



SOUTHERN CALIFORNIA
EDISON®

(U 338-E)

**2025 GRC
A.23-05-010**

Workpapers

***SCE-06 Vol.01
Enterprise Technology***

May 2023

2025 General Rate Case

Index of Workpapers

SCE-06 Vol. 01 – Enterprise Technology

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**Technology Planning, Design and Support -
Standard O&M Workpapers**



(U 338-E)

2025 General Rate Case

A. 23-05-

Workpapers

SCE-06 Enterprise Support
Volume 1 - Enterprise Technology
Technology Planning, Design and Support

May 2023

2025 GRC Summary

(Constant 2022 \$000)

Beginning of Workpapers for:

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Planning, Design and Support
 Witness: Eric Roddick

Cost Type	Recorded/Adj. 2022	Forecast 2025
Labor	4,206	5,610
Non-Labor	1,336	1,657
Other	0	0
Total	5,543	7,267

Due to rounding, totals may not tie to individual items.

Description of Activity:

This activity is used to record costs associated with planning, design, and support for Enterprise Technology. It includes identification and prioritization of necessary system investments to meet SCE's regulatory compliance and operational needs. Costs recording to this activity are SCE labor, office supplies, travel, professional services, and training.

Forecast Methods - Summary of Results of Methods Studied

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Planning, Design and Support
 Witness: Eric Roddick

Cost Type	Recorded/Adj.				
	2018	2019	2020	2021	2022
Labor	11,148	5,485	4,241	3,992	4,206
Non-Labor	846	1,254	1,695	1,466	1,336
Other	0	0	0	0	0
Total	11,994	6,739	5,936	5,459	5,543

Cost Type	Results of Linear Trending					
	3 Years: 2020 - 2022		4 Years: 2019 - 2022		5 Years: 2018 - 2022	
	\$	r2*	\$	r2*	\$	r2*
Labor	4,077	0.02	2,643	0.60	(1,874)	0.64
Non-Labor	782	0.98	1,446	0.00	1,916	0.36
Other	0	0.00	0	0.00	0	0.00
Total	4,859	N/A	4,089	N/A	42	N/A

Cost Type	Results of Averaging							
	2 Years:		3 Years:		4 Years:		5 Years:	
	2021 - 2022	sd**	2020 - 2022	sd**	2019 - 2022	sd**	2018 - 2022	sd**
Labor	4,099	107	4,147	110	4,481	587	5,815	2,718
Non-Labor	1,401	65	1,499	148	1,438	167	1,320	280
Other	0	0	0	0	0	0	0	0
Total	5,501	N/A	5,646	N/A	5,919	N/A	7,134	N/A

Cost Type	Last Recorded Year		
	2023	2024	2025
Labor	4,206	4,206	4,206
Non-Labor	1,336	1,336	1,336
Other	0	0	0
Total	5,543	5,543	5,543

Cost Type	Itemized Forecast		
	2023	2024	2025
Labor	0	0	0
Non-Labor	4,514	1,563	1,657
Other	0	0	0
Total	4,514	1,563	1,657

* r2 = R Squared (Based on recorded years data)

** sd = standard deviation (Based on recorded years data)

2025 GRC Selected Forecast Method

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Planning, Design and Support
 Witness: Eric Roddick

Cost Type	Recorded/Adj.					Forecast			Selected Forecast		TY Forecast Inc/(Decr) from 2022
	2018	2019	2020	2021	2022	2023	2024	2025	Method	(\$000)	
Labor	11,148	5,485	4,241	3,992	4,206	4,722	4,958	5,610	LRY + Adj	5,610	1,403
Non-Labor	846	1,254	1,695	1,466	1,336	4,514	1,563	1,657	Itemized	1,657	321
Other											
Total	11,994	6,739	5,936	5,459	5,543	9,236	6,521	7,267		7,267	1,724

Due to rounding, totals may not tie to individual items.

Analysis of Forecasting Methods

Analysis of Last Recorded Year:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have been relatively stable for three or more years, the last recorded year is an appropriate base estimate

Itemized Forecast:

Itemized Forecast Method

Other Forecast Methods not Selected

Linear Trending:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have shown a trend in a certain direction for three or more years, the last recorded year is an appropriate base estimate. Recorded expenses for this activity have not shown a strong trend, so the linear trending method is not appropriate to forecast the 2025 Test Year.

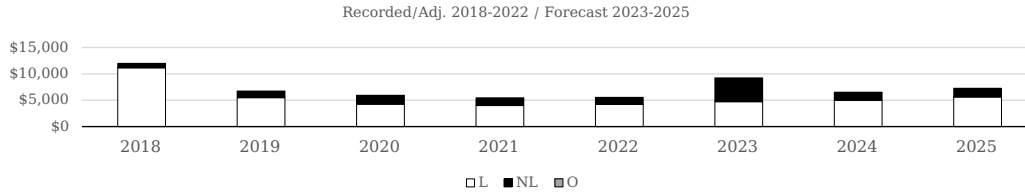
Averaging:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have significant fluctuations from year to year, or expenses are influenced by external forces beyond the utility's control, an average of recorded-expenses is appropriate. Recorded expenses in this activity have not shown significant fluctuations, therefore, the averaging methodology was not used as the basis for estimating the 2025 Test Year.

2025 GRC Year Over Year Variance

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Planning Element: Enterprise Technology
Activity: Technology Planning, Design and Support
Witness: Eric Roddick



Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	11,148	5,485	4,241	3,992	4,206	4,722	4,958	5,610
	Non-Labor	846	1,254	1,695	1,466	1,336	4,514	1,563	1,657
	Other	0	0	0	0	0	0	0	0
	Total	11,994	6,739	5,936	5,459	5,543	9,236	6,521	7,267
Labor	Prior Year Total	11,148	5,485	4,241	3,992	4,206	4,722	4,958	5,610
	Change	(5,663)	(1,244)	(249)	214	515	237	651	
	Total	5,485	4,241	3,992	4,206	4,722	4,958	5,610	
Non-Labor	Prior Year Total	846	1,254	1,695	1,466	1,336	4,514	1,563	1,657
	Change	408	441	(228)	(130)	3,178	(2,951)	94	
	Total	1,254	1,695	1,466	1,336	4,514	1,563	1,657	
Other	Prior Year Total	0	0	0	0	0	0	0	0
	Change	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0
Total Change	Prior Year Total	11,994	6,739	5,936	5,459	5,543	9,236	6,521	
	Change	(5,256)	(803)	(477)	84	3,693	(2,715)	745	
	Total	6,739	5,936	5,459	5,543	9,236	6,521	7,267	

Due to rounding, totals may not tie to individual items.

2025 GRC Forecast Commentary

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Planning, Design and Support
 Witness: Eric Roddick

Summary of Changes: See Testimony

Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	11,148	5,485	4,241	3,992	4,206	4,722	4,958	5,610
	Non-Labor	846	1,254	1,695	1,466	1,336	4,514	1,563	1,657
	Other	0	0	0	0	0	0	0	0
	Total	11,994	6,739	5,936	5,459	5,543	9,236	6,521	7,267

Due to rounding, totals may not tie to individual items.

Recorded (2018-2022)
See Testimony

Forecast (2023-2025)
See Testimony

Tech Planning Design & Support Labor

Southern California Edison - 2025 GRC
 Tech Planning, Design Support GRC Activity
 SCE-06 Vol.01
 Constant \$

Constant 000's								
Number of Positions	Position Description	2023	2024	2025	2026	2027	2028	
39	Base Labor	\$ 4,078,283	\$ 4,092,018	\$ 4,440,829	\$ 4,444,669	\$ 4,441,950	\$ 4,431,897	
10	Software Architects (incremental positions)	\$ 98,010	\$ 98,010	\$ 142,710	\$ 154,956	\$ 154,953	\$ 154,759	\$ 154,272
5	Enterprise Architects and Back-office support (backfills of pre-existing vacancies)	\$ 351,392	\$ 351,392	\$ 471,881	\$ 512,373	\$ 512,363	\$ 511,721	\$ 510,111
3	Architecture Resources Transferred from Digital & Process Transformation	\$ 184,328	\$ 184,328	\$ 234,119	\$ 254,209	\$ 254,204	\$ 253,886	\$ 253,087
18	Total Additions to 2025 Labor Forecast for Technology Planning, Design & Support	\$ 633,730	\$ 633,730	\$ 848,710	\$ 921,538	\$ 921,520	\$ 920,366	\$ 917,470
	Employee Compensation Program	\$ 9,670	\$ 9,670	\$ 17,622	\$ 247,263	\$ 247,407	\$ 247,670	\$ 247,685
	Grand Total	\$ 4,721,683	\$ 4,721,683	\$ 4,958,351	\$ 5,609,630	\$ 5,613,596	\$ 5,609,996	\$ 5,597,053

Cost Center	Software Architects (incremental positions)	2023	2024	2025	2026	2027	2028
F530400, F530399, F532168	6 FTEs- IT Arch (Systems Design), Sr Advisor	\$ 68,977	\$ 91,410	\$ 99,254	\$ 99,252	\$ 99,127	\$ 98,815
F530400, F530401, F532168	4 FTEs- IT Arch (Systems Design), Advisor	\$ 29,033	\$ 51,300	\$ 55,702	\$ 55,701	\$ 55,631	\$ 55,456
	Total	\$ 98,010	\$ 142,710	\$ 154,956	\$ 154,953	\$ 154,759	\$ 154,272

Cost Center	Enterprise Architects and Back-office support (backfills of pre-existing vacancies)	2023	2024	2025	2026	2027	2028
F401195	Bus Ops Anlys, Sr Spec	\$ 47,687	\$ 94,794	\$ 102,929	\$ 102,927	\$ 102,798	\$ 102,474
F530400	IT Arch (Systems Design), Sr Advisor	\$ 76,641	\$ 76,175	\$ 82,711	\$ 82,710	\$ 82,606	\$ 82,346
F530399	IT Arch (Systems Design), Sr Mgr	\$ 130,288	\$ 172,661	\$ 187,478	\$ 187,474	\$ 187,239	\$ 186,650
F530400	IT Arch (Systems Design), Advisor	\$ 48,388	\$ 64,125	\$ 69,628	\$ 69,626	\$ 69,539	\$ 69,320
F530399	IT Arch (Systems Design), Advisor	\$ 48,388	\$ 64,125	\$ 69,628	\$ 69,626	\$ 69,539	\$ 69,320
	Total	\$ 351,392	\$ 471,881	\$ 512,373	\$ 512,363	\$ 511,721	\$ 510,111

Cost Center	Architecture Resources Transferred from Digital & Process Transformation	2023	2024	2025	2026	2027	2028
F530399	IT Arch (Systems Design), Sr Advisor	\$ 30,656	\$ 30,470	\$ 33,085	\$ 33,084	\$ 33,042	\$ 32,938
F530399	IT Arch (Systems Design), Advisor	\$ 38,710	\$ 51,300	\$ 55,702	\$ 55,701	\$ 55,631	\$ 55,456
F530399	IT Arch (Systems Design), Sr Advisor	\$ 114,961	\$ 152,349	\$ 165,423	\$ 165,419	\$ 165,212	\$ 164,692
	Total	\$ 184,328	\$ 234,119	\$ 254,209	\$ 254,204	\$ 253,886	\$ 253,087

Tech Planning Design & Support Non-Labor

Southern California Edison - 2025 GRC
Tech Planning, Design Support GRC Activity
SCE-06 Vol.01
Constant \$

Constant \$

IT Subscriptions and Memberships	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	Business Justification
National Security Energy Initiative	\$ 673,699	\$ 647,261	\$ 686,275	\$ 686,275	\$ 686,275	\$ 686,275	SCE will be participating in multiple public/private initiatives aimed to identifying and reducing systemic risk to the sector through joint collaboration between energy sector members, the US Government, national laboratories and key sector partners in a trusted environment. SCE believes our participation is necessary to ensure we are proactively engaged to better prepare for emerging systemic risks and challenges in a constantly shifting threat and geopolitical environment.
Gartner	\$ 524,523	\$ 503,939	\$ 534,314	\$ 534,313	\$ 534,314	\$ 534,313	Gartner provides industry leading research that can be utilized to keep up on global technology trends and bring real world examples. Additionally, Gartner can connect SCE IT with industry peers facing similar challenges or those who have gone through the current challenges faced by SCE. Lastly, SCE has access to analysts that can be leveraged on consultation for challenges and trends facing IT.
CEB (Corporate Executive Board)	\$ 192,485	\$ 184,932	\$ 196,078	\$ 196,079	\$ 196,078	\$ 196,078	CEB provides best practice research, benchmarks, and decision support tools to business leaders in HR, Finance, IT, Marketing, Sales, Customer Service, Strategy, R&D, Procurement, Legal, and Compliance functions globally.
UNITE (Utility Information Technology Best Practices Program)	\$ 28,873	\$ 27,739	\$ 29,412	\$ 29,412	\$ 29,412	\$ 29,411	UNITE is an IT benchmarking consortium of 23 electric and gas utility companies across the country. Members exchange IT specific best practices through surveys to enable improvements in their organizations and operations.
ASUG (American SAP User Group)	\$ 4,812	\$ 4,623	\$ 4,902	\$ 4,902	\$ 4,902	\$ 4,902	ASUG is America's Official SAP user group of 130,000+ technology executives & professionals, where SCE is able to leverage the power of collective learning and peer to peer engagement for SAP related topics.
Misc. Employee Expenses	\$ 202,614	\$ 194,541	\$ 206,139	\$ 206,015	\$ 205,893	\$ 205,772	Employee expenses such as training and office supplies
Grand Total¹	\$ 1,627,006	\$ 1,563,034	\$ 1,657,119	\$ 1,656,995	\$ 1,656,873	\$ 1,656,752	

1/ An error was identified subsequent to the finalization of financial data. Therefore, the intended financial number that is stated here in testimony does not align with the financial numbers in standardized workpapers and the RO model. An errata will be submitted to align the financial numbers in testimony, standardized workpapers, and the RO model at a future date.

**Technology Delivery -
Standard O&M Workpapers**



(U 338-E)

2025 General Rate Case

A. 23-05-

Workpapers

| SCE-06 Enterprise Support
| Volume 1 - Enterprise Technology
| Technology Delivery

May 2023

2025 GRC Summary

(Constant 2022 \$000)

Beginning of Workpapers for:

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Delivery
 Witness: Jim Ishiguro

Cost Type	Recorded/Adj. 2022	Forecast 2025
Labor	6,218	6,450
Non-Labor	2,047	3,646
Other	0	0
Total	8,265	10,096

Due to rounding, totals may not tie to individual items.

Description of Activity:

This activity includes SCE labor and non-labor to plan and implement capital software projects. It also includes costs for project management, post go-live stabilization, and change management expenses. Lastly, the activity includes O&M software project costs that are expensed (typically less than \$250,000).

Forecast Methods - Summary of Results of Methods Studied

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Delivery
 Witness: Jim Ishiguro

Cost Type	Recorded/Adj.				
	2018	2019	2020	2021	2022
Labor	3,524	5,958	6,070	5,439	6,218
Non-Labor	9,356	5,814	3,752	2,091	2,047
Other	0	0	0	0	0
Total	12,880	11,772	9,823	7,530	8,265

Cost Type	Results of Linear Trending					
	3 Years: 2020 - 2022		4 Years: 2019 - 2022		5 Years: 2018 - 2022	
	\$	r2*	\$	r2*	\$	r2*
Labor	6,205	0.03	5,988	0.00	7,876	0.48
Non-Labor	(781)	0.77	(2,407)	0.89	(4,559)	0.89
Other	0	0.00	0	0.00	(0)	0.50
Total	5,424	N/A	3,581	N/A	3,317	N/A

Cost Type	Results of Averaging							
	2 Years:		3 Years:		4 Years:		5 Years:	
	2021 - 2022	sd**	2020 - 2022	sd**	2019 - 2022	sd**	2018 - 2022	sd**
Labor	5,829	390	5,909	338	5,921	293	5,442	994
Non-Labor	2,069	22	2,630	794	3,426	1,541	4,612	2,743
Other	0	0	0	0	0	0	0	0
Total	7,897	N/A	8,539	N/A	9,347	N/A	10,054	N/A

Cost Type	Last Recorded Year		
	2023	2024	2025
Labor	6,218	6,218	6,218
Non-Labor	2,047	2,047	2,047
Other	0	0	0
Total	8,265	8,265	8,265

Cost Type	Itemized Forecast		
	2023	2024	2025
Labor	0	0	0
Non-Labor	4,530	2,125	3,646
Other	0	0	0
Total	4,530	2,125	3,646

* r2 = R Squared (Based on recorded years data)

** sd = standard deviation (Based on recorded years data)

2025 GRC Selected Forecast Method

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Planning Element: Enterprise Technology
Activity: Technology Delivery
Witness: Jim Ishiguro

Cost Type	Recorded/Adj.					Forecast			Selected Forecast		TY Forecast Inc/(Decr) from 2022
	2018	2019	2020	2021	2022	2023	2024	2025	Method	(\$000)	
Labor	3,524	5,958	6,070	5,439	6,218	5,445	5,623	6,450	LRY + Adj	6,450	232
Non-Labor	9,356	5,814	3,752	2,091	2,047	4,530	2,125	3,646	Itemized	3,646	1,599
Other	0								Itemized		
Total	12,880	11,772	9,823	7,530	8,265	9,975	7,749	10,096		10,096	1,831

Due to rounding, totals may not tie to individual items.

Analysis of Forecasting Methods**Analysis of Last Recorded Year:**

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have been relatively stable for three or more years, the last recorded year is an appropriate base estimate

Itemized Forecast:**Itemized Forecast Method****Other Forecast Methods not Selected****Linear Trending:**

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have shown a trend in a certain direction for three or more years, the last recorded year is an appropriate base estimate. Recorded expenses for this activity have not shown a strong trend, so the linear trending method is not appropriate to forecast the 2025 Test Year.

Averaging:

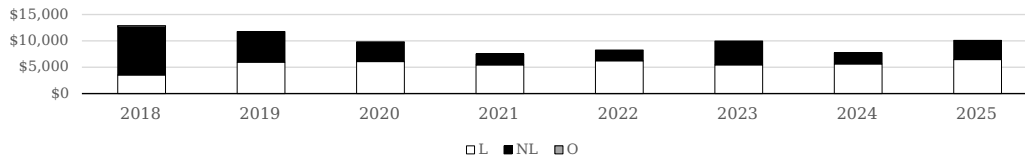
In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have significant fluctuations from year to year, or expenses are influenced by external forces beyond the utility's control, an average of recorded-expenses is appropriate. Recorded expenses in this activity have not shown significant fluctuations, therefore, the averaging methodology was not used as the basis for estimating the 2025 Test Year.

2025 GRC Year Over Year Variance

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Delivery
 Witness: Jim Ishiguro

Recorded/Adj. 2018-2022 / Forecast 2023-2025



Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	3,524	5,958	6,070	5,439	6,218	5,445	5,623	6,450
	Non-Labor	9,356	5,814	3,752	2,091	2,047	4,530	2,125	3,646
	Other	0	0	0	0	0	0	0	0
	Total	12,880	11,772	9,823	7,530	8,265	9,975	7,749	10,096
Labor	Prior Year Total		3,524	5,958	6,070	5,439	6,218	5,445	5,623
	Change		2,434	112	(631)	779	(773)	178	827
	Total		5,958	6,070	5,439	6,218	5,445	5,623	6,450
Non-Labor	Prior Year Total		9,356	5,814	3,752	2,091	2,047	4,530	2,125
	Change		(3,542)	(2,061)	(1,661)	(44)	2,483	(2,405)	1,521
	Total		5,814	3,752	2,091	2,047	4,530	2,125	3,646
Other	Prior Year Total		0	0	0	0	0	0	0
	Change		(0)	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0
Total Change	Prior Year Total		12,880	11,772	9,823	7,530	8,265	9,975	7,749
	Change		(1,108)	(1,950)	(2,293)	735	1,710	(2,227)	2,348
	Total		11,772	9,823	7,530	8,265	9,975	7,749	10,096

Due to rounding, totals may not tie to individual items.

2025 GRC Forecast Commentary

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Planning Element: Enterprise Technology
Activity: Technology Delivery
Witness: Jim Ishiguro

Summary of Changes: See Testimony

Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	3,524	5,958	6,070	5,439	6,218	5,445	5,623	6,450
	Non-Labor	9,356	5,814	3,752	2,091	2,047	4,530	2,125	3,646
	Other	0	0	0	0	0	0	0	0
	Total	12,880	11,772	9,823	7,530	8,265	9,975	7,749	10,096

Due to rounding, totals may not tie to individual items.

Recorded (2018-2022)
See Testimony

Forecast (2023-2025)
See Testimony

Technology Delivery Non-Labor

Southern California Edison - 2025 GRC
 Technology Delivery GRC Activity
 SCE-06 Vol.01
 Constant \$

Cost Object	Project	2023	2024	2025	2026	2027	2028
F529982	CCURE Re-Platform	54,349	45,326	-	-	-	-
F529982	COBRA - Centralized Budget & Reporting Analytics System	30,640	-	-	-	-	-
F529982	EHSQ	346,474	290,089	-	-	-	-
F529982	ESPP LTI - Morgan Stanley to new vendor Migration	25,363	-	-	-	-	-
F529982	HR Replatform	182,069	-	-	-	-	-
F529982	PowerPlan Upgrade 2023	-	-	3,769,289	-	-	-
F529982	UI Planner Upgrade	-	72,522	-	-	-	-
F529982	SCEcom Digital Mobile App Phase 3	18,117	22,663	-	-	-	-
F529982	[Value Stream] - BI and Analytics (Data Science and Self-Service)	-	104,251	56,539	36,954	36,229	53,278
F529982	[Value Stream] - Data Engineering (DaaS)	-	217,567	197,888	110,861	90,573	79,917
F529982	[Value Stream] - Evolve Data Environment (Data Catalog)	-	81,587	235,581	230,961	81,516	79,917
F529982	[Value Stream] - Trusted Datasets (Data Quality Improvement)	-	169,974	141,348	157,054	135,860	133,196
F529982	EPCR - SAP Stack Upgrade	54,349	45,326	-	-	-	-
F529982	LN Decom - Migration to SAP Marketing Cloud	36,233	-	-	-	-	-
F529982	NetComm Encryption	50,726	-	-	-	-	-
F529982	AI Machine Learning Analytics (DAP Phase 3)	-	9,065	9,423	-	-	-
F529982	ARIG ECN Consolidation	-	1,813	-	-	-	-
F529982	Battery Value Streams	-	-	-	18,477	18,477	18,477
F529982	Catalina Repower Phase 2	-	-	-	9,238	-	-
F529982	Control Center Organizational Alignment P12	-	-	9,423	-	-	-
F529982	Curtailment Initiative	8,696	-	-	-	-	-
F529982	DRRS Initiative (Olivine) - ADR Decommissioning	-	9,065	-	-	-	-
F529982	Endur Upgrade	19,565	-	-	-	-	-
F529982	EPM VAMO (aka PCIA Track 3)	6,246	-	-	-	-	-
F529982	Generation Data Services	-	-	9,423	-	-	-
F529982	GenMS Refresh	29,920	317,285	-	-	-	-
F529982	Hydro Value Streams	-	-	-	13,858	13,858	13,858
F529982	IMEP 2023 - Releases	34,783	-	-	-	-	-
F529982	Mountainview Duct Burner Refresh	-	-	-	18,477	-	-
F529982	Peaker Black Start Generator Refresh	-	9,065	-	-	-	-
F529982	Process Automation Phase 2 (BPA Phase 2)	7,246	-	-	-	-	-
F529982	PS Hadoop Re-platform	7,246	-	-	-	-	-
F529982	Resource Adequacy (RA) Reform - 24 Hour Slice	-	18,131	-	-	-	-
F529982	SettleCore Re-platform	17,392	-	-	-	-	-
F529982	System1 Portable Enterprise Solution	-	-	18,846	9,238	-	-
F529982	Thermal Fleet Value Streams	-	-	-	-	9,057	9,057
F529982	UMT 360 Generation Phase 2	-	9,065	-	-	-	-
F530695	Next Gen	129,126	-	-	-	-	-
	Adjustment to increase to 3% for 2026-2028	-	-	-	1,441,163	1,626,396	1,572,809
	Total SP&D All Other	1,058,539	1,422,795	4,447,761	2,046,282	2,011,966	1,960,509
F530905	Centralized Remedial Action Scheme (CRAS) Refresh	139,133	-	-	-	-	-
F530905	Digital Crew Board	289,862	-	-	-	-	-
F530905	Scheduling Re-Platform	1,084,760	41,091	-	-	-	-
F530905	SCMT - Scope and Cost Management Tool	3,624	-	-	-	-	-
F530905	WorkIt	1,732,370	453,264	282,697	282,697	282,697	282,697
	EAD	-	-	313,793	307,641	301,608	295,694
	Adjustment to increase to 3% for 2026-2028	-	-	-	325,278	299,514	287,800
	Total SP&D T&D	3,249,749	494,355	596,490	915,616	883,819	866,191
	Total Capital Related O&M	4,308,288	1,917,150	5,044,251	2,961,897	2,895,785	2,826,700
	Miscellaneous O&M Expenses	157,357	151,182	160,294	160,294	160,294	160,294
	OEC	64,279	57,009	55,126	54,045	52,985	51,946
	Total Non Labor (Constant \$)	4,529,925	2,125,341	5,259,671	3,176,236	3,109,064	3,038,941
	Normalized Amount (2025-2028)				\$3,645,978		

**Digital and Process Transformation
- Standard Workpapers**



(U 338-E)

2025 General Rate Case

A. 23-05-

Workpapers

SCE-06 Enterprise Support
Volume 1 - Enterprise Technology
Digital and Process Transformation

May 2023

2025 GRC Summary

(Constant 2022 \$000)

Beginning of Workpapers for:

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Digital and Process Transformation
 Witness: Kurt Sweetser

Cost Type	Recorded/Adj. 2022	Forecast 2025
Labor	2,879	9,989
Non-Labor	1,419	1,419
Other	0	0
Total	4,298	11,408

Due to rounding, totals may not tie to individual items.

Description of Activity:

This activity includes labor and non-labor (e.g., office supplies, travel, professional services, training) expenses for deploying digital tools such as robotic process automation, mobile solutions and advanced analytics using agile delivery methods and user/customer centric design principals. This activity also involves transforming core, cross-functional, end-to-end processes facilitated by digital technologies with the goal of reducing waste and improving processes.

Forecast Methods - Summary of Results of Methods Studied

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Digital and Process Transformation
 Witness: Kurt Sweetser

Cost Type	Recorded/Adj.				
	2018	2019	2020	2021	2022
Labor	133	3,681	3,256	2,872	2,879
Non-Labor	774	2,007	2,150	2,319	1,419
Other	0	0	0	0	0
Total	908	5,688	5,405	5,191	4,298

Cost Type	Results of Linear Trending					
	3 Years: 2020 - 2022		4 Years: 2019 - 2022		5 Years: 2018 - 2022	
	\$	r2*	\$	r2*	\$	r2*
Labor	2,250	0.73	1,917	0.88	4,905	0.28
Non-Labor	501	0.58	1,256	0.28	2,534	0.16
Other	0	0.00	0	0.00	0	0.00
Total	2,751	N/A	3,172	N/A	7,440	N/A

Cost Type	Results of Averaging							
	2 Years:		3 Years:		4 Years:		5 Years:	
	2021 - 2022	sd**	2020 - 2022	sd**	2019 - 2022	sd**	2018 - 2022	sd**
Labor	2,875	4	3,002	179	3,172	332	2,564	1,251
Non-Labor	1,869	450	1,962	391	1,974	339	1,734	567
Other	0	0	0	0	0	0	0	0
Total	4,744	N/A	4,965	N/A	5,146	N/A	4,298	N/A

Cost Type	Last Recorded Year		
	2023	2024	2025
Labor	2,879	2,879	2,879
Non-Labor	1,419	1,419	1,419
Other	0	0	0
Total	4,298	4,298	4,298

Cost Type	Itemized Forecast		
	2023	2024	2025
Labor	0	0	0
Non-Labor	0	0	0
Other	0	0	0
Total	0	0	0

* r2 = R Squared (Based on recorded years data)

** sd = standard deviation (Based on recorded years data)

2025 GRC Selected Forecast Method

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Digital and Process Transformation
 Witness: Kurt Sweetser

Cost Type	Recorded/Adj.					Forecast			Selected Forecast		TY Forecast Inc/(Decr) from 2022
	2018	2019	2020	2021	2022	2023	2024	2025	Method	(\$000)	
Labor	133	3,681	3,256	2,872	2,879	4,667	5,755	9,989	LRY + Adj	9,989	7,110
Non-Labor	774	2,007	2,150	2,319	1,419	502	570	1,419	LRY	1,419	0
Other											
Total	908	5,688	5,405	5,191	4,298	5,170	6,325	11,408		11,408	7,110

Due to rounding, totals may not tie to individual items.

Analysis of Forecasting Methods

Analysis of Last Recorded Year:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have been relatively stable for three or more years, the last recorded year is an appropriate base estimate

Other Forecast Methods not Selected

Linear Trending:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have shown a trend in a certain direction for three or more years, the last recorded year is an appropriate base estimate. Recorded expenses for this activity have not shown a strong trend, so the linear trending method is not appropriate to forecast the 2025 Test Year.

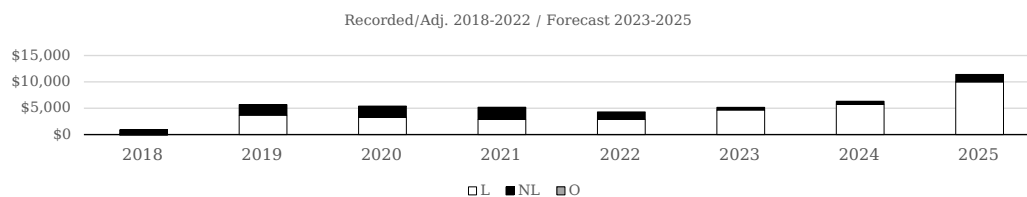
Averaging:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have significant fluctuations from year to year, or expenses are influenced by external forces beyond the utility's control, an average of recorded-expenses is appropriate. Recorded expenses in this activity have not shown significant fluctuations, therefore, the averaging methodology was not used as the basis for estimating the 2025 Test Year.

2025 GRC Year Over Year Variance

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Digital and Process Transformation
 Witness: Kurt Sweetser



Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	133	3,681	3,256	2,872	2,879	4,667	5,755	9,989
	Non-Labor	774	2,007	2,150	2,319	1,419	502	570	1,419
	Other	0	0	0	0	0	0	0	0
	Total	908	5,688	5,405	5,191	4,298	5,170	6,325	11,408

Labor	Prior Year Total	133	3,681	3,256	2,872	2,879	4,667	5,755
	Change		3,548	(426)	(384)	8	1,788	4,234
	Total		3,681	3,256	2,872	2,879	4,667	5,755

Non-Labor	Prior Year Total	774	2,007	2,150	2,319	1,419	502	570
	Change		1,233	142	169	(900)	(916)	68
	Total		2,007	2,150	2,319	1,419	502	570

Other	Prior Year Total	0	0	0	0	0	0	0
	Change		0	0	0	0	0	0
	Total		0	0	0	0	0	0

Total Change	Prior Year Total	908	5,688	5,405	5,191	4,298	5,170	6,325
	Change		4,781	(283)	(215)	(892)	872	1,155
	Total		5,688	5,405	5,191	4,298	5,170	6,325

Due to rounding, totals may not tie to individual items.

2025 GRC Forecast Commentary

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Digital and Process Transformation
 Witness: Kurt Sweetser

Summary of Changes: See Testimony

Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	133	3,681	3,256	2,872	2,879	4,667	5,755	9,989
	Non-Labor	774	2,007	2,150	2,319	1,419	502	570	1,419
	Other	0	0	0	0	0	0	0	0
	Total	908	5,688	5,405	5,191	4,298	5,170	6,325	11,408

Due to rounding, totals may not tie to individual items.

Recorded (2018-2022)

See Testimony

Forecast (2023-2025)

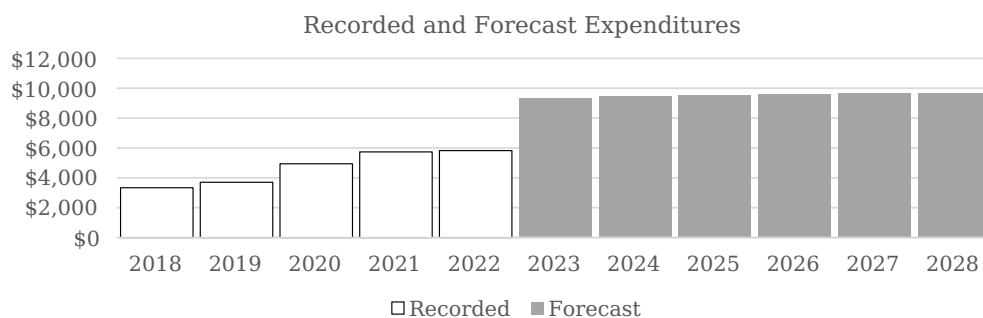
See Testimony

Southern California Edison - Capital Workpapers
Capital Workpapers Summary
SUMMARY BY GRC Volume
(Nominal \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology

Description	Recorded Capital Expenditures					Forecast Capital Expenditures					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Recorded and Forecast Expenditures	3,336	3,703	4,940	5,735	5,822	9,308	9,473	9,548	9,607	9,646	9,683
Total Expenditures	23,536					57,264					

Due to rounding, totals may not tie to individual items.



GRC Activity	Forecast Capital Expenditures						
	2023	2024	2025	2026	2027	2028	6 yr Total
Digital and Process Transformation	9,308	9,473	9,548	9,607	9,646	9,683	57,264
GRC Total	9,308	9,473	9,548	9,607	9,646	9,683	57,264

**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Digital and Process Transformation

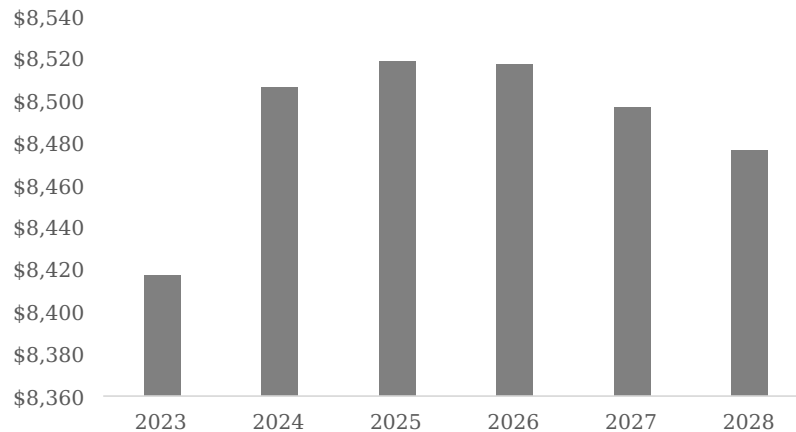
1. Witness: Kurt Sweetser
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\9999
 4. RO Model ID: 691
 5. Pin: 3896
 6. CWBS Element: CIT00DMDM000230
 CWBS Description: Digital and Mobile Applications
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	8,417	8,507	8,519	8,517	8,497	8,477	50,934

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Digital and Process Transformation

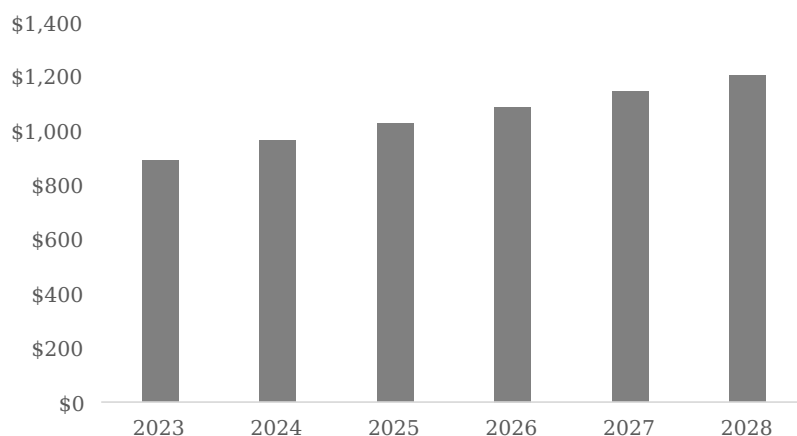
1. Witness: Kurt Sweetser
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\9999
 4. RO Model ID: 706
 5. Pin: 3896
 6. CWBS Element: CIT00DMDM000320
 CWBS Description: Robotic Process Automations
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	891	966	1,029	1,090	1,148	1,207	6,330

Due to rounding, totals may not tie to individual items.



Digital and Process Transformation Labor

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol. 01
 Constant \$

Digital Process Transformation Labor 2023 - 2028

Digital Process Transformation Labor 2023 - 2028								Constant \$000's			
Number of Positions	Position Description	2023	2024	2025	2026	2027	2028				
29	Base Labor	\$ 2,991,542	\$ 3,050,906	\$ 3,302,320	\$ 3,297,157	\$ 3,291,999	\$ 3,289,620				
7	Interns (including 1 MBA intern)	\$ 48,306	\$ 47,776	\$ 51,713	\$ 51,632	\$ 51,551	\$ 51,514				
2	Bus Process Improvement Sr. Advisors from Strategic Performance Improvement	\$ 224,602	\$ 222,136	\$ 240,442	\$ 240,066	\$ 239,690	\$ 239,517				
93	Total Additions to 2025 Labor Forecast (for increasing demand)	\$ 1,395,277	\$ 2,422,144	\$ 4,373,042	\$ 5,692,748	\$ 6,788,144	\$ 7,931,520				
	Employee Compensation Program	\$ 7,623	\$ 12,120	\$ 190,761	\$ 196,324	\$ 200,185	\$ 237,176				
Grand Total		\$ 4,667,351	\$ 5,755,082	\$ 8,158,277	\$ 9,477,927	\$ 10,571,569	\$ 11,749,348				
			Normalized Amount (2025-2028)	\$9,989,280.21							

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol. 01
 Constant \$

Digital Process Transformation Labor 2023 - 2028

DPT - Strategy, Innovation, & Advanced Analytics (incremental positions)							
Total # per Position Title	Position Title	2023	2024	2025	2026	2027	2028
1	AI Applications, Prin Mgr	\$ -	\$ -	\$ 237,007	\$ 236,636	\$ 236,266	\$ 236,095
3	App Dev, Advisor	\$ -	\$ 27,261	\$ 29,508	\$ 58,924	\$ 88,247	\$ 88,184
2	App Dev, Spec	\$ 43,077	\$ 56,805	\$ 61,486	\$ 61,390	\$ 122,588	\$ 122,500
1	App Dev, Sr Advisor	\$ -	\$ -	\$ -	\$ 59,866	\$ 59,773	\$ 59,730
1	App Dev, Sr Spec	\$ 16,132	\$ 21,273	\$ 23,026	\$ 22,990	\$ 22,954	\$ 22,938
1	Bus Sys Anlys, Sr Spec	\$ 14,359	\$ 18,935	\$ 20,495	\$ 20,463	\$ 20,431	\$ 20,417
2	Data Engineering, Advisor	\$ -	\$ -	\$ -	\$ 149,824	\$ 239,343	\$ 239,170
2	Data Engineering, Sr Advisor	\$ -	\$ -	\$ 206,071	\$ 205,749	\$ 205,427	\$ 205,279
2	IT Arch (Systems Design), Advisor	\$ -	\$ -	\$ -	\$ 137,315	\$ 274,200	\$ 274,002
5	IT Arch (Systems Design), Sr Advisor	\$ 114,458	\$ 392,431	\$ 588,143	\$ 587,223	\$ 586,304	\$ 748,625
6	Prdctve Anlytics/Data Science, Advisor	\$ 91,177	\$ 90,176	\$ 390,429	\$ 487,273	\$ 587,833	\$ 583,391
2	Prdctve Anlytics/Data Science, Specialist	\$ 48,396	\$ 63,819	\$ 69,079	\$ 68,971	\$ 137,725	\$ 137,626
2	Prdctve Anlytics/Data Science, Sr Advisor	\$ -	\$ -	\$ -	\$ 119,267	\$ 238,160	\$ 237,988
2	Prdctve Anlytics/Data Science, Sr Spec	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 133,868
32	Total by Year	\$ 327,599	\$ 670,701	\$ 1,625,244	\$ 2,215,891	\$ 2,819,254	\$ 3,109,812

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol. 01
 Constant \$

Digital Process Transformation Labor 2023 - 2028

		DPT - Product & Design (incremental positions)							
Total # per Position Title	Position Title	2023	2024	2025	2026	2027	2028		
1	App Dev, Sr Advisor	\$ -	\$ -	\$ -	\$ 59,866	\$ 59,773	\$ 59,730		
1	Bus Ops Anlys, Advisor	\$ -	\$ -	\$ 115,374	\$ 115,194	\$ 115,013	\$ 114,930		
2	Bus Ops Anlys, Sr Advisor	\$ -	\$ -	\$ -	\$ 140,474	\$ 140,254	\$ 280,306		
2	Bus Ops Anlys, Sr Spec	\$ -	\$ 187,829	\$ 203,307	\$ 202,989	\$ 202,671	\$ 202,525		
2	Bus Process Imprvmt, Sr Advisor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,126		
1	Info Tchnlgy Prj Mgmt, Sr Mgr	\$ 157,725	\$ 155,993	\$ 168,847	\$ 168,583	\$ 168,320	\$ 168,198		
6	Info Tchnlgy Prj Mgr	\$ 38,912	\$ 203,365	\$ 277,709	\$ 277,275	\$ 276,841	\$ 331,969		
9	Info Tchnlgy Sr Prj Mgr	\$ -	\$ -	\$ 145,646	\$ 276,034	\$ 483,248	\$ 611,672		
1	Info Tchnlgy, Assoc Proj Mgr	\$ -	\$ 20,307	\$ 21,981	\$ 21,946	\$ 21,912	\$ 21,896		
1	Prj Mgmt, Assoc Proj Mgr	\$ 27,900	\$ 36,792	\$ 39,824	\$ 39,762	\$ 39,700	\$ 39,671		
3	Tech/Digital Prod Owner, Sr Prj Mgr	\$ 139,493	\$ 137,961	\$ 209,062	\$ 208,735	\$ 267,954	\$ 267,760		
29	Total by Year	\$ 364,030	\$ 742,247	\$ 1,181,750	\$ 1,510,858	\$ 1,775,686	\$ 2,298,783		

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol. 01
 Constant \$

Digital Process Transformation Labor 2023 - 2028

DPT - Development, Performance, & Operations (incremental positions)							
Total # per Position Title	Position Title	2023	2024	2025	2026	2027	2028
1	App Dev, Advisor	\$ -	\$ -	\$ -	\$ 29,462	\$ 29,416	\$ 29,395
3	App Dev, Spec	\$ 28,718	\$ 94,675	\$ 102,477	\$ 143,244	\$ 143,019	\$ 142,916
4	App Dev, Sr Advisor	\$ -	\$ -	\$ -	\$ 59,866	\$ 179,318	\$ 238,918
4	App Dev, Sr Spec	\$ 32,264	\$ 42,546	\$ 138,157	\$ 137,941	\$ 137,725	\$ 183,501
3	Bus Ops Anlys, Advisor	\$ 215,548	\$ 213,181	\$ 230,748	\$ 345,581	\$ 345,040	\$ 344,791
3	Bus Ops Anlys, Specialist	\$ 71,856	\$ 140,974	\$ 152,592	\$ 152,353	\$ 152,115	\$ 228,007
4	Bus Ops Anlys, Sr Spec	\$ 94,957	\$ 187,829	\$ 304,960	\$ 405,978	\$ 405,343	\$ 405,050
	Info Tchnlgy Prj Mgmt, Sr Mgr	\$ -	\$ -	\$ 168,847	\$ 168,583	\$ 168,320	\$ 168,198
1							
6	Info Tchnlgy Prj Mgr	\$ 38,912	\$ 51,313	\$ 166,625	\$ 221,820	\$ 332,209	\$ 331,969
1	Info Tchnlgy Sr Prj Mgr	\$ -	\$ 59,714	\$ 64,635	\$ 64,534	\$ 64,433	\$ 64,387
2	Project Mgmt, Prin Mgr	\$ 221,394	\$ 218,963	\$ 237,007	\$ 236,636	\$ 236,266	\$ 385,793
32	Total by Year	\$ 703,648	\$ 1,009,195	\$ 1,566,048	\$ 1,965,998	\$ 2,193,204	\$ 2,522,925

Digital and Process Transformation GRC Summary

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol.01
 Constant \$

**Digital Process Transformation GRC Summary
 2022 - 2028**

Recorded

Nominal \$s	2022	2023	2024	2025	2026	2027	2028	Total 2022-2028
Labor								
SCE Labor	\$ 2,879,322	\$ 4,659,728	\$ 5,742,962	\$ 7,967,516	\$ 9,281,603	\$ 10,371,384	\$ 11,512,171	\$ 52,414,686
Employee Compensation Program	\$ -	\$ 7,623	\$ 12,120	\$ 190,761	\$ 196,324	\$ 200,185	\$ 237,176	\$ 844,189
Total Labor	\$ 2,879,322	\$ 4,667,350	\$ 5,755,082	\$ 8,158,277	\$ 9,477,927	\$ 10,571,569	\$ 11,749,348	\$ 53,258,875
Contract Labor								
Contract Labor	\$ 1,407,414	\$ 304,330	\$ 339,485	\$ 1,056,188	\$ 1,058,700	\$ 1,055,331	\$ 1,096,319	\$ 6,317,767
Total Contract Labor	\$ 1,407,414	\$ 304,330	\$ 339,485	\$ 1,056,188	\$ 1,058,700	\$ 1,055,331	\$ 1,096,319	\$ 6,317,767
Software Tools								
Software Tools	\$ -	\$ 128,898	\$ 148,305	\$ 267,946	\$ 253,434	\$ 245,309	\$ 193,318	\$ 1,237,211
Total Software Tools	\$ -	\$ 128,898	\$ 148,305	\$ 267,946	\$ 253,434	\$ 245,309	\$ 193,318	\$ 1,237,211
Other Costs								
Employee Expenses	\$ 6,150	\$ 48,382	\$ 57,526	\$ 66,292	\$ 74,693	\$ 82,739	\$ 90,440	\$ 426,222
Training	\$ -	\$ 13,824	\$ 16,436	\$ 18,941	\$ 21,341	\$ 23,640	\$ 25,840	\$ 120,021
Other Expenses	\$ 5,273	\$ 6,913	\$ 8,218	\$ 9,470	\$ 10,669	\$ 11,820	\$ 12,920	\$ 65,283
IT Hardware	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Shared Costs	\$ 11,423	\$ 69,119	\$ 82,180	\$ 94,703	\$ 106,703	\$ 118,198	\$ 129,200	\$ 611,526
Total	\$ 4,298,159	\$ 5,169,697	\$ 6,325,052	\$ 9,577,114	\$ 10,896,764	\$ 11,990,407	\$ 13,168,185	\$ 61,425,378
Labor Subtotal	\$ 2,879,322	\$ 4,667,350	\$ 5,755,082	\$ 8,158,277	\$ 9,477,927	\$ 10,571,569	\$ 11,749,348	\$ 53,258,875
Normalized Labor Amount (2025-2028)					\$9,989,280.09			
Non Labor Subtotal	\$ 1,418,837	\$ 502,346	\$ 569,970	\$ 1,418,837	\$ 1,418,837	\$ 1,418,837	\$ 1,418,837	\$ 8,166,503

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol.01
 Constant \$

Digital Process Transformation GRC Summary
 2022 - 2028

Recorded

Nominal \$2022		2023	2024	2025	2026	2027	Capital Cost		Total	
							20282022-2028			
Labor										
	SCE Labor		\$ 1,977,424	\$ 3,816,312	\$ 3,883,871	\$ 3,914,520	\$ 3,938,884	\$ 3,954,657	\$ 3,970,191	\$ 25,455,859
Total Labor			\$ 1,977,424	\$ 3,816,312	\$ 3,883,871	\$ 3,914,520	\$ 3,938,884	\$ 3,954,657	\$ 3,970,191	\$ 25,455,859
Contract Labor										
	Contract Labor		\$ 3,568,218	\$ 4,654,039	\$ 4,736,428	\$ 4,773,805	\$ 4,803,517	\$ 4,822,753	\$ 4,841,697	\$ 32,200,456
Total Consulting			\$ 3,568,218	\$ 4,654,039	\$ 4,736,428	\$ 4,773,805	\$ 4,803,517	\$ 4,822,753	\$ 4,841,697	\$ 32,200,456
Software Tools										
	Software Tools		\$ 276,410	\$ 465,404	\$ 473,643	\$ 477,381	\$ 480,352	\$ 482,275	\$ 484,170	\$ 3,139,634
Total Software Tools			\$ 276,410	\$ 465,404	\$ 473,643	\$ 477,381	\$ 480,352	\$ 482,275	\$ 484,170	\$ 3,139,634
Other Costs										
	Employee Expenses									\$ -
	Training									\$ -
	Other Expenses			\$ 93,080.78	\$ 94,728.55	\$ 95,476.10	\$ 96,070.33	\$ 96,455.06	\$ 96,833.93	\$ 572,645
	IT Hardware			\$ 279,242.34	\$ 284,185.65	\$ 286,428.30	\$ 288,210.99	\$ 289,365.18	\$ 290,501.79	\$ 1,717,934
										\$ -
Total Shared Costs			\$ -	\$ 372,323	\$ 378,914	\$ 381,904	\$ 384,281	\$ 385,820	\$ 387,336	\$ 2,290,579
Total			\$ 5,822,052	\$ 9,308,078	\$ 9,472,855	\$ 9,547,610	\$ 9,607,033	\$ 9,645,506	\$ 9,683,393	\$ 63,086,527
Labor Subtotal			\$ 1,977,424	\$ 3,816,312	\$ 3,883,871	\$ 3,914,520	\$ 3,938,884	\$ 3,954,657	\$ 3,970,191	\$ 25,455,859
Non Labor Subtotal			\$ 3,844,628	\$ 5,491,766	\$ 5,588,984	\$ 5,633,090	\$ 5,668,149	\$ 5,690,849	\$ 5,713,202	\$ 37,630,668

Southern California Edison - 2025 GRC
 Digital Process Transformation GRC Activity
 SCE-06 Vol.01
 Constant \$

Digital Process Transformation GRC Summary
 2022 - 2028

Nominal \$	Recorded					Total Cost (O&M + Capital)		Total
	2022	2023	2024	2025	2026	2027	2028	
Labor								
SCE Labor	\$ 4,856,746	\$ 8,476,040	\$ 9,626,832	\$ 11,882,036	\$ 13,220,486	\$ 14,326,042	\$ 15,482,362	\$ 77,870,545
Total Labor	\$ 4,856,746	\$ 8,476,040	\$ 9,626,832	\$ 11,882,036	\$ 13,220,486	\$ 14,326,042	\$ 15,482,362	\$ 77,870,545
Contract Labor								
Contract Labor	\$ 4,975,632	\$ 4,958,369	\$ 5,075,912	\$ 5,829,993	\$ 5,862,216	\$ 5,878,084	\$ 5,938,016	\$ 38,518,222
Total Consulting	\$ 4,975,632	\$ 4,958,369	\$ 5,075,912	\$ 5,829,993	\$ 5,862,216	\$ 5,878,084	\$ 5,938,016	\$ 38,518,222
Software Tools								
Software Tools	\$ 276,410	\$ 594,302	\$ 621,948	\$ 745,326	\$ 733,786	\$ 727,584	\$ 677,488	\$ 4,376,844
Total Software Tools	\$ 276,410	\$ 594,302	\$ 621,948	\$ 745,326	\$ 733,786	\$ 727,584	\$ 677,488	\$ 4,376,844
Other Costs								
Employee Expenses	\$ 6,150	\$ 48,382	\$ 57,526	\$ 66,292	\$ 74,693	\$ 82,739	\$ 90,440	\$ 426,222
Training	\$ -	\$ 13,824	\$ 16,436	\$ 18,941	\$ 21,341	\$ 23,640	\$ 25,840	\$ 120,021
Other Expenses	\$ 5,273	\$ 99,994	\$ 102,947	\$ 104,946	\$ 106,740	\$ 108,275	\$ 109,754	\$ 637,928
IT Hardware	\$ -	\$ 279,242	\$ 284,186	\$ 286,428	\$ 288,211	\$ 289,365	\$ 290,502	\$ 1,717,934
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Shared Costs	\$ 11,423	\$ 441,442	\$ 461,094	\$ 476,608	\$ 490,985	\$ 504,018	\$ 516,536	\$ 2,902,105
Total	\$ 10,120,211	\$ 14,470,152	\$ 15,785,787	\$ 18,933,964	\$ 20,307,473	\$ 21,435,728	\$ 22,614,402	\$ 123,667,716

**Fixed Price Technology and Maintenance -
Standard O&M Workpapers**



(U 338-E)

2025 General Rate Case

A. 23-05-

Workpapers

SCE-06 Enterprise Support
Volume 1 - Enterprise Technology
Fixed Price Technology and Maintenance

May 2023

2025 GRC Summary

(Constant 2022 \$000)

Beginning of Workpapers for:

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Fixed Price Technology and Maintenance
 Witness: Lori Garriss

Cost Type	Recorded/Adj. 2022	Forecast 2025
Labor	3,495	3,767
Non-Labor	69,796	70,087
Other	0	0
Total	73,291	73,855

Due to rounding, totals may not tie to individual items.

Description of Activity:

The Fixed Price Technology and Maintenance work activity includes non-labor for IT Services provided primarily by SCE's Managed Services Providers (MSPs). This activity also includes SCE labor and employee related expenses to oversee and govern performance of IT processes, MSPs' contractual performance, and sourcing.

Forecast Methods - Summary of Results of Methods Studied

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Fixed Price Technology and Maintenance
 Witness: Lori Garriss

Cost Type	Recorded/Adj.				
	2018	2019	2020	2021	2022
Labor	3,135	3,246	3,550	3,402	3,495
Non-Labor	75,243	72,318	78,295	75,351	69,796
Other	0	0	0	0	0
Total	78,378	75,564	81,845	78,753	73,291

Cost Type	Results of Linear Trending					
	3 Years: 2020 - 2022		4 Years: 2019 - 2022		5 Years: 2018 - 2022	
	\$	r2*	\$	r2*	\$	r2*
Labor	3,372	0.14	3,692	0.34	3,803	0.64
Non-Labor	57,483	0.97	69,212	0.14	70,271	0.15
Other	0	0.00	0	0.00	0	0.00
Total	60,855	N/A	72,904	N/A	74,074	N/A

Cost Type	Results of Averaging							
	2 Years:		3 Years:		4 Years:		5 Years:	
	2021 - 2022	sd**	2020 - 2022	sd**	2019 - 2022	sd**	2018 - 2022	sd**
Labor	3,448	47	3,482	61	3,423	115	3,365	155
Non-Labor	72,574	2,777	74,481	3,524	73,940	3,192	74,201	2,902
Other	0	0	0	0	0	0	0	0
Total	76,022	N/A	77,963	N/A	77,363	N/A	77,566	N/A

Cost Type	Last Recorded Year		
	2023	2024	2025
Labor	3,495	3,495	3,495
Non-Labor	69,796	69,796	69,796
Other	0	0	0
Total	73,291	73,291	73,291

Cost Type	Itemized Forecast		
	2023	2024	2025
Labor	0	0	0
Non-Labor	70,350	66,210	70,087
Other	0	0	0
Total	70,350	66,210	70,087

* r2 = R Squared (Based on recorded years data)

** sd = standard deviation (Based on recorded years data)

2025 GRC Selected Forecast Method

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Planning Element: Enterprise Technology
Activity: Fixed Price Technology and Maintenance
Witness: Lori Garris

Cost Type	Recorded/Adj.					Forecast			Selected Forecast		TY Forecast Inc/(Decr) from 2022
	2018	2019	2020	2021	2022	2023	2024	2025	Method	(\$000)	
Labor	3,135	3,246	3,550	3,402	3,495	3,267	3,297	3,767	LRY + Adj	3,767	273
Non-Labor	75,243	72,318	78,295	75,351	69,796	70,350	66,210	70,087	Itemized	70,087	291
Other											
Total	78,378	75,564	81,845	78,753	73,291	73,617	69,507	73,855		73,855	564

Due to rounding, totals may not tie to individual items.

Analysis of Forecasting Methods**Analysis of Last Recorded Year:**

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have been relatively stable for three or more years, the last recorded year is an appropriate base estimate

Itemized Forecast:**Itemized Forecast Method****Other Forecast Methods not Selected****Linear Trending:**

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have shown a trend in a certain direction for three or more years, the last recorded year is an appropriate base estimate. Recorded expenses for this activity have not shown a strong trend, so the linear trending method is not appropriate to forecast the 2025 Test Year.

Averaging:

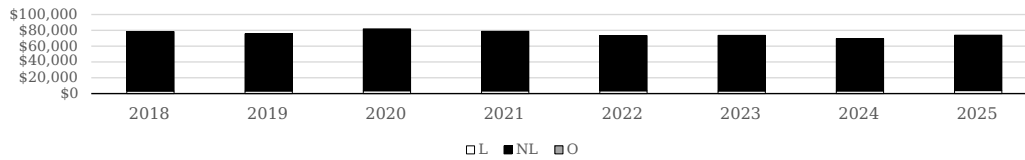
In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have significant fluctuations from year to year, or expenses are influenced by external forces beyond the utility's control, an average of recorded-expenses is appropriate. Recorded expenses in this activity have not shown significant fluctuations, therefore, the averaging methodology was not used as the basis for estimating the 2025 Test Year.

2025 GRC Year Over Year Variance

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Fixed Price Technology and Maintenance
 Witness: Lori Garris

Recorded/Adj. 2018-2022 / Forecast 2023-2025



Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	3,135	3,246	3,550	3,402	3,495	3,267	3,297	3,767
	Non-Labor	75,243	72,318	78,295	75,351	69,796	70,350	66,210	70,087
	Other	0	0	0	0	0	0	0	0
	Total	78,378	75,564	81,845	78,753	73,291	73,617	69,507	73,855
Labor	Prior Year Total		3,135	3,246	3,550	3,402	3,495	3,267	3,297
	Change		111	304	(148)	93	(228)	31	470
	Total		3,246	3,550	3,402	3,495	3,267	3,297	3,767
Non-Labor	Prior Year Total		75,243	72,318	78,295	75,351	69,796	70,350	66,210
	Change		(2,925)	5,977	(2,944)	(5,555)	554	(4,140)	3,878
	Total		72,318	78,295	75,351	69,796	70,350	66,210	70,087
Other	Prior Year Total		0	0	0	0	0	0	0
	Change		0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0
Total Change	Prior Year Total		78,378	75,564	81,845	78,753	73,291	73,617	69,507
	Change		(2,814)	6,281	(3,092)	(5,462)	326	(4,110)	4,347
	Total		75,564	81,845	78,753	73,291	73,617	69,507	73,855

Due to rounding, totals may not tie to individual items.

2025 GRC Forecast Commentary

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Planning Element: Enterprise Technology
Activity: Fixed Price Technology and Maintenance
Witness: Lori Garris

Summary of Changes: See Testimony

Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	3,135	3,246	3,550	3,402	3,495	3,267	3,297	3,767
	Non-Labor	75,243	72,318	78,295	75,351	69,796	70,350	66,210	70,087
	Other	0	0	0	0	0	0	0	0
	Total	78,378	75,564	81,845	78,753	73,291	73,617	69,507	73,855

*Due to rounding, totals may not tie to individual items.***Recorded (2018-2022)**

See Testimony

Forecast (2023-2025)

See Testimony

GRC MSP Cost Breakdown

Southern California Edison - 2025 GRC
 Fixed Price Technology Maintenance GRC Activity
 SCE-06 Vol.01
 Constant \$

MSP Cost Breakdown

Constant \$

MSP Costs	2022	2023*	2024	2025	2026	2027	2028	Comments
Application Dev/Maint	37,434,423	38,824,903	36,480,463	37,580,813	36,843,935	36,121,505	35,413,240	Increase of \$146,390 in 2025 over 2022 recorded to support new NextGen SAP technologies such as: DWC, AC, BTP, DI, ILM & Signavio Process Mapping
Testing Services	2,514,709	2,622,513	2,599,293	2,913,746	2,856,613	2,800,601	2,745,687	Increase of \$399,037 in 2025 over 2022 based on growth in Testing Services to support new platforms and new operational
Data Center	7,788,228	7,299,542	8,	045,439	7,887,686	7,733,025	7,581,397	Increase of \$257,211 in 2025 over 2022 due to growth in infrastructure to support ADM services and new service introductions
Network Management	4,645,148	4,441,611	4,247,125	4,973,821	4,876,295	4,780,681	4,686,942	Increase of \$328,673 in 2025 over 2022 to support new demand for Network Management Services due to growth in cloud computing and greater data demands
End User Support Services	8,861,810	8,389,293	8,022,619	8,775,064	8,603,003	8,434,317	8,268,938	Decrease of \$86,747 in 2025 over 2022 based on EUSS for new digital devices, new platforms and new operational services
IT Service Management	4,084,844	3,645,954	3,481,255	4,201,631	4,119,246	4,038,476	3,959,290	Increase of \$116,787 in 2025 over 2022 based on Helix Upgrade for critical ITSM services
Digital Services	3,805,374	3,821,548	3,400,723	4,001,130	4,196,700	4,384,406	4,564,461	Increase of \$195,756 in 2025 over 2022 based on new Digital Services to support new platforms and tools such as Salesforce and Ignio. We expect Digital Services to increase in the future in alignment with industry trends.
Cloud	640,505	972,681	645,493	1,124,854	1,179,836	1,232,606	1,283,226	Increase of \$118,753 in 2025 over 2022 based on migration/transition of new and existing applications to cloud computing platforms. We expect Cloud to increase in the future in alignment with industry trends.
Total MSP Contract	69,775,041	70,315,527	66,176,513	71,616,497	70,563,314	69,525,618	68,503,182	
Employee Expenses	21,369	34,647	33,288	35,294	35,294	35,294	35,294	
Grand Total (MSP + Employee Expenses)	69,796,410	70,350,175	66,209,801	71,651,792	70,598,608	69,560,912	68,538,476	
Normalized Amount (2025-2028)				70,087,447				

* includes \$49,020 of MSP costs to assess cloud subscriptions for opportunities for savings

**Software Maintenance and Replacement
- Standard Workpapers**



(U 338-E)

2025 General Rate Case

A. 23-05-

Workpapers

SCE-06 Enterprise Support
Volume 1 - Enterprise Technology
Software Maintenance and Replacement

May 2023

2025 GRC Summary

(Constant 2022 \$000)

Beginning of Workpapers for:

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Software Maintenance and Replacement
 Witness: Lori Garriss

Cost Type	Recorded/Adj. 2022	Forecast 2025
Labor	11,149	12,944
Non-Labor	90,651	149,974
Other	0	0
Total	101,800	162,918

Due to rounding, totals may not tie to individual items.

Description of Activity:

The Software Maintenance and Replacement O&M work activity includes SCE labor and non-labor costs required to maintain SCE's operating software assets through on-premise license, cloud, subscription, and maintenance agreements. Operating Software includes operating systems, business intelligence systems, database management systems, cross-system integration tools, IT monitoring tools and end-user productivity and collaboration software which enable business applications to take advantage of the underlying hardware features and functions.

In addition, this work activity includes SCE labor and non-labor for application refresh activities, which consist of the management, upgrade, maintenance, optimization, monitoring, and testing of IT applications and interfaces through their lifecycle.

Forecast Methods - Summary of Results of Methods Studied

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Software Maintenance and Replacement
 Witness: Lori Garriss

Cost Type	Recorded/Adj.				
	2018	2019	2020	2021	2022
Labor	8,040	8,544	11,425	10,692	11,149
Non-Labor	74,466	71,635	70,694	77,506	90,651
Other	0	0	0	0	0
Total	82,506	80,179	82,119	88,199	101,800

Cost Type	Results of Linear Trending					
	3 Years: 2020 - 2022		4 Years: 2019 - 2022		5 Years: 2018 - 2022	
	\$	r2*	\$	r2*	\$	r2*
Labor	10,536	0.14	13,639	0.49	14,152	0.72
Non-Labor	119,531	0.97	106,359	0.80	96,111	0.56
Other	0	0.00	0	0.00	0	0.00
Total	130,067	N/A	119,998	N/A	110,264	N/A

Cost Type	Results of Averaging							
	2 Years:		3 Years:		4 Years:		5 Years:	
	2021 - 2022	sd**	2020 - 2022	sd**	2019 - 2022	sd**	2018 - 2022	sd**
Labor	10,920	228	11,089	302	10,452	1,133	9,970	1,399
Non-Labor	84,079	6,572	79,617	8,283	77,622	7,963	76,991	7,233
Other	0	0	0	0	0	0	0	0
Total	94,999	N/A	90,706	N/A	88,074	N/A	86,960	N/A

Cost Type	Last Recorded Year		
	2023	2024	2025
Labor	11,149	11,149	11,149
Non-Labor	90,651	90,651	90,651
Other	0	0	0
Total	101,800	101,800	101,800

Cost Type	Itemized Forecast		
	2023	2024	2025
Labor	0	0	0
Non-Labor	101,631	118,005	149,974
Other	0	0	0
Total	101,631	118,005	149,974

* r2 = R Squared (Based on recorded years data)

** sd = standard deviation (Based on recorded years data)

2025 GRC Selected Forecast Method

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Software Maintenance and Replacement
 Witness: Lori Garris

Cost Type	Recorded/Adj.					Forecast			Selected Forecast		TY Forecast Inc/(Decr) from 2022
	2018	2019	2020	2021	2022	2023	2024	2025	Method	(\$000)	
Labor	8,040	8,544	11,425	10,692	11,149	11,108	11,382	12,944	LRY + Adj	12,944	1,795
Non-Labor	74,466	71,635	70,694	77,506	90,651	101,631	118,005	149,974	Itemized	149,974	59,323
Other											
Total	82,506	80,179	82,119	88,199	101,800	112,739	129,388	162,918		162,918	61,118

Due to rounding, totals may not tie to individual items.

Analysis of Forecasting Methods

Analysis of Last Recorded Year:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have been relatively stable for three or more years, the last recorded year is an appropriate base estimate

Itemized Forecast:

Itemized Forecast Method

Other Forecast Methods not Selected

Linear Trending:

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have shown a trend in a certain direction for three or more years, the last recorded year is an appropriate base estimate. Recorded expenses for this activity have not shown a strong trend, so the linear trending method is not appropriate to forecast the 2025 Test Year.

Averaging:

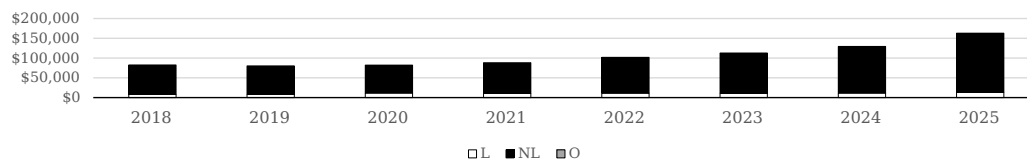
In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have significant fluctuations from year to year, or expenses are influenced by external forces beyond the utility's control, an average of recorded-expenses is appropriate. Recorded expenses in this activity have not shown significant fluctuations, therefore, the averaging methodology was not used as the basis for estimating the 2025 Test Year.

2025 GRC Year Over Year Variance

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Software Maintenance and Replacement
 Witness: Lori Garriss

Recorded/Adj. 2018-2022 / Forecast 2023-2025



Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	8,040	8,544	11,425	10,692	11,149	11,108	11,382	12,944
	Non-Labor	74,466	71,635	70,694	77,506	90,651	101,631	118,005	149,974
	Other	0	0	0	0	0	0	0	0
	Total	82,506	80,179	82,119	88,199	101,800	112,739	129,388	162,918

Labor	Prior Year Total	8,040	8,544	11,425	10,692	11,149	11,108	11,382
	Change	503	2,881	(732)	456	(40)	274	1,561
	Total	8,544	11,425	10,692	11,149	11,108	11,382	12,944

Non-Labor	Prior Year Total	74,466	71,635	70,694	77,506	90,651	101,631	118,005
	Change	(2,831)	(941)	6,812	13,145	10,980	16,374	31,969
	Total	71,635	70,694	77,506	90,651	101,631	118,005	149,974

Other	Prior Year Total	0	0	0	0	0	0	0
	Change	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0

Total Change	Prior Year Total	82,506	80,179	82,119	88,199	101,800	112,739	129,388
	Change	(2,328)	1,940	6,080	13,601	10,940	16,649	33,530
	Total	80,179	82,119	88,199	101,800	112,739	129,388	162,918

Due to rounding, totals may not tie to individual items.

2025 GRC Forecast Commentary

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Software Maintenance and Replacement
 Witness: Lori Garriss

Summary of Changes: See Testimony

Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	8,040	8,544	11,425	10,692	11,149	11,108	11,382	12,944
	Non-Labor	74,466	71,635	70,694	77,506	90,651	101,631	118,005	149,974
	Other	0	0	0	0	0	0	0	0
	Total	82,506	80,179	82,119	88,199	101,800	112,739	129,388	162,918

Due to rounding, totals may not tie to individual items.

Recorded (2018-2022)

See Testimony

Forecast (2023-2025)

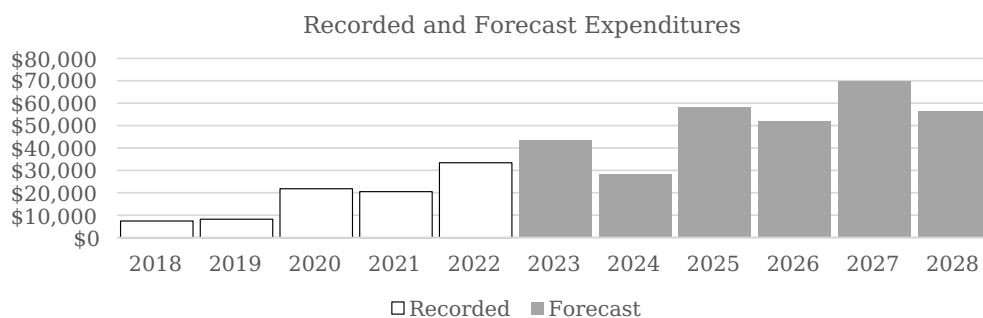
See Testimony

Southern California Edison - Capital Workpapers
Capital Workpapers Summary
SUMMARY BY GRC Volume
(Nominal \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology

Description	Recorded Capital Expenditures					Forecast Capital Expenditures					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Recorded and Forecast Expenditures	7,393	8,199	21,795	20,491	33,393	43,589	28,320	58,201	52,075	70,080	56,411
Total Expenditures	91,271					308,675					

Due to rounding, totals may not tie to individual items.



GRC Activity	Forecast Capital Expenditures						6 yr Total
	2023	2024	2025	2026	2027	2028	
Software Maintenance and Replacement	43,589	28,320	58,201	52,075	70,080	56,411	308,675
GRC Total	43,589	28,320	58,201	52,075	70,080	56,411	308,675

**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Software Maintenance and Replacement

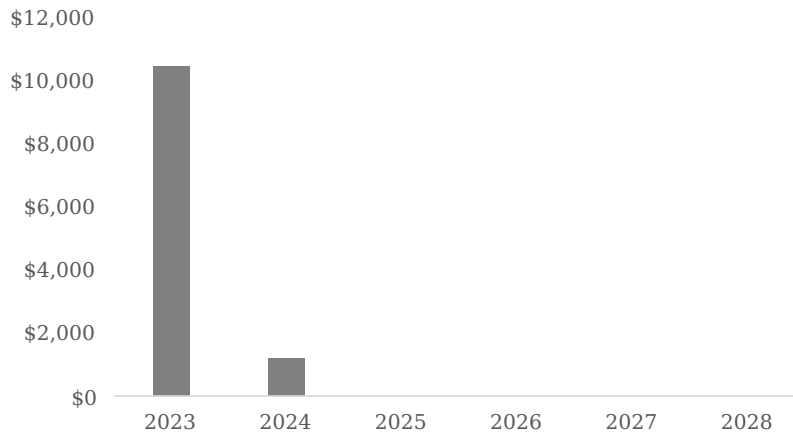
1. Witness: Lori Garris
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\2024
 4. RO Model ID: 21
 5. Pin: 3896
 6. CWBS Element: CIT00SDPM000296
 CWBS Description: App Rationalization
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	10,445	1,200	0	0	0	0	11,645

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Software Maintenance and Replacement

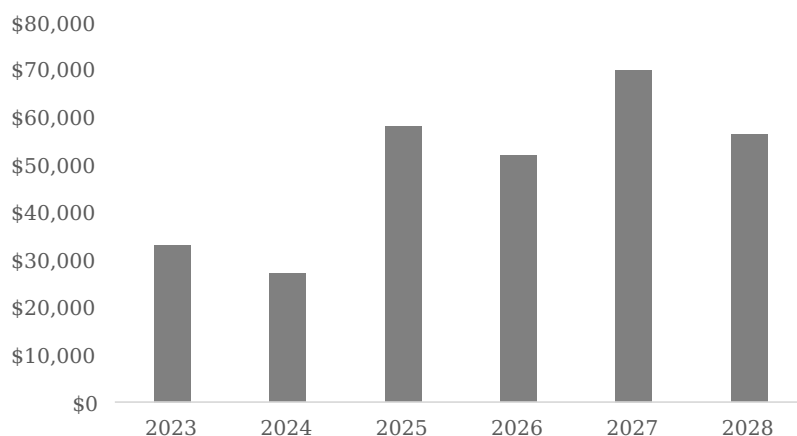
1. Witness: Lori Garris
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\9999
 4. RO Model ID: 466
 5. Pin: 3896
 6. CWBS Element: CIT00SDPM000249
 CWBS Description: Applications Refresh
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	33,143	27,120	58,201	52,075	70,080	56,411	297,030

Due to rounding, totals may not tie to individual items.

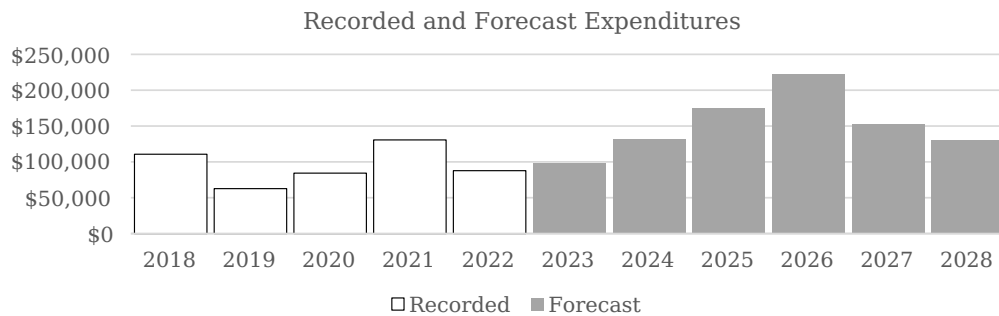


Southern California Edison - Capital Workpapers
Capital Workpapers Summary
SUMMARY BY GRC Volume
(Nominal \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology

Description	Recorded Capital Expenditures					Forecast Capital Expenditures					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Recorded and Forecast Expenditures	110,673	62,679	84,299	130,627	87,727	98,724	132,047	174,888	222,835	152,344	130,119
Total Expenditures	476,006					910,958					

Due to rounding, totals may not tie to individual items.



GRC Activity	Forecast Capital Expenditures						6 yr Total
	2023	2024	2025	2026	2027	2028	
Software Maintenance and Replacement	6,656	11,945	34,602	90,564	9,375	11,828	164,970
Technology Infrastructure Maintenance and Replacement	92,068	120,103	140,286	132,271	142,969	118,291	745,987
GRC Total	98,724	132,047	174,888	222,835	152,344	130,119	910,958

**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Software Maintenance and Replacement

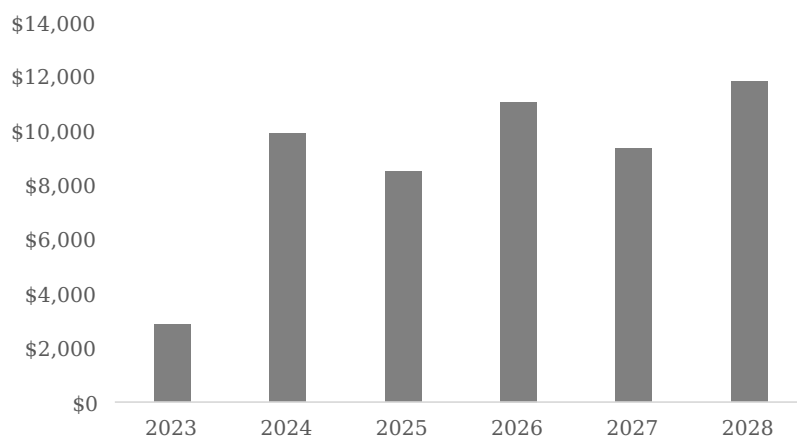
1. Witness: Rick Nanda
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\9999
 4. RO Model ID: 490
 5. Pin: 7282
 6. CWBS Element: CIT00OPCS000030
 CWBS Description: Operating Software & Middleware
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	2,856	9,906	8,528	11,081	9,375	11,828	53,575

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Software Maintenance and Replacement

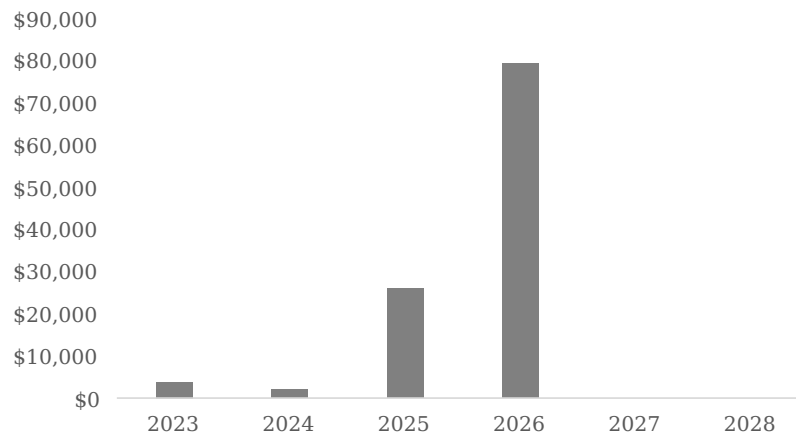
1. Witness: Rick Nanda
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\9999
 4. RO Model ID: 489
 5. Pin: 7369
 6. CWBS Element: CIT00OPCS000023
 CWBS Description: Software License True-Up
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	3,800	2,038	26,074	79,482	0	0	111,395

Due to rounding, totals may not tie to individual items.



Software Maintenance & Replacement Normalization

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01

		Software Maintenance and Replacement Normalization			
		2025	2026	2027	2028
Sub Work Activity (Non Labor)					
Perpetual License, Cloud and SaaS	\$	120,139,480	\$ 125,145,542	\$ 127,213,828	\$ 128,689,867
Application Refresh	\$	23,149,975	\$ 22,819,633	\$ 22,988,519	\$ 23,899,478
Total	\$	143,289,455	\$ 147,965,175	\$ 150,202,347	\$ 152,589,345
Normalized Amount (2025-2028)		\$148,511,581			

Capital Workpapers - Perpetual License SaaS Cloud

**Capital Work Papers-
Perpetual License SaaS Cloud**

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

	Recorded					Totals
	2018	2019	2020	2021	2022	
Operating Software						35,738,988
Operating Software & Middleware	9,972,685	5,188,218	8,633,712	5,018,422	6,925,952	
Software Licenses	48,545,749	5,713,012	5,444,058	63,073,187	15,058,335	137,834,340
	58,518,434	10,901,229	14,077,770	68,091,609	21,984,287	173,573,328
Testimony	58,518,434	10,901,229	14,077,770	68,091,609	21,984,287	173,573,328

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

	Forecast (\$)						
	2023	2024	2025	2026	2027	2028	Totals
	2,856,187	9,906,467	8,528,008	11,081,364	9,375,300	11,828,131	53,575,457
	3,800,000	2,038,198	26,074,345	79,482,455			111,394,998
	6,656,187	11,944,665	34,602,353	90,563,819	9,375,300	11,828,131	164,970,456
	6,656,187	11,944,665	34,602,353	90,563,819	9,375,300	11,828,131	164,970,456

Application Refresh Labor Workpaper

Application Refresh Labor Forecast

Southern California Edison - 2025 GRC
 Software Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Constant \$

Headcount	Headcount Type	2023	2024	2025	2026	2027	2028	Description
81	Base	10,398,904	10,423,169	11,322,181	11,322,166	11,305,325	11,262,828	Service Managers and System Integrators to: - partner with MSP to ensure application stability, availability, sustainability, and reliability - monitor, measure, and improve application service delivery to meet business needs - ensure that the quality and timeliness of resolution for application issues and operational activities are met within service level agreements and within business expectation - drive service improvements with IT partners - integrate with OU to ensure that projects are delivered with operational needs and efficiencies in mind - collaborate with Planning organization to influence the strategy and decisions made during the project life cycle - integrate with Architects for operational initiatives and roadmap development
6	Vacant Positions in 2022	530,710	715,391	777,095	777,094	775,938	773,021	These roles are Architect Senior Advisors and Service Managers. Service managers will partner with MSP to ensure application stability, availability, sustainability, and reliability and monitor, measure, and improve application service delivery to meet business needs. Architect senior advisor will integrate with service managers for operational initiatives and roadmap development
10	New OEC Positions	100,235	153,556	166,801	166,801	166,552	165,926	Systems Quality Advisors that will maintain IT's processes, metrics, and operational reports with a focus on Quality, Value and Speed from strategy to operational phases for a given technology.
	Retention Bonus	52,356	40,106	-	-	-	-	
	Employee Compensation Program	26,179	50,213	677,464	677,857	678,579	678,621	
		11,108,384	11,382,436	12,943,539	12,943,917	12,926,394	12,880,396	

Application Refresh Labor Forecast

Southern California Edison - 2025 GRC
 Software Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Constant \$

Headcount	Vacant Positions in 2022	2023	2024	2025	2026	2027	2028
2	IT Arch (Systems Design), Sr Advisor	222,911	260,240	282,686	282,685	282,265	281,204
1	IT Arch (Systems Design), Advisor	77,648	103,094	111,986	111,985	111,819	111,399
1	IT Outsourcing Mgmt. Advisor	92,184	122,393	132,950	132,950	132,752	132,253
1	IT Arch (Systems Design), Advisor	67,942	90,207	97,987	97,987	97,842	97,474
1	IT Svc Del & Relation Mgmt, Sr Advisor	70,025	139,458	151,486	151,486	151,260	150,692
	Total	530,710	715,391	777,095	777,094	775,938	773,021

Headcount	New OEC Positions	2023	2024	2025	2026	2027	2028
10	IT Systems Quality, Sr Advisor	100,235	153,556	166,801	166,801	166,552	165,926
	Total	100,235	153,556	166,801	166,801	166,552	165,926

Application Refresh O&M Workpaper Overview

Southern California Edison - 2025 GRC
 Software Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Constant \$

Application Refresh Non-Capital Overview

Name	Forecast - Constant						Normalized (2025-2028)
	2023	2024	2025	2026	2027	2028	
O&M Projects	\$ 5,230,506	\$ 3,898,069	\$ 12,327,593	\$ 11,725,576	\$ 11,596,232	\$ 12,180,427	\$ 11,957,457
Consulting and Professional Services (C&PS)	\$ 5,161,348	\$ 4,438,850	\$ 6,536,458	\$ 6,482,939	\$ 6,430,470	\$ 6,379,029	\$ 6,457,224
Ongoing Maintenance Costs	\$ 1,924,856	\$ 3,626,110	\$ 4,146,218	\$ 4,471,412	\$ 4,822,111	\$ 5,200,316	\$ 4,660,014
Employee Related Expense	\$ 137,146	\$ 131,764	\$ 139,706	\$ 139,706	\$ 139,706	\$ 139,706	\$ 139,706
O&M Non-Labor Total	\$ 12,453,856	\$ 12,094,793	\$ 23,149,975	\$ 22,819,633	\$ 22,988,519	\$ 23,899,478	\$ 23,214,401

Application Refresh O&M Projects Workpaper

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

<i>Total submitted for SW Maint & Replace GRC Inclusion</i>		2023	2024	2025	2026	2027	2028
O&M Project Name	Impacts/Justification	\$ 5,230,506	\$ 3,898,069	\$ 12,327,593	\$ 11,725,576	\$ 11,596,232	\$ 12,180,427
SCE.com PSPS/Wildfire Enhanced Monitoring and Alerting Support	This is needed in order to ensure we can support PSPS events when they occur, and limit any unplanned downtime. Ensures customers can view PSPS outage information.	\$ 192,486	\$ 192,234	\$ 235,581	\$ 230,961	\$ 226,433	\$ 266,391
Drupal 10 Upgrade	Without the support of Drupal we will not be able to provide update communication to customers in a timely manner including PSPS events, ongoing campaigns.	\$ 216,546	\$ -	\$ 212,023	\$ 207,865	\$ 203,789	\$ 266,391
Post CSRP additional pre-paid capacity	High priority key functional improvements that are intended to expedite transaction and reduce manual processing. If not executed, manual work arounds will be required leading to slower response to customers	\$ 962,428	\$ -	\$ 942,322	\$ 923,845	\$ 905,731	\$ 887,971
Unbilled Revenue/Delayed Billing & Active Collections	This effort is support for Active Collection restart. Potential impact to SCE revenue due to delay in collecting payments from customers, if not executed.	\$ 673,699	\$ -	\$ 1,069,197	\$ 816,578	\$ 604,727	\$ 829,934
CS: Industry Specific Solution for Utilities (ISU) Data Archiving	Data archiving ensures we do not run out of table space. Running out of space would cause an unplanned outage which would impact the organization and our SCE customers	\$ -	\$ -	\$ 494,719	\$ 499,569	\$ 504,467	\$ 509,413
Making Front Office build packages compatible with GitHub advance security	This tool allows us to efficiently store our source code, including version history. It is an industry standard. SCE's Front Office systems include customer facing systems such as SCE.com and Customer Call Center applications	\$ -	\$ -	\$ 141,348	\$ 138,577	\$ 135,860	\$ 133,196
Making Back Office build packages compatible with GitHub advance security	This tool allows us to efficiently store our source code, including version history. It is an industry standard. SCE's Back Office includes metering, billing, payment, and collections.	\$ -	\$ -	\$ 141,348	\$ 138,577	\$ 135,860	\$ 133,196

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Max Attention SAP Enroll Custom Code	Helps minimize downtime, and to resolve issues in a timely manner. This service helps us reduce unplanned downtime for the systems our customers rely on.	\$ -	\$ -	\$ 376,929	\$ 369,538	\$ 362,292	\$ 355,189
Post Digital Self Service (DSS) transition to Operations Stabilization	Investing in Digital Self Service allows reduction of our customers dependency on the customer contact center.	\$ -	\$ -	\$ 1,130,787	\$ 1,108,615	\$ 1,086,877	\$ 1,331,957
Analytics Community for Excellence (ACE) Governance	Without architectural guidelines and governance, the rapidly expanding data and analytics landscape will end up with suboptimal design patterns, tool and data duplication and lack of cost control. The premise of moving to cloud platforms is to have better cost structure and faster development for data and analytics use cases and this is achievable only with constant and dedicated governance.	\$ -	\$ 201,845	\$ 141,348	\$ 138,577	\$ 135,860	\$ 133,196
Azure Integration Services (AIS) to SAP Cloud Platform Integration (CPI) refactoring	Without migrating the Azure integration component to CPI, SCE will have to pay additional licensing & transactional cost for AIS.	\$ -	\$ -	\$ 94,232	\$ -	\$ -	\$ -
Citizen Development Governance	Without adequate citizen development guidelines and governance, the multitude of self-service platforms and workloads will quickly expand and become difficult to control both in terms of duplication and costs. It will also delay the movement of costly IT workloads to business users - both allowing for faster delivery as well as lower costs. Most use cases also run the risk of being orphaned in terms of support without adequate guidance provided to end users.	\$ -	\$ -	\$ 329,813	\$ 138,577	\$ 135,860	\$ 133,196

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Data Quality and Data Governance	This effort is to build data quality and governance. Without adequate data quality checks and reconciliations being built, there is a major risk of not being able to service regulatory reporting requirements for regulatory bodies as well as SCE's partners.	\$ -	\$ 144,175	\$ 169,618	\$ 166,292	\$ 163,032	\$ 79,917
DataPower Firmware Maintenance/Upgrade	DataPower is an enterprise gate way for all external integration to SCE platform used across all the OUs. Not having upgrade will lead to lack of IBM vendor support.	\$ -	\$ -	\$ 282,697	\$ 461,923	\$ -	\$ -
SAP Data Warehouse Cloud (DWC)/SAP Analytics Cloud (SAC) Expansion	Without the expansion, evangelization of wider use for DWC platform will not be possible. We will not be able to move towards making DWC the data modeling tool of choice for citizen developers. Currently, citizen developer data modeling is done off various custom databases that are managed and controlled by the teams completing the development. This results in multiple issues: 1)Resource intensive and expensive data movement and duplication across these databases and the corresponding source systems 2)Duplication of data models and associated efforts across these databases 3)Individual dependency posing a risk to sustainability of such models 4)No IT oversight, control or management is possible due to the spread of such data models Having a modern, cloud based data modeling platform such as SAP DWC resolves all of the above problems and brings in additional capabilities such as: data virtualization, drag and drop modeling (no code modeling) and advanced analytics	\$ -	\$ -	\$ -	\$ -	\$ 570,610	\$ 266,391

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Edison Carrier Solutions (ECS) Crew Manager Maintenance/Upgrade	ECS CrewManager application was last upgraded in 2020. The new release through upgrade will fix some of issues in current version such as performance problems and will also bring efficiencies to help manage crew by giving more visibility about the work i.e. person assigned to that work for both construction group and engineering group.	\$ -	\$ 96,117	\$ -	\$ -	\$ -	\$ 75,478
Hadoop Maintenance	Hadoop applications will be without support until 2024, H2S(Hadoop to Snowflake) implementation timeline will migrate apps out of Hadoop to Snowflake by end of 2024 and beginning of 2025	\$ -	\$ 134,564	\$ 179,041	\$ -	\$ -	-
Integration Center of Excellence (ICOE) Governance	Modernization & maintenance of the ICOE (Integration Center of Excellence) Without this modernization effort, tools, pattern, architecture governance and operations will be negatively impacted. If this work is not completed, more manual intervention for resources scaling up or down due to lack of cloud adoption, the on-premise tools lead to higher maintenance costs, and without these tools, patterns, and modernizations, features like containerization and zero downtime will not be available.	\$ -	\$ 28,835	\$ 28,270	\$ 27,715	\$ 27,172	\$ 26,639
Power Business Intelligence (BI) Expansion & Governance	Not upgrading or expanding will cause the platform to fall out of support and increase risks of unplanned downtimes causing widespread reporting outage across the organization	\$ -	\$ -	\$ 452,315	\$ 461,923	\$ 298,891	-
Power Business Intelligence (BI) Gateway expansion	Not expanding the gateway cluster will pose a high risk of downtimes for these servers causing user data refreshes to fail for their reports.	\$ -	\$ -	\$ 141,348	\$ -	\$ 135,860	\$ 133,196
Remediation/Refactoring of Statistical Software (SAS) reports to Snowflake	Remediation efforts for selected business developed SAS Reports post Hadoop to Snowflake migration.	\$ -	\$ 115,652	\$ 141,348	\$ 92,385	\$ 90,573	\$ 66,598

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
SAS Self Service Governance	There are delays in data sharing today with third parties via Managed File Transfer (MFT) transfer via the Legacy route. Direct data sharing will lead to better customer satisfaction and less lead time to obtain data from SCE.	\$ -	\$ -	\$ 329,813	\$ 69,288	\$ 67,930	\$ -
Snowflake Self Service and Data Sharing Rollouts	This project is expected to create a self-service lab area on Snowflake platform and establish associate governance. (After governance, set up guardrails, establish and circulate best practices) As users are growing exponentially, therefore better governance is required to cater to the User needs.	\$ -	\$ -	\$ 141,348	\$ 69,288	\$ 90,573	\$ -
Unclaimed Property Compliance System (UPCS) application upgrade to latest market version	Unclaimed Property Compliance System (UPCS) was last upgraded in Apr 2022. Vendor upgrades this product every 2 years. If this product is not upgraded on time, it will be out of vendor support and in case of any critical issue business may not be able to comply with California and other states' Unclaimed Property Law and Regulations.	\$ -	\$ 182,622	\$ -	\$ 184,769	\$ -	\$ 133,196
Enterprise Data Management (EDM) / Tibco Upgrade	Delay in upload of Contracts, Resource, Meter and Locations master data will impact settlement process and EDM (Enterprise Data Management) users.	\$ -	\$ 144,175	\$ 94,232	\$ 50,602	\$ 90,573	\$ 221,993
Adobe Experience Manager Cloud Migration	Adobe Experience Manager is currently running as an on-premise solution in SCE's environment. Adobe has already migrated this product to the cloud to address all product vulnerabilities and performance limits. This effort is to migrate to the cloud platform. In SCE this app is used as backend solution to support API services now and over a period of time the PDF conversion rate will keep on increasing and our performance limits wont suffice requirements in future	\$ -	\$ -	\$ 329,813	\$ -	\$ 226,433	\$ -

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Ariba/Business Technology Platform (BTP) Maintenance/Upgrade	Ariba is a procure-to-pay spend management cloud software. If it is not upgraded on time, the maximum usage of its functionality would not be realized. Risks to not upgrade include: Compliance / Security Risk Unavailability of new functionalities Risk of not getting vendor product support Compatibility / Performance issues	\$ -	\$ 192,234	\$ 188,464	\$ 166,292	\$ 163,032	\$ 177,594
Human Resources Support Pack (HRSP) Yearly Support pack and Maintenance	SAP Support Packages are released at regular intervals and provide customers around the globe with the latest SAP patches, legal requirements and corrections. They include all updates for international functions and local versions.	\$ -	\$ 192,234	\$ 188,464	\$ 184,769	\$ 181,146	\$ 177,594
Salesforce Platform	This is for support of the Salesforce platform which hosts critical applications to our business. Unavailability and degraded performance on this platform will impact applications that support activities for Wildfire. As well there other applications on the platform and their business processes would not be able to work, such as: Arpora (Vegetation Management), Inspectforce (Inspections of T&D assets), Workit and DCB (Work Management).	\$ -	\$ 1,542,894	\$ 1,512,641	\$ 1,482,982	\$ 1,453,904	\$ 1,425,396
SAP Archiving	This project is to build a business aligned data archival capability. This will improve the ability to service customers, reduce the cost of storage, improve operational and systems efficiency and decrease compliance and regulatory risk, without impacting operations. If not done all of these benefits will not be realized by SCE and their customers.	\$ -	\$ -	\$ 437,966	\$ 923,845	\$ 906,431	\$ 1,331,957

Southern California Edison - 2025 GRC
 Software Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Constant \$

Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
SuccessFactors Maintenance/Upgrade	SuccessFactors provides the capabilities of online learning courses, employee performance review process enterprise wide. Any interruption on this capabilities will put SCE at risk of not having the users consume and complete regulatory mandated training courses on time and be in compliance of having NERC/FERC access requirements. Additional risks of not upgrading include: Compliance / Security Risk Unavailability of new functionalities Risk of not getting vendor product support	\$ -	\$ -	\$ -	\$ 461,923	\$ 243,642	\$ 648,018
Analytics-Enterprise Data Catalog	SCE Departments need easy access to all metadata related to data objects, entity, and attribute (Enterprise Data Catalog) as defined in Enterprise Data Warehouse to help them perform reporting and analytics, enable edge analytics users collaboration to help understand the data better, and enable consistent use of data across OU's. This will reduce the risk of incorrect usage and inconsistent data sharing with internal and external parties. A number of use cases for external data sharing requires data catalog to be shared along with the data. Also, DC is required to ensure accurate and consistent reporting and analytics by IT and business. EIG and OU Data Governance teams need a self-service data catalog that can be organically expanded by data stewards (for glossary and business definitions) and IT Custodians (for data dictionary).	\$ 43,824	\$ -	\$ -	\$ -	\$ -	\$ -

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
ARIBA Cloud Integration Gateway (CIG) - Access Provisioning	This project is to establish direct connection between on-premise access management system and Ariba for user access provisioning/de-provisioning. Multiple hops between systems can be eliminated and interfaces issues can also be avoided with the provisioning/de provisioning in ARIBA.	\$ 441,176	\$ -	\$ -	\$ -	\$ -	\$ -
Business Intelligence and Analytics Model Management Platform	To mature data science and advanced analytics capabilities across enterprise, a robust model management capability is needed to track models, model efficacy, sharing of models across OU's. This is a critical capability required for deploying Artificial Intelligence (AI)/Machine Language (ML) models. In absence of robust Data Engineering (DE) capabilities and unavailability of value-added datasets, users will have to repeatedly perform the data engineering activities for the same datasets thus increasing cloud compute costs As SCE builds and deploys new AI/ML models across OU's (by citizen data scientists) the capability for model management will become increasingly critical for effective reuse and reduced cost/effort	\$ 60,735	\$ -	\$ -	\$ -	\$ -	\$ -

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Customer Usage Data (CUD) - Improve data quality in IT landscape and help institutionalize data quality governance	As part of CS Data Quality (DQ) improvement initiatives, DQ dashboards/scorecards will be developed for the prioritized critical datasets. Every DQ rule has a threshold that is set by the CS DQ governance team. Dashboards for DQ rules are proactively monitored on daily regular basis by Data custodians, Data Stewards, and Data SMEs. The Root Cause Analysis (RCA) will be conducted based on the findings of the DQ scorecard and the remediation solutions identified based on the results of the DQ scorecard. A remediation solution may require data corrections, system fixes, business process improvements, or adding IT controls. Root Cause Analysis (RCA) and remediation if not implemented, will cause the issue to reappear adding cost of investigation and fixes multiple times and also possible penalties as financial risk. The measure of issue has been anecdotal without scorecard, the cost of multiple RCAs and data fixes has not eliminated the issues, it has been always adding to the O&M cost pressure	\$ 292,157	\$ -	\$ -	\$ -	\$ -	\$ -
Genetec Security Center 5.10 version upgrade	This project is to periodically upgrade the Federal Signal and Genetec Security Center application which is a requirement for physical safety. These applications are very critical for SCE physical property security matter and compliance. Genetec Security Center is a unified security platform that connects security systems, sensors, and data in one interface to simplify security operations.	\$ 245,098	\$ -	\$ -	\$ -	\$ -	\$ -

Application Refresh Projects Forecast

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Constant \$

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
NERC CIP Data encryption	This project is to identify the NERC CIP data storage system and encrypt them. NERC CIP Data resides in equipment master data. While publishing the data to target systems, the data is visible for IT. The visibility of NERC data during transfer between systems was not considered in the original design. This is highly recommended for data safety. This proposal is to enable to data encryption and decryption during data transfer across systems via SAP PO. In this way NERC Data will be protected from unauthorized view. NERC CIP Data is in an unsecured form that can be easily viewed or accessed without the need of a decryption key.	\$ 294,118	\$ -	\$ -	\$ -	\$ -	\$ -
Onapsis Upgrade and Remediation	Onapsis upgrade and remediation is part of cyber security compliance. Onapsis is a software analysis tool that checks the security and quantity of SAP codes. This project is to upgrade the Onapsis application to the latest or n-1 version and to remediate the risks arising therefrom. System will be vulnerable to external attacks leading to security risk and breach. Attacker can perform malicious activities if vulnerabilities are not taken care of.	\$ 637,255	\$ -	\$ -	\$ -	\$ -	\$ -
Removal of Secure Hash Algorithm 1 (SHA1) algorithm	This application has a weak cypher which is deprecated. It is not secure and can be prone to cyber attacks. In such attack the impact will be enterprise wide as there are many integrations involved also SCE is having multiple 3rd party files transfer integration which are at risk.	\$ 88,235	\$ -	\$ -	\$ -	\$ -	\$ -

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Application Refresh Projects Forecast		2023	2024	2025	2026	2027	2028
O&M Project Name	Impacts/Justification						
SAP Application and Database High Availability	This is required for availability of SAP systems for Business Continuity. Currently, we have Disaster Recovery (DR) functionality for our production Databases. However, we don't have disaster recovery HA (High Availability) in SAP application layer. The impact is application unavailability due to Hardware or Software failure of Central Instance.	\$ 490,196	\$ -	\$ -	\$ -	\$ -	\$ -
Self Service & Faster Data Engineering Solutions Platform	Strategic roadmap for analytics and IT can be realized with data engineering controls and processes on data management life cycle. Service management costs would not be controlled unless data engineering pipelines are designed, monitored and improved for data platforms envisioned for data science and self-service. Benefits of implementing this platform include: Improved data availability for enterprise use cases, self-service enhancement, predictable and cost-effective data ingestion and consumption pipeline development effort, and pro-active SLA management for data engineering components.	\$ 53,971	\$ -	\$ -	\$ -	\$ -	\$ -
SMOO budget SAP Cloud subscription	This is forecasting the monthly subscriptions for SAP Cloud Platform Integration (CPI), Event Mesh and other products. Critical interfaces including billing interfaces need to use Cloud Platform Enterprise Agreement (CPEA) account for ongoing sustainability	\$ 88,235	\$ -	\$ -	\$ -	\$ -	\$ -
Support Pack Stack Upgrade (Human Resources Support Pack - HRSP 2023)	SAP Support Packages are released at regular intervals and provide Customers around the globe with the latest SAP Patches, legal requirements and corrections. They include all updates for international functions and local versions.	\$ 334,856	\$ -	\$ -	\$ -	\$ -	\$ -

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O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Upgrade older .Net code on sce.com to supported version	This is needed in order to ensure we continue run on a supported platform. It ensures we can apply the right level of security patches to safeguard our systems from Cyber intrusions.	\$ -	\$ 249,904	\$ 202,599	\$ -	\$ -	\$ 133,196
Making build packages compatible with GitHub advance security	This tool allows us to efficiently store our source code, including version history. This tool is an industry standard.	\$ -	\$ -	\$ 141,348	\$ 138,577	\$ 135,860	\$ 133,196
Czarnecki-Yester Consulting Group (CYCG) download through Managed File Transfer (MFT) instead of Secured File Transfer Protocol (SFTP)	We need to move to a more secured and supported file transfer system. In order to ensure we can continue to share the settlements allocation data with CYCG without interruption, we need to perform this migration.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 133,196
Ignio Software as a Service (SaaS) conversion	This effort is to move to a SaaS solution due to discontinuation of on premise support. As the vendor has ended support for the on premise version of Ignio, this effort is to migrate to a cloud solution that is supported by the vendor. If we do not do this work, we will lose vendor support that could introduce risks and instability to the platform.	\$ 57,746	\$ -	\$ 94,232	\$ 92,385	\$ 354,367	\$ 88,797
Pega Business Process Management (BPM) platform Upgrade for centralized env.	This effort is centralization to streamline operational support. The current applications maintain separate and independent environments which increase the work required to maintain the environments. By centralizing or combining the environments into shared environments this will reduce cost of maintaining and supporting separate environments.	\$ -	\$ -	\$ 188,464	\$ 184,769	\$ 181,146	\$ 177,594

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Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Pega BPM platform Upgrade for Grid Interconnection Processing Tool (GIPT)	This effort is to upgrade to current version to avoid instability and reliability issues due to old version. As the vendor is ending support for the version used by GIPT, this effort is to upgrade to a version supported by the vendor. If we do not do this work, we will lose vendor support that could introduce risks and instability to the platform.	\$ -	\$ -	\$ 75,386	\$ 73,908	\$ 72,458	\$ 71,038
Pega BPM platform Upgrade for Service Transition, Planning & Support (STPS) & Hardware (H/W) Procurement	This effort is to upgrade to current version to avoid instability and reliability issues due to old version. The current applications maintain separate and independent environments which increase the work required to maintain the environments. By centralizing or combining the environments into shared environments this will reduce cost of maintaining and supporting separate environments.	\$ -	\$ -	\$ -	\$ 92,385	\$ -	\$ 88,797
Citizen Development - On-Going Support	This effort is support for citizen development guardrails to mitigate risks, specifically to define and implement the necessary controls to ensure Citizen Developers do not introduce risks or instability when implementing new products.	\$ -	\$ -	\$ 94,232	\$ 92,385	\$ 90,573	\$ 88,797
Ignio SaaS extend for CSRP	This initiative will include extending the Ignio capabilities to CSRP. This effort is to implement the module of Ignio that is compatible with CSRP allowing the team to increase efficiencies by automating manual efforts.	\$ -	\$ -	\$ -	\$ -	\$ 760,622	\$ -
Uipath Platform Upgrade	This effort is to upgrade to current version to avoid instability and reliability issues due to old version. Application refreshes are required to maintain the necessary vendor support, the Uipath platform has to be upgraded on a recurring basis to avoid losing vendor support and causing instability on the platform.	\$ -	\$ -	\$ 103,655	\$ -	\$ 99,630	\$ -

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Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Application Lifecycle Management (ALM) Octane Refresh	This effort is an ALM Octane major version refresh. Octane refreshes are required to maintain the vendor support and stay current with patches to avoid instability and risks.	\$ -	\$ -	\$ 235,581	\$ 230,961	\$ -	\$ 221,993
DevOps Acceleration - DataPower/API Gateway Pattern	This effort is to develop patterns to leverage DevOps pipelines to increase efficiencies of deployments. Develop a DevOps pattern and connectivity to allow for automated deployments. Without this work, SCE will be unable to achieve the efficiencies by using automated deployments.	\$ 57,746	\$ -	\$ -	\$ -	\$ -	\$ -
Support Cost per year - 40 DevOps pipelines	This is to maintain 40 DevOps pipelines to allow for automated deployments by the application teams. Without this the application teams will need to continue with the manual deployment efforts.	\$ -	\$ -	\$ 141,348	\$ 184,769	\$ 181,146	\$ 221,993
Enterprise DevOps Tools Refresh	This effort is enterprise DevOps tools major version refreshes (Jenkins, SonarQube, Nexus) To maintain the vendor support and stay current with patches to avoid instability and risks.	\$ -	\$ -	\$ 188,464	\$ -	\$ 181,146	\$ -
Value Stream Management Tool Refresh	This work is to maintain and update the Value Stream Management tool that allows the tracking by business process or value stream. Without this effort, the planning teams will need to continue with the manual processes and may miss value added opportunities.	\$ -	\$ -	\$ 188,464	\$ 184,769	\$ -	\$ 177,594
AppCenter administration Infrastructure	Microsoft Visual Studio AppCenter is used to manage and deploy mobile applications. Without this effort, automated processes would need to be reverted to manual steps to complete the tasks. The forecast is for Azure resources for the AppCenter administration scripts.	\$ -	\$ -	\$ 9,423	\$ 9,238	\$ 9,057	\$ 8,880

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Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Apple Developer License	This is to pay Apple for the rights to use their Developer APIs and list our products in the store. If we are unable to use the Developer APIs from Apple then it will restrict our ability to offer a streamlined development and deployment methods for products.	\$ -	\$ -	4,712 \$	4,619 \$	4,529 \$	4,440
Augmented Reality/Virtual Reality (AR/VR) Developer Kit Licenses - Apple	This item is to stand up support, buy any licensed software we would need and bring these devices into SCE IT. This would also be to develop the capability to support Meta, Apple, and Microsoft devices. Without this item the cost for purchasing the AR/VR devices may not be fully realized.	\$ -	\$ -	9,423 \$	9,238 \$	9,057 \$	8,880
Augmented Reality/Virtual Reality (AR/VR) Developer Kit Licenses - Meta	This item is to stand up support, buy any licensed software we would need and bring these devices into SCE IT. This would also be to develop the capability to support Meta, Apple, and Microsoft devices. Without this item the cost for purchasing the AR/VR devices may not be fully realized.	\$ -	\$ -	9,423 \$	9,238 \$	9,057 \$	8,880
Augmented Reality/Virtual Reality (AR/VR) Developer Kit Licenses - Microsoft	This item is to stand up support, buy any licensed software we would need and bring these devices into SCE IT. This would also be to develop the capability to support Meta, Apple, and Microsoft devices. Without this item the cost for purchasing the AR/VR devices may not be fully realized.	\$ -	\$ -	9,423 \$	9,238 \$	9,057 \$	8,880

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Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Cloud based Mobile test platform - Unified Functional Testing (UFT) Mobile/Other Saas : Cloud-Hosted Devices Solution	The Micro Focus® UFT Mobile cloud devices lab extension allows users to include real devices hosted privately in the cloud by Micro Focus Software as a Service. This enables users to interact with a larger selection of devices and achieve maximum device coverage, without having to deal with procuring, configuring, and maintaining all of the devices needed for testing.	\$ -	\$ -	\$ 235,581	\$ -	\$ -	\$ 221,993
Swift Migration - CraftComm	This effort is to migrate code base from React Native (RN) to Swift and move from RN based libraries to Swift based native libraries. We need to drop support for Android and start supporting Apple / iOS devices only. This work would be to do this transition and eliminate the technical debt associated with the Android platform. Without this effort, costs will continue to be incurred for Android devices.	\$ -	\$ -	\$ 103,655	\$ -	\$ -	\$ -
Micro Focus® UFT Mobile (UFTM) device refresh	This effort is to upgrade UFTM connected devices. This item is to transition test scripts over to Continuous Integration pipeline scripts that use Apple's cloud test environment instead of having to pay and continue to support our own.	\$ -	\$ -	\$ -	\$ 27,715	\$ -	\$ 72,208
Micro Focus® UFT Mobile (UFTM) License renewal	This effort is the renewal of UFTM Enterprise license & support. This item is to transition test scripts over to Continuous Integration pipeline scripts that use Apple's cloud test environment instead of having to pay and continue to support our own.	\$ -	\$ -	\$ -	\$ 600,500	\$ -	\$ 310,790
Micro Focus® UFT Mobile (UFTM) upgrade	This effort is the upgrade UFTM to major version. This item is to transition test scripts over to Continuous Integration pipeline scripts that use Apple's cloud test environment instead of having to pay and continue to support our own.	\$ -	\$ -	\$ 94,232	\$ -	\$ 90,573	\$ -

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Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Citizen Development - Power Platform ongoing governance/operations	This would be to support and fund staff and efforts to support the Power Platform for Citizen Development. With this item, the proper governance and operations would not be in place to mitigate risks and ensure stability of the platform.	\$ -	\$ -	\$ 254,427	\$ 249,438	\$ 244,547	\$ 239,752
Custom applications – ACDC, C3 Small Tools ongoing operational support and enhancements	ACDC- Custom Mobile App supporting the capture of asset information via a bar code scan, currently used for Remote Fault Indicator (RFI) installation C3- Custom Mobile App supporting automated updates of estimated restoration times for outages from the field Small ToolsApp developed on Power Apps to electronically capture small tools that are taken out of the tool room and person who took them This effort is to establish support for applications used to capture asset information, estimate restoration times and ensuring the necessary equipment is available. Without this effort, these processes would need to be completed manually.	\$ -	\$ 144,175	\$ -	\$ -	\$ -	\$ -
Subscription Custom applications subscription costs	This item is related to the subscription costs for ACDC and C3 applications. Without this item, the processes described above would need to revert to manual efforts consuming more resources.	\$ -	\$ 48,058	\$ -	\$ -	\$ -	\$ -

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Application Refresh Projects Forecast

O&M Project Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Custom applications – Inspect App, Inspect Cam ongoing operational support and enhancements	Inspect App & Inspect Cam - Custom Mobile IOS App Supporting Distribution Ground Inspection VoltVOLT is a web-based annotaon, data labeling, and categorization tool leveraging an open-source image annotation engine (i.e. Microsoft VoTT) used for digitally labeling electric Transmission and Distribution assets. VOLT acts as a centralized repository for annotations for the purposes of enabling easier management and training of Artificial Intelligence / Machine Learning models These applications automate the asset inspection and management processes. Without these applications the processes would need to be completed manually incurring additional resources and increase potential errors.	\$ -	\$ -	16,491 \$	16,167 \$	15,850 \$	15,539
Click Professional Services	The support needed would impact the scheduling of distribution, transmission, civil, apparatus, and metering work and field users will not have work order information to complete work. Any delay of work could have safety implications depending on the work type. Also, the closure of WO will have financial implications as closure date will not be met or completed in a timely manner . For MFO Click, if work type is medical base then it needs to be treated with high priority as turnaround time is 1day.	\$ -	288,351 \$	- \$	- \$	- \$	-
		\$ 5,230,506	\$ 3,898,069	\$ 12,327,593	\$ 11,725,575	\$ 11,596,232	\$ 12,180,427
		Average Normalized (2025-2028)					
		\$11,957,457.00					

Application Refresh Ongoing O&M Workpaper

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Application Refresh Ongoing Maintenance Costs

\$ in Thousands

Application Refresh Ongoing O&M forecast reflect maintenance expenses for OU Capitalized Software projects that are transitioning from capital to O&M, typically after a 5 year pre-paid maintenance and support agreement with the vendor. After this initial 5 year period, SCE is required to pay for ongoing maintenance for these projects using O&M. Application Refresh Ongoing O&M (nominal) is derived as a percentage (~4%) of OU Capitalized Software ("Technology Solutions") historical dollars. Previous authorized amount was ~3% of OU Capitalized software request. We increased an additional 1% to our previous baseline of 3%, to account for growth in the portfolio due to inflation, higher vendor costs, etc.

Please see below for the calculations and conversion to constant dollars.

Calculation Method: Application Refresh Ongoing O&M Forecast (Nominal) is derived based on a percentage of historical recorded Technology Solutions costs 5 years prior, which is the typical cycle for SCE's capitalized software.

For example, to derive the 2025 Test Year Forecast for Ongoing O&M, we take the 2020 Recorded for Technology Solutions [\$98,035], and multiply by 4%, which equals \$4,400 for 2025.

BPG	Technology Solutions Recorded							Forecast	
	2018	2019	2020	2021	2022	2023	2018 - 2023 Total (\$)	2018 - 2023 Total (%)	
Customer Interactions	14,485	8,581	4,207	8,475	20,692	24,073	80,514	11.11%	
Distribution Grid	22,442	19,968	12,148	10,448	4,547	2,670	72,223	9.96%	
Energy Procurement	11,834	11,651	11,011	10,004	6,017	6,828	57,344	7.91%	
Enterprise Support	38,750	33,632	35,339	40,779	58,452	87,466	294,419	40.61%	
Generation	6,352	2,046	4,485	6,451	6,592	5,143	31,070	4.29%	
Resiliency	11,537	8,474	18,290	21,936	9,508	9,906	79,650	10.99%	
Substation	11,382	7,748	5,323	4,884	3,950	6,342	39,629	5.47%	
System Augmentation	4,097	5,504	7,233	14,700	19,531	19,074	70,138	9.67%	
Total By BPG	120,880	97,604	98,035	117,677	129,288	161,504	724,987		
Nominal \$000	Application Refresh Ongoing O&M Forecast								
	2023	2024	2025	2026	2027	2028			
Customer Interactions	218	419	489	538	591	650			
Distribution Grid	196	376	438	482	530	583			
Energy Procurement	155	298	348	383	421	463			
Enterprise Support	797	1,532	1,787	1,966	2,162	2,378			
Generation	84	162	189	207	228	251			
Resiliency	216	414	483	532	585	643			
Substation	107	206	241	265	291	320			
System Augmentation	190	365	426	468	515	567			
Total By BPG	1,963	3,773	4,400	4,840	5,324	5,856			

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Application Refresh Ongoing Maintenance Costs

Nominal \$000		Application Refresh Ongoing O&M Forecast					
BPG	2023	2024	2025	2026	2027	2028	
Ongoing O&M Percentage	2%	4%	4%	4%	4%	4%	
Nominal to Constant Conversion	1.0200	1.0404	1.0612	1.0824	1.1041	1.1262	
Constant \$000		Application Refresh Ongoing O&M Forecast					
BPG	2023	2024	2025	2026	2027	2028	
Customer Interactions	214	403	460	497	536	578	
Distribution Grid	192	361	413	445	480	518	
Energy Procurement	152	287	328	354	381	411	
Enterprise Support	782	1,473	1,684	1,816	1,958	2,112	
Generation	82	155	178	192	207	223	
Resiliency	211	398	456	491	530	571	
Substation	105	198	227	244	264	284	
System Augmentation	186	351	401	433	467	503	
Total By BPG	1,925	3,626	4,146	4,471	4,822	5,200	
Average Normalized (2025-2028)		4,660					

1/ the amount authorized for 2023 in the 2021 GRC was \$3.177 million (2022 constant dollars)

Application Refresh O&M C&PS Workpaper

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Total submitted for SW Maint & Replace GRC inclusion		\$	5,161,348	\$	4,438,850	\$	6,536,458	\$	6,482,939	\$	6,430,470	\$	6,379,029
Initiative Name	Impacts/Justification		2023		2024		2025		2026		2027		2028
CR&B Application Support (AO)	Proprietary functions in SAP ISU (Industry Specific Solution for Utilities) require support from SAP professional services. This support is needed when functional customizations are required.	\$	68,854	\$	-	\$	-	\$	-	\$	-	\$	-
CR&B Infrastructure Support (IO)	This service covers ISU (Industry Specific Solution for Utilities) infrastructure and Database (BASIS) support. There are proprietary functions that cannot be covered by the MSP.	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
ISU Data Archiving	Data archiving ensures we do not run out of table space. Running out of space would cause an unplanned outage which would impact the organization and our SCE customers	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
OpenText Exstream Renewal	Vendor support for the OpenText Exstream product which is used for printing customer letters and bills.	\$	240,607	\$	201,845	\$	235,581	\$	237,890	\$	240,222	\$	242,578
OpenText Document Presentment (DP) Live Support Renewal	Vendor support for the OpenText module used by SAP Cloud 4 Customer (C4C) Call Center Agent to view customer billing statements	\$	96,243	\$	155,269	\$	188,464	\$	190,312	\$	192,178	\$	194,062
Data Quality Initiative	The data quality rules improve overall data quality for third party data sharing, and reduces the amount of manual effort needed to perform data corrections.	\$	336,850	\$	336,409	\$	339,707	\$	343,038	\$	336,311	\$	339,609
Community Choice Aggregation (CCA) - Mass Enrollment Testing/ESP EDI Testing	CCA mass enrollment is critical to the company and the enrollments are mandated by the CPUC. This funding will ensure we have enough resources to meet the demand set by the enrollment schedule.	\$	962,428	\$	437,332	\$	696,557	\$	623,107	\$	560,601	\$	488,935
C4C Quarterly Refresh	The data quality rules improve overall data quality for third party data sharing, and reduces the amount of manual effort needed to perform data corrections.	\$	283,916	\$	298,284	\$	400,487	\$	404,413	\$	408,378	\$	412,382

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
New Meter Testing	This is needed in order to ensure our meters are performing as expected. Critical for our clients that our meters report data accurately.	\$ 192,486	\$ 192,234	\$ 194,118	\$ 196,022	\$ 197,943	\$ 199,884
Training Environment Refresh	Refreshing our training environments allows us to better prepare our clients to use the systems accurately, and better service SCEs customers.	\$ 144,364	\$ 144,175	\$ 145,589	\$ 147,016	\$ 148,457	\$ 149,913
Openlink Professional Services	This is a third party product with customized code provided by the vendor. Openlink is used by SCE for Energy Trading and Risk Management. This proprietary code requires vendor support which cannot be provided by our Managed Services Providers.	\$ 221,358	\$ 221,069	\$ 223,236	\$ 225,425	\$ 227,635	\$ 229,867
Minneapolis Consulting Group (MCG) Professional Services	This is a third party product with customized code provided by the vendor. MCG is used by SCE for Energy Scheduling and Interie tagging to the California Independent System Operator (CAISO). This proprietary code requires vendor support which cannot be provided by our Managed Services Providers.	\$ -	\$ 192,234	\$ 194,118	\$ 196,022	\$ 197,943	\$ 199,884
Interconnect Planning Corporation (IPC) Professional Services	This is a third party product which used to record calls with trading counter parties. These require support from the vendor.	\$ 48,121	\$ 48,058	\$ 48,530	\$ 49,005	\$ 49,486	\$ 49,971
Hydstra Professional Services	This is a third party product which gathers data from the Hydro-electric control systems. This proprietary application requires vendor support which cannot be provided by our Managed Services Providers.	\$ -	\$ 62,476	\$ 63,088	\$ 63,707	\$ 64,332	\$ 64,962

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Click Professional Services	This is third party support for ClickSchedule. The support needed would impact the scheduling of distribution, transmission, civil, apparatus, and metering work and field users will not have work order information to complete work. Any delay of work could have safety implications depending on the work type. Also, the closure of WO will have financial implications as closure date will not be met or completed in a timely manner. For Meter Field Operations (MFO) Click, if work type is medical base then it needs to be treated with high priority as turnaround time is 1 day.	\$ 192,485	\$ -	\$ 188,464	\$ 184,769	\$ 181,146	\$ 177,594
Substation, Engineering, Modeling Tool (SEMT)	SEMT application is an SCE owned application that was developed and enhanced by General Networks. This application strives to assist substation engineers to accurately model existing as well as new designs of substations. The goal is to provide support to the SEMT application clients for critical enhancements and any defects found in the system. If the SEMT is not supported, SCE will no longer be able to procure Human Machine Interface builds for substation and all networking configurations for all devices in the substation will need to be created by hand. This will also mean that substations will also need to have more personnel on shift as a lot of automated functionality is performed by this system.	\$ 144,364	\$ 144,175	\$ 141,348	\$ 138,577	\$ 135,860	\$ 133,196

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Gomocha Professional Services	The support provided by Gomocha would impact the Inspections, Storm Work Order completion, E1P1 Notifications completions of Distribution, Transmission, Substations, Constructions and Maintenance Field users in the Consolidated Mobile Solution application. Any delay of work or additional General Order or CPUC requirement will not be able to accommodate if we do not have the budget available. It will have financial implication and regulatory compliance issue if this has not been completed in a timely manner	\$ 96,243	\$ 96,117	\$ 94,232	\$ 129,338	\$ 163,756	\$ 197,499
Advanced Systems for Power Engineering (ASPEN) Professional Services	Advanced Systems for Power Engineering (ASPEN) is a COTS (Custom Off the Shelf) application. It is used for storing data on relays and related protection equipment for electric utilities and industrial facilities. There are needs to engage vendor for remediating effort to address incompatibility issues in the event of Operating System patches, windows server and database upgrades. Vendor effort is needed to implement enhancement to the application. ASPEN is classified as 'critical' application with Recovery Time Objective of 8 hours. Vendor support might also be required during Disaster Recovery.	\$ 48,122	\$ -	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399
CIRCUIT BREAKER ANALYSIS 4.0 (LENS) Professional Services	This vendor services includes break/fixes or enhancements for CIRCUIT BREAKER ANALYSIS 4.0 (LENS). LENS is used to capture "events" on circuit breakers which gives the Technician some idea of the health of the CB and if maintenance / repair might be required. If a user experiences a LENS "issue" and cannot perform circuit breaker tests using Lens then they cannot really perform their job.	\$ 48,122	\$ -	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Spatial Business Systems (SBS) Professional Services	This vendor services provided by SBS includes break/fixes or enhancements for AUD. AUD (Automated Utility Design) is a system that provides graphical interpretations of OH, Basemap and UG designs. It comprises COT solutions from Autodesk and SBS. There are code customization done by SBS to meet specific requirements for SCE. On-going maintenance of the customization code and COTs solution owned by SBS will require SBS expertise and support. If we don't get the funding, business users will not be able to complete the work to deliver services to customers when SBS customized code fails or when system enhancements are required but we don't have SBS support.	\$ 48,122	\$ 48,058	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399
Spida Professional services	The support needed would impact Pole loading project planning, calculation and costing. Spida application also performs pole loading analysis to meet SCE safety and regulatory requirements. Delay of work would have safety, compliance and financial implications if not met in a timely manner	\$ 48,122	\$ 48,058	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399

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 Constant \$

Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Auto Desk Vendor Support	This vendor services includes break/fixes or enhancements for Auto Desk. Autodesk is needed to provide technical guidance for Vault and AUD. AUD stands for Automated Utility Design and it's a graphical design tool what is supported by both Autodesk and SBS (Spatial Business Systems) products. Autodesk provides AUTOCAD and Vault products that enable users to create new design, check in/out existing designs and store design upon design completion for a work order. If we don't have the funding, business users will not be able to complete the work to deliver services to customers while SCE does not have technical guidance from Autodesk to resolve application issues when needed. □	\$ 24,061	\$ -	\$ 23,558	\$ 23,096	\$ 22,643	\$ 22,199
Primavera/Dynatek Professional Services	This vendor services includes break/fixes or enhancements for Primavera/Dynatek. Primavera is currently being used to manage, plan, and execute 78,000 capital projects across substation, Transmission, and Distribution	\$ 72,182	\$ -	\$ 70,674	\$ 69,288	\$ 67,930	\$ 66,598

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
CYME Professional Services	This vendor services includes break/fixes or enhancements for CYME. CYME is a power system analysis software and an advanced simulation tools that allows modeling capabilities to support the detailed modeling of any distribution and transmission network. CYME is a vendor supported application. All changes are done by Vendor. This cost is for vendor to fix production issues and to implement needed business functionality in the production environment. If Cyme C&PS in unavailable and CYME is not available, power engineers will not be able to address daily and emerging issues/challenges in power network planning and operations.	\$ 24,061	\$ -	\$ 94,232	\$ 92,385	\$ 90,573	\$ 88,797
Doble Professional Services	This vendor services provided by Doble includes break/fixes or enhancements for Test Smart Form Tool (TSFT). TSFT project ongoing is the replacement of the existing TSFT tool with two commercial-off-the-shelf packages from Doble called PowerBase and RTS. Doble Protection Suite is the software solution that SCE utilizes to test, capture and store test results for Protective Relay devices and other auxiliary devices on Edison Transmission and Execution Grid. This is COTS application.	\$ -	\$ -	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Service Management Professional Services (Asset Management & Work Management)	Resources are required to support service management activities for asset management & work management applications. This includes supporting corporate major programs (PSPS, Wildfire Mitigation, Grid Resiliency, Electric Asset Data). They provide oversight and strategic direction to MSP including accountability for MSP outcomes – service quality. Ensure client satisfaction and address client escalations.	\$ 288,728	\$ -	\$ 282,697	\$ 277,154	\$ 271,719	\$ 266,391
Data Quality	Data quality is required to support major asset types and enhance the systems, processes and governance required to properly capture and maintain data moving forward. This includes prioritization, and remediating priority asset types (including high fire poles and wires). Improve overall data quality and reduce the amount of manual effort needed to perform data corrections.	\$ -	\$ -	\$ 659,626	\$ 646,692	\$ 634,012	\$ 621,580
Salesforce Professional Services	This is for support from the vendor for consulting on the Salesforce platform which hosts critical applications to our business. If there are issues that cannot be addressed by MPSS then there could be unavailability and degraded performance on this platform which will impact applications that support activities for Wildfire. There are also other applications on the platform and their business processes that would be impacted, such as: Arbora (Vegetation Management), Inspectforce (Inspections of T&D assets), Worklit and Digital Morning Shuffle Crew Board (DCB) (Work Management).	\$ -	\$ 211,457	\$ 301,543	\$ 295,631	\$ 289,834	\$ 284,151

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Power Plant Premier Support	Required yearly for custom code fixes and enhancements. Power Plan Premier Support contract is required for in-flight fixes within the Plant, Tax, and Lease modules. PowerPlan is currently vendor supported, all of these fixes require this extra support due to the complexity of these areas that may include custom code and the need for additional enhancements. This type of support is not covered under standard support. These fixes have financial impacts that could cause issues during routine month end closes. Premier Support is required to work through any problems that may develop.	\$ 438,867	\$ 451,749	\$ 442,891	\$ 434,207	\$ 425,693	\$ 417,347
Cloudera Professional Services	The vendor services from Cloudera are required support Hadoop. Hadoop platform support 40 plus applications of different Line of Business (LOB) and self-service reporting which is used for various regulatory and critical data sharing . If Cloudera professional support is not extended it will impact data sharing and self-services due to platform issues .	\$ 202,110	\$ 173,010	\$ 169,618	\$ 166,292	\$ 163,032	\$ 159,835
Talend Professional Services	Consultation for Talend Cloud migration, DevOps and Microservices architecture. Talend is an ETL(Extract Transform and load) tool that provides solutions for data integration, data quality, data preparation, big data, and application integration. The big data and data integration tools of Talend are extensively used.	\$ 38,497	\$ 38,447	\$ 37,693	\$ 36,954	\$ 36,229	\$ 35,519

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Staff Augmentation SharePoint Service Manager	Backfill for SharePoint Service Manager and supporting number of critical HR applications like Payroll, Time, Employee Master etc. This service manager will support SAP Human Capital Management, SAP Payroll, SAP Disability Management, SAP Tax Engine, Taleo Recruiting, Org Publisher, Everbridge Emergency Management, Aspect Call Center Scheduling for HR Employee Information Center, Syntellect Case Management, Call Recorder, Conduent benefits, SharePoint.	\$ 240,607	\$ 240,292	\$ 235,581	\$ 230,961	\$ 226,433	\$ 221,993
Staff Augmentation HR Service Manager	Backfill for HR Service Manager and supporting number of critical HR applications like Payroll, Time, Employee Master etc.	\$ 240,607	\$ 211,457	\$ 235,581	\$ 230,961	\$ 226,433	\$ 221,993
SAP - Utilities International Inc. (UI) Planner	The services for UI Planner is for the upgrade as well as vendor maintenance and support when required. UI Planner provides unique capabilities for Long Term Financial planning which includes establishing & managing Utility specific Financial Model, regulations & associated accounting processes. As an industry leading tool, UI Planner has preconfigured calculations (in the areas of actualization, forecasting, revenue recognition, financing, income tax etc.) based on best practices across many utilities in United States and this also helps ensure faster updates to model the latest tax laws within the application. Existing 2-dimensional UI Planner Financial Model is reaching end-of-life in 2023.	\$ 48,121	\$ 48,058	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
Ventiv Professional Services	This is a vendor that hosts and provides support for our IVOS application which is for worker's compensation. This support is for additional changes or activities that are required outside of our normal maintenance contract. This is needed for changes and requirements necessary due to compliance and other business critical decisions.	\$ 48,121	\$ 38,447	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399
Intelligent Online Analytical Processing (IOLAP) Professional Services - Snowflake Migration	Required to establish standards & governance, provide consultation and control on projects/ enhancements in data and analytics space to ensure quality, design efficiency and operational effectiveness	\$ 216,546	\$ 144,175	\$ 141,348	\$ 176,270	\$ 172,813	\$ 207,118
TIBCO EBX-MDM (Master Data Management) tool	TIBCO EBX-MDM is a Master Data Management software. Delay in upload of Contracts, Resource, Meter and Locations master data will impact settlement process and EPM users.	\$ -	\$ 57,670	\$ 56,539	\$ 55,431	\$ 54,344	\$ 53,278
Tagetik Professional Services	This is a vendor that supports COBRA process. The Consolidated Omnibus Budget Reconciliation Act (COBRA) gives workers and their families who lose their health benefits the right to choose to continue group health benefits provided by their group health plan for limited periods of time under certain circumstances such as voluntary or involuntary job loss, reduction in the hours worked, transition between jobs, death, divorce, and other life events.	\$ -	\$ 73,052	\$ 150,489	\$ 147,538	\$ 144,645	\$ 141,809
SNOWFLAKE Professional Services	Snowflake professional services is required to mitigate platform and migration issues. It will have delay on Hadoop decommission plan, building new applications and data sharing requirements.	\$ -	\$ 96,117	\$ 94,232	\$ 92,385	\$ 128,266	\$ 125,751

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Initiative Name	Impacts/Justification	2023	2024	2025	2026	2027	2028
TCL - Mitrastech Professional Services	This is the vendor that supports the invoicing for Legal services. This expertise required for support in defect resolution on their product as well as mandatory changes to do business and compliance reasons for the product.	\$ 48,121	\$ 19,223	\$ 47,116	\$ 46,192	\$ 45,287	\$ 44,399
Annual RFgen Maintenance Service (for 2022 and onwards)	RFgen is a mobile data collection software. Untimely support from RFgen may cause a delay in processing inbound material handling. No other off-the-shelf software have similar capability to support SCE's functionality.	\$ 9,913	\$ 9,900	\$ 9,706	\$ 9,516	\$ 9,329	\$ 9,146
Totals		\$ 5,161,349	\$ 4,438,850	\$ 6,536,458	\$ 6,482,939	\$ 6,430,470	\$ 6,379,028
		Average Normalized (2025-2028)					
		\$6,457,223.83					

Application Refresh Capital Workpaper

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	\$ 43,588,512 2023 Refresh Cost	\$ 28,320,092 2024 Refresh Cost	\$ 58,200,649 2025 Refresh Cost	\$ 52,074,981 2026 Refresh Cost	\$ 70,079,780 2027 Refresh Cost	\$ 56,411,175 2028 Refresh Cost
SailPoint	This refresh is part of maintaining and conducting major version upgrades of the core IGA (Identity Governance & Access) platforms at SCE. The major refresh schedule is set for every 2 years.	Loss of vendor support for critical component for Identity, Account Management, Onboarding, and SOX/NERC CIP Compliance. Risk of stability in platform and operational availability in support compliance and enterprise processes.	\$ -	\$ 2,000,000	\$ 873,612	\$ 2,500,000	\$ -	\$ 3,000,000
Microservices – Spring boot library Upgrade	This is a development tool needed to make changes to the SCE.com. There is a major difference between the currently used version and the latest stable version. Therefore, it is recommended to upgrade the libraries. The old version is already out of support.	This is needed in order to receive vendor support. Without it we may not be able to make transactional changes to SCE.com website for our customers.	\$ 155,000	\$ -	\$ 155,000	\$ -	\$ 155,000	\$ -
SCE.com PSPS/Wildfire Initiatives & Various Support Tracks	These efforts allow us to deploy enhanced monitoring and reporting to support PSPS wildfire events.	This is needed to support outages and PSPS events. In the event we have unplanned or planned outage, we must have our darksite up so that our customers can still receive updates regarding PSPS events.	\$ -	\$ -	\$ 424,000	\$ 549,000	\$ 549,000	\$ 732,626
SCE.com PODS Capacity Increase (vNet Rebuild)	This initiative is to increase the IP Address range for the clusters, so that we have required ability to increase the POD (cloud container units) based on user traffic. This activity requires assessment after every major initiative in order to keep the site optimal.	If we do not expand we will run out of available space. This will cause a cascading performance issue across sce.com development environments. We would not be able to continue to develop /support the platform. We would not be able to provide new or updated content in SCE.com for our customers	\$ 1,140,000	\$ -	\$ 1,118,000	\$ -	\$ 1,641,600	\$ -
MDMS Tech Refresh	Meter Data Management System stores meter data from smart meters and provides usage information to billing system (ISU). This MDMS upgrade is a prerequisite to ISU upgrade. Upgrade to ensure that we continue to run on a vendor supported version	Need to keep current in order to retain vendor support. Without vendor support we might not be able to restore service which would impact billing, and our ability to share usage information with our customers.	\$ 3,504,000	\$ -	\$ -	\$ 5,950,000	\$ -	\$ -

Application Refresh Capital Forecast

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Industry Specific Solution for Utilities (ISU) Tech Refresh including DP Live Upgrade	SAP-ISU is customer service solution for customer interaction, usage billing, payment and collections, and metering devices. Upgrade to ensure that we continue to run on a vendor supported version	Need to keep current in order to retain vendor support. Without vendor support we might not be able to restore service which would our ability to services our customers. Everything from move-in to move-out, to outage communication, to billing and payments would be impacted.	\$ -	\$ -	\$ 11,150,000	\$ -	\$ -	\$ 12,350,000
Network Management System (NMS) 7.0 to 7.2 (or applying 7.0 SP4 Hotfix 2)	Network Management System (NMS) is a collection engine that manages communication with Edison SmartConnect meters to transmit and receive data. Upgrade to ensure that we continue to run on a vendor supported version	Need to keep current in order to retain vendor support. Without vendor support we might not be able to restore service which would impact billing, and our ability to share usage information with our customers.	\$ -	\$ 5,428,346	\$ -	\$ -	\$ 8,400,000	\$ -
OT (Open Text) Exstream Upgrade	OpenText application is used for customer bill printing and bill presentment in SCE.com	Need to keep current in order to retain vendor support. Without vendor support we might not be able to restore service which would impact our ability to print customer letters, and customer bills.	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,650,000	\$ -
Smart Connect Monitoring and Analysis System (SCMAS) Upgrade	The SCMAS (Smart Connect Monitoring and Analysis System) web application is used as a focal point to manage incidents, create ad-hoc NMS (Network Management System) jobs, perform Template management, and provide System Administration features	This is intended to refresh the solution which will replace SCMAS. This tool will allow our Advanced Metering Organization (AMO) to continue to safeguard and monitor our advanced meter infrastructure. The SCMAS replacement will be addressed in the Smart Meter Advanced Analytics (SMAA) project that will decommission SCMAS	\$ -	\$ -	\$ -	\$ -	\$ 3,325,000	\$ -
Cell Relay Availability (CRA)+ Cell Relay Configuration Management (CGM) Upgrade	CRA (Cell Relay Availability System) performs the scheduled jobs of communicating with cell relays to get the data which is used for visual tracking of cell relays function	This is related to our cell relay used for collecting data from the meters. Need to keep current in order to retain vendor support. Without vendor support we might not be able to restore service which would impact billing, and our ability to share usage information with our customers.	\$ -	\$ -	\$ -	\$ 2,000,000	\$ -	\$ -
Upgrade Java Development Kit (JDK) and .Net for SCE Energy Procurement Applications	Upgrade all the in-house grown application to latest Java Development Kit (JDK) and .Net version	Needed in order to comply with cyber security standards. If we run an outdated version, it puts us at risk for a cyber related event. We need to stay current in order to continue to receive vendor security patches.	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ -
Settlecore Application Refresh	Upgrade Settlecore from thick client to Web based application	This is needed to process settlements with CALISO and counter parties	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ -

Application Refresh Capital Forecast

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Commodity Management Platform (CMP) - Endur Grid Engine - Migration from Script Engine	Migrate Endur service to use Grid Engine. CMP-Endur is Energy Trading and Contract settlement Migration from Script system	This is SCEs primary energy trading system. This is needed in order to ensure we are able to provide energy to our customers	\$ -	\$ -	\$ -	\$ -	\$ 950,000	\$ -
Commodity Management Platform (CMP) - Endur Upgrade	Upgrade Endur to Version 22.	This is SCEs primary energy trading system. This is needed in order to ensure we are able to provide energy to our customers	\$ -	\$ -	\$ -	\$ 2,375,000	\$ -	\$ -
Rome Upgrade	Upgrade ROME to release 11. Rome is Credit and Collateral Management system	This is Energy Procurement Management (EPMs) risk management system. This is needed in order to assess the risk of counter parties. Not having this functional could put us at risk of not being able to provide energy.	\$ -	\$ -	\$ -	\$ -	\$ 747,500	\$ -
Generation Revenue Metering System (GRMS) (MV90) Upgrade	Upgrade MV90 GRMS to Latest version.	This is needed to read meter data from the generation sites. We need this in order to submit data to CALISO.	\$ -	\$ -	\$ -	\$ -	\$ 661,250	\$ -
Transmission & Distribution Non-Geographic Information System (GIS) Asset Management Refreshes	This effort is for the upgrades of: General Electric Smallworld (GESW), Spatial Business Systems, Operational Data Store/Feature Manipulation Engine, Map3D, Outage Database and Reliability Metrics (ODRM), LandVision	If these applications are not upgraded, Log4j and Java vulnerabilities will remain. Delay or unavailability for Business to maintain circuit map data, streetlight map data, transmission and distribution assets. Additionally, there will be continued compatibility issues with Oracle 19c. Impacts ability to record mapping updates to reflect asset and connectivity changes as a result of safety issues for field employees when maps do not reflect current field conditions. This will induce data latency and data integrity issues across integrated systems, that will increase work duplication and degrade performance. Users are currently experiencing ~500 of crashes a month increasing the time needed perform their work. Delays and manual effort of performing the final steps of qualifying and validating outage result for reporting to the CPUC if these applications are not upgraded.	\$ 700,000	\$ -	\$ 1,000,000	\$ 1,758,304	\$ 1,500,000	\$ 1,000,000

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Transmission & Distribution Geographic Information Refreshes	This effort is for the upgrades of: ArcGIS, SCEGeoview	If these applications are not upgraded: - There would be delays or be available for Business resiliency Team to provide the 5-day weather forecast data which helps on predicting and planning for a PSPS Event. Timely notifications are sent to the SCE present and proposed customers. - There will be delays or be unavailable for T&D grid operations team. It is used by Grid Operations during the PSPS to constantly monitor circuits if they are partially and fully de-energized. - There will be delays or impacts in managing PSPS event by Public Safety Partners in accessing SCE data. - There will be have delays or be unavailable to manage Grid radio devices. - There will be delays or be unavailable for Safety and Environmental OUs to create report for Incident Management, Safety Observation, Hazardous Waste Management, and Environmental Clearance applications. - The business would lose ability to visualize assets and attributes from a GIS mapping perspective. Being able to visualize assets in relation to High Fire areas, Bulletin 322, and flagged with Safety and Customer (i.e., Redlist) implication is essential for field and office personnel. This would limit ability to initiate Distribution and Subtransmission Capital work with existing geo-referenced assets and connectivity, extending the Work Order Design processes and mapping updates upon completion of the work. Time cannot create new WOs for	\$ -	\$ 2,360,000	\$ 4,500,000	\$ 6,300,000	\$ 6,600,000	\$ 4,750,000

Application Refresh Capital Forecast

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Transmission & Distribution Engineering & Planning Refreshes	This effort is for the upgrades of: Distributed Energy Resource Planning External Portal (DRPEP), Grid Interconnection Processing Tool (GIPPT), Grid Analytics Tool (GAT), Cyme, Grid Connectivity Model (GCM)	If these applications are not upgraded risks would include SCE would be non-compliant to CPUC and limit SCE's efforts to support customer use of clean energy technologies, streamline the interconnection process, and help California meet its clean energy goals. These applications are needed to provide public access to SCE's integration Capacity Analysis (ICA) for each line section or node in the distribution system and to perform the Commission-approved Locational Net Benefit Analysis (LNBA) methodology in our distribution systems. Additional impacts include SCE would be inhibited in the ability to support the timely processing of external Customer submissions of requests to interconnect Distributed Energy Resources (DERs) to SCE's electrical system under SCE's interconnection tariffs. These applications streamlines the complex end-to-end cross organizational and generation interconnection processes and centralizes the DER information captured during these processes.	\$ -	\$ -	\$ 500,000	\$ 1,200,000	\$ 500,000	\$ -
Transmission & Distribution (T&D) Grid Resilience Refreshes	This effort is for the upgrades of: Public Safety Power Shutoff (PSPS), Vegetation Management, GRViewer	If these applications are not upgraded, the vendor support would expire. Risks to the applications include: - There will be delay or unavailability for Business resiliency Team to provide the 5-day weather forecast data which helps on predicting and planning for a PSPS Event. Timely notifications are sent to the SCE present and proposed customers. - There will be delay or unavailability for T&D grid operations team. It is used by Grid Operations during the PSPS to constantly monitor circuits if they are partially and fully de-energized. - There will be delay or impact in managing PSPS event by Public Safety Partners in accessing SCE data.	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ 500,000

Application Refresh Capital Forecast

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Transmission & Distribution (T&D) Field Application Refreshes	This effort is for the upgrades of: Consolidated Mobile Solutions (CMS), Aflaria, Field Automated Test System (FATS), Electrical Metering Services Tracking System (EMST), Inspect Cam, Inspect App, C3 (customer Crew Connect), ACDC (Asset Complete Data Capture), Bolt AI Learning, Small Tools- Golden Gem, Advanced Systems for Power Engineering (Aspen), Test Smart Form Tool (TSFT/DOBLE), Transmission Circuit and Transmission Single Line, Field Mobility Portal 360 (FMP360)	If upgrades are not performed for these applications, then impacts would be seen in the inspections, work order completion, and E1P1 Notifications completions, meter engineering to provide designs for new complex metering would be impacted, and the tools that manage the devices in the field would not be able to perform the activities.	\$ 1,500,000	\$ -	\$ 4,250,000	\$ 1,500,000	\$ 500,000	\$ 2,500,000
Transmission & Distribution (T&D) Desktop Application Refreshes	This effort is for the upgrades of: CIRCUIT BREAKER ANALYSIS 4.0 (LENS), Design Manager (DM), Automated Utility Design (AUD), SPIDA	If upgrades are not performed for these applications, then the ability to create and design work will stop, circuit breaker health will be unavailable to field crew, pole project planning, calculations, and costing would be unavailable, work order management and pricing would be impacted.	\$ 3,084,329	\$ 91,746	\$ 6,750,000	\$ 2,600,000	\$ 3,900,000	\$ 4,250,000
Accellion Cloud Migration/Modernization	Kiteworks is a highly scalable and secure mobile file sharing and collaboration platform. Kiteworks is the new name for Accellion. SCE uses Kiteworks to distribute Large CPUC data files with affiliate companies (external OC firms, parties and business). The application provides secure way to share file with various CPUC parties also can handle large data. SCE uses Kiteworks to distribute Large CPUC data files with affiliate companies (external OC firms, parties and business).	Currently, SCE is using a On Premise unix server to host the application however vendor also offers their cloud platform. Aligned to SCE's cloud road map, SCE will move the application to vendor supported application for better accessibility, availability, performance, DR and wants to release the OnPrem Infra and related Opx and Capx. If we do not execute this project, SCE will keep on incurring infrastructure related costs for the server and users will also not be able to explore the full potential of the cloud platform.	\$ -	\$ 100,000	\$ 240,000	\$ 1,000,000	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Application Programming Interface (API) Connect version Upgrade/Modernization	This is the IBM tool used to design and manage API lifecycle and assists in creating self-service APIs.	By not upgrading, this will lead to losing IBM vendor support. IBM will not provide any support for the bugs raised due to IBM API current version which will lead to business disruption of application functions and sce.com being the primary one. Functionality on sce.com likes user detail service like address update, contact detail, account summary detail, bill submission, bill recalculation summary etc will be impacted. There are 100+ API up and running at present in production. API is an enterprise tool for API management used across all the OUs.	\$ -	\$ -	\$ 300,000	\$ -	\$ 300,000	\$ -
Account Payable System (APS) Merge with IVOS	Account Payable System (APS) application is used to transfer the account payable data between IVOS and SAP. This is a Window Console application. APS application are mainly used by worker compensation department to generate the invoice details file from IVOS for SAP and also to generate the Check Status file for IVOS from SAP.	During IVOS migration IVOS Cloud - On Premise SAP Integration module APS was developed as a desktop application. This project will move APS to IVOS cloud. If we do not execute this project, APS and IVOS will remain as separate modules and maintaining them might be difficult and costly in comparison to having them integrated as a single application in cloud.	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -
SAP Business Objects (BOBJ) Upgrade & Expansion	This effort is to upgrade BOBJ to market -1 version and plan move to cloud. BOBJ is the enterprise reporting tool for SCE. All critical, operational and strategic business reports are on SAP Business Objects (BOBJ) platform.	BOBJ is used for most enterprise reporting and needs to be kept on market -1 version to ensure compatibility and vendor support. If the product falls out of vendor support, it poses a risk of unplanned downtimes and lack of vendor support for the platform. The business impact is unavailability of all reports supporting the Human Capital Management, Finance, Operations, T&D, Fleet management and Customer service reporting. It will basically impact all data based decision making capability of SCE as an enterprise.	\$ -	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 500,000

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Business Warehouse Support Pack (BW SP) Upgrade validation	SAP BW is the main enterprise data warehouse at SCE supporting all data and analytics modeling, reports and applications across enterprise functions such as HR and Finance. SAP BW system is used as the enterprise data warehouse for all enterprise data sets in SCE. The SAP BW platform needs to be upgraded to market -1 version for it to be adequately supported	If not upgraded, the SAP Business Information Warehouse data warehouse environment runs the risk of falling out of vendor support. It also exposes the data warehouse environment to security risks due to vendor provided patches for new vulnerabilities being unavailable. This platform will have a direct impact of most enterprise business processes including but not limited to HR reporting, Financial reporting, Customer service analysis and reporting, Enterprise Asset master data reporting, Business Consolidation Service, Finance month end close reporting.	\$ -	\$ -	\$ 300,000	\$ -	\$ 300,000	\$ -
ASPECT Workforce Management/ Quality Management Server (QMS) / Contact Center Enterprise Version 10 (CCE10) application upgrade	ASPECT is a comprehensive resource planning and staff management system that gives you the tools you need to achieve your contact-center sales and service goals at the lowest cost. Syntellect CCE10 enables user to fully control a universal queue of customer interactions of all types, including telephone and interactive Voice Response (IVR), voice mail, email, web chat, web transactions, fax and agent tasks. QMS is a part of CCE10	These products were last upgraded in 2022 and is due for an upgrade in 2025. If these products are not upgraded on time, they will be out of vendor support and may cause business impact in case of any critical issue.	\$ -	\$ -	\$ -	\$ 1,130,000	\$ -	\$ -
Claims Information Management system (CIMS) Search and Mobile enablement	Claims Information Management system (CIMS) is a system to manage the Claims (Collections and Liabilities) used by the SCE Legal Organization Claims Division. CIMS is the system of records for thousands of incidents logged each year and its resulting Claims.	CIMS has moved to Cloud (Azure & SharePoint). As SharePoint0365 also offers Mobile enablement, SCE will also add this functionality to enable various user actions on the go. If we execute this project, it will reduce the cycle time of claim lifecycle, improve searchability, productivity and increase the throughput, thus improving customer satisfaction.	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Compulaw Web Migration	Compulaw is a third party Commercial Off the Shelf (COTS) Application developed by Aderant which is also referred to as Docket Management System. This product is used for the creation of Court Calendars based on the court rules. The main purpose behind installation of the system was to ensure that the Court deadlines are never missed. This system also helps the Timekeeper to keep the Attorneys on check.	SCE is currently using old Compulaw desktop version which is placed in an 2008 R2 server file share. However, the vendor already offers their web and cloud version of this same product which are based on most recent technologies and architecture and with many new features. If we do not execute this project, the current OnPrem version will be more challenging and costly to maintain and more vulnerable to cyber risk.	\$ -	\$ 120,000	\$ -	\$ -	\$ -	\$ -
DataPower Modernization OpenShift	IBM DataPower Gateway is a single gateway platform that helps provide security, control, integration, and optimized access to workloads across multiple business channels. These channels include mobile, web, application programming interface (API), service-oriented architecture (SOA), B2B, and cloud.	Moving DataPower to RedHat OpenShift will help free up on-premise resources and improve the integration architecture for the cloud to cloud integration scenarios. IBM OpenShift provides offerings like Containerization thereby reduces the hardware & licensing cost. It also provides features for cloud gateway. Without the DataPower modernization, SCE will continue to pay higher licensing cost. Resources scaling up and down will be effort and cost intensive.	\$ -	\$ 2,000,000	\$ 500,000	\$ -	\$ -	\$ -
SAP Data Intelligence (DI) Migration for SAP Business Objects Data Services (BODS) Cloud connectors	DI is the enterprise Extraction-Transformation Loading (ETL) cloud tool of choice and all workloads need to be migrated to DI from on prem systems. This requires connectivity with existing on prem counterpart ETL tools such as BODS to execute on prem workloads as a sub part of DI.	Without the implementation of BODS cloud connectors in SAP Data Intelligence, the corresponding ETL processes will be impacted. This includes all ETL between Hadoop and HANA environments, non-SAP to HANA environments, Remedy data to HANA pipelines. Etc. having a direct impact on warehousing and reporting across these areas. It will also impact processes such as Call Miner and all service management reporting across SCE.	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
SAP Data Intelligence (DI) Migration for Information Steward (IS)	DI is the enterprise Extraction-Transformation Loading (ETL) cloud tool of choice and all workloads need to be migrated to DI from on prem systems. IS is the Data Quality (DQ) tool of choice currently which needs to be migrated over to DI on cloud for future proofing purposes as well as long term sustainability	SAP Data Intelligence is the enterprise ETL cloud tool of choice and all workloads need to be migrated to DI from on prem systems. If SAP Information Steward jobs and data quality rules are not migrated, it poses the risk of having these rules not supported by the vendor anymore, thereby impacting overall data quality across environments in SCE. It will impact data quality in areas such as Customer Service & T&D, across critical processes such as billing, usage, meter interval data. It will also impact SCEs ability to service the regulatory data requirements of its Demand Response Partners.	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ -	\$ -
SAP Data Intelligence (DI)/SAP Business Objects Data Services (BODS)/Information Steward (IS) Upgrade & Expansion	SAP DI / BODS and IS is a combined platform supporting all critical ETL platforms at SCE. BODS / DI are the only ETL tool that SCE uses to integrate its data platforms and move data from source to Data platforms. BODS is used for key ETL jobs and needs to be kept on market -1 version to ensure compatibility and vendor support	SAP DI / BODS and IS is a combined platform supporting all critical ETL platforms at SCE. Not keeping this platform upgraded and sized appropriately runs the risk of impacting all data pipelines across SCE across functional areas. Any data that has corresponding analysis and reporting needs will be impacted across CS, T&D, Enterprise areas. It also exposes the ETL pipelines to future vulnerabilities due to unavailability of vendor provided patches.	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000	\$ -
Data Warehouse Cloud (DWC) migration for HANA Self Service	DWC is the cloud platform of choice for self-service modeling. Use cases that are in on-premise HANA today need to be moved to DWC	Self-service use cases that are in on-premise HANA run the risk of being unsupported and pose security risks for the larger HANA platform holding critical data across functional areas. It's imperative to move these workloads to DWC both to make them more secure, easier to manage and maintain and more user friendly for end users. Business functions that will have significant impacts are HR reporting including headcount reporting and talent planning, CS reporting across customer process such as billing and usage, products and programs, devices. It also poses risks to IT service and incident management analytics and reports.	\$ -	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Electronic Data Interchange Value Added Network (EDI VAN) (Liaison LENS) replacement	The EDI VAN is simply a secure network where EDI documents can be exchanged between a network of business partners. Replacement of EDI VAN will lead to saving in license cost SCE pays for the 3rd party. Electronic Data Interchange(EDI) Value Added Network(VAN)	Continuing of EDI VAN usage will lead to increase in license cost for SCE	\$ -	\$ -	\$ 400,000	\$ 1,000,000	\$ 400,000	\$ -
High-performance Analytic Appliance (HANA) Expansion / Upgrade validation	SAP HANA (High-performance Analytic Appliance) is a multi-model database that stores data in its memory instead of keeping it on a disk. The SAP HANA platform's needs to be upgraded to market -1 version for it to be adequately supported	HANA data and usage growth will exceed its current capacity by 2025. If the system is not upgraded and expanded, it runs the risk of unplanned downtimes posing risks of unplanned outages. The platform hosts SCE enterprise Datawarehouse environments such as SAP BW and standalone HANA DB for managing Enterprise, CS, T&D and HR data.	\$ -	\$ 300,000	\$ -	\$ 300,000	\$ -	\$ 300,000
Native Storage Extension (NSE) Implementation and rollout	Native Storage Extension (NSE) will allow up to 7 times more storage on HANA using the same infrastructure without over consuming main memory. The current system is up to 60% full and this is an urgent requirement to ensure future sustainability of the platform	HANA on prem is up to capacity and NSE is required to ease the workload on HANA to avoid system risks and downtimes. NSE will allow SCE to retain data older than 1 year on the underlying disks thereby freeing the main memory to hold the most frequently accessed data. This will allow the system to function for longer with the same hardware capacity. Not implementing NSE poses immediate risks of system downtimes due to excessive memory consumption beyond the vendor recommended limits posing a risk to all data warehousing and reporting use cases across SCE.	\$ -	\$ 400,000	\$ 400,000	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
SAP Analytics Cloud (SAC) Migration	SAC is the future visualization tool of choice from SAP and is projected as a future potential replacement for BOBJ for enterprise reporting. Once it gets tested and established, a migration of existing use cases will allow us to decommission on premise infrastructure	Not moving away from BOBJ to SAC will be costly since we will be required to maintain both on prem as well as cloud platform. It also poses the risk of falling behind in terms of available feature sets and functionality. SAC is expected to support all critical dashboarding and storyboarding needs for SCE including all HR reporting in the future based on data from SuccessFactors. SAC will also host critical planning process across Finance and HR for Headcount. Not migrating and expanding the SAC platform will pose a direct risk to HR, Finance and planning processes for SCE.	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ -	\$ -
SAP PO- Service Pack Upgrade	SAP PO is the integration component SAP uses to send various functional data from SAP to other non-SAP system. For example SAP ECC (ERP Central Component) sends outgoing payment information to different banks like JPMC, PNC, Wells Fargo etc. It also integrate with Design Manager for process like create/update workorder, notification , material master data etc.	The new features/fixes of SAP PO service pack will not be available. Product will be out of support for these new features.	\$ -	\$ -	\$ 335,000	\$ -	\$ -	\$ -
SAS Grid / Statical Software (SAS) Viya Upgrade/Modernization	SAS Grid / Statical Software (SAS) Viya data visualization for Business	SAS system performance will degrade with increasing user base	\$ -	\$ 250,000	\$ 100,000	\$ 2,000,000	\$ -	\$ -
Sterling Managed File Transfer - Rearchitect/Modernize(Cloud)	Application used for the intra/intercompany encrypted Electronic Data Interchange (EDI) files and other file transfer activities	Without the MFT modernization, SCE will continue to pay higher licensing cost. Resources scaling up and down will be effort and cost intensive. There will be no zero-down time deployment.	\$ 1,000,000	\$ 2,000,000	\$ 500,000	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
TM2 Tariff Manager upgrade / replacement	Tariff Manager 2 (TM2) supports the Utility's Regulatory department(s) in the preparation, management, and retention of CPUC advice letter filings. TM2 provides tools that support the process of cancellation, editing, composition, and publication of these complex documents. TM2 also automates the publication of both submitted filings and the tariff book to Utility websites, saving significant personnel resources while helping to ensure that the Utility remains in compliance with CPUC posting requirements.	Current TM2 version is out of vendor support and cannot be sustained due to old technology and vendor went out of business. If this application is not replaced/rebuilt or if it breaks down Regulatory department will be at great risk of not meeting CPUC compliance deadlines and the possibility of penalty. Also, a manual work around would need hiring of several employees to handle the incremental work. Hence this product needs to be upgraded or replaced to ensure this does not breakdown and SCE remain in compliance with CPUC posting requirements.	\$ -	\$ 700,000	\$ -	\$ -	\$ -	\$ -
Utilities International Inc. (UI) Planner upgrade to new B2 solution	Finance Utilities International Planner is a financial tool used by cash management and treasurers in finance department. It is used for financial planning and analysis (for purposes like forecasting, budgeting, etc.). It is considered consistent in applying business logic and integrates financial and regulatory statements.	UI Planner provides unique capabilities for Long Term Financial planning which includes establishing & managing Utility specific Financial Model, regulations & associated accounting processes. As an industry leading tool, UIPlanner has preconfigured calculations (in the areas of actualization, forecasting, revenue recognition, financing, income tax etc.) based on best practices across many utilities in United States and this also helps ensure faster updates to model the latest tax laws within the application. Existing 2-dimensional UI Planner Financial Model is reaching end-of-life in 2023. The project will bring the multidimensional UI Solutions Financial Model and will include the upgrade of the Asset Book and Tax solutions. It will help minimize the manual effort and improve processing of complex financial modelling by enabled automated invoices, with improved data accuracy, easier configuration and administration, improved calculations for several key areas (Ledger, Cash Balancing, Bonds, and State and Federal Income Taxes).	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Verint Upgrade	Verint Survey Tool is a vendor supported application which helps user to conduct surveys.	The current Verint Survey application version won't support latest security, application patches which results in cyber threat/risk while using this application. We may see many more vulnerabilities in near future if this application is not upgraded to their latest market version.	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -
Data Power Refresh / Upgrade	There are physical & virtual DataPower gateway which is playing a major security gateway for all the Application Programming Interface (API) calls.	DataPower is an enterprise gateway for all external integration to SCE platform used across all the OUs. Not having upgrade will lead to lack of IBM vendor support.	\$ -	\$ 1,800,000	\$ -	\$ -	\$ -	\$ 3,000,000
Data Strategy	Periodic architectural exercise as part of Analytics Community for Excellence (ACE) governance	New data ingestion, ETL, modeling, reporting and visualization patterns and tool implementations. Not devising and implementing a coherent, uniform and quality oriented data strategy across SCE will impact all decision making capabilities for the organization impacting not just the safety, reliability and compliance to regulatory norms for external reports, but also internal impacts across business functions not being able to have visibility to longer term data trends within their purview.	\$ -	\$ -	\$ 6,425,000	\$ 5,100,000	\$ 5,479,386	\$ 3,750,000
Integration Strategy	This effort included the periodic architectural exercise as part of ICOE governance. Modernization & maintenance of the ICOE (Integration Center of Excellence) tools, pattern, architecture governance and operations.	If this work is not completed, more manual intervention for resources scaling up or down due to lack of cloud adoption, the on-premise tools lead to higher maintenance costs, and without these tools, patterns, and modernizations, features like containerization and zero downtime will not be available.	\$ -	\$ -	\$ 1,000,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000

Application Refresh Capital Forecast

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Data Reconciliation products	Evaluate and move to new Data Quality (DQ) products such as SAP Data Intelligence from the current Information Steward on prem. Also standardize all audit and DW frameworks that have already been implemented	There are multiple DQ initiatives on multiple different tools and platforms as of today and all of them are seeing rapid development. Standardization is required to be implemented now otherwise moving to a new tool at a later stage will become too effort intensive. Supporting the existing DQ infrastructure will also become unmanageable in a few years posing risks to the quality of data available cross SCEs data platforms. This will impact critical functions such as regulatory reporting to DRPs, Customer usage reporting to end customers through sce.com and all data based decision making due to unreliability of data	\$ -	\$ 600,000	\$ 500,000	\$ 500,000	\$ -	\$ -
Click Remediation	Click is used for maintenance and service WO scheduling and crew assignment. This project is to implement a new scheduling application and migrate the functionalities of the outdated Click Application.	Risks of not completing this effort include: maintenance costs, outdated technology, security and compliance risks and loss of vendor support. Impacts t the application would impact: Work Order and business scheduling. Contributes to safety if work orders are not being performed on time.	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -
Ariba/Cloud Intergration Gateway (CIG) Upgrade	The project scope is to upgrade the Ariba / Cloud Integration Gateway System to latest version of the software Middleware	Risk of not performing the upgrade: 1) Frequent system outages. 2) Procure-to-Pay document may intermittently failed. 3) Compliance / Security Risk 4) Unavailability of new functionalities 5) Risk of not getting Vendor Product Support 6) Compatibility / Performance issues	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ 750,000

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
eDMRM Upgrade	Electronic Document Management and Record Management (eDMRM) is enterprise wide repository to store and retrieve business records that includes drawings, notification workflow attachments, PO(purchase order) attachments, all other enterprise wide business related documents. The project scope is to periodically upgrade the eDMRM System to latest version or n-1 version of the software.	The current version is 6 versions back from the latest available version. Product Support has expired for the current version which then causes compatibility issues, performance issues, compliance and security risk and unavailability of new functionalities. Additionally, there is risk of not getting Vendor Product Support, which then the issues we encounter will not be support in case of any critical issues in production environment. This will impact availability of eDMRM application, which means the user cannot retrieve any prior stored information like drawings, PO attachments, notification workflow attachments. Also the field officer's will not be able to upload/download asset images.	\$ -	\$ -	\$ -	\$ 870,000	\$ 635,000	\$ -
Federal Signal version upgrade / Genetec Security Center 5.10 version upgrade	Genetec is physical security monitoring software which is very critical for SCE. This tool have video surveillance capability to detect trespass, gun shooting detection, etc. This project is to periodically upgrade the Federal Signal and Genetec Security Center application - a requirement for physical safety. This application are very critical for SCE physical property security matter. It is also compliance matter.	This application is safety & compliance application. The planned upgrade will improve the current security risks in the application. Risks of not upgrading include: Compliance / Security Risk Unavailability of new functionalities Risk of not getting Vendor Product Support Compatibility / Performance issues	\$ -	\$ 450,000	\$ -	\$ 450,000	\$ -	\$ 450,000
Fieldglass Maintenance/Upgrade	The SAP Fieldglass is a cloud-based Vendor Management System for SCE contingent worker and service providers. Addition to the above Fieldglass supports to manage Statement Of Work with vendors. The project scope is to upgrade the Fieldglass / Middleware System to latest version of the software.	Risks of not upgrading the application include: Unable to transact data to/from Fieldglass Uncertainty in Business Continuity Compliance / Security Risk Unavailability of new functionalities Risk of not getting Vendor Product Support Compatibility / Performance issues	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000

Application Refresh Capital Forecast

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
FIORI Migration/Modernization to Business Technology Platform (BTP)	BTP (Business Technology Platform) is a cloud based platform for application development, analytics and artificial intelligence, automation and integration. Currently Fiori applications are hosted in on-premise Gateway system. As a part of technology modernization and SAP roadmap, the application hosted in on-premise gateway system will be migrated to BTP platform. This project is to migrate the middleware Gateway application functionalities for existing Fiori applications to SAP BTP	Risks of not upgrading the application include: Unable to fully leverage new technology benefits(new function and user friendly look and feel). Risk of older versions (SAP Gateway) going out of support in future. Effects all of the new SAP Development efforts (easier to develop).	\$ -	\$ 850,000	\$ 850,000	\$ -	\$ -	\$ -
Gateway Upgrade	SAP Gateway, an integral part of SAP NetWeaver, lets you connect devices, environments, and platforms to SAP systems. It uses the Open Data Protocol (OData) so you can use any programming language or model to connect to SAP and non-SAP applications. The project scope is to upgrade the Gateway System to latest version of the software	SAP Gateway is used for Fiori mobile application. It is critical to upgrade to avoid compliance / security risk and loss of Vendor Support if we don't upgrade timely.	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
GIS Implementation - Interface Remediation	Project scope to provide the remediation support for GIS implementation and consolidation project.	This interface remediation is necessary for all on Premise Applications. We risk losing Vendor Support if we do not upgrade. There are also compliance impacts if not upgraded timely.	\$ -	\$ 470,000	\$ -	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
GRC Version Upgrade	SAP GRC is compliance management tool which is very critical to SCE. We actively use this application to manage regulatory requirement, compliance control management, and access control management. This Project is for executing a Functional upgrade of the GRC systems	SAP GRC is key compliance management system at SCE. This is critical for SCE to be compliant with many regulatory requirement. Not upgrading will result in: Compliance / Security Risk Loss of Vendor Support, Used by Multiple Compliance Teams Risk of not getting Vendor Product Support Compatibility / Performance issues Risk of not getting Vendor Product Support Compatibility / Performance issues	\$ -	\$ -	\$ 600,000	\$ 800,000	\$ -	\$ 800,000
KOFAX Total Agility Upgrade	KOFAX Total Agility is scanning solution deployed in SCE. Currently, KTA is been used by Legal, Customer Care, T&D, Aircraft Operation for scanning document and uploading in different repositories. The project scope is to periodically upgrade KOFAX Total Agility to latest version or n-1 version of the software.	Browser compatibility issue exists for the current version. The vendor support has expired for the current version. The current version in SCE is 5 versions behind the latest released version. Not upgrading will result in: Compliance / Security Risk Unavailability of new functionalities Risk of not getting Vendor Product Support Compatibility / Performance issues	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -
NERC CIP Upgrade	This Project is to upgrade the NERC CIP SharePoint platform to the latest version. This NERC CIP repository for storing unstructured data	If this upgrade does not occur it will go out of support with Microsoft. Without support SCE will not have an approved NERC CIP repository for storing unstructured data which will cause us to be out of compliance and put our NERC CIP data at risk. These repositories also support Western Electricity Coordinating Council (WECC) audits which are mandatory and the system must be available for our NERC CIP business users.	\$ -	\$ 700,000	\$ -	\$ -	\$ -	\$ -

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Onapsis Upgrade and Remediation	Onapsis is a code scanning tool to ensure the security and quality of SAP codes. Onapsis offers monitoring and protection for SAP and Oracle-based ERP systems. The service includes identifying vulnerabilities in the code, application, or system level. It should help improve ERP performance overall. Onapsis checks for all updates and system changes. This project is to upgrade the Onapsis application to the latest or n-1 version and to remediate the risks arising therefrom.	If this application is not upgraded SCE risks system vulnerabilities to external attacks leading to security risk and breach, compliance and security risk, and risk of losing vendor product support. It's a cyber risk if this application was not available. Business data could be breached if this application was not available to catch malicious and substandard codes in SAP applications	\$ -	\$ 600,000	\$ -	\$ 650,000	\$ -	\$ 650,000
OpenText Bill Presentment & Extended Enterprise Content Management (xECM) Platform Upgrade	SCE Bills are stored in Local Nas in archive Center. Open Text SCE Bill Presentment application will give ability to view the bill via SCE.com The project scope is to upgrade the OpenText Bill Presentment & xECM Platform to latest version or n-1 version	If this application is not upgraded SCE risks call center agents not able to use Edge version due to OpenText compatibility issue, compliance and security risks, unavailability of new functionalities, and risk of not getting Vendor Product Support. If no Edge access is available, call center agent will not be able to see the data to better assist. View bill functionality will be impacted. Hence Edge version should always be compatible for the call center agents to work and provide support.	\$ -	\$ -	\$ -	\$ 800,000	\$ -	\$ -
PowerPlan Upgrade	PowerPlan is a software catering to the needs of Utilities Accounting. It is considered as a critical application required to comply with Financial and Regulatory Reporting needs. SCE mainly uses it as a sub-ledger for Fixed Assets. Currently it is used to house SCE's This project is to upgrade the PowerPlan application to the latest or n-1 version and to remediate the risks arising therefrom.	If this application is not upgraded SCE risks losing Vendor Support for Out of Service Versions, unavailability of new functionalities, and performance issues. Current version of PowerPlan is no longer supported as it hit end of life in December 2022. The extended support was provided due to Premier Support contract. However, the support for the current version will not be extended beyond June 2023 and SCE must upgrade to continue getting support.	\$ 5,040,000	\$ -	\$ 4,500,000	\$ -	\$ -	\$ 4,500,000

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
RfGen (Mobile Data Collection Software) upgrade	RfGen is a mobile data collection software and warehouse automation solutions. This Project is to upgrade RfGen Handheld devices for Stores or the underlying software / hardware to the latest or n-1 version	If this application is not upgraded SCE risks impacting the receiving process at warehouse/storage location, performance issues, longer resolution time, compliance and security risk, and losing vendor product support.	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000
SAP MAX attention	SAP MaxAttention provides an embedded support team, tailored engineering services, enhanced back-office support and attention from SAP executives.	SAP MaxAttention is the premium support plan we use for SAP. It provides us with enhanced support for operations and our projects. This also provides support for projects for analysis, troubleshooting and go lives. It there is a risk to new development projects. If this is not provided the trouble shooting of issues for projects operations will be impacted which could create BIEs, go live support will be reduced which would impact the end users and increase defects into production, and subpar analysis of work. All of our SAP systems are supported by this contract which SAP is our core enterprise systems with multiple modules that impact all users of the company and customers. Some key business applications are payroll, time, compensation, financial closure, work order processing and invoicing.	\$ 1,800,000	\$ 2,200,000	\$ 500,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
SAP On Prem Refresh / Upgrade / Modernization	This project is to assess the core software and hardware components in Enterprise SAP platform and perform the upgrade, migration, decommission and consolidation to optimize the environment.	Security Risks are at stake if the effort is not completed. Necessary for all on-premise applications. SAP applications occasionally need expertise opinion from the vendor during critical issues therefore, risk of losing vendor support has a high impact to the application.	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000	\$ 1,739,800

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Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
SAP Modernization	EPICR (Enterprise Core Refresh): According to SCE's Enterprise SAP System maintenance strategy, core software and hardware components in the landscape are accessed and perform activities like upgrade, migration, decommission and consolidation wherever applicable. As part of EPICR'2022, HANA Support Pack Upgrade, SAP Application & NetWeaver Support Pack Stack Upgrade, Operating System Support Pack Upgrade will be performed.	SAP databases that are using CISCO hardware has an end of support by end of year 2023. EPICR program objective is to migrate SAP databases from CISCO to new HP Superdome hardware. This will prevent any unplanned disruptions of key SAP business applications like payroll, time keeping, compensation, and financial closure.	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000	\$ 1,500,000
SuccessFactors Implementation - Payroll etc.	Migrate Payroll from ERP Central Component (ECC) to SAP SuccessFactors cloud based solution.	SAP Enterprise Core Component software module has end of support by the year 2027 and advised customers to upgrade to S/4 HANA. This move to upgrade to S/4 HANA is managed through the NextGen ERP project. However, the ECC-HCM module transition to SuccessFactors is a prerequisite to NextGen ERP. Without this project, the planned major program S/4 HANA cannot be executed before the end of support. Workforce Planning, Budgeting, Employee Position Changes, Union Payscale revisions, Collective bargaining agreements will be impacted if the functions of the underlying SAP ECC software is nonfunctional.	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000	\$ -
Support Pack Stack Upgrade	SAP Support Packages are released at regular intervals and provide Customers around the globe with the latest SAP Patches, legal requirements and corrections. They include all updates for international functions and local versions.	If this effort is not completed the risks include: Compliance / Security Risk Annual Update, Loss of Vendor Support Enhanced Security for a Secure Environment will not be update properly. New Features and Business Functionality will not get reflected. Interrupt SAP Support and customizing cost of solution implementation will increase	\$ -	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
SAP BW/4 Hana Upgrade	SAP BW is the main enterprise data warehouse at SCE supporting all data and analytics modeling, reports and applications across enterprise functions such as HR and Finance. Superdome flex is the name of the HP provided servers.	Current BW system was last upgraded in 2018 and needs to undergo the next upgrade soon. The next upgrade is to BW/4HANA which is a new platform. Most objects in the current platform are dated, not perform and turning obsolete posing a significant risk to platform stability. The readiness for BW/4HANA requires a lot of pre-requisites to be met in terms of reimplementation of current applications which are effort intensive and time consuming. It's an enterprise system used across the enterprise for critical functions.	\$ 3,250,000	\$ -	\$ -	\$ -	\$ -	\$ -
Data Power Modernization	IBM DataPower Gateway is a single gateway platform that helps provide security, control, integration, and optimized access to workloads across multiple business channels. These channels include mobile, web, application programming interface (API), service-oriented architecture (SOA), B2B, and cloud.	If the upgrades do not occur we risk end of mainstream maintenance and loss of support. Moving datapower to RedHat openshift will help free up onpremise resource and improve the integration architecture for the cloud to cloud integration scenarios. IBM Openshift provides offering like Containerization thereby reduces the hardware & licensing cost. It also provides features for cloud gateway. Without the datapower modernization, SCE will continue to pay higher licensing cost. Resources scaling up and down will be effort and cost intensive.	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
Lease interface upgrade/restructure	Lease module used for lease accounting in PowerPlan application. This tool enables SCE as Lessee to recognize, measure, and present expenses and cash flows arising from a leases (both operating and capital) as assets and liabilities on the balance sheet as per the needs of Generally Accepted Accounting Principles (GAAP).	Existing functionality is not working for lease interface. Some of the existing functionalities in the lease module are not working for lease interfaces built with SAP. Fixes will be implemented through the technical/functional upgrade of lease interfaces in PowerPlan and SAP.	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
SAP Cloud Platform Integration (CPI) migration to Cloud Foundry	SAP CPI migration from SAP Neo to Cloud Foundry to support SCE roadmap for SAP Business Technology Platform (BTP). SAP CPI is an enterprise integration Platform as a Service (IPAAS) solution for integration with cloud applications. At SCE this is primarily used for integration of SAP Cloud for Customer (C4C), hybris marketing with on-premise, SAP ISU and SAP ECC.	SCE has recently procured licenses for Cloud Foundry (CF) which included CPI services. SCE will end up having two similar platforms (Neo & CF), maintenance of two SAP CPI platforms will lead to additional licensing cost. Critical interfaces including billing interfaces need to be migrated into the new platform before end of life, otherwise we will have impact to billing. Critical interfaces including billing interfaces need to be migrated into the new platform before end of life	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -
SAP Data Warehouse Cloud (DWC) & SAP Data Intelligence (SAC) Enterprise Production Roll Out/ SAP Data Intelligence (DI) Production Roll Out/SAS to DWC / High Performance Analytical Appliance (HANA) models for critical programs/Citizen Development Governance and Operationalization	DWC & SAC roll out to all SCE Departments - to provide self-service modeling capabilities to SCE Departments - associated governance and trainings/ DI production roll out - governance setup and replacing BODS cloud use cases (E.g. Call Miner)/ Remodeling in DWC / HANA for low performing/ critical SAS applications / programs / models starting with T&D/ Citizen Development Champion roles required for Visualization (SAC, Power BI, BOBI), Modeling (SAS, HANA, DWC) and Data Quality (DI / IS) This effort will provide for large segment of SAP business users to develop their own analytical and reporting solutions. This will enable to make timely business decisions without relying on IT.	DWC is expected to be the platform of choice for all self-service data modeling needs - especially with the move to cloud DWs and especially when the source data is in any SAP platform (e.g. SuccessFactors). We would need to ensure that its rolled out to all Departments across SCE to ensure they start investing in building the right skillsets for this platform. Impact across all OUs in SCE - anyone using on prem or cloud SAP sources and having citizen development / self-service needs. The users will rely on IT for all of the analytics reporting requirements which will have both higher costs and longer turn around times.	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -

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Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Integration of Infrastructure Tasks with SAP Landscape Management (LaMa)	SAP Landscape Management is an orchestration solution that can help us simplify, automate, and centralize the management and operations of our SAP landscapes running on premise, in the public or private cloud, and in hybrid environments.	Business benefits include: Automate repetitive, time-consuming administration tasks and tailor processes to our specific needs, centralize landscape operations and gain landscape-wide visibility through a single user interface and thereby reduce time, resources and effort in the current decentralized system. If the upgrades are not completed the business risks are: Lower operational expenditure, supports digital transformation and Drive business innovation	\$ 520,000	\$ -	\$ -	\$ -	\$ -	\$ -
BOBI Platform Upgrade	SAP BOBI is the enterprise reporting tool for SCE - all critical, operational & strategic business reports are on SAP Business Objects (BOBI) platform.	End of Mainstream maintenance/ Loss of support Risk of losing most of the enterprise reporting capabilities if something were to happen to the platform and we dont have vendor support.	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -
(CARRY OVER) eDMRM -Electronic Document Management and Records Management	electronic Document Management and Record Management (eDMRM) is enterprise wide repository to store and retrieve business records that includes corp drawings, notification workorder attachments, PO(purchase order) attachments, all other enterprise wide business related documents. KOFAX Total Agility (KTA) is scanning solution deployed in SCE. Currently, KTA is been used by Legal, Customer Care, T&D, Aircraft Operation for scanning document and uploading in different repositories.	The focus of this project is to upgrade current version of the eDMRM environment and related modules to 22.1 without any degradation of the functional and current system performance. Addition to no vendor support, any kinds of issues we encounter will not be support incase of any critical issues in production environment, this will impact availability of eDMRM application, like the user cannot retrieve any prior stored information like corp drawings, Purchase Order (PO) attachments, notification workorder attachments. Also the field officers will not be able to upload/download asset images.	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -

Southern California Edison - 2025 GRC Software Maint. Replacement GRC Activity SCE-06 Vol.01 Nominal \$				Application Refresh Capital Forecast				
Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
(CARRY OVER) InfoPath forms migration	InfoPath Forms makes it possible for people to fill out forms in a Web browser which typically puts the data from the form in SharePoint. This is used in business processes for approvals, surveys and intake requests.	InfoPath is a deprecated technology and is out of support. If this is not migrated over to Power Platform and SharePoint Framework (SPFx) the applications will stop working when Microsoft retires them. This includes many business critical apps such as approvals on work orders and documentation.	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -
	ITSM (IT Service Management): BMC Remedy to Helix Migration	Ongoing Upgrade project till 2024. BMC Helix helps to setup integrations to the latest IT processes such as Agile, DevOps, and AIOps. It has ability to connect to Cloud based IT Service management system. It also bring the latest user interface to improve productivity.	\$ 2,500,000	\$ 600,000	\$ -	\$ -	\$ -	\$ -
Visual Boards and Agile Suite for BMC Helix	IT service management tools to manage Agile, DevOps processes for faster delivery of IT services	Delay in adaption of Agile process. No ability to measure agile adaption	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -
BMC Discovery Upgrade	IT service management Tool to discover data center assets, inventory, configuration and setup relationship data and maps applications to the IT Infrastructure	Non-compliance with license and limited functionality. Need to upgrade to BMC Helix Discovery as BMC Helix migration is progressing to integrate to new functionalities. Eventually, the current license will reach end of life.	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
BMC Discovery Upgrade - Containerization	IT service management Tool to discover data center assets, inventory, configuration and setup relationship data and maps applications to the IT Infrastructure	Non-compliance with license and limited functionality. Need to upgrade to BMC Helix Discovery as BMC Helix migration is progressing to integrate to new functionalities. Eventually, the current license will reach end of life.	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -
Multi Cloud Asset Discovery Tools Integration	IT service management Tool to manage IT services in multi environments such as on-premise, cloud (SaaS) and hybrid IT services	Non-compliance with license and limited functionality. Need to upgrade to BMC Helix Multi Cloud Discovery as BMC Helix migration is progressing to integrate to new functionalities connecting to various SaaS environments. Eventually, the current license will reach end of life.	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
Multi Cloud Asset Discovery Tools Integration - Containerization	IT service management Tool to manage IT services in multi environments such as on-prem, cloud (SaaS) and hybrid IT services	Non-compliance with license and limited functionality. Need to upgrade to BMC Helix Multi Cloud Discovery as BMC Helix migration is progressing to integrate to new functionalities connecting to various SaaS environments. Eventually, the current license will reach end of life.	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Broadcom DX NetOps Upgrade to 21.2	IT service management monitoring tool to manage network performance, alerts and provide analytics.	End of Life and Impact to network performance monitoring for reliable operations.	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
Testing Center of Excellence (TCOE): Cyber observations for HP Application Lifecycle Management (ALM) & HP PC	TCOE to modify the log-in processes to adhere to our cybersecurity log-in standards/protocols.	Non-compliance with cybersecurity access standards. SCE uses access standards such as Okta. If we don't follow Okta etc standards, users may have left SCE but their tools accesses will remain and are not properly terminated.	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -
Testing Center of Excellence (TCOE): Enhance to high end virtual machines	TCOE to expand our testing lab to include more machines with more capacity to handle increase in test automation etc.	Future test automations additions may be restricted. If SCE IT expands its scope of test automation, we will need more machines to automate testing. Without these extra more powerful machines, our automation efforts may be restricted.	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
Testing Center of Excellence (TCOE): SQA (System Quality Assurance) Improvements	TCOE to conduct improvements such as automation, which will help speed up the process of reviewing projects for adherence to STPS processes.	SQA reviews continues in manual mode as opposed to automated. A lot of automation has moved to digitized STPS. SQA has more suggestions for how we can speed up SQA reviews/audits through additional enhancements to digitized STPS tool.	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -
Testing Center of Excellence (TCOE): BMC Helix License and IBM OpenShift License Renewal	IT Service management tool for managing IT service tickets and containerized ITSM Environments	License expires on 2027. BMC Helix helps to setup integrations to the latest IT processes such as Agile, DevOps, and AIOps. It has ability to connect to Cloud based IT Service management system. It also bring the latest user interface to improve productivity.	\$ -	\$ -	\$ -	\$ -	\$ 7,800,000	\$ -
IT Service Management (ITSM): BMC Helix Suite Refresh	IT Service management tool for managing IT service tickets	License expires on 2027. BMC Helix helps to setup integrations to the latest IT processes such as Agile, DevOps, and Artificial Intelligence Operations (AIOps). It has ability to connect to Cloud based IT Service management system. It also bring the latest user interface to improve productivity.	\$ -	\$ -	\$ 300,000	\$ 600,000	\$ 2,800,000	\$ 1,600,000

Southern California Edison - 2025 GRC

Application Refresh Capital Forecast

Software Maint. Replacement GRC Activity

SCE-06 Vol.01

Nominal \$

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
TCOE: Test Tools Refresh (HP ALM/Application Lifecycle Management, LR/Loadrunner Enterprise)/New Automation Licenses	TCOE to upgrade our key test tools every 3 to 4 years, to implement new available tool features. This is a standard protocol for all tools which we purchase from the market.	Unable to use new features of testing; unable to support new automation types. Technology changes on an ongoing basis and our tools need to be constantly upgraded to keep up with new operating systems etc. Without upgrades, our tools become outdated and won't be able to continue to support us functionally.			\$ 300,000	\$ 400,000	\$ 400,000	\$ 400,000
Adding Additional Capabilities to Conversational Service Framework	New functionality to meet increasing business demands. Conversational Service Framework allows teams to automate and disseminate information to internal clients in a consistent manner to focus efforts on higher value add activities.	Resources may be required to continue to address the increasing requests from the business manually for additional information on processes, tools and policies. IT would be unable to meet increasing business demands.	\$ -	\$ -	\$ 350,000	\$ -	\$ 350,000	\$ -
Pega BPM platform Upgrade for Human Resources (HR) Onboarding (OB)	The HR Onboarding application coordinates the requests for new positions within the organizations from job postings, hiring process, office space and IT equipment. Current version of Pega BPM is out of support. Upgrade application to current version to avoid loss of vendor support	Required to keep platform up to date on version. Without potential risks by being behind on patches/fixes.	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ -
Proof of Concept (POC) and Technology Prototypes	Prototypes and Proof of Concepts allow the teams to try new ideas and technologies to quickly identify the viability for use. Conduct Proof of Concepts and develop technology prototypes	Without POCs or Prototypes, a full implementation will need to be completed to determine viability of new changes. There would be loss of ability to identify new efficiency improvements if this work is not completed.	\$ -	\$ -	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000
Additional capacity - annual support cost for an additional 20 Chatbot Use cases	Support costs for ChatBot automating business demands.	Loss of efficiencies gained by automating business processes. Without the automation of complex business processes, the work would need to be completed through manual efforts increasing the time to complete and potential errors.	\$ -	\$ -	\$ 259,803	\$ 285,783	\$ 314,361	\$ 345,797

Southern California Edison - 2025 GRC
Software Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

Application Refresh Capital Forecast

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Additional capacity - annual Pega BPM support cost (8 applications)	Pega BPM allows the integration of multiple applications into on user interface to automate complex business processes such as Onboarding. Support costs for BPM applications that automate business processes.	Without the automation of complex business processes, the work would need to be completed through manual efforts increasing the time to complete and potential errors. There would be loss of efficiencies gained by automating business processes if this work is not completed.	\$ -	\$ -	\$ 588,994	\$ 647,894	\$ 712,683	\$ 783,951
Additional capacity - Virtual Desktop Infrastructure (VDI)	Robotic Process Automations are implemented on Virtual Desktops or VDIs. These VDIs have limited capacity and therefore additional VDIs are required to accommodate the increasing number of RPA requests. This effort includes licenses required for RPA automations	With the benefit of RPAs, the automated processes would need to be completed manually and could result in increased duration and errors. There would be loss of efficiencies gained by automating business processes if this work is not completed.	\$ -	\$ -	\$ 416,240	\$ 344,000	\$ 344,000	\$ 344,000
Optimize DevOps and Unified Functional Testing (UFT) Mobile Replatform Infrastructure	This enables users to interact with a larger selection of devices and achieve maximum device coverage, without having to deal with procuring, configuring, and maintaining all of the devices needed for testing. Increases reliability and stability by optimizing tools	With outdated tools, there is a risk to losing vendor support, updated patches which could lead to instability of the platform and possible outages due to outdated tools.	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -
Enterprise DevOps Interface Refresh	Update interfaces with major IT systems due to upgrades of major IT systems (ITSM, UMT360, Orbus) As applications are updated or refreshed, the interfaces to these tools must be updated to ensure they continue to work with the new version.	Loss of vendor support could result in vulnerabilities not being patched or fixed since the vendors focus on their current versions for supplying patches for vulnerabilities.	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000
ALM Octane platform refresh, capacity increase and support (software)	ALM Octane is the enterprise standard	Without this effort, the planning teams will need to continue with the manual processes and may miss value added opportunities. Without this work completed, there would be loss of efficiencies gained by using tools.	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -

Application Refresh Capital Forecast

Southern California Edison - 2025 GRC
 Software Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Nominal \$

Application Name	Application Description	Business Impact of not performing the effort	2023 Refresh Cost	2024 Refresh Cost	2025 Refresh Cost	2026 Refresh Cost	2027 Refresh Cost	2028 Refresh Cost
Value Stream Delivery Platform (VSDP, aka DevOps 2.0)	This work is to implement the Value Stream Management tool that allows the tracking by business process or value stream.	Without this effort, the planning teams will need to continue with the manual processes and may miss value added opportunities.	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -
Wildfire mobile application product ongoing support transition services and additional enhancement capacity	This application allows the field crews to increase efficiencies in mitigating the risks associated with Wildfires such as inspecting lines and leveraging enhanced documentation.	Crews will need to go back to manual processes to review and inspect lines for Wildfire mitigation efforts.	\$ -	\$ -	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000
Application Rationalization	Optimizing the IT applications portfolio will save costs and improve IT service operations.	If this effort is not completed, IT will continue to have even higher needs for capital and O&M support	\$ 10,445,183	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -

**Technology Infrastructure Maintenance &
Replacement - Standard Workpapers**



(U 338-E)

2025 General Rate Case

A. 23-05-

Workpapers

SCE-06 Enterprise Support
Volume 1 - Enterprise Technology
Technology Infrastructure Maintenance and Replacement

May 2023

2025 GRC Summary

(Constant 2022 \$000)

Beginning of Workpapers for:

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Infrastructure Maintenance and Replacement
 Witness: Rick Nanda

Cost Type	Recorded/Adj. 2022	Forecast 2025
Labor	6,870	7,434
Non-Labor	14,883	17,171
Other	0	0
Total	21,754	24,605

Due to rounding, totals may not tie to individual items.

Description of Activity:

The Technology Infrastructure Maintenance and Replacement O&M work activity includes labor to manage performance of Managed Services Providers performing acquisition, configuration, installation of infrastructure hardware/software, as well as troubleshooting activities. It also consists of expenses necessary to maintain the IT infrastructure hardware within SCE's production data centers and are provided through support agreements with the respective hardware vendors. The capitalized hardware replacements benefit from purchasing prepaid maintenance agreements, typically over five years. After the five-year period ends, the O&M hardware support expenses are accumulated, tracked, and reported through non-labor expenses in this account.

This work activity also includes SCE labor and associated non-labor expenses for monitoring and control of the Managed Services Providers' performance in relation to the Service Desk, management of the third-party vendor contractual obligations and performance for cellular and wireless, product ordering, printing, audio and visual. Finally, it includes the management of cellular devices and monthly plans, printers, software licensing renewals, computer accessories, and printers.

Forecast Methods - Summary of Results of Methods Studied

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Planning Element: Enterprise Technology
Activity: Technology Infrastructure Maintenance and Replacement
Witness: Rick Nanda

Cost Type	Recorded/Adj.				
	2018	2019	2020	2021	2022
Labor	7,664	6,666	7,942	7,669	6,870
Non-Labor	22,946	19,149	16,874	13,890	14,883
Other	0	0	0	0	0
Total	30,610	25,815	24,816	21,559	21,754

Cost Type	Results of Linear Trending					
	3 Years: 2020 - 2022		4 Years: 2019 - 2022		5 Years: 2018 - 2022	
	\$	r2*	\$	r2*	\$	r2*
Labor	5,350	0.93	7,440	0.01	7,070	0.03
Non-Labor	11,235	0.43	9,098	0.77	6,857	0.87
Other	0	0.00	0	0.00	0	0.00
Total	16,585	N/A	16,538	N/A	13,927	N/A

Cost Type	Results of Averaging							
	2 Years:		3 Years:		4 Years:		5 Years:	
	2021 - 2022	sd**	2020 - 2022	sd**	2019 - 2022	sd**	2018 - 2022	sd**
Labor	7,270	399	7,494	455	7,287	532	7,362	500
Non-Labor	14,387	497	15,216	1,241	16,199	2,014	17,548	3,245
Other	0	0	0	0	0	0	0	0
Total	21,656	N/A	22,709	N/A	23,486	N/A	24,911	N/A

Cost Type	Last Recorded Year		
	2023	2024	2025
Labor	6,870	6,870	6,870
Non-Labor	14,883	14,883	14,883
Other	0	0	0
Total	21,754	21,754	21,754

Cost Type	Itemized Forecast		
	2023	2024	2025
Labor	0	0	0
Non-Labor	16,835	18,035	17,171
Other	0	0	0
Total	16,835	18,035	17,171

* r2 = R Squared (Based on recorded years data)

** sd = standard deviation (Based on recorded years data)

2025 GRC Selected Forecast Method

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Infrastructure Maintenance and Replacement
 Witness: Rick Nanda

Cost Type	Recorded/Adj.					Forecast			Selected Forecast		TY Forecast Inc/(Decr) from 2022
	2018	2019	2020	2021	2022	2023	2024	2025	Method	(\$000)	
Labor	7,664	6,666	7,942	7,669	6,870	6,506	6,555	7,434	LRY + Adj	7,434	564
Non-Labor	22,946	19,149	16,874	13,890	14,883	16,835	18,035	17,171	Itemized	17,171	2,287
Other											
Total	30,610	25,815	24,816	21,559	21,754	23,341	24,590	24,605		24,605	2,851

Due to rounding, totals may not tie to individual items.

Analysis of Forecasting Methods**Analysis of Last Recorded Year:**

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have been relatively stable for three or more years, the last recorded year is an appropriate base estimate

Itemized Forecast:**Itemized Forecast Method****Other Forecast Methods not Selected****Linear Trending:**

In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have shown a trend in a certain direction for three or more years, the last recorded year is an appropriate base estimate. Recorded expenses for this activity have not shown a strong trend, so the linear trending method is not appropriate to forecast the 2025 Test Year.

Averaging:

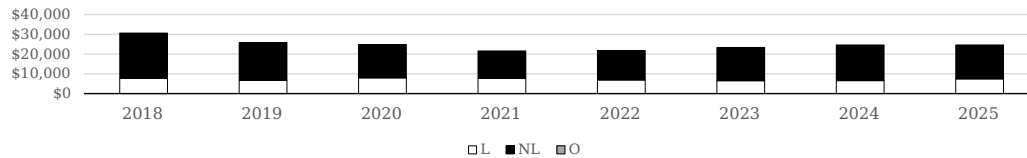
In D.89-12-057, and subsequently in D.04-07-022, the CPUC stated that if recorded expenses have significant fluctuations from year to year, or expenses are influenced by external forces beyond the utility's control, an average of recorded-expenses is appropriate. Recorded expenses in this activity have not shown significant fluctuations, therefore, the averaging methodology was not used as the basis for estimating the 2025 Test Year.

2025 GRC Year Over Year Variance

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Infrastructure Maintenance and Replacement
 Witness: Rick Nanda

Recorded/Adj. 2018-2022 / Forecast 2023-2025



Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	7,664	6,666	7,942	7,669	6,870	6,506	6,555	7,434
	Non-Labor	22,946	19,149	16,874	13,890	14,883	16,835	18,035	17,171
	Other	0	0	0	0	0	0	0	0
	Total	30,610	25,815	24,816	21,559	21,754	23,341	24,590	24,605
Labor	Prior Year Total		7,664	6,666	7,942	7,669	6,870	6,506	6,555
	Change		(998)	1,276	(273)	(799)	(364)	49	879
	Total		6,666	7,942	7,669	6,870	6,506	6,555	7,434
Non-Labor	Prior Year Total		22,946	19,149	16,874	13,890	14,883	16,835	18,035
	Change		(3,798)	(2,275)	(2,984)	993	1,952	1,200	(865)
	Total		19,149	16,874	13,890	14,883	16,835	18,035	17,171
Other	Prior Year Total		0	0	0	0	0	0	0
	Change		0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0
Total Change	Prior Year Total		30,610	25,815	24,816	21,559	21,754	23,341	24,590
	Change		(4,795)	(999)	(3,257)	195	1,587	1,249	14
	Total		25,815	24,816	21,559	21,754	23,341	24,590	24,605

Due to rounding, totals may not tie to individual items.

2025 GRC Forecast Commentary

(Constant 2022 \$000)

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Planning Element: Enterprise Technology
 Activity: Technology Infrastructure Maintenance and Replacement
 Witness: Rick Nanda

Summary of Changes: See Testimony

Cost Type		Recorded/Adj.					Forecast		
		2018	2019	2020	2021	2022	2023	2024	2025
Recorded / Forecast	Labor	7,664	6,666	7,942	7,669	6,870	6,506	6,555	7,434
	Non-Labor	22,946	19,149	16,874	13,890	14,883	16,835	18,035	17,171
	Other	0	0	0	0	0	0	0	0
	Total	30,610	25,815	24,816	21,559	21,754	23,341	24,590	24,605

Due to rounding, totals may not tie to individual items.

Recorded (2018-2022)

See Testimony

Forecast (2023-2025)

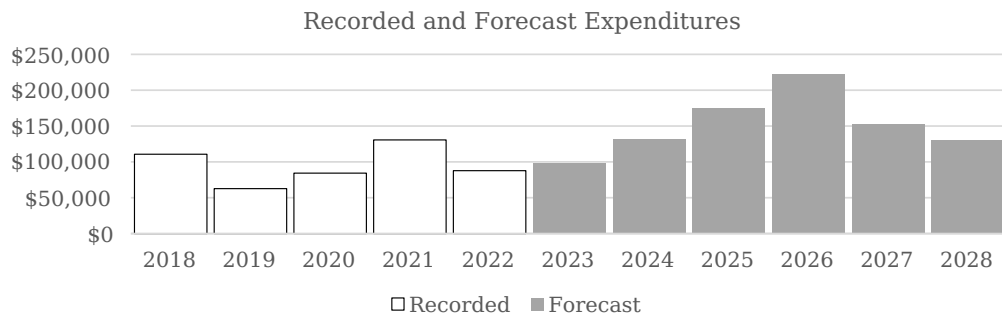
See Testimony

Southern California Edison - Capital Workpapers
Capital Workpapers Summary
SUMMARY BY GRC Volume
(Nominal \$000)

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology

Description	Recorded Capital Expenditures					Forecast Capital Expenditures					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Recorded and Forecast Expenditures	110,673	62,679	84,299	130,627	87,727	98,724	132,047	174,888	222,835	152,344	130,119
Total Expenditures	476,006					910,958					

Due to rounding, totals may not tie to individual items.



GRC Activity	Forecast Capital Expenditures						6 yr Total
	2023	2024	2025	2026	2027	2028	
Software Maintenance and Replacement	6,656	11,945	34,602	90,564	9,375	11,828	164,970
Technology Infrastructure Maintenance and Replacement	92,068	120,103	140,286	132,271	142,969	118,291	745,987
GRC Total	98,724	132,047	174,888	222,835	152,344	130,119	910,958

**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

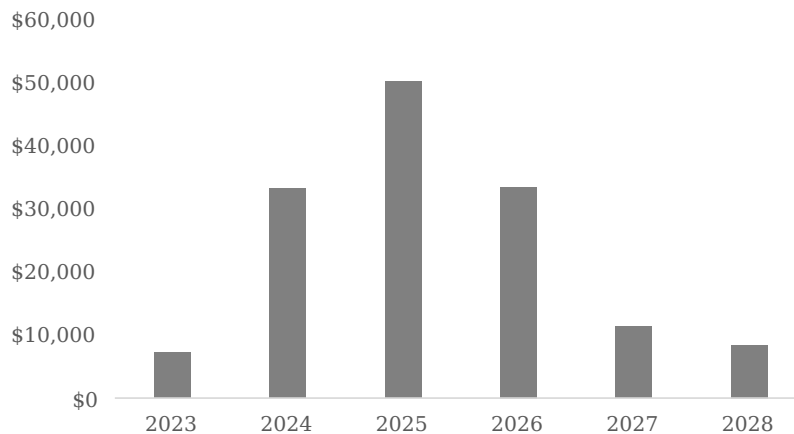
1. Witness: Rick Nanda
 2. Asset type: SERVERS
 3. In-Service date: 12\1\9999
 4. RO Model ID: 693
 5. Pin: 3896
 6. CWBS Element: CIT00DMDM000249
 CWBS Description: (SMOO) Technology Appliances
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	7,218	33,205	50,119	33,414	11,285	8,407	143,648

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

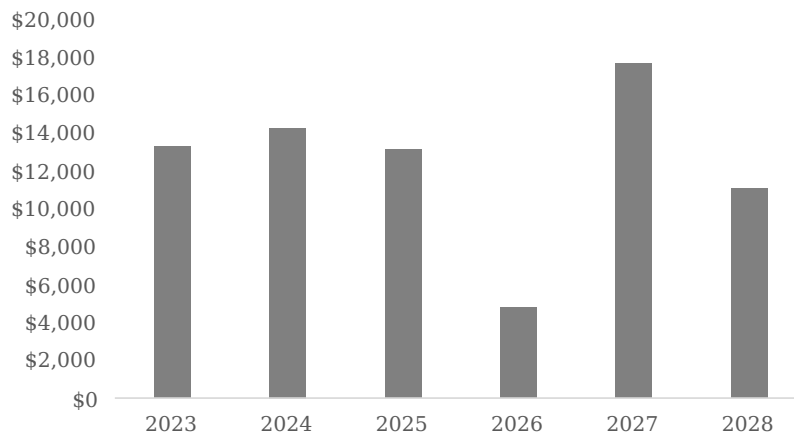
1. Witness: Rick Nanda
 2. Asset type: TELECOMM
 3. In-Service date: 12\1\8888
 4. RO Model ID: 494
 5. Pin: 7840
 6. CWBS Element: CIT00OPDC000007
 CWBS Description: ADC Network Refresh
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	13,288	14,249	13,121	4,780	17,665	11,078	74,182

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

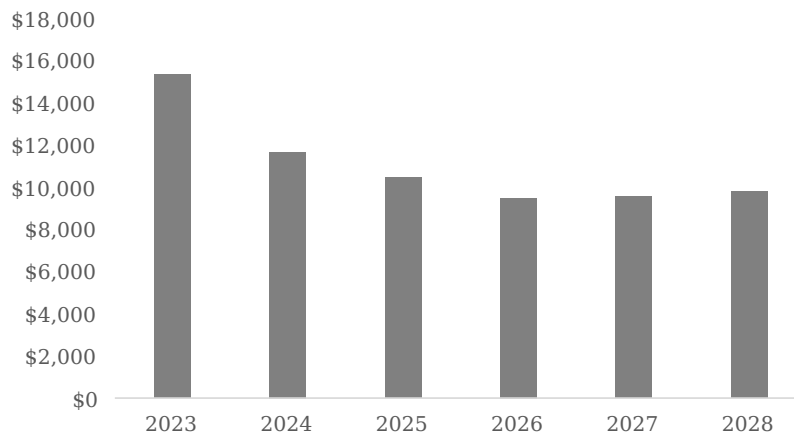
1. Witness: Rick Nanda
 2. Asset type: 5YR SWA
 3. In-Service date: 12\1\9999
 4. RO Model ID: 493
 5. Pin: 7254
 6. CWBS Element: CIT00OPCS000079
 CWBS Description: Cloud Infrastructure
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	15,379	11,685	10,457	9,503	9,582	9,812	66,418

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

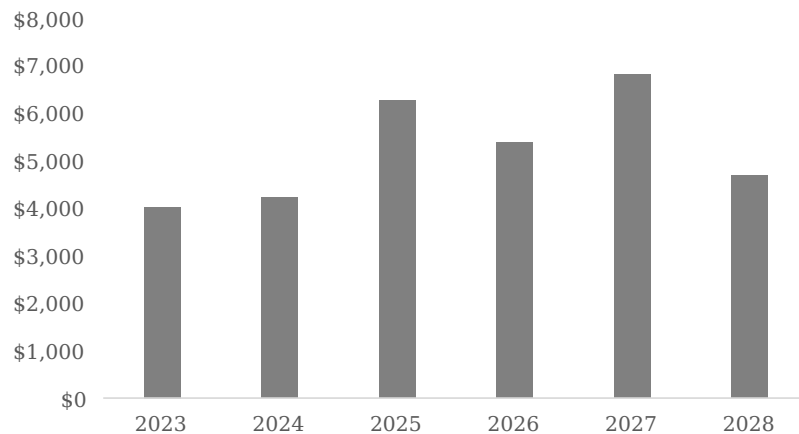
1. Witness: Rick Nanda
 2. Asset type: COMPUTERS
 3. In-Service date: 12\1\8888
 4. RO Model ID: 491
 5. Pin: 7280
 6. CWBS Element: CIT00OPCS000037
 CWBS Description: IT Capacity Expansion
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	4,031	4,233	6,284	5,387	6,822	4,689	31,446

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

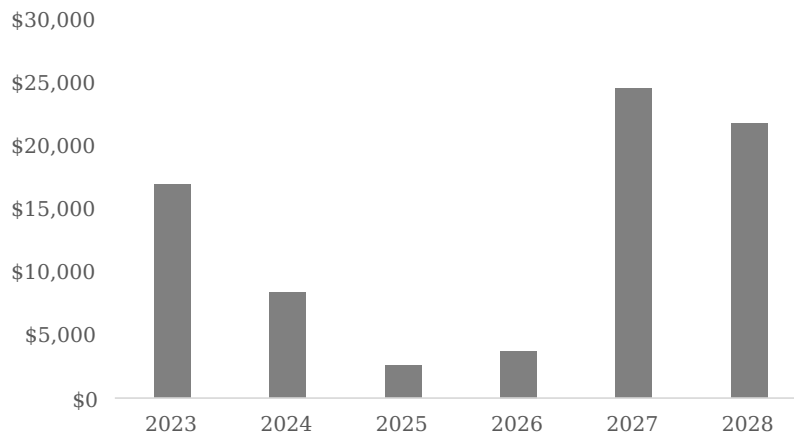
1. Witness: Rick Nanda
 2. Asset type: COMPUTERS
 3. In-Service date: 12\1\8888
 4. RO Model ID: 487
 5. Pin: 7280
 6. CWBS Element: CIT00OPCS000008
 CWBS Description: Midrange Servers
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	16,915	8,370	2,607	3,729	24,471	21,734	77,825

Due to rounding, totals may not tie to individual items.



Southern California Edison
2025 GRC Capital Workpapers

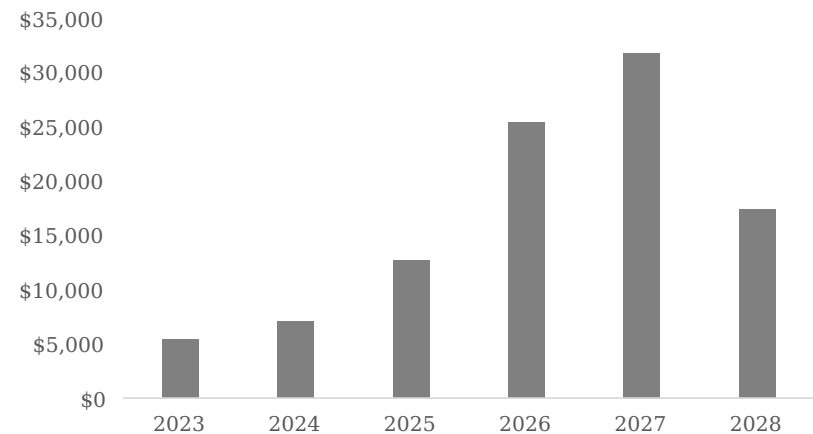
Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Plan Group: Enterprise Support
Business Plan Element: Enterprise Technology
GRC Activity: Technology Infrastructure Maintenance and Replacement

1. Witness: Rick Nanda
2. Asset type: COMPUTERS
3. In-Service date: 12\1\8888
4. RO Model ID: 488
5. Pin: 7281
6. CWBS Element: CIT00OPCS000009
CWBS Description: Midrange Storage
7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)
2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	5,400	7,046	12,704	25,417	31,852	17,395	99,813

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

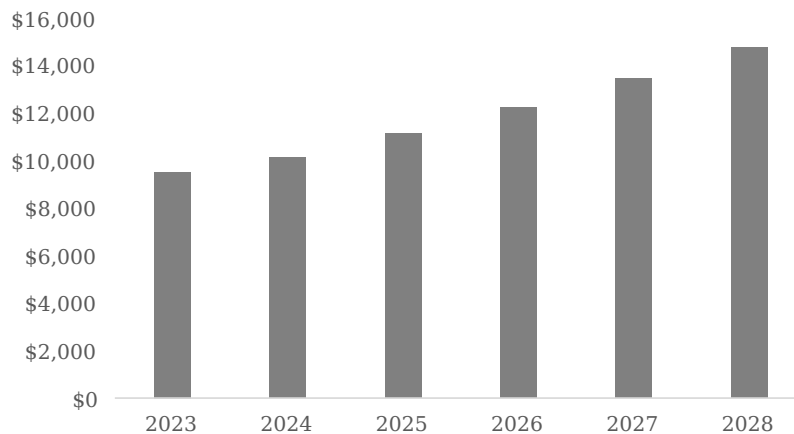
1. Witness: Rick Nanda
 2. Asset type: COMPUTERS
 3. In-Service date: 12\1\8888
 4. RO Model ID: 531
 5. Pin: 3896
 6. CWBS Element: CIT00OPSM000027
 CWBS Description: Monitors
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	9,545	10,160	11,168	12,279	13,474	14,787	71,413

Due to rounding, totals may not tie to individual items.



Southern California Edison
2025 GRC Capital Workpapers

Exhibit: SCE-06 Enterprise Support
Volume: 1 - Enterprise Technology
Business Plan Group: Enterprise Support
Business Plan Element: Enterprise Technology
GRC Activity: Technology Infrastructure Maintenance and Replacement

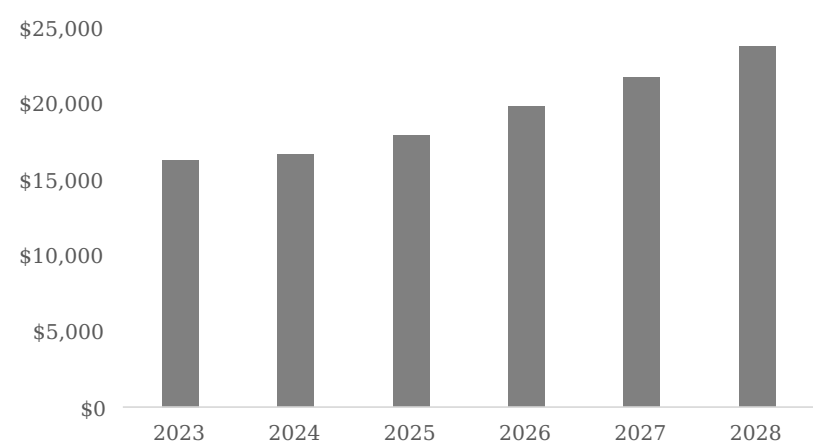
1. Witness: Rick Nanda
2. Asset type: COMPUTERS
3. In-Service date: 12\1\8888
4. RO Model ID: 528
5. Pin: 4359
6. CWBS Element: CIT00OPSM000001
CWBS Description: PC s - CDE
7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	16,296	16,640	17,895	19,830	21,721	23,800	116,183

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

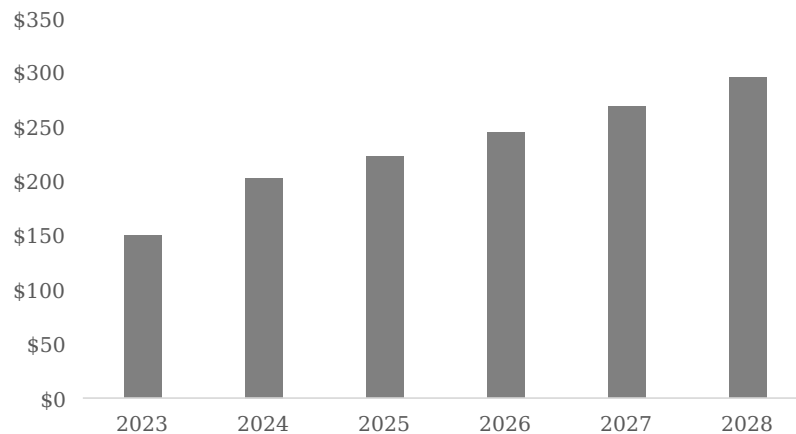
1. Witness: Rick Nanda
 2. Asset type: TELECOMM
 3. In-Service date: 12\1\8888
 4. RO Model ID: 532
 5. Pin: 3896
 6. CWBS Element: CIT00OPSM000028
 CWBS Description: Radios
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	150	203	223	246	269	296	1,387

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

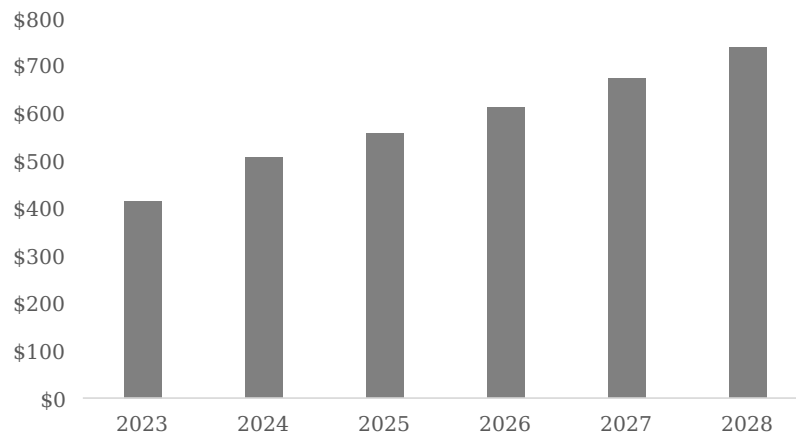
1. Witness: Rick Nanda
 2. Asset type: COMPUTERS
 3. In-Service date: 12\1\8888
 4. RO Model ID: 530
 5. Pin: 4359
 6. CWBS Element: CIT00OPSM000006
 CWBS Description: Specialty Printers for TDBU
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	416	508	558	614	674	739	3,509

Due to rounding, totals may not tie to individual items.



**Southern California Edison
2025 GRC Capital Workpapers**

Exhibit: SCE-06 Enterprise Support
 Volume: 1 - Enterprise Technology
 Business Plan Group: Enterprise Support
 Business Plan Element: Enterprise Technology
 GRC Activity: Technology Infrastructure Maintenance and Replacement

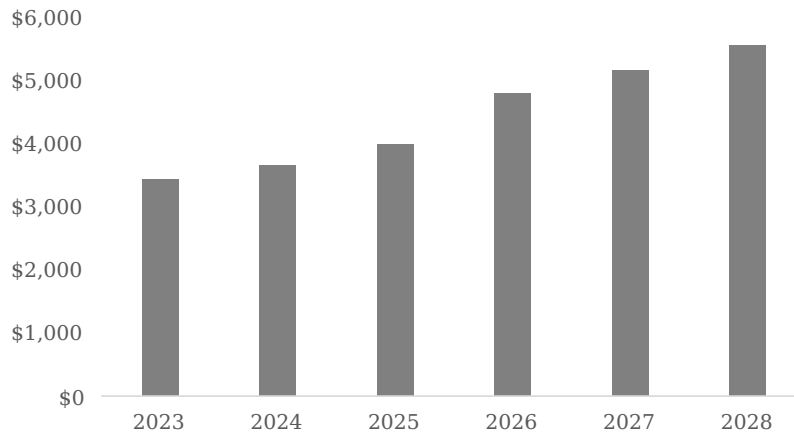
1. Witness: Rick Nanda
 2. Asset type: COMPUTERS
 3. In-Service date: 12\1\8888
 4. RO Model ID: 529
 5. Pin: 4359
 6. CWBS Element: CIT00OPSM000005
 CWBS Description: TDBU Refresh for Ruggedized Laptops
 7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	3,430	3,644	3,982	4,794	5,153	5,553	26,556

Due to rounding, totals may not tie to individual items.



Southern California Edison

2025 GRC Capital Workpapers

Exhibit: SCE-06 Enterprise Support

Volume: 1 - Enterprise Technology

Business Plan Group: Enterprise Support

Business Plan Element: Enterprise Technology

GRC Activity: Technology Infrastructure Maintenance and Replacement

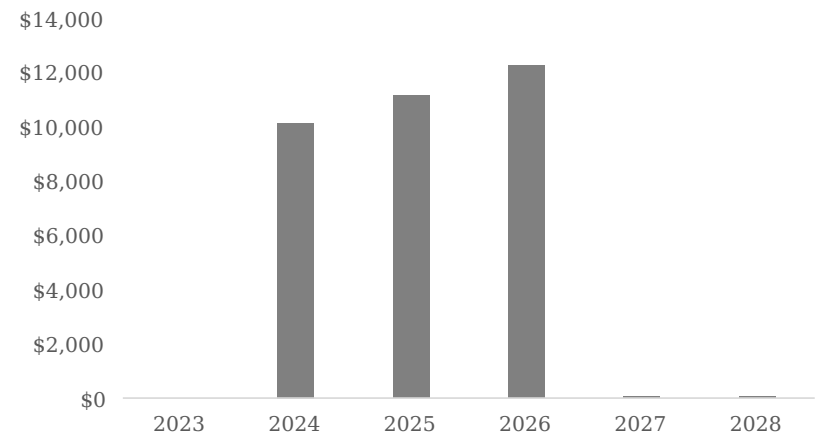
1. Witness: Rick Nanda
2. Asset type: COMPUTERS
3. In-Service date: 12\1\8888
4. RO Model ID: 39
5. Pin: 4359
6. CWBS Element: CIT00DMDM000481
- CWBS Description: Windows 11
7. SRIIM Eligible: No

Cost Estimates - Nominal (\$000)

2025 GRC - Capital Expenditures Forecast

Year	2023	2024	2025	2026	2027	2028	2023 - 2028 Total
SCE\$	0	10,160	11,168	12,279	0	0	33,607

Due to rounding, totals may not tie to individual items.



Technology Infrastructure Maintenance & Replacement Normalization

Technology Infrastructure Maintenance and Replacement
Normalization

Southern California Edison - 2025 GRC
Technology Infrastructure Maintenance & Replacement
SCE-06 Vol. 01
Constant \$

Sub Work Activity (Non Labor)	2025	2026	2027	2028
Data Center Infrastructure	\$ 6,387,273	\$ 5,200,073	\$ 5,090,547	\$ 2,388,506
End User Computing, Maintenance & Replacement	\$ 11,871,476	\$ 12,219,643	\$ 12,578,050	\$ 12,946,998
Total	\$ 18,258,749	\$ 17,419,716	\$ 17,668,597	\$ 15,335,504
Normalized Amount (2025-2028)	\$17,170,642			

Data Storage Capacity Growth Trend



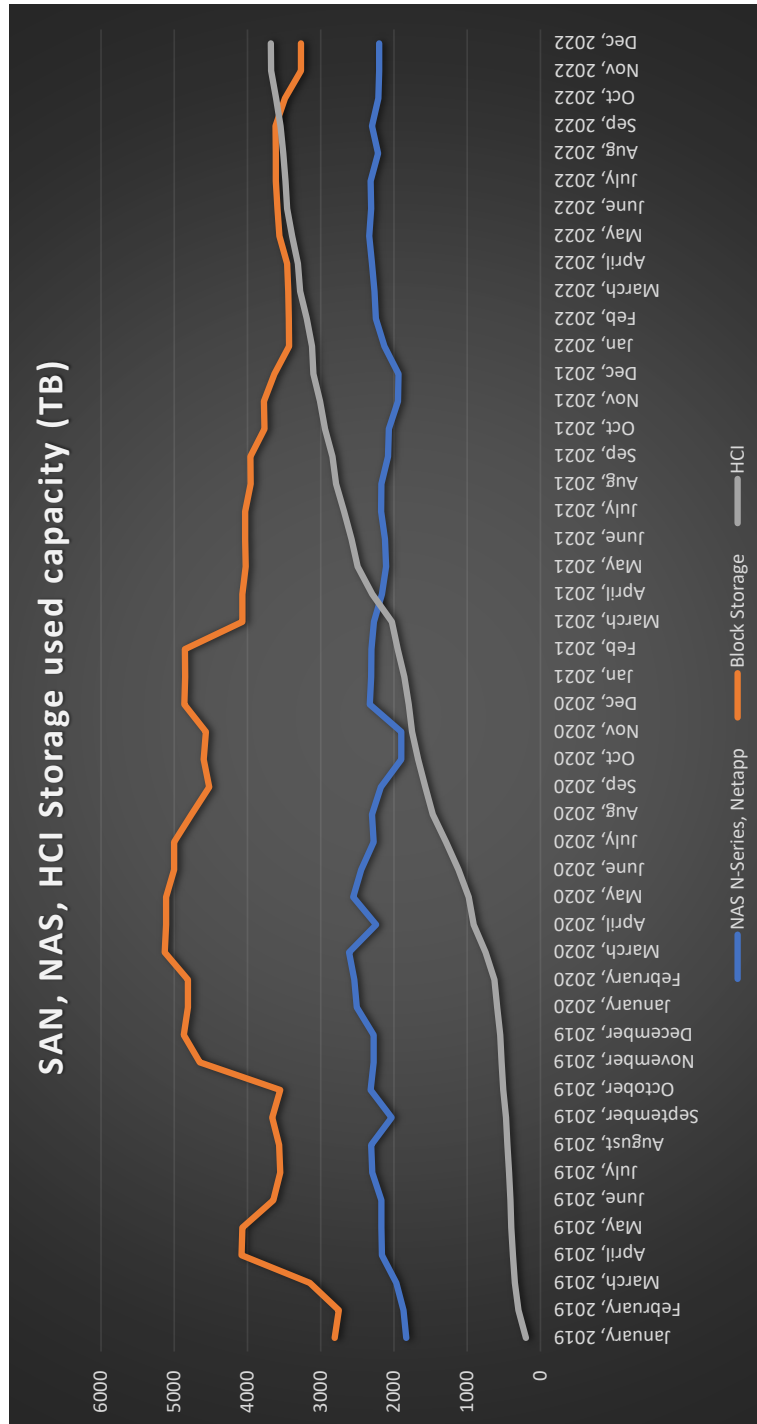
Storage Capacity Growth Trend (NAS & SAN) 2019 to 2022 (Till December)

1

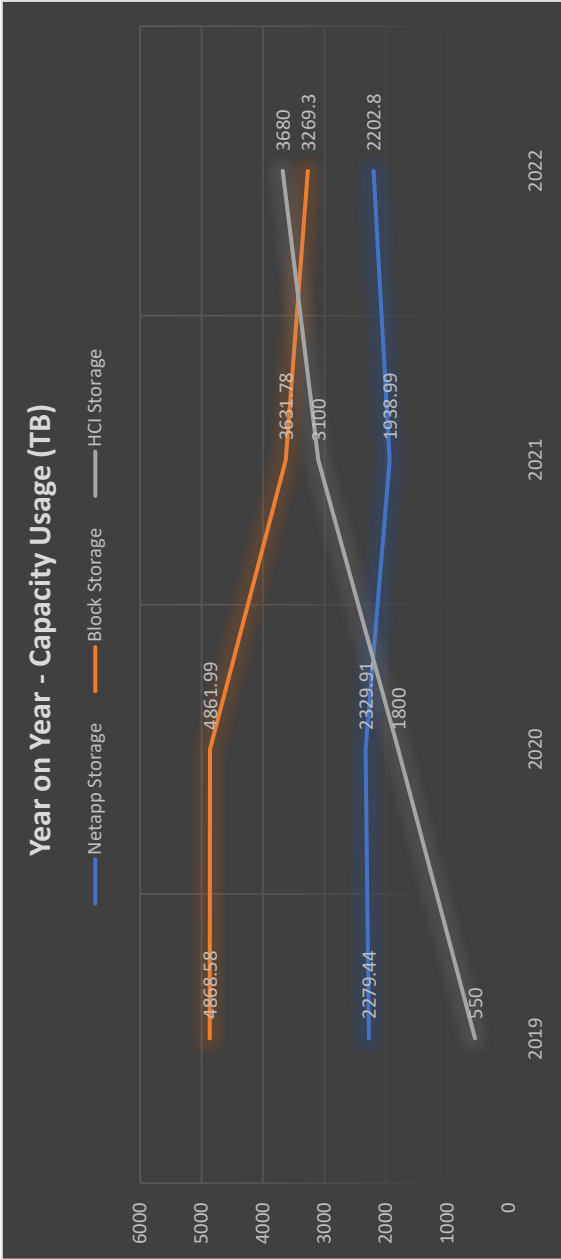


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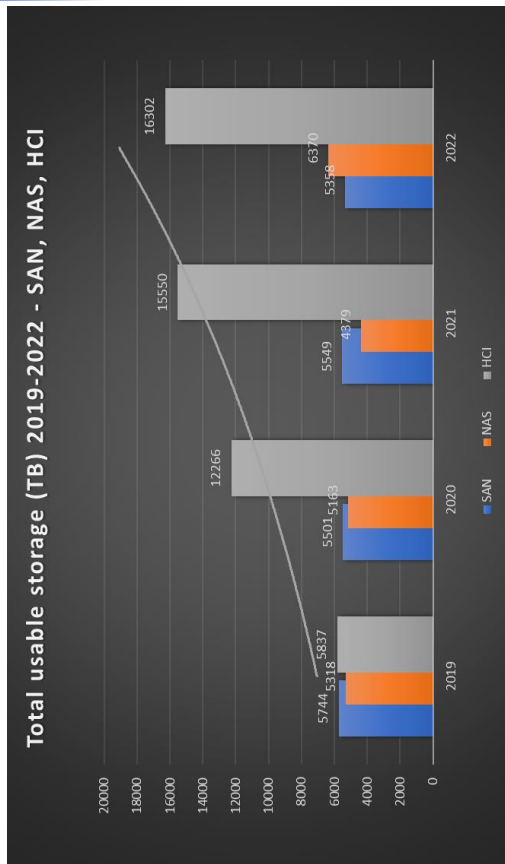


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Total Used Capacity TB	2019	2020	2021	2022
Netapp Storage	2279.44	2329.91	1938.99	2202.8
Block Storage	4868.58	4861.99	3631.78	3269.3
HCI Storage	550	1800	3100	3680
		HCI Adoption	SAN Consolidation	SAN Exit





Year	2019 (TB)	2020 (TB)	2021 (TB)	2022 (TB)
SAN	5744	5501	5549	5358
NAS	5318	5163	4379	6370
HCI	5837	12266	15550	16302

Points to note –

- Post 2019, VMs were built on Nutanix HCI
- Flex Pod to Nutanix HCI migration started from 2018 - 2019
- SAN utilization reduced due to P2V and SAN exit plan
- NAS Storage for Enterprise File share has increased by 30% - due to organic growth, new projects and increase in number of SCE users.

SAN

- Monthly average usage of IBM SAN has reduced between 2019 to 2022
- The average year on year usage on SAN is reduced by 6% between 2019 to 2022 – due to P2V migration
- Nutanix HCI was introduced to take over workload

NAS

- Monthly average usage of Enterprise NAS has increased by 1% to 2%
- The average year on year usage growth on NAS is 8% to 10%
- Enterprise file share utilization has increased by 30% between 2019 to 2022

HCI

- The average year on year usage of HCI has increased 3 times since 2019 till today



**O&M Non-Labor Workpaper - Hardware
Maintenance**

Non Labor Workpaper- Hardware Maintenance

Southern California Edison - 2025 GRC
 Tech. Infra. Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Constant \$

O&M Non-Labor	Forecast - Constant (\$)						
	2023	2024	2025	2026	2027	2028	Totals
HW Maintenance Vendors							
CISCO/WWT	\$1,454,866	\$844,867	\$565,393	\$711,361	\$2,366,823	\$830,373	\$6,773,684
HPE/Opt Tech	\$98,039	\$99,000	\$99,886	\$0	\$0	\$0	\$296,926
IBM	\$1,317,858	\$831,559	\$839,712	\$1,111,635	\$0	\$0	\$4,100,763
NetApp/Opt Tech	\$0	\$457,516	\$0	\$0	\$0	\$0	\$457,516
Nutanix/Edge	\$0	\$1,368,582	\$2,279,977	\$1,133,029	\$452,865	\$356,198	\$5,590,652
Oracle/ZONES	\$1,115,141	\$666,090	\$0	\$0	\$0	\$0	\$1,781,231
Optiv/Network misc	\$588,235	\$594,002	\$600,259	\$606,043	\$611,368	\$796,631	\$3,796,539
Palo Alto/ Optiv	\$911,699	\$1,346,475	\$1,626,947	\$1,253,129	\$1,264,548	\$0	\$6,402,798
HW Maintenance Subtotal	\$5,485,838	\$6,208,093	\$6,012,175	\$4,815,196	\$4,695,605	\$1,983,202	\$29,200,109
Professional Services (Data Center Cabling, Rack installation,etc)	\$307,976	\$304,593	\$332,451	\$342,229	\$352,295	\$362,656	\$2,002,202
Employee Related Expense	\$41,866	\$40,223	\$42,647	\$42,647	\$42,647	\$42,647	\$252,678
Total	\$5,835,680	\$6,552,909	\$6,387,273	\$5,200,073	\$5,090,547	\$2,388,506	\$31,454,988
Average Normalized (2025-2028)	\$4,766,600						

Capital Workpaper - Server Replacement

Capital Work Paper - Server Replacement

Southern California Edison - 2025 GRC
 Tech. Infra. Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Nominal \$

Midrange Servers

This category includes servers: X86 (Linux) and risc (UNIX)	
Costs listed is actual quotes or extrapolations/averages/estimates from previously obtained.	
MSP labor for hardware installation and/or onfiguration estimated at 10% of hardware cost	
HW cost estimates includes 5 year pre-paid support/maintenance	

Type	Recorded					Total with Installation (\$)							
	2018	2019	2020	2021	2022	Totals	2023	2024	2025	2026	2027	2028	Totals
	12,338,495	5,410,807	1,476,328	240,838	198,600	19,665,068							-
Cisco							19,439,750	8,569,769	2,606,917	3,728,527	24,471,098	21,733,662	80,549,723
Dell							275,000						275,000
HP							(2,800,000)	(200,000)					(3,000,000)
IBM							16,914,750	8,369,769	2,606,917	3,728,527	24,471,098	21,733,662	77,824,723
Application Rationalization Savings*	12,338,495	5,410,807	1,476,328	240,838	198,600	19,665,068	16,914,750	8,369,769	2,606,917	3,728,527	24,471,098	21,733,662	77,824,723
Total	12,338,495	5,410,807	1,476,328	240,838	198,600	19,665,068	16,914,750	8,369,769	2,606,917	3,728,527	24,471,098	21,733,662	77,824,723

*This includes savings from Application Rationalization effort as described in section V.B.4.b. Application Refresh

Capital Workpaper - Storage Replacement

Southern California Edison - 2025 GRC
 Tech. Infra. Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Nominal \$

Capital Work Paper - Storage Replacement

Storage

Although disk and virtual tape devices come due for refresh based on the age of the equipment, we estimate the cost hardware replacement based on previous purchase and calculated need.
 Costs listed is actual quotes or extrapolations/averages/estimates from previously obtained.
 MSP labor for hardware installation and/or onfiguration estimated at 10% of hardware cost.
 HW cost estimates includes 5 year pre-paid support/maintenance.

Type	Recorded					Total with Installation (\$)						
	2018	2019	2020	2021	2022	Totals	2024	2025	2026	2027	2028	Totals
Cisco	979,184	1,550,041	329,887	6,835	6,848	2,872,795						
dell/EMC							2,120,717				138,590	2,259,307
IBM							1,299,410				3,304,818	4,604,228
NetApp							2,742,915	306,752	786,815		2,057,849	9,294,331
Oracle								2,683,962	8,533,028	19,203,451	9,696,313	42,116,754
Veritas							882,577	9,712,852	16,096,911	12,649,029	2,196,987	41,538,356
	979,184	1,550,041	329,887	6,835	6,848	2,872,795	7,045,619	12,703,566	25,416,754	31,852,480	17,394,557	99,812,976
	979,184	1,550,041	329,887	6,835	6,848	2,872,795	7,045,619	12,703,566	25,416,754	31,852,480	17,394,557	99,812,976

**Capital Workpapers - Data Center
Network Replacement**

Southern California Edison - 2025 GRC
 Tech Infrastructure Maint. Replacement GRC Activity
 SCE-06 Vol.01
 Nominal \$

Capital Workpapers - Data Center Network Replacement

	(\$Millions)										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Network	7,223,944	4,266,174	7,794,646	3,043,762	5,831,085	13,287,988	14,248,968	13,121,047	4,780,498	17,665,159	11,078,325
Total	7,223,944	4,266,174	7,794,646	3,043,762	5,831,085	13,287,988	14,248,968	13,121,047	4,780,498	17,665,159	11,078,325

Southern California Edison - 2025 GRC
Tech Infrastructure Maint. Replacement GRC Activity
SCE-06 Vol.01
Nominal \$

Type	Qty (Devices)					Total with Installation (\$)					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Appliance			32	4	9	\$600,000	\$2,052,841	\$1,802,676	\$765,529	\$1,727,155	\$184,928
Firewall	20		32	10	2	\$490,000	\$144,200	\$129,850	\$38,150	\$649,927	\$393,214
Load Balancer	8	2	7		17	\$340,800	\$351,024	\$270,936	\$185,736	\$2,306,184	\$361,920
Network Aggregator	5	2	6	2	11	\$67,000	\$966,140	\$1,757,010	\$292,120	\$643,207	\$87,691
Network Sniffer			1	13	1	\$248,318	\$511,535	\$3,900,473	\$541,333	\$1,049,360	\$238,566
Proxy Server		1		20		\$5,205,000	\$714,820	\$367,820	\$865,964	\$1,270,407	\$4,625,178
Router	2		6			\$3,858,000	\$6,098,717	\$4,571,131	\$1,511,243	\$9,135,048	\$3,296,128
Switch	2	106	22	47	43	\$2,478,870	\$3,409,691	\$321,151	\$580,423	\$883,871	\$1,890,701
				Total		\$13,287,988	\$14,248,968	\$13,121,047	\$4,780,498	\$17,665,159	\$11,078,325

Capital Workpaper - Appliance Replacement

Southern California Edison - 2025 GRC
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Nominal \$

Appliance
This category includes appliances as noted in the 'type.'
Costs listed is either actual quotes or extrapolations/averages/estimates from previously obtained.
MSP labor for hardware installation and/or configuration estimated at 10% of hardware cost.
HW cost estimates includes 5 year pre-paid support/maintenance.

Type	Recorded				Totals
	2018	2019	2020	2021	
	18,234,493	35,253,806	26,526,372	20,684,208	
ITRON					
Nutanix					
PSSC Lab					
Oracle	-	18,234,493	35,253,806	26,526,372	20,567,078
	-	18,234,493	35,253,806	26,526,372	20,567,078

	Total with Installation (\$)					Totals
	2023	2024	2025	2026	2027	
			5,198,448			5,198,448
		24,983,748	41,263,854			108,342,146
		5,523,443				8,881,406
	7,217,674	2,698,151	3,656,792			21,226,001
	7,217,674	33,205,342	50,119,094			143,648,001
	7,217,674	33,205,342	50,119,094	33,413,735	11,285,293	143,648,001
	7,217,674	33,205,342	50,119,094	33,413,735	11,285,293	143,648,001

Capital Workpaper - Organic Growth

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Capital Work Paper - Organic Growth

	Recorded					Forecast (\$)					% Change
	2018	2019	2020	2021	2022	Totals	2023	2024	2025	2026	Totals
Capacity Growth											
IT Capacity Expansion											
IT Capacity Risk Management											
Midrange Storage				1,700,000		1,700,000				350,000	1,750,000
Mainframe											
Mid Range Appliances	4,216,667		1,757,214			5,973,881			500,000		
Network	5,153,703	5,737,913	7,491,588	6,575,110	1,745,325	5,973,881	3,531,426	3,882,738	5,234,050	4,587,161	27,096,368
Disk and Tape Storage				150,000		150,000	500,000	350,000	550,000	450,000	2,000,000
Data Center Operations											
Total Capacity Growth	9,370,370	5,737,913	9,248,802	8,425,110	1,745,325	34,527,520	4,031,426	4,232,738	6,284,050	5,387,161	31,446,368
Testimony	9,370,370	5,737,913	9,248,802	8,425,110	1,745,325	34,527,520	4,031,426	4,232,738	6,284,050	5,387,161	31,446,368

Rugged Device Lifecycle

Rugged Device Lifecycle

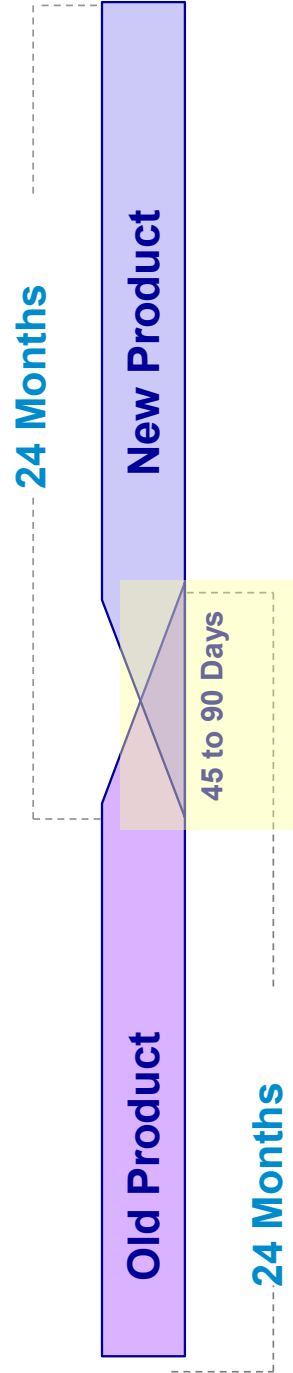
- Models in service now and future release forecast

Model	Release Date	Life Cycle	
		4 years	Next Generation
Dell Latitude 5414	2015/2016	2020	2021
Dell Latitude 7414	2017	2021	2021
Dell Latitude 7214	2017	2021	2021
Dell Latitude 7404	2015/2016	2019/2020	2020
Dell Latitude 5404	2015/2016	2019/2020	2020
Dell Latitude 7204	2015	2019	2020
Dell Latitude 7424	2022	2026	2027
Dell Latitude 7212	2019	2023	2024
Dell Latitude 5424	2022	2026	2027
Dell Latitude 5420	2022	2026	2027
Dell Rugged Tablet 7220	2022	2026	2027

Rugged Device Lifecycle

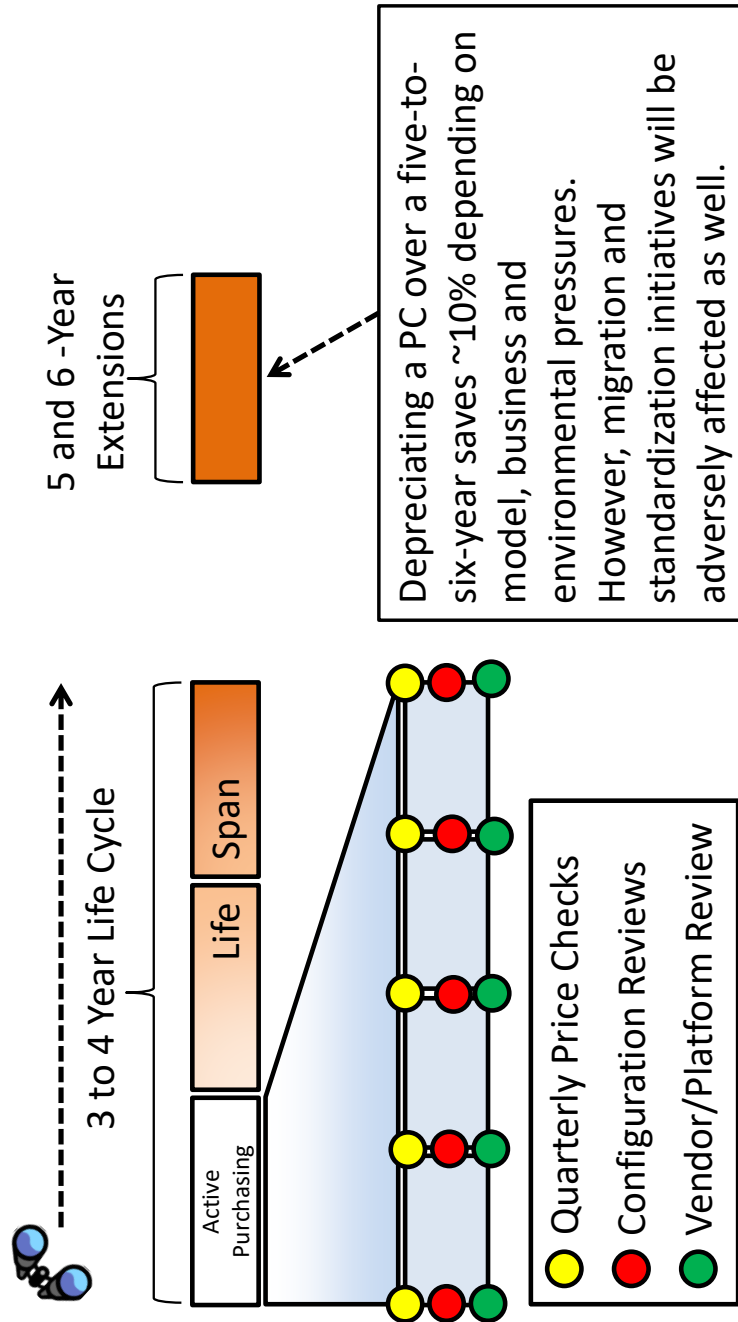
Transition Management

- **Why are managed transitions important?**
 - Migrating to new products is expensive and time consuming
 - Managed transitions provide visibility to product transitions and enable customers to plan IT resources and deployments
- **How does IT manage transitions?**
 - Ruggedized laptop models have long lifecycles (24 months) with managed transitions of at least 45-90 days



PC Purchase Lifecycle

PC Purchasing Life Cycle



Although delaying PC purchases will improve cash flow position, long-term business will spend more to migrate technology and not be able to react as quickly to business change – we believe the optimal life cycle for most organizations is 4 years for desktops and 3 years for notebooks.

End User Computing Non-Labor Workpaper

End User Computing Non Labor Workpaper

Southern California Edison - 2025 GRC
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 Constant \$

CONSTANT \$

TESTIMONY

\$10,999,391 \$11,482,568 \$11,871,476 \$12,219,643 \$12,578,050 \$12,946,998

Average Normalized (2025-2028)**\$12,404,042**

Line Item	Forecast						Justification
	2023	2024	2025	2026	2027	2028	
Smartphones Verizon Wireless	\$2,792,698	\$2,874,836	\$2,959,390	\$3,046,431	\$3,136,032	\$3,228,268	This account captures all the data billing expenses from smartphones for Verizon Wireless . Currently SCE has around 8,500 smartphones. This number fluctuates and is expected to grow in the outer years as our workforce follows the market trends and becomes more mobile.
Air Cards Verizon Wireless	\$1,891,131	\$1,946,753	\$2,004,010	\$2,062,952	\$2,123,627	\$2,186,087	This account captures all the data billing expenses from the aircards and iPads (Non-Wildfire). Currently, SCE has around 4,000 aircards/myfis and around 800 iPads (non-Wildfires). This number fluctuates and it is expected to grow in the outer years. Starting in 2024, IT is expecting to have over 7,000 iPads and it is expected to grow.
Cell Phones Verizon Wireless	\$5,199	\$5,352	\$5,510	\$5,672	\$5,839	\$6,010	This account captures data billing expenses from a small number of cell phones which are used for critical operations to provide support (e.g. command centers).

End User Computing Non Labor Workpaper

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Line Item	2023	2024	2025	2026	2027	2028	Justification
iPad Activation T-Mobile	\$92,510	\$105,729	\$108,838	\$112,039	\$115,335	\$118,727	This account captures iPad activation and data fees for T-Mobile. T-Mobile is a new provider added in 2023. Expenses will be minimum on this year and it will increase in outer years.
Cell Phones ATT	\$577,141	\$594,116	\$611,590	\$629,578	\$648,095	\$667,157	This account captures smartphone, iPad, and aircard data billing and activations for AT&T.
MFM (Multi Functional Machine) Printers	\$953,163	\$1,131,513	\$1,164,793	\$1,199,051	\$1,234,318	\$1,270,621	This account captures maintenance and prints of the MFM (multi functional machine) printers. MFM printers had low utilization from 2020-2021 due to the pandemic and employees working from home. In 2022, printing started to ramp up and it is expected to increase more in 2023 and outer years as our work force begin to transition back into the office.

End User Computing Non Labor Workpaper

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Line Item	2023	2024	2025	2026	2027	2028	Justification
Maintenance Devices Transportation - MDT	\$366,912	\$377,704	\$388,812	\$400,248	\$412,020	\$424,138	This account captures maintenance of the fleet radio and computer equipment setups. This account is consistent and expected to increase as SCE fleet will be increasing starting in 2023 and continue to increase in outer years
Satellite Phones	\$621,143	\$639,412	\$658,218	\$677,577	\$697,506	\$718,021	Due to the pandemic and more resources required to address wildfires, emergencies, and safety, satellite phones is expected to keep increasing slightly over the years.
Device MAC	\$107,513	\$110,675	\$113,930	\$117,281	\$120,730	\$124,281	This account captures fleet radio and computer equipment breakfixes and modifications
Dedicated Command Circuits	\$1,063,786	\$1,095,074	\$1,127,282	\$1,160,437	\$1,194,567	\$1,229,702	This account captures costs for internet circuits, dedicated circuits, etc. that connect SCE sites and provide Grid Services telecommunications and monitoring. Telecom carriers (AT&T, Verizon, etc.) continuing to push customers away from Time Division Multiplexing/Copper based circuits by increasing costs for these circuits as they are costing them more to maintain.

End User Computing Non Labor Workpaper

Southern California Edison - 2025 GRC
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Line Item	2023	2024	2025	2026	2027	2028	Justification
Tele MAC (Move Activate & Change) Breakfixes	\$83,775	\$86,239	\$88,776	\$91,387	\$94,075	\$96,842	This account includes costs associated with dispatching vendor technicians to resolve break/fix requests and/or complete small projects relative to telephony at sites throughout entire SCE territory
PAX Phones	\$1,506,405	\$1,550,711	\$1,596,320	\$1,643,271	\$1,691,602	\$1,741,355	This account captures monthly recurring & usage charges for telephone connections to the public switched telephone network supporting calling to and from the SCE PAX network to public telephone network. Most of these lines are also TDM/Copper based and carriers continue to increase costs for them
WebEx	\$2,304	\$2,372	\$2,441	\$2,513	\$2,587	\$2,663	This account captures fees for WebEx teleconferencing system. The expenses of this account fluctuates depending upon the demand to host critical meetings with external agencies and/or other utilities that cannot communicate with SCE via our standard meeting/video tools

End User Computing Non Labor Workpaper

Southern California Edison - 2025 GRC
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Line Item	2023	2024	2025	2026	2027	2028	Justification
All Cell Phone Activations	\$84,443	\$121,107	\$124,669	\$128,336	\$132,111	\$135,996	This account captures all phone activations for every new phone provided. IT performed a mobile device management upgrade on all phones in 2022 which required the replacement of several phones that were not compatible.
Consulting & Professional Services	\$818,064	\$809,076	\$883,074	\$909,046	\$935,783	\$963,306	This account is used for Audio and Visual professional services and yearly maintenance of the conference rooms, breakfixes and accessories replacement
Employee related expenses	\$33,204	\$31,901	\$33,824	\$33,824	\$33,824	\$33,824	This account used to capture employee related expenses such as training and office supplies

* While we are not forecasting for categories of pagers, teleconferencing, and Smartphone AT&T, it is possible that we may incur charges in the future

End User Computing Capital Forecast

End User Computing Capital Forecast

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END USER COMPUTING REFRESH PLAN CYCLE AT 25% PER YEAR

SCE Total	Account Number	2023		2024		2025		2026		2027		2028	
		Units	Price per Unit Average	Units	Price per Unit Average	Units	Price per Unit Average	Units	Price per Unit Average	Units	Price per Unit Average	Units	Price per Unit Average
Desktops Refresh	CIT-00-OP-SM-000001	800	\$1,295.00	520	\$1,295.00	520	\$1,295.00	520	\$1,295.00	520	\$1,295.00	520	\$1,295.00
Desktops New	CIT-00-OP-SM-000001	200	\$1,295.00	170	\$1,295.00	170	\$1,295.00	170	\$1,295.00	170	\$1,295.00	170	\$1,295.00
Laptops Refresh	CIT-00-OP-SM-000001	3,900	\$1,470.00	3,500	\$1,470.00	4,194	\$1,470.00	4,238	\$1,470.00	4,500	\$1,470.00	5,100	\$1,470.00
Laptops New	CIT-00-OP-SM-000001	2,100	\$1,470.00	2,200	\$1,470.00	2,100	\$1,470.00	2,150	\$1,470.00	2,747	\$1,470.00	2,881	\$1,470.00
Tablet Refresh	CIT-00-OP-SM-000001	1,900	\$1,500.00	3,200	\$1,500.00	3,500	\$1,500.00	4,200	\$1,500.00	4,500	\$1,500.00	4,900	\$1,500.00
Tablet New	CIT-00-OP-SM-000001	2,200	\$1,500.00	1,710	\$1,500.00	1,710	\$1,500.00	2,200	\$1,500.00	2,300	\$1,500.00	2,550	\$1,500.00
Monitor Refresh	CIT-00-OP-SM-000027	3,105	\$350.00	4,200	\$350.00	4,232	\$350.00	4,400	\$350.00	4,548	\$350.00	4,800	\$350.00
Monitor New	CIT-00-OP-SM-000027	1,200	\$350.00	1,310	\$350.00	1,618	\$350.00	1,744	\$350.00	1,500	\$350.00	2,079	\$350.00
Digital Monitor Refresh	CIT-00-OP-SM-000027	700	\$10,100.00	717	\$10,100.00	789	\$10,100.00	800	\$10,100.00	860	\$10,100.00	951	\$10,100.00
Digital Monitor New	CIT-00-OP-SM-000027	100	\$10,100.00	100	\$10,100.00	109	\$10,100.00	200	\$10,100.00	220	\$10,100.00	275	\$10,100.00
Plotter Refresh	CIT-00-OP-SM-000006	44	\$9,104.00	54	\$9,104.00	60	\$9,104.00	66	\$9,104.00	73	\$9,104.00	80	\$9,104.00
Rugged Devices	CIT-00-OP-SM-000005	789	\$4,350.00	838	\$4,350.00	915	\$4,350.00	1,100	\$4,350.00	1,200	\$4,350.00	1,276	\$4,350.00
Motorola Radios	CIT-00-OP-SM-000028	36	\$4,250.00	47	\$4,250.00	52	\$4,250.00	57	\$4,250.00	78	\$4,250.00	72	\$4,250.00
Windows 11		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (\$ Millions)													

Assumptions

- The price per unit is inclusive of all taxes, shipping, environmental fees, accessories, and installation, and models.
- A significant volume of devices will be upgraded to new models in 2024 and 2025 as part of the Windows 11 Upgrade Project due to Operating System comparability.
- Refresh volume has increased from 20 percent to 25 percent as part of the contract renewal with IT Managed Service Provider, however, due to the pandemic the refresh of devices was minimum in 2020 and 2021, therefore we have boosted the number of devices to be refreshed to up to 30 percent.
- The volume of desktops potentially be reduced from 2024 to 2028 since many users are being converted to laptops to have the ability to be refreshed to up to 30 percent.
- The average price per unit for desktops and laptops will go up in years 2024 to 2028 because Microsoft Surface Pro laptops and desktop newer models will be introduced every year, therefore the unit cost fluctuates.
- Tablets (Apple and Microsoft Pro tablets) have been introduced since 2018 and we are expecting to have around 10,000 iPads and 3000 tablets, depending on staff fluctuations, by 2028.
- 17 Vending Machines have been introduced in 2022 to provide faster turnaround on computer equipment delivery and it is expecting to grow in the next 5 years.

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End User Computing Capital Forecast

Summary of Device & Monitors Purchases									
Item	Model	Description		2023	2024	2025	2026	2027	2028
Desktop	T7920	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost	\$ 8,720	\$ 8,720	\$ 8,720	\$ 8,720		
			Tax	\$ 785	\$ 785	\$ 785	\$ 785		
			Shipping	\$ 71	\$ 71	\$ 71	\$ 71		
			Installation	\$ 95	\$ 95	\$ 95	\$ 95		
			Total	\$ 9,671	\$ 9,671	\$ 9,671	\$ 9,671		
	7050MT	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost	1230	1230	EOL	EOL		
			Tax	\$ 111	\$ 111	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ 1,341	\$ 1,341	\$ -	\$ -		
	7050SFF	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost	990	990	EOL	EOL		
			Tax	\$ 89	\$ 89	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ 1,079	\$ 1,079	\$ -	\$ -		
	7080MT	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost		\$ -	\$ 1,295	\$ 1,295		
			Tax	\$ -	\$ -	\$ 117	\$ 117		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,412	\$ 1,412		
	7080SFF	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost		1020.00	1020.00	End of Life		
			Tax	\$ -	\$ 92	\$ 92	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,112	\$ 1,112	\$ -		
	7090MT	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost			1090.00	1090.00		
			Tax	\$ -	\$ -	\$ 98	\$ 98		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,188	\$ 1,188		
	7000MFF	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost		\$ -	\$ 946	\$ 946		
			Tax	\$ -	\$ -	\$ 85	\$ 85		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,031	\$ 1,031		
	7050 SFF	Vendor typically releases 4 new desktop models per year. As each new model is released, newer components are introduced. For example, larger hard drive capacity, new processors, improved video graphics, and additional improved technologies	Base Cost		\$ 980	EOL	EOL		
			Tax	\$ -	\$ 88	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,068	\$ -	\$ -		

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End User Computing Capital Forecast

Summary of Device & Monitors Purchases									
Item	Model	Description		2023	2024	2025	2026	2027	2028
Laptop	Precision M5520	This is the new release of this model. Generally, this is the highpoint in cost for any unit.	Base Cost	1780	1780	EOL	EOL		
			Tax	\$ 160	\$ 160	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ 1,940	\$ 1,940	\$ -	\$ -		
	Precision M5540	This is the new release of this model. Generally, this is the highpoint in cost for any unit.	Base Cost		\$ 1,980	EOL	EOL		
			Tax	\$ -	\$ 178	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 2,158	\$ -	\$ -		
	Precision M5550	This is the new release of this model. Generally, this is the highpoint in cost for any unit.	Base Cost		\$ 2,280	\$ 2,280	EOL		
			Tax	\$ -	\$ 205	\$ 205	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 2,485	\$ 2,485	\$ -		
	Precision M5570	Second year of this model. Price decreases the longer the unit has been available in the market.	Base Cost		\$ -	\$ 2,645	\$ 2,645		
			Tax	\$ -	\$ -	\$ 238	\$ 238		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 2,883	\$ 2,883		
	Latitude 5400	Second year of this model. Price decreases the longer the unit has been available in the market.	Base Cost	1020	EOL	EOL	EOL		
			Tax	\$ 92	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ 1,112	\$ -	\$ -	\$ -		
	Latitude 5420	This is the first release of this model. New model dock required.	Base Cost			\$ 1,472	EOL		
			Tax	\$ -	\$ -	\$ 132	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,604	\$ -		
	Latitude 5430	This is the first release of this model. New model dock required.	Base Cost		\$ 1,415	EOL	\$ -		
			Tax	\$ -	\$ 127	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,542	\$ -	\$ -		
	Microsoft Surface Laptop 2	This is the first release of this model. New model dock required.	Base Cost		\$ -	EOL	EOL		
			Tax	\$ -	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ -		
	Microsoft Surface Laptop 3	This is the first release of this model. New model dock required.	Base Cost		\$ 1,621	EOL	EOL		
			Tax	\$ -	\$ 146	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,767	\$ -	\$ -		
	Microsoft Surface Laptop 4	This is the first release of this model. New model dock required.	Base Cost		\$ -	\$ 1,477	EOL		
			Tax	\$ -	\$ -	\$ 133	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,610	\$ -		
	Microsoft Surface Laptop 5	This is the first release of this model. New model dock required.	Base Cost		\$ -	\$ -	\$ 1,487		
			Tax	\$ -	\$ -	\$ -	\$ 134		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ 1,621		
	Apple ipad pro 11"	This is the first release of this model. New model dock required.	Base Cost		\$ 1,290	\$ 1,196	\$ 1,196		
			Tax	\$ -	\$ 116	\$ 108	\$ 108		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,406	\$ 1,304	\$ 1,304		

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 Nominal \$

End User Computing Capital Forecast

Summary of Device & Monitors Purchases									
Item	Model	Description		2023	2024	2025	2026	2027	2028
	Microsoft Surface pro 7	This is the first release of this model. New model dock required.	Base Cost		\$ 1,679	EOL	EOL		
			Tax	\$ -	\$ 151	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,830	\$ -	\$ -		
	Microsoft Surface pro 7+	This is the first release of this model. New model dock required.	Base Cost		\$ 1,723	EOL	EOL		
			Tax	\$ -	\$ 155	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 1,878	\$ -	\$ -		
	Microsoft Surface pro 8	This is the first release of this model. New model dock required.	Base Cost			\$ 1,821	EOL		
			Tax	\$ -	\$ -	\$ 164	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,985	\$ -		
	Microsoft Surface pro 9	This is the first release of this model. New model dock required.	Base Cost		\$ -	\$ 1,631	\$ 1,631		
			Tax	\$ -	\$ -	\$ 147	\$ 147		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 1,778	\$ 1,778		
	Latitude 12 7220	This is the first release of this model. New model dock required.	Base Cost		\$ 2,238	\$ 2,238	\$ 2,238		
			Tax	\$ -	\$ 201	\$ 201	\$ 201		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 2,439	\$ 2,439	\$ 2,439		
	Latitude 7424 Extreme	This is the first release of this model. New model dock required.	Base Cost		\$ 3,581	\$ 3,581	\$ 3,581		
			Tax	\$ -	\$ 322	\$ 322	\$ 322		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 3,903	\$ 3,903	\$ 3,903		
	Latitude Rugged 5424	This is the first release of this model. New model dock required.	Base Cost		\$ 2,530	\$ 2,530	EOL		
			Tax	\$ -	\$ 228	\$ 228	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 2,758	\$ 2,758	\$ -		
	Latitude 5420 Rugged Laptop	This is the first release of this model. New model dock required.	Base Cost		\$ 2,403	EOL	EOL		
			Tax	\$ -	\$ 216	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 2,619	\$ -	\$ -		
	Latitude 5430 Rugged Laptop	This is the first release of this model. New model dock required.	Base Cost		\$ -	\$ 2,445	\$ -		
			Tax	\$ -	\$ -	\$ 220	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ 2,665	\$ -		

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End User Computing Capital Forecast

Summary of Device & Monitors Purchases									
Item	Model	Description		2023	2024	2025	2026	2027	2028
Monitors	24"		Base Cost		\$ 212	\$ 213	\$ 213		
			Tax	\$ -	\$ 19	\$ 19	\$ 19		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 231	\$ 232	\$ 232		
	27"		Base Cost		\$ 450	\$ 450	\$ 450		
			Tax	\$ -	\$ 41	\$ 41	\$ 41		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 491	\$ 491	\$ 491		
	34"		Base Cost		\$ 517	\$ 517	\$ 517		
			Tax	\$ -	\$ 47	\$ 47	\$ 47		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 564	\$ 564	\$ 564		
	38"		Base Cost		\$ 589	\$ 589	\$ 589		
			Tax	\$ -	\$ 53	\$ 53	\$ 53		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ 642	\$ 642	\$ 642		
Digital Monitors	49"		Base Cost	\$ -	\$ -	\$ -	\$ -		
			Tax	\$ -	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ -		
	75"		Base Cost	\$ 10,100	\$ 10,100	\$ 10,100			
			Tax	\$ -	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ -		
Plotters	HP-T2500		Base Cost	\$ -	\$ -	\$ -	\$ -		
			Tax	\$ -	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ -		
	HP-2530		Base Cost	\$ -	\$ -	\$ -	\$ -		
			Tax	\$ -	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ -		
Radios	Motorola		Base Cost	\$ -	\$ -	\$ -	\$ -		
			Tax	\$ -	\$ -	\$ -	\$ -		
			Shipping	\$ -	\$ -	\$ -	\$ -		
			Installation	\$ -	\$ -	\$ -	\$ -		
			Total	\$ -	\$ -	\$ -	\$ -		
Base Cost				Cost for unit as configured per Vendor quote					
Tax				California sales tax is not shown on the Vendor quote. Vendor sells directly to Edison					
Shipping				Costs vary based on quantity purchased and incentives from Vendor					
Installation				Standard cost as per negotiated contract with vendor					

Windows 11 Summary

Microsoft Windows 11 Deployment									
Project Overview / Objectives / Drivers	- Upgrade the existing Windows 7 and Windows 10 to the current Microsoft platform of Windows 11. - Currently we support Operating Systems: Windows 7 and Windows 10 in the SCE environment and upgrading these operating systems to one platform which is Windows 10 will facilitate savings in hardware refresh, software license, and maintenance upgrade costs. - Windows 10 Operating System goes end of life starting Q2 2025. There will be a financial impact to SCE to continue support Microsoft Windows 10 Operating System starting in 2025 to assure continued vendor support, operations, and cybersecurity compliance								
	IT Operational Impacts			Technology Impacts			Dependencies		Constraints
	- Application testing and remediation - Desktop support deployment - Remediation of the following: Land Network, Virtual Private Network and SIMS to support new operating System	- Office 365 (SharePoint Online, Exchange Online), End user application - IT Operations Collaboration Tools (Microsoft SCCM, SIMS, APP-V, Citrix) - Land Network - Virtual Private Network			- Identification of COTS solution - Wireless Local Area Network (WLAN)/Wireless Wide Area Network (WWAN) - Virtual Environment - Microsoft SCCM - SIMS (Software Installation Management System)		OU transition strategy		
	Migrate SCE's current 20,147 end-point devices to Windows 11 and remediate applications as required to support required integration.								
High-level Cost Analysis (ROM)	Overall	2023	2024	2025	2026	Post Project Yearly Costs (Year 6)			
	HW/SW	\$33,606,910	\$0	\$9,910,479	\$11,057,630	\$12,168,801			
	Labor			\$250,000	\$110,000	\$110,000			
	Capital Total			\$10,160,479	\$11,167,630	\$12,278,801			
SCE Goals Impact	Safety	Compliance	Customer Service	Reliability	Affordability	Operational Support	Risk Mitigation		
	X	X	X	X	X	X	X		
	 EDISON AN EDISON INTERNATIONAL COMPANY								

Windows 11 Deployment Cost Plan Workpapers

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Windows 11 Deployment Cost Plan Workpapers.xlsx

Windows 11 Cost Summary

Business Initiative Name: Windows 11 Enterprise Deployment

Cost Type	Cost Type	2024	2025	2026	2027	Year Summary
Project split by Year	Percent					100%
SCE Labor	Capital	\$ 250,000	\$ 110,000	\$ 110,000	\$ -	\$ 470,000
HW/SW	Capital	\$9,910,479	\$11,057,630	\$12,168,801		
Vendor Contract (External, MSP, Fixed Price)	Capital					\$ -
	Capital	\$ 10,160,479	\$ 11,167,630	\$ 12,278,801	\$ -	\$ 33,606,910
Travel expenses, training costs, and application remediation work that can't be capitalized	O&M					\$ -
	O&M	\$ -	\$ -	\$ -	\$ -	\$ -
	Cost/Year	\$ 10,160,479	\$ 11,167,630	\$ 12,278,801	\$ -	\$ 33,606,910

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Windows 11 Labor & Contract Estimate

Team	Phase	Effort Hrs	Rate	\$	% of Build	Comments
	Planning and Analysis	87,532	65	\$ 5,689,580	0	Identification of COT's solutions, and analysis to determine impacts of upgraded OS
	Testing & Design	155,385	65	\$ 10,100,025	30%	Includes application, infrastructure and automation tools testing
	Remediation	47,428	65	\$ 3,082,820	9%	Includes application, IT Automation Tools, VPN Infrastructure
	Training	28,276	65	\$ 1,837,940	5%	Operational support training, end user training (job aids, CBT, brown bags, etc)
	Deployment	106,895	65	\$ 6,948,175	21%	Application packaging and push of new OS to all enterprise users
	Project Support Services	31,619	65	\$ 2,055,235	6%	Operational readiness, support during deployment, etc.
	Stabilization, Performance, Warranty	28,276	65	\$ 1,837,940	5%	Continued remediation of impacts not discovered during initial testing and remediation phase
	SDLC Estimate	485,411		\$ 31,551,715		
	Project Management	15,809	65	\$ 1,027,585	3%	Validation that remediation efforts don't adversely impact cybersecurity, IT controls and compliance
	Cybersecurity, IT Controls, Compliance, etc.	15,809	65	\$ 1,027,585	3%	
		Subtotal		\$ 2,055,170		
	Grand Total	517,029		\$ 33,606,885		

Note: Estimates are based on experience from Windows 10 Enterprise Deployment

The Future of Cloud Computing in 2027: From Technology to Business Innovation



The Future of Cloud Computing in 2027: From Technology to Business Innovation

Published 5 October 2022 - ID G00768816 - 1 min read

David Smith

Initiatives: [Cloud and Edge Infrastructure](#)

By 2027, cloud will be pervasive and will have moved into its next chapter — one of flexibility and innovation. It will be ubiquitous, and the underlying basis for most IT and business innovation. We enable I&O leaders to discuss cloud's future evolution with executive leaders, peers and teams.

Additional Perspectives

- [Summary Translation: The Future of Cloud Computing in 2027: From Technology to Business Innovation](#)
(27 October 2022)

Today, most people think of the cloud as a technology platform. This perspective will shift markedly by 2027. Cloud computing will not only be a technological approach for delivering applications, but will also serve as the key driver of business innovation.

Digital organizations depend on technology to deliver competitive operations and customer experiences. Cloud is at the center of most recent and emerging technological innovations, including:

- Artificial intelligence
- Event-driven architectures
- Internet of Things (IoT) services
- Next-generation user interfaces
- Edge computing
- Quantum computing
- Real-time situational awareness



Therefore, few (if any) mainstream organizations will be able to implement new business models or ecosystem relationships without relying on cloud services. Further, cloud services provide consumption-based pricing models and ubiquitous availability to all organizations, which democratizes technology for the masses.

In 2027, cloud will be the pervasive style of computing. New workloads deployed outside of a cloud-native environment will be rare, and anything noncloud will be considered legacy.

This presentation includes our top predictions for cloud computing in 2027, the rationale behind these predictions and key strategic actions IT leaders should take to prepare.

Document Revision History

[The Future of Cloud in 2025: From Technology to Innovation - 29 October 2020](#)

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Capital Workpapers - Technology Adoption

Capital Workpapers - Technology Adoption

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Technology Adoption	Recorded					
	2018	2019	2020	2021	2022	Totals
Cloud	913,820	429,480	740,298	656,363	6,165,883	8,905,844
Reliability		-	-			-
Business Recovery/ Disaster Recovery						-
Storage and Backup						-
Networking						-
Security						-
Identity Management			2,701,926	2,024,570	1,668,374	6,394,870
Total Technology Adoption	913,820	429,480	3,442,224	2,680,933	7,834,257	15,300,714
Testimony	913,820	429,480	3,442,224	2,680,933	7,834,257	15,300,714

	Forecast (\$)					
	2023	2024	2025	2026	2027	2028
Technology Adoption						
Cloud Transition	9,500,000	7,684,551	4,856,963	4,753,386	6,981,818	7,962,167
Business Resiliency			750,000	750,000		
Automation	1,000,000		350,000			
Cost Management		500,000				
Compliance				1,500,000	1,500,000	1,000,000
Identity Management	4,878,914	3,500,000	4,500,000	2,500,000	1,100,000	850,000
Total Technology Adoption	15,378,914	11,684,551	10,456,963	9,503,386	9,581,818	9,812,167
Testimony	15,378,914	11,684,551	10,456,963	9,503,386	9,581,818	9,812,167
						66,417,799