BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

STATE OF CALIFORNIA

Order Instituting Rulemaking to Further Develop a Risk-Based Decision-Making Framework for Electric and Gas Utilities.	Rulemaking 20-07-013
NOT CONSOLIDATED	
Application of Southern California Edison Company (U 338-E) Regarding 2022 Risk Assessment Mitigation Phase.	Application 22-05-013
NOT CONSOLIDATED	
Application of Southern California Edison Company (U 338-E) for Authority to Increase its Authorized Revenues for Electric Service in 2021, among other things, and to Reflect that Increase in Rates.	Application 19-08-013

SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) 2021 SAFETY PERFORMANCE METRICS REPORT

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SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) 2021 SAFETY PERFORMANCE METRICS REPORT

Pursuant to Ordering Paragraphs 1 and 2 of Decision (D.) 19-04-020 and Decision 21-11-009, Southern California Edison Company (SCE) respectfully submits the attached 2021 Safety Performance Metrics Report.

Respectfully submitted,

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June 1, 2022

Appendix A

Southern California Edison Company's 2021 Safety Performance Metrics Report

Southern California Edison Company's
2021 Safety Performance Metrics Report

June 1, 2022

Southern California Edison's 2021 Safety Performance Metrics Report

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Southern California Edison's 2021 Safety Performance Metrics Report

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I.

INTRODUCTION

Southern California Edison Company (SCE) submits its 2021 Safety Performance Metrics Report (SPMR) in accordance with Decision (D.) 19-04-020 and D.21-11-009.[1] SCE's 2021 SPMR is divided into two chapters. Chapter 1 discusses SCE's Safety Performance Metrics (SPM or Metric) and use of SPM data; the relationship between SPMs and SCE's executive compensation, including bias controls; and SCE's progress toward meeting its safety goals.[2] Chapter 2 explains the seventeen approved SPMs for SCE and, for each SPM, SCE's historical data and, where applicable, bias controls and/or links to financial incentives.

Chapter 1 is organized as follows:

- Section I.A provides examples of how SCE has used SPM data to improve employee and contractor training and take corrective actions to minimize top risks or risk drivers, and how SCE has used this data to support risk-based decision-making in accordance with the Safety Model Assessment Proceeding (SMAP) and Risk Assessment Mitigation Phase (RAMP) processes.
- Section I.B discusses the seventeen approved SPMs that are linked to or used for the purpose of determining executive compensation levels and/or incentives and which are linked to individual and group performance goals. This section also identifies the director-level or higher executive positions linked to these SPMs and describes the bias controls SCE has in place to ensure that reporting of the SPMs has not been gamed or skewed to support a financial incentive goal.
- Section I.C explains how the SPM data reflect progress toward SCE's RAMP and General Rate Case (GRC) safety goals and provides a high-level summary of SCE's total estimated risk mitigation spending level as approved in its last GRC decision.

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1 D.19-04-020 requires that SCE annually file and serve its SPMR on March 31. On January 21,2022 the CPUC granted our extension request to file the 2021 SPMR on June 1, 2022.

2 *See* D.19-04-020, Ordering Paragraph (OP) 6.

- Section I.D provides a brief narrative overview of the approved Metrics for SCE, which are shown in detail below in Table I-1.

Table I-1
SCE Approved Safety Performance Metrics[3]

Metric Name	Units	Metric Description
1. T&D Overhead Wires Down	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); excludes down secondary distribution wires and "Major Event Days" (typically due to severe storm events) as defined by the IEEE.
2. T&D Overhead Wires Down - Major Event Days	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); includes down secondary distribution wires. Includes "Major Event Days" (typically due to severe storm events) as defined by the IEEE.
3. Electric Emergency Response	The time in minutes that an electric crew person or a qualified first responder takes to respond after receiving a call which results in an emergency order.	Average time and median time in minutes to respond on-site to an electric-related emergency notification from the time of notification to the time a representative (or qualified first responder) arrived onsite. Emergency notification includes all notifications originating from 911 calls and calls made directly to the utilities' safety hotlines. The data used to determine the average time and median time shall be provided in increments as defined in GO 112-F 123.2 (c) as supplemental information, not as a metric.
4. Fire Ignitions	Number of ignitions	The number of fire incidents annually reportable to the California Public Utilities Commission (CPUC) per Decision 14-02-015.
14. Employee Days Away, Restricted and Transfer (DART) Rate	Injuries	DART Rate is calculated based on number of OSHA- recordable injuries resulting in Days Away from work and/or Days on Restricted Duty or Job Transfer, and hours worked
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	Number of SIF-Actual cases among employees x 200,000/employee hours worked	Rate of SIF Actual (Employee) is calculated using the formula: Number of SIF-Actual cases among employees x 200,000 / employee hours worked, where SIF Actual is counted using the methodology developed by the Edison Electrical Institute's (EEI) Occupational Health and Safety Committee (OHSC) Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Actual, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also provide SIF Actual data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.
16. Rate of SIF Actual (Contractor)	Number of SIF-Actual cases among contractors x 200,000/contractor hours worked	Rate of SIF Actual (Contractor) is calculated using the formula: Number of SIF-Actual cases among contractors x 200,000 / contractor hours worked, where SIF Actual is counted using the methodology developed by the EEI OSHC Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing incidents where a SIF occurred, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also report SIF Actual Rate data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.
17. Rate of SIF Potential (Employee)	Number of SIF-Potential cases among employees x 200,000/employee hours worked	Rate of SIF Potential (Employee) is calculated using the formula: Number of SIF Potential cases among employees x 200,000 / employee hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI OSHC Safety Classification and Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it.

[3] These metrics are provided in Appendix B – SPMs Table to D.21-11-009.

Metric Name	Units	Metric Description
		As a supplemental reporting requirement to the Potential SIF Rate (Employee), all utilities shall provide information about the key lessons learned from Potential SIF (Employee) incidents.
18. Rate of SIF Potential (Contractor)	Number of SIF-Potential cases among contractors x 200,000/contractor hours worked	Rate of SIF Potential (contractor) is calculated using the formula: Number of SIF Potential cases among contractors x 200,000/contractor hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it. As a supplemental reporting requirement to the Potential SIF Rate (Contractor), all utilities shall provide information about key lessons learned from SIF Potential (Contractor) incidents.
19. Contractor Days Away, Restricted Transfer (DART)	OSHA DART Rate.	DART Rate: Days Away, Restricted and Transfer (DART) Cases include OSHA-recordable Lost Work Day Cases and injuries that involve job transfer or restricted work activity. DART Rate is calculated as DART Cases times 200,000 divided by contractor hours worked.
20. Public Serious Injuries and Fatalities	Number of Serious Injuries and Fatalities	A fatality or personal injury requiring in-patient hospitalization involving utility facilities or equipment. Equipment includes utility vehicles used during the course of business.
21. Helicopter/ Flight Accident or Incident	Number of accidents or incidents (as defined in 49 CFR Section 830.5 "Immediate Notification") per 100,000 flight hours.	Defined by Federal Aviation Regulations (FARs), reportable to Federation Aviation Administration per 49-Code of Federal Regulations (CFR)-830.
25. Wires-Down not resulting in Automatic De-energization	Percentage of wires down occurrences	This metric is defined as the number of occurrences of wire down events in the past calendar year that did not result in automatic (i.e., not manually activated) de-energization by circuit protection devices such as fuses, circuit breakers, and reclosers, etc. on all portions of a downed conductor that rest on the ground. This metric does not consider possible energization due to induced voltages from magnetic coupling of parallel circuits. Metric excludes secondary conductors and service drops. The metric is reported as a percentage of all wires down events in the past calendar year. Separate metrics are provided for transmission and distribution systems.
26. Missed Inspections and Patrols for Electric Circuits	Percentage of structures that missed inspection relative to total required structures.	Metrics are calculated as annual number of overhead electric structures that did not comply with the inspection frequency requirements divided by total number of overhead electric structures with inspections due in the past calendar year. Separate metrics are provided for patrols, detailed inspections. Separate metrics are provided for primary distribution and transmission overhead circuits. "Minimum patrol frequency" refers to the frequency of patrols as specified in GO 165. "Structures" refers to electric assets such as transformers, switching protective devices, capacitors, lines, poles, etc.
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	Percentage relative to total circuit miles	Percentage of primary distribution overhead conductors in Tiers 2 and 3 HFTD that is #6 copper. Secondary conductors are excluded.
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)	Percentage of corrective actions completed	The number of Priority Level 2 notifications that were completed on time divided by the total number of Priority Level 2 notifications that were due in the calendar year in Tiers 2 and 3, HFTD. Consistent with GO 95 Rule 18 provisions, the proposed metric should exclude notifications that qualify for extensions under reasonable circumstances. Separate metrics are provided for distribution and transmission systems.
32.Overhead Conductor Safety Index	Number of occurrences per circuit mile	Overhead Conductor Safety Index is the sum of all annual occurrences on overhead transmission or primary voltage distribution conductors satisfying one or more of the following conditions divided by total circuit miles in the system x 1,000: 1) A conductor or splice becomes physically broken; 2) A conductor is dislodged from its intended design position due to either malfunction of its attachment points and/or supporting structures or contact with foreign objects (including vegetation); 3) A conductor falls from its intended position to rest on the ground or a foreign object; 4) A conductor comes into contact with communication circuits, guy wires, or conductors of a lower voltage; or 5) A power pole carrying normally energized conductors leans by more than 45 degrees in any direction relative to the vertical reference when measured at ground level.

Metric Name	Units	Metric Description
		Separate metrics are reported for transmission and primary voltage distribution conductors. Secondary voltage conductors and service drops are not included in this metric.

Chapter 2 is divided into seventeen sections for each SPM shown in Table I-1. For each SPM, the first subsection provides a narrative description and visual depiction of the annual historical SPM data.[4] The next subsection addresses whether the SPM is used for the purposes of determining executive level compensation or incentives, or is linked to the determination of individual or group performance goals. The final subsection describes what, if any, bias controls are in place for the SPM.

A. SCE's Use of Safety Performance Metrics Data

In Ordering Paragraph 6.D of D.19-04-020, the Commission directed each of the investor-owned utilities (IOUs)[5] to "[p]rovide three to five examples of how the utility has used Safety Performance Metrics data to improve staff and/or contractor training, and/or to take corrective actions to minimize top risks or risk drivers; and, provide three to five examples how the utility is using [SPM] data to support risk-based decision-making as required in the SMAP and RAMP processes." The following sections provide the requested examples.

1. Use of Safety Performance Metrics Data to Improve Staff and/or Contractor Training, and/or to Take Corrective Actions to Minimize Top Risks or Risk Drivers

a) Contractor Safety Performance

SCE analyzes contractor SPMs from multiple sources including Safety Incident Reports, Safety Observations and individual Contractor safety performance as reported in ISNetWorld. This data is continuously refreshed and analyzed, feeding five key on-going programs that summarize trends over distinct time periods:

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4 SCE provides the monthly historical data in Attachment A and in the Excel file served concurrently with this report.

5 The IOUs are defined in D.19-04-020 as SCE, Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Gas Company (SoCalGas).

Continuous: *PowerBi dashboards* provide data focused on specific Organizational Unit (OU) data, indicating trends in Incidents, Observations and Compliance issues. This data is made available to the OU leaders for their awareness and action.

Weekly: SCE publishes a *Weekly Incident Report* summarizing the prior week's incidents, including reports from other utilities. SPM data is analyzed for trends and to facilitate discussion and recommendations, safety reminders, key takeaways and reinforcement of applicable Critical Observable Actions (COAs).

Monthly: SCE Supply Management holds monthly Scorecard reviews with individual contractors,[6] where performance metrics for the prior month are reviewed and discussed with the contractor.

Quarterly: SCE publishes a *Quarterly Trend Report* showing how safety metrics are trending over time (up or down), along with Common Causes, Key Takeaways, Operating Experiences & Cause Evaluation Reports.

Yearly: SCE OUs are required to hold annual *Contractor Safety Forums* where trending data is presented and discussed for the specific work-types applicable to each OU (e.g., Vegetation Management).

A recent example of specific contractor safety performance actions resulting from the use of safety performance metrics is the development of a new program, HFRA Hot Work Restriction & Mitigation Measures. The program was developed in response to SCE's focused observations of trends in fire related incidents, which identified certain drivers of incidents, including gaps in knowledge and training processes. HFRA Hot Work Restriction & Mitigation Measures reduce the risk of fire events in High Fire Risk Areas that are "outside the fence" (i.e., beyond SCE's controlled environment). The program defines specific safe work and fire prevention practices, and requires SCE employees and contractors to adhere to these practices at all times when performing hot work activities

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[6] SCE currently only holds discussion with our highest risk work contractors which includes, Distribution Business Line, Transmission, Veg Management, Civil and Air Operations.

in high fire risk areas that may cause arcs, sparks, flames and/or significant heat sources which could lead to an ignition. Additionally, this program requires SCE employees and contractors to postpone non-emergency work that involves hot work activities during elevated and extreme fire weather threat conditions to help prevent a wildfire that could be difficult to suppress.

b) Human and Organizational Performance (HOP) Initiatives

HOP is a cornerstone program for SCE to become a proactive learning organization where all employees, leaders and executives work together to prevent serious injuries and fatalities. The program sets HOP organizational learning-centric guiding principles (i.e., people make mistakes, blame fixes nothing, context drives behavior, learning and improving is vital, and leaders' responses matters) for all levels of the organization so they can be applied consistently. The program also provides ground-level practical tools and practices for the application and sustainability of the principles to reduce the consequences of normal human errors and strengthen organizational capabilities to fail safely.

Examples of these practical tools and practices include the following:

- Event Learning Form and Process, so the organization can proactively learn from the context of incidents and good catches, and address latent organizational deficiencies/traps;
- SCE's Standardized Error Reduction Tools and Practices Reference Guide, explaining the "what, why, when and how" for consistency;
- Monthly thought-provoking sustainability topics to engage leaders and craft employees in ongoing dialogue around the HOP principles and their application in the day-to-day jobs of leaders and craft employees to continue to build and strengthen a learning organization; and
- Other sustainability workstreams to be launched in subsequent years based on HOP maturity.

HOP will build SCE's capability and resiliency through an integrated approach of ongoing education and sustainability across all levels of the organization. HOP recognizes unintentional error as part of the human condition. Adopting this way of thinking will allow SCE to build more error-tolerant systems by proactively building defenses and addressing organizational latent conditions to reduce the consequences of normal human error and fail safely. With consistent application over time by leaders and individual constructors, and proper allocation of resources for sustainability, this effort will prevent injuries, system interruptions, and equipment damage.

HOP has been adopted as an industry best practice by the North America Transmission Forum (HOP roadmap and principles of operating excellence), National Safety Council, our peer utilities, and many high-risk organizations such as the U.S. Department of Energy and Alcoa. SCE used best practices, focusing on an inclusive and grassroots approach, to strategize the design, development, implementation, and sustainability of HOP.

Currently SCE is focusing this effort on our Substation Construction & Maintenance (SC&M) organizational group. This work effort includes:

1. Completing HOP Training for SC&M in 2022 (Leaders and Individual Contributors)

2. Launching subsequent HOP sustainability efforts beyond 2022 and collaborating with key stakeholders including the training organizations and SC&M leadership.

SCE is also in the process of developing our long-term strategy for implementing HOP across other areas of our organization to ensure organizational readiness and alignment.

c) Targeted Employee Training

SCE uses data from previous safety incidents to analyze common causes and determine corrective actions, that often target improvements to worker training. An example of this is

the Common Cause Evaluation completed for induction incidents.[7] Between 2012 and 2019, ten induction incidents occurred at SCE. Other incidents resulted in hospitalization with the least severe causing minor burns.

A common cause analysis was done to determine the underlying causes of these related incidents, focusing on commonalities across several key elements, including: Organizational Unit; involved personnel (i.e., SCE or contractor); undesired actions contributing to the occurrence of the incidents; Human Performance (HU) failure modes associated with the undesired actions; and Organizational and Programmatic (O&P) failure modes associated with the undesired actions.

The Common Cause was determined to be the inadequate establishment and verification of an effective equipotential zone (EPZ) because of the following key drivers: less than adequate crew knowledge of induction hazards and the thoroughness required for implementation of associated protection protocols; less than effective supervisory oversight in providing adequate job direction critical to doing the job safely, monitoring the job to identify and resolve performance issues, and reinforcing expectations; and lack of a robust barrier to verify the adequacy of the initially established EPZ and when conditions change.

The following corrective actions were developed to address the key drivers of the common cause: require the establishment of an EPZ whenever hazardous induction is present; develop a training module on how induction incidents can occur, hazards associated with induction incidents, and how to properly establish an effective EPZ; and develop protocols for measurement of the voltages on conductors within EPZ boundaries.

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[7] Induction incidents refers to the process by which an electrical conductor becomes electrified when near, but not in contact with, another electrical charged conductor, such as a transmission line. Induction incidents typically occur when a conductor de-energized from its primary source becomes re-energized due to proximity to another conductor such as an energized transmission line.

2. Use of Safety Performance Metrics Data to Support Risk-Based Decision-Making as Required in the SMAP and RAMP Processes

a) SCE Continues to Update our Wildfire Risk Analysis Modeling.

For the 2020 Wildfire Mitigation Plan (WMP), SCE assessed wildfire risks, risk mitigation alternatives, and risk mitigation scope based on system averages for probability and consequence of ignition. In 2019 and 2020, SCE created Wildfire Risk Analysis Modeling (WRRM) to model and quantify the Probability of Ignition (POI) and Consequence of fire at the asset level, which allows SCE to prioritize programs using asset and circuit-segment level risk rankings by targeting the assets and/or circuit segments with the highest wildfire risks. For example, SCE's Wildfire Covered Conductor Program (WCCP) is informed by segment-level wildfire risk rankings from WRRM. Risk data at the asset-level now enables SCE to quantify wildfire risks, risk mitigation alternatives, and risk mitigation scope and perform asset- or location-specific analyses. This led to different results between the system level and asset- or location- specific risk analyses. Beginning in 2021, the WRRM includes a method to translate the expected values produced by the model into unitless multi-attribute risk scores at the asset and location level. This enables SCE to both calculate risk and risk reduction at the asset and location level as well as aggregated as needed for circuit, or system level analysis. Based on the transition to asset-level risk analysis, SCE's ignition forecast is dependent on using a risk buy down curve, where priority is based on mitigating the total overall risk.

SCE has developed machine learning (ML) models to quantify the POI caused by Equipment and Facility Failure (EFF) and Contact From Object (CFO). The models utilize historical outages and faults caused by EFF and CFO, SCE asset data including circuit connectivity, historical weather data, tree inventory data, etc., to identify patterns that lead to faults then sparks.

In 2021, SCE updated its existing asset specific WRRM POI models by using the latest asset data, weather data and most suitable algorithms. At the same time, SCE updated the Technosylva fire consequence models by including additional historical weather scenarios and the most up-to-date fuel, including the recent burn scars to better capture the potential fire consequences.

b) Expansion of Safety Predictive Model

The Safety Predictive Model (SPM), developed in 2018, applied artificial intelligence (AI) and machine learning to process and analyze tendencies of historical data for field worker SIFs and planned work order characteristics. An AI code was developed that flags new Distribution, Construction & Maintenance planned work orders with higher-than-normal risks that may potentially result in a SIF. The code also identifies the top factors that contribute to that high-risk flag. This information is directly populated in the work scheduling and planning system used by field personnel daily. The SPM, combined with the expertise of personnel, provides data-driven insights to assist targeted communication and bring greater focus to work execution planning to mitigate risks. This will enhance our employees' ability to identify safety issues even before going out to the field to plan the work.

The SPM has been implemented in eighteen Distribution Districts from 2019 through 2021. In 2022 – 2023 SCE will focus on enhancing the model to include more work characteristics, weather and more work order complexity detailed insights. We will complete SPM implementation in the rest of the Distribution Districts and we plan to expand the use of the model to include emergent work.

c) Asset Failure Mitigation Register

The Asset Failure and Mitigation Register (AFMR) was established in 2021 with the intent to track key asset failures and their associated mitigations. Asset failures are investigated through events such as ignitions, wire downs, and Underground Equipment Failures (UEF).
The investigation results are evaluated by engineers for trends based on the asset and failure types. This evolving process continues to undergo enhancements to help inform appropriate mitigation strategy development with input from a variety of perspectives such as asset engineers, data scientists, risk management, reliability, wildfire, and public safety. As asset failure mitigations are implemented, failure engineers continue to track failure trends to provide data-driven feedback on mitigation effectiveness through the AFMR process.

B. Description of Executive Compensation Links and Bias Controls

Pursuant to D.19-04-020,[8] this section discusses (1) SPMs linked to or used for the purpose of determining executive compensation level and/or incentives, (2) SPMs linked to individual and group performance goals, (3) the Director-level or higher executive positions linked to SPMs and (4) bias controls associated with the reporting of SPMs.

During 2021, four SPMs were directly linked to SCE's incentive compensation plans for our employees, including those in executive positions through SCE's goal measures. Specifically, Fire Ignitions, Employee SIF, Public SIF, and Employee DART Rate contributed, in part, to determining whether SCE's corporate goals were met which, in turn, impacted the amount of incentive compensation paid under SCE's Executive Incentive Compensation (EIC) Plan.[9] As further described herein, SCE annually conducts audits of corporate goal metrics to protect against any gaming or skewing of metrics reporting.

1. Overview of Annual Incentive Awards Programs Applicable to Executives

For SCE employees holding Director-level or higher positions, the annual incentive awards are paid under the EIC Plan and are based on the achievement of specific safety, operating, financial and strategic objectives that benefit our customers and other stakeholders. Whether SCE meets those objectives directly impacts the level of incentives paid under the EIC Plan. For additional information on the EIC Plan, please refer to SCE's 2021 GRC testimony and Executive Compensation Submission pursuant to Assembly Bill 1054.[10]

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[8] *See* D.19-04-020, Ordering Paragraph 6.A-C.

[9] In lieu of the EIC, non-executive employees are eligible for incentive compensation under the Short Term Incentive Plan (STIP). STIP and EIC are aligned with the same set of Company performance goals.

[10] See Exhibit SCE-06 Vol. 03 Part 1 – Employee Benefits, Training & Support and Executive Compensation Submission of Southern California Edison Pursuant to Assembly Bill 1054 dated March 14, 2022 (accessible at https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/WSD/SCE%20Executive%20Compensation%202021.pdf).

2. Development of SCE's Corporate Goals

The process for establishing SCE's 2021 corporate goals began in June 2020 when the Company's Executive Management Committee conducted a strategic refresh of business priorities with the Board of Directors (Board). A supplemental review and refresh of the resulting Goal Framework was performed in July 2020 to validate goal categories and alignment with business priorities. Thereafter, the team developed representative success measures for goals within each category reflecting desired outcomes.

Criteria employed to develop success measures include the meaningfulness of the metric in representing the desired outcomes or performance levels, the maturity of the metric (e.g., the availability and quality of data, level of understanding of the drivers that influence the metric, and the degree of influence the company has over those drivers), the likelihood of achievement due to various factors (e.g., budgetary and regulatory commitments, resource availability and/or constraints, and historical performance) and the potential for improvement over past years' performance.

Draft metrics and milestones were refined through a series of reviews by senior executives beginning in September 2020, by the Safety and Operations Committee in October and December 2020 and January 2021, and by the Compensation and Executive Personnel Committee (Compensation Committee) in December 2020 and February 2021, when it approved final metrics and milestones. The Compensation Committee is comprised of independent Board members who have significant experience and qualifications in using incentive compensation to drive performance. No SCE officers or employees serve on the Compensation Committee.

In February 2022, the Compensation Committee assessed company performance against goals for 2021. The Compensation Committee duly considered both what was accomplished and the manner in which it was accomplished. The goals must be achieved while living SCE's values, which include safety. Significant consideration was given to the efficacy and prudency of the efforts and impacts from external events when evaluating the absolute outcomes. The Compensation Committee retains discretion to reduce or eliminate entirely annual incentive awards should circumstances warrant.

The Compensation Committee has exercised this discretion in recent years to reduce or eliminate payouts when safety goals were not met.[11]

3. Safety Performance Metrics Linked to Executive Compensation through SCE's Corporate Goals

SCE's corporate goals for 2021 are shown in Table I-2. In 2021, SCE's corporate goal structure increased the weighting of our safety and resiliency efforts and included an overarching goals framework related to safety and compliance. Safety and compliance are foundational to SCE, and events such as employee fatalities and serious injuries to the public from system failures can result in meaningful deduction or full elimination of EIC awards, regardless of the performance of the other goal categories. The overarching goals framework can supersede all of the other goals for purposes of determining incentive payouts. The Compensation Committee has the discretion to determine whether the reduction or elimination tied to that framework applies to all plan participants, all executives, or only specific officers.

Target weights are assigned and communicated at the goal category level, not the individual goal or success measure level. For the three main goal categories of Safety and Resiliency, Financial Performance and Operational Excellence, and Strategic Advancement, the highest weighting is placed on Safety and Resiliency. Our philosophy emphasizes the importance of viewing these goal categories as a whole. When goals are established, the subcomponents that comprise goal categories are not assigned specific weights. Allocating small percentages to numerous subcomponents would mask the importance of the overarching goal categories. For example, the most important and heavily weighted category is Safety and Resiliency. Providing a weighting breakdown of subcomponents at the beginning of the year might obscure the critical importance of *all* the representative success measures within the category. They are *all* necessary in our effort to increase the safety and resiliency of our communities and our workers. We want executives, and all employees, to be focused on achieving the

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[11] *See* Table I-3 below.

main objectives and all the success measures, and not make tradeoffs due to small weighting differences between subcomponents. After year-end, the Compensation Committee assesses the individual representative success measures approved at the beginning of the year alongside other important activities and developments during the year. At that point, the Compensation Committee evaluates the relative importance of the various success measures and scores the subcategories.

SCE's 2021 goals incorporate several changes. For the Safety and Resiliency goal category, SCE increased the target weighting from 45 percent to 50 percent. New outcome-based quantitative metrics for wildfire resiliency goals include a new success measure for CPUC Reportable Ignitions, which are a subset of the Fire Ignitions metric in this SPMR. Safety and Resiliency Capabilities was added as a new success measure to further enhance risk reduction through improved data and records, performance and quality management, process management and digital enablement. A Contractor Management success measure was also added to enhance safety and compliance controls and processes for SCE's contractors. A new Public Safety Power Shutoff (PSPS) success measure was added focusing on a comprehensive improvement plan to enhance customer notifications and other PSPS capabilities. Lastly, a success measure was added for the Overhead Conductor Program aimed at mitigating public safety risks from downed overhead lines.

Other goals continue to focus on key operational and service excellence measures promoting efficient management of core business operations, advancement of key innovation/transformation activities essential to meeting longer-term business strategy objectives, and cultivation of a more agile, diverse workforce and supplier group.

Table I-2 identifies the instances where SMAP Safety Performance Metrics are linked to a corporate goal in the third column.

Table I-2
SCE Company Goals Included in EIC for the 2021 Plan Year

Goal Category and Target Score for Goal Category	Representative Success Measures for Goal Category	SMAP Safety Performance Metrics Linked to Executive Compensation
Overarching Goals Framework[12]	• The goals will be achieved while living the company's values, which include safety • Safety and compliance are foundational and events such as fatalities or significant non-compliance issues can result in meaningful or full elimination of short-term incentive compensation	• No employee fatalities (Employee SIF Rates – fatality component) • No serious injuries to public from system failure (subset of Public SIF metric data)
Safety and Resiliency 50	• Worker Safety: Make significant progress toward eliminating serious injuries and fatalities (SIF). Improvements will be measured utilizing metrics such as DART and SIF rates o Improvements in worker safety programs focus on reducing serious injuries associated with high risk work activities	• Employee SIF Rate • Employee DART rate
	• Public Safety: Reduce risk of public injuries related to SCE's electric infrastructure o Improve public awareness of safety around electric lines and equipment as measured by awareness survey results and key outreach activities performed o Overhead Conductor Program installation of circuit miles aligned with 2021 GRC forecast o Vegetation Line Clearing: execute on time trims to support compliance with GO 95	
	• Wildfire Resiliency: Reduce risk of catastrophic wildfires associated with electric infrastructure by executing SCE's Wildfire Mitigation Plan (WMP) and programs • CPUC reportable ignitions in High Fire Risk Areas (HFRA) aligned with WMP forecast • Covered Conductor: installation of circuit miles aligned with 2021 GRC • Overhead Inspections: complete ground and aerial HFRA inspection scope and remediate findings 30 days before compliance due date • Hazard Tree & Drought Relief: perform WMP assessment scope and complete prescribed mitigations in active inventory within 180 days of schedule • Improve PSPS customer experience by executing comprehensive improvement plan focused on enhancing notifications and other PSPS capabilities	• Subset of Fire Ignitions metric (HFRA only)
	• Cybersecurity: Maintain effective controls to mitigate and prevent significant disruptions, data breach or system failure o Improvements will be measured utilizing metrics such as further deployment of cyber tools and enterprise-wide phishing program click rate	

[12] The potential score for each goal category (other than Overarching Goals Framework described above) ranges from zero to twice the target score for the goal category. The potential total score is from zero to 200.

Goal Category and Target Score for Goal Category	Representative Success Measures for Goal Category	SMAP Safety Performance Metrics Linked to Executive Compensation

	• Safety and Resiliency Capabilities: Advance foundational capabilities in operations
	  • Electric Asset Data: Improve pole and wire data quality and enhance information governance
	  • Critical Business Records: Complete risk analysis of records types and implement management plans for high-risk records
	  • Field and Work Management Tools: Advance inspection and vegetation management applications, and build digital work order system	

	• Contractor Management: Strengthen contractor management to improve safety and quality performance • Implement Contractor Management Plan: Increase safety and quality integration in procurement, clarity of performance triggers, and efficacy of corrective action mechanisms	
Financial Performance 25	• Achieve SCE core earnings target	
Operational Excellence & Strategic Advancement 25	• Reliability: Improve reliability for repair outages as measured by System Average Interruption Duration Index (SAIDI).	
	• Capital Deployment: Execute grid, technology, electrification, and other improvements to deliver safe, reliable, clean, and affordable energy for customers. • Achieve CPUC and FERC jurisdictional capital improvement plan execution, consistent with CPUC direction	

	• Policy Outcomes: Shape California legislative and regulatory policies to align with SCE's strategy
	  • Advocate for effective implementation of wildfire policies and obtain Wildfire Mitigation Plan approval and annual Safety Certification
	  • Advocate for prudent cost recovery and affordability decisions that secure funding to meet company and customer needs
	  • Build support for SCE's Clean Power and Electrification Pathway/Pathway 2045 and achieve key policy outcomes that accelerate its development	

	• Diversity, Equity and Inclusion: Improve diversity in our employees and supplier base and drive inclusion
	  • Implement a comprehensive Diversity, Equity and Inclusion (DEI) Plan
	  • Achieve Diverse Business Enterprise (DBE) spend aligned with 2021 forecast and YE results	

	• Customer Service Re-Platform (CSRP): Complete CSRP implementation and stabilization milestones and project spend in line with plan • Achieve go-live by end of Q2 2021 and post implementation stabilization by end of Q4 2021 within budget	
	• San Onofre Nuclear Generating Station (SONGS) Decommissioning: Safely and effectively manage SONGS decommissioning • Safely and effectively oversee contractors to complete Decommissioning and Dismantlement critical path activities	

Annual incentive awards are based on corporate and individual performance. Corporate performance is based on accomplishments related to the goal categories established at the beginning of the year. For each goal category, the Compensation Committee assigns a target score and potential score range reflecting the relative weight given that goal category. Some goals have quantitative metrics for determining if the goal was unmet, met or exceeded. Other goals are activity-based or assessed by the quality of the respective outcome, all of which are subject to the judgment of the Compensation Committee.

In review of SCE's 2019 SPMR, SPD requested information on what years' executive compensation was impacted, how many executives were impacted, and what percentage of their total bonus compensation this affected.[13] For 2021, SCE's year-end performance resulted in an aggregate goal score of 120 across the goal categories for Safety and Resiliency, Financial Performance and Operational Excellence and Strategic Advancement. This aggregate score reflected a total deduction of five points within the Safety and Resiliency goal category due to below-target performance for Wildfire Resiliency, Safety and Resiliency Capabilities, and Contractor Management goals. As mentioned above, the Compensation Committee has exercised discretion frequently in recent years to reduce or eliminate payouts for not meeting safety goals. Table I-3 below summarizes SCE's annual incentive award deductions for senior vice presidents and above due to safety performance since 2016.

[13] Safety Policy Division's Review of Southern California Edison's 2020 Safety Performance Metrics Submittal Pursuant to Decision 19-04-020, p. 20.

Table I-3
Annual Incentive Award Deductions for Safety Performance

Year	Total Deduction for Executive Officers Due to Unmet Safety Goals, Wildfire Resiliency Goals and/or Overarching Goals Framework	Summary of Unmet Safety Goals, Wildfire Resiliency Goals, and/or Overarching Goals Framework
2021	5-point deduction[14]	Below-target performance for Wildfire Resiliency, Safety and Resiliency Capabilities, and Contractor Management
2020	13-point deduction[15]	Three contractor fatalities; third-party contractor seriously injured from contact with line with insufficient clearance; SIF rate worse than target
2019	14-point deduction[16]	Three contractor fatalities; transformer failure that seriously burned a member of the public; DART injury rate worse than target
2018	Annual incentive completely eliminated for SCE's CEO and President;[17] 20-point deduction for other senior officers[18]	Impact of wildfires on communities within SCE's service territory; fatalities of (i) two contractors and (ii) a private tree trimmer who came in contact with a power line; DART injury rate worse than target
2017	17-point deduction[19]	Fatality and a serious injury occurred when members of the public came in contact with downed power wires in separate incidents; DART injury rate worse than target
2016	10-point deduction[20]	Four worker fatalities; DART injury rate worse than target

[14] Wildfire Resiliency was scored 2 points below target due to reportable ignitions in High Fire Risk Areas and assessment and mitigation of hazardous trees being worse than target; Safety and Resiliency Capabilities were scored 1 point below target due to some field and work management tool development occurring behind schedule; Contractor Management was scored 2 points below target due to a delay in the revised end-to-end contractor management process.

[15] The 13-point deduction was comprised of: 10-point deduction to the company modifier due to unmet overarching goal for all senior officers (and certain other officers) due to three contractor fatalities and a third-party contractor serious injury; and Worker Safety portion of the Safety and Resiliency goal category was scored 3 points below target for all employees (including non-executive) due to the SIF rate.

[16] The 14-point deduction was comprised of: 10-point deduction to company modifier due to unmet overarching goals; Safety portion of Operational and Service Excellence goal category was scored 4 points below target due to DART injury rate.

[17] In light of the impact of wildfires on communities within SCE's service area, the Compensation Committee decided, in consultation with management and with its full support and agreement, that no annual incentive award would be paid for 2018 to SCE's CEO and President. This action was not a reflection on the performance of SCE or these officers.

(*Continued*)

Looking beyond 2021, changes were made to SCE's goal framework for 2022 to further expand our public and worker safety efforts and streamline the goal framework: the Safety and Resiliency goal category weighting was further increased from 50% to 55%; the number of goals and success measures was significantly reduced; most qualitative success measures were eliminated and the number of quantitative success measures was slightly increased (thereby making scoring more transparent); and new goals were added to address the following:

- Quality of field work (new quantitative goal to focus on quality performance in key programs);
- Customer experience (SCE replaced the Customer Service Re-platform implementation goal, since that project has been completed. Instead, we have a quantitative goal to improve Billing and Payment Net score levels); and
- Execution-focused clean energy and electrification activities (new quantitative goal to support Pathway 2045).

4. Bias Controls for the Reporting of the Corporate Goals

SCE's internal audit team works to validate that the reporting of corporate goals and underlying metrics has not been gamed or skewed to support a financial incentive. For the corporate goals, each year, on a sample basis, the internal audit team verifies that the reporting used to determine the STIP and EIC payouts is accurate. This includes obtaining supporting documentation for the reported goal, reviewing and validating the accuracy of the performance standard, metric, or target number used for assessing obtainment of that goal, and comparing the data to internal and/or external

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18 The 20-point deduction was comprised of: 5-point deduction to Safety portion of Operational and Service Excellence goal category due to DART injury rate; 5-point deduction to overall company modifier due to unmet overarching goal; and 10-point deduction to individual performance modifier due to unmet overarching goal.

19 The 17-point deduction was comprised of: 7-point deduction to Safety goal category due to DART injury rate and 10-point deduction to individual performance modifier due to unmet overarching goal.

20 The target score for the Safety goal category was 10 points. The worker fatalities and the DART injury rate were independent bases to score zero points for the category (i.e., either by itself would have resulted in a score of zero).

sources as applicable to validate the data. The internal audit team also periodically audits other company programs that track metrics such as Employee DART or SIF. These audits include reviewing the program processes and controls, including event and/or injury classifications, to validate the accuracy of the reported rate. The internal audit team is accountable to the Audit and Finance Committee of SCE's Board, which is comprised of independent members in accordance with the Securities and Exchange Act of 1934. Please refer to Chapter II for a discussion of additional, metric-specific bias controls where applicable.

5. Individual and Group Performance Goals

In addition to company performance, annual incentive awards under the EIC also take into account individual performance. SCE non-represented employees, including executives, have individual performance goals and, in some circumstances, may also have group performance goals. Individual and group performance goals are developed specific to an employee or organizational unit's scope of work, and are intended to align with and support the company's overall corporate goals. Thus, while individual and group performance goals may include safety competencies, they are generally not specific to any of the SPMs outside those already linked to corporate goals.[21] Additionally, to the extent that an individual or group performance goal intersects with one of the SPMs, success or lack of success on that goal would not necessarily impact compensation. For each individual, success on individual and group performance goals is typically determined holistically by the organizational unit's management (or, in the case of senior officers, by the Compensation Committee), which takes into account that individual's performance across all of their goals and benchmarking based on a comparison to the performance of that individual's peers within the organizational unit. Any impact on compensation (whether through an annual incentive award or a base salary increase) based on this assessment is

[21] Based on SCE's review of all director level and above individual performance plans for 2022, SCE identified two instances where a Safety Performance Metric outside those already linked to corporate goals was directly incorporated into an individual director level or higher performance goal. It should be noted that these goals are only one of various considerations in individual performance goals and their compensation.

subject to management discretion.[22] For executive officers, the compensation impact is decided by the Compensation Committee rather than by management.

C. Interim Risk Mitigation Accountability Report Requirements

In D.14-12-025, the Commission determined that IOUs should include in their annual Safety Performance Metrics Reports some of the information originally envisioned as part of the Risk Mitigation Accountability Report (RMAR) which is the subject of the SMAP proceeding. Specifically, the IOUs were directed to include an explanation of how the reported SPM data reflects progress against the safety goals in their respective RAMP and approved GRC application, and a high-level summary of total estimated risk mitigation spending level as approved in its most recent GRC.

1. How the Safety Performance Metrics Reflect Progress Against SCE's RAMP and GRC Safety Goals

SCE is committed to delivering safe, reliable, affordable, and clean energy to its customers. Safety is our number one value, and part of implementing that value is making sure we empower employees with the knowledge, motivation, and means to make safe choices. SCE is also committed to collaborating with our contractors to strengthen safe work practices, and educating the public to avoid hazards associated with our electrical grid. In some performance areas, SCE has seen a dramatic improvement in its safety results. However, SCE recognizes that it has more work ahead to ultimately achieve and maintain a fully mature safety culture, foster an injury-free workplace, and protect members of the public. Since 2012, SCE has achieved more than a 40% improvement in employee safety performance, as measured by our Employee Days Away, Restricted or Transferred (DART) Rate and the Edison Electric Institute (EEI) SIF Rate. SCE continues to utilize contractors for

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[22] The final component of compensation approved each year for director level and above positions is long-term incentive awards. Unlike with annual incentive awards, which are determined by looking back at the prior year's performance, long-term incentive awards are typically determined by considering the individual's longer-term performance as well as the company's longer-term goals and needs. None of the Safety Performance Metrics is linked to executive compensation through long-term incentive awards.

key work activities as discussed below in Section II.G, and the overall contractor hours have grown from 16.7 million hours in 2018 to 22.5 million hours in 2021. Despite the significant increase in contractor hours the EEI SIF *rate* has decreased by 62% since 2018. SCE's efforts to mitigate contractor serious injuries and fatalities are described in Section II.G. SCE also saw increased levels of fire ignitions in 2021 which we address in Section II.D.

Table I-4
Percent Improvement/Decline in SCE's 2021 Metric Performance Compared to Historical Average[23] [24]

Metric Name	2021 Performance	Historical Average	Percent Improvement/Decline in SCE's 2021 Metric Performance Compared to Historical Average	Average Notes
1. T&D Overhead Wires Down	1,041	1,048	0.7%	5 year Average (2016 - 2020)
2. T&D Overhead Wires Down - Major Event Days	2,057	2,130	3.4%	5 year Average (2016 - 2020)
3. Electric Emergency Response *(Avg time)*	55.8	51.8	-7.6%	4 Year Average (2017 - 2020)
4. Fire Ignitions	173	115	-50.4%	5 year Average (2016 - 2020)
14. Employee Days Away, Restricted and Transfer (DART) Rate	1.05	0.97	-8.5%	5 year Average (2016 - 2020)
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	0.06	0.10	38.6%	5 year Average (2016 - 2020)
16. Rate of SIF Actual (Contractor)	0.124	0.216	42.7%	3 Year Average (2018 - 2020)
17. Rate of SIF Potential (Employee)	0.193	0.195	1.2%	3 Year Average (2018 - 2020)
18. Rate of SIF Potential (Contractor)	0.390	0.497	21.5%	3 Year Average (2018 - 2020)
19. Contractor Days Away, Restricted Transfer (DART)	0.36	0.5	20.0%	3 Year Average (2018 - 2020)
20. Public Serious Injuries and Fatalities	9	14	37.5%	5 year Average (2016 - 2020)
21. Helicopter/ Flight Accident or Incident	1 incident	N/A	N/A	N/A
25. Wires-Down not resulting in Automatic De-energization	N/A	N/A	N/A	Insufficient historical data
26. Missed Inspections and Patrols for Electric Circuits				
Distribution Detailed	2%	2%	-5.3%	9 year Average (2012- 2021)

[23] For electric emergency response, where a higher value is better, positive values show a percent increase in the metric's performance in the table; for all other metrics where a lower value is better, (*e.g.*, fire ignitions, wires down, SIF, etc.), positive values show a percent decrease in the metric's performance.

[24] SCE uses different historical averages for comparison purposes depending on the amount of historical data that is available.

Metric Name	2021 Performance	Historical Average	Percent Improvement/Decline in SCE's 2021 Metric Performance Compared to Historical Average	Average Notes
Distribution Patrols	0%	1%	100.0%	9 year Average (2012- 2021)
Transmission Detailed	3%	7%	58.6%	3 Year Average (2018 - 2020)
Transmission Patrols	2%	2%	11.1%	9 year Average (2012- 2021)
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	N/A	N/A	N/A	Insufficient historical data
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)				
Distribution	84%	85%	-1.1%	3 Year Average (2018 - 2020)
Transmission	77%	63%	22.0%	3 Year Average (2018 - 2020)
32.Overhead Conductor Safety Index	0.019	0.019	0.1%	6 year Average (2015 - 2020)

**For GO-95 corrective actions metrics, where a higher value is better, positive values show a percent increase in the metric's performance in the table; for all other metrics where a lower value is better, (e.g., fire ignitions, wires down, SIF, etc.), positive values show a percent decrease in the metric's performance.*

SCE uses a form of most of the SPMs addressed in this report to develop the risk bowtie structures which inform the Risk Informed Decision Making (RIDM) framework and the mitigation plans to address some of SCE's top risks as identified in the 2022 RAMP filing.[25] Table I-5 below indicates which 2022 RAMP risk(s) and which risk bowtie element(s) each metric is linked to.

Table I-5
SPMR Metrics Linked to SCE's 2022 RAMP Filing

Metric Name	RAMP Risk(s)	Bowtie Element(s)
1. T&D Overhead Wires Down	Contact with Energized Equipment	Triggering Event for CEE Risk Bowtie
2. T&D Overhead Wires Down - Major Event Days	Contact with Energized Equipment	Triggering Event for CEE Risk Bowtie
3. Electric Emergency Response		
4. Fire Ignitions	Wildfire	Triggering Event for Wildfire
14. Employee Days Away, Restricted and Transfer (DART) Rate	N/A	Not directly include in Employee Safety risk analysis
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	Employee Safety	Triggering Event for Employee Safety
16. Rate of SIF Actual (Contractor)	Contractor Safety	Triggering Event for Contractor Safety
17. Rate of SIF Potential (Employee)	N/A	Not directly include in Employee Safety risk analysis, but qualitatively discussed.
18. Rate of SIF Potential (Contractor)	N/A	Not directly include in Contractor Safety risk analysis, but qualitatively discussed.
19. Contractor Days Away, Restricted Transfer (DART)	N/A	Not directly include in Contractor Safety risk analysis

[25] For additional information on how SCE developed our risk bowties for the 2022 RAMP, please refer to SCE's 2022 RAMP Application, A.22-05-013, Chapter 2 – Risk Model and RSE Methodology.

Metric Name	RAMP Risk(s)	Bowtie Element(s)
20. Public Serious Injuries and Fatalities	Wildfire, PSPS, Contact with Energized Equipment, Underground Equipment Failure, and Physical Security	Public SIF events are included in the safety consequences of these RAMP risks.
21. Helicopter/ Flight Accident or Incident	N/A	Not directly included, however if an incident occurs that results in an Employee, Contractor or Public SIF it would be included.
25. Wires-Down not resulting in Automatic De-energization	Contact with Energized Equipment	Impacts the outcomes of a wire down event.
26. Missed Inspections and Patrols for Electric Circuits	N/A	Not directly included
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	N/A	Not directly included
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)	N/A	Not directly included
32.Overhead Conductor Safety Index	N/A	Not directly included

2. High-level Summary of SCE's Total Estimated Risk Mitigation Spending Level as Approved in its Most Recent GRC

As directed in D.19-04-020, SCE is providing a high-level summary of the total estimated risk mitigation spending as approved in our most recent GRC.[26] The recorded and authorized RAMP O&M expenses from SCE's Test Year 2021 GRC Decision are shown below in Table I-6 by SCE's 2018 RAMP risks.

[26] D.19-04-02, Ordering Paragraph 6.F, p. 63.

Table I-6
RAMP O&M Spending by RAMP Risk ($000s)

SCE 2018 RAMP Risk	2021 Recorded	2021 Authorized	Variance (Recorded less Authorized)	% Variance
Wildfire	$114,013	$58,293	$55,720	96%
Physical Security	$21,891	$27,064	($5,173)	-19%
Cyber Attack	$16,045	$26,410	($10,365)	-39%
Contact with Energized Equipment	$6,051	$6,821	($770)	-11%
Climate Change	$3,799	$3,744	$55	1%
Building Safety	$3,725	$8,769	($5,045)	-58%
Employee, Contractor & Public Safety	$3,554	$9,053	($5,499)	-61%
Grand Total	**$169,077**	**$140,155**	**$28,923**	**21%**

The recorded and authorized RAMP capital expenditures are shown below in Table I-7 by SCE's 2018 RAMP risks.

Table I-7
RAMP Capital Spending by RAMP Risk ($000s)

SCE 2018 RAMP Risk	2021 Recorded	2021 Authorized	Variance (Recorded less Authorized)	% Variance
Wildfire	$947,088	$563,584	$383,503	68%
Cyber Attack	$88,848	$104,500	($15,652)	-15%
Contact with Energized Equipment	$84,713	$72,641	$12,072	17%
Underground Equipment Failure	$36,467	$24,587	$11,880	48%
Physical Security	$33,370	$48,980	($15,610)	-32%
Hydro Asset Safety	$20,827	$19,237	$1,590	8%
Building Safety	$6,391	$7,369	($978)	-13%
Employee, Contractor and Public Safety	$1,975	$2,512	($537)	-21%
Grand Total	**$1,219,677**	**$843,409**	**$376,269**	**45%**

Additional discussion of the spending variances for O&M expenses and capital expenditures can be found in SCE's 2021 Risk Spending Accountability Report.

D. Overview of Approved Safety Performance Metrics

In accordance with D.21-11-009, SCE reports on the seventeen applicable SPMs[27] using the designated definitions and units and including data for the last ten years (2012-2021) where such data exists.[28] SCE provides additional context on each of these metrics as appropriate in Chapter II below.

II.

SCE SAFETY PERFORMANCE METRIC DATA

A. Metric 1: Transmission & Distribution (T&D) Overhead Wires Down [29]

Table II-8
Transmission & Distribution (T&D) Overhead Wires Down

Metric Name	Risks	Category	Units	Metric Description
1. T&D Overhead Wires Down	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); excludes down secondary distribution wires and "Major Event Days" (typically due to severe storm events) as defined by the IEEE.

1. Metric Data and Discussion

The annual and historical monthly data for T&D Overhead Wires Down is presented below in Figure II-1 and Table II-9, respectively. As shown in Table II-8, the definition for this metric includes both transmission and distribution primary overhead conductors and excludes distribution secondary conductors. SCE discusses trends, performance, risk drivers and initiatives to reduce wires down events in Section II.B below, as part of Metric 2- T&D Wires Down – Major Event Days.

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27 These metrics are provided in Appendix B – SPMs Table to D.21-11-009.
28 This data is included in Attachment A "SCE 2021 Safety Performance Metrics – Historical Data." SCE is also serving an Excel version of this attachment concurrently with this report.
29 Note that SCE is following the same numbering for these metrics as used by the Commission in Appendix B to D.21-11-009.

Figure II-1
Annual T&D Overhead Wires Down Metric Data[30]

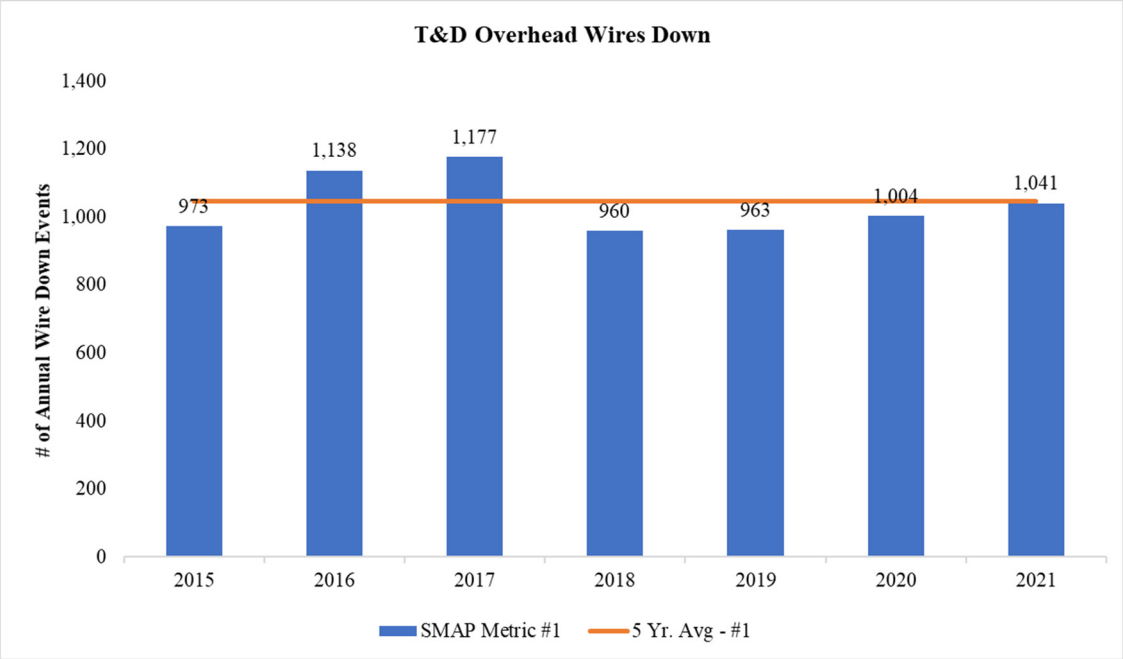


Table II-9
T&D Overhead Wires Down – Historical Monthly Data

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2014	N/A	N/A	N/A	N/A	81	85	64	91	67	71	63	119	**641**
2015	88	55	96	80	74	81	103	67	77	79	78	95	**973**
2016	93	86	110	127	97	82	76	73	108	76	81	129	**1,138**
2017	131	88	138	93	105	97	93	91	119	79	68	75	**1,177**
2018	67	93	102	100	74	127	57	72	75	56	53	84	**960**
2019	118	86	78	69	83	77	85	50	77	40	74	126	**963**
2020	66	89	98	84	92	119	78	105	57	58	101	57	**1,004**
2021	129	79	101	69	93	95	73	74	75	108	54	91	**1,041**
Avg by Month	**99**	**82**	**103**	**89**	**87**	**95**	**79**	**78**	**82**	**71**	**72**	**97**	**-**

30 SCE defines a wire down event as an event where the wire struck the ground or fell within eight feet and did not contact ground. SCE is developing the ability to parse out events into "hit ground" or "did not hit ground" for future reporting. SCE is focused on the safety concerns that are implicated whenever a wire down incident occurs, regardless of whether the wire happens to physically make contact with the ground. A wire down that does not touch the ground still poses danger to the public and to our workers. Therefore, SCE includes both on- ground and above-ground in our data because both situations present dangers to the communities we serve. SCE thus tracks and provides a more comprehensive set of data than simply wire down incidents that are on-ground or on a foreign object.

2. Metric Link to Compensation or Individual or Group Performance Goals

The T&D Wires Down metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B, Description of Executive Compensation Links and Bias Controls.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

To populate wire-down data for each driver, SCE has previously used its wire-down database containing repair orders. As noted in the Q3 2021 QDR submission, SCE has reviewed prior period transmission wire down data and performed a broader deep dive on failure data which identified two datasets that were not previously included in its wire down reporting. This has resulted in the inclusion of additional wire down events, the vast majority of which occurred from 2016-2018 on distribution secondaries and service lines in the Non-HFTD.

B. Metric 2: Transmission & Distribution (T&D) Overhead Wires Down – Major Event Days

Table II-10
Transmission & Distribution (T&D) Overhead Wires Down – Major Event Days

Metric Name	Risks	Category	Units	Metric Description
2. T&D Overhead Wires Down - Major Event Days	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); includes down secondary distribution wires. Includes "Major Event Days" (typically due to severe storm events) as defined by the IEEE.

1. Metric Data and Discussion

The annual and historical monthly data for T&D Overhead Wires Down – Major Event Days is presented below in Figure II-2 and Table II-11, respectively. As shown in Table II-10 above, the definition for this metric includes transmission conductor, distribution primary overhead conductor and distribution secondary conductor, and does not exclude Major Event Days as defined by IEEE.

Figure II-2
Annual T&D Overhead Wires Down – Major Event Days Metric Data

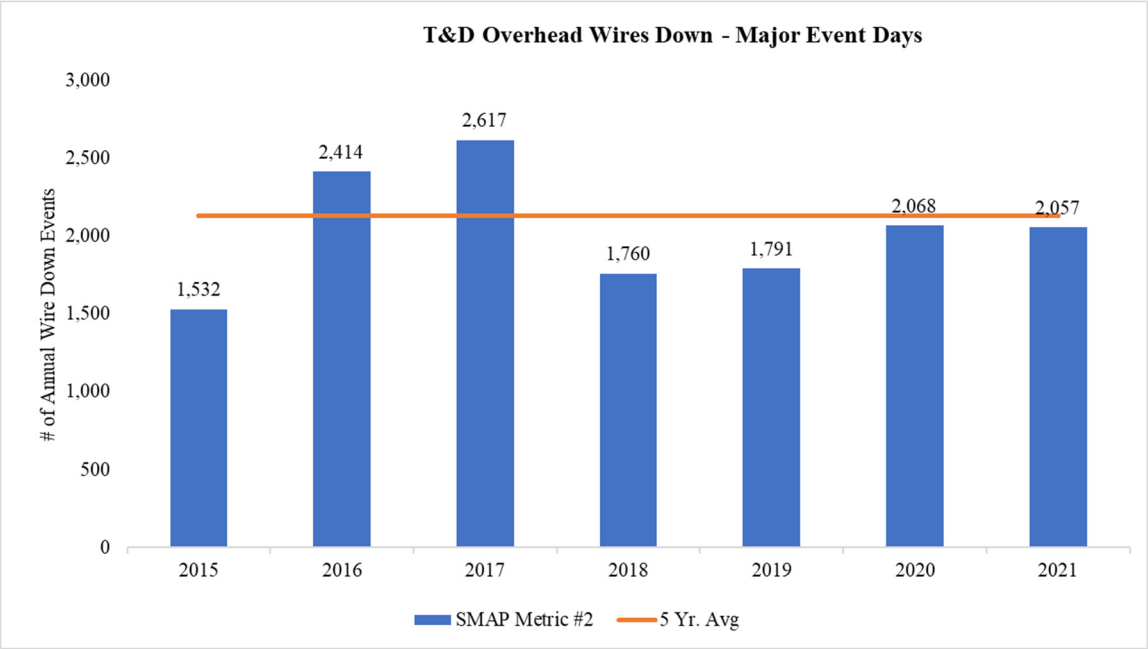


Table II-11
T&D Overhead Wires Down – Major Event Days – Historical Monthly Data

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2014	N/A	N/A	N/A	N/A	131	118	100	123	126	101	100	241	**1,040**
2015	132	77	125	109	101	120	152	133	154	139	126	164	**1,532**
2016	229	164	158	208	134	172	191	207	262	245	214	230	**2,414**
2017	413	222	261	232	208	230	152	231	245	171	88	164	**2,617**
2018	133	151	155	189	131	193	162	83	104	146	170	143	**1,760**
2019	205	248	133	131	114	105	121	89	126	126	170	223	**1,791**
2020	106	149	141	154	178	207	135	192	198	220	207	181	**2,068**
2021	311	145	173	128	163	197	177	113	114	166	125	245	**2,057**
Avg by Month	**218**	**165**	**164**	**164**	**145**	**168**	**149**	**146**	**166**	**164**	**150**	**199**	**1,889**

The key drivers of wire down events are shown below in Table II-12.[31]

Table II-12
Key Drivers of Wire Down Events

Cause Category	Sub-cause Category	2015	2016	2017	2018	2019	2020	2021	5 Year Average (2016 - 2020)	% over / under Avg.
Contact from object - Distribution	Veg. contact	279	404	382	158	308	419	371	334	11%
Contact from object - Distribution	Animal contact	74	59	53	48	38	68	49	53	-8%
Contact from object - Distribution	Balloon contact	115	113	115	134	98	108	106	114	-7%
Contact from object - Distribution	Vehicle contact	227	374	248	267	269	385	404	309	31%
Contact from object - Distribution	Other contact from object	0	1	0	1	1	0	0	1	-100%
Equipment / facility failure - Distribution	Connector damage or failure	84	112	81	75	68	115	78	90	-14%
Equipment / facility failure - Distribution	Conductor failure	0	0	28	44	121	234	112	85	31%
Equipment / facility failure - Distribution	Splice damage or failure	35	28	24	24	28	29	25	27	-6%
Equipment / facility failure - Distribution	Crossarm damage or failure	31	29	26	25	35	34	32	30	7%
Equipment / facility failure - Distribution	Lightning arrestor damage or failure	0	0	2	0	2	1	1	1	0%
Equipment / facility failure - Distribution	Tap damage or failure	0	0	4	5	12	11	8	6	25%
Equipment / facility failure - Distribution	Other	105	120	113	107	110	250	347	140	148%
Wire-to-wire contact - Distribution	Wire-to-wire contact / contamination	0	0	1	2	1	7	4	2	82%
Other- Distribution	All Other	580	1,154	1,530	863	678	395	513	924	-44%
All Transmission		2	20	10	7	22	12	7	14	-51%
Total		**1,532**	**2,414**	**2,617**	**1,760**	**1,791**	**2,068**	**2,057**	**2,130**	**-3%**

As indicated above in Table II-12, SCE has seen swings in wire down events from 2015 to 2021 that were caused by vegetation contact, vehicle contact and other distribution equipment failures. As shown in Table II-11, SCE generally sees increased levels of wire down events in January and December primarily due to higher levels of inclement weather (wind and rain). The rest of the calendar year shows a relatively flat trend with some increased levels of wires down from September to November which is attributed, in part, to more severe wind conditions in those autumn months. To address wire down causes, SCE has implemented a series of initiatives, including:[32]

- **Asset Failure and Mitigation Register:** The Asset Failure and Mitigation Register (AFMR) was established in 2021 with the designed intent to track key asset failures and their associated mitigations. The asset failures are investigated through events such as ignitions, wire downs, and Underground Equipment

[31] Additional detail on wire down events is provided in SCE's 2022 WMP, Table 2 and 7.1.
[32] This should not be considered an exhaustive list of activities and/or initiatives that SCE undertakes to mitigate wire down events.

Failures (UEF). The investigation results are evaluated by engineers for trends based on the asset and failure types. This evolving process continues to undergo enhancements to help inform appropriate mitigation strategy development with input from a variety of perspectives such as asset engineers, data scientists, risk management, reliability, wildfire, and public safety. As asset failure mitigations are implemented, failure engineers continue to track failure trends to provide data-driven feedback on mitigation effectiveness through the AFMR process.

- **Overhead Conductor Program:** The Overhead Conductor Program (OCP) was first discussed in SCE's 2018 GRC to address public safety risks associated with overhead conductors. The OCP replaces small conductors and installs protective devices to limit the amount of damage that conductors experience during fault conditions and mitigate the risk of failure. Additional details on this program can be found in SCE's Test Year 2021 GRC testimony and SCE's 2022 Risk Assessment and Mitigation Plan (RAMP).[33]
- **Inspection Programs:** SCE has several inspection and remediation programs to address the degradation of equipment and structures related to wear and tear from normal operations and external factors such as weather or third party caused damage. These programs help mitigate in-service malfunction or failure which can lead to potential wire down and ignition events. A more detailed discussion on these programs is provided in Section II.D.1 and in SCE's 2022 WMP.
- **Long Span Initiative (LSI) Remediation:** SCE uses Light Detection and Ranging Technology (LiDAR) to identify potential "long-span" risks on the distribution overhead system and remediate the highest risks following field investigation. "Long-spans" consist of distribution circuit spans of significant length or complex configuration (e.g. spans with mixed conductors, spans that

[33] See, A.22-05-013, Chapter 5 – Contact with Energized Equipment.

have a sharp angle, or spans that transition between vertical and horizontal configuration) that present the highest risk of conductor clash in adverse weather conditions. LiDAR helps identify locations with conductor clashing (i.e. wire-to-wire contact) which may result in sparks, wire-down events and ignitions. Options for remediation based upon the specific details of each span and field conditions include line spacers between conductors, alternate construction methods (such as ridge pin or box construction) to increase spacing, wider crossarms to increase spacing, inter-set poles, and covered conductor. In 2022, SCE expects to remediate at least 1,400 spans and up to 1,800 spans in SCE's HFRA, primarily those with compliance due dates, subject to resource constraints and other execution risks. The 2022 scope for the LSI Remediation program is primarily based on compliance due remediations identified from 2019 ground-based inspections. Additional details on this program can be found in SCE's 2022 WMP.

- **Vegetation Management:** SCE has several vegetation management initiatives focused on preventing wire down events and ignitions. Some of these initiatives are described below and additional initiatives are discussed in the next section regarding Fire Ignitions.
- **Hazard Tree Management Program (HTMP):** SCE's analysis of Tree-Caused Circuit Interruptions (TCCIs) data revealed that a significant number of faults and wire downs were caused by live trees "falling in" or branches and fronds from green trees "blowing in" to lines and equipment. These trees frequently are outside of the compliance clearance zone as they are visually healthy and meet clearance requirements, but still pose a fall-in risk, depending on condition of the tree and other site-specific factors. Branches or fronds getting dislodged from trees near electrical facilities also present a higher risk of blowing into the lines and equipment and causing faults that can potentially initiate an ignition. SCE

initiated the HTMP which entails detailed inspection and evaluation of trees that pose risks despite trimming and pruning, and appropriate mitigations up to removal of these trees. In 2021, SCE completed approximately 131,000 individual HTMP tree assessments. Given that the number of trees with strike potential is difficult to estimate with accuracy, in 2022 SCE is shifting its program targets to be based on circuits, not trees. For 2022, SCE's target will be to inspect 330 circuits and assess any trees with strike potential along those circuits. Additional information on this program can be found in SCE's 2022 WMP.

- **Dead, Dying and Diseased Tree Removal:** The Dead, Dying and Diseased Tree Removal program (formerly called the Drought Relief Initiative) was established as a result of the epidemic of dead and dying trees brought on by climate change and years of drought conditions. Both GO 9553 and Public Resources Code section 492354 address the mitigation of hazards posed by dead or significantly compromised trees. Under this program, SCE conducts patrols in HFRA to identify and remove dead, dying, or diseased trees affected by drought conditions and/or insect infestation. All trees within striking distance of SCE overhead facilities that are dead or expected to die within a year are removed. In 2021, SCE performed Dead and Dying Tree annual inspections and prescribed mitigations in accordance with program guidelines and schedules. SCE plans to continue Dead & Dying Tree Removal program efforts in 2022 and plans to inspect 900 unique circuits and prescribe mitigation for dead and dying trees with strike potential along those circuits. Additional information on this program can be found in SCE's 2022 WMP.

2. Metric Link to Compensation or Individual or Group Performance Goals

The T&D Wires Down – MED metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

To populate wire-down metric data, SCE has previously used its wire-down database of repair orders. As noted in the SCE's Q3 2021 Quarterly Data Report submission,[34] SCE has reviewed prior period transmission wire down data and performed a broader deep dive on failure data, which identified two datasets that were not previously included in its wire down reporting. This has resulted in the inclusion of additional wire down events, the vast majority of which occurred from 2016-2018 on distribution secondaries and service lines in the Non-HFTD.

[34] See, Southern California Edison Q3 2021 Quarterly Data Report, Nov. 1 2021, p. 10.

C. Metric 3: Electric Emergency Response

Table II-13
Electric Emergency Response

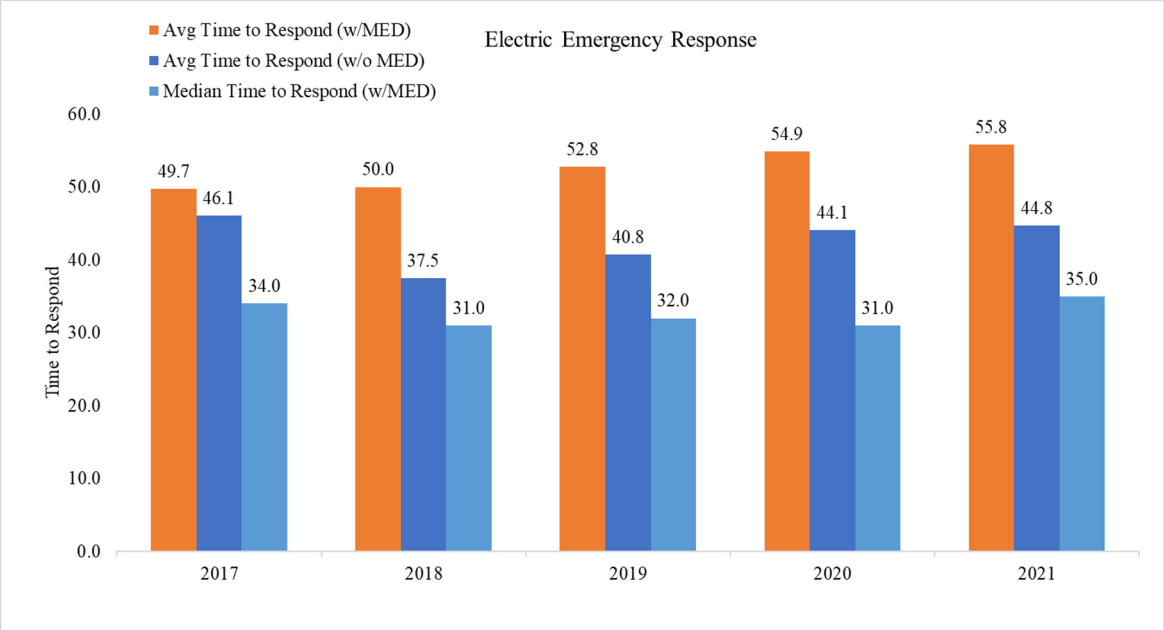
Metric Name	Risks	Category	Units	Metric Description
3. Electric Emergency Response	Wildfire Overhead Conductor Public Safety Worker Safety	Electric	The time in minutes that an electric crew person or a qualified first responder takes to respond after receiving a call which results in an emergency order.	Average time and median time in minutes to respond on-site to an electric-related emergency notification from the time of notification to the time a representative (or qualified first responder) arrived onsite. Emergency notification includes all notifications originating from 911 calls and calls made directly to the utilities' safety hotlines. The data used to determine the average time and median time shall be provided in increments as defined in GO 112-F 123.2 (c) as supplemental information, not as a metric.

1. Metric Data and Discussion

The annual average and median data for Electric Emergency Response is presented below in Figure II-3.[35] The average time is provided for response time with and without MED response times.[36]

[35] Monthly data is provided in Attachment A.
[36] The median response time did not materially change with or without including MED response times.

Figure II-3
Annual Electric Emergency Response Metric Data
(Average and Median Time to Respond)



The Electric Emergency Response metric measures SCE's ability to respond quickly to 911 calls and to minimize the exposure time of the public to any potential incidents including failed equipment and downed wires. SCE has maintained high performance over the last several years and continues to explore ways to maintain and improve performance. The overall response time consists of three steps: 1) the average handle time of the call at the call center, 2) the time to identify and dispatch SCE resources to respond, and 3) the time for the dispatched resource to respond. Mid-way through 2021, a shift in call handling was made. During normal operations activity levels (non-major event days), incoming calls from public agencies are now directly routed to the Distribution Operations Center (DOC) dispatch operators. This reduces response times by eliminating the initial step in a time sensitive process. The dispatch operators leverage a vehicle tracking program to promptly locate the closest available traditional and non-traditional responders for dispatch.

When call frequency exceeds the DOC's ability to efficiently collect incoming data and route appropriate field personnel, the calls will overflow back to SCE's Customer Call Center (CCC) to have an Energy Advisor (ENA) perform the first step in the process above. 911 calls are designated the

highest priority of all calls received by the CCC and promptly assigned for routing. All employees hired into the ENA role for the CCC must successfully complete 911-Police/Fire Agency Trouble Order training on how to handle incoming calls from police and fire agencies. Training covers the pertinent information to gather from the agencies calling and scenarios on how to issue different trouble orders. ENAs also have access to Trouble Order Resources in a knowledge management database that provides additional 911 order processing steps and related information.

SCE expanded training to additional field personnel in 2017 to augment the team available to respond to 911 calls. Ongoing qualification training ensures that these responders have both the skills and tools in order to perform tasks such as keeping the public a safe distance from an impacted area.

While these supplemental personnel are considered non-traditional responders since they are not trained to clear wire down events, they can arrive on scene first and have been trained on actions to ensure the public stays clear of the impacted area until a traditional responder arrives on scene. The dispatch operators are also able to use Samsara, a vehicle tracking program, to promptly locate the closest available traditional and non-traditional responders for dispatch.

These incremental changes over time have continued to strengthen our approach and commitment to the safety of the public as it relates to incidents stemming from or related to our infrastructure. As efforts are monitored and evaluated, SCE will seek to evolve its approach, ensuring that our 911 response times benefit from any necessary adjustments.

2. Metric Link to Compensation or Individual or Group Performance Goals

The Electric Emergency Response metric is not linked to executive compensation or performance goals. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**

- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

SCE has instituted processes to validate the Electric Emergency Response metric data for internal purposes. Absent a recorded arrival time for the SCE first responder, the Dispatch Supervisors research the call using vehicle tracking devices and Outage Management System verification to validate the arrival time. While reviewing data for time stamp anomalies, an analysis is also done on events where multiple calls relate to the same incident. Due to the overlap in these metrics, duplicates are excluded from reporting to secure the integrity of the average and median response times overall.

D. Metric 4: Fire Ignitions

Table II-14
Fire Ignitions

Metric Name	Risks	Category	Units	Metric Description
4. Fire Ignitions	Overhead Conductor Wildfire Public Safety Worker Safety Catastrophic Event Preparedness	Electric	Number of ignitions	The number of fire incidents annually reportable to the California Public Utilities Commission (CPUC) per Decision 14-02-015.

1. Metric Data and Discussion

The annual and historical monthly data for Fire Ignitions is presented below in Figure II-4 and Table II-15, respectively.

Figure II-4
Annual Fire Ignitions Metric Data by HFTD[37]

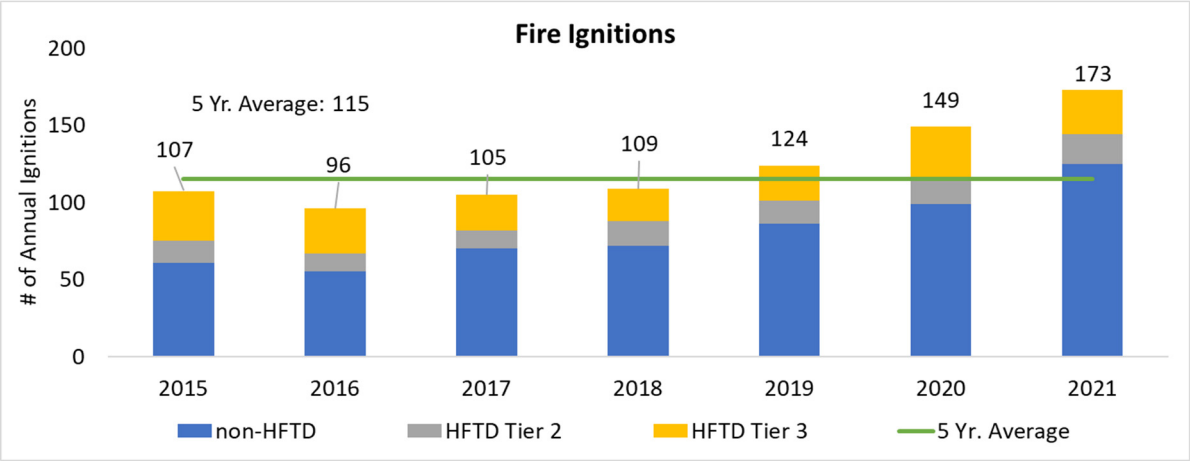


Table II-15
Fire Ignitions – Historical Monthly Data[38]

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2014	N/A	N/A	N/A	N/A	1	6	6	6	5	3	6	6	**39**
2015	2	2	4	20	17	19	11	7	8	7	8	2	**107**
2016	4	10	3	14	8	16	6	4	9	11	5	6	**96**
2017	4	1	6	9	17	21	15	13	7	6	3	3	**105**
2018	4	6	2	14	8	18	11	13	6	16	6	5	**109**
2019	1	1	5	15	7	23	15	20	20	7	9	1	**124**
2020	4	4	8	4	12	42	16	20	8	12	12	7	**149**
2021	12	11	7	16	20	30	23	21	14	12	3	4	**173**
Average by Month	**4**	**5**	**5**	**13**	**11**	**22**	**13**	**13**	**10**	**9**	**7**	**4**	**116**

While wildfires can occur across the SCE service territory any time of the year, the frequency is highest between May and October due to the warmer and drier conditions in the summer and early fall months increasing the risk of a significant conflagration occurrence. The autumn months have typically been viewed as most susceptible to wildfire activity due to the dry, fierce winds that blow across the state preceded by hot and dry summer conditions leading to expanses of dried vegetation.

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37 This data does not include any fire ignitions that are currently under claims investigation or subject to potential or pending litigation. Data collection started in May 2014.

38 SCE provides the monthly historical data in Attachment A and in the Excel file served concurrently with this report.

However, climate change has contributed to a trend where the wildfire season is beginning earlier and ending later each year.

While SCE saw an increase in overall ignitions in 2021, the vast majority of the increase was associated with ignitions within SCE's non-HFRA. Some key drivers for the year over year increase include climate change related impacts and the continuation of severe drought conditions in Southern California.

SCE captures and reports ignition events under the following drivers: contact from object (CFO), equipment facility failure (EFF), wire to wire contact, contamination, utility work/operations, vandalism/theft, other and unknown. The historical data for ignitions is shown below in Table II-16.

Table II-16
Fire Ignitions by Risk Event Category

Risk Event Category	2015	2016	2017	2018	2019	2020	2021	5 Year Average (2016 - 2020)	% over / under Avg.
1. Contact from object	54	47	56	70	66	68	80	61	30%
2. Equipment / facility failure	21	40	31	28	36	59	71	39	83%
3. Wire-to-wire contact	1	1	3	3	8	5	6	4	50%
4. Contamination``	1	0	1	0	3	1	0	1	-100%
5. Utility work / Operation	0	0	0	0	0	0	0	0	-
6. Vandalism / Theft	4	0	0	1	6	6	6	3	131%
7. Other	4	2	1	0	4	8	9	3	200%
8. Unknown	22	6	13	7	1	2	1	6	-83%
Total	**107**	**96**	**105**	**109**	**124**	**149**	**173**	**117**	**48%**

SCE continues to analyze the risk event drivers for possible new mitigations and existing mitigation improvements. The following are several key programs that SCE is implementing to address fire ignitions.[39] Additional details on these and other SCE initiatives and work activities to minimize fire ignitions can be found in SCE's 2022 RAMP and 2022 WMP.

Covered Conductor: The WCCP in HFRA focuses on replacing bare overhead conductor with covered conductor. SCE performs this work with appropriate urgency and risk-informed prioritization. Poles that require replacement as part of WCCP are replaced with FRPs. SCE also installs

[39] This should not be considered an exhaustive list of the activities/initiatives SCE is undertaking to reduce fire ignitions.

covered conductor in HFRA during post-fire restoration work (outside of the WCCP) and other non-WCCP programmatic work, e.g., through the OCP where bare wires are replaced with covered conductor as part of SCE's current engineering standards in HFRA.

In 2021, SCE completed covered conductor installation on approximately 1,500 circuit miles, exceeding the WMP program target of 1,000 circuit miles. SCE also replaced approximately 12,000 wood poles with FRPs in HFRA in the same year. The regions covered were based on the prioritization approach described above. SCE has seen in-field success from covered conductor. For example, in a July 2020 incident, a vehicle hit a pole in Ojai that supported energized covered conductors, causing the pole and conductors to make contact with vegetation. However, no fault or ignition occurred. Additional information on this program can be found in SCE's 2022 WMP.

Undergrounding Overhead Conductor: In 2021, SCE's evaluation and installation of targeted undergrounding of overhead conductors shall continue. As noted earlier, overhead wire contact with objects (such as vegetation, metallic balloons, or debris) and wire-to-wire faults were associated with approximately 60% of suspected wildfire ignition events. From 2015 to 2019, 10% of ignitions were due to conductor failures. In 2020, SCE's efforts were focused on developing and refining a methodology for targeted undergrounding that balances risk reduction with costs and operational timing. SCE evaluated circuit segments based on multiple criteria including wildfire risk scoring from WRRM, PSPS impacts (including circuits that have experienced multiple PSPS events), terrain, grid topography, construction complexity associated with undergrounding, and cost. SCE also consulted with local districts and reviewed egress in areas where poles and overhead facilities inhibit evacuation should a fire occur. In addition, SCE collaborated with communities to assess areas where customers may require electric service to provide essential health and safety services.

In 2021 SCE undertook an additional effort developing new tools to methodically identify qualitative risk factors to further expand its undergrounding scope due to the significant ignition and PSPS risk mitigation benefits and interest among external stakeholders to consider undergrounding. These factors include, but are not limited to, population egress, historical fire frequency, as well as those locations with extreme winds and/or dense tree cover to ultimately identify locations which may benefit

from additional hardening such as targeted undergrounding. In 2021, SCE completed nearly six miles, exceeding the program target of four miles. In 2022, SCE plans to complete 11 miles of targeted undergrounding and will strive to install up to 13 miles in SCE's HFRA, subject to resource constraints and other execution risks. Additional information on this program can be found in SCE's 2022 WMP and SCE's 2022 RAMP.

Secondary Caused Ignitions: Secondary conductor is conductor that branches off transformers fed by the primary conductor to service lower voltages such as residential loads. A number of mitigations were deployed in 2021 after observing an increasing trend in ignitions associated with secondary conductor in 2020. These mitigations included implementing a temporary solution to tape exposed secondary voltage connectors and replacing all high fire open wire bare secondaries with multiplex conductor. In 2022 SCE intends to inspect and trim vegetation around approximately 700 secondary structures and to tape connectors on approximately 3,000 secondary structures in SCE's HFRA, subject to resource constraints and other execution risks. SCE is also developing a secondary connection covering to replace temporary taping and evaluating a breakaway that disconnects and de-energizes service and secondary connector at predetermined mechanical load, which prevents ignitions if the wires fall due to fallen trees or excessive winds.

Advanced Technologies – Pilots: SCE is initiating several advanced technology pilots to address fire ignitions, including early fault detection, high impedance relays, rapid earth fault current limiter, distribution open phase detection and transmission open phase detection. These pilots are discussed below.

Early Fault Detection: Early Fault Detection (EFD) technology detects high frequency radio emissions which can occur from arcing or partial discharge conditions on the electric system. These types of conditions can represent an incipient failure, such as severed strands on a conductor, vegetation contact, or tracking on insulators. EFD shows potential to monitor the overall health of the electric system which may inform operational decisions during high-risk conditions. The technology requires placement of paired sensors on poles approximately every three circuit miles on a distribution line, or placement further apart at higher circuit voltages. Each pair of sensors is able to "bi-angulate"

the detection down to a specific location. In 2021, SCE installed a total of 138 EFD sensors, 125 on distribution circuits and 13 on sub-transmission circuits. In 2022, SCE will install an additional 50 units and strive to add up to 150 EFD units, expanding the scope of the pilot and validating next generation EFD equipment, which is expected to increase sampling rates and improve the signal-to-noise ratio in comparison to current EFD equipment.

High Impedance Relays: High Impedance Relays utilize multiple protective elements to reduce wildfire ignition risks by detecting High Impedance (Hi-Z) conditions such as downed conductors or arcing events. The Hi-Z relays were installed at two locations prior to 2021 and deployed at an additional 15 Distribution 12kV and 16kV locations in HFRA in 2021 to assess the effectiveness of detecting Hi-Z conditions. The locations were selected based on having voltage-sensors with minimum required current levels (i.e., ≥ 25 amps). In 2022, SCE plans to expand the existing pilot to an additional 20 locations in HFRA to assess the effectiveness of detecting Hi-Z conditions, with almost half deployed at Distribution locations with covered conductor. Increasing the number of locations at which Hi-Z relays are deployed is expected to provide additional data from potential Hi-Z events. SCE plans to conduct an analysis of its pilots at the end of 2022.

Rapid Earth Fault Current Limiter: Rapid Earth Fault Current Limiter (REFCL) is a family of technologies that detects ground faults and rapidly reduces the fault current to a level much lower than traditional powerline designs. This technology works like a safety switch and reduces the likelihood of a fire ignition if a powerline comes in contact with the ground or a grounded object. SCE studied three REFCL technologies: Ground Fault Neutralizer (GFN), Resonant Grounded Substation (RGS), and Isolation Transformer (IT), to mitigate ground faults. SCE received the GFN and RGS equipment in 2020 and began construction in late 2021. SCE expected significant reduction in ignitions associated with phase-to-ground faults where GFN was deployed as compared to historical averages. Effectiveness was confirmed by staged fault tests showing voltage on the faulted conductor is reduced quickly enough to prevent the ignitions that the technology is designed to prevent. SCE will begin developing GFN for more locations in 2022 and will continue to evaluate RGS and Information Technology (IT) in the pilot phase.

Distribution Open Phase Detection: A Distribution Open Phase Detection (DOPD) scheme aims to detect one or more open phase (broken conductor) conditions on the distribution system. The scheme focuses on reducing ignition risk associated with wire-down incidents for both bare and covered conductor systems, by allowing the protection system to isolate a separated conductor before the wire contacts the ground. In 2021, SCE continued monitoring the performance of existing units with DOPD logic and identified two successful open phase events. In 2022, SCE plans to continue monitoring the performance of existing units, perform lab testing on algorithms and capture learnings in an assessment report. SCE will also install DOPD logic at two additional locations using LTE communication technology.

Transmission Open Phase Detection: Transmission Open Phase Detection (TOPD) is a technology that allows de-energization of an open phase (broken conductor) before it contacts a grounded object resulting in a fault event. This technology reduces ignition risks associated with the high voltage transmission system. In 2021, SCE deployed the TOPD logic on ten in-service transmission lines. In 2022, SCE will deploy TOPD on transmission lines, considering risk and operational considerations. SCE targets Tier 3 followed by Tier 2 transmission lines that traverse through HFRA to deploy this new technology.

Inspections: SCE has several inspection and remediation programs that are based on legal mandates. These include detailed inspections of SCE's overhead distribution and transmission electric system in compliance with GO 165 and the rules and regulations of the North American Electric Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC) and the California Independent System Operator (CAISO).

Infrared and Corona Inspections: Deteriorated connection points on electrical equipment such as conductors, insulators, splices or connectors can cause localized hot spots that can lead to failures and ignitions risks if left unmitigated. These conditions are often not visible to the human eye and may not be detected even by detailed visual inspections. In 2021, SCE met its goal of inspecting 50% of overhead distribution circuits in the HFRA by completing inspections on 4,410 circuit miles.

In 2022, SCE plans to complete infrared inspections of its remaining distribution overhead lines in the HFRA, a total of approximately 4,400 overhead distribution circuit miles.

Vegetation Management: SCE has several vegetation management initiatives that work to prevent wire down events and potential ignitions. One such initiative, that was not discussed in the Wire Down Events section, is Expanded Pole Brushing. SCE removes vegetation around poles to create 10-foot radial clearings (when attainable) at the base of its poles in HFRA and consistent with Public Resources Code § 4292.72. Fast growing vegetation at the base of poles and structures can provide the fuel to convert a spark from equipment failure into a fire and also risks fire propagation, especially during dry and windy conditions. Moreover, poles with adjacent brush are more likely to be affected by a wildfire impeding power restoration and reconstruction efforts. SCE has historically brushed approximately 80,000 distribution poles annually. SCE's goal in 2021 was to perform pole brushing on a minimum of 200,000 distribution poles. SCE experienced challenges with access constraints and the ability to retain crews. As a result, SCE brushed approximately 163,000 poles. In 2022, SCE's goal is to perform brush clearing at the base of 134,000 to 170,000 poles.

2. Metric Link to Compensation or Individual or Group Performance Goals

As noted above in Section I.B.3, CPUC reportable ignitions in HFRA has been integrated as part of SCE's 2021 Corporate Goals. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [Yes]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [Yes]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [Yes]**

3. Metric Specific Bias Controls Discussion

All potential ignitions, other than those under SCE's claims investigations, are reviewed by a team of engineers, analysts, and SCE senior management to confirm ignitions are documented and analyzed to determine if the ignition meets the Commission's reportable fire ignitions definition.

E. Metric 14 – Employee Days Away, Restricted and Transfer (DART) Rate

Table II-17
Employee Days Away, Restricted and Transfer (DART) Rate

Metric Name	Risks	Category	Units	Metric Description
14. Employee Days Away, Restricted and Transfer (DART) Rate	Employee Safety	Injuries	DART Cases times 200,000 divided by employee hours worked	DART Rate is calculated based on number of OSHA-recordable injuries resulting in Days Away from work and/or Days on Restricted Duty or Job Transfer, and actual work hours. The rate is standardized by using a factor of 200,000, which represents the average number of hours worked by 100 full-time workers in one year.

1. Metric Data and Discussion

The annual data for Employee DART Rate is presented below in Figure II-5. Employee DART rate is a metric SCE has tracked over the 10-year period and continues to be used as a metric for corporate goals. Employee DART rates significantly decreased starting in 2014 due to various safety programs and culture initiatives implemented at SCE. The Employee DART rate increased slightly in 2021 to slightly above the historical 5-year average but is still below the 10-year average. The key risk drivers impacting employee safety as identified in SCE's 2022 RAMP are discussed below in Section II.F along with a description of additional SCE worker safety initiatives. While these drivers were developed to address serious injuries and fatalities, they are also generally applicable to lower-level DART injuries as well.

Figure II-5
Annual Employee Days Away, Restricted and Transfer (DART) Rate Data

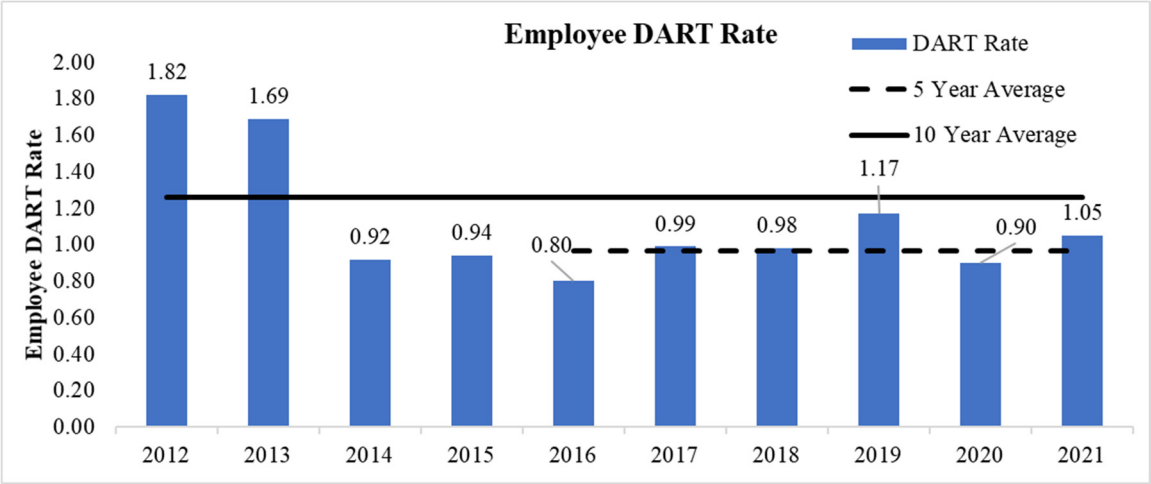


Table II-18
Employee Days Away, Restricted and Transfer (DART) Rate – Historical Monthly Data

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2012	2.09	1.77	1.54	2.02	2.60	1.60	2.10	1.81	1.77	1.51	1.31	1.64	**1.82**
2013	1.79	2.36	1.35	2.02	1.67	1.59	1.16	1.72	1.45	2.08	1.95	1.07	**1.69**
2014	1.06	1.36	1.42	0.78	1.17	1.18	0.88	0.90	0.26	0.84	0.89	0.36	**0.92**
2015	1.40	1.16	1.46	1.14	0.85	0.35	1.07	0.92	1.19	0.81	0.11	0.60	**0.94**
2016	0.71	0.89	0.81	0.48	0.68	0.65	0.52	1.33	0.88	1.26	0.66	0.66	**0.80**
2017	1.10	0.84	0.99	0.83	1.23	1.33	1.16	1.78	0.79	0.91	0.43	0.32	**0.99**
2018	0.77	1.06	0.65	0.59	1.30	0.58	0.88	1.22	1.25	1.65	0.61	1.10	**0.98**
2019	0.82	1.49	1.77	0.73	1.89	0.87	1.37	1.23	1.32	0.98	0.94	0.51	**1.17**
2020	1.55	0.87	1.28	0.49	0.78	0.25	0.93	1.21	1.28	0.87	0.40	0.93	**0.90**
2021	0.84	0.85	0.57	1.40	0.86	1.32	0.66	0.99	1.87	1.56	0.95	0.73	**1.05**
Avg by Month	**1.21**	**1.27**	**1.18**	**1.05**	**1.30**	**0.97**	**1.07**	**1.31**	**1.21**	**1.25**	**0.83**	**0.79**	-

A more detailed discussion on initiatives to reduce employee injuries and fatalities is discussed below in Section II.F, however SCE provides general descriptions of other initiatives SCE undertakes here. Edison Safety, the department that oversees SCE safety, also partners with SCE Organizational Units (OUs) to ensure that each OU's activity-specific safety programs meet applicable regulatory requirements. SCE's Field Safety division partners with SCE OUs in developing, maintaining, and monitoring field safety programs and activities that are specific to the work in their

area of responsibility. The work focuses on programs specifically designed for field employees in T&D, Generation, and Operational Services to ensure that the Accident Prevention Manual, safety programs, policies, incident reporting, and close calls are being updated and maintained. Below are just several programs in place to help reduce all injuries.

Safety Leadership Development: Safety Leadership training is provided to all T&D employees who enter a supervisory role, including represented employees in Foremen positions. Safety Leadership training provides leaders with an understanding of their role in creating and sustaining a safety culture where employees use available safety tools and processes to identify and mitigate hazards.

Safety Meetings and Stand-Downs: Regularly scheduled Safety Meetings with T&D employees provide an opportunity to discuss important safety topics, such as changing tools and methods, safe operation of vehicles and equipment, and lessons learned from incidents. Safety Meetings, Significant Safety Event Calls, and Safety Stand-Downs play a vital role in conveying the importance SCE places on safety. They also provide a venue to disseminate valuable and practical information to improve employee safety.

Safety Congresses and Teams: Safety Congresses provide a forum for employees to generate and discuss improvements to current safety practices and programs, exchange ideas, work through problematic safety concerns and elevate those concerns directly to senior management. Safety Congresses serve as direct, in-person communications of safety messages and programs to employees in T&D. Strengthening lines of safety communication helps to enhance awareness of safety issues as a first step towards mitigating employee accidents and injuries.

Incident Conference Calls: T&D conducts incident conference calls to review recent incidents, focus on corrective actions, and discuss preventative measures. The periodic calls include field personnel and supervision. Personnel involved in the incident discuss the details, including the cause, key safety information, contributing factors, and lessons learned. In addition, the calls highlight an example of excellent craftsmanship and promote safety conversations across all levels.

Safety Standards, Programs and Policies: SCE routinely reviews its safety standards, programs, and policies for accuracy, effectiveness, and relevancy. Some examples of these programs

include: Bloodborne Pathogens Exposure Control Standard, Chemical Management, Confined Space Program, Fall Protection Standard, Hazardous Energy Control, Hearing Conservation Program, Heat Illness Prevention Program, Hot Work Program, Injury and Illness Prevention Program, Respiratory Protection Program and Safety Incident Management Standard.

2. Metric Link to Compensation or Individual or Group Performance Goals

The Employee DART Rate metric is linked to executive compensation as described in Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [Yes]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [Yes]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [Yes]**

3. Metric Specific Bias Controls Discussion

The OSHA Recordkeeping regulation (29 CFR 1904) requires the preparation and maintenance of records of serious occupational injuries and illnesses using the OSHA 300 log. SCE's OSHA recordkeeper performs these regulated activities, through which injuries and illnesses are classified as Non-Lost-Time, Lost-Time, Restricted Duty and Transfer injuries. All submitted injury/illness incidents related to SCE employees are reviewed daily, along with associated medical reports and Workers Compensation claim work status changes. Edison Safety and OU leadership are notified of DART classifications and have the opportunity to review and appeal a classification.

After year-end data is closed, OSHA classification counts are reviewed in aggregate to ensure accurate OSHA 300 log reporting required by Federal OSHA. OSHA 300 logs are generated and reviewed, then approved by SCE leadership before submittal to OSHA. Timekeeping data is extracted to enable calculation of DART rates. Dual rate calculation methods are utilized to confirm accuracy.

SCE's internal Audit group may perform audits on DART counts and rates to confirm accuracy related to a corporate goal target.

F. Metric 15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)

Table II-19
Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)

Metric Name	Risks	Category	Units	Metric Description
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	Employee Safety	Injuries	Number of SIF-Actual cases among employees x 200,000/employee hours worked	Rate of SIF Actual (Employee) is calculated using the formula: Number of SIF-Actual cases among employees x 200,000 / employee hours worked, where SIF Actual is counted using the methodology developed by the Edison Electrical Institute's (EEI) Occupational Safety & Health Committee (OSHC) Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Actual, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also provide SIF Actual data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.

1. Metric Data and Discussion

The annual data for Employee SIF rate is presented below in Figure II-6. SCE has been seeing a downward trend in this data in recent years. In 2021, SCE saw a notable decrease in SIF rate to our lowest level since 2019 and 33% below the 5-year historical average.

Figure II-6
Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)

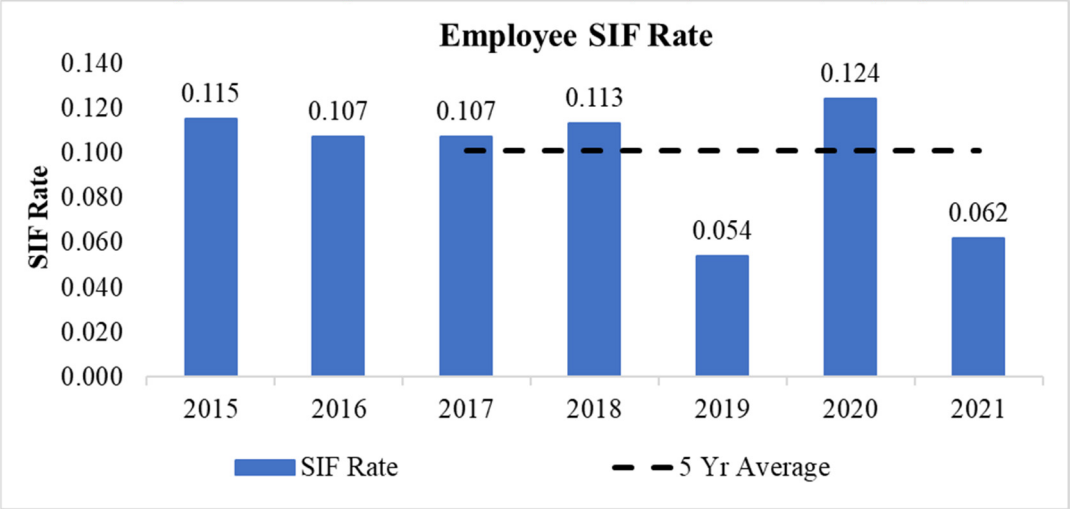


Table II-20
Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2015	0.175	0.000	0.514	0.088	0.190	0.088	0.000	0.092	0.000	0.090	0.000	0.100	**0.115**
2016	0.203	0.099	0.000	0.096	0.097	0.186	0.105	0.177	0.196	0.097	0.000	0.000	**0.107**
2017	0.200	0.000	0.181	0.000	0.190	0.285	0.000	0.178	0.099	0.091	0.000	0.000	**0.107**
2018	0.289	0.317	0.186	0.000	0.186	0.097	0.098	0.087	0.000	0.000	0.000	0.110	**0.113**
2019	0.000	0.199	0.000	0.092	0.000	0.000	0.091	0.175	0.000	0.000	0.000	0.102	**0.054**
2020	0.091	0.097	0.256	0.162	0.087	0.083	0.255	0.086	0.256	0.079	0.000	0.000	**0.124**
2021	0.188	0.094	0.081	0.000	0.095	0.176	0.000	0.000	0.094	0.000	0.000	0.000	**0.062**
Avg by Month	**0.160**	**0.119**	**0.190**	**0.073**	**0.125**	**0.123**	**0.092**	**0.133**	**0.092**	**0.060**	**0.000**	**0.052**	**0.103**

At SCE, safety is our highest value. SCE has in place numerous safety programs and initiatives designed to maintain and improve worker safety. SCE's vision is to strengthen our culture, eliminate serious injuries and fatalities, and reduce all injuries. Edison Safety provides guidance, governance, and oversight of the company's safety programs and activities focused on employee and contractor safety to accomplish the common goal of creating an injury-free workplace. This includes developing and managing programs to meet requirements outlined by governing regulatory agencies including Occupational Safety and Health Administration (OSHA) and the California Division of Occupational Safety and Health (Cal/OSHA), learning from safety incident evaluations, tracking and

analyzing the company's safety data and records, managing and implementing SCE's Safety Culture Transformation, as well as managing all other employee (field and office) and ensure contractors have safety programs and standards.

SCE identified four main SIF drivers (People, Process, Equipment and Other) with various sub-drivers as part of developing our 2022 RAMP report. These drivers and sub-drivers are listed below in Table II-21.[40] The People driver category includes incidents that were caused by human factors, including intentional shortcuts and unintentional human error or conditions. In the Process driver category, a standard or process either does not exist to address safety hazards or the current standard/process is inadequate and needs improvement. The Equipment driver category is defined as a failure in equipment design that leads to an incident, or equipment design that creates an error trap for individuals and leads to an incident. Examples include a vehicle engine manufacturer design failure that causes a fire, a pinch point created due to equipment or system design, or error traps such as distraction or confusing displays or controls. The Other driver category includes incidents beyond SCE's control, such as a vehicle incident caused by a member of the public.

[40] For additional information on these drivers and sub-drivers please see SCE's 2022 RAMP Application Chapter 9 – Employee Safety.

Table II-21
Employee Safety Risk Drivers

Driver	Sub-driver	Sub-driver Definition
People	Lack of Hazard Awareness	A failure to identify, correct, and/or account for hazardous conditions in the work environment or work practices
	Work Practice:	Poor or inadequate workplace practices or methods that expose workers to additional risks
	Physical Capabilities	Indicates the body's lack of ability to withstand the work due to different situations which include; industrial ergo, pre-existing conditions, lack of understanding of physical limitations, fatigue, fitness for duty
	Adherence to Rules, Training or Policy	Worker knowingly or unknowingly violates a procedure, policy or rule leading to incorrect execution of work
	Tool/Equipment/Operation	A worker's choice of tool/equipment or their operation of a tool/equipment creates increased risk
Process	Lack of Formal Process/Poor Process	Inadequate or missing process or procedure
	Lack of/Poor Communication	Communication (e.g., formal communication, tailboards) is inadequate to foster safety
	Tool/Equipment/Operation	Tool, equipment or operation failed and caused an incident due to lack of maintenance or inspection
	Working Conditions	Surrounding conditions adversely affected the safety of the worker. Conditions include unexpected or abnormal conditions, working alone, performing work during hours of darkness, and real or perceived time pressure or urgency
Equipment	N/A	N/A
Other	N/A	N/A

Below we discuss some examples, non-exhaustive, of programs and initiatives that address these key risk drivers impacting employee safety. Additional detail can be found in SCE's 2022 RAMP Chapter for Employee Safety.

Human Organizational Performance (HOP) is a cornerstone program for SCE to become a proactive learning organization where all employees, leaders and executives work together to prevent serious injuries and fatalities. HOP is described above in Chapter I, Section I.A.1.b).

Safety Predictive Initiative: The Safety Predictive Initiative builds on SCE's strategy to use data proactively to learn, aid action planning, and drive decision-making to help reduce and

eliminate SIFs. The initiative has two components: (1) Safety Predictive Model (SPM), and (2) Digital Crew Board (DCB).

The SPM, developed in 2018, applies artificial intelligence (AI) and machine learning to process and analyze tendencies of historical data for field worker SIFs and planned work order characteristics. An AI code was developed that flags new Distribution, Construction & Maintenance planned work orders with higher-than-normal risks that may potentially result in a SIF. The code also identifies the top factors that contribute to that high-risk flag. This information is directly populated in the work scheduling and planning system used by field personnel daily. The SPM, combined with the expertise of the personnel, provides data-driven insights to assist targeted communication and bring greater focus to work execution planning to mitigate risks. This will enhance our employees' ability to identify safety issues even before going out to the field to plan the work.

The SPM was implemented in eighteen Distribution Districts from 2019 through 2021. The SPM scope of application is for planned work orders assigned to SCE crews. In 2022 – 2023 we will focus on enhancing the model to include more work characteristics, weather and more work order complexity detailed insights. We will complete SPM implementation to the rest of the Distribution Districts. In the next five years (2024-2028), we plan to expand the use of the model to emergent work. We are also exploring implementation in Transmission upon their complete implementation of the Work Scheduling Tool.

The DCB, developed in 2019, combined the existing manual crew assignment and team member shuffling process with the insights from the SPM. It is a digital platform which can be accessed directly from touch-screen monitors installed in District offices or on a web browser from a laptop or mobile device. The DCB alerts field personnel to elevated risks that are present with a particular job. It helps the field supervisors mitigate risk and prevent SIFs by managing the different variables they must consider when assigning crews to work orders.

The DCB was implemented in four Distribution Districts in 2020-2021. We plan to implement it in seventeen additional districts in 2022-2023. Taking into consideration and aligning with

our technology roadmap portfolio, we will assess the requirements and benefits to implement it for the rest of the Distribution Districts and for Transmission in the next five years (2024-2028).

Risk Based Safety Program: The SCE Risk-Based Safety Program will support SCE in making progress towards eliminating SIFs by proactively, programmatically and systematically evaluating risks and mitigating them. The Risk-Based Safety Program, in collaboration with key stakeholders and subject matter experts across SCE, looks to identify and implement engineering, organizational and human/process-based mitigations. Additionally, the Risk-Based Safety Program will focus on proactively and comprehensively identifying SIF exposure (including drivers) and proactively preventing those incidents that result in catastrophic safety consequences. The Program leverages the HOP Principles described above, in Chapter I.A.1.b.

In 2022 the program will continue to engage key stakeholders across the organization for alignment, to maximize effectiveness and sustainability of the funded risk mitigations as they are implemented, and to develop a 5-Year Roadmap. Long-term, the program will proactively set standards for how work across SCE is executed and integrated in accordance with best practices, analytics, tools and technology. The program will also focus on strategically identifying and addressing risks based on exposure, potential and the unknown, as well as incidents, drivers and conditions. Unknown risks will be identified by collaborating with those closest to the work, looking at cause reports, recorded PSIFS/Close-Calls, and any documentation that could lead us to identify risk we have yet to capture. Also, benchmarking across the industry to gather peer utility experience to risks faced with similar work will enable the identification of known risks.

Cause Evaluations: SCE has established a Corrective Action Program with the goal of reducing safety incidents. To do this, we have established a cause evaluation process that carefully focuses on identifying organizational and programmatic causes. This is done by partnering with key stakeholders within organizations where a safety incident has occurred. SCE takes a graded approach to conducting cause evaluations by adjusting the level of analysis to align with the severity of the safety incident. A systematic process is then used to identify the causes, so that effective corrective actions can

be put in place with reasonable promptness, in order to reduce the likelihood of the safety incidents re-occurring.

SCE uses a Safety Incident Management System (EHSync) to capture reports of safety incidents such as injuries, illnesses, and close calls. Once incidents are reported, they are screened and classified using the industry standard EEI Safety Classification and Learning Model. This model grades severity based on the level of energy present, whether controls to mitigate workers' exposure to energy were present and/or effective, the proximity of workers to energy, and the severity of an injury/illness sustained.

A cause evaluation type is then assigned that is commensurate with the severity of the safety incident. Root Cause Evaluations are conducted for fatalities. Apparent Cause Evaluations are conducted for serious injuries that involve high energy and close calls that potentially could have resulted in a serious injury. Standard Cause Evaluations are conducted for serious injuries where no high energy was present, and for some injuries that result in days away or restricted duty for the injured employee. There is also an option to identify and capture direct causes and corrective actions for minor injuries through existing evaluation processes within organizations.

Cause evaluations are performed in partnership with trained cause evaluators and leadership within the organization where the injury or close call occurred. For each evaluation type, a systematic process is used to identify causes and actions to improve performance and mitigate future risks. A review process through a committee or individual stakeholder is required to ensure the quality and effectiveness of the evaluation. Actions resulting from cause evaluations are tracked through completion.

2. Metric Link to Compensation or Individual or Group Performance Goals

The Employee SIF metric is linked to executive compensation as described in Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [Yes]**

- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [Yes]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [Yes]**

3. Metric Specific Bias Controls Discussion

In addition to the controls discussed in Section I.B, an SCE Incident Screener reviews incident details and medical reports daily to identify Employee SIF in accordance with the EEI SIF definition. Dual tracking is done by the OSHA Recordkeeper and any discrepancies are reviewed and addressed. Classifications are overseen by Edison Safety Management. The SCE Incident Screener may contact EEI when clarification is needed on the SIF criteria. The Edison Safety Management Team and OU leadership discuss each Employee SIF incident at monthly executive safety meetings to assess ways to minimize risk, prevent potential recurrence of serious injuries or fatalities, and validate accurate reporting of the incidents.

After year-end data is closed, SIF counts are reviewed in aggregate to ensure accurate internal reporting and EEI benchmarking. Timekeeping data is extracted to enable calculation of SIF rates. Dual rate calculation methods are utilized to confirm accuracy.

SCE's internal Audit group may perform audits on SIF counts and rates to confirm accuracy related to a corporate goal target.

G. Metric 16. Rate of SIF Actual (Contractor)

Table II-22
Rate of SIF Actual (Contractor)

Metric Name	Risks	Category	Units	Metric Description
16. Rate of SIF Actual (Contractor)	Contractor Safety	Injuries	Number of SIF-Actual cases among contractors x 200,000/contractor hours worked	Rate of SIF Actual (Contractor) is calculated using the formula: Number of SIF-Actual cases among contractors x 200,000 / contractor hours worked, where SIF Actual is counted using the methodology developed by the EEI OSHC Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing incidents where a SIF occurred, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also report SIF Actual Rate data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.

1. Metric Data and Discussion

The annual Contractor SIF Metric data is presented below in Figure II-7. In 2021, SCE saw our lowest contractor SIF Rate since 2019 and 43% below the three-year historical average (2018 – 2020).

Figure II-7
Rate of SIF Actual (Contractor)

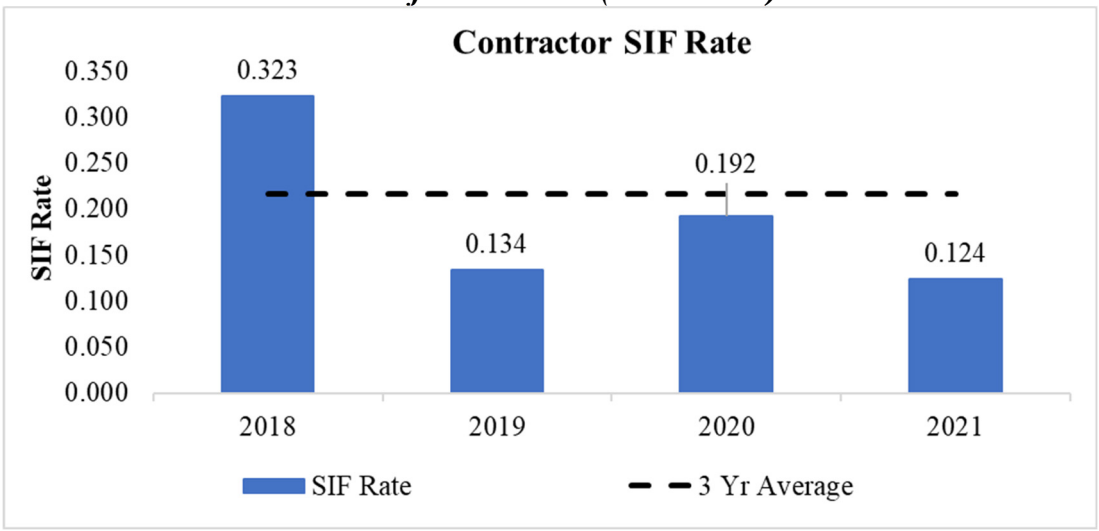


Table II-23
Rate of SIF Actual (Contractor)

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	0.174	0.000	0.451	0.141	0.892	0.425	0.147	0.577	0.257	0.126	0.210	0.531	**0.323**
2019	0.335	0.139	0.223	0.118	0.112	0.209	0.107	0.095	0.094	0.087	0.088	0.104	**0.134**
2020	0.109	0.115	0.000	0.493	0.105	0.105	0.436	0.217	0.107	0.247	0.000	0.409	**0.192**
2021	0.243	0.000	0.000	0.000	0.317	0.000	0.000	0.197	0.206	0.091	0.414	0.000	**0.124**
Avg by Month	0.174	0.000	0.451	0.141	0.892	0.425	0.147	0.577	0.257	0.126	0.210	0.531	-

SCE contractors perform a variety of work, including certain high-hazard tasks that SCE does not regularly perform with its own employees. Some examples of the work performed by SCE contractors include Transmission and Distribution Line Construction, Vegetation Management, Hazard Tree Removal, Crane Operations, Traffic Control, Helicopter Operations, Drone Operations, Civil Operations (horizontal directional drilling and jack and bore), Substation Operation and Maintenance, Generation Maintenance, heavy civil equipment operation, Environmental Monitoring, Material Transport and Corporate Real Estate.

SCE identified three main drivers (People, Process and Equipment) with various sub-drivers as part of developing our 2022 RAMP report. These drivers and sub-drivers are listed below in Table II-24. The People driver category includes incidents where the primary cause was determined to be human performance. The Process driver category includes incidents where the primary cause was determined to be inadequate process. The Equipment Driver category is for incidents where the primary cause was determined to be equipment failure. SCE does not have any cause codes or sub-drivers for this specific driver category.

Table II-24
Contractor Safety Risk Drivers

Driver	Sub-driver	Sub-driver Definition
People	Hazard Identification Failure	Contractor worker fails to recognize the hazards inherent in the work.
	Human Performance / Not following rules	Contractor worker fails to follow established safety rules or procedures.
	Complacency/Overconfidence	Contractor worker was performing seemingly routine or familiar tasks, resulting in a lack of focus on safety.
	Perceived Time Pressure	Contractor worker felt perceived time pressure, causing them to rush the work, resulting in unsafe conditions.
	Fatigue	Contractor worker was not sufficiently rested before performing the task.
	Understanding and compliance of STOP WORK authority	Contractor worker fails to call for work to stop when an imminent hazard is identified.
Process	Lack of standards/skill/training/qualified workers	Incident was primarily caused by a lack of identified standards or by the use of workers who were not sufficiently trained in standards.
	Effective Traffic Management	Incident was determined to be primarily caused by insufficient or ineffective traffic management systems.
	Ratio of safety observers to workers	Contractor workforce did not meet the required ratio of safety observers to workers, resulting in insufficient safety observation coverage.
	Unfamiliar conditions (e.g., wildfire, out of state workers)	Contractor worker was working in unfamiliar conditions.
	Ineffective preparation/communications between ground and air crews	Contractor crews failed to communicate effectively between aircraft crews and those working on the ground.
	Contractor Safety Culture	The Contractor's safety culture was not at the required maturity level.
Equipment	N/A	N/A

As discussed in SCE's 2022 RAMP and shown below in Table II-25, there are three main controls used to reduce contractor safety incidents. SCE's Contractor Safety Management Program is focused on enhancing SCE's safety oversight of contractors/subcontractors, reinforcing SCE's expectations that the contractor's leadership communicate SCE's requirements to the contractor's workforce while reasonably managing the safety risks associated with contracted work. SCE has

multiple workstreams to address contractor safety. These workstreams are grouped into three major categories: (1) Pre-Qualification and On-Boarding; (2) Oversight, Performance Management and Culture Development; and (3) Incident Management and Learning. The program components are listed below in Table II-25 and include safety pre-qualification of all contractors/subcontractors that are conducting high-risk work, oversight of contractor work planning process, field monitoring, incident analyses, safety performance improvement processes for individual contractors, and efforts to influence the development of strong safety cultures amongst our contractors.

Table II-25
SCE Contractor Safety Programs

Pre-Qualification and On-Boarding	• 3rd party (ISN Qualification), • Conditional Contractor Plans, • RFP Development, • Contractor Orientation (CHOC HASP), • Badging and Training Qualification
Oversight, Performance Management and Culture Development	• SCE Field Observations, • 3rd party field observations, • COA implementation, • CSQAR, • Work Type CSQAR (COA development), • Scorecards, • Performance Dashboards and Monthly reporting, Compliance Management, • Control Stages, • Safety Culture Training, • Communications, • Safety Forums, • Contractor Safety Advocate, • California Peer Utility Benchmarking Forums
Incident Management and Learning	• Incident Evaluations, • Management Review Committees, • Common Cause Evaluations, • Corrective Action Plan Management, • Incident Review Teams, • Incident Communications

2. Metric Link to Compensation or Individual or Group Performance Goals

The Rate of SIF Actual (Contractor) metric is not linked to executive compensation as described in Section I.A.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

An SCE Incident Screener reviews contractor submitted incident reports including medical status information daily to identify Contractor SIF in accordance with the EEI SIF definition. SCE also maintains an independent contractor safety incident reporting system (EHSync) that documents each contractor safety incident. Dual tracking is performed by Contractor Safety and Edison Safety, reconciling the EHSync entries with Contractor Safety Excel data. Discrepancies are reviewed and addressed monthly. Classifications are overseen by Edison Safety Management. The SCE Incident Screener may contact EEI when clarification is needed on the SIF criteria. The Edison Safety Management Team and OU leadership discuss each Contractor SIF incident at monthly executive safety meetings to assess ways to minimize risk, prevent potential recurrence of serious injuries or fatalities, and validate accurate reporting of the incidents.

After year-end data is closed, SIF counts are reviewed in aggregate to ensure accurate internal reporting and EEI benchmarking. Contractor provided hours worked data is extracted to enable calculation of SIF rates

H. Metric 17: Rate of SIF Potential (Employee)

Table II-26
Rate of Serious Injuries or Fatalities (SIF) Potential (Employee)

Metric Name	Risks	Category	Units	Metric Description
17. Rate of SIF Potential (Employee)	Employee Safety	Injuries	Number of SIF-Potential cases among employees x 200,000/employee hours worked	Rate of SIF Potential (Employee) is calculated using the formula: Number of SIF Potential cases among employees x 200,000/employee hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it. As a supplemental reporting requirement to the Potential SIF Rate (Employee), all utilities shall provide information about the key lessons learned from Potential SIF (Employee) incidents.

1. Metric Data and Discussion

The annual Employee Potential SIF rate data is presented below in Figure II-8. In 2021, SCE saw a slight increase of 1.2% in the PSIF rate compared to a three-year historical average (2018 – 2020). However, SIF-Potential (PSIF) should be considered to be a bi-directional indicator. That is, movement in two opposite directions could each be viewed as desirable. For example, PSIF increasing can be explained as a positive indication that workers have a greater willingness to report potential SIFs. In that instance, learning can occur, and mitigations can then be appropriately implemented to reduce further occurrence of PSIF. On the other hand, an increase in PSIF's could instead mean that workers are being placed in harm's way and are more likely to incur an actual serious injury.

Figure II-8
Rate of SIF Potential (Employee)

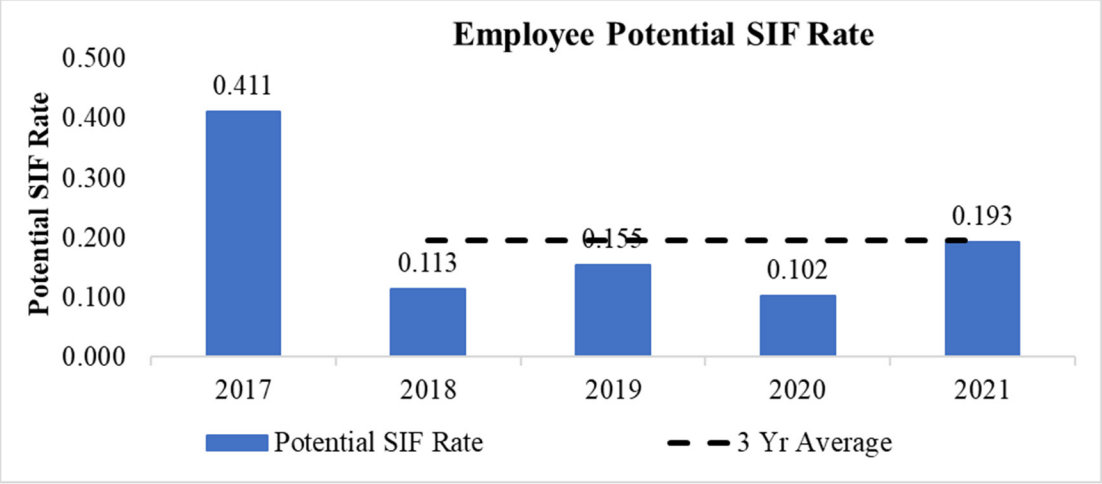


Table II-27
Rate of SIF Potential (Employee)

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	0.300	0.314	0.452	0.415	0.379	0.285	0.739	0.801	0.198	0.455	0.216	0.324	**0.411**
2018	0.000	0.106	0.186	0.098	0.186	0.097	0.098	0.175	0.000	0.174	0.204	0.000	**0.113**
2019	0.000	0.398	0.093	0.092	0.180	0.097	0.091	0.175	0.188	0.082	0.419	0.102	**0.155**
2020	0.000	0.097	0.256	0.000	0.000	0.083	0.085	0.259	0.171	0.000	0.201	0.093	**0.102**
2021	0.094	0.094	0.081	0.611	0.095	0.000	0.000	0.360	0.187	0.368	0.210	0.208	**0.193**
Avg. by Month	**0.079**	**0.202**	**0.214**	**0.243**	**0.168**	**0.112**	**0.203**	**0.354**	**0.149**	**0.216**	**0.250**	**0.145**	-

The Rate of PSIF (employee) has the same drivers as the actual Rate of SIF (Metric 15). SCE takes every safety incident seriously, whether it is relatively minor (such as a slip or fall resulting in a DART-level incident) or serious (such as a switching incident with a flash, resulting in third-degree burns). Further, SCE treats SIF Potential cases in the same manner as actual SIF cases because in many instances, a PSIF could have resulted in an actual SIF to an employee. While the consequence of actual SIF and PSIF cases may be different, the circumstances are often very similar, such that an actual SIF could have occurred. Cause evaluations are performed on actual and potential SIFs to identify and implement corrective actions to reduce the risk of future, similar incidents. Both actual and potential SIF

incidents inform SCE's SIF Risk Register, and when SCE makes efforts to address drivers of incidents, SCE examines PSIF incidents with the same degree of seriousness as actual SIF incidents.

PSIF cases are important both on an individual basis and at an aggregate level. If SCE only tracked and acted on actual SIF cases in 2021, we would have had fewer than ten incidents from which to learn from and take preventive action. By identifying PSIF cases, SCE is able to learn from and address a greater variety of situations. For example, in 2021, one actual SIF occurred due to a "line of fire" incident. However, nine additional PSIF "line of fire" cases occurred.

As shown in Figure II-11, Helicopter incidents that are included in Metric #21, which are defined by Federal Aviation Regulations (FARs) and reportable to Federation Aviation Administration per 49-Code of Federal Regulations (CFR)-830, are extremely rare. However, SCE is providing lessons learned from potential SIF cases as requested by the CPUC and noted above in Table II-26. By evaluating a broader set of potential cases, SCE identified an opportunity to conduct a common cause evaluation on related potential aviation cases from 2016-2020. *SCE emphasizes that these PSIF cases are not the same as the Helicopter/Flight Incidents that are included in Metric #21 and further discussed in Section* II.L*, these are potential SIF (PSIF) cases.* A common cause analysis was performed, focusing on commonalities across these elements: location of case (e.g., district and region); pilot organization (i.e., SCE or contractor resources); ground crew organization (i.e., SCE or contractor resources); governing process, activity, or program; undesired actions contributing to the occurrence of the cases; identified causes from previously performed cause evaluations or case investigations; HU failure modes associated with undesired actions; and Organizational and Programmatic (O&P) failure modes associated with undesired actions. The following common causes for these *potential SIF cases* were identified:

- Common Cause 1 is inadequate interface formality between the multiple SCE and contracted organizations in the execution of essential aspects of work planning and implementation to ensure requisite risk assessment and mitigation when performing work activities involving contracted aircraft and associated pilots.

- Common Cause 2 is insufficient rigging and lifting controls, including but not limited to personnel qualifications / training, communication protocols, and supervisory oversight, when performing work activities involving contracted aircraft and associated pilots.

The key corrective actions taken to address these common causes were: Developing a Standard for Helicopter Use; Requiring development of Helicopter Use Plans per the Standard for Helicopter Use, with review and approval by Aircraft Operations; Requiring approval by Aircraft Operations of all Contractor Hazard Assessment and Safety Plans related to helicopter use; Implementing a Job Walk Form for pilot and ground crew organizations to jointly walk down the job prior to performing work; Performing a Work Type Contractor Safety Quality Assurance Review with involvement by pilot and ground crew organizations; and Establishing a program manual pertaining to lifting and rigging controls in support of activities associated with the use of helicopters.

SCE's evaluated PSIF cases included a broader range of "Line of Fire" incidents in 2021. SCE identified three apparent or contributing causes:

- Apparent Cause 1 was existing programmatic controls related to limiting and controlling entry into drop zones were less than adequate to prevent personal injuries from dropped objects.
- Contributing Cause 1 was less than effective supervisory oversight in limiting and controlling entry into drop zones.
- Contributing Cause 2 was corrective actions from previous causal evaluations for dropped object incidents were not effective in preventing subsequent dropped object incidents.

SCE took two key corrective actions to address these causes. First, SCE revised our Accident Prevention Manual to prohibit entry into a drop zone while work is being performed in an elevated position unless such entry is essential to completing the immediate task at hand. Second, the drop zone area shall be clearly designated with physical barriers where possible or with visual barriers where a physical barrier is not possible due to geographic limitations.

2. Metric Link to Compensation or Individual or Group Performance Goals

The Rate of SIF Potential metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

In addition to the earlier discussion provided in Section I.B, an SCE Incident Screener reviews incident details and medical reports (as applicable) daily to identify Employee Potential SIF in accordance with the EEI SCL classifications. Classifications are overseen by Edison Safety Management. The SCE Incident Screener may contact EEI when clarification is needed on the SCL Model criteria. The Edison Safety Management Team and OU leadership discuss actual and potential SIF incidents at monthly executive safety meetings to assess ways to minimize risk, prevent potential recurrence of serious injuries or fatalities, and validate accurate reporting of the incidents. After year-end data is closed, Potential SIF counts are reviewed in aggregate to ensure accurate reporting. Timekeeping data is extracted to enable calculation of Potential SIF rates.

I. Metric 18: Rate of SIF Potential (Contractor)

Table II-28
Rate of Serious Injuries or Fatalities (SIF) Potential (Contractor)

Metric Name	Risks	Category	Units	Metric Description
18. Rate of SIF Potential (Contractor)	Contractor Safety	Injuries	Number of SIF-Potential cases among contractors x 200,000/contractor hours worked	Rate of SIF Potential (contractor) is calculated using the formula: Number of SIF Potential cases among contractors x 200,000/contractor hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model.[5] If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it. As a supplemental reporting requirement to the Potential SIF Rate (Contractor), all utilities shall provide information about key lessons learned from SIF Potential (Contractor) incidents.

1. Metric Data and Discussion

The annual Contractor rate of SIF Potential metric data is presented below in Figure II-8. In 2021, SCE saw a notable increase in SIF Potential counts (38% above historical averages). Factoring in total contractor hours, the rate of Potential SIF was 18% below historical averages as SCE has experienced an increase in contractor hours in recent years. However, SIF-Potential (PSIF) should be considered to be a bi-directional indicator. That is, movement in two opposite directions could each be viewed as desirable. For example, PSIF increasing can be explained as a positive indication that workers have a greater willingness to report potential SIFs. In that instance, learning can occur, and mitigations can then be appropriately implemented to reduce further occurrence of the PSIF. On the other hand, an increase in PSIF could instead mean that workers are being placed in harm's way and are more likely to incur an actual injury.

Figure II-9
Rate of SIF Potential (Contractor)

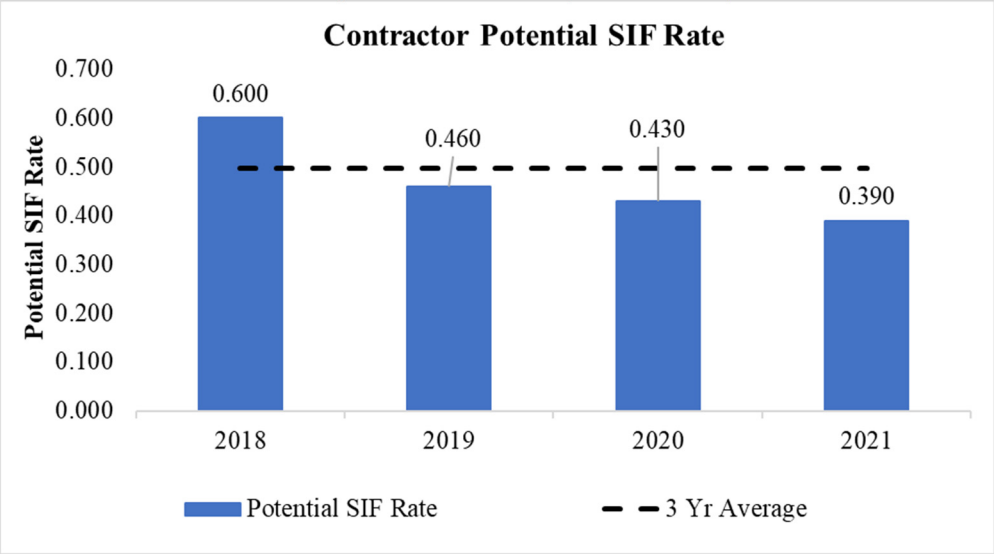


Table II-29
Rate of SIF Potential (Contractor)

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	1.040	0.710	1.050	0.420	1.040	0.570	0.150	0.430	0.510	0.380	0.420	0.710	**0.600**
2019	0.330	0.420	0.330	0.590	0.330	1.150	0.860	0.190	0.470	0.610	0.090	0.210	**0.460**
2020	0.540	0.580	0.450	0.370	0.110	0.740	0.220	0.430	0.530	0.250	0.640	0.310	**0.430**
2021	0.490	0.600	0.340	0.710	0.210	0.420	0.450	0.200	0.520	0.270	0.520	0.000	**0.390**
Avg. by Month	**0.600**	**0.578**	**0.543**	**0.523**	**0.423**	**0.720**	**0.420**	**0.313**	**0.508**	**0.378**	**0.418**	**0.308**	-

The rate of SIF Potential (contractor) has the same drivers as the contractor SIF actual Rate. SCE treats PSIF incidents in the same manner as actual SIF incidents because in many cases, a PSIF could have resulted in an actual SIF given a change in conditions. While the consequence of actual SIF and PSIF incidents may have been different, the circumstances are often similar, such that an actual SIF could have occurred. Cause Evaluations are performed by contractor companies on actual and potential SIFs to identify and implement corrective actions to reduce the risk of future, similar incidents. All contractor incidents (both actual SIF and PSIF), must be reviewed and accepted by the SCE Management Review Committee (MRC).

Potential SIF cases provide SCE with more data for analysis then just focusing on Actual SIF cases. As a result of increased trends in either actual or potential SIFs, SCE will provide focused observations on these areas, and targeted communications to contractors regarding these trends, as well as key takeaways, safety reminders and references to any applicable Critical Observable Actions (COAs).

SCE has a system to progressively manage undesired behavior or performance, which includes Corrective Action Plans and Control Stages. Control stages can include work restrictions, crew count restrictions, reduction in work, and ultimately termination, if the conditions identified in SCE's formal notification are not met. As an example, one contractor experienced multiple PSIFs, involving non-injury flash incidents. The contractor was placed into SCE's control program, resulting in limited work scope and reduced number of crews. The contractor was also required to develop a Corrective Action Plan to address the undesired performance. As long as the contractor remains in the control stage, SCE and the contractor will conduct monthly performance evaluations of the contractor's performance.

Further discussion on PSIF cases is discussed above in Section II.H.

2. <u>Metric Link to Compensation or Individual or Group Performance Goals</u>

The Contractor Rate of SIF Potential metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

An SCE Incident Screener reviews contractor submitted incident details and medical reports daily to identify Contractor SIF in accordance with the EEI SIF definition. SCE also maintains an independent contractor safety incident reporting system (EHSync) that documents each contractor safety incident. Dual tracking is performed by Contractor Safety and Edison Safety to reconcile the EHSync entries with contractor Safety Excel data. Discrepancies are reviewed and addressed monthly. Classifications are overseen by Edison Safety Management. The SCE Incident Screener may contact EEI when clarification is needed on the SIF criteria. The Edison Safety Management Team and OU leadership discuss each Contractor SIF incident at monthly executive safety meetings to assess ways to minimize risk, prevent potential recurrence of serious injuries or fatalities, and validate accurate reporting of the incidents.

After year-end data is closed, SIF counts are reviewed in aggregate to ensure accurate internal reporting and EEI benchmarking. Contractor provided hours worked data is extracted to enable calculation of SIF rates.

SCE's internal Audit group may perform audits on SIF counts and rates to confirm accuracy related to a corporate goal target.

J. Metric 19 : Contractor Days Away, Restricted Transfer (DART)

Table II-30
Contractor Days Away, Restricted Transfer (DART) Rate

Metric Name	Risks	Category	Units	Metric Description
19. Contractor Days Away, Restricted Transfer (DART)	Contractor Safety	Injuries	OSHA DART Rate.	DART Rate: Days Away, Restricted and Transfer (DART) Cases include OSHA-recordable Lost Work Day Cases and injuries that involve job transfer or restricted work activity. DART Rate is calculated as DART Cases times 200,000 divided by contractor hours worked.

1. Metric Data and Discussion:

The annual Contractor DART rate metric data is presented below in Figure II-10. In 2021, SCE saw a decrease in Contractor DART rate (20% percent below the three-year historical average). The key risk drivers impacting Contractor safety as identified in SCE's 2022 RAMP are discussed above in Section II.G along with a description of SCE's Contractor safety activities. While these drivers were developed to address serious injuries and fatalities, they are also generally applicable to lower lever injuries as well. In addition, the work activities described in Section II.G would also apply to this metric and are not repeated here.

Figure II-10
Contractor DART Rate

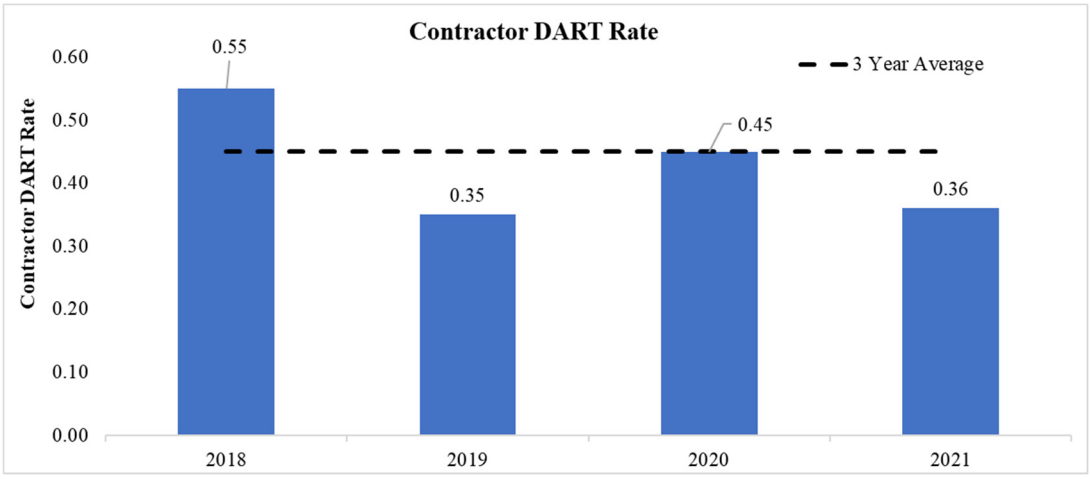


Table II-31
Contractor DART Rate

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	0.170	0.180	0.450	0.700	0.590	0.990	1.030	1.300	0.130	0.250	0.210	0.710	**0.550**
2019	0.500	0.420	0.330	0.240	0.330	0.520	0.210	0.380	0.470	0.260	0.260	0.310	**0.350**
2020	0.220	0.460	0.450	0.860	0.420	0.420	0.870	0.430	0.000	0.410	0.270	0.610	**0.450**
2021	0.360	0.120	0.220	0.000	0.420	0.420	0.330	0.590	0.720	0.270	0.520	0.340	**0.360**
Avg by Month	**0.297**	**0.353**	**0.410**	**0.600**	**0.447**	**0.643**	**0.703**	**0.703**	**0.200**	**0.307**	**0.247**	**0.543**	**0.450**

2. Metric Link to Compensation or Individual or Group Performance Goals

The Contractor DART Rate metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section .

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

SCE verifies contractor submitted DARTs from ISNetworld's "Site Tracker" data with Contractor Incident Reports for improved quality control of contractor safety performance data.

SCE maintains an independent contractor safety incident reporting system that documents each contractor safety incident. Incidents resulting in DARTs are noted on the SCE incident report form. Contractors are required to submit the SCE Incident Report Number for each incident resulting in a DART. On the next business day after the 10th of the month, the SCE Contractor Safety department then reconciles all serious injury/fatality counts reported via ISN "Site Tracker" against the SCE Incident Report data. The contractor is notified of any discrepancies and SCE contractor safety follows up to ensure that each discrepancy is resolved, ideally within the same month and typically by the following month.

After year-end data is closed, DART counts are reviewed in aggregate and contractor submitted hours worked data are extracted to enable calculation of DART rates.

K. Metric 20 - Public Serious Injuries and Fatalities

1. Metric Data and Discussion:

Pursuant to Ordering Paragraph 3 of D.19-04-020, SCE provided SED staff with its data on Public Serious Injuries and Fatalities sixty days prior to the due date for this report.[41] In Table II-32 below, SCE provides the public serious injury and fatality data in the categories and subcategories provided by SED for the 2021 SPMRs.

Table II-32
Public Serious Injury and Fatality – 2021 Data by Category

#	Injury Type	Incident Type	Sub-Category	Infrastructure Involved
1	Fatality	Other non-categorized causes	-	Transmission
2	Serious Injury	Underground Electric Contact	Causes other than theft/vandalism	Distribution
3	Serious Injuries (2) and Fatality	Overhead Electric Contact	Contact with intact overhead conductors	Distribution
4	Serious Injury	Underground Electric Contact	Theft/vandalism	Distribution
5	Fatality	Overhead Electric Contact	Contact with intact overhead conductors	Substation
6	Serious Injury	Overhead Electric Contact	Contact with intact overhead conductors	Distribution
7	Fatality	Underground Electric Contact	Theft/vandalism	Distribution

The annual data for Public Serious Injuries and Fatalities is presented below in Table II-33 with the data broken out by SCE system failure related public SIFs. For some incidents, the actual severity of injury and/or SCE's involvement either remain unknown or are still under investigation. Therefore, the Public Serious Injuries and Fatalities data may change from what is presented in this report if subsequent determinations are made.

[41] SCE provided this information to CPUC staff on January 31, 2022.

Table II-33
Public Serious Injuries and Fatalities Due to System Failures

Public Serious Injuries & Fatalities due to system failures

	2012*	2013	2014	2015	2016	2017	2018	2019	2020	2021
Public Fatalities due to system failure		0	0	0	0	1	0	0	0	0
Public Serious Injuries due to system failure		0	0	0	0	1	0	1	1	0

*Prior to 2013, SIFs were not classified by system failure

Total Public Serious Injuries & Fatalities reported to the CPUC

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Public Fatalities	6	3	11	4	6	4	9	2	2	4
Public Serious Injuries (Cal OSHA)	13	5	19	12	8	10	11	10	10	5

Protecting the public is central to SCE's mission. The causes of public safety incidents vary and include vehicle incidents, SCE facility failures, outages, and trespassing and vandalism. SCE has identified several key public safety risks in Table II-34. SCE provides additional discussion on what we are doing to address some of these key public safety risks below, which should not be taken to be exhaustive.

Table II-34
Key Public Safety Risks Identified by SCE

- Underground Equipment Failure
- Contact with Energized Equipment –Wire Down
- Contact with Energized Equipment –Overhead Intact Contact (*e.g.*, tree trimmer)
- Contact with Energized Equipment –Underground Intact Contact Below Grade (*e.g.*, dig-ins)
- Contact with Energized Equipment –Underground Intact Contact Above Grade (*e.g.*, riser, panel)
- Contact with Energized Equipment – Vandalism Theft & Idle Facilities (*e.g.*, Copper Theft)
- Planned/Unplanned Outages-Energy Dependent Customers
- Widespread Outage
- SCE Vehicle Operations (e.g., 3rd Party Incidents)
- Workplace Issues (e.g., Worksite Protection)
- 3rd Party Vehicle Hit SCE Equipment (e.g., Car Hit Pole)
- Aircraft Collision with Overhead Lines
- Wildfire
- Hydro Asset Failure
- Accessory Dwelling Units (ADUs)

SCE continues to strive for excellence in public safety. In 2021, there were nine reported Serious Injuries or Fatalities (SIFs), an improvement from the prior year. This is also below the ten-year average, being the second lowest annual count of incidents in the past decade. This positive trend is supported by a number of activities taking place to ensure our commitment to public safety.

There are five main areas that provide focus on public safety outcomes: 1) design and construction standards, 2) inspection, maintenance and infrastructure replacement programs,3) controls and mitigations, 4) expanded claims investigations, and 5) public outreach. Through a blend of programs that focus on grid resiliency, monitoring, and education, there is a concerted effort to assess all aspects of our infrastructure and how our customers interface with our facilities in their day-to-day activities.

In 2021, updates were made to our standards that provided options for de-energization of idle facilities. In addition, a decal was approved for primary risers, alerting the public to the hazardous voltage of the cable in the conduit. Both of these measures are intended to deter potential vandalism where possible, and minimize the risk of contact with energized equipment when our facilities are not in use. Alongside current practices in place such as fixed and mobile surveillance cameras, intrusion sensing technology, perimeter lighting upgrades and high security, anti-cut/anti-climb fencing, and more, these additions support the overall goal of reducing risk to the public while constructing and operating the grid in the safest way possible.

Maintenance and Inspection programs and Infrastructure Replacement programs mitigate the risk of system failure that may contribute to public safety incidents. These programs are managed and maintained by SCE's Transmission & Distribution organization. SCE continues to enhance management and understanding of underground equipment failure (UEF) and contact with energized equipment (CEE), specifically wire down events. Deploying cover pressure restraint systems (CPRR) and overhead conductor program (OCP) along with improved monitoring devices as predicted through high consequence/high probability of failure modeling ensures that the approach is driven by the highest likelihood of adverse public safety outcomes.

SCE has controls and mitigations in place such as PSPS. This program allows for strategic, proactive shutoff ahead of a threshold defined wind event to mitigate the potential for an

adverse event. Close monitoring of weather stations and HD cameras also support incident management and prevention.

The Expanded Claims Investigation process focuses on public safety events in order to gather lessons learned. Through these learnings, opportunities to incorporate improved strategies are leveraged. These proactive mitigations are varied in nature, including standards updates, media messaging, and more- all of which are intended to reduce the likelihood of similar events from recurring in the future.

SCE's public outreach programs provide education and essential information to the public including billboards, radio spots, mailers, and television campaigns in multiple languages. External safety communication programs are developed and maintained by Corporate Communications. Focal topics include such dangers as contact with downed wires, releasing metallic balloons, the 'Call Before You Dig' 811 program, and the importance of maintaining a 10' safe distance from power lines.

Educational seminars are given to communities, schools, and first responders on the dangers of electricity. SCE's Public Safety team, in partnership with Corporate Communications, continues to deploy targeted campaigns to at-risk workers, including tree trimmers and others working around high voltage lines. In continued partnership with the Culver Company, targeted mailings are sent, including focused messaging for excavations in relation to dig-ins.

2. Metric Link to Compensation or Individual or Group Performance Goals

The Public Serious Injury and Fatality metric is linked to executive compensation as described in Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [Yes]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [Yes]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [Yes]**

3. Metric Specific Bias Controls Discussion

As stated in Section I.B, Public SIF is part of SCE's foundational corporate goals and will undergo the Internal Audit process. In addition, SCE's claims department will continue to investigate and may reclassify certain Public SIF incidents as necessary to ensure the incident meets the reportable definition as additional information is gathered.

L. Metric 21: Helicopter / Flight Accident or Incident

Table II-35
Helicopter / Flight Accident or Incident

Metric Name	Risks	Category	Units	Metric Description
21. Helicopter/ Flight Accident or Incident	Aviation Safety Helicopter Operations Public Safety Worker Safety Employee Safety	Vehicle	Number of accidents or incidents (as defined in 49 CFR Section 830.5 "Immediate Notification") per 100,000 flight hours.	Defined by Federal Aviation Regulations (FARs), reportable to Federation Aviation Administration per 49-Code of Federal Regulations (CFR)-830.

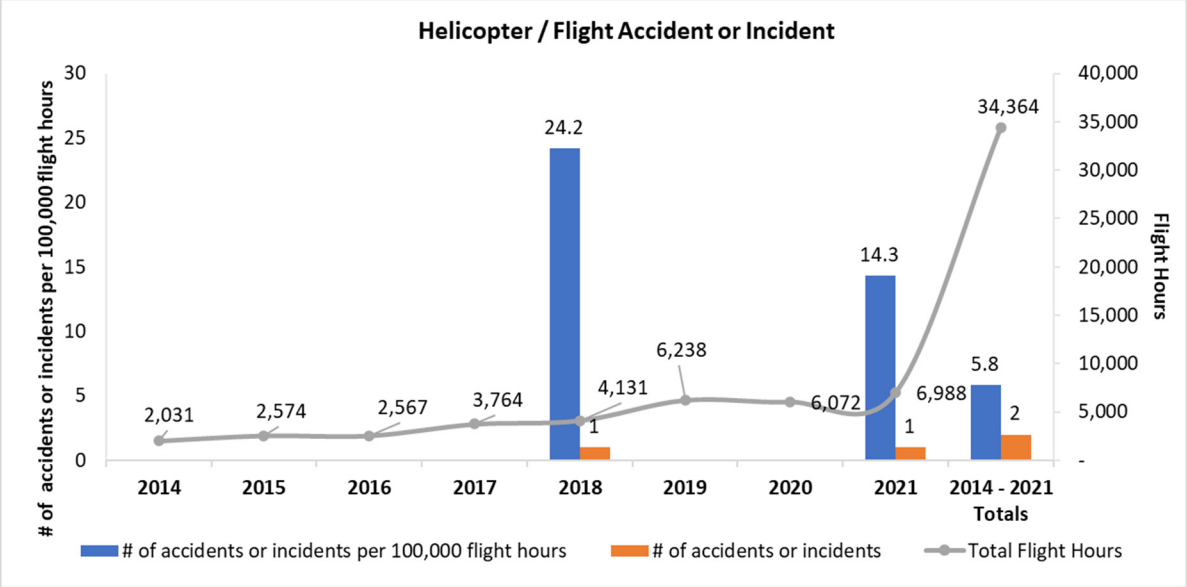
1. Metric Data and Discussion:

The annual data for Helicopter/Flight Accident or Incident is presented below in Figure II-11 and Table II-36, respectively. SCE's actions supporting aviation safety with our employees and contractors and the general public are as follows:

- SCE's Use of Company Owned, Contract and Chartered Aircraft Policy serves as an administrative control for the use of aviation assets.
- All contractors, including aviation providers, must comply with the Contractor Safety Policy (ISN) and are required to attend a contractor Safety Forum.
- All Aviation Service Providers are required to pass a technical qualification as required by SCE Air Operations policy. They are approved by work method based on their ability and whether they have obtained certificates to perform the work in compliance with Federal Aviation Administration (FAA) regulations.

- SCE performs observations of contract helicopter vendors during missions so that it can provide safety behavior feedback to the contractor.
- Air Operations conducts an annual educational outreach program on how to survive in the wire environment. This program is open to all general aviation pilots including first responders.

Figure II-11
Summary of Annual Metric Data



As indicated above in Figure II-11, 2021, SCE had one contractor incident/accident that met the metric definition in 2021. This incident did not result in any serious injuries or fatalities to any employees, contractors or members of the public. The National Transportation Safety Board (NTSB) analysis indicated the pilot reported that, shortly after takeoff, the helicopter encountered a dust devil from the right side, which caused the helicopter to yaw right and descend. Despite the pilot's best attempt to control the helicopter, it struck terrain. The helicopter sustained substantial damage to the tail boom. The pilot reported that there were no pre-accident mechanical malfunctions or failures with the helicopter that would have precluded normal operation. As a result of this incident, SCE has made changes to our process around the helicopter use plan as discussed in Section II.H.

Table II-36
Annual Historical Data for Helicopter / Flight Accident or Incident Metric

Year	# of accidents or incidents	Total Flight Hours	# of accidents or incidents per 100,000 flight hours
2014	0	2,031	0.00
2015	0	2,574	0.00
2016	0	2,567	0.00
2017	0	3,764	0.00
2018	1	4,131	24.21
2019	0	6,238	0.00
2020	0	6,072	0.00
2021	1	6,988	14.31
2014 - 2021 Totals	**2**	**34,364**	**5.82**

2. Metric Link to Compensation or Individual or Group Performance Goals

The Helicopter/Flight Accident or Incident metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B Description of Executive Compensation Links and Bias Controls.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

SCE uses a common industry device, Hobbs meter, to validate accurate measurement of total flight hours for SCE and contractors. In addition, SCE internally reviews and verifies that helicopter incidents or accidents are reported to the FAA to the extent they meet the requirements for reporting in the FAA regulations.

M. Metric 25. Wires-Down not resulting in Automatic De-energization

Table II-37
Wires-Down not resulting in Automatic De-energization

Metric Name	Risks	Category	Units	Metric Description
25Wires-Down not resulting in Automatic De-energization	Electric Overhead, wildfire	Electric	Percentage of wires down occurrences	This metric is defined as the number of occurrences of wire down events in the past calendar year that did not result in automatic (i.e., not manually activated) de-energization by circuit protection devices such as fuses, circuit breakers, and reclosers, etc. on all portions of a downed conductor that rest on the ground. This metric does not consider possible energization due to induced voltages from magnetic coupling of parallel circuits. Metric excludes secondary conductors and service drops. The metric is reported as a percentage of all wires down events in the past calendar year. Separate metrics are provided for transmission and distribution systems.

1. Metric Data and Discussion

The annual monthly historical data for distribution and transmission is shown below in Table II-38.

Table II-38
Wires-Down not resulting in Automatic De-energization Data – Historical Monthly Data[42]

Distribution Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2020	9.2%	4.6%	9.4%	14.3%	15.1%	16.9%	16.9%	24.1%	16.5%	23.8%	26.5%	16.7%	**17.0%**
2021	16.0%	23.6%	13.3%	17.6%	16.5%	11.4%	25.0%	21.5%	24.4%	20.5%	22.5%	16.7%	**19.0%**
Avg by Month	**16.0%**	**23.6%**	**13.3%**	**17.6%**	**16.5%**	**11.4%**	**25.0%**	**21.5%**	**24.4%**	**20.5%**	**22.5%**	**16.7%**	**32.0%**

Transmission Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2016	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
2017	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
2018	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
2019	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	100%	0%	**9%**
2020	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	50%	0%	**17%**
2021	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	**8%**
Avg by Month	**0%**	**0%**	**0%**	**14%**	**0%**	**25%**	**0%**	**10%**	**0%**	**0%**	**33%**	**0%**	**6%**

SCE's electric system is designed and built with protection to stop the flow of electricity under fault conditions, to remain de-energized under conditions of permanent faults or equipment damage without manual patrol or intervention by field personnel, and to reclose under conditions of temporary faults which do not cause infrastructure damage. This protection approach is intended to prevent accidental contact with overhead conductor by de-energizing the conductor prior to or immediately upon contact with the ground. This is successful when there is enough fault current to be detected by system protective devices.

However, under certain conditions, wire-down events can be difficult to detect by protective devices. For example, challenges can occur when a wire-down event takes place on high-resistance surfaces such as asphalt, concrete, or very sandy or rocky soils. These conditions are referred to as "high impedance fault conditions," and can result in lower fault current magnitudes than we can readily detect. High impedance fault conditions with wire-downs may not be automatically cleared by

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[42] For safety reasons, field personnel generally treat wire down events as energized if energization is unknown. The percentages above represent the information reported as actually being energized.

protective devices. These conditions also may need to be interrupted by manual intervention of Troublemen or other field personnel.

SCE has and will continue to perform work to ensure that we minimize all wire down events, and that we minimize the amount of energized wire down events. SCE provided and extensive discussion on the efforts we undertake to minimize wire down events in Section II.B.1 and Section II.D.1. SCE also discusses our efforts around educating the public of the dangers of a wire down in Section II.K.1 and what we do to address our 911 response time which can include wire down events in Section II.C.1.

2. Metric Link to Compensation or Individual or Group Performance Goals

This metric is not directly linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

SCE distribution and transmission engineering groups review wire down data and MADEC data to determine which wire down events are known to have been energized based on the best available data. Going forward SCE will look to improve our data collection efforts and can provide an update in future reports.

N. Metric 26. Missed Inspections and Patrols for Electric Circuits

Table II-39
Missed Inspections and Patrols for Electric Circuits

Metric Name	Risks	Category	Units	Metric Description
26. Missed Inspections and Patrols for Electric Circuits	Electric Overhead, wildfire	Electric	Percentage of structures that missed inspection relative to total required structures.	Metrics are calculated as annual number of overhead electric structures that did not comply with the inspection frequency requirements divided by total number of overhead electric structures with inspections due in the past calendar year. Separate metrics are provided for patrols, detailed inspections. Separate metrics are provided for primary distribution and transmission overhead circuits. "Minimum patrol frequency" refers to the frequency of patrols as specified in GO 165. "Structures" refers to electric assets such as transformers, switching protective devices, capacitors, lines, poles, etc.

1. Metric Data and Discussion

The annual historical data for distribution and transmission inspections is shown below in Table II-40.

Table II-40
Annual Missed Inspections and Patrols for Electric Circuits Data

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Annual Average
Distribution Detailed	2%	4%	3%	2%	1%	1%	1%	1%	2%	2%	2%
Distribution Patrols	0%	0%	1%	0%	2%	2%	2%	1%	2%	0%	1%
Transmission Detailed							12%	12%	2%	3%	7%
Transmission Patrols	0.4%	0.6%	0.1%	0.0%	0.3%	0.1%	7%	9%	3%	2%	2%

Distribution Inspections:

As required by GO 165, inspections of the overhead distribution system include annual grid patrols (AGP) and overhead detailed inspections (ODI). GO 165 requires grid patrols to be performed each year (annually) for urban locations and every two (2) years for rural locations (excluding Tier 2 and Tier 3 of High-Fire Threat Districts (HFRD, which should be conducted annually), while detailed inspection of overhead distribution equipment is to be performed every five years. SCE performs AGP annually and ODI every five years. An AGP entails an annual visual

evaluation of SCE's electrical distribution facilities with the intent to identify and document obvious discrepancies that require corrective action. An ODI entails a close in-depth visual inspection of SCE's overhead electrical distribution facilities with the intent to identify and document obvious discrepancies.

As part of an ODI, the inspectors will (1) identify hazardous conditions or non-conformances with GO 95 that require corrective action, (2) determine what corrective action is required and priority corrective action in alignment with the Distribution Inspection & Maintenance Program, and (3) perform minor repairs at the public level while at the location. In any given year where SCE does not perform an ODI, a grid patrol will be performed for that given year. As stated in GO 165 and consistent with the purpose for implementing patrols and detailed inspections, the term "year" is defined as 12 consecutive calendar months starting the first full calendar month after an inspection is performed, plus three full calendar months, not to exceed the end of the calendar year in which the next inspection is due. SCE may either perform inspections ahead of the due date, on the expected due date, or if missed, have up to 3 additional months to complete the inspection to align with GO 165 requirements. For ODI, there will be times, in spite of every effort, where a full detail inspection may not be possible, which leads to SCE performing either a limited inspection, access exception, and/or obstruction inspection as follows:

- Limited Inspection: A limited inspection is when a full detailed inspection of the critical distribution assets of a structure- such as from the communication level up- can be safely taken but some environmental condition prevents the inspector from viewing some non-critical aspect of the distribution equipment.
- Access Exception: The inspector is unable to view the critical aspects of the distribution equipment.
- Obstruction Exception: The inspector is unable to view the critical aspects of the distribution equipment because their view is obstructed.

Inspectors document any discrepancies found during the inspections, determine the priority levels, and assign a timeframe for corrective actions based on construction and compliance

standards. SCE follows a three-priority rating system that is compliant with the requirements outlined in Rule 18 of GO95:

- A priority 1 discrepancy is an immediate public safety/system reliability hazard that is required to be made safe within twenty-four hours and remedied within seventy-two hours;
- A priority 2 discrepancy is one that is required to be addressed within six months to three years, depending on the high-fire tier designation of the asset. If the asset is located within high-fire tier 3 then it will be required to be addressed within six months. If the asset is located within high-fire tier 2 then it will be required to be addressed within twelve months. Non high-fire findings are required to be addressed within three years; and
- A priority 3 discrepancy is addressed as opportunity maintenance that is performed when other work is done on or near that particular asset. As a result of an update to Rule 18 of GO95, overhead Priority 3 discrepancies found after June 2019 will be required to be addressed within five years.

Transmission Inspections:

The Transmission Inspection & Maintenance Program (TIMP) is an ongoing company-wide program established to maintain the Transmission system and Communication network in accordance with good utility practices and the CPUC's G.O. 95, G.O. 128, and G.O. 165. SCE's overhead transmission lines, along with the structures supporting the lines, must be routinely patrolled and inspected to detect any problems that may compromise the integrity of the structures or impede the transmission of electricity. Transmission inspectors perform circuit (routine) patrols annually and detail inspections every three years. A circuit (routine) patrol consists of a visual assessment performed at ground level or via aircraft, for the purpose of identifying, prioritizing, and recording obvious discrepancies, whereas a detail inspection consists of a careful visual assessment performed in close proximity to or while upon a structure for the purpose of identifying, prioritizing, and recording discrepancies. This activity includes performing minor or temporary repairs during the inspection and

special technical evaluation as needed. Inspectors document any discrepancies found during the inspections, determine their priority levels, and assign a timeframe for corrective actions based on construction and compliance standards. SCE follows a three-priority rating system that is compliant with the requirements outlined in Rule 18 of GO95:

- A priority 1 discrepancy is an immediate public safety/system reliability hazard that is required to be made safe within twenty-four hours and remedied within seventy-two hours;
- A priority 2 discrepancy is one that is required to be addressed within six months to three years, depending on the high-fire tier designation of the asset. If the asset is located within high-fire tier 3 then it will be required to be addressed within six months. If the asset is located within high-fire tier 2 then it will be required to be addressed within twelve months. Non high-fire findings are required to be addressed within three years; and
- A priority 3 discrepancy is addressed as opportunity maintenance that is performed when other work is done on or near that particular asset. As a result of an update to Rule 18 of GO95, overhead Priority 3 discrepancies found after June 2019 will be required to be addressed within five years.

2. <u>Metric Link to Compensation or Individual or Group Performance Goals</u>

The Missed Inspections and Patrols for Electric Circuits metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

The Distribution and Transmission inspection programs are responsible for performing self-validation for inspections to be completed within the minimum expected due dates as outlined by each inspection program requirements. The self-validation process leverages various program dashboards and reporting tools to ensure inspections are completed in a timely manner. If inspection programs deviate from program minimum requirements, then additional measures will be performed, such as, internal audits and/or quality assessments will be performed to address the missed inspection and understand the program deviations for future process improvements.

O. Metric 27 – Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)

Table II-41
Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)

Metric Name	Risks	Category	Units	Metric Description
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	Electric Overhead, wildfire	Electric	Percentage relative to total circuit miles	Percentage of primary distribution overhead conductors in Tiers 2 and 3 HFTD that is #6 copper. Secondary conductors are excluded.

1. Metric Data and Discussion

The monthly Overhead Conductor Size metric data is presented below in Table II-42.[43]

Table II-42
Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD) Data – Historical Monthly Data

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2021	N/A	N/A	N/A	N/A	N/A	4.7%	4.6%	4.5%	4.5%	4.4%	4.4%	4.3%	**4.3%**

[43] SCE may have pulled this information on an ad-hoc basis but has not historically tracked this information on a regular basis. SCE will continue to track this information on a monthly basis going forward. SCE is unable to go back and pull historical GIS data.

As noted in our comments in R.20-07-013, because there is no mandated standard for conductor type or size in HFTD or non-HFTD, the IOUs have discretion as to the pace of replacing conductors in HFTD and non-HFTD areas and progress would be heavily reliant on Commission authorized funding for OCP and WCCP type programs which address more than just #6 copper replacements. Further, because conductor may be #6 copper does not necessarily mean it poses a public safety risk or warrants proactive replacement. There are other factors, such as short circuit duty (SCD), that determine when conductor may need proactive replacement. As SCE continues to collect more data, we will expand on this narrative, including trends and year over year performance.

2. Metric Link to Compensation or Individual or Group Performance Goals

This metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

SCE does not have any specific bias controls in place for this metric.

P. Metric 29 – GO-95 Corrective Actions (Tiers 2 and 3, HFTD)

Table II-43
GO-95 Corrective Actions (Tiers 2 and 3, HFTD)

Metric Name	Risks	Category	Units	Metric Description
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)	Electric safety and wildfire	Electric	Percentage of corrective actions completed	The number of Priority Level 2 notifications that were completed on time divided by the total number of Priority Level 2 notifications that were due in the calendar year in Tiers 2 and 3, HFTD. Consistent with GO 95 Rule 18 provisions, the proposed metric should exclude notifications that qualify for extensions under reasonable circumstances. Separate metrics are provided for distribution and transmission systems.

1. Metric Data and Discussion

The annual GO-95 Corrective Actions data is presented below in Figure II-12 and monthly data is presented in Table II-44.

Figure II-12
Annual GO-95 Corrective Actions (Tiers 2 and 3, HFTD) Data

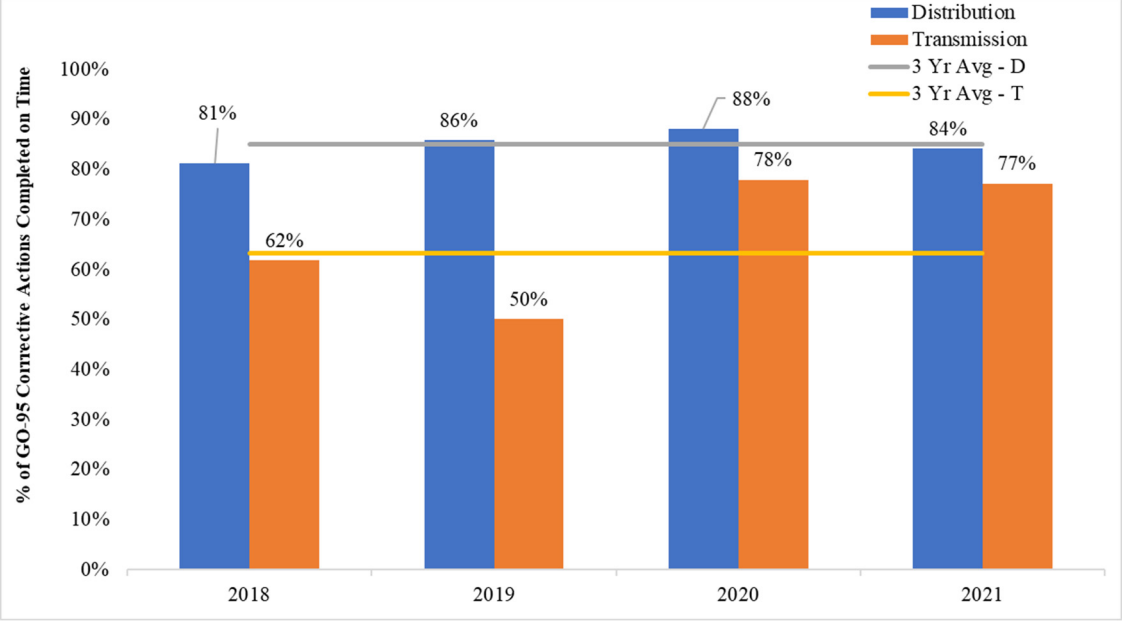


Table II-44
GO-95 Corrective Actions (Tiers 2 and 3, HFTD) Data – Historical Monthly Data

Monthly Distribution Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	78%	81%	83%	80%	79%	79%	77%	83%	79%	81%	84%	89%	**81%**
2019	84%	75%	82%	80%	84%	91%	84%	83%	81%	83%	84%	95%	**86%**
2020	94%	92%	84%	82%	84%	89%	88%	83%	83%	85%	89%	90%	**88%**
2021	84%	84%	86%	78%	90%	86%	85%	85%	84%	79%	83%	92%	**84%**
Avg by Month	**85%**	**83%**	**83%**	**81%**	**82%**	**86%**	**83%**	**83%**	**81%**	**83%**	**86%**	**91%**	**85%**

Monthly Transmission Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	85%	72%	62%	68%	67%	47%	56%	52%	64%	56%	56%	74%	**62%**
2019	87%	43%	74%	65%	45%	77%	36%	48%	73%	52%	81%	80%	**50%**
2020	79%	82%	48%	37%	48%	74%	83%	83%	84%	83%	88%	84%	**78%**
2021	83%	71%	75%	82%	84%	72%	63%	76%	80%	74%	81%	78%	**77%**
Avg by Month	**84%**	**65%**	**61%**	**57%**	**53%**	**66%**	**58%**	**61%**	**74%**	**64%**	**75%**	**79%**	**63%**

Priority 2 (P2) notifications are issues that pose material risk to SCE's system but are not determined to need immediate resolution (those needing immediate resolution would be categorized as Priority 1 notifications). A P2 that is located within HFRA and poses a potential fire risk will have a due date that is 6 months if in an extreme fire threat area (Tier 2) and 12 months if in an elevated fire threat area (Tier 3). Priority 2 notifications in non-HFRA can have due dates up to 36 months. Examples of P2 issues include vegetation near lines, deteriorated crossarms, splices or hardware, or insufficient pole depth. While SCE strives to complete all P2 notifications within the prescribed timeframes, there are times when this is not possible. Notifications that cannot be completed by their due date because of an external constraint (e.g., environmental/permitting issues, third-party constraints, etc.) are noted as "GO-95 Exceptions." The ability to execute notifications often depends on permits or permission from third parties, and some of those third parties, such as the Coastal Commission, National Forest, and other governmental agencies, may have longer delays as a result of the high volume of remediation work required for their review. Thus, GO-95 Exceptions have been removed from this reporting as indicated in Table II-43. Notifications that cannot be completed by their due date because of an internal constraint

(e.g., resources, design issues, etc.) are considered "Internal Exceptions." While any notification past its due date represents a significant priority to SCE, risk-ranking is used to prioritize certain notifications as part of the company's wildfire mitigation efforts to ensure that any past-due notification which poses a high ignition risk is remediated (within SCE's ability to do so) before periods of especially increased risk (summer for dry fuel-driven risk areas and fall for wind-driven risk areas).

2. Metric Link to Compensation or Individual or Group Performance Goals

The GO-95 Corrective Actions metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals? – [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions? – [No]**

3. Metric Specific Bias Controls Discussion

The Distribution and Transmission inspection programs are responsible for performing self-validation for inspections to be completed within the minimum expected due dates for corrective action as outlined by each inspection program requirements. The self-validation process leverages various program dashboards and reporting tools to ensure corrective actions are completed in a timely manner. This includes capturing any exceptions for corrective actions unable to be performed due to limiting factors as captured by GO 95 requirements (e.g., Third Party refusal, customer issue, no access, permits required, system emergencies etc.). If corrective actions are not performed to meet program minimum requirements, then additional measures will be taken, such as, internal audits and/or quality assessments will be performed to address corrective actions and understand the program deviations for future process improvements.

Q. Metric 32 – Overhead Conductor Safety Index

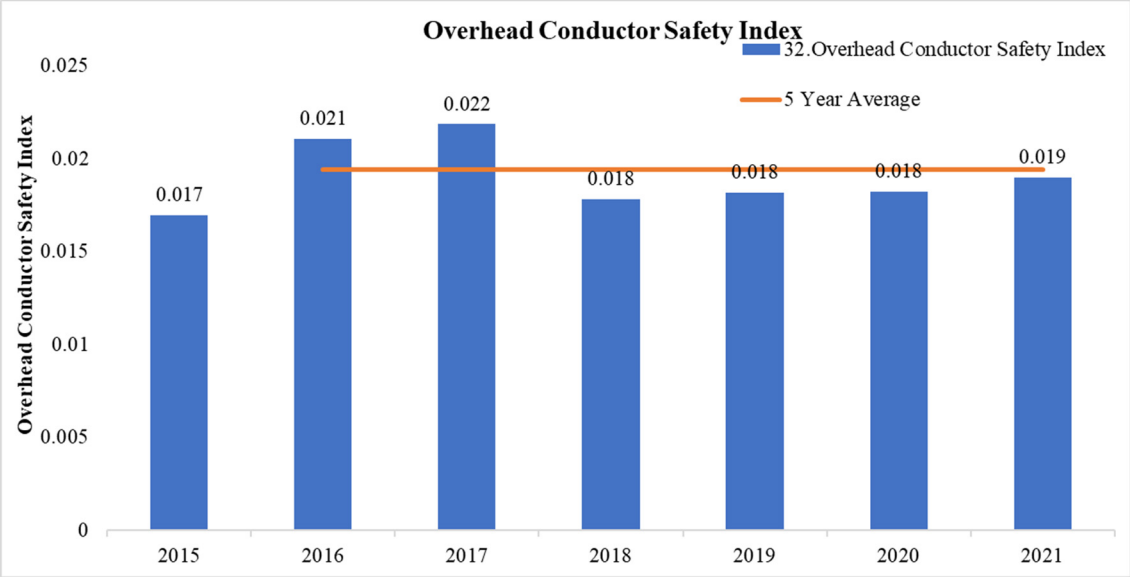
Table II-45
Overhead Conductor Safety Index

Metric Name	Risks	Category	Units	Metric Description
32.Overhead Conductor Safety Index	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of occurrences per circuit mile	Overhead Conductor Safety Index is the sum of all annual occurrences on overhead transmission or primary voltage distribution conductors satisfying one or more of the following conditions divided by total circuit miles in the system x 1,000: 1) A conductor or splice becomes physically broken; 2) A conductor is dislodged from its intended design position due to either malfunction of its attachment points and/or supporting structures or contact with foreign objects (including vegetation); 3) A conductor falls from its intended position to rest on the ground or a foreign object; 4) A conductor comes into contact with communication circuits, guy wires, or conductors of a lower voltage; or 5) A power pole carrying normally energized conductors leans by more than 45 degrees in any direction relative to the vertical reference when measured at ground level. Separate metrics are reported for transmission and primary voltage distribution conductors. Secondary voltage conductors and service drops are not included in this metric.

1. Metric Data and Discussion

As indicated in the Technical Working Groups and in written comments in R.20-07-013, SCE does not have the ability to report out on this metric per the five subcomponents listed above. SCE has assumed that the spirit of this metric aligns with our Wires Down metric definition as stated in Metrics 1 and 2 and the numbers above represent the number of Distribution and Transmission Wire Down Events divided by total overhead circuit miles. For a discussion of activities and initiatives that SCE is undertaking to reduce wire down events please refer to Section II.B.1.

Figure II-13
Annual Overhead Conductor Safety Index Data



2. Metric Link to Compensation or Individual or Group Performance Goals

The Overhead Conductor Size metric is not linked to executive compensation. For a further discussion of how SCE determined which metrics are linked to executive compensation please refer to Section I.B.

- **Is Metric Used for the Purposes of Determining Executive (Director Level or Higher) Compensation Levels and/or Incentives? – [No]**
- **Is Metric Linked to the Determination of Individual or Group Performance Goals?– [No]**
- **Is Metric Linked to Executive (Director Level or Higher) Positions?– [No]**

3. Metric Specific Bias Controls Discussion

For a description of the bias controls in place for determining a wire down event please refer to Section II.B.3.

Attachment A

SCE 2021 Safety Performance Metrics – Historical Data

Southern California Edison Safety Performance Metrics

Metric Name	Risks	Metric Category	Units	Metric Description
1. T&D Overhead Wires Down	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); excludes down secondary distribution wires and "Major Event Days" (typically due to severe storm events) as defined by the IEEE.
2. T&D Overhead Wires Down - Major Event Days	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); includes down secondary distribution wires. Includes "Major Event Days" (typically due to severe storm events) as defined by the IEEE.
3. Electric Emergency Response	Wildfire Overhead Conductor Public Safety Worker Safety	Electric	The time in minutes that an electric crew person or a qualified first responder takes to respond after receiving a call which results in an emergency order.	Average time and median time in minutes to respond on-site to an electric-related emergency notification from the time of notification to the time a representative (or qualified first responder) arrived onsite. Emergency notification includes all notifications originating from 911 calls and calls made directly to the utilities' safety hotlines. The data used to determine the average time and median time shall be provided in increments as defined in GO 112-F 123.2 (c) as supplemental information, not as a metric.
4. Fire Ignitions	Overhead Conductor Wildfire Public Safety Worker Safety Catastrophic Event Preparedness	Electric	Number of ignitions	The number of fire incidents annually reportable to the California Public Utilities Commission (CPUC) per Decision 14-02-015.
14. Employee Days Away, Restricted and Transfer (DART) Rate	Employee Safety	Injuries	DART Cases times 200,000 divided by employee hours worked	DART Rate is calculated based on number of Occupational Safety and Health Administration (OSHA)-recordable injuries resulting in Days Away from work and/or Days on Restricted Duty or Job Transfer, and hours worked.
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	Employee Safety	Injuries	Number of SIF-Actual cases among employees x 200,000/employee hours worked	Rate of SIF Actual[2] (Employee) is calculated using the formula: Number of SIF-Actual cases among employees x 200,000 / employee hours worked, where SIF Actual is counted using the methodology developed by the Edison Electrical Institute's (EEI) Occupational Health and Safety Committee (OHSC) Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Actual, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also provide SIF Actual data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.
16. Rate of SIF Actual (Contractor)	Contractor Safety	Injuries	Number of SIF-Actual cases among contractors x 200,000/contractor hours worked	Rate of SIF Actual[3] (Contractor) is calculated using the formula: Number of SIF-Actual cases among contractors x 200,000 / contractor hours worked, where SIF Actual is counted using the methodology developed by the EEI OHSC Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing incidents where a SIF occurred, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also report SIF Actual Rate data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.
17. Rate of SIF Potential (Employee)	Employee Safety	Injuries	Number of SIF-Potential cases among employees x 200,000/employee hours worked	Rate of SIF Potential (Employee) is calculated using the formula: Number of SIF Potential cases among employees x 200,000/employee hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model.[4] If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it. As a supplemental reporting requirement to the Potential SIF Rate (Employee), all utilities shall provide information about the key lessons learned from Potential SIF (Employee) incidents.
18. Rate of SIF Potential (Contractor)	Contractor Safety	Injuries	Number of SIF-Potential cases among contractors x 200,000/contractor hours worked	Rate of SIF Potential (contractor) is calculated using the formula: Number of SIF Potential cases among contractors x 200,000/contractor hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model.[5] If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it. As a supplemental reporting requirement to the Potential SIF Rate (Contractor), all utilities shall provide information about key lessons learned from SIF Potential (Contractor) incidents.
19. Contractor Days Away, Restricted Transfer (DART)	Contractor Safety	Injuries	OSHA DART Rate.	DART Rate: Days Away, Restricted and Transfer (DART) Cases include OSHA-recordable Lost Work Day Cases and injuries that involve job transfer or restricted work activity. DART Rate is calculated as DART Cases times 200,000 divided by contractor hours worked.
20. Public Serious Injuries and Fatalities	Public Safety	Injuries	Number of Serious Injuries and Fatalities	A fatality or personal injury requiring in-patient hospitalization involving utility facilities or equipment. Equipment includes utility vehicles used during the course of business.
21. Helicopter/ Flight Accident or Incident	Aviation Safety Helicopter Operations	Vehicle	Number of accidents or incidents (as defined in 49 CFR Section 830.5 "Immediate Notification") per 100,000 flight hours.	Defined by Federal Aviation Regulations (FARs), reportable to Federation Aviation Administration per 49-Code of Federal Regulations (CFR)-830.
25. Wires-Down not resulting in Automatic De-energization	Electric Overhead, wildfire	Electric	Percentage of wires down occurrences	This metric is defined as the number of occurrences of wire down events in the past calendar year that did not result in automatic (i.e., not manually activated) de-energization by circuit protection devices such as fuses, circuit breakers, and reclosers, etc. on all portions of a downed conductor that rest on the ground. This metric does not consider possible energization due to induced voltages from magnetic coupling of parallel circuits. Metric excludes secondary conductors and service drops. The metric is reported as a percentage of all wires down events in the past calendar year. Separate metrics are provided for transmission and distribution systems.
26. Missed Inspections and Patrols for Electric Circuits	Electric Overhead, wildfire	Electric	Percentage of structures that missed inspection relative to total required structures.	Metrics are calculated as annual number of overhead electric structures that did not comply with the inspection frequency requirements divided by total number of overhead electric structures with inspections due in the past calendar year. Separate metrics are provided for patrols, detailed inspections. Separate metrics are provided for primary distribution and transmission overhead circuits. "Minimum patrol frequency" refers to the frequency of patrols as specified in GO 165. "Structures" refers to electric assets such as transformers, switching protective devices, capacitors, lines, poles, etc.
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	Electric Overhead, wildfire	Electric	Percentage relative to total circuit miles	Percentage of primary distribution overhead conductors in Tiers 2 and 3 HFTD that is #6 copper. Secondary conductors are excluded.
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)	Electric safety and wildfire	Electric	Percentage of corrective actions completed	The number of Priority Level 2 notifications that were completed on time divided by the total number of Priority Level 2 notifications that were due in the calendar year in Tiers 2 and 3, HFTD. Consistent with GO 95 Rule 18 provisions, the proposed metric should exclude notifications that qualify for extensions under reasonable circumstances. Separate metrics are provided for distribution and transmission systems.
32.Overhead Conductor Safety Index	Wildfire Transmission Overhead Conductor	Electric	Number of occurrences per circuit mile	Overhead Conductor Safety Index is the sum of all annual occurrences on overhead transmission or primary voltage distribution conductors satisfying one or more of the following conditions divided by total circuit miles in the system x 1,000:

1) SCE's Approved Safety Performance Metrics from D21-11-009 Appendix B

Southern California Edison Safety Performance Metrics - Monthly Data

Date	1. T&D Overhead Wires Down	2. T&D Overhead Wires Down - Major Event Days	3. Electric Emergency Response (Avg)	3. Electric Emergency Response (Median)	4. Fire Ignitions	14. Employee Days Away, Restricted and Transfer (DART) Rate	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	15. Serious Injuries or Fatalities (SIF) Actual (Employee) - Cal OSHA Acutals	16. Rate of SIF Actual (Contractor)	16. SIF Actual (Contractor) - Cal OSHA Actuals	17. Rate of SIF Potential (Employee)	18. Rate of SIF Potential (Contractor)
Dec-21	91	245	87.9%	38.0%	4	0.73	0.000	0	0.000	0	0.208	0.000
Nov-21	54	125	62.4%	38.0%	3	0.95	0.000	0	0.414	2	0.210	0.520
Oct-21	108	166	57.7%	37.0%	12	1.56	0.000	0	0.091	1	0.368	0.270
Sep-21	75	114	43.5%	36.0%	14	1.87	0.094	0	0.206	1	0.187	0.520
Aug-21	74	113	42.7%	33.0%	21	0.99	0.000	0	0.197	1	0.360	0.200
Jul-21	73	177			23	0.66	0.000	1	0.000	0	0.000	0.450
Jun-21	95	197			30	1.32	0.176	0	0.000	0	0.000	0.420
May-21	93	163			20	0.86	0.095	1	0.317	3	0.095	0.210
Apr-21	69	128			16	1.40	0.000	0	0.000	0	0.611	0.710
Mar-21	101	173	36.3%	29.0%	7	0.57	0.081	1	0.000	0	0.081	0.340
Feb-21	79	145	44.3%	32.0%	11	0.85	0.094	0	0.000	0	0.094	0.600
Jan-21	129	311	60.0%	33.0%	12	0.84	0.188	1	0.243	1	0.094	0.490
Dec-20	57	181	44.0%	32.0%	7	0.93	0.000	0	0.409	1	0.093	0.310
Nov-20	101	207	82.1%	35.0%	12	0.40	0.000	0	0.000	0	0.201	0.640
Oct-20	58	220	130.1%	33.0%	12	0.87	0.079	1	0.247	2	0.000	0.250
Sep-20	57	198	65.9%	32.0%	8	1.28	0.256	2	0.107	1	0.171	0.530
Aug-20	105	192	38.6%	29.0%	20	1.21	0.086	0	0.217	2	0.259	0.430
Jul-20	78	135	35.4%	30.0%	16	0.93	0.255	1	0.436	4	0.085	0.220
Jun-20	119	207	37.1%	30.0%	42	0.25	0.083	1	0.105	0	0.083	0.740
May-20	92	178	36.2%	29.0%	12	0.78	0.087	0	0.105	1	0.000	0.110
Apr-20	84	154	39.2%	28.0%	4	0.49	0.162	1	0.493	4	0.000	0.370
Mar-20	98	141	36.1%	30.0%	8	1.28	0.256	1	0.000	1	0.256	0.450
Feb-20	89	149	51.5%	33.0%	4	0.87	0.097	0	0.115	2	0.097	0.580
Jan-20	66	106	40.2%	32.0%	4	1.55	0.091	0	0.109	1	0.000	0.540
Dec-19	126	223	69.3%	35.0%	1	0.51	0.102	0	0.104	0	0.102	0.210
Nov-19	74	170	114.3%	34.0%	9	0.94	0.000	0	0.088	0	0.419	0.090
Oct-19	40	126	47.5%	32.0%	7	0.98	0.000	0	0.087	1	0.082	0.610
Sep-19	77	126	42.9%	31.5%	20	1.32	0.000	0	0.094	0	0.188	0.470
Aug-19	50	89	37.9%	32.0%	20	1.23	0.175	2	0.095	2	0.175	0.190
Jul-19	85	121	36.2%	30.0%	15	1.37	0.091	1	0.107	2	0.091	0.860
Jun-19	77	105	37.8%	31.0%	23	0.87	0.000	0	0.209	2	0.097	1.150
May-19	83	114	37.2%	30.0%	7	1.89	0.000	0	0.112	1	0.180	0.330
Apr-19	69	131	52.7%	32.0%	15	0.73	0.092	0	0.118	0	0.092	0.590
Mar-19	78	133	37.4%	31.0%	5	1.77	0.000	1	0.223	0	0.093	0.330
Feb-19	86	248	59.0%	37.0%	1	1.49	0.199	0	0.139	0	0.398	0.420
Jan-19	118	205	43.5%	31.0%	1	0.82	0.000	0	0.335	0	0.000	0.330
Dec-18	84	143	40.3%	33.0%	5	1.10	0.110	0	0.531	2	0.000	0.710
Nov-18	53	170	45.1%	32.0%	6	0.61	0.000	0	0.210	1	0.204	0.420
Oct-18	56	146	129.8%	39.0%	16	1.65	0.000	0	0.126	1	0.174	0.380
Sep-18	75	104	36.2%	31.0%	6	1.25	0.000	0	0.257	1	0.000	0.510
Aug-18	72	83	35.9%	30.0%	13	1.22	0.087	1	0.577	0	0.175	0.430
Jul-18	57	162	41.4%	31.0%	11	0.88	0.098	1	0.147	1	0.098	0.150
Jun-18	127	193	36.2%	30.0%	18	0.58	0.097	1	0.425	2	0.097	0.570
May-18	74	131	36.0%	30.0%	8	1.30	0.186	1	0.892	5	0.186	1.040
Apr-18	100	189	35.6%	29.0%	14	0.59	0.000	0	0.141	0	0.098	0.420
Mar-18	102	155	35.0%	30.0%	2	0.65	0.186	1	0.451	3	0.186	1.050
Feb-18	93	151	36.8%	30.0%	6	1.06	0.317	0	0.000	0	0.106	0.710
Jan-18	67	133	56.3%	34.0%	4	0.77	0.289	0	0.174	1	0.000	1.040
Dec-17	75	164	52.6%	33.0%	3	0.32	0.000	0			0.324	
Nov-17	68	88	38.2%	34.0%	3	0.43	0.000	0			0.216	
Oct-17	79	171	37.7%	31.0%	6	0.91	0.091	1			0.455	
Sep-17	119	245	44.2%	33.0%	7	0.79	0.099	1			0.198	
Aug-17	91	231	45.9%	32.0%	13	1.78	0.178	0			0.801	
Jul-17	93	152	38.9%	33.0%	15	1.16	0.000	0			0.739	
Jun-17	97	230	43.7%	34.0%	21	1.33	0.285	1			0.285	
May-17	105	208	44.6%	33.0%	17	1.23	0.190	1			0.379	
Apr-17	93	232	64.1%	40.0%	9	0.83	0.000	0			0.415	
Mar-17	138	261	54.1%	36.0%	6	0.99	0.181	2			0.452	
Feb-17	88	222	91.3%	42.5%	1	0.84	0.000	0			0.314	
Jan-17	131	413	60.1%	39.0%	4	1.10	0.200	1			0.300	
Dec-16	129	230			6	0.66	0.000	0				
Nov-16	81	214			5	0.66	0.000	0				
Oct-16	76	245			11	1.26	0.097	0				
Sep-16	108	262			9	0.88	0.196	2				
Aug-16	73	207			4	1.33	0.177	0				
Jul-16	76	191			6	0.52	0.105	0				
Jun-16	82	172			16	0.65	0.186	1				
May-16	97	134			8	0.68	0.097	0				
Apr-16	127	208			14	0.48	0.096	1				
Mar-16	110	158			3	0.81	0.000	0				
Feb-16	86	164			10	0.89	0.099	1				
Jan-16	93	229			4	0.71	0.203	2				
Dec-15	95	164			2	0.60	0.100	1				
Nov-15	78	126			8	0.11	0.000	0				
Oct-15	79	139			7	0.81	0.090	0				
Sep-15	77	154			8	1.19	0.000	0				
Aug-15	67	133			7	0.92	0.092	1				
Jul-15	103	152			11	1.07	0.000	0				
Jun-15	81	120			19	0.35	0.088	0				
May-15	74	101			17	0.85	0.190	2				

Southern California Edison Safety Performance Metrics - Monthly Data

Date	1. T&D Overhead Wires Down	2. T&D Overhead Wires Down - Major Event Days	3. Electric Emergency Response (Avg)	3. Electric Emergency Response (Median)	4. Fire Ignitions	14. Employee Days Away, Restricted and Transfer (DART) Rate	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	15. Serious Injuries or Fatalities (SIF) Actual (Employee) - Cal OSHA Acutals	16. Rate of SIF Actual (Contractor)	16. SIF Actual (Contractor) - Cal OSHA Actuals	17. Rate of SIF Potential (Employee)	18. Rate of SIF Potential (Contractor)
Apr-15	80	109			20	1.14	0.088	1				
Mar-15	96	125			4	1.46	0.514	1				
Feb-15	55	77			2	1.16	0.000	0				
Jan-15	88	132			2	1.40	0.175	1				
Dec-14	119	241			6	0.36						
Nov-14	63	100			6	0.89						
Oct-14	71	101			3	0.84						
Sep-14	67	126			5	0.26						
Aug-14	91	123			6	0.90						
Jul-14	64	100			6	0.88						
Jun-14	85	118			6	1.18						
May-14	81	131			1	1.17						
Apr-14						0.78						
Mar-14						1.42						
Feb-14						1.36						
Jan-14						1.06						
Dec-13						1.07						
Nov-13						1.95						
Oct-13						2.08						
Sep-13						1.45						
Aug-13						1.72						
Jul-13						1.16						
Jun-13						1.59						
May-13						1.67						
Apr-13						2.02						
Mar-13						1.35						
Feb-13						2.36						
Jan-13						1.79						
Dec-12						1.64						
Nov-12						1.31						
Oct-12						1.51						
Sep-12						1.77						
Aug-12						1.81						
Jul-12						2.10						
Jun-12						1.60						
May-12						2.60						
Apr-12						2.02						
Mar-12						1.54						
Feb-12						1.77						
Jan-12						2.09						

Southern California Edison Safety Performance Metrics - Monthly Data

Date	19. Contractor Days Away, Restricted Transfer (DART)	20. Public Serious Injuries and Fatalities	21. Helicopter / Flight Accident or Incident			25. Wires-Down not resulting in Automatic De-energization - Distribution	25. Wires-Down not resulting in Automatic De-energization - Transmission	27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD) - Distribution	29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD) - Transmission
			Total Incident Count	*Total Flight Hours*	*Total Incident Rate*					
Dec-21	0.340	0	0	548.21	0	16.7%	0%	4.3%	92%	78%
Nov-21	0.520	1	0	661.81	0	22.5%	0%	4.4%	83%	81%
Oct-21	0.270	2	0	620.71	0	20.5%	0%	4.4%	79%	74%
Sep-21	0.720	0	0	468.41	0	24.4%	0%	4.5%	84%	80%
Aug-21	0.590	1	0	463.51	0	21.5%	0%	4.5%	85%	76%
Jul-21	0.330	4	0	511.11	0	25.0%	0%	4.6%	85%	63%
Jun-21	0.420	1	0	475.91	0	11.4%	100%	4.7%	86%	72%
May-21	0.420	0	1.00	499.71	200	16.5%	0%		90%	84%
Apr-21	0.000	0	0	760.21	0	17.6%	0%		78%	82%
Mar-21	0.220	0	0	822.21	0	13.3%	0%		86%	75%
Feb-21	0.120	0	0	565.21	0	23.6%	0%		84%	71%
Jan-21	0.360	0	0	447.01	0	16.0%	0%		84%	83%
Dec-20	0.610	1	0	659.8	0	16.7%	0%		90%	84%
Nov-20	0.270	0	0	1090.2	0	26.5%	50%		89%	88%
Oct-20	0.410	0	0	943.7	0	23.8%	0%		85%	83%
Sep-20	0.000	1	0	300.5	0	16.5%	0%		83%	84%
Aug-20	0.430	1	0	190.1	0	24.1%	0%		83%	83%
Jul-20	0.870	2	0	358.2	0	16.9%	0%		88%	83%
Jun-20	0.420	0	0	495.8	0	16.9%	0%		89%	74%
May-20	0.420	2	0	329.4	0	15.1%	0%		84%	48%
Apr-20	0.860	2	0	388.8	0	14.3%	50%		82%	37%
Mar-20	0.450	1	0	437.6	0	9.4%	0%		84%	48%
Feb-20	0.460	0	0	530	0	4.6%	0%		92%	82%
Jan-20	0.220	2	0	347.9	0	9.2%	0%		94%	79%
Dec-19	0.310	0	0	554.1	0		0%		95%	80%
Nov-19	0.260	1	0	543.6	0		100%		84%	81%
Oct-19	0.260	3	0	756.3	0		0%		83%	52%
Sep-19	0.470	0	0	622.5	0		0%		81%	73%
Aug-19	0.380	2	0	325.8	0		50%		83%	48%
Jul-19	0.210	2	0	770	0		0%		84%	36%
Jun-19	0.520	2	0	764	0		0%		91%	77%
May-19	0.330	0	0	644	0		0%		84%	45%
Apr-19	0.240	0	0	404.1	0		0%		80%	65%
Mar-19	0.330	1	0	431.4	0		0%		82%	74%
Feb-19	0.420	0	0	212.4	0		0%		75%	43%
Jan-19	0.500	1	0	209.7	0		0%		84%	87%
Dec-18	0.710	0	0	207.3	0		0%		89%	74%
Nov-18	0.210	4	0	325.5	0		0%		84%	56%
Oct-18	0.250	2	0	518.9	0		0%		81%	56%
Sep-18	0.130	2	0	526.4	0		0%		79%	64%
Aug-18	1.300	0	0	565.3	0		0%		83%	52%
Jul-18	1.030	1	0	548.3	0		0%		77%	56%
Jun-18	0.990	3	1	405.4	247		0%		79%	47%
May-18	0.590	1	0	186	0		0%		79%	67%
Apr-18	0.700	1	0	199	0		0%		80%	68%
Mar-18	0.450	2	0	172.8	0		0%		83%	62%
Feb-18	0.180	4	0	151.8	0		0%		81%	72%
Jan-18	0.170	0	0	324.1	0		0%		78%	85%
Dec-17		3	0	232.6	0		0%			
Nov-17		0	0	195.3	0		0%			
Oct-17		0	0	270.4	0		0%			
Sep-17		2	0	577.5	0		0%			
Aug-17		1	0	233.3	0		0%			
Jul-17		0	0	320.3	0		0%			
Jun-17		2	0	614.8	0		0%			
May-17		1	0	439.6	0		0%			
Apr-17		2	0	287.4	0		0%			
Mar-17		1	0	253.6	0		0%			
Feb-17		2	0	140.1	0		0%			
Jan-17		0	0	198.6	0		0%			
Dec-16		1	0	128.3	0		0%			
Nov-16		1	0	266.6	0		0%			
Oct-16		2	0	220.8	0		0%			
Sep-16		1	0	460.1	0		0%			
Aug-16		0	0	262.8	0		0%			
Jul-16		0	0	216.1	0		0%			
Jun-16		0	0	180.5	0		0%			
May-16		4	0	158.7	0		0%			
Apr-16		1	0	156.5	0		0%			
Mar-16		1	0	175.2	0		0%			
Feb-16		1	0	183.4	0		0%			
Jan-16		2	0	157.6	0		0%			
Dec-15		0	0	250.9	0					

Southern California Edison Safety Performance Metrics - Monthly Data

Date	19. Contractor Days Away, Restricted Transfer (DART)	20. Public Serious Injuries and Fatalities	21. Helicopter / Flight Accident or Incident			25. Wires-Down not resulting in Automatic De-energization - Distribution	25. Wires-Down not resulting in Automatic De-energization - Transmission	27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD) - Distribution	29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD) - Transmission
			Total Incident Count	*Total Flight Hours*	*Total Incident Rate*					
Nov-15		4	0	212.1	0					
Oct-15		2	0	216.6	0					
Sep-15		1	0	357.8	0					
Aug-15		2	0	224.7	0					
Jul-15		0	0	255.5	0					
Jun-15		1	0	248.1	0					
May-15		2	0	215.8	0					
Apr-15		1	0	146.3	0					
Mar-15		1	0	191.4	0					
Feb-15		2	0	155.4	0					
Jan-15		0	0	99.8	0					
Dec-14		0	0	184.4	0					
Nov-14		1	0	113.9	0					
Oct-14		2	0	156.5	0					
Sep-14		0	0	218.9	0					
Aug-14		7	0	252.5	0					
Jul-14		1	0	183.1	0					
Jun-14		4	0	181.5	0					
May-14		9	0	168.4	0					
Apr-14		1	0	178.2	0					
Mar-14		2	0	163.9	0					
Feb-14		3	0	119.8	0					
Jan-14		0	0	109.7	0					
Dec-13		0								
Nov-13		0								
Oct-13		2								
Sep-13		0								
Aug-13		1								
Jul-13		3								
Jun-13		0								
May-13		0								
Apr-13		0								
Mar-13		0								
Feb-13		0								
Jan-13		2								
Dec-12		2								
Nov-12		4								
Oct-12		0								
Sep-12		0								
Aug-12		2								
Jul-12		4								
Jun-12		2								
May-12		2								
Apr-12		1								
Mar-12		1								
Feb-12		0								
Jan-12		1								

Southern California Edison Safety Performance Metrics - Annual Data

Year	1. T&D Overhead Wires Down	2. T&D Overhead Wires Down - Major Event Days	3. Electric Emergency Response (Average)	3. Electric Emergency Response (Median	4. Fire Ignitions	14. Employee Days Away, Restricted and Transfer (DART) Rate	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	16. Rate of SIF Actual (Contractor)	17. Rate of SIF Potential (Employee)	18. Rate of SIF Potential (Contractor)	19. Contractor Days Away, Restricted Transfer (DART)	20. Public Serious Injuries and Fatalities	25. Wires-Down not resulting in Automatic De-energization - Distribution	25. Wires-Down not resulting in Automatic De-energization - Transmission	29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD) - Distribution	29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD) - Transmission	32.Overhead Conductor Safety Index
2012						1.82						19					
2013						1.69						8					
2014						0.92						30					
2015	973	1,532			107	0.94	0					16					0.017
2016	1,138	2,414			96	0.80	0					14		0%			0.021
2017	1,177	2,617	49.7	34.0	105	0.99	0		0.411			14		0%			0.022
2018	960	1,760	50.0	31.0	109	0.98	0	0.323	0.113	0.60	0.55	20		0%	81%	62%	0.018
2019	963	1,791	52.8	32.0	124	1.17	0	0.134	0.155	0.46	0.35	12		9%	86%	50%	0.018
2020	1,004	2,068	54.9	31.0	149	0.90	0	0.192	0.102	0.43	0.45	12	17%	17%	88%	78%	0.018
2021	1,041	2,057	55.8	35.0	173	1.05	0	0.124	0.193	0.39	0.36	9	19%	8%	84%	77%	0.019

Percent Improvement/Decline in SCE's 2021 Metric Performance Compared to Historical Average*

Metric Name	2021 Performance	Historical Average	Percent Improvement/Decline in SCE's 2021 Metric Performance Compared to Historical Average	Average Notes
1. T&D Overhead Wires Down	1,041	1,048	0.7%	5 year Average (2016 - 2020)
2. T&D Overhead Wires Down - Major Event Days	2,057	2,130	3.4%	5 year Average (2016 - 2020)
3. Electric Emergency Response - Average	55.8	51.8	-7.6%	4 Year Average (2017 - 2020)
4. Fire Ignitions	173	115	-50.4%	5 year Average (2016 - 2020)
14. Employee Days Away, Restricted and Transfer (DART) Rate	1.05	0.97	-8.5%	5 year Average (2016 - 2020)
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	0.06	0.10	38.6%	5 year Average (2016 - 2020)
16. Rate of SIF Actual (Contractor)	0.124	0.216	42.7%	3 Year Average (2018 - 2020)
17. Rate of SIF Potential (Employee)	0.193	0.195	1.2%	3 Year Average (2018 - 2020)
18. Rate of SIF Potential (Contractor)	0.390	0.497	21.5%	3 Year Average (2018 - 2020)
19. Contractor Days Away, Restricted Transfer (DART)	0.36	0.5	20.0%	3 Year Average (2018 - 2020)
20. Public Serious Injuries and Fatalities	9	14	37.5%	5 year Average (2016 - 2020)
21. Helicopter/ Flight Accident or Incident				
25. Wires-Down not resulting in Automatic De-energization	N/A	N/A	N/A	Insufficient histroical data
26. Missed Inspections and Patrols for Electric Circuits				
Distribution Detailed	2%	2%	-5.3%	9 year Average (2012- 2021)
Distribution Patrols	0%	1%	100.0%	9 year Average (2012- 2021)
Transmission Detailed	3%	7%	58.6%	3 Year Average (2018 - 2020)
Transmission Patrols	2%	2%	11.1%	9 year Average (2012- 2021)
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	N/A	N/A	N/A	Insufficient histroical data
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)				
Distribution	84%	85%	1.1%	3 Year Average (2018 - 2020)
Transmission	77%	63%	-22.0%	3 Year Average (2018 - 2020)
32.Overhead Conductor Safety Index	0.019	0.019	0.1%	6 year Average (2015 - 2020)

**For GO-95 corrective actions metrics, where a higher value is better, positive values show a percent increase in the metric's performance in the table; for all other metrics where a lower value is better, (e.g., fire ignitions, wires down, SIF, etc.), positive values show a percent decrease in the metric's performance.*

#1 - T&D Overhead Wires Down

Metric Name	Risks	Category	Units	Metric Description
1. T&D Overhead Wires Down	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); excludes down secondary distribution wires and "Major Event Days" (typically due to severe storm events) as defined by the IEEE.

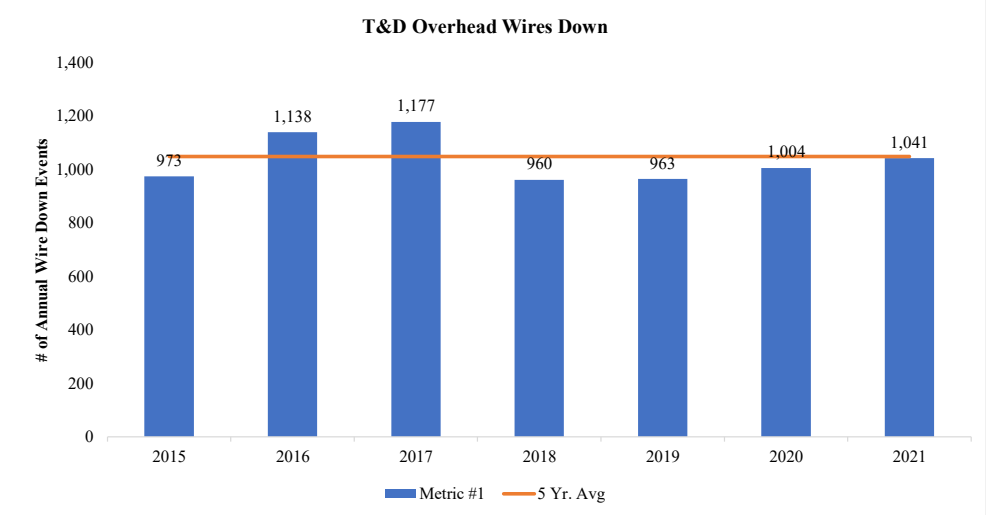
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals	Monthly Average
2014	N/A	N/A	N/A	N/A	81	85	64	91	67	71	63	119	**641**	**80**
2015	88	55	96	80	74	81	103	67	77	79	78	95	**973**	**81**
2016	93	86	110	127	97	82	76	73	108	76	81	129	**1,138**	**95**
2017	131	88	138	93	105	97	93	91	119	79	68	75	**1,177**	**98**
2018	67	93	102	100	74	127	57	72	75	56	53	84	**960**	**80**
2019	118	86	78	69	83	77	85	50	77	40	74	126	**963**	**80**
2020	66	89	98	84	92	119	78	105	57	58	101	57	**1,004**	**84**
2021	129	79	101	69	93	95	73	74	75	108	54	91	**1,041**	**87**
Average by Month	**99**	**82**	**103**	**89**	**87**	**95**	**79**	**78**	**82**	**71**	**72**	**97**	-	-

Annual Historical Data:

Year	Metric #1	5 Yr. Avg
2014	641	1,048
2015	973	1,048
2016	1,138	1,048
2017	1,177	1,048
2018	960	1,048
2019	963	1,048
2020	1,004	1,048
2021	1,041	1,048
5 Year Average	**1,048**	

Annual Historical Chart



2 - T&D Overhead Wires Down - Major Event Days

Metric Name	Risks	Category	Units	Metric Description
2. T&D Overhead Wires Down - Major Event Days	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of Wire Down Events	Number of instances where an electric transmission or primary distribution conductor is broken, or remains intact, and falls from its intended position to rest on the ground or a foreign object; a conductor is considered energized unless confirmed in an idle state (i.e. normally de-energized); includes down secondary distribution wires. Includes "Major Event Days" (typically due to severe storm events) as defined by the IEEE.

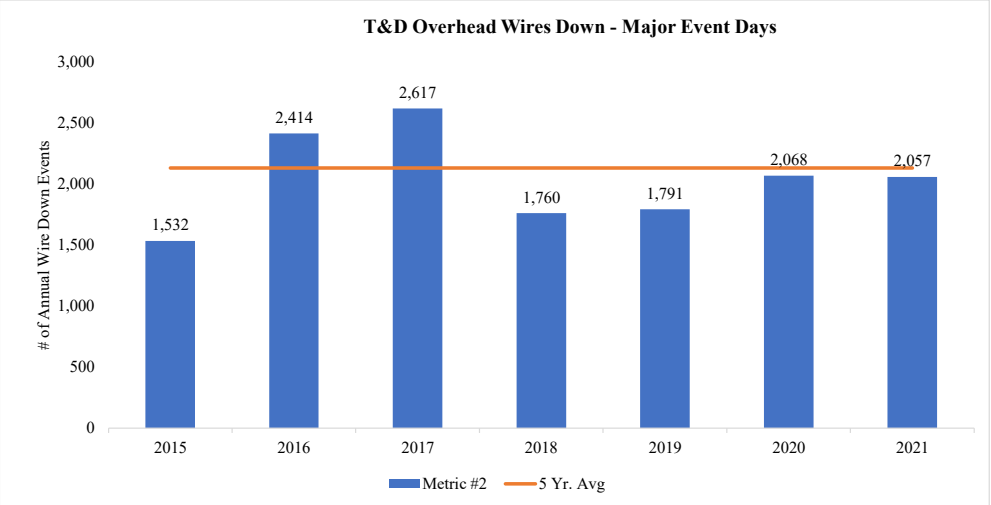
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals	Monthly Average
2014	N/A	N/A	N/A	N/A	131	118	100	123	126	101	100	241	**1,040**	**130**
2015	132	77	125	109	101	120	152	133	154	139	126	164	**1,532**	**128**
2016	229	164	158	208	134	172	191	207	262	245	214	230	**2,414**	**201**
2017	413	222	261	232	208	230	152	231	245	171	88	164	**2,617**	**218**
2018	133	151	155	189	131	193	162	83	104	146	170	143	**1,760**	**147**
2019	205	248	133	131	114	105	121	89	126	126	170	223	**1,791**	**149**
2020	106	149	141	154	178	207	135	192	198	220	207	181	**2,068**	**172**
2021	311	145	173	128	163	197	177	113	114	166	125	245	**2,057**	**171**
Average by Month	**218**	**165**	**164**	**164**	**145**	**168**	**149**	**146**	**166**	**164**	**150**	**199**	**1,889**	**164**

Annual Historical Data:

Year	Metric #2	5 Yr. Avg
2014	1,040	2,130
2015	1,532	2,130
2016	2,414	2,130
2017	2,617	2,130
2018	1,760	2,130
2019	1,791	2,130
2020	2,068	2,130
2021	2,057	2,130
5 Year Average	**2,130**	

Annual Historical Chart



3 - Electric Emergency Response (Including Major Event Days)

Metric Name	Risks	Category	Units	Metric Description
3. Electric Emergency Response	Wildfire Overhead Conductor Public Safety Worker Safety	Electric	The time in minutes that an electric crew person or a qualified first responder takes to respond after receiving a call which results in an	Average time and median time in minutes to respond on-site to an electric-related emergency notification from the time of notification to the time a representative (or qualified first responder) arrived onsite. Emergency notification includes all notifications originating from 911 calls and calls made directly to the utilities' safety hotlines. The data used to determine the average time and median time shall be provided in increments as defined in GO 112-F 123.2 (c) as supplemental information, not as a metric.

Monthly Historical Data - Average Time to Respond

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	60.1	91.3	54.1	64.1	44.6	43.7	38.9	45.9	44.2	37.7	38.2	52.6	49.7
2018	56.3	36.8	35.0	35.6	36.0	36.2	41.4	35.9	36.2	129.8	45.1	40.3	50.0
2019	43.5	59.0	37.4	52.7	37.2	37.8	36.2	37.9	42.9	47.5	114.3	69.3	52.8
2020	40.2	51.5	36.1	39.2	36.2	37.1	35.4	38.6	65.9	130.1	82.1	44.0	54.9
2021	60.0	44.3	36.3					42.7	43.5	57.7	62.4	87.9	55.8
Average by Month	**52.0**	**56.6**	**39.8**	**47.9**	**38.5**	**38.7**	**38.0**	**40.2**	**46.6**	**80.6**	**68.4**	**58.8**	

***SCE does not have data from April 2021 – July 2021. SCE inadvertently was not recording the incoming call time at the Call Center during these months. This was updated starting in August 2021.*

Monthly Historical Data - Median Time to Respond

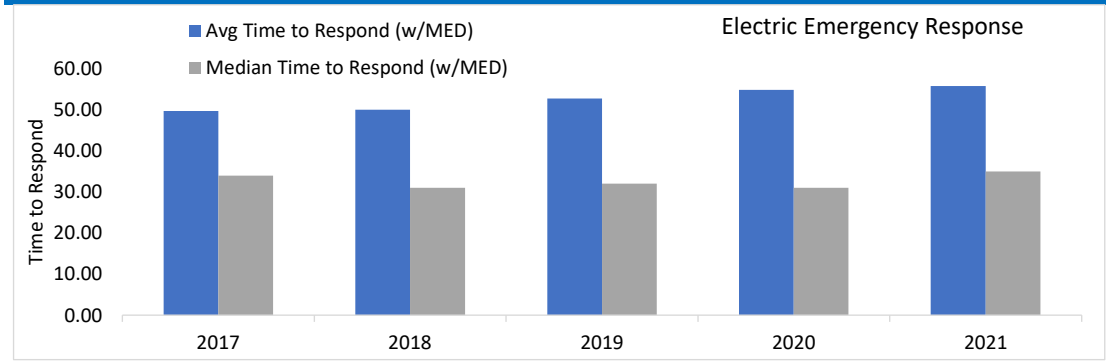
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	39.0	42.5	36.0	40.0	33.0	34.0	33.0	32.0	33.0	31.0	34.0	33.0	34.0
2018	34.0	30.0	30.0	29.0	30.0	30.0	31.0	30.0	31.0	39.0	32.0	33.0	31.0
2019	31.0	37.0	31.0	32.0	30.0	31.0	30.0	32.0	31.5	32.0	34.0	35.0	32.0
2020	32.0	33.0	30.0	28.0	29.0	30.0	30.0	29.0	32.0	33.0	35.0	32.0	31.0
2021	33.0	32.0	29.0					33.0	36.0	37.0	38.0	38.0	35.0
Average by Month	**33.80**	**34.90**	**31.20**	**32.25**	**30.50**	**31.25**	**31.00**	**31.20**	**32.70**	**34.40**	**34.60**	**34.20**	

***SCE does not have data from April 2021 – July 2021. SCE inadvertently was not recording the incoming call time at the Call Center during these months. This was updated starting in August 2021.*

Annual Historical Data:

Year	Avg Time to Respond (w/MED)	Median Time to Respond (w/MED)
2017	49.71	34.00
2018	50.01	31.00
2019	52.75	32.00
2020	54.87	31.00
2021	55.79	35.00
4 Year Averrage	**51.83**	**32.00**

Annual Historical Chart



3 - Electric Emergency Response (Excluding Major Event Days)

Metric Name	Risks	Category	Units	Metric Description
3. Electric Emergency Response	Wildfire Overhead Conductor Public Safety Worker Safety	Electric	The time in minutes that an electric crew person or a qualified first responder takes to respond after receiving a call [illegible]	Average time and median time in minutes to respond on-site to an electric-related emergency notification from the time of notification to the time a representative (or qualified first responder) arrived onsite. Emergency notification includes all notifications originating from 911 calls and calls made directly to the utilities' safety hotlines. The data used to determine the average time and median time shall be provided in increments as defined in GO 112-F 123.2 (c) as supplemental information, not as a metric.

Monthly Historical Data - Average Time to Respond

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	53.31	57.17	54.15	64.12	44.56	43.71	38.95	42.12	44.18	37.73	38.17	41.01	46.10
2018	35.40	36.84	35.03	35.61	35.99	36.18	39.61	35.86	36.22	39.27	44.37	40.32	37.51
2019	43.45	47.29	37.37	36.85	37.18	37.80	36.20	38.27	42.97	38.68	45.39	47.16	40.77
2020	40.15	51.47	36.11	39.17	36.16	37.06	35.43	38.89	37.31	44.38	83.90	44.00	44.10
2021	39.63	44.27	36.27					42.45	43.52	55.34	42.49	52.37	44.76
Average by Month	**42.39**	**47.41**	**39.79**	**43.94**	**38.47**	**38.69**	**37.55**	**39.52**	**40.84**	**43.08**	**50.87**	**44.97**	

***SCE does not have data from April 2021 – July 2021. SCE inadvertently was not recording the incoming call time at the Call Center during these months. This was updated starting in August 2021.*

Monthly Historical Data - Median Time to Respond

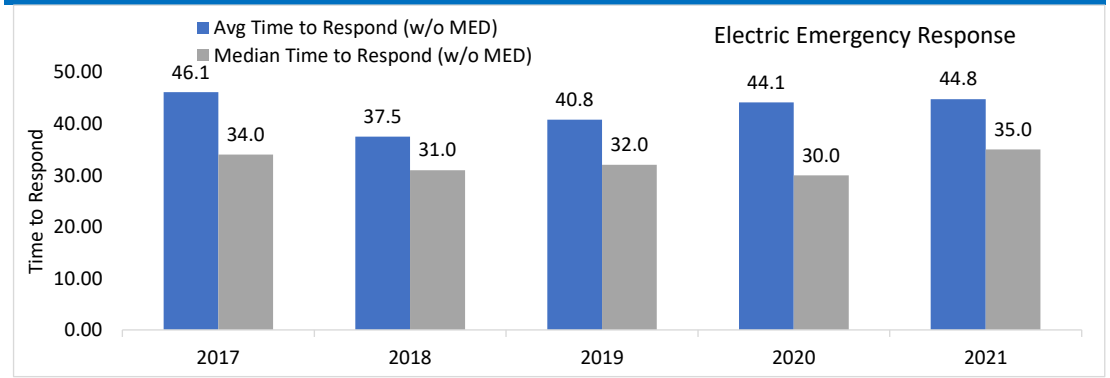
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	37.5	41.0	36.0	40.0	33.0	34.0	33.0	31.0	33.0	31.0	34.0	32.0	34.00
2018	31.0	30.0	30.0	29.0	30.0	30.0	31.0	30.0	31.0	31.0	33.0	33.0	31.00
2019	31.0	35.0	31.0	31.0	30.0	31.0	30.0	32.0	31.0	31.0	33.0	34.0	32.00
2020	32.0	33.0	30.0	28.0	29.0	30.0	30.0	30.0	29.0	29.0	34.0	32.0	30.00
2021	31.0	32.0	29.0	36.0	40.0	34.0	36.0	33.0	36.0	37.0	37.0	36.0	35.00
Average by Month	**32.88**	**34.75**	**31.75**	**32.00**	**30.50**	**31.25**	**31.00**	**30.75**	**31.00**	**30.50**	**33.50**	**32.75**	**32.40**

***SCE does not have data from April 2021 – July 2021. SCE inadvertently was not recording the incoming call time at the Call Center during these months. This was updated starting in August 2021.*

Annual Historical Data:

Year	Avg Time to Respond (w/o MED)	Median Time to Respond (w/o MED)
2017	46.10	34.00
2018	37.51	31.00
2019	40.77	32.00
2020	44.10	30.00
2021	44.76	35.00
4 Year Averrage	**42.12**	**31.75**

Annual Historical Chart



#4 - Fire Ignitions

Metric Name	Risks	Category	Units	Metric Description
4. Fire Ignitions	Overhead Conductor Wildfire Public Safety Worker Safety Catastrophic Event Preparedness	Electric	Number of ignitions	The number of fire incidents annually reportable to the California Public Utilities Commission (CPUC) per Decision 14-02-015.

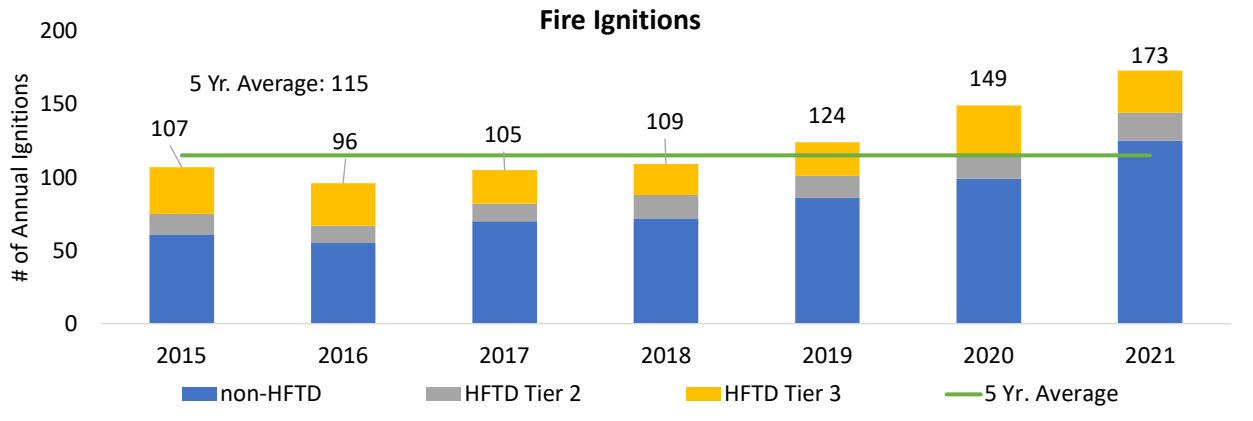
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2014	N/A	N/A	N/A	N/A	1	6	6	6	5	3	6	6	**39**
2015	2	2	4	20	17	19	11	7	8	7	8	2	**107**
2016	4	10	3	14	8	16	6	4	9	11	5	6	**96**
2017	4	1	6	9	17	21	15	13	7	6	3	3	**105**
2018	4	6	2	14	8	18	11	13	6	16	6	5	**109**
2019	1	1	5	15	7	23	15	20	20	7	9	1	**124**
2020	4	4	8	4	12	42	16	20	8	12	12	7	**149**
2021	12	11	7	16	20	30	23	21	14	12	3	4	**173**
Average by Month	**4**	**5**	**5**	**13**	**11**	**22**	**13**	**13**	**10**	**9**	**7**	**4**	**116**

Annual Historical Data:

Year	Value
2014	39
2015	107
2016	96
2017	105
2018	109
2019	124
2020	149
2021	173
5 Year Average	**115**

Annual Historical Chart



#14 - Employee Days Away, Restricted and Transfer (DART) Rate

Metric Name	Risks	Category	Units	Metric Description
14. Employee Days Away, Restricted and Transfer (DART) Rate	Employee Safety	Injuries	DART Cases times 200,000 divided by employee hours worked	DART Rate is calculated based on number of OSHA- recordable injuries resulting in Days Away from work and/or Days on Restricted Duty or Job Transfer, and hours worked

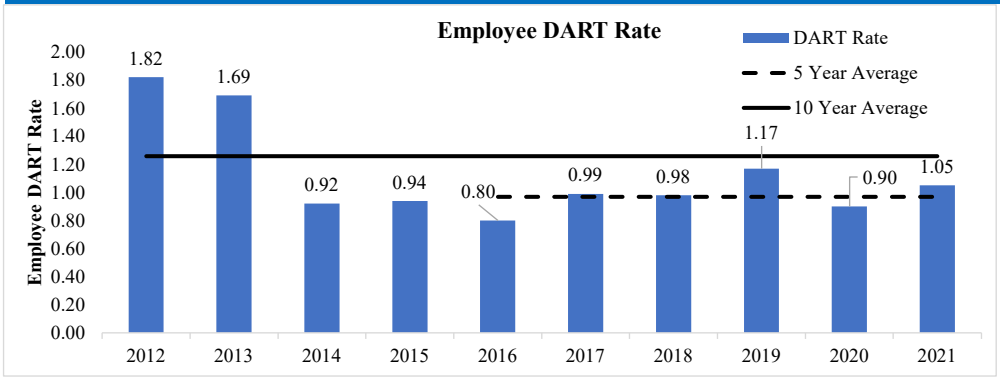
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2012	2.09	1.77	1.54	2.02	2.60	1.60	2.10	1.81	1.77	1.51	1.31	1.64	**1.82**
2013	1.79	2.36	1.35	2.02	1.67	1.59	1.16	1.72	1.45	2.08	1.95	1.07	**1.69**
2014	1.06	1.36	1.42	0.78	1.17	1.18	0.88	0.90	0.26	0.84	0.89	0.36	**0.92**
2015	1.40	1.16	1.46	1.14	0.85	0.35	1.07	0.92	1.19	0.81	0.11	0.60	**0.94**
2016	0.71	0.89	0.81	0.48	0.68	0.65	0.52	1.33	0.88	1.26	0.66	0.66	**0.80**
2017	1.10	0.84	0.99	0.83	1.23	1.33	1.16	1.78	0.79	0.91	0.43	0.32	**0.99**
2018	0.77	1.06	0.65	0.59	1.30	0.58	0.88	1.22	1.25	1.65	0.61	1.10	**0.98**
2019	0.82	1.49	1.77	0.73	1.89	0.87	1.37	1.23	1.32	0.98	0.94	0.51	**1.17**
2020	1.55	0.87	1.28	0.49	0.78	0.25	0.93	1.21	1.28	0.87	0.40	0.93	**0.90**
2021	0.84	0.85	0.57	1.40	0.86	1.32	0.66	0.99	1.87	1.56	0.95	0.73	**1.05**
Average by Month	**1.21**	**1.27**	**1.18**	**1.05**	**1.30**	**0.97**	**1.07**	**1.31**	**1.21**	**1.25**	**0.83**	**0.79**	**-**

Annual Historical Data:

Year	Value	5 Year Average	10 Year Average
2011	2.37		1.26
2012	1.82		1.26
2013	1.69		1.26
2014	0.92		1.26
2015	0.94		1.26
2016	0.80	0.97	1.26
2017	0.99	0.97	1.26
2018	0.98	0.97	1.26
2019	1.17	0.97	1.26
2020	0.90	0.97	1.26
2021	1.05	0.97	1.26
5 Year Average	**0.97**		
10 Year Average	**1.26**		

Annual Historical Chart



#15 - Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)

Metric Name	Risks	Category	Units	Metric Description
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	Employee Safety	Injuries	Number of SIF-Actual cases among employees x 200,000/employee hours worked	Rate of SIF Actual[2] (Employee) is calculated using the formula: Number of SIF-Actual cases among employees x 200,000 / employee hours worked, where SIF Actual is counted using the methodology developed by the Edison Electrical Institute's (EEI) Occupational Health and Safety Committee (OHSC) Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Actual, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also provide SIF Actual data based on OSHA reporting requirements under Section 6409.1 of the California Labor Code.

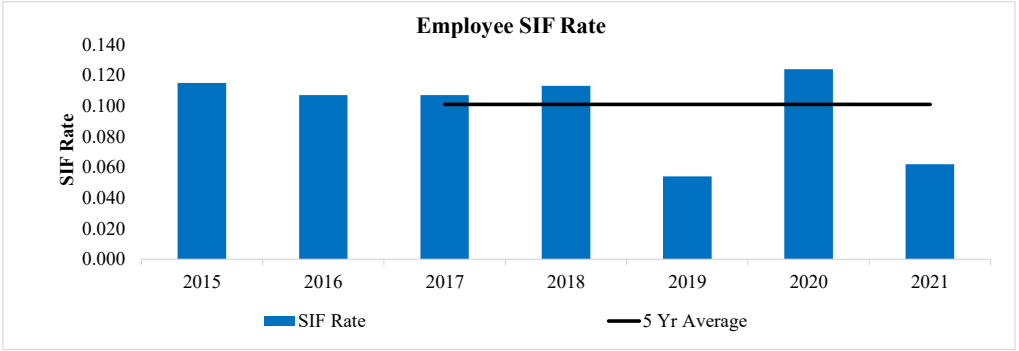
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2015	0.175	0.000	0.514	0.088	0.190	0.088	0.000	0.092	0.000	0.090	0.000	0.100	**0.115**
2016	0.203	0.099	0.000	0.096	0.097	0.186	0.105	0.177	0.196	0.097	0.000	0.000	**0.107**
2017	0.200	0.000	0.181	0.000	0.190	0.285	0.000	0.178	0.099	0.091	0.000	0.000	**0.107**
2018	0.289	0.317	0.186	0.000	0.186	0.097	0.098	0.087	0.000	0.000	0.000	0.110	**0.113**
2019	0.000	0.199	0.000	0.092	0.000	0.000	0.091	0.175	0.000	0.000	0.000	0.102	**0.054**
2020	0.091	0.097	0.256	0.162	0.087	0.083	0.255	0.086	0.256	0.079	0.000	0.000	**0.124**
2021	0.188	0.094	0.081	0.000	0.095	0.176	0.000	0.000	0.094	0.000	0.000	0.000	**0.062**
Average by Month	**0.160**	**0.119**	**0.190**	**0.073**	**0.125**	**0.123**	**0.092**	**0.133**	**0.092**	**0.060**	**0.000**	**0.052**	**-**

Annual Historical Data:

Year	SIF Rate	5 Yr Average
2015	0.115	
2016	0.107	
2017	0.107	0.101
2018	0.113	0.101
2019	0.054	0.101
2020	0.124	0.101
2021	0.062	0.101
5 Year Average	**0.1010**	

Annual Historical Chart



#16 - Rate of SIF Actual (Contractor)

Metric Name	Risks	Category	Units	Metric Description
16. Rate of SIF Actual (Contractor)	Contractor Safety	Injuries	Number of SIF-Actual cases among contractors x 200,000/contractor hours worked	Rate of SIF Actual[3] (Contractor) is calculated using the formula: Number of SIF-Actual cases among contractors x 200,000 / contractor hours worked, where SIF Actual is counted using the methodology developed by the EEI OHSC Safety and Classification Learning Model. If a utility has implemented a replicable, substantially similar evaluation methodology for assessing incidents where a SIF occurred, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Actual using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Actual differs and why it chose to use it. As a supplemental reporting requirement to the SIF Actual Rate for comparative purposes, all utilities shall also report SIF Actual Rate data based on OSHA reporting

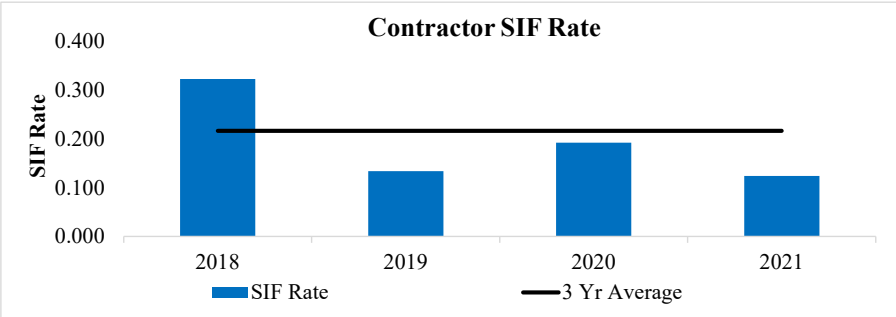
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	0.174	0.000	0.451	0.141	0.892	0.425	0.147	0.577	0.257	0.126	0.210	0.531	**0.323**
2019	0.335	0.139	0.223	0.118	0.112	0.209	0.107	0.095	0.094	0.087	0.088	0.104	**0.134**
2020	0.109	0.115	0.000	0.493	0.105	0.105	0.436	0.217	0.107	0.247	0.000	0.409	**0.192**
2021	0.243	0.000	0.000	0.000	0.317	0.000	0.000	0.197	0.206	0.091	0.414	0.000	**0.124**
Average by Month	**0.215**	**0.064**	**0.169**	**0.188**	**0.357**	**0.185**	**0.173**	**0.272**	**0.166**	**0.138**	**0.178**	**0.261**	**-**

Annual Historical Data:

Year	SIF Rate	3 Yr Average
2018	0.323	0.216
2019	0.134	0.216
2020	0.192	0.216
2021	0.124	0.216
3 Year Average	**0.2163**	

Annual Historical Chart



#17 - Rate of SIF Potential (Employee)

Metric Name	Risks	Category	Units	Metric Description
17. Rate of SIF Potential (Employee)	Employee Safety	Injuries	Number of SIF-Potential cases among employees x 200,000/employee hours worked	Rate of SIF Potential (Employee) is calculated using the formula: Number of SIF Potential cases among employees x 200,000/employee hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model.[4] If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it.

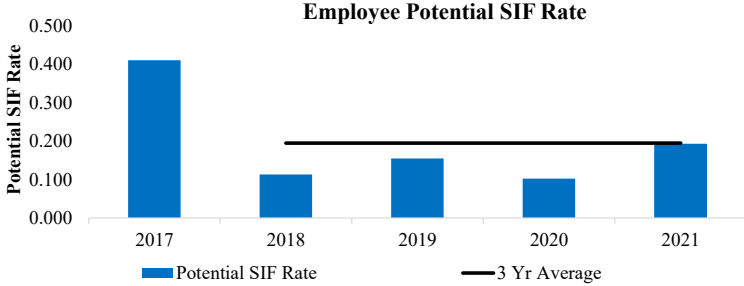
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	0.300	0.314	0.452	0.415	0.379	0.285	0.739	0.801	0.198	0.455	0.216	0.324	**0.411**
2018	0.000	0.106	0.186	0.098	0.186	0.097	0.098	0.175	0.000	0.174	0.204	0.000	**0.113**
2019	0.000	0.398	0.093	0.092	0.180	0.097	0.091	0.175	0.188	0.082	0.419	0.102	**0.155**
2020	0.000	0.097	0.256	0.000	0.000	0.083	0.085	0.259	0.171	0.000	0.201	0.093	**0.102**
2021	0.094	0.094	0.081	0.611	0.095	0.000	0.000	0.360	0.187	0.368	0.210	0.208	**0.193**
Average by Month	**0.079**	**0.202**	**0.214**	**0.243**	**0.168**	**0.112**	**0.203**	**0.354**	**0.149**	**0.216**	**0.250**	**0.145**	**-**

Annual Historical Data:

Year	Potential SIF Rate	3 Yr Average
2017	0.411	
2018	0.113	0.195
2019	0.155	0.195
2020	0.102	0.195
2021	0.193	0.195
3 Year Average	**0.1953**	

Annual Historical Chart



18. Rate of SIF Potential (Contractor)

Metric Name	Risks	Category	Units	Metric Description
18. Rate of SIF Potential (Contractor)	Contractor Safety	Injuries	Number of SIF-Potential cases among contractors x 200,000/contractor hours worked	Rate of SIF Potential (contractor) is calculated using the formula: Number of SIF Potential cases among contractors x 200,000/contractor hours worked, where a SIF incident, in this case would be events that could have led to a reportable SIF. Potential SIF incidents are identified using the EEI Safety Classification and Learning Model.[5] If a utility has implemented a replicable, substantially similar evaluation methodology for assessing SIF Potential, the utility may use that method for reporting this metric. If a utility opts to report the rate of SIF Potential using a method other than the EEI Safety Classification Model, it must explain how its methodology for counting SIF Potential differs and why it chose to use it. As a supplemental reporting requirement to the Potential SIF Rate (Contractor), all utilities shall provide information about key lessons learned from SIF Potential (Contractor) incidents.

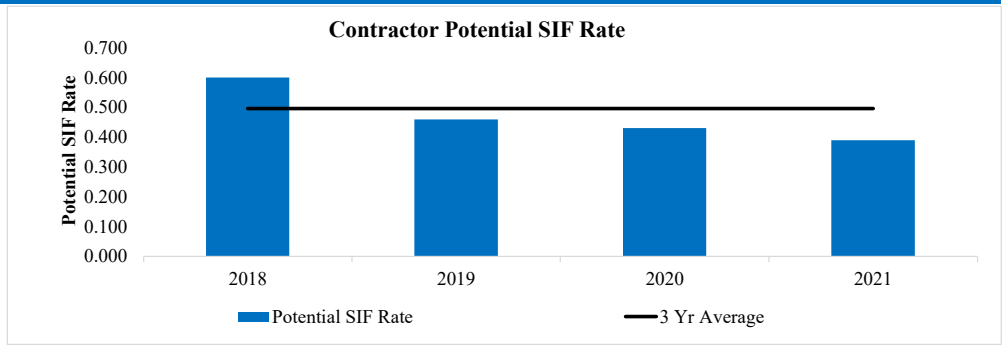
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	1.040	0.710	1.050	0.420	1.040	0.570	0.150	0.430	0.510	0.380	0.420	0.710	**0.600**
2019	0.330	0.420	0.330	0.590	0.330	1.150	0.860	0.190	0.470	0.610	0.090	0.210	**0.460**
2020	0.540	0.580	0.450	0.370	0.110	0.740	0.220	0.430	0.530	0.250	0.640	0.310	**0.430**
2021	0.490	0.600	0.340	0.710	0.210	0.420	0.450	0.200	0.520	0.270	0.520	0.000	**0.390**
Average by Month	**0.600**	**0.578**	**0.543**	**0.523**	**0.423**	**0.720**	**0.420**	**0.313**	**0.508**	**0.378**	**0.418**	**0.308**	**-**

Annual Historical Data:

Year	Potential SIF Rate	3 Yr Average
2018	0.600	0.497
2019	0.460	0.497
2020	0.430	0.497
2021	0.390	0.497
3 Year Average	**0.4967**	

Annual Historical Chart



19. Contractor Days Away, Restricted Transfer (DART)

Metric Name	Risks	Category	Units	Metric Description
19. Contractor Days Away, Restricted Transfer (DART)	Contractor Safety	Injuries	OSHA DART Rate.	DART Rate: Days Away, Restricted and Transfer (DART) Cases include OSHA-recordable Lost Work Day Cases and injuries that involve job transfer or restricted work activity. DART Rate is calculated as DART Cases times 200,000 divided by contractor hours worked.

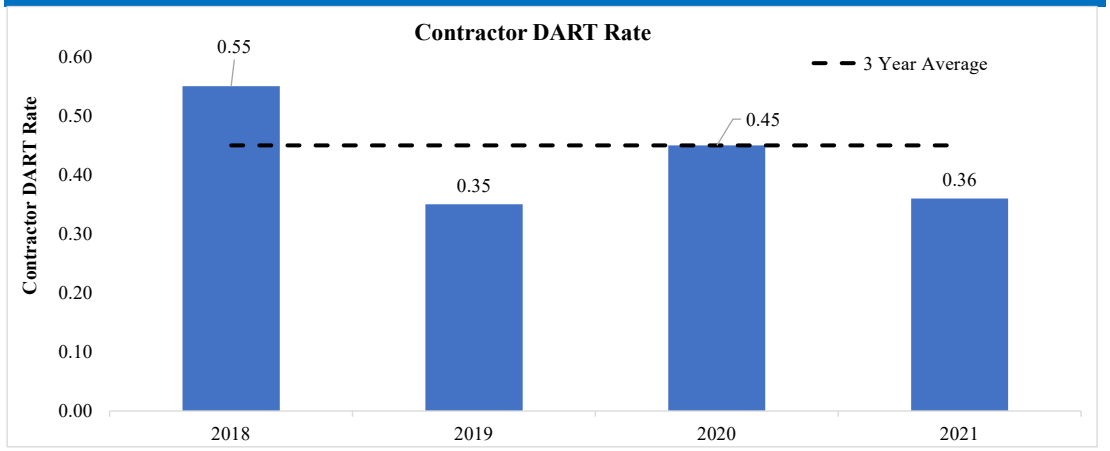
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	0.170	0.180	0.450	0.700	0.590	0.990	1.030	1.300	0.130	0.250	0.210	0.710	**0.550**
2019	0.500	0.420	0.330	0.240	0.330	0.520	0.210	0.380	0.470	0.260	0.260	0.310	**0.350**
2020	0.220	0.460	0.450	0.860	0.420	0.420	0.870	0.430	0.000	0.410	0.270	0.610	**0.450**
2021	0.360	0.120	0.220	0.000	0.420	0.420	0.330	0.590	0.720	0.270	0.520	0.340	**0.360**
Average by Month	**0.297**	**0.353**	**0.410**	**0.600**	**0.447**	**0.643**	**0.703**	**0.703**	**0.200**	**0.307**	**0.247**	**0.543**	**0.450**

Annual Historical Data:

Year	Value	5 Yr Average
2018	0.55	0.45
2019	0.35	0.45
2020	0.45	0.45
2021	0.36	0.45
3 Year Average	**0.45**	

Annual Historical Chart



#20 - Public Serious Injuries and Fatalities

Metric Name	Risks	Category	Units	Metric Description
20. Public Serious Injuries and Fatalities	Public Safety	Injuries	Number of Serious Injuries and Fatalities	A fatality or personal injury requiring in-patient hospitalization involving utility facilities or equipment. Equipment includes utility vehicles used during the course of business.

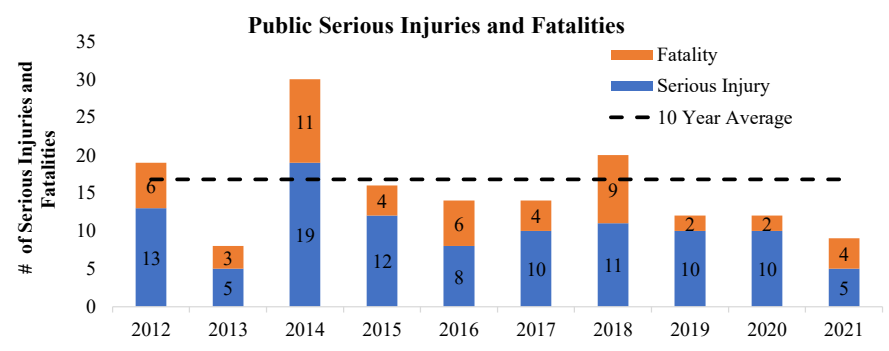
Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2012	1	0	1	1	2	2	4	2	0	0	4	2	**19**
2013	2	0	0	0	0	0	3	1	0	2	0	0	**8**
2014	0	3	2	1	9	4	1	7	0	2	1	0	**30**
2015	0	2	1	1	2	1	0	2	1	2	4	0	**16**
2016	2	1	1	1	4	0	0	0	1	2	1	1	**14**
2017	0	2	1	2	1	2	0	1	2	0	0	3	**14**
2018	0	4	2	1	1	3	1	0	2	2	4	0	**20**
2019	1	0	1	0	0	2	2	2	0	3	1	0	**12**
2020	2	0	1	2	2	0	2	1	1	0	0	1	**12**
2021	0	0	0	0	0	1	4	1	0	2	1	0	**9**
Average by Month	**0.8**	**1.2**	**1.0**	**0.9**	**2.1**	**1.5**	**1.7**	**1.7**	**0.7**	**1.5**	**1.6**	**0.7**	

Annual Historical Data:

Year	Serious Injury	Fatality	Total	10 Yr Average
2011	12	11	23	
2012	13	6	19	16.8
2013	5	3	8	16.8
2014	19	11	30	16.8
2015	12	4	16	16.8
2016	8	6	14	16.8
2017	10	4	14	16.8
2018	11	9	20	16.8
2019	10	2	12	16.8
2020	10	2	12	16.8
2021	5	4	9	16.8
5 Year Average	**10**	**5**	**14**	
10 Year Average	**11.0**	**5.8**	**16.8**	

Annual Historical Chart



#21 - Helicopter / Flight Accident or Incident

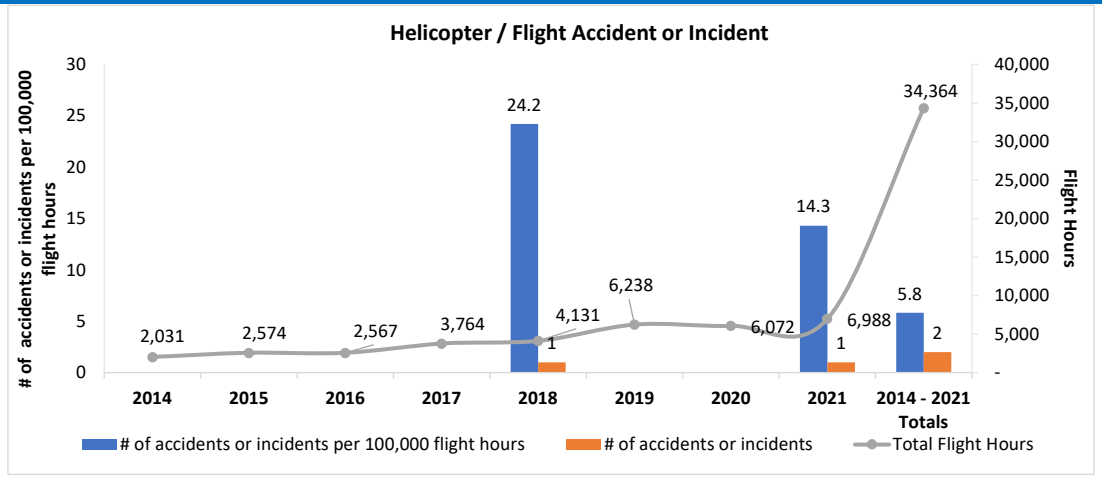
Metric Name	Risks	Category	Units	Metric Description
21. Helicopter/ Flight Accident or Incident	Aviation Safety Helicopter Operations Public Safety Worker Safety Employee Safety	Vehicle	Number of accidents or incidents (as defined in 49 CFR Section 830.5 "Immediate Notification") per 100,000 flight hours.	Defined by Federal Aviation Regulations (FARs), reportable to Federation Aviation Administration per 49-Code of Federal Regulations (CFR)-830.

Monthly Historical Data is provided in Tab All Metric Data - Mon

Annual Historical Data:

Year	# of accidents or incidents per 100,000 flight hours	# of accidents or incidents	Total Flight Hours
2014	-	0	2,031
2015	-	0	2,574
2016	-	0	2,567
2017	-	0	3,764
2018	24.2	1	4,131
2019	-	0	6,238
2020	-	0	6,072
2021	14.3	1	6,988
2014 - 2021 Totals	**5.8**	**2**	**34,364**

Annual Historical Chart



25. Wires-Down not resulting in Automatic De-energization

Metric Name	Risks	Category	Units	Metric Description
25. Wires-Down not resulting in Automatic De-energization	Electric Overhead, wildfire	Electric	Percentage of wires down occurrences	This metric is defined as the number of occurrences of wire down events in the past calendar year that did not result in automatic (i.e., not manually activated) de-energization by circuit protection devices such as fuses, circuit breakers, and reclosers, etc. on all portions of a downed conductor that rest on the ground. This metric does not consider possible energization due to induced voltages from magnetic coupling of parallel circuits. Metric excludes secondary conductors and service drops. The metric is reported as a percentage of all wires down events in the past calendar year. Separate metrics are provided for transmission and distribution systems.

Distribution Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2020	9.2%	4.6%	9.4%	14.3%	15.1%	16.9%	16.9%	24.1%	16.5%	23.8%	26.5%	16.7%	**17%**
2021	16.0%	23.6%	13.3%	17.6%	16.5%	11.4%	25.0%	21.5%	24.4%	20.5%	22.5%	16.7%	**19.0%**
Average by Month	**12.6%**	**14.1%**	**11.4%**	**16.0%**	**15.8%**	**14.2%**	**21.0%**	**22.8%**	**20.5%**	**22.2%**	**24.5%**	**16.7%**	**17.8%**

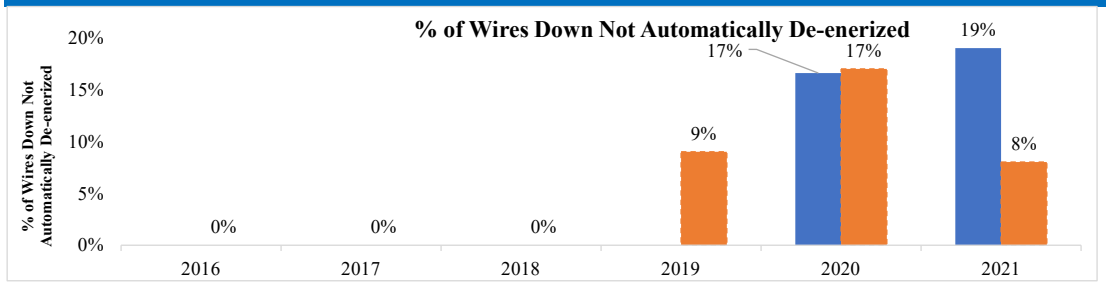
Transmission Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2016	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
2017	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
2018	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
2019	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	100%	0%	**9%**
2020	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	50%	0%	**17%**
2021	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	**8%**
Average by Month	**0%**	**0%**	**0%**	**14%**	**0%**	**25%**	**0%**	**10%**	**0%**	**0%**	**33%**	**0%**	**6%**

Annual Historical Data:

Year	Distribution	Transmission
2016		0%
2017		0%
2018		0%
2019		9%
2020	17%	17%
2021	19%	8%

Annual Historical Chart



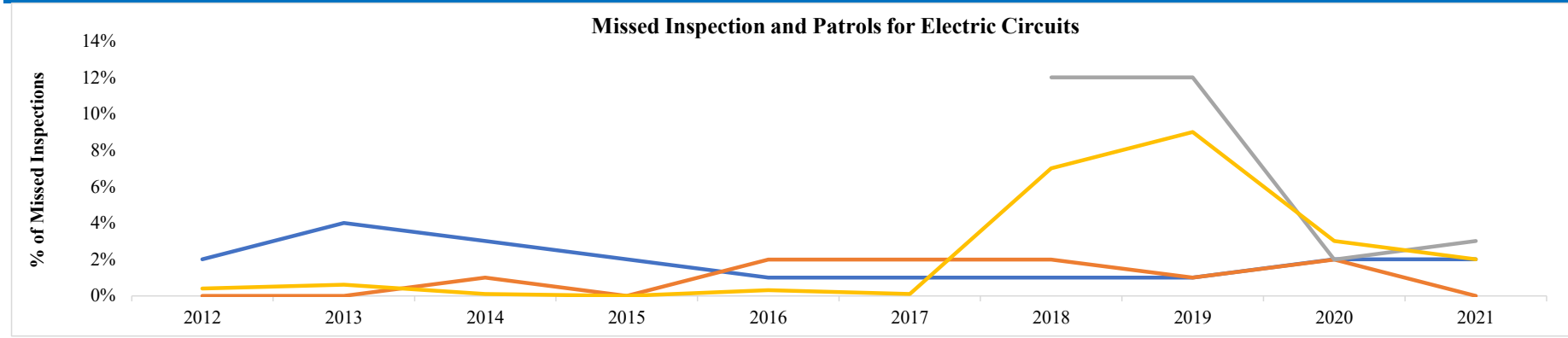
26. Missed Inspections and Patrols for Electric Circuits

Metric Name	Risks	Category	Units	Metric Description
26. Missed Inspections and Patrols for Electric Circuits	Electric Overhead, wildfire	Electric	Percentage of structures that missed inspection relative to total required structures.	Metrics are calculated as annual number of overhead electric structures that did not comply with the inspection frequency requirements divided by total number of overhead electric structures with inspections due in the past calendar year. Separate metrics are provided for patrols, detailed inspections. Separate metrics are provided for primary distribution and transmission overhead circuits. "Minimum patrol frequency" refers to the frequency of patrols as specified in GO 165. "Structures" refers to electric assets such as transformers, switching protective devices, capacitors, lines, poles, etc.

Monthly Historical Data:

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Annual Average
Distribution Detailed	2%	4%	3%	2%	1%	1%	1%	1%	2%	2%	**2%**
Distribution Patrols	0%	0%	1%	0%	2%	2%	2%	1%	2%	0%	**1%**
Transmission Detailed							12%	12%	2%	3%	**7%**
Transmission Patrols	0.40%	0.60%	0.10%	0.00%	0.30%	0.10%	7%	9%	3%	2%	**2%**

Annual Historical Chart



27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)

Metric Name	Risks	Category	Units	Metric Description
27. Overhead Conductor Size in High Fire Threat District (Tiers 2 and 3, HFTD)	Electric Overhead, wildfire	Electric	Percentage relative to total circuit miles	Percentage of primary distribution overhead conductors in Tiers 2 and 3 HFTD that is #6 copper. Secondary conductors are excluded.

Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2021	N/A	N/A	N/A	N/A	N/A	4.7%	4.6%	4.5%	4.5%	4.4%	4.4%	4.3%	**4.3%**
Average by Month	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**0.047**	**4.6%**	**4.5%**	**4.5%**	**4.4%**	**4.4%**	**4.3%**	**-**

29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)

Metric Name	Risks	Category	Units	Metric Description
29. GO-95 Corrective Actions (Tiers 2 and 3, HFTD)	Electric safety and wildfire	Electric	Percentage of corrective actions completed	The number of Priority Level 2 notifications that were completed on time divided by the total number of Priority Level 2 notifications that were due in the calendar year in Tiers 2 and 3, HFTD. Consistent with GO 95 Rule 18 provisions, the proposed metric should exclude notifications that qualify for extensions under reasonable circumstances. Separate metrics are provided for distribution and transmission systems.

Monthly Distribution Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	78%	81%	83%	80%	79%	79%	77%	83%	79%	81%	84%	89%	**81%**
2019	84%	75%	82%	80%	84%	91%	84%	83%	81%	83%	84%	95%	**86%**
2020	94%	92%	84%	82%	84%	89%	88%	83%	83%	85%	89%	90%	**88%**
2021	84%	84%	86%	78%	90%	86%	85%	85%	84%	79%	83%	92%	**84%**
Average by Month	**85%**	**83%**	**83%**	**81%**	**82%**	**86%**	**83%**	**83%**	**81%**	**83%**	**86%**	**91%**	**85%**

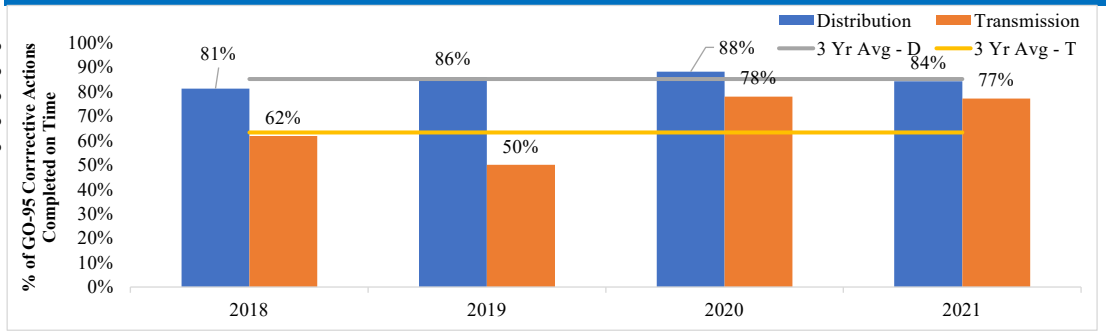
Monthly Transmission Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2018	85%	72%	62%	68%	67%	47%	56%	52%	64%	56%	56%	74%	**62%**
2019	87%	43%	74%	65%	45%	77%	36%	48%	73%	52%	81%	80%	**50%**
2020	79%	82%	48%	37%	48%	74%	83%	83%	84%	83%	88%	84%	**78%**
2021	83%	71%	75%	82%	84%	72%	63%	76%	80%	74%	81%	78%	77%
Average by Month	**84%**	**65%**	**61%**	**57%**	**53%**	**66%**	**58%**	**61%**	**74%**	**64%**	**75%**	**79%**	**63%**

Annual Historical Data:

Year	Distribution	Transmission	3 Yr Avg - D	3 Yr Avg - T
2018	81%	62%	85%	
2019	86%	50%	85%	
2020	88%	78%	85%	
2021	84%	77%	85%	
3 Year Average	**85%**	**63%**	85%	

Annual Historical Chart



32. Overhead Conductor Safety Index

Metric Name	Risks	Category	Units	Metric Description
32.Overhead Conductor Safety Index	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of occurrences per circuit mile	Overhead Conductor Safety Index is the sum of all annual occurrences on overhead transmission or primary voltage distribution conductors satisfying one or more of the following conditions divided by total circuit miles in the system x 1,000: 1) A conductor or splice becomes physically broken; 2) A conductor is dislodged from its intended design position due to either malfunction of its attachment points and/or supporting structures or contact with foreign objects (including vegetation); 3) A conductor falls from its intended position to rest on the ground or a foreign object; 4) A conductor comes into contact with communication circuits, guy wires, or conductors of a lower voltage; or 5) A power pole carrying normally energized conductors leans by more than 45 degrees in any direction relative to the vertical reference when measured at ground level. Separate metrics are reported for transmission and primary voltage distribution conductors. Secondary voltage conductors and service drops are not included in this metric.

Annual Historical Data:

Year	# of Wire Down Events	Circuit Miles	Index
2015	1,033	60,914	0.017
2016	1,283	60,914	0.021
2017	1,332	60,914	0.022
2018	1,085	60,914	0.018
2019	1,108	60,914	0.018
2020	1,111	60,914	0.018
2021	1,157	60,914	0.019
6 Year Average	**0.02**		

Annual Historical Chart