

PUBLIC UTILITIES COMMISSION

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September 7, 2022

Claire E. Torchia
Southern California Edison Company
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
SENT VIA EMAIL: claire.torchia@sce.com

**SUBJECT: The 2021 Southern California Edison Company
Risk Spending Accountability Report Review**

Dear Ms. Torchia:

The Southern California Edison Company (SCE) submitted their 2021 Risk Spending Accountability Report (RSAR) to The California Public Utilities Commission (CPUC) on June 1, 2022. Energy Division has completed a review of this report and provides SCE with recommendations for its future RSAR submittals. The attachments provide background and details of staff's analysis on spending accountability and spending variances.

CONCLUSIONS

The 2021 RSAR represents SCE's first official RSAR¹ and is also the first RSAR under the Test Year 2021 GRC (Application 19-08-013). ED has reviewed the RSAR to determine compliance with the guidance in CPUC's Safety Model Assessment Proceeding (S-MAP) Decision, (D.) 19-04-020. Within the RSAR, SCE presented imputed adopted costs, actual spending, and work units for its reportable general rate case (GRC) programs related to safety, reliability and maintenance.

Program Selection

SCE applied the selection criteria for its GRC programs according to D.19-04-020 and included the explanations required for those programs selected for an explanation. SCE provided reference and regulatory account information affecting authorized spending.

Variance

Overall, SCE's 2021 RSAR showed a 9 percent overspend (\$502 million), as shown in Table 1. It should be noted that SCE reported a 7 percent underspend (\$311 million) in its 2020 RSAR.

¹ [D.19-04-020](#) p. 46 "SCE shall comply with the RSAR requirements approved in this decision starting with its 2021 RSAR filing" SCE has filed interim RSAR reports back to record year 2016 and can be found on the CPUC website: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/risk-spending-accountability-reports>

Table 1. 2021 Capital and O&M Authorized and vs Recorded

	Total GRC Authorized	Total SRM Authorized	SRM Programs as a percent of Authorized	Recorded Cost	Variance	% Variance of Authorized SRM
O&M	\$2,577,424	\$1,325,673	51 %	\$1,609,476	\$283,803	21%
Capital	\$4,798,014	\$4,099,194	85%	\$4,317,233	\$218,039	5%
TOTAL	\$7,375,438	\$5,424,867	74%	\$5,926,709	\$501,842	9%

Across all RSAR related major business lines for capital and O&M expenses, capital distribution system programs had the largest total overspend (\$469 million), but when netted against transmission, distribution, and other non-distribution system capital program underspending, the net overspend on capital investment was only \$218 million, or a 5 percent overspend, as shown in Table 2 below. The Wildfire Covered Conductor program accounted for 77 percent of the Capital Distribution overspend.

It is notable that the 2020 capital distribution category had a \$150 million underspend, highlighting the importance of multi-year tracking.

Table 2. 2021 Recorded vs Actual by Major Line of Business

Category	2021 Recorded (\$000)	2021 Authorized (\$000)	Variance (\$000)	Variance (%)
O&M				
Distribution	\$767,723	\$468,949	\$298,774	64%
Transmission	\$121,015	\$114,970	\$6,045	5%
Generation	\$155,471	\$160,265	(\$4,795)	-3%
Other	\$565,268	\$581,489	(\$16,221)	-3%
O&M Total	\$1,609,476	\$1,325,673	\$283,803	21%
Capital				
Distribution	\$2,656,738	\$2,187,265	\$469,473	21%
Transmission	\$919,250	\$1,080,240	(\$160,991)	-15%
Generation	\$93,561	\$94,298	(\$738)	-1%
Other	\$647,685	\$737,391	(\$89,706)	-12%
Capital Total	\$4,317,233	\$4,099,194	\$218,039	5%

Of the 250 programs evaluated, 61 (24 percent) exceeded the variance threshold². Of the 61 programs exceeding the variance threshold, 29 (a little less than half, or 12 percent of the programs evaluated) had a negative variance (under spending).

Expanded, Emergent, and Deferred

SCE identified 12 canceled projects and 59 deferred projects. SCE had 41 emergent programs all in capital totaling \$75 million.

² Variance threshold that triggers and explanation varies between type of expense and units: Expense Variance > \$10 million or >\$5 million and 20 percent; Capital Variance > \$20 million or >\$10 million and 20 percent; or Unit Variance between adopted units and actual units > 20 percent.

Memorandum and Balancing Accounts

The Balancing and Memorandum accounts included only two balancing accounts for 2021: Mobilehome Park Master Meter Balancing Account (MMMBA) and Catastrophic Event Memorandum Account (CEMA).

Table 3. 2021 Memorandum and Balance Account Expenditures

Account	Activity	O&M Expense	Capital Expenditure
MMMBA	Mobile Home Park	0.090	15.617
CEMA	2021 CEMA Storm Events	0.175	0
TOTAL		0.265	15.617

Comments

D.19-04-020 provides for a method for parties to comment on the report. No comments were received on the SCE 2021 RSAR.

RECOMMENDATIONS

SCE provided explanations and descriptions for the programs or projects in the report but should improve on their efforts to include authorized work units and lists of activities when work units are not available. Use of unique program names, even when under different activity types, would facilitate analysis and eliminate potential confusion. SCE clearly identified cancelled and deferred projects. Including the cancelled and deferred projects' allocated costs would be helpful in tracking the impact of cancelled and deferred projects to the spending variances.

SCE should refer to the reporting framework in D.19-04-020, Ordering Paragraph 10 in preparing and submitting future RSARs. SCE should also follow recommendations and decisions related to RSARs that comes from the Order Instituting Rulemaking to Further Develop a Risk-Based Decision-Making Framework for Electric and Gas Utilities R.20-07-013 (S-MAP 2).³

If you have any questions or comments, please contact Jordan Smith at jordan.smith@cpuc.ca.gov.

Sincerely,

 For

Leuwam Tesfai

Deputy Executive Director for Energy and Climate Policy/ Director Energy Division

Enclosure: ATTACHMENT A - Staff Analysis of Selected Programs
ATTACHMENT B – SCE RSAR Programs Ranked by Spending Variance

cc: Daniel Komula, Southern California Edison
Kristen Yee, Southern California Edison
Franz Cheng, Supervisor Electric Costs Section
Service Lists for I.18-11-006, A.19-08-013, A.22-05-013

³ 6 On July 18, 2022, the CPUC issued a proposed decision that contains a list of ED recommendations meant to improve and clarify the RSAR format. See <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M494/K608/494608119.PDF>

ATTACHMENT A:

STAFF ANALYSIS OF SELECTED PROGRAMS of 2021 SCE RSAR

CPUC Staff made data requests on programs when variance explanations appeared inadequate. The results of these inquiries may be found in the sections below. Impacts of the COVID-19 pandemic have affected many of the program underexpenditures discussed in this attachment. Supply chain disruptions have delayed the procurement of needed equipment and hardware, labor shortages have presented challenges in project management and have increased costs, and SCE has experienced delays in receiving permits from government and other regulatory agencies.

Please note that some programs listed in the RSAR have the same name under different activity types and business lines. A general recommendation from ED staff is for SCE to provide a unique identifier to each program to avoid confusion when referring to programs with the same name.

Capital Distribution

Wildfire Covered Conductor Program

Spending for this program was \$919.5 million compared to an imputed adopted cost of \$557.5 million, an **overexpenditure** of approximately 65 percent (\$362 million).

The Wildfire Covered Conductor Program includes the costs associated with installation of covered conductors, installation of fire-resistant poles, and mitigation of tree attachments in SCE's High Fire Risk Area.

The reasons for the overexpenditure in this category are twofold. The first is that SCE installed 384 (37 percent) more miles of covered conductor than originally imputed. The second is that the costs of installation have increased beyond what was imputed. Costs were especially higher when working in rural and mountainous areas. When the 2021 GRC was first filed in August 2019, the Wildfire Covered Conductor program was in its infancy and SCE claims that there was not sufficient historical data in which to base a forecast.

SCE's installation of additional miles of covered conductor in wildfire prone areas reduces wildfire risk and increases safety and reliability, but in the future, SCE should provide the information about lack of historical data and the difficulties in effectively forecasting this program in future RSARs to provide greater context.

Distribution Substation Plan (DSP) Circuits

Spending for this program was \$33 million compared to an imputed adopted cost of \$55 million, an **underexpenditure** of approximately 40 percent (\$22 million).

The DSP Program consist of new distribution circuits required to 1) provide new capacity outside the substation fence in areas where multiple distribution circuits in the same geographical region are expected to exceed capacity; 2) serve new residential or commercial developments in areas with no existing electrical infrastructure; and 3) relieve existing circuits projected to exceed capacity in geographically isolated areas with limited usable circuit ties to transfer load.

SCE cites three main reasons for the underexpenditure in this program. First, SCE experienced permitting delays for certain projects, as impacts from COVID-19 slowed permitting response times from other regulatory agencies. Second, SCE experienced resource planning and performance management constraints as a result of COVID-19 impacts to supply chains and availability of labor. Third, several projects came in significantly under the initial cost estimates.

Delays due to COVID-19 are cited in many of the selected programs' analyses. Having several projects come in below estimates decreases pressure for rate increases. SCE should identify if further delays will cause a backlog of work and any resulting safety concerns.

Distribution Preventative and Breakdown Capital Maintenance

Spending for this program was \$339 million compared to an imputed adopted cost of \$293 million, an **overexpenditure** of approximately 16 percent.

The Distribution Preventative and Breakdown Capital Maintenance Program captures the labor, equipment, and other material costs associated with removal and replacement of failed distribution equipment.

SCE cites an increased number of enhanced overhead inspections which drove a higher number of remediations. In addition to the number of inspections, three other reasons are cited. The first is the bundling of wildfire with non-wildfire work. When performing remediation work, SCE will complete all needed work at the location to save time and resources. This caused some wildfire prevention work to be recorded in the non-wildfire category. The second reason was caused by a greater reliance on contractor resources versus utility staff due to increased workload. Contractor resources are more expensive than SCE employees. The third reason was higher amounts of overtime hours than were projected in the budget.

It remains unclear if remediation maintenance work has caught up with the increased inspection findings. SCE should elaborate on its plan to address and prioritize the remediation work in its future RSAR reporting. In addition, while ED staff encourages the continued practice of bundling work at locations, SCE should consider how to improve accounting practices to better capture the different work types performed in the appropriate categories.

Enhanced Overhead Inspections and Remediations

Spending for this program was \$135 million compared to an imputed adopted cost of \$49.5 million, an **overexpenditure** of approximately 172 percent.

The Enhanced Overhead Inspections and Remediations program includes the costs associated with performing inspections and remediation of findings across SCE's High Fire Risk Area.

When feasible, SCE bundles different work types at the same structure and circuit segment for economic efficiency and to minimize the impact of remediation work on customers. Bundling also reduces the number of repeat outages and traffic restrictions due to necessary road closures. In some cases in 2021, this resulted some work planned for subsequent years being performed. Accelerated progress due to bundling contributed to SCE's overexpenditure. At the same time, there may be other earlier-year work not completed because of operating constraints such as resource availability, permitting delays, and weather deferrals.

The economic and time efficiencies realized by bundling work at structure and circuit sites are encouraged. However, the report is unclear regarding how work sites are prioritized when different work types are bundled together. It is also not clear to ED staff how these different work types are captured in the appropriate categories in the RSAR. In future RSARs, SCE should elaborate on how bundled work locations are prioritized and how the different work types performed are accounted for correctly.

Underground Structure Replacements

Spending for this program was \$19 million compared to an imputed adopted cost of \$5 million, an **overexpenditure** of approximately 258 percent.

The Underground Structure Replacement program consists of three different sub-activities; structure replacements; vault shoring; and Cover Pressure Relief and Restraint (CPRR) intended to prevent primary distribution underground electrical equipment failures that could potentially lead to a vault or manhole explosion event.

SCE prioritized the completion of underground structure replacements with the worst classifications grades (D & F). SCE also completed more vault replacements than shoring which have significantly higher unit costs compared to shoring projects. The cost of materials has also increased generally.

SCE focused on underground structure and vault replacements that had the most need. In addition, some of this work was completed ahead of schedule. This, combined with higher unit costs led to the overexpenditure. SCE states that this does not necessarily correlate to the cost of projects in the future, but SCE should evaluate these costs to assess the need for modified forecasting.

O&M Distribution

Distribution Routine Vegetation Management

Spending for this program was \$358 million compared to an imputed adopted cost of \$108 million, an **overexpenditure** of approximately 231 percent.

The Distribution Routine Vegetation Management program includes costs incurred for pre-inspections, trimming and removal of trees, expanded clearance distances, back-end quality assurance/checks; pole-brushing work, supplemental patrols, and substation-associated vegetation management work.

SCE cites two reasons for the overexpenditure. The first is the implementation of Senate Bill (SB) 247, which set a higher rate for tree trimmers than what SCE was initially paying. Because the 2021 GRC was filed in August 2019, these higher costs were not captured. SCE planned to address this in a testimony update, but that update was denied by the Commission on procedural grounds. The second reason is that SCE's largest vegetation management consultant experienced a six-month safety stand down in response to two specific incidents. In one incident, a rope was caught in a chipper and injured two contractor employees. In another, a tree fell on a structure resulting in personnel injuries and structural damage. The safety stand down caused SCE to contract with multiple smaller contractors at a higher rate. When the safety stand down was over, multiple contractors worked overtime to address the backlog of vegetation management work.

SB 247 was signed by the Governor on October 2, 2019 and imposed an increase in labor costs after the 2021 TY GRC was filed in August 2019, but labor rates alone do not account for the 231 percent overexpenditure. More detail on the work units, such as an aggregated work unit of “miles” that could include tree removal and clearance, would assist in determining the true magnitude of the overexpenditure.

Infrared Inspection Program

Spending for this program was \$558,000 compared to an imputed adopted cost of \$3.8 million, an **underexpenditure** of approximately 85 percent.

The Infrared Inspection Program includes the costs associated with performing infrared inspections on High Fire Risk Area (HFRA) distribution circuits as well as infrared and corona inspections on transmission lines in HFRA.

When SCE filed its 2021 GRC, SCE had proposed combined corona and infrared scanning as the most efficient and cost effective method to conduct transmission aerial inspections. The forecast for both activities was combined into one activity. However, as SCE’s wildfire strategies evolved, it became clear that this solution was not practical or cost effective. The activities were separated and analyzed independently.

Corona inspections are still budgeted within the Infrared Inspection Program and ED staff could not identify if any corona inspections were completed. Without identified work units, 85 percent of this category remains unaccounted for. SCE has committed to provide additional clarity for transmission infrared inspections and corona scans in the next RSAR submittal.

Enhanced Overhead Inspections and Remediations

Spending for this program was \$117 million compared to an imputed adopted cost of \$61.5 million, an **overexpenditure** of approximately 90 percent.

The Enhanced Overhead Inspections and Remediations program includes the costs for performing inspections and remediation across SCE's High Fire Risk Area. This includes Transmission EOI inspections, Distribution EOI Inspections, aerial inspections, Transmission and Distribution EOI repairs, the long span mitigation, vertical switches, and EOI PMO costs.

In 2020 and 2021, SCE introduced a new inspection initiative known as the Areas of Concern (AOC). AOCs are specific geographic areas that are marked by environmental and asset conditions that face significant wildfire risk, such as an abundance of dry fuel and exposure to high winds. In 2021, SCE expanded AOC mitigation efforts by including both summer and fall AOC-specific inspection regimens.

The AOC is a new program that does not appear in the GRC. Its purpose is to focus inspections and remediations on areas of the highest wildfire risk. The increased inspections were accompanied by an increase in contractor rates, which explains the overspend, but reasonableness of the increased inspections have not been determined.

Dead, Dying and Diseased Tree Removal

Spending for this program was \$16 million compared to an imputed adopted cost of \$35.5 million, an **underexpenditure** of approximately 55 percent.

The Dead, Dying and Diseased Tree Removal program includes costs incurred to proactively remove such trees that could fall on or contact SCE's electrical facilities.

As mentioned in the Distribution Routine Vegetation Management category above, SCE enacted a safety stand down on its main contractor responsible for vegetation management. In addition, SCE cites new environmental processes slowing its ability to complete certain planned removals.

Regarding the new environmental processes, SCE should cite the new rules and provide a high-level explanation for how they impact this work.

Capital Transmission

Transmission Capital Maintenance

Spending for this program was \$50 million, despite an imputed adopted cost of \$87 million, an **underexpenditure** of approximately 43 percent.

The Transmission Capital Maintenance program includes the costs to remove, replace, and retire assets on a planned or reactive basis. Planned transmission capital maintenance is driven by regular equipment maintenance cycles; maintenance work identified and prioritized through overhead and underground inspection programs; and maintenance identified through observations by field personnel and other activities.

SCE cites resource constraints and delays in the Tower Corrosion component of the Transmission Capital Maintenance program. SCE also cites lower ongoing maintenance spend on smaller transmission grid maintenance activities. The reason for the delay and reduction in spend is due to resource constraints related to COVID-19. Disruptions in the supply chain and reduction in labor resources have also constrained the program.

Disruptions to the supply chain and constraints on labor resources are cited repeatedly throughout SCE's RSAR. SCE should provide a plan for how it will address any backlog of work from this delay, including the potential need to reprioritize projects to ensure safety and reliability.

Substation Transformer Bank Replacement

Spending for this program was \$54 million with an imputed adopted cost of \$88 million resulting in an **underexpenditure** of approximately 39 percent.

The Substation Transformer Bank Replacement program includes the preemptive replacement of transformers approaching the end of their service lives.

SCE cites three reasons for the underexpenditure in this category. First, SCE experienced transmission constraints resulting in project deferrals, since during hot summer days and other times when the electric grid is near capacity, system operators sometimes suspend this work to avoid outages. Second, SCE experienced material delivery delays from supply chain issues due to COVID-19, also resulting in project deferrals. Third, COVID-19 also created other general

construction constraints and delays resulting from supply chain issues, labor shortages, and permitting from government and other resource agencies.

SCE should provide a plan for how it will continue this work and address any resulting backlog in the next RSAR submittal.

Transmission Line Rating Remediation (TLRR)

Spending for this program was \$93 million compared to an imputed adopted cost of \$137 million, an **underexpenditure** of approximately 32 percent.

The TLRR program includes the cost of labor, materials used, and expenses incurred to remediate line clearance discrepancies. Remediations vary based on the discrepancy and can include re-tensioning circuits, re-framing towers, grading land under a line, replacing towers and poles, raising existing towers and points of connection, and re-conducting existing conductors. It also includes related costs such as transportation, meals, traveling, lodging, and incidental expenses.

SCE cites delays and the need to develop alternatives for both the Ivanpah-Control and Eldorado-Lugo-Pisgah transmission lines. SCE experienced longer than expected regulatory review from the Bureau of Land Management and unanticipated extensive cultural resources were found.

SCE should provide a plan for how these projects, or their alternatives, will be addressed in the next RSAR submittal.

Protection of Grid Infrastructure Assets

Spending for this program was \$16 million compared to an imputed adopted cost of \$28 million, an **underexpenditure** of approximately 45 percent.

The Protection of Grid Infrastructure Assets program is an ongoing effort to improve the physical protection of SCE employees and assets at electric facilities to deter and protect against theft, security breaches, and other security incidents.

SCE's variance explanation cites supply chain problems associated with the COVID-19 pandemic as a leading reason for the underspend. Another reason was related to the completion of NERC CIP 014 work. While some of these factors were anticipated, not all of them were able to be mitigated.

SCE should address how this work will be accomplished or identify the projects as delayed. In addition, SCE should provide additional discussion about how this category is affected by NERC CIP 014 and wildfire work.

Capital Other

Substation Switchrack Rebuild

Spending for this program was \$37 million, despite an imputed adopted cost of \$80.5 million, an **underexpenditure** of approximately 54 percent.

The Substation Switchrack Rebuild program is a capital activity that relates to rebuilding existing substation racks based on conditions found in the field, as well as through various analyses including

structural and seismic analysis. A substation switchrack is the skeletal/structural system used to support substation assets such as circuit breakers, disconnects, and conductors.

SCE cites several reasons for the underexpenditure in this program category, including unforeseen project scope changes, material shortages, labor shortages, and customer requests for deferment of installation dates. Site specific field conditions can often alter the scope of a project. In some projects, teams determined that alternate work would be suitable, such as work on pad/pole and skid mounts were operationally efficient and more cost effective than a complete rebuild of the substation. Also, the COVID-19 pandemic has impacted supply chains, availability of labor, and have delayed permitting. In addition, substation work is sometimes delayed because of concerns from neighboring property owners. Without information on number of work units completed, it is impossible to assess what work has not been accomplished as a result of the reduced spending, SCE should provide an assessment of the delayed work and the resulting impact on overall spending.

Grid Modernization Cybersecurity

Spending for this program was \$35 million compared to an imputed adopted cost of \$46 million, an **underexpenditure** of approximately 24 percent.

Cybersecurity programs are related to the implementation of the Grid Modernization Program. This includes addressing the comprehensive security and data protection needs of both new infrastructure and assets being added through the program including the following: Field Area Network (FAN), Common Substation Platform (CSP), Wide Area Network (WAN), Grid Management System (GMS), DRP External Portal (DRPEP), and Grid Interconnection Processing Tool (GIPT). This work addresses the critical need for modern and robust cybersecurity measures and controls by detecting, isolating, fixing or removing, and restoring electric distribution grid systems and devices as quickly and efficiently as possible. The program seeks to accomplish this through a combination of infrastructure, applications, and threat intelligence initiatives.

This work has experienced delays with work shifted from 2021 to 2023-24, split approximately 50/50 between those two years. SCE does not currently know what the current spend will be in 2023 or 2024. SCE experienced delays in the delivery of specialized hardware and from labor shortages. This is consistent with many of the delays encountered by SCE due to the COVID-19 pandemic. Still, SCE has interconnected cybersecurity systems in place that work together to protect against external and internal attacks. SCE acknowledges the need to continually evolve its systems to protect against future attacks and is working to catch up to the project delays.

SCE should discuss in the next RSAR how it is working to catch up to the project delays.

Attachment B
SCE RSAR Programs Ranked by Spending Variance

Type	Business Line	GRC Activity	RAMP Control / Mitigation Name	Recorded Costs (\$000) - A	Authorized Costs (\$000) - B	Variance (\$000) (A - B)	% Variance - (A - B)/B	Recorded Units - C	Authorized Units - D	Variance (Units) - (C - D)	% threshold Variance (Units) - (C - D)/D	\$ Threshold Variance Explanation	% \$ Variance Explanation	Unit Variance Explanation
Capital	Transmission	Grid Reliability Projects	N/A	\$203,429	\$264,607	(\$61,178)	-23%					Yes	Yes	No
Capital	Other	Communications	N/A	\$15,086	\$74,107	(\$59,021)	-80%					Yes	Yes	No
Capital	Transmission	Transmission Line Rating Remediation (TLRR)	N/A	\$93,182	\$136,614	(\$43,432)	-32%					Yes	Yes	No
Capital	Other	Substation Switchrack Rebuild	N/A	\$37,216	\$80,517	(\$43,301)	-54%					Yes	Yes	No
Capital	Transmission	Transmission Capital Maintenance	N/A	\$49,697	\$87,353	(\$37,656)	-43%					Yes	Yes	No
Capital	Other	CRE Project Management	Total	\$48,512	\$84,075	(\$35,562)	-42%					Yes	Yes	No
Capital	Transmission	Substation Transformer Bank Replacement	N/A	\$53,675	\$87,713	(\$34,038)	-39%	30	47	-17	-0.36	Yes	Yes	Yes
Capital	Distribution	Distribution Substation Plan Substations	N/A	\$32,483	\$65,867	(\$33,384)	-51%					Yes	Yes	No
Capital	Other	CRE Project Management	Non-RAMP	\$46,537	\$71,595	(\$25,058)	-35%							
O&M	Other	Training, Drills and Exercises	Emergency Management	\$1,199	\$25,188	(\$23,989)	-95%				N/A	N/A	N/A	No
Capital	Distribution	Distribution Substation Plan (DSP) Circuits	N/A	\$33,207	\$55,432	(\$22,224)	-40%					Yes	Yes	No
O&M	Other	Security Technology Operations and Maintenance	Asset Protection	\$4,213	\$24,772	(\$20,559)	-83%				N/A	Yes	Yes	No
O&M	Distribution	Dead, Dying and Diseased Tree Removal	N/A	\$16,165	\$35,569	(\$19,403)	-55%				N/A	Yes	Yes	No
O&M	Other	Software Maintenance and Replacement	N/A	\$84,098	\$102,261	(\$18,163)	-18%				N/A	Yes	No	No
Capital	Transmission	Transmission Pole Loading Program Replacement	N/A	\$26,864	\$43,910	(\$17,046)	-39%	783	1598	-815	-0.51	No	Yes	Yes
Capital	Distribution	Targeted Undergrounding	N/A	\$6,586	\$23,047	(\$16,461)	-71%	5.5	6	-0.5	-0.08	No	Yes	No
Capital	Other	Technology Infrastructure Maintenance and Replacement	N/A	\$62,535	\$78,139	(\$15,604)	-20%					No	No	No
Capital	Distribution	Automation	N/A	\$21,822	\$36,908	(\$15,086)	-41%					No	Yes	No
Capital	Distribution	Substation Equipment Replacement Program	N/A	\$22,908	\$37,680	(\$14,772)	-39%	188	217	-29	-0.13	No	Yes	No
Capital	Transmission	Protection of Grid Infrastructure Assets	Grid Infrastructure Protection - Enhanced	\$15,686	\$28,380	(\$12,693)	-45%					No	Yes	No
O&M	Transmission	Transmission O&M Maintenance	N/A	\$9,051	\$21,461	(\$12,410)	-58%				N/A	Yes	Yes	No
O&M	Transmission	Monitoring Bulk Power System	N/A	\$45,294	\$56,667	(\$11,374)	-20%					N/A	Yes	No
O&M	Other	Emergency Preparedness and Response	Emergency Management	\$2,367	\$13,594	(\$11,227)	-83%				N/A	N/A	N/A	No
Capital	Other	Grid Mod Cybersecurity	Grid Modernization Cybersecurity	\$35,256	\$46,330	(\$11,074)	-24%					No	Yes	No
O&M	Other	Safety Activities - Transmission & Distribution	Total	\$7,700	\$17,946	(\$10,245)	-57%				N/A	Yes	Yes	No
Capital	Other	Cybersecurity Delivery and IT Compliance	Total	\$53,663	\$63,779	(\$10,116)	-16%					No	No	No
O&M	Other	Training Seat-Time - Transmission and Distribution	N/A	\$18,954	\$28,301	(\$9,346)	-33%				N/A	No	Yes	No
O&M	Generation	SCE-05 Vol : 1:	Unable to identify a single unit due to multiple activities for supporting this Generation activity.	20514	\$29,402	(\$8,887)	(\$0)				N/A	No	Yes	No
Capital	Generation	Hydro - Relicensing	N/A	\$6,731	\$15,310	(\$8,578)	-56%					No	No	No
Capital	Transmission	Transmission Deteriorated Pole Replacement	N/A	\$90,033	\$98,274	(\$8,242)	-8%	3145	3570	-425	-0.12	No	No	No
O&M	Other	Safety Activities - Transmission & Distribution	Non-RAMP	\$7,700	\$15,680	(\$7,979)	-51%				N/A	N/A	N/A	No
Capital	Other	Cybersecurity Delivery and IT Compliance	Perimeter Defense	\$31,083	\$38,479	(\$7,396)	-19%							
Capital	Transmission	NERC Compliance Programs	N/A	\$934	\$7,563	(\$6,629)	-88%					No	No	No
O&M	Other	Facility and Land Operations	Total	\$55,237	\$61,672	(\$6,434)	-10%				N/A	No	No	No
Capital	Generation	Hydro - Prime Movers	N/A	\$4,198	\$10,004	(\$5,806)	-58%					No	No	No
Capital	Distribution	Prefabrication	N/A	\$17,195	\$22,935	(\$5,740)	-25%					No	No	No
Capital	Distribution	Streetlight Maintenance and LED Conversions	N/A	\$45,836	\$51,549	(\$5,714)	-11%	63996	76300	-12304	-0.16	No	No	No
Capital	Other	Cybersecurity Delivery and IT Compliance	Non-RAMP	\$71	\$5,610	(\$5,538)	-99%							
O&M	Other	Technology Delivery	N/A	\$6,403	\$11,920	(\$5,517)	-46%				N/A	No	Yes	No
O&M	Other	Business Planning	N/A	\$32,802	\$38,208	(\$5,406)	-14%				N/A	No	No	No
Capital	Distribution	Distribution Storm Response Capital	N/A	\$37,599	\$42,910	(\$5,311)	-12%					No	No	No
O&M	Other	Training and Development	Total	\$15,509	\$20,428	(\$4,919)	-24%				N/A	No	No	No

Type	Business Line	GRC Activity	RAMP Control / Mitigation Name	Recorded Costs (\$000) - A	Authorized Costs (\$000) - B	Variance (\$000) (A - B)	% Variance - (A - B)/B	Recorded Units - C	Authorized Units - D	Variance (Units) - (C - D)	% threshold Variance (Units) - (C - D)/D	\$ Threshold Variance Explanation	% \$ Variance Explanation	Unit Variance Explanation
O&M	Other	Facility and Land Operations	Non-RAMP	\$54,991	\$59,815	(\$4,824)	-8%				N/A	N/A	N/A	No
Capital	Other	All Hazards Assessment, Mitigation and Analytics	Total	\$29,813	\$34,636	(\$4,823)	-14%					No	No	No
Capital	Distribution	Distribution Transformers	N/A	\$97,069	\$101,816	(\$4,746)	-5%	27161	21654	5507	0.25	No	No	Yes
O&M	Other	Training Delivery and Development - Transmission and Distribution	N/A	\$14,409	\$18,899	(\$4,490)	-24%				N/A	No	No	No
O&M	Other	Environmental Programs	N/A	\$14,082	\$18,358	(\$4,276)	-23%				N/A	No	No	No
O&M	Other	Cybersecurity Delivery and IT Compliance	Total	\$18,523	\$22,613	(\$4,090)	-18%				N/A	No	No	No
Capital	Generation	Hydro - Dams and Waterways	Seepage Mitigation	\$0	\$3,900	(\$3,900)	-100%							
O&M	Distribution	Distribution Preventive and Breakdown O&M Maintenance	N/A	\$108,181	\$111,930	(\$3,749)	-3%				N/A	No	No	No
Capital	Distribution	Engineering and Planning Software Tools	N/A	\$24,463	\$27,866	(\$3,403)	-12%					No	No	No
O&M	Distribution	Infrared Inspection Program	Non-RAMP	\$94	\$3,495	(\$3,402)	-97%	1050	3240	-2190	-0.68	N/A	N/A	Yes
O&M	Other	Emergency Preparedness and Response	Fire Management	\$728	\$4,061	(\$3,332)	-82%				N/A	N/A	N/A	No
O&M	Distribution	Infrared Inspection Program	Total	\$558	\$3,840	(\$3,282)	-85%	5460	7580	-2120	-0.28	No	No	Yes
Capital	Other	All Hazards Assessment, Mitigation and Analytics	Non-RAMP	\$26,052	\$29,267	(\$3,216)	-11%							
O&M	Other	Employee and Contractor Safety	Non-RAMP	\$688	\$3,845	(\$3,158)	-82%				N/A	N/A	N/A	No
Capital	Distribution	Distribution Circuit Upgrades	N/A	\$41,140	\$44,271	(\$3,131)	-7%					No	No	No
O&M	Transmission	Transmission Line Patrols	N/A	\$4,562	\$7,512	(\$2,949)	-39%				N/A	No	No	No
O&M	Other	Technology Infrastructure Maintenance and Replacement	N/A	\$20,140	\$23,055	(\$2,915)	-13%				N/A	No	No	No
O&M	Distribution	Streetlight Operations, Inspections, and Maintenance	N/A	\$4,171	\$6,968	(\$2,797)	-40%				N/A	No	No	No
O&M	Other	Training and Development	Safety Culture Transformation	\$1,223	\$3,956	(\$2,733)	-69%				N/A	(blank)	(blank)	No
Capital	Other	Technology Solutions	Non-Electric Facilities/Protection of Major Business Functions	\$0	\$2,543	(\$2,543)	-100%							
Capital	Generation	Catalina - Diesel	N/A	(\$444)	\$2,048	(\$2,492)	-122%					No	No	No
O&M	Other	Training, Drills and Exercises	Facility Emergency Management Program	\$645	\$3,113	(\$2,468)	-79%				N/A	N/A	N/A	No
O&M	Other	Ethics and Compliance	N/A	\$12,829	\$15,283	(\$2,454)	-16%				N/A	No	No	No
O&M	Other	Safety Activities - Transmission & Distribution	Safety Controls	\$0	\$2,266	(\$2,266)	-100%				N/A	N/A	N/A	No
O&M	Other	Develop and Manage Policy and Initiatives	N/A	\$14,469	\$16,730	(\$2,261)	-14%				N/A	No	No	No
Capital	Generation	Protection of Generation Assets	Protection of Generation Capabilities	\$1,061	\$3,288	(\$2,227)	-68%					No	No	No
O&M	Other	Cybersecurity Delivery and IT Compliance	Grid Modernization Cybersecurity	\$2,396	\$4,497	(\$2,101)	-47%				N/A	N/A	N/A	No
O&M	Other	Training and Development	Non-RAMP	\$14,274	\$16,268	(\$1,994)	-12%				N/A	(blank)	(blank)	No
Capital	Distribution	Substation Tools and Work Equipment	N/A	\$5,762	\$7,741	(\$1,980)	-26%					No	No	No
O&M	Distribution	Distribution Request for Attachment Inspections	N/A	\$1,195	\$3,111	(\$1,916)	-62%				N/A	No	No	No
O&M	Other	Cybersecurity Delivery and IT Compliance	Interior Protection	\$1,955	\$3,839	(\$1,884)	-49%				N/A	N/A	N/A	No
O&M	Other	Distribution Storm Response O&M	N/A	\$12,580	\$14,424	(\$1,844)	-13%				N/A	No	No	No
O&M	Other	Education, Safety and Operations	N/A	\$5,898	\$7,736	(\$1,838)	-24%				N/A	No	No	No
Capital	Generation	Mountainview	N/A	\$4,760	\$6,595	(\$1,835)	-28%					No	No	No
O&M	Other	Cybersecurity Delivery and IT Compliance	Data Protection	\$1,908	\$3,716	(\$1,809)	-49%				N/A	N/A	N/A	No
O&M	Transmission	Transmission Line Rating Remediation (TLRR)	N/A	\$129	\$1,861	(\$1,732)	-93%				N/A	No	No	No
Capital	Distribution	Distribution Wood Pole Disposal - Pole Loading Program	N/A	\$0	\$1,719	(\$1,719)	-100%					No	No	No
Capital	Distribution	Distribution Claim	N/A	\$42,879	\$44,538	(\$1,659)	-4%					No	No	No
O&M	Distribution	Monitoring and Operating Substations	N/A	\$43,237	\$44,863	(\$1,626)	-4%				N/A	No	No	No

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Capital	Other	Cybersecurity Delivery and IT Compliance	Data Protection	\$7,153	\$8,776	(\$1,623)	-18%							
O&M	Other	Cybersecurity Delivery and IT Compliance	SCADA Cybersecurity	\$1,751	\$3,370	(\$1,619)	-48%				N/A	N/A	N/A	No
Capital	Other	All Hazards Assessment, Mitigation and Analytics	Seismic Building Safety Program	\$3,761	\$5,369	(\$1,608)	-30%							
O&M	Other	Cyber Software License and Maintenance	Total	\$4,425	\$6,004	(\$1,579)	-26%				N/A	No	No	No
Capital	Distribution	Distribution Tools and Work Equipment	N/A	\$1,971	\$3,513	(\$1,541)	-44%					No	No	No
O&M	Other	Facility and Land Operations	Electrical Inspections	\$240	\$1,628	(\$1,388)	-85%				N/A	N/A	N/A	No
Capital	Generation	Palo Verde	N/A	\$35,851	\$37,212	(\$1,361)	-4%					No	No	No
Capital	Other	Climate Adaptation and Severe Weather	N/A	\$72	\$1,393	(\$1,320)	-95%					No	No	No
Capital	Other	Environmental Programs	N/A	\$429	\$1,721	(\$1,292)	-75%					No	No	No
Capital	Generation	Hydro - Dams and Waterways	Spillway Remediation and Improvement	\$1,345	\$2,500	(\$1,155)	-46%							
O&M	Distribution	Fusing Mitigation	N/A	\$36	\$1,154	(\$1,119)	-97%				N/A	No	No	No
Capital	Distribution	DER-Driven Grid Reinforcement	N/A	\$405	\$1,523	(\$1,119)	-73%					No	No	No
O&M	Other	All Hazards Assessment, Mitigation and Analytics	Seismic Building Safety Program	\$1,634	\$2,749	(\$1,115)	(blank)				N/A	N/A	N/A	No
Capital	Transmission	Telecommunication Pole Loading Program Replacement	N/A	\$20	\$1,124	(\$1,104)	-98%					No	No	No
Capital	Other	Technology Solutions	Protection of Generation Capabilities	\$0	\$1,024	(\$1,024)	-100%							
Capital	Distribution	Underground Structure Replacements	Cover Pressure Relief and Restraint (CPRR) Program	\$7,607	\$8,622	(\$1,015)	-12%	355	347	8	0.02	No	No	No
O&M	Other	Transmission/Substation Storm Response O&M	N/A	\$1,119	\$2,092	(\$974)	-47%				N/A	N/A	N/A	No
O&M	Distribution	Distribution Apparatus Inspection and Maintenance	N/A	\$5,259	\$6,177	(\$918)	-15%				N/A	No	No	No
O&M	Other	Cyber Software License and Maintenance	Perimeter Defense	\$1,620	\$2,496	(\$876)	-35%				N/A	N/A	N/A	No
O&M	Other	Cybersecurity Delivery and IT Compliance	Perimeter Defense	\$3,511	\$4,332	(\$820)	-19%				N/A	N/A	N/A	No
O&M	Other	External Communications	Public Outreach	\$6,051	\$6,821	(\$770)	-11%				N/A	N/A	N/A	No
Capital	Other	Fleet Asset Management	N/A	\$1,444	\$2,190	(\$746)	-34%					No	No	No
O&M	Other	Cyber Software License and Maintenance	Grid Modernization Cybersecurity	\$1,363	\$2,100	(\$737)	-35%				N/A	N/A	N/A	No
Capital	Other	Communications Equipment	N/A	\$676	\$1,398	(\$722)	-52%	19	32	-13	-0.41	No	No	Yes
Capital	Distribution	New Capacitors	N/A	\$3,085	\$3,783	(\$698)	-18%					No	No	No
Capital	Transmission	Transmission Tools and Work Equipment	N/A	\$788	\$1,426	(\$638)	-45%					No	No	No
O&M	Distribution	Load Side Support	N/A	\$727	\$1,362	(\$635)	-47%				N/A	No	No	No
O&M	Distribution	Relay Inspections and Maintenance	N/A	\$2,703	\$3,318	(\$616)	-19%				N/A	No	No	No
O&M	Other	Safety Culture Transformation	Safety Culture Transformation	\$1,800	\$2,413	(\$612)	-25%				N/A	No	No	No
O&M	Other	Planning, Continuity and Governance	N/A	\$838	\$1,436	(\$599)	-42%				N/A	No	No	No
Capital	Distribution	Substation Emergency Equipment	N/A	\$24,119	\$24,704	(\$585)	-2%					No	No	No
Capital	Distribution	Meter System Maintenance Design	N/A	\$384	\$922	(\$538)	-58%					No	No	No
Capital	Other	CRE Project Management	Office Ergonomics (CORE Program)	\$1,975	\$2,512	(\$537)	-21%							
O&M	Other	Training, Drills and Exercises	Total	\$1,844	\$2,359	(\$516)	-22%				N/A	No	No	No
Capital	Distribution	4 kV Cutovers - Load Growth Driven	N/A	\$18,800	\$19,285	(\$486)	-3%					No	No	No
Capital	Distribution	Fusing Mitigation	N/A	\$0	\$0	(\$479)	100%					No	No	No
Capital	Distribution	Automatic Reclosers Replacement Program	N/A	\$2,239	\$2,673	(\$434)	-16%	49	31	18	0.58	No	No	Yes
O&M	Other	External Communications	Total	\$11,563	\$11,976	(\$413)	-3%				N/A	No	No	No
O&M	Other	Cyber Software License and Maintenance	Interior Protection	\$707	\$1,089	(\$382)	-35%				N/A	N/A	N/A	No
O&M	Distribution	Substation - Inspections and Maintenance	N/A	\$959	\$1,320	(\$361)	-27%				N/A	No	No	No

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Capital	Transmission	Relays, Protection and Control Replacements	N/A	\$74,823	\$75,172	(\$349)	0%					No	No	No
Capital	Other	Cybersecurity Delivery and IT Compliance	SCADA Cybersecurity	\$2,290	\$2,613	(\$323)	-12%							
Capital	Other	Facility Asset Management	Fire Life Safety Portfolio Assessment	\$688	\$1,000	(\$312)	-31%							
Capital	Other	Laboratory Operations	N/A	\$1,937	\$2,227	(\$289)	-13%					No	No	No
O&M	Other	Transmission Pole Loading Work Order Related Expense	N/A	\$19	\$278	(\$259)	-93%				N/A	N/A	N/A	No
O&M	Transmission	Transmission Intrusive Pole Inspections	N/A	\$403	\$608	(\$205)	-34%	10150	14360	-4210	-0.29	No	No	Yes
O&M	Other	Training and Development	Insider Threat Program Enhancement - Information Analysis - Base	\$7	\$183	(\$176)	-96%				N/A	(blank)	(blank)	No
O&M	Other	Facility and Land Operations	Fire Life Safety Portfolio Assessment	\$7	\$179	(\$172)	-96%				N/A	N/A	N/A	No
Capital	Transmission	Transmission Emergency Equipment	N/A	\$0	\$166	(\$166)	-100%					No	No	No
O&M	Other	Employee and Contractor Safety	Contractor Safety Program	\$40	\$200	(\$160)	-80%				N/A	N/A	N/A	No
O&M	Distribution	Meter System Maintenance Design	N/A	\$3,336	\$3,489	(\$153)	-4%				N/A	No	No	No
O&M	Transmission	Insulator Washing	N/A	\$694	\$820	(\$126)	-15%				N/A	No	No	No
O&M	Other	Public Safety	N/A	\$531	\$655	(\$124)	-19%				N/A	No	No	No
O&M	Other	All Hazards Assessment, Mitigation and Analytics	Climate Adaptation & Severe Weather	\$766	\$882	(\$116)	(blank)				N/A	N/A	N/A	No
O&M	Transmission	Equipment Washing	N/A	\$1,268	\$1,381	(\$113)	-8%				N/A	No	No	No
Capital	Generation	Solar	N/A	\$16	\$102	(\$87)	-85%					No	No	No
O&M	Transmission	Transformer Inspections and Maintenance	N/A	\$1,275	\$1,352	(\$78)	-6%				N/A	No	No	No
O&M	Other	Cyber Software License and Maintenance	Data Protection	\$117	\$180	(\$63)	-35%				N/A	N/A	N/A	No
O&M	Other	Facility and Land Operations	Office Ergonomics - Core Program	\$0	\$50	(\$50)	-100%				N/A	N/A	N/A	No
O&M	Other	Cyber Software License and Maintenance	SCADA Cybersecurity	\$90	\$139	(\$49)	-35%				N/A	N/A	N/A	No
O&M	Transmission	Transmission Request for Attachment Inspections	N/A	\$323	\$351	(\$28)	-8%				N/A	No	No	No
O&M	Other	Grid Mod Cybersecurity	Grid Modernization Cybersecurity	\$627	\$652	(\$25)	-4%				N/A	No	No	No
O&M	Other	Training and Development	Asset Protection	\$5	\$21	(\$16)	-76%				N/A	(blank)	(blank)	No
O&M	Other	Employee and Contractor Safety	Industrial Ergonomics	\$0	\$15	(\$15)	-97%				N/A	N/A	N/A	No
Capital	Generation	Hydro - Dams and Waterways	Instrumentation / Communication Enhancements	\$237	\$250	(\$13)	-5%							
O&M	Generation	SCE-05 Vol : 1:	Unable to identify a single unit due to multiple activities for supporting this Generation activity.	1381	\$1,389	(\$8)	(\$0)				N/A	No	No	No
O&M	Other	Work Force Protection/Insider Threat	Insider Threat Program Enhancement - Information Analysis - Base	\$10	\$16	(\$6)	-40%				N/A	N/A	N/A	No
Capital	Other	Fleet Operations and Maintenance	N/A	\$510	\$512	(\$2)	0%					No	No	No
Capital	Generation	Hydro - Dams and Waterways	Seismic Retrofit		\$0	\$0	\$0	100%						

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O&M	Distribution	HFRA Sectionalizing Devices	N/A	\$14	\$0	\$14	100%				N/A	No	No	No	
O&M	Distribution	Other Substation Equipment Inspections and Maintenance	N/A	\$1,399	\$1,377	\$22	2%				N/A	No	No	No	
Capital	Transmission	Telecommunication Deteriorated Pole Replacement	N/A	\$261	\$230	\$31	13%					No	No	No	
Capital	Distribution	Cable Life Extension (CLE) Program	Cable Replacement Programs (CIC)	\$41	\$0	\$41	100%					No	No	No	
Capital	Other	Air Operations	N/A	\$870	\$798	\$72	9%					No	No	No	
O&M	Other	Telecommunication Storm Response O&M	N/A	\$122	\$23	\$99	439%					No	No	No	
O&M	Distribution	Distribution Intrusive Pole Inspections	N/A	\$5,563	\$5,457	\$106	2%	133972	129240	4732	0.04	No	No	No	
O&M	Distribution	Substation O&M Breakdown Maintenance	N/A	\$2,709	\$2,591	\$119	5%					No	No	No	
O&M	Distribution	Infrared Inspection Program	Infrared Inspections	\$464	\$344	\$120	35%	4410	4340	70	0.02	N/A	N/A	No	
O&M	Distribution	Distribution Fault Anticipation	N/A	\$135	\$0	\$135	100%					No	No	No	
Capital	Generation	Hydro - Decommissioning	N/A	\$586	\$418	\$168	40%					No	No	No	
Capital	Distribution	Distribution Volt VAR Control and Capacitor Automation Program	N/A	\$2,772	\$2,595	\$177	7%	524	450	74	0.16	No	No	No	
O&M	Other	Emergency Preparedness and Response	Total	\$3,095	\$2,862	\$234	8%					No	No	No	
Capital	Distribution	Capacitor Bank Replacement Program	N/A	\$3,073	\$2,781	\$291	10%	54	70	-16	-0.23	No	No	Yes	
Capital	Distribution	PCB Transformer Removal	N/A	\$2,284	\$1,990	\$294	15%	202	250	-48	-0.19	No	No	No	
O&M	Distribution	Fire Hazard Prevention	N/A	\$349	\$0	\$349	100%					No	No	No	
O&M	Other	External Communications	Non-RAMP	\$5,513	\$5,155	\$357	7%					N/A	N/A	N/A	
O&M	Transmission	Transmission Underground Structure Inspection	N/A	\$2,472	\$2,101	\$371	18%					No	No	No	
Capital	Transmission	Substation Claim	N/A	\$791	\$396	\$395	100%					No	No	No	
O&M	Transmission	Transmission Pole Loading Repairs	N/A	\$806	\$379	\$426	112%	132	224	-92	-0.41	No	No	Yes	
O&M	Distribution	Circuit Breaker Inspections and Maintenance	N/A	\$5,606	\$5,178	\$428	8%					No	No	No	
O&M	Generation	SCE-05 Vol : 1:	Unable to identify a single unit due to multiple activities for supporting this Generation activity.	6133	\$5,667	\$466	\$0					N/A	No	No	No
Capital	Distribution	Underground Switch Replacements	UG Oil Switch Replacement Program	\$3,230	\$2,705	\$525	19%	39	24	15	0.63	No	No	Yes	
O&M	Other	Cyber Software License and Maintenance	Non-RAMP	\$528	\$0	\$528	100%					N/A	N/A	N/A	
O&M	Distribution	Wildfire Covered Conductor Program	N/A	\$545	\$0	\$545	100%					N/A	No	No	
Capital	Distribution	Cable-in-Conduit (CIC) Replacement Program	Cable Replacement Programs (CIC)	\$6,823	\$6,133	\$691	11%	34	18	16	0.88	No	No	Yes	
Capital	Other	Oil Containment Diversion System	N/A	\$1,162	\$403	\$758	188%					No	No	No	
O&M	Generation	SCE-05 Vol : 1:	Unable to identify a single unit due to multiple activities for supporting this Generation activity.	8728	\$7,957	\$771	\$0					N/A	No	No	No
O&M	Distribution	Distribution Underground Detail Inspections	N/A	\$7,549	\$6,669	\$880	13%	173822	167451	6371	0.04	No	No	No	
Capital	Other	Facility Asset Management	Electrical Inspections	\$1,942	\$1,000	\$942	94%								
Capital	Transmission	Telecommunication Inspection and Maintenance	N/A	\$4,350	\$3,365	\$985	29%					No	No	No	
Capital	Distribution	4 kV Substation Eliminations	N/A	\$4,490	\$3,366	\$1,123	33%	3	6	-3	-0.5	No	No	Yes	
O&M	Generation	SCE-05 Vol : 1:	Unable to identify a single unit due to multiple activities for supporting this Generation activity.	73401	\$72,249	\$1,152	\$0					N/A	No	No	No
O&M	Transmission	Transmission Pole Loading Assessments	N/A	\$1,264	\$109	\$1,155	1056%	2105	1600	505	0.32	No	No	Yes	
Capital	Other	Asset Reliability Risk Analytics	N/A	\$1,161	\$0	\$1,161	100%					No	No	No	

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Capital	Generation	Hydro - Dams and Waterways	Dam Surface Protection	\$1,207	\$0	\$1,207	100%							
Capital	Other	Fire Science and Advanced Modeling	(blank)	\$2,340	\$1,129	\$1,211	107%					No	No	No
Capital	Transmission	Transmission/Substation Storm Response Capital	N/A	\$7,724	\$6,193	\$1,531	25%					No	No	No
O&M	Other	Enhanced Situational Awareness	N/A	\$5,411	\$3,786	\$1,625	43%				N/A	No	No	No
O&M	Other	Fire Science and Advanced Modeling	N/A	\$5,770	\$4,135	\$1,635	40%				N/A	No	No	No
O&M	Generation	SCE-05 Vol : 1:	Unable to identify a single unit due to multiple activities for supporting this Generation activity.	45313	\$43,601	\$1,712	\$0				N/A	No	No	No
O&M	Transmission	Roads and Rights of Way	N/A	\$6,559	\$4,813	\$1,746	36%				N/A	No	No	No
O&M	Transmission	Telecommunication Inspection and Maintenance	N/A	\$4,341	\$2,591	\$1,750	68%				N/A	No	No	No
O&M	Other	Work Force Protection/Insider Threat	Non-RAMP	\$63	(\$1,696)	\$1,760	-104%				N/A	N/A	N/A	No
Capital	Generation	Hydro - Dams and Waterways	Total	\$14,443	\$12,587	\$1,856	15%					No	No	No
Capital	Generation	Hydro - Dams and Waterways	Non-RAMP	\$8,059	\$5,937	\$2,122	36%							
O&M	Other	All Hazards Assessment, Mitigation and Analytics	Total	\$6,467	\$4,194	\$2,273	54%				N/A	No	No	No
Capital	Distribution	Distribution Wood Pole Disposal	N/A	\$5,350	\$3,069	\$2,280	74%					No	No	No
O&M	Other	Environmental Management and Development	N/A	\$13,041	\$10,569	\$2,471	23%				N/A	No	No	No
Capital	Distribution	PSPS Execution	PSPS Protocol and Support Functions	\$3,309	\$756	\$2,554	338%					No	No	No
Capital	Distribution	HFRA Sectionalizing Devices	Remote-Controlled Automatic Reclosers and Fast Curve Settings	\$7,891	\$5,334	\$2,557	48%	95	34	49	1.44	No	No	Yes
Capital	Transmission	Transmission Claim	N/A	\$6,446	\$3,835	\$2,611	68%					No	No	No
Capital	Transmission	Protection of Major Business Functions	Non-Electric Facilities/Protection of Major Business Functions	\$16,623	\$13,745	\$2,878	21%					No	No	No
O&M	Distribution	Distribution Pole Loading Assessments	N/A	\$3,999	\$1,031	\$2,968	288%	17961	23000	-5039	-0.22	No	No	Yes
O&M	Other	Customer Contact Center	N/A	\$51,802	\$48,360	\$3,442	7%				N/A	No	No	No
Capital	Generation	Hydro - Structures and Grounds	N/A	\$6,647	\$3,203	\$3,444	108%					No	No	No
O&M	Other	All Hazards Assessment, Mitigation and Analytics	Non-RAMP	\$4,067	\$562	\$3,504	(blank)				N/A	N/A	N/A	No
Capital	Generation	Hydro - Dams and Waterways	Low Level Outlet Improvements	\$3,596	\$0	\$3,596	100%							
O&M	Distribution	Patrolling and Locating Trouble	N/A	\$27,315	\$23,644	\$3,671	16%				N/A	No	No	No
O&M	Other	Cybersecurity Delivery and IT Compliance	Non-RAMP	\$7,003	\$2,859	\$4,144	145%				N/A	N/A	N/A	No
Capital	Distribution	Distribution Deteriorated Pole Replacement	N/A	\$218,326	\$213,969	\$4,356	2%	9983	10513	-530	-0.05	No	No	No
O&M	Distribution	Distribution Pole Loading Repairs	N/A	\$5,343	\$804	\$4,539	565%	1966	1065	901	0.85	No	No	Yes
Capital	Other	Cybersecurity Delivery and IT Compliance	Interior Protection	\$13,065	\$8,302	\$4,764	57%							
Capital	Other	Enhanced Situational Awareness	Situational Awareness	\$5,607	\$0	\$5,607	100%					No	No	No
Capital	Transmission	Circuit Breaker Replacement	N/A	\$49,218	\$43,372	\$5,846	13%	187	205	-18	-0.09	No	No	No
Capital	Generation	Hydro - Electrical Equipment	N/A	\$9,776	\$3,533	\$6,243	177%					No	No	No
O&M	Other	Organizational Support	N/A	\$10,653	\$3,484	\$7,169	206%				N/A	No	Yes	No
O&M	Distribution	Distribution Overhead Detail Inspections	N/A	\$13,279	\$5,198	\$8,081	155%				N/A	No	Yes	No
O&M	Distribution	Wildfire Vegetation Management	Expanded Vegetation Management	\$32,432	\$24,238	\$8,194	34%				N/A	No	Yes	No
Capital	Distribution	Distribution Fault Anticipation	N/A	\$8,362	\$0	\$8,362	100%	130	0	0	-	No	No	No
Capital	Other	Facility Asset Management	Non-RAMP	\$65,635	\$56,042	\$9,593	17%					No	No	No
Capital	Generation	Peakers	N/A	\$9,937	\$0	\$9,937	100%					No	No	No

Type	Business Line	GRC Activity	RAMP Control / Mitigation Name	Recorded Costs (\$000) - A	Authorized Costs (\$000) - B	Variance (\$000) (A - B)	% Variance - (A - B)/B	Recorded Units - C	Authorized Units - D	Variance (Units) - (C - D)	% threshold Variance (Units) - (C - D)/D	\$ Threshold Variance Explanation	% \$ Variance Explanation	Unit Variance Explanation
Capital	Transmission	Monitoring Bulk Power System	N/A	\$84,345	\$74,364	\$9,981	13%					No	No	No
Capital	Other	Facility Asset Management	Total	\$68,265	\$58,042	\$10,223	18%					No	No	No
O&M	Other	Employee and Contractor Safety	Total	\$15,022	\$4,611	\$10,411	226%				N/A	Yes	Yes	No
Capital	Other	PSPS Customer Support	PSPS Protocol and Support Functions	\$11,217	\$0	\$11,217	100%					No	Yes	No
Capital	Distribution	Worst Circuit Rehabilitation (WCR)	Worst Circuit Rehabilitation (WCR)	\$18,764	\$7,127	\$11,638	163%	58	15	43	2.86	No	Yes	Yes
Capital	Distribution	Distribution Pole Loading Program Pole Replacement	N/A	\$279,422	\$267,436	\$11,986	4%	11629	14187	-2558	-0.18	No	No	No
Capital	Distribution	Overhead Conductor Program (OCP)	Overhead Conductor Program (OCP)	\$84,713	\$72,641	\$12,072	17%	344	367	-23	-0.06	No	No	No
Capital	Distribution	Underground Structure Replacements	Total	\$26,453	\$13,887	\$12,566	90%	388	383	5	0.01	No	Yes	No
Capital	Distribution	Preventive Maintenance	N/A	\$61,373	\$48,595	\$12,778	26%					No	Yes	No
Capital	Other	Technology Solutions	Non-RAMP	\$113,627	\$100,350	\$13,277	13%					No	No	No
Capital	Other	Technology Solutions	Total	\$113,627	\$100,350	\$13,277	13%					No	No	No
Capital	Distribution	Underground Structure Replacements	Non-RAMP	\$18,846	\$5,265	\$13,581	258%	33	25	8	0.32			Yes
Capital	Transmission	Substation Capital Breakdown Maintenance	N/A	\$27,475	\$13,156	\$14,319	109%					No	Yes	No
O&M	Other	Work Force Protection/Insider Threat	Asset Protection	\$17,540	\$1,903	\$15,637	822%				N/A	N/A	N/A	No
Capital	Distribution	4 kV Cutovers	N/A	\$26,155	\$10,221	\$15,934	156%	393	159	234	1.47	No	Yes	Yes
Capital	Distribution	Distribution Plant Betterment	N/A	\$21,226	\$3,871	\$17,355	448%					No	Yes	No
O&M	Other	Work Force Protection/Insider Threat	Total	\$17,613	\$223	\$17,391	7806%				N/A	Yes	Yes	No
O&M	Other	PSPS Customer Support	PSPS Protocol and Support Functions	\$33,981	\$13,833	\$20,148	146%				N/A	Yes	Yes	No
Capital	Transmission	Transmission Substation Plan (TSP)	N/A	\$112,885	\$89,283	\$23,602	26%					Yes	Yes	No
Capital	Other	Grid Management System	N/A	\$67,704	\$43,633	\$24,070	55%					Yes	Yes	No
Capital	Other	Software Maintenance and Replacement	N/A	\$88,583	\$62,012	\$26,571	43%					Yes	Yes	No
O&M	Other	PSPS Execution	PSPS Protocol and Support Functions	\$41,677	\$14,938	\$26,739	179%				N/A	Yes	Yes	No
O&M	Transmission	Transmission Routine Vegetation Management	N/A	\$42,574	\$12,963	\$29,611	228%				N/A	Yes	Yes	No
Capital	Distribution	Distribution Preventive and Breakdown Capital Maintenance	N/A	\$338,638	\$293,061	\$45,578	16%					Yes	No	No
O&M	Distribution	Enhanced Overhead Inspections and Remediations	N/A	\$117,237	\$61,592	\$55,645	90%				N/A	Yes	Yes	No
Capital	Distribution	Enhanced Overhead Inspections and Remediations	N/A	\$135,028	\$49,553	\$85,475	172%					Yes	Yes	No
O&M	Distribution	Distribution Routine Vegetation Management	N/A	\$357,724	\$108,070	\$249,654	231%				N/A	Yes	Yes	No
Capital	Distribution	Wildfire Covered Conductor Program	Wildfire Covered Conductor Program	\$919,542	\$557,495	\$362,047	65%	1427	1043	384	0.37	Yes	Yes	Yes