,423**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0

Business Purpose:

This project started in 2019. This project leverages our SAP system to establish a single platform for the Environmental , Health and Safety (EH&S) organization.

Physical Description:

1) Environmental Tracking System: application to track environmental project review/processing and regulatory permit reporting.
2) Near Miss: application to report a Near Miss, which is defined as an incident in which no property was damaged, and no personal injury was sustained, but where, given a slight shift in time or position, damage or injury easily could have occurred.
3) Stop Work: application to allow employees to stop work when they encounter unsafe conditions, actions, or are unsure about a Gas Standard or how to correctly perform a job task that could potentially endanger themselves, employees, contractors, customers, the public, equipment, or facilities.
4) Ignition Management: solution to manage Fire Ignition Events. Data Recorders will gather ignition and near ignition data from the field and provide it to the mitigation owners for follow-up actions. Ability to run analytics on data collected.
5) Safety Incident Management System (SIMS): application to allow users to access one interface for reporting and managing all required data related to employee injuries and incidents and facility safety inspections. This application maintains compliance with policy requirements of both the Injury and Illness Prevention Program and the Environmental and Safety Compliance Management Program.
6) Ops Environmental: application that tracks environmental compliance for Sempra. Ops Environmental provides workflow management for submitting, approving and analyzing environmental data.
7)Excavation Near Misses: To comply with CPUC mandate for close call record traceability , the Damage Prevention Strategies team seeks to use the existing workflow for Near Miss to capture near misses caused during an excavation process
8)Safety Suggestions: This app allows employees to report safety concerns or suggestions when logged into their desktop or anonymously via mobile, and provides workflow and statuses for analytics and reporting

This project impacts eight applica

Project Justification:

This project delivers significant improvements in business functionality, user satisfaction, analytics, and mobile access and meets company safety goals by providing an enterprise wide Safety and Environmental solution. Lastly, it eliminates redundant customized capabilities with a standard solution supported by existing support staff .

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756C - RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756C

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756C - RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1
Workpaper Detail:	00756C.001 - RAMP - Environmental Health and Safety (EH&S) Rplc Phase 1 Labor (Same RAMP item as 00721A.01)
In-Service Date:	04/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	194	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**194**	**0**	**0**
FTE	1.6	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756C - RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1
Workpaper Detail:	00756C.002 - RAMP - Environmental Health and Safety (EH&S) Rplc Phase 1 NL Services (Same RAMP item as 00721A.01)
In-Service Date:	04/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,475	0	0
NSE	0	0	0
Total	**1,475**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	K. Safety & Risk Management Systems
Category-Sub:	4. Accelerate Digital
Workpaper Group:	00756C - RAMP - Environmental Health and Safety (EH&S) Replacement Phase 1
Workpaper Detail:	00756C.003 - RAMP - Environmental Health and Safety (EH&S) Rplc Phase 1 SW Purchase (Same RAMP item as 00721A.01)
In-Service Date:	04/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	754	0	0
NSE	0	0	0
Total	**754**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: L. Supply Management & Supplier Diversity
Workpaper: VARIOUS

Summary for Category: L. Supply Management & Supplier Diversity

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	0	1,761	951	703
Non-Labor	0	15,936	9,414	1,000
NSE	0	0	0	0
Total	**0**	**17,697**	**10,365**	**1,703**
FTE	0.0	14.6	8.0	5.8
00756G Supply Management and Logistics Modernization				
Labor	0	459	0	0
Non-Labor	0	2,378	0	0
NSE	0	0	0	0
Total	**0**	**2,837**	**0**	**0**
FTE	0.0	3.8	0.0	0.0
00756W Supplier Risk Management (SRM)				
Labor	0	0	262	87
Non-Labor	0	0	1,554	0
NSE	0	0	0	0
Total	**0**	**0**	**1,816**	**87**
FTE	0.0	0.0	2.2	0.7
00786E Diverse Business Enterprise (DBE) Spend Reporting Enhancements				
Labor	0	159	53	0
Non-Labor	0	900	450	0
NSE	0	0	0	0
Total	**0**	**1,059**	**503**	**0**
FTE	0.0	1.3	0.4	0.0
00756K Enterprise Source to Pay ES2P				
Labor	0	1,143	0	0
Non-Labor	0	12,658	400	0
NSE	0	0	0	0
Total	**0**	**13,801**	**400**	**0**
FTE	0.0	9.5	0.0	0.0
00786D Enterprise Source to Pay (ES2P) Analytics Solution				
Labor	0	0	342	28
Non-Labor	0	0	2,010	0
NSE	0	0	0	0
Total	**0**	**0**	**2,352**	**28**
FTE	0.0	0.0	2.9	0.2

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Category: L. Supply Management & Supplier Diversity
Workpaper: VARIOUS

	In 2021$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
00786G Enterprise Source to Pay (ES2P) Value Stream				
Labor	0	0	294	588
Non-Labor	0	0	5,000	1,000
NSE	0	0	0	0
Total	**0**	**0**	**5,294**	**1,588**
FTE	0.0	0.0	2.5	4.9

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756G - Supply Management and Logistics Modernization

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756G - Supply Management and Logistics Modernization

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	459	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,378	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**2,837**	**0**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0

Business Purpose:

This project started in 2020. The Supply Management and Logistics system and business processes need to be updated to face the increasing demands of new and existing capital initiatives, retiring workforce, and increasing inventory levels.

Physical Description:

This project modernizes and improves the Supply Management and Logistics System in three phases.

Phase 1 of this project implements a data governance module to facilitate material maintenance. This is a foundational effort that provides a unified way to submit requests for new materials , approval workflows, status reporting and automation of material code creation.

Phase 2 of this project delivers tools and reengineers business processes and procedures to use statistical analysis for planning and maintaining material master.

Phase 3 of this project evaluates and delivers additional mobile capabilities needed to efficiently manage the growing number of warehouse and storeroom transactions.

This project impacts one application and approximately 70 tablets and 10 printers.
The internal labor costs for this project are driven by various resources such as project manager, developers, architect, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by hardware, software and prepaid maintenance, and vendor services for IT quality assurance.
This is a shared asset.

Project Justification:

This project enables optimization and process re-engineering leading to higher customer satisfaction, adequate levels of inventory for the right materials and alignment with compliance.

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756G - Supply Management and Logistics Modernization

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756G

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756G - Supply Management and Logistics Modernization
Workpaper Detail:	00756G.001 - Supply Management and Logistics Modernization Labor
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	459	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**459**	**0**	**0**
FTE	3.8	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756G - Supply Management and Logistics Modernization
Workpaper Detail:	00756G.002 - Supply Management and Logistics Modernization NL Services
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	1,536	0	0
NSE	0	0	0
Total	**1,536**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756G - Supply Management and Logistics Modernization
Workpaper Detail:	00756G.003 - Supply Management and Logistics Modernization HW Purchase
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	190	0	0
NSE	0	0	0
Total	**190**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756G - Supply Management and Logistics Modernization
Workpaper Detail:	00756G.004 - Supply Management and Logistics Modernization SW Maintenance
In-Service Date:	12/31/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	652	0	0
NSE	0	0	0
Total	**652**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756W - Supplier Risk Management (SRM)

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756W - Supplier Risk Management (SRM)

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	262	87
Non-Labor	Zero-Based	0	0	0	0	0	0	1,554	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**1,816**	**87**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.7

Business Purpose:

This project includes purchasing and implementation of Supplier Risk Management (SRM) module that encompasses performance management, safety and supply risk management, sustainability, and diversity.

Physical Description:

The project scope includes the design and implementation of SRM capability that encompasses:
1) Defined supplier tiers based on spend, risk, strategic alignment, and diversity
2) Defined ownership of relationship across supply management and business units, and suppliers
3) Enabled Key Performance Indicators (KPI's) aligned to business objectives
4) Structured development plans, and use of supplier forums
5) In-depth review of current and future supplier capabilities, auto review triggers
6) Structured logs, progress reviews, proactive communication

Deliverables include:
1) Supplier segmentation model
2) Governance model
3) Supplier performance KPIs and Scorecards
4) Supplier development plans by segments
5) Approach for issue mgt.
6) Implemented SRM platform
7) Updated policy
8) Job aid

This project includes one enhancement.
The internal labor costs for this project are driven by various resources such as architects, project managers, developers, and business analysts. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription, and vendor services for implementation.
This is a non-shared asset.

Project Justification:

1) Improve supplier management effectiveness regarding performance management , safety risk management, supply risk management
2) Increase service levels

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756W - Supplier Risk Management (SRM)

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756W

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00756W - Supplier Risk Management (SRM)
Workpaper Detail: 00756W.001 - Supplier Risk Management (SRM) Labor

In-Service Date: 03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	262	87
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**262**	**87**
FTE	0.0	2.2	0.7

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756W - Supplier Risk Management (SRM)
Workpaper Detail:	00756W.002 - Supplier Risk Management (SRM) NL Services
In-Service Date:	03/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	625	0
NSE	0	0	0
Total	**0**	**625**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00756W - Supplier Risk Management (SRM)
Workpaper Detail:	00756W.003 - Supplier Risk Management (SRM) SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	929	0
NSE	0	0	0
Total	**0**	**929**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786E - Diverse Business Enterprise (DBE) Spend Reporting Enhancements

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 1. Simplify and Standardize
Workpaper Group: 00786E - Diverse Business Enterprise (DBE) Spend Reporting Enhancements

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	159	53	0
Non-Labor	Zero-Based	0	0	0	0	0	900	450	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**1,059**	**503**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.3	0.4	0.0

Business Purpose:

The current Diverse Business Enterprise (DBE) reporting process requires much manual work and relies on antiquated systems with cyber security compliance challenges. A new solution is needed to remove the vulnerabilities and reduce manual effort, which will increase reporting accuracy and timeliness.

Physical Description:

1) Provide additional structure improvements and automation to allow for more consistent and repeatable efforts . Automation will also provide data integrity and accuracy in preparation for CPUC audits.
2) Additional new reports and dashboard screens to allow for additional data views and data capture to monitor and measure new Company goals which will allow internal clients to be self-serving.
3) Provide automated data reconciliation to prevent error prone manual effort to provide more adequate data to internal clients and the CPUC

This project impacts two applications.
The internal labor costs for this project are driven by various resources such as project managers, architects, business analysts, and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services for implementation, development, and IT quality assurance.
This is a shared asset.

Project Justification:

1) Reduce labor intensive, error prone data assimilation and transformation steps.
2) Provide more robust reporting to further breakdown the spend for analysis

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786E - Diverse Business Enterprise (DBE) Spend Reporting Enhancements

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786E

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786E - Diverse Business Enterprise (DBE) Spend Reporting Enhancements
Workpaper Detail:	00786E.001 - Diverse Business Enterprise (DBE) Spend Reporting Enhancements Labor
In-Service Date:	03/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	159	53	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**159**	**53**	**0**
FTE	1.3	0.4	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	1. Simplify and Standardize
Workpaper Group:	00786E - Diverse Business Enterprise (DBE) Spend Reporting Enhancements
Workpaper Detail:	00786E.002 - Diverse Business Enterprise (DBE) Spend Reporting Enhancements NL Services
In-Service Date:	03/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	900	450	0
NSE	0	0	0
Total	**900**	**450**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00756K - Enterprise Source to Pay ES2P

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756K - Enterprise Source to Pay ES2P

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	1,143	0	0
Non-Labor	Zero-Based	0	0	0	0	0	12,658	400	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**13,801**	**400**	**0**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0

Business Purpose:

This project started in 2019. The Enterprise Source-to-Pay (ES2P) project contains the procurement business process under a single integrated SAP Ariba eco-system to maximize efficiency, compliance, and sourcing effectiveness. The project implementation consists of five SAP modules: Contract Management, Fieldglass, Supplier Lifecycle and Performance, Sourcing, and Buying and Invoicing. These systems enable requisitions, sourcing management, contract management, e-procurement, and invoice management. After project completion the following systems will be decommissioned: ECM, Coupa, Taulia/Lavante, and PowerAdvocate Sourcing.

Physical Description:

1) Implement five SAP modules as part of the ES2P project: Contract Management, Fieldglass, Supplier Lifecycle and Performance, Sourcing, and Buying and Invoicing.
2) Re-engineer source-to-pay process to align with industry best practices, reduce inefficiency and optimize the use of technology.
3) Decommission current systems where needed.
4) Deploy a comprehensive organizational change management plan for maximum user adoption of the new systems and processes.

This project impacts six applications over the project duration.
The internal labor costs for this project are driven by various resources such as project managers, developers, architects, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for integration, implementation, and IT quality assurance.
This is a shared asset.

Project Justification:

1) Increase savings through integrated sourcing activities, increased automation and streamlined tactical spend/spot buys.
2) Decrease risk and increased compliance through enforced user and supplier compliance to contracted rates, increased invoice accuracy and reduced overpayment.
3) Improve productivity of supply chain operations through reduced inefficiencies and cycle times , increased PO and invoice automation, streamlined contract setup and analysis efforts
4) Align with IT SAP roadmap

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756K - Enterprise Source to Pay ES2P

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00756K

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756K - Enterprise Source to Pay ES2P
Workpaper Detail: 00756K.001 - Enterprise Source to Pay ES2P Labor

In-Service Date: 06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	1,143	0	0
Non-Labor	0	0	0
NSE	0	0	0
Total	**1,143**	**0**	**0**
FTE	9.5	0.0	0.0

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00756.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00756K - Enterprise Source to Pay ES2P
Workpaper Detail: 00756K.002 - Enterprise Source to Pay ES2P NL Services

In-Service Date: 12/31/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	3,233	400	0
NSE	0	0	0
Total	**3,233**	**400**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00756.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00756K - Enterprise Source to Pay ES2P
Workpaper Detail:	00756K.003 - Enterprise Source to Pay ES2P SaaS Subscription
In-Service Date:	06/30/2022

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	9,425	0	0
NSE	0	0	0
Total	**9,425**	**0**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786D - Enterprise Source to Pay (ES2P) Analytics Solution

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786D - Enterprise Source to Pay (ES2P) Analytics Solution

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	342	28
Non-Labor	Zero-Based	0	0	0	0	0	0	2,010	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**2,352**	**28**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.2

Business Purpose:

The Enterprise Source to Pay (ES2P) project is in need of a new Analytics infrastructure with pre-built content for SAP Ariba, Fieldglass, and SAP back end. The legacy analytics solution is home-grown on an outdated architecture. The new SAP-provided and supported solution is cloud-based with prebuilt content and designed for better self-service, freeing up internal IT for more strategic work. Additionally, SAP offers a data warehouse cloud capability that would allow us to combine Ariba, Fieldglass and SAP ECC data with internal HR data and other data sources.

Physical Description:

1) Implement SAP Analytics Cloud and Analytics Data Warehouse.
2) Build data warehouse, combining information from SAP ECC, SAP Ariba, SAP Fieldglass, and Concur
6) Migrate and blend legacy data from current BW
7) Develop dashboards, reporting, and KPIs for new data warehouse

This project includes one enhancement.
The internal labor costs for this project are driven by various resources such as project managers, architects, developers, business analysts, and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by vendor services, and SaaS subscription for IT quality assurance.
This is a shared asset.

Project Justification:

1) Simplify solution architecture, consistent with IT analytics roadmap
2) Improve self-service analytics capabilities
3) Reduce technical debt and lower maintenance overhead
4) Use SAP-pre-built content and analytics tools or leverage existing PowerBI tools.
5) Align with SAP Analytics roadmap

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786D - Enterprise Source to Pay (ES2P) Analytics Solution

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786D

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786D - Enterprise Source to Pay (ES2P) Analytics Solution
Workpaper Detail:	00786D.001 - Enterprise Source to Pay (ES2P) Analytics Solution Labor
In-Service Date:	07/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	342	28
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**342**	**28**
FTE	0.0	2.9	0.2

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786D - Enterprise Source to Pay (ES2P) Analytics Solution
Workpaper Detail:	00786D.002 - Enterprise Source to Pay (ES2P) Analytics Solution NL Services
In-Service Date:	07/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	1,110	0
NSE	0	0	0
Total	**0**	**1,110**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786D - Enterprise Source to Pay (ES2P) Analytics Solution
Workpaper Detail:	00786D.003 - Enterprise Source to Pay (ES2P) Analytics Solution SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	900	0
NSE	0	0	0
Total	**0**	**900**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper Group
00786G - Enterprise Source to Pay (ES2P) Value Stream

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786G - Enterprise Source to Pay (ES2P) Value Stream

Summary of Results (Constant 2021 $ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2017	2018	2019	2020	2021	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	294	588
Non-Labor	Zero-Based	0	0	0	0	0	0	5,000	1,000
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0**	**0**	**5,294**	**1,588**
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.5	4.9

Business Purpose:

The Enterprise Source To Pay system (ES2P) encompasses requisitions, sourcing management, contract management, e-procurement, and invoice management under the SAP Ariba suite. This project facilitates care and feeding of the ES2P value stream and system which allows for expanding how the utilities leverage the ES2P system beyond the initial implementation for Supply Management.

Physical Description:

This project replaces the contingent workforce solution with an ES2P-based solution, including contractor onboarding, timesheet tracking, and contractor compliance tracking.

This project impacts one application.
The internal labor costs for this project are driven by various resources such as project manager, developers, architect, business analysts and information security engineers. Internal labor roles and allocations may vary.
The non-labor costs for this project are driven by SaaS subscription and vendor services for implementation and IT quality assurance.
This is a shared asset.

Project Justification:

1) Fulfill business and technology roadmaps
2) Standardize more functionality within the ES2P system
3) Eliminate technical debt from other non-SAP solutions

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786G - Enterprise Source to Pay (ES2P) Value Stream

Forecast Methodology:

Labor - Zero-Based

A zero-based method was utilized to develop the labor forecast.

Non-Labor - Zero-Based

A zero-based method was utilized to develop the non-labor forecast.

NSE - Zero-Based

NA

Beginning of Workpaper Sub Details for
Workpaper Group 00786G

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786G - Enterprise Source to Pay (ES2P) Value Stream
Workpaper Detail: 00786G.001 - Enterprise Source to Pay (ES2P) Value Stream Labor

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	294	588
Non-Labor	0	0	0
NSE	0	0	0
Total	**0**	**294**	**588**
FTE	0.0	2.5	4.9

Note: Totals may include rounding differences.

Area: INFORMATION TECHNOLOGY
Witness: William J. Exon
Budget Code: 00786.0
Category: L. Supply Management & Supplier Diversity
Category-Sub: 2. Proactively Manage Risk
Workpaper Group: 00786G - Enterprise Source to Pay (ES2P) Value Stream
Workpaper Detail: 00786G.002 - Enterprise Source to Pay (ES2P) Value Stream NL Services

In-Service Date: 12/31/2024

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	2,000	1,000
NSE	0	0	0
Total	**0**	**2,000**	**1,000**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.

Area:	INFORMATION TECHNOLOGY
Witness:	William J. Exon
Budget Code:	00786.0
Category:	L. Supply Management & Supplier Diversity
Category-Sub:	2. Proactively Manage Risk
Workpaper Group:	00786G - Enterprise Source to Pay (ES2P) Value Stream
Workpaper Detail:	00786G.003 - Enterprise Source to Pay (ES2P) Value Stream SaaS Subscription
In-Service Date:	06/30/2023

Description:

Workpaper Detail provides description of costs supporting the workpaper.

Forecast In 2021 $(000)			
Years	**2022**	**2023**	**2024**
Labor	0	0	0
Non-Labor	0	3,000	0
NSE	0	0	0
Total	**0**	**3,000**	**0**
FTE	0.0	0.0	0.0

Note: Totals may include rounding differences.