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 CONS	SOLIDATED	
Application of Southern California Edison Company (U 338-E) Regarding 2022 Risk Assessment Mitigation Phase.	Application 22-05-013	
NOT CONS	SOLIDATED	
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	

<u>SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E)</u> 2022 SAFETY PERFORMANCE METRICS REPORT

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Dated: April 3, 2023

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<u>SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E)</u> <u>2022 SAFETY PERFORMANCE METRICS REPORT</u>

Pursuant to Ordering Paragraphs 1 and 2 of Decision 19-04-020 and Ordering Paragraph 9 of Decision 21-11-009,¹ Southern California Edison Company (SCE) respectfully submits the attached 2022 Safety Performance Metrics Report.

In compliance with D.21-11-009 at Ordering Paragraph 9, p. 145, this 2022 SPMR is being filed in and served on the "most recent or current Risk Assessment Mitigation Phase (RAMP) (A.22-05-013) and GRC proceeding (A.19-08-013)," and on the successor S-MAP proceeding, Rulemaking (R.) 20-07-013. SCE will also concurrently email the Safety Performance Metrics Report to RASA_Email@cpuc.ca.gov. D.21-11-009 (issued November 9, 2021) at Ordering Paragraph 9, p. 145.

Respectfully submitted,

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April 3, 2023

Appendix A

Southern California Edison Company's 2022 Safety Performance Metrics Report

April 3, 2023

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DATA

I.

INTRODUCTION

Southern California Edison Company (SCE) submits its 2022 Safety Performance Metrics Report (SPMR) in accordance with Decision (D.) 19-04-020¹ and D.21-11-009. SCE's 2022 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.

¹ D.19-04-020 requires that SCE annually file and serve its SPMR on March 31. However, March 31 is a state holiday, therefore SCE is filing this report on April 3.

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 (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)	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 (PSIF) 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.

 $\frac{3}{2}$ 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 (Public SIF)	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.
Chapte	r 2 is divided	l 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. <u>SCE's Use of Safety Performance Metrics Data</u>

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.

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) Fall from Heights Mitigations (Metrics 14 and 15)

SCE has about 2,000 employees who work on trucks/coffin bins, from ladders, off poles and from buckets. The incident rates of employees falling from heights have increased, causing increases in both DART and SIF rates, and the consequences of these events can be severe. We will identify a suite of recommendations from a variety of levels of hierarchy of controls to minimize or eliminate this risk.

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).

This workstream will reduce the risk of falls from heights and vehicle/coffin bins by implementing select mitigations that will include at least the following: a high visibility lanyard and peer check, proper truck housekeeping, adoption of improved PPE and revised protocols and training, and reinforcement of understanding of expectations in following established work methods when working from heights. The workstream will also explore and potentially implement other mitigations focused on engineering out the hazards based on benchmarking with contractors and other utilities, and identifying needed changes in leadership (management and local 47) engagement to ensure reinforcement and sustainability of appropriate practices.

b) Industrial Sprains and Strains Management Program (Metric 14)

There has been no significant improvement in Employee DART rates between 2016 and 2022. Benchmarking indicates SCE needs to transition toward a comprehensive Industrial Sprains and Strains Management Program supported by in-person external resources to address early signs and symptoms, proactively evaluate work, provide continuous wellness/ergonomic education, and help employees acclimate to work after returning from extended leave. The Industrial Sprains and Strains Management Program will consist of 3 components that are described below. Additional detail on this work effort is discussed below in Section II.F.1.

• Industrial Sports Medicine

Goal: Identify high risk work tasks and reduce the risk of injury through elimination, engineering, administrative and behavioral controls.

• Industrial Ergonomics

Goal: Identify high risk work tasks and reduce the risk of injury through elimination, engineering, administrative and behavioral controls.

• Return to Work

Goal: Help employees acclimate into their role when returning from disability or workers compensation leave.

c) <u>Roadside Safety Mitigations (Metrics 14, 15, 16 and 19)</u>

A common cause evaluation was conducted to determine the most prevalent common factors among third-party vehicle incidents that occurred from 2016–2022 and that contributed to the employee and Contractor DART and SIF rates. Three common causes were identified through the evaluation:

- a) Third-party vehicle outside of SCE/Contractor control
- b) Less than adequate traffic control set-up
- c) Less than adequate worker behavior while working in or around traffic control zones

To address these incidents, SCE will implement traffic corrective actions as

identified below:

- a) Identify a subject matter expert for traffic control
- b) Develop/implement traffic training for employees who work on/near roadways
- c) Develop traffic control specific job hazard analysis
- d) Implement pilot program utilizing rumble strips
- e) Assess other traffic safety technologies, as available

d) <u>Contractor SIF Potentials (PSIFs) Driving Changes in Critical Observable</u> <u>Actions (Metric 18)</u>

An example of how SCE has used PSIFs to drive contractor safety programs is the development of a new combined set of Critical Observable Actions (COAs) for all Air Operations. Prior to 2022, SCE had elements of Air Operations COAs embedded in multiple COAs, including those dedicated to Transmission and Distribution work streams. After five (5) PSIFs relating to Air Operations were reported in 2021, Edison Safety and the operating units (OUs) agreed to combine all Air Operations COAs into a single set of COAs, providing a standard reference for all ground crews and air crews, regardless of work type. The COAs were combined, consolidated and published as a single set of

COAs in March 2022 and now provide a safety and observation reference for all work streams involving Air Operations.

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

a) <u>Metric Data Used in RAMP Risk Analysis (Multiple Metrics)</u>

SCE uses SPMs 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.⁶ Table I-5 below indicates which 2022 RAMP risk(s) and which risk bowtie element(s) each metric is linked to. This metric data helps inform the level of risks at SCE and helps SCE target mitigations to impact the drivers or consequences of these risks. This risk analysis is used to help inform SCE's upcoming General Rate Case request.

b) <u>Wires Down and Public SIF Data Influence Overhead Conductor Program</u> <u>Prioritization (Metrics 1, 2 and 20)</u>

SCE uses the metrics T&D Overhead Wires Down and T&D Overhead Wires Down-Major Event Days, as well as historical Public SIF data, to help inform efforts to reduce risks associated with conductor falls to the ground and conductor sagging excessively close to the ground in a manner that would allow the public to come into contact with wires down. SCE uses these wires down metrics as a central triggering event to measure and understand the risks associated with contact with energized conductor. SCE evaluates the drivers of wires down events, the frequency of those drivers, and the consequences associated with wires down events. From this baseline understanding, SCE identifies and evaluates the ability of various activities to reduce the risks associated with wires down events. This evaluation is used to inform which mitigation strategies SCE should pursue.

⁶ 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.

In SCE's 2022 RAMP, and in the upcoming Test Year 2025 General Rate Case application (2025 GRC), SCE used historical wires-down events and SCE's predictive analytics model to inform the scope of the overhead conductor program (OCP). For event consequences, the analysis is supplemented with data sets such as population density, outage durations, and other types of historical data. Specifically, for the safety consequences of a wires-down event, SCE uses historical Public SIF data related to overhead conductor events to calibrate our system level safety consequences. The results of this overall analysis provide SCE with an understanding of the risks associated with overhead conductor within its distribution system. SCE then uses the analysis to prioritize its proactive OCP work Additional details on the company's efforts to address wires-down events can be found in Chapter 4 of SCE's 2022 RAMP report, and will be addressed in SCE's upcoming 2025 GRC.

c) <u>Risk Prioritization of Notification Backlogs (Metric 29)</u>

As discussed in depth in its 2023-2025 Wildfire Mitigation Plan (WMP), in 2023 SCE is working diligently to address the current backlog and prevent the occurrence of past-due notifications⁷ by implementing new processes and resources. While there are factors that may lead to past due notifications in the future, SCE is committed to remediating issues within the required timelines consistent with Commission compliance requirements. We are also focused on remediating the highest risk items first.

Accordingly, SCE will analyze how it can prioritize all open notifications in a risk-informed manner. In 2023, SCE plans to update its prioritization methodology for its backlog and apply it to all open notifications. SCE will also investigate the possibility of informing open notification prioritization methodology with additional factors such as Public Safety Power Shutoffs (PSPS) and Areas of Concern (AOCs).⁸ Similarly, SCE will investigate how it can

⁷ Priority Level 2 notifications as defined in General Order 95.

⁸ AOCs are specific geographic areas identified through a combination of environmental conditions, such as an abundance of dry fuel and exposure to high winds.

deprioritize low-risk notifications while balancing compliance requirements to reduce the backlog and continue to prioritize higher ignition risk open notifications.

B. <u>Description of Executive Compensation Links and Bias Controls</u>

Pursuant to D.19-04-020,⁹ 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 2022, four SPMs were directly linked to SCE's incentive compensation plans, 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.¹⁰ 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 1054.¹¹

⁹ See D.19-04-020, Ordering Paragraph 6.A-C.

¹⁰ 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.

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 <u>https://energysafety.ca.gov/what-we-do/electrical-infrastructure-safety/wildfire-mitigation-andsafety/executive-compensation/</u>.

2. <u>Development of SCE's Corporate Goals</u>

The process for establishing SCE's 2022 corporate goals began in June 2021 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 2021 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 2021, by the Safety and Operations Committee in October and December 2021, and by the Compensation and Executive Personnel Committee (Compensation Committee) in December 2021 and February 2022, 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 2023, the Compensation Committee assessed company performance against goals for 2022. 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.

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The Compensation Committee has exercised this discretion in recent years to reduce or eliminate payouts when safety goals were not met.¹²

3. <u>Safety Performance Metrics Linked to Executive Compensation through SCE's</u> <u>Corporate Goals</u>

SCE's corporate goals for 2022 are shown in Table I-2. In 2022, SCE's corporate goal structure continued to include an overarching goals framework related to safety and compliance, consistent with prior years. 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. 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 2022 goals incorporated changes to SCE's goal framework to further expand our public and worker safety efforts and streamline the goal framework. Goal categories were modified down to two main categories of Safety and Resiliency and Performance Management and Operational Excellence. 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:

¹² See Table I-3 below.

- 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).

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

Goal Category and Target Score for Goal Category	Representative Success Measures for Goal Category	SMAP Safety Performance Metrics Linked to Executive Compensation
	 The goals will be achieved while living the Company's values, which include safety 	 No employee fatalities
Overarching Goals Framework ^{<u>13</u>}	 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 	 (Employee SIF Rates – fatality component) No serious injuries to public from system failure (subset of Public SIF metric data)
	• Employee Safety: Make significant progress toward eliminating Serious Injuries and Fatalities (SIF)	 Employee SIF Rate
	 Reduce Employee Edison Electric Institute (EEI) SIF Injury Rate 	 Employee DART rate
	 Reduce Employee Days Away, Restrictions, and Transfer (DART) Injury Rate 	
	• Public Safety & Wildfire Resiliency: Reduce risk of public injuries and catastrophic wildfires related to	 Subset of Fire Ignitions
	our electric infrastructure by executing our Wildfire Mitigation Plan (WMP) and programs	metric (HFRA only)
	 CPUC reportable ignitions in High Fire Risk Areas (HFRA) 	
	 Covered Conductor: installation of circuit miles 	
	 Overhead Inspections: complete ground and aerial HFRA inspection scope and remediate findings 	
Safaty and	30 days before compliance due date	
	 Vegetation Line Clearing: execute trims within planned schedule to support compliance with GO 95 requirements 	
Resiliency	 Reduce duration of customer Public Safety Power Shutoffs (PSPS) outages: Calculated Customer 	
55	Minutes of Interruption (CMI) percentage reduction from executed grid hardening	
	 Improve customer notification: PSPS-impacted customers receive notification before de- 	
	energization	
	• Cybersecurity: Maintain effective controls to mitigate and prevent significant disruptions, data breach	
	or system failure	
	 Mature enterprise-wide phishing program as measured by simulation exercise click rate and 	
	reporting rate	
	 Quality: Sustain execution quality in operations 	
	 Sustain quality performance in key programs: quality conformance index 	
	• Capital Deployment: Execute grid, technology, electrification, and other improvements to deliver safe,	
	reliable, clean, and affordable energy for customers.	

Table I-2SCE Company Goals Included in EIC for the 2022 Plan Year

¹³ 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
	 Achieve CPUC and FERC jurisdictional capital improvement plan execution, consistent with appropriate regulatory direction 	
	• Achieve SCE core earnings target	
	 Reliability: Improve reliability for repair outages 	
	 Achieve System Average Interruption Duration Index (SAIDI), Repair. 	
	• Diversity, Equity and Inclusion: Improve Organizational Unit (OU) accountability for employee diversity,	
	equity and inclusion and sustain a diverse supplier base	
Performance	 Build OU DEI action plans 	
Management and	 Achieve Diverse Business Enterprise (DBE) spend 	
Operational	 Clean Power: Support Pathway 2045 by Transportation Electrification (TE) adoption and other 	
Excellence	initiatives	
45	 Advance SCE's clean energy pathway objectives 	
	 Transportation Electrification installs, charging port installations and medium/heavy duty 	
	electric vehicle conversions	
	 Building Electrification installs 	
	 Demand Response resources 	
	 Customer Experience: Improve customer experience to address targeted interactions 	
	 Achieve Billing and Payment (B&P) Net Score 	

Annual incentive awards are based on corporate and individual performance. Target weights for 2022 continued to be assigned and communicated at the goal category level, not the individual goal or success measure level. 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, Safety Policy Division (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.¹⁴ For 2022, SCE's year-end performance resulted in a total deduction of twelve points due to unmet foundational goals and due to Employee Safety SIF and DART rates. 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.

¹⁴ SPD's Review of Southern California Edison's 2020 Safety Performance Metrics Submittal Pursuant to Decision 19-04-020, p. 20.

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
2022	12-point deduction ¹⁵	Public injury from a downed power wire; SIF and DART rates worse than threshold
2021	5-point deduction ¹⁶	Below-target performance for Wildfire Resiliency, Safety and Resiliency Capabilities, and Contractor Management
2020	13-point deduction ¹⁷	Three contractor fatalities; third-party contractor seriously injured from contact with line with insufficient clearance; SIF rate worse than target
2019	14-point deduction ¹⁸	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; ¹⁹ 20-point deduction for other senior officers ²⁰	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 ²¹	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 ²²	Four worker fatalities; DART injury rate worse than target

Table I-3Annual Incentive Award Deductions for Safety Performance

- 17 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 thirdparty 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.
- 18 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.
- ¹⁹ 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.

¹⁵ The 12-point deduction was comprised of: 2-point deduction due to unmet foundational goal; 10-point deduction to Employee Safety goal due to SIF and DART rates.

¹⁶ 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.

Looking beyond 2022, changes were made to SCE's goal framework for 2023 to preassign weights at the individual goal success measure versus goal category level to improve transparency and align with Office of Energy Infrastructure Safety (OEIS) guidance. New goals were added to address the following:

- New leading indicator goal measure for employee safety focused on high hazard observations
- New Operational Excellence goal focused on advancement of continuous improvement efforts

4. <u>Bias Controls for the Reporting of the Corporate Goals</u>

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 sources as applicable to validate the data. The internal audit team also periodically audits other companyprograms 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.

²⁰ 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.

²¹ 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.

²² 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).

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 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.²³ 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 subject to management discretion.²⁴ 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

²³ 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.

²⁴ 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.

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. <u>How the Safety Performance Metrics Reflect Progress Against SCE's RAMP and</u> <u>GRC Safety Goals</u>

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. In 2022, SCE saw decreases in both wires down and ignitions from 2021. Similarly, SCE saw positive improvements in contractor safety DART and SIF rates compared to 2021 and historical averages. In fact, the rates were the lowest SCE has observed since recording this data. However, SCE did see slight year over year increases in Employee DART and SIF rates. SCE provides a discussion on how we are addressing these increases below in Sections II.E and II.F.

Table I-4Percent Improvement/Decline in SCE's 2021 Metric Performance Compared to
Historical Average25 26

Metric Name	2022 Performance	Historical Average	Percent Improvement/Decline in SCE's 2022 Metric Performance Compared to	Average Notes
		iiverage	Historical Average	
1. T&D Overhead Wires Down	931	1,047	11.1%	6 year Average (2016 - 2021)
2. T&D Overhead Wires Down - Major Event Days	1,826	2,124	14.0%	6 year Average (2016 - 2021)
3. Electric Emergency Response (Avg time)	67.4	52.0	-29.7%	5 year Average (2017 - 2021)
4. Fire Ignitions	125	123	-1.6%	7 year Average (2015 - 2021)
14. Employee Days Away, Restricted and Transfer (DART) Rate	1.18	1.02	-15.9%	5 year Average (2017 - 2021)
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	0.09	0.10	9.7%	7 year Average (2015 - 2021)
16. Rate of SIF Actual (Contractor)	0.060	0.193	69.0%	4 Year Average (2018 - 2021)
17. Rate of SIF Potential (Employee)	0.112	0.195	42.5%	5 year Average (2017 - 2021)
18. Rate of SIF Potential (Contractor)	0.250	0.470	46.8%	4 Year Average (2018 - 2021)
19. Contractor Days Away, Restricted Transfer (DART)	0.26	0.4	39.2%	4 Year Average (2018 - 2021)
20. Public Serious Injuries and Fatalities	5	13	62.7%	5 year Average (2017 - 2021)
21. Helicopter/ Flight Accident or Incident	N/A	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 Pa	atrols for Electric	Circuits		
Distribution Detailed	4%	2%	-94.4%	9 Year Average (2013 - 2021)
Distribution Patrols	3%	1%	-182.6%	9 Year Average (2013 - 2021)
Transmission Detailed	0%	7%	96.1%	4 Year Average (2018 - 2021)
Transmission Patrols	0%	2%	95.2%	9 Year Average (2013 - 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	s (Tiers 2 and 3, H	FTD)		

²⁵ 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.

 $[\]frac{26}{10}$ SCE uses different historical averages for comparison purposes depending on the amount of historical data that is available.

Metric Name	2022 Performance	Historical Average	Percent Improvement/Decline in SCE's 2022 Metric Performance Compared to Historical Average	Average Notes
Distribution	89%	85%	-4.4%	4 Year Average (2018 - 2021)
Transmission	Transmission 77% 67% -14.9%		-14.9%	4 Year Average (2018 - 2021)
32. Overhead Conductor Safety Index				
Distribution	21.6	24.0	10.2%	7 year Average (2015 - 2021)
Transmission	0.6	0.9	31.9%	7 year Average (2015 - 2021)

*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 RIDM framework and the mitigation plans to address some of SCE's top risks as identified in the 2022 RAMP filing.²⁷ Table I-5 below indicates which 2022 RAMP risk(s) and which risk bowtie element(s) each metric is linked to.

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)
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	N/A	Not directly included
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
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

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

2. <u>High-level Summary of SCE's Total Estimated Risk Mitigation Spending Level as</u> 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.²⁸ 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.²⁹

²⁸ D.19-04-02, Ordering Paragraph 6.F, p. 63.

²⁹ SCE received and extension request to file our 2022 RSAR by July 28, 2023. SCE is still finalizing our 2022 recorded values and the values in the tables below may change. To the extent that any changes are material SCE will provide an errata with the corrected values.

SCE 2018 RAMP Risk	2022 Recorded	2022 Authorized	Variance (Recorded less Authorized)	% Variance
Wildfire	\$74,066	\$59,817	\$14,248	24%
Physical Security	\$21,611	\$27,716	(\$6,105)	-22%
Cyber Attack	\$20,931	\$27,156	(\$6,225)	-23%
Contact with Energized Equipment	\$5,440	\$6,984	(\$1,544)	-22%
Climate Change	\$940	\$3,667	(\$2,727)	-74%
Building Safety	\$3,444	\$6,057	(\$2,613)	-43%
Employee, Contractor & Public Safety	\$4,211	\$9,302	(\$5,091)	-55%
Grand Total	\$130,643	\$140,700	(\$10,057)	-7%

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

The recorded and authorized RAMP capital expenditures are shown below in Table I-7

by SCE's 2018 RAMP risks.

SCE 2018 RAMP Risk	2022 Recorded	2022 Authorized	Variance (Recorded less Authorized)	% Variance					
Wildfire	\$825,751	\$586,340	\$239,412	41%					
Cyber Attack	\$98,804	\$104,500	(\$5,695)	-5%					
Contact with Energized Equipment	\$74,101	\$72,641	\$1,461	2%					
Underground Equipment Failure	\$18,456	\$24,587	(\$6,131)	-25%					
Physical Security	\$55,052	\$48,980	\$6,072	12%					
Hydro Asset Safety	\$3,978	\$19,237	(\$15,259)	-79%					
Building Safety	\$10,194	\$7,369	\$2,825	38%					
Employee, Contractor and Public Safety	\$0	\$2,512	(\$2,512)	-100%					
Grand Total	\$1,086,337	\$866,164	\$220,173	25%					

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

Additional discussion of the spending variances for O&M expenses and capital

expenditures will be discussed in SCE's 2022 Risk Spending Accountability Report.

D. <u>Overview of Approved Safety Performance Metrics</u>

In accordance with D.21-11-009, SCE reports on the seventeen applicable SPMs³⁰ using the designated definitions and units and including data for the last ten years (2013-2022) where such data exists.³¹ SCE provides additional context on each of these metrics as appropriate in Chapter II below.

 $[\]frac{30}{10}$ These metrics are provided in Appendix B – SPMs Table to D.21-11-009.

³¹ This data is included in Attachment A "SCE 2022 Safety Performance Metrics – Historical Data." SCE is also serving an Excel version of this attachment concurrently with this report.

II.

SCE SAFETY PERFORMANCE METRIC DATA

A. <u>Metric 1: Transmission & Distribution (T&D) Overhead Wires Down 32</u>

Table II-8Transmission & 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.

 $[\]frac{32}{100}$ 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 Data³³

Table II-9								
T&D Overhead	Wires Dow	n – 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
2022	65	86	75	78	85	76	78	87	75	65	90	71	931
Avg by Month	95	83	100	88	87	93	79	79	81	70	74	94	1,021

33 SCE defines a wires down event as an event where the wire struck the ground or fell within eight feet and did not contact the 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 wires 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 wires down incidents that are on-ground or on a foreign object.
2. <u>Metric Link to Compensation or Individual or Group Performance Goals</u>

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. <u>Metric Specific Bias Controls Discussion</u>

To populate wiresdown data for each driver, SCE has previously used its wiresdown database containing repair orders. As noted in the Q3 2021 Quarterly Data Report (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. <u>Metric 2: Transmission & Distribution (T&D) Overhead Wires Down – Major Event Days</u>

Table II-10Transmission & 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

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	207	251	135	131	115	110	121	90	127	128	176	228	1,819
2020	106	149	141	154	178	207	135	192	198	220	208	181	2,069
2021	311	145	173	128	163	197	178	113	115	166	125	249	2,063
2022	162	124	113	132	153	196	143	163	203	105	222	110	1,826
Avg by Month	212	160	158	160	146	171	148	148	170	158	159	190	1,893

 Table II-11

 T&D Overhead Wires Down – Major Event Days – Historical Monthly Data

The key drivers of wire down events are shown below in Table II-12.34

Table II-12Key Drivers of Wire Down Events

										5 Year	% Over /
Cause Category	Sub-Cause Category	2015	2016	2017	2018	2019	2020	2021	2022	Average	Under
										(2017 - 2021)	Average
Contact From Object	Veg. Contact	291	540	758	349	432	425	427	307	478	-36%
Contact From Object	Animal Contact	74	66	68	59	39	68	52	25	57	-56%
Contact From Object	Balloon Contact	116	117	129	137	103	108	112	97	118	-18%
Contact From Object	Vehicle Contact	227	423	362	345	301	389	415	382	362	5%
Contact From Object	Other Contact from Object	0	1	0	1	2	1	0	15	0.8	1775%
Equipment/Facility Failure	Connector Damage or Failure	84	119	115	95	72	115	84	68	96	-29%
Equipment/Facility Failure	Conductor Failure	0	2	30	44	127	239	112	118	110	7%
Equipment/Facility Failure	Splice Damage or Failure	35	28	25	27	30	31	28	15	28	-47%
Equipment/Facility Failure	Crossarm Damage or Failure	31	31	31	28	36	34	32	31	32	-4%
Equipment/Facility Failure	Lightning Arrestor Damage or Failure	0	0	2	0	2	1	1	1	1	-17%
Equipment/Facility Failure	Tap Damage or Failure	0	0	4	5	12	11	9	6	8	-27%
Equipment/Facility Failure	Other	104	147	170	143	127	252	359	333	210	58%
Equipment/Facility Failure	Wire-to-Wire Contact / Contamination	0	0	1	2	1	7	4	1	3	-67%
Other	All Other	570	940	922	525	535	388	428	427	560	-24%
Totals		1,532	2,414	2,617	1,760	1,819	2,069	2,063	1,826	2,066	-12%

As indicated above in Table II-12, SCE has seen swings in wires down events from 2015 to 2022 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 wires down events in January and December, primarily due to higher levels of inclement weather (wind, rain, and snow). The rest of the calendar year shows a relatively flat trend with some increased levels of wires down from September

 $[\]frac{34}{100}$ Additional detail on wire down events is provided in SCE's 2023 WMP.

to November, which is attributed, in part, to more severe wind conditions in those autumn months. To address wires down causes, SCE has implemented a series of initiatives, including:³⁵

- <u>Asset Failure and Mitigation Register</u>: The Asset Failure and Mitigation Register (AFMR) was established in 2021 with the designed intent to track key asset failures and associated mitigations. The asset failures are investigated through events such as ignitions, wires down, 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 datadriven 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 wires down events. SCE has continued this program, albeit at a reduced level, in recent years to decrease the frequency of wires down events. SCE will be seeking additional funding in 2025 2028 for the continuation of this program in our Test Year (TY) 2025 GRC.
- <u>Inspection Programs</u>: 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 wires down and ignition events. A more detailed discussion on these programs is provided in Section II.D.1 and in SCE's 2023 WMP.

³⁵ This should not be considered an exhaustive list of activities and/or initiatives that SCE undertakes to mitigate wire down events.

- 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 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-towire contact) which may result in sparks, wires-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 2023, SCE expects to remediate at least 400 spans and up to 500 spans in SCE's HFRA, subject to resource constraints and other execution risks. Additional details on this program can be found in SCE's 2023 WMP.
- <u>Vegetation Management</u>: SCE has several vegetation management initiatives focused on preventing wires down events and ignitions. Some of these initiatives are described below and additional initiatives are discussed in the next section regarding Fire Ignitions.
- <u>Hazard Tree Management Program (HTMP)</u>: 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. For 2023, SCE's target will be to inspect 550 grids and prescribe mitigation for hazardous trees with strike potential within those grids. Additional information on this program can be found in SCE's 2023 WMP.

Dead, Dving 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 General Order (GO) 95 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 and Dying Tree Removal program efforts in 2023 and plans to inspect 650 grids and prescribe mitigation for dead and dying trees with strike potential within those grids Additional information on this program can be found in SCE's 2023 WMP.

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

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 wires-down metric data, SCE has previously used its wires-down database of repair orders. As noted in the SCE's Q3 2021 Quarterly Data Report submission,³⁶ SCE has reviewed prior period transmission wires down data and performed a broader deep dive on failure data, which identified two datasets that were not previously included in its wires down reporting. This has resulted in the inclusion of additional wires down events, the vast majority of which occurred from 2016-2018 on distribution secondaries and service lines in the Non-HFTD.

C. <u>Metric 3: Electric Emergency Response</u>

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.

Table II-13Electric Emergency Response

<u>³⁶</u> See, Southern California Edison Q3 2021 Quarterly Data Report, Nov. 1 2021, p. 10.

1. Metric Data and Discussion

The annual average and median data for Electric Emergency Response is presented below in Figure II-3.³⁷ The average time is provided for response time with and without Major Event Days (MED) response times.³⁸



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 amount of time that the public is exposed to any potential hazards including failed equipment and downed wires. The overall response time consists of three steps: 1) the average handle time of the call at the Distribution Operations Center (DOC) or call center, 2) the time to identify and dispatch SCE resources to respond, and 3) the time for the dispatched resource to arrive on scene.

SCE has maintained high performance over the last several years and continues to explore ways to maintain and improve performance. In 2021, a shift in emergency call handling was made. During normal operations activity levels (non-major event days), incoming calls from public

 $[\]frac{37}{10}$ Monthly and supplemental data is provided in Attachment A.

 $[\]frac{38}{28}$ The median response time did not materially change with or without including MED response times.

agencies were routed directly to the DOC dispatch operators. This reduced response time 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 or non-traditional responder for dispatch.

When call frequency exceeds the DOC's ability to efficiently collect incoming data and route appropriate field personnel, the calls 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.

As we continue to explore the functionality of vehicle tracking software and its capabilities, there is room for improvement in data correction techniques. Use of historical time stamps and other mechanisms within the software will continue to improve, allowing actual arrival times to be captured instead of relying on the first responder to relay that information back to the DOC. This also has the added safety benefit of allowing those responders to work on the task at hand, instead of delaying efforts to make the call back to dispatchers.

Through the tracking software, trucks can be seen arriving on scene and remain stationary, but because responders tended to the emergency first, arrival times are not always accurately recorded, potentially creating an artificial, longer response time in the data. By continuing to leverage all the modules of the tracking software and holding regular reviews for data accuracy, we expect that response times will be reduced.

At the beginning of 2022, there was a serious storm within SCE territory that resulted in impassable roadways and extreme delays in response times. As weather conditions present more severe scenarios, we anticipate more accessibility challenges within these consolidated events. Wherever possible and practical, use of incremental technology changes over time will continue to strengthen our approach and commitment to the safety of the public as it relates to incidents stemming from or related to our infrastructure. SCE will continue 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. <u>Metric Specific Bias Controls Discussion</u>

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. <u>Metric 4: Fire Ignitions</u>

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 HFTD³⁹

³⁹ 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.

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	6	23	15	20	20	7	9	1	123
2020	4	4	8	4	12	42	16	20	8	11	12	7	148
2021	12	11	7	16	20	30	23	21	14	12	3	4	173
2022	9	9	9	10	18	21	12	12	11	5	8	1	125
Average by Month	5	6	6	13	12	22	13	13	10	9	7	4	117

 Table II-15

 Fire Ignitions – Historical Monthly Data⁴⁰

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

SCE saw a significant decrease in overall ignitions in 2022 with the vast majority of the decrease associated with ignitions within SCE's non-HFRA. 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.

⁴⁰ SCE provides the monthly historical data in Attachment A and in the Excel file served concurrently with this report.

	2015	2016	2017	2018	2019	2020	2021	2022	7 Year Average (2015 - 2021)
Contact From Object									
Animal	12	10	9	12	20	26	20	16	15.6
Balloons	13	11	20	30	15	19	22	15	18.6
CFO Other	4	6	5	0	6	3	6	0	4.3
Vegetation	13	13	16	15	14	13	21	14	15.0
Vehicle	12	7	6	13	10	7	11	14	9.4
Equipment/Facility Failure									
Capacitor Bank	0	1	1	0	1	0	0	2	0.4
Conductor	3	19	15	5	11	22	27	20	14.6
Crossarm	1	2	2	1	1	0	0	0	1.0
Fuse	1	1	1	0	2	1	3	1	1.3
Insulator	1	2	2	1	3	6	1	4	2.3
Lightning Arrestor	2	0	2	0	2	1	3	1	1.4
EFF Other	5	6	2	8	2	11	9	11	6.1
Pole	1	2	1	0	1	3	0	1	1.1
Splice/Clamp/Connector	4	4	3	2	8	1	13	1	5.0
Switch	0	0	0	1	2	5	4	4	1.7
Transformer	3	3	2	10	3	9	10	10	5.7
Vandalism/Theft	4	0	0	1	6	6	7	3	3.4
Wire-Wire Contact	1	1	3	3	8	5	6	2	3.9
Other	5	2	3	0	7	8	9	4	4.9
Unknown	22	6	12	7	1	2	1	2	7.3
Totals	107	96	105	109	123	148	173	125	123.0

Table II-16Fire Ignitions by Risk Event Category

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.⁴¹ Additional details on these and other SCE initiatives and work activities to minimize fire ignitions can be found in SCE's 2022 RAMP and 2023 WMP.

Covered Conductor: The Wildfire Covered Conductor Program (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 fire resistant poles. SCE also installs 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.

⁴¹ This should not be considered an exhaustive list of the activities/initiatives SCE is undertaking to reduce fire ignitions.

SCE has continued to install covered conductor (CC) and is targeting 1,100, 1,050 and 700 miles in years 2023, 2024 and 2025, respectively. SCE has realized significant benefits from covered conductor deployment. On circuits where the overhead primary is all covered conductor, SCE has observed a 71% reduction of faults covered conductor is expected to mitigate compared to bare wire.⁴² Zero ignitions have occurred where cover conductor is deployed from drivers covered conductor is expected to mitigate.⁴³

In 2022 SCE initiated a spacer cable pilot to examine how covered conductor is supported by a high strength messenger through diamond shaped spacers instead of the traditional open crossarm arrangement. The pilot encompassed six spans or about 800 feet of covered conductor. SCE will continue to evaluate the viability of this type of installation as possibly another solution in mitigating wildfire ignitions. Additional information on this program can be found in SCE's 2022 WMP.

Secondaries Covered Conductor: In 2022, SCE updated its covered conductor standard to include the replacement of open wire secondary or weather-resistant aluminum (OWS or WAL) with multiplex secondary conductors. Weather-resistant aluminum wire on the secondary system is outdated technology and will be updated to the new standard when WCCP is installed. All OWS and WAL secondary lines that share the same line path or are attached to the same targeted primary structure shall be upgraded to multiplex conductors (see Figure II-5 below). Multiplex conductors are fully insulated secondary conductors that can help mitigate contact-related faults and associated ignitions.

 $[\]underline{42}$ Measurement of CC effectiveness began in 2018.

 $[\]underline{43}$ As of year-end 2022.

Figure II-5 Outdated Secondary Conductor (Left) and In-Standard Secondary Conductor (Right)



SCE addressed these issues by updating the inspection forms and covering bare connectors with tape. In 2022, the main driver of secondary ignitions was Equipment/Facility Failure in approximately 70% of cases, followed by CFO in approximately 15% of cases. SCE estimates a small portion of its secondary system (10%) is still bare open wire and weather resistant aluminum which are outdated technology. SCE plans to replace these in the coming years.⁴⁴

Open wire secondaries and weather-resistant aluminum conductors can pose an ignition risk because they are vulnerable to contact-from-object faults. Upgrading OWS and WAL conductors to multiplex conductors (duplex, triplex, or quadraplex), which are a bundle of conductors twisted around each other (see picture of the multiplex conductor on the right of Figure II-5 above) will help mitigate ignition events. Since multiplex conductors are covered and bundled together, they can withstand CFO much better than the bare open wire or single conductor can. This standard update will only affect WCCP installations starting in 2024, and not planned WCCP work for 2022 and 2023, as work for these years is already in the design or construction phase.

Undergrounding Overhead Conductor: Targeted Undergrounding (TUG) is a program to underground existing overhead power lines to significantly reduce wildfire and PSPS risk by significantly reducing the possibility for objects to contact energized conductor as well as greatly

⁴⁴ There are approximately 0.3 miles of secondary conductor for every mile of primary conductor in HFRA. SCE estimates that approximately 10% of the secondary conductor requires replacement, with an estimated 7% of secondary spans being weather-resistant aluminum and 3% being bare open wire.

limiting the ignition-causing potential from equipment failures. In addition to those drivers, fault conditions can weaken and sometimes cause electrical stresses on hardware and insulators, which could lead to energized wire-down events or electrical arcing. Removing overhead lines and replacing them with underground wire significantly reduces this risk. Undergrounding has the added benefit of reducing the need for PSPS during extreme wind events. While the deployment of covered conductor may significantly increase the windspeed threshold for de-energization during a risk event, it does not completely prevent those de-energizations during extreme wind events like undergrounding can. Accordingly, undergrounding is the preferred method to nearly eliminate risk in Severe Risk Areas. However, there are some locations that are not feasible to underground due to factors such as rocky terrain. In those cases, SCE would instead consider other mitigation measures including covered conductor combined with other measures.

Generally, when converting existing overhead lines to underground facilities, a line route needs to be determined. Often in urbanized areas, this route can be the same as the existing overhead line assuming pre-existing underground utilities (e.g., natural gas, water, sewer, etc.) do not preclude the addition of a new duct and structure system. Routes may also need to be altered to avoid obstructions. For example, this may involve moving a rear property pole line to curbside to avoid swimming pools, block walls, etc.

In coastal, mountainous, or more rural communities, topography can present additional challenges to those already mentioned above. Lines may need to be moved to the road to avoid steep terrain, heavy vegetation, water crossings, erosion concerns, and to generally avoid environmental considerations associated with heavy equipment access to construct and/or maintain lines. Because of these topographical challenges with some existing overhead lines, vehicle access required for installing underground cable is not available, which makes undergrounding along the same route impractical. Therefore, overhead lines may need to be brought out to the public right-of-way for undergrounding, increasing the length of the undergrounding needed and significantly increasing the cost as well as the construction timeline.

SCE aims to convert 11, 16 and 48 miles of overhead conductor to underground facilities in years 2023, 2024 and 2025, respectively. In 2023, SCE will continue to deploy TUG based on the previous risk prioritization methods prior to the introduction of IWMS. SCE has updated our methodology to release scope using IWMS, which considers factors such as egress, fire travel, and burn history. More details can be found in Section 6.2.1 of SCE's 2023 WMP.

Emerging Technologies: SCE is advancing several emerging technologies 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 efforts 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 2022, SCE installed 44 EFD units on distribution lines and 2 on transmission lines. In 2023, SCE will install an additional 50 units and strive to add up to 100 EFD units.

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., \geq 25 amps). In 2022, SCE installed Hi-Z at 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. In 2023, SCE will continue to monitor the effectiveness of these deployments with an assessment report issued at the end of Q3 2023.

Rapid Earth Fault Current Limiter (REFCL): The REFCL grounding conversion applications act to reduce energy and ignition risk associated with single phase to ground faults. SCE created a separate category for grounding conversion projects which are utilized on smaller substations or applied at the distribution circuit level, rather than larger substations which are targeted by the REFCL Ground Fault Neutralizer (GFN) program. These projects convert the existing electric system to operate either ungrounded or resonant grounded without the use of the GFN. For the purposes of REFCL systems, the distinction between "large" and "small" substations/systems primarily depends on the lengths of overhead and underground circuitry. Typical grounding conversion projects cover 2 to 15 miles of circuitry. In 2023, SCE anticipates completing one grounding conversion project, then four projects in each 2024 and 2025 and will strive to meet targets of six in 2024 and 2025.

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 installed DOPD logic at two additional locations. In 2023, SCE plans to continue monitoring the performance of existing units, perform lab testing on algorithms and capture learnings in an assessment report.

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 performed a retrofit on one existing location and installed TOPD at 11 new locations. In 2023, SCE plans on installing TOPD at five new locations.

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).

Vegetation Management: SCE has several vegetation management initiatives that work to prevent wire down events and potential ignitions. One such initiative, 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 (PRC) § 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. In 2023, SCE aims to inspect and clear (where clearance is needed) 63,700 structures (these structures are in addition to poles subject to PRC § 4292.72) with the exception of structures for which there are customer access or environmental constraints. SCE will strive to inspect and clear (where clearance is needed) 135,200 structures, with the exception of structures for which there are customer access or environmental constraints.

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

As noted above in Section I.B.3, CPUC reportable ignitions in HFRA has been integrated as part of SCE's 2022 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. <u>Metric 14 – Employee Days Away, Restricted and Transfer (DART) Rate</u>

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.

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

1. <u>Metric Data and Discussion</u>

The annual data for Employee DART Rate is presented below in Figure II-6. 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 2022 to slightly above both the historical 10 and 5-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-6 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
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
2022	0.80	0.51	1.30	1.35	1.73	1.76	1.53	1.30	1.10	1.20	0.53	0.88	1.18
Avg by Month	1.18	1.20	1.19	1.08	1.34	1.04	1.11	1.31	1.20	1.24	0.80	0.80	-

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.

Below SCE highlights some of the programs designed to help reduce injuries and potential fatalities. This list of programs should not be considered exhaustive.

Groundmen Safety Success Plan

This effort, as part of the Safety Work Plan, is focused on strengthening systems, plans, and tools that help successfully onboard and continually develop groundmen for their role. 220+ groundmen are being hired into Distribution, Construction & Maintenance (DC&M) over each of the next two years. This classification has one of the highest incident/injury rates at SCE, and SCE is committed to taking the necessary steps and actions to mitigate this trend.

Industrial Sprains and Strains Management Program

There has been no significant improvement in OSHA and DART rates between 2016 and 2022 YTD. Benchmarking indicates SCE needs to transition towards a comprehensive Industrial Sprains and Strains Management Program supported by in-person external resources to address early signs and symptoms, proactive evaluation of work, continuous wellness/ergonomic education, and help employees acclimate to work from extended leave. The Industrial Sprains and Strains Management Program will consist of 3 components:

Industrial Sports Medicine

Goal: Identify high risk work tasks and reduce the risk of injury through elimination, engineering, administrative and behavioral controls

- Industrial Injury Prevention Specialist (IIPS) are professionals trained in sports medicine
 - Each IIPS visits sites within their assigned T&D region regularly and are available for "on-call" services
 - The amount of IIPS will be based on historical injury trends and adjusted as needed
- IIPS Services (not limited to):
 - In the field body mechanics coaching
 - Onsite early symptom intervention (massage, trigger point release, kinesio-tape, and other first aid support)
 - o Individual and group health education
 - o Task-specific and job classification exercises
 - o Wellness education
 - o Sprains and strains prevention education

Industrial Ergonomics

Goal: Identify high risk work tasks and reduce the risk of injury through elimination, engineering, administrative and behavioral controls

- Approach
 - o IIPS Supported
 - Risk-based approach to identify the most physically demanding tasks based on interviews and past injury data
 - Identify high risks task, assess task, research solutions, pilot, and implement solutions, and reassess task to verify risk reduction
 - Leverage various types of technology (wearables and video) for accurate assessment of risks as well as exoskeletons to reduce task specific fatigue
 - Strive for elimination and engineering solutions to significantly reduce risks factors

• Provide ergonomic training and education to enable employees to identify and mitigate risk proactively

Return to Work

Goal: Help employees acclimate into their role when returning from disability or workers comp leave

- Approach
 - o IIPS supported
 - In partnership with Workers Compensation and Disability Management, establish a process to include assessing the physical condition of an employee returning to work from an extended leave.
 - As a result of the assessment, develop a plan for the employee and leader regarding work practices and exercises to eliminate the risk of re-injury

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 of safety to T&D employees. 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. <u>Metric Link to Compensation or Individual or Group Performance Goals</u>

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. <u>Metric Specific Bias Controls Discussion</u>

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 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. <u>Metric 15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)</u>

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/emp loyee 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.

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

1. Metric Data and Discussion

The annual data for Employee SIF rate is presented below in Figure II-7. SCE has been seeing a downward trend in this data in recent years. However, in 2022, SCE saw a notable increase in SIF rate compared to 2021, with the rate slightly below the 5-year historical average.



Figure II-7 Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)

Table II-20Rate 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
2022	0.100	0.102	0.260	0.097	0.192	0.000	0.000	0.087	0.000	0.093	0.000	0.109	0.088
Avg by Month	0.156	0.114	0.185	0.067	0.130	0.114	0.069	0.110	0.081	0.056	0.000	0.053	-

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 the 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 employees (field and office) and requiring contractors to 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-21.⁴⁵ 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.

⁴⁵ For additional information on these drivers and sub-drivers please see SCE's 2022 RAMP Application Chapter 9 – Employee Safety.

Driver	Sub-driver	Sub-driver Definition					
	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					
People	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					
	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					
Process	Tool/Equipment/Operation	Tool, equipment or operation failed and caused an incident due to lack of maintenance or inspection					
1100033	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					

Table II-21Employee Safety Risk Drivers

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 and in SCE's upcoming 2025 GRC.

Human Organizational Performance (HOP)

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 will allow SCE to continue to advance in maturing as a proactive learning organization where all employees, leaders and executives work together to prevent serious injuries and fatalities. It sets HOP organizational learning-centric guiding principles which have been adopted by high-risk and highreliability organizations for all levels of the organization to apply them consistently (i.e., people make mistakes, blame fixes nothing, context drives behavior, learning and improving is vital, and leader's response matters). It also provides ground-level practical tools and practices for applying and sustaining the principles to reduce the consequences of normal human errors and strengthen organizational capabilities to "fail safely."

Energy Exposure Mitigations

This workstream will evaluate, develop, and execute on mitigations that focus on reducing energy exposure. The SCE grid, associated structures, and various equipment (e.g., the system) all come with inherent risks, across their lifecycles, from procurement, installation, through maintenance and retirement. Work activities to manage this system ongoingly subject the workforce to energy exposures (e.g., Substation arc flashes, underground and overhead flashes), some of which can result in a SIF.

Opportunity exists to strengthen our approach to mitigating energy exposures through targeted tactics that engineer out hazards and/or minimize the severity of the hazards. This work effort emerged from a collaborative endeavor with our T&D, IBEW and Enterprise Risk partners to evaluate and streamline all of our safety related initiatives. Senior leaders, in partnership with Edison Safety and Local 47 IBEW spent considerable time and reflection to ensure going forward we are focused on areas of highest value and impact.

Fall from Heights Mitigations

SCE has about 2,000 employees who work on trucks/coffin bins, from ladders, off poles and from buckets. The incident rates of employees falling from heights have increased and the consequence can be severe. SCE intends to identify a suite of recommendations from a variety of levels of hierarchy of controls to minimize or eliminate this risk.

This workstream will reduce risk of falls from heights and vehicle/coffin bins by implementing select mitigations to at least include: a high visibility lanyard and peer check, proper truck housekeeping, adoption of improved personal protective equipment (PPE) and revised protocols and

training, and reinforcement of understanding of expectations in following established work methods when working from heights. It will also explore and potentially implement other mitigations focused on engineering out the hazards gained through benchmarking with contractors and other utilities, including identifying needed changes in leadership (management and local 47) and engagement to ensure reinforcement and sustainability of appropriate practices.

Roadside Safety Mitigations

A common cause evaluation was conducted to determine the most prevalent common factors among third-party vehicle incidents that occurred from 2016 to mid-2022. Three common causes were developed from the evaluation:

- a) Third-party vehicle outside of SCE/Contractor control
- b) Less than adequate traffic control set-up
- c) Less than adequate worker behavior while working in or around traffic control zones

This workstream will implement traffic corrective actions as identified below:

- a) Identify a subject matter expert for traffic control
- b) Develop/implement traffic training for employees who work on/near roadways
- c) Develop traffic control specific job hazard analysis
- d) Implement pilot program utilizing rumble strips
- e) Assess other traffic safety technologies, as available

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 tiered approach to conducting cause evaluations by adjusting the level of analysis to align with the severity of the incident. A systematic process is then used to identify the cause(s), 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. An incident description and cause(s) and corrective actions identified in the cause evaluations are shared with the organization via an Operating Experience document. SCE describes some of the common cause evaluations regarding potential SIFs below in Section II.H.

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

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. <u>Metric Specific Bias Controls Discussion</u>

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-22Rate 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/cont ractor 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-8. In 2022, SCE saw our lowest contractor SIF Rate since we started tracking and 69% below the four-year historical average (2018 – 2021).



Figure II-8 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
2022	0.000	0.117	0.000	0.118	0.000	0.124	0.122	0.000	0.000	0.000	0.000	0.263	0.060
Avg 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	-

Table II-23Rate of SIF Actual (Contractor)

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 work at corporate facilities.

SCE identified three main drivers (People, Process and Equipment) with various subdrivers 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.

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				

Table II-24Contractor Safety Risk Drivers

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.

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 					

Table II-25SCE Contractor Safety Programs

Below SCE discusses some of the key workstreams and efforts to reduce contractor SIFs. **Contractor Safety Culture:** SCE's safety culture extends to our contractors, especially

contractors who perform higher-risk work (Tier 1 Contractors). In 2022, SCE ensured that the leader safety culture training was expanded to all higher-risk contractors. The expected outcome was to ensure all Safety Tier 1 HR contractors had and executed leader safety culture training, understood where opportunities existed and implemented steps to strengthen the program's effectiveness. SCE also facilitated the sharing of best practices and lessons learned among contractors who implemented their

program at OU contractor safety forums. SCE uses prequalification and onboarding controls for contractors before work begins to reduce SIF. These components include a third-party assessment and mitigation plans when needed. SCE also incorporates safety requirements into our requests for proposal.

Contractor SIF Classifications: SCE uses an industry best practice model for classifying SIF and to assess contractors' safety performance. SCE representatives ensure contractor incidents are reported while working for SCE. We analyze contractor safety performance data to identify trends, implement targeted approaches in areas of opportunity and set objectives for contractor safety performance. For instance, in 2022, SCE conducted 14,682 observations on our contractors overall, and our third-party observers conducted an additional 3,632 on our contractors working in HFRA. Observation outcomes span crew recognition, identification of Opportunity for Improvement, and have also included work stoppages due to at-risk behaviors or site conditions. We use the findings of these observations to develop Critical Observable Actions (COAs) — behaviors that must be in place to keep the workforce safe — which contractors are required to implement.

Communications to Contractors: SCE regularly communicates to our contractor workforce to raise awareness about safety. Some examples of our communications include weekly incident reports, significant safety event communications, safety performance scorecards, construction method publications, and tool and equipment recalls.

Contractor Incident Evaluation Reports: In the event of an injury, SCE's response may range from requiring the contractor to develop its own corrective action to reducing or terminating the contract based on the contractor's safety performance. SCE requires incident evaluation reports to be submitted for all incident severities and requires contractors to outline mitigation measures to prevent similar incidents from recurring.

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

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. <u>Metric Specific Bias Controls Discussion</u>

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. <u>Metric 17: Rate of SIF Potential (Employee)</u>

Table II-26Rate 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 PSIF rate data is presented below in Figure II-9. In 2022, SCE saw a decrease in the PSIF rate compared to a five-year historical average (2017 – 2021) and compared to 2021. However, 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 increasingly being placed in harm's way and are more likely to experience a serious injury.

Figure II-9 Rate of SIF Potential (Employee)



Table II-27Rate 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
2022	0.100	0.000	0.000	0.000	0.096	0.093	0.204	0.000	0.184	0.278	0.213	0.219	0.112
Avg. by Month	0.082	0.168	0.178	0.203	0.156	0.109	0.203	0.295	0.155	0.226	0.244	0.158	-

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. By identifying PSIF cases, SCE is able to learn from and address a greater variety of situations.

There were 14 PSIF incidents in 2022. Seven incidents were classified as "Line of Fire" incidents. Four of the seven "Line of Fire" incidents were programmatic/organizational and three of the incidents were individual performance issues. Below is an analysis of trends and lessons learned amongst the seven "Line of Fire" incidents.

Apparent cause evaluations were performed on all 14 PSIF incidents to determine cause by examining weak/failed barriers, cultural, organizational, and programmatic issues, undesired actions, and human failure modes. The following weak/failed barriers were identified: Visual Cues, Procedure Use and Adherence, Tailboard, 3-way Communication, Validation Practices, Change Management, Corrective Actions, Design, Equipment Performance Programs, Knowledge/Training, Physical Barriers, Procedural Guidance, Resource Management, and Supervisory Oversight.

There were three "Line of Fire" incidents where employees on the crew, including field supervision, did not demonstrate a questioning attitude. Actions taken included:

- Coaching the foreman to ensure his crew knows the proper tool use and is operating in a manner consistent with safe operating processes.
- Lessons learned from this incident were communicated at work location's all hands meeting
- Work location held a safety meeting to reinforce the use of a peer check/"buddy check" for all tools and equipment, to include a check for carabiners on rigging bags to ensure they are SCE compliant, prior to climbing.

There were three "Line of Fire" incident where the depth of training/qualification was not adequate for the person(s) and the task. The actions taken included:

- Incorporate use of only authorized equipment, including approved carabiners relative to rigging bags, in existing new hire lineman and groundman skills training
- Coach the foreman to ensure their crew knows the proper tool use and is operating in a manner consistent with safe operating processes.

There were three "Line of Fire" incidents where work practices used were not accepted by leadership. Actions taken included:

- Cover use of emergency brakes on all vehicles and equipment via meetings: APM 124-Focus Topic for Safety Observations.
- Lesson Learned from this incident were communicated during the work location's all hands meeting

From a failed barrier perspective, 5 of 7 "Line of Fire" PSIF cause evaluations called out "Knowledge and Training" as either weak or missing. Actions taken included:

- Incorporate use of only authorized equipment, including approved carabiners relative to rigging bags, in existing new hire lineman and groundman skills training
- Develop and implement emergency evacuation drills for work location and determine acceptable periodicity (annual, semi-annual etc.) including development and implementation of Lessons Learned for drill scenarios
- Coach the foreman on ensuring his crew knows the proper tool use and is operating in a manner consistent with safe operating processes
- Coach the individual on understanding job hazards associated with moving/lifting and the importance of obtaining assistance when encountering a situation that exceeds one's capacity

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

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 Safety Classification and Learning (SCL) model. 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-28Rate 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/contracto r 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 2022, SCE saw a notable decrease in SIF Potential counts and rates. However, 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.

0.700 0.600 0.600 0.430 0.500 0.460 **Potential SIF Rate** 0.390 0.400 0.300 0.250 0.200 0.100 0.000 2018 2019 2020 2021 2022 Potential SIF Rate -4 Yr Average

Figure II-10 Rate of SIF Potential (Contractor)

Table II-29Rate 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
2022	0.440	0.230	0.560	0.240	0.120	0.370	0.240	0.370	0.240	0.120	0.000	0.000	0.250
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 PSIF (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 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. One example of how SCE has used PSIFs to drive Contractor Safety programs is the development of a new combined set of COAs for all Air Operations. Prior to 2022, SCE had elements of Air Operations COAs embedded in multiple COAs, including those dedicated to Transmission and Distribution work types. After five (5) PSIFs relating to Air Operations were reported in 2021, Edison Safety and the OUs agreed to combine all Air Operations COAs into a single set of COAs, providing a standard reference for all ground crews and air crews, regardless of work type. The COAs were combined, consolidated and published as a single set of COAs in March 2022 and now provide a safety and observation reference for all work types involving Air Operations.

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. <u>Metric Specific Bias Controls Discussion</u>

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)

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.

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

1. Metric Data and Discussion:

The annual Contractor DART rate metric data is presented below in Figure II-11. In 2022, SCE saw a decrease in Contractor DART rate (39% percent below the four-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-11 Contractor DART Rate

Table II-31Contractor 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
2022	0.110	0.230	0.110	0.590	0.240	0.370	0.120	0.240	0.120	0.350	0.140	0.530	0.2600
Avg by Month	0.272	0.282	0.312	0.478	0.400	0.544	0.512	0.588	0.288	0.308	0.280	0.500	0.272

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

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. <u>Metric Specific Bias Controls Discussion</u>

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.⁴⁶ 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.

#	Injury Type	Incident Type	Sub-Category	Infrastructure Involved		
1	Fatality	Other	Other	Distribution		
2	Injury	Other	Distribution			
3	Injury	Overhead Electric Contact	Contact with energized fallen overhead conductors due to conductor failure	Distribution		
4	Fatality	Overhead Electric Contact	Contact with intact overhead conductors	Distribution		
5	Fatality	Other	er Theft/Vandalism			

Table II-32Public Serious Injury and Fatality – 2022 Data by Category

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.

 $[\]frac{46}{2}$ SCE provided this information to CPUC staff on January 31, 2022.

	Public Serious Injuries & Fatalities due to system failure										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Publi te	ic Fatalities due o system failure	0	0	0	0	1	0	0	0	0	0
	Public Serious Injuries due to system failure	0	0	0	0	1	0	1	1	0	1
	Total P	ublic S	erious I	njuries	& Fata	lities <u>re</u>	ported	to the C	<u>CPUC</u>		
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
I	Public Fatalities	3	11	4	6	4	9	2	2	4	3
Injuri	Public Serious ies (Cal OSHA)	5	19	12	8	10	11	10	10	5	2

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

Protecting the public is central to SCE's mission. The causes of public safety incidents

vary and may include SCE facility failures, outages, vehicle accidents, and trespassing with the intent to

vandalize. 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-34Key Public Safety Risks Identified by SCE

- Contact with Energized Equipment
 - $\circ \quad \text{Wire Down} \\$
 - Overhead Intact Contact (*e.g.*, tree trimmer)
 - Underground Intact Contact Below Grade (e.g., dig-ins)
 - Underground Intact Contact Above Grade (e.g., riser, meter panel)
- Underground Equipment Failure
- Aircraft Collision with Overhead Lines
- SCE Vehicle Operations (*e.g.*, 3rd party incidents)
- 3rd Party Vehicle Hit SCE Equipment (*e.g.*, vehicle hit poles)
- Worksite Protection
- Planned/Unplanned Outages- Energy Dependent Customers
- Hydro Asset Failure
- Wildfire

SCE continues to focus on public safety, striving for zero serious injuries or fatalities to

members of the public. In 2022, there were five reported Serious Injuries or Fatalities (SIFs), not only an

improvement from the prior year, but also the lowest annual count of incidents in the past decade. This

positive trend is supported by maintaining existing activities taking place and expanding our actions to ensure our commitment to public safety.

There are six principal 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, 5) focused analysis of close call events, and 6) public outreach. A blended focus on grid resiliency, monitoring, and education allows SCE to assess various aspects of our infrastructure design and maintenance as well as how our customers interface with our facilities in their day-to-day activities.

In 2022, SCE continued to assess alternative options for identifying idle facilities. This precursor action may improve targeted, proactive de-energization of idle facilities. "Hazardous Voltage" decals continue to be applied to all risers, as prescribed by the revised standards. Combined, these measures are intended to deter potential vandalism with enhanced warning signs and minimize the risk of contact with energized equipment when our facilities are not in use.

SCE remains vigilant about the safety and reliability of our infrastructure in light of recent terrorist activity threatening electrical grids around the country. We continue to be on high alert, working with local authorities on suspicious activity while also staying involved with the national dialogue around recent events. Current practices remain 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. We have also increased patrols where suspicious activity or serious incidents have already occurred. 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. Cover pressure restraint systems (CPRR) and overhead

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conductor program (OCP) deployment, along with improved monitoring devices, are also used to reduce risk related to these types of events.

Through high consequence/high probability of failure modeling, SCE ensures that the approach is driven by the highest likelihood of adverse public safety outcomes. As our root cause process matures and additional data supports change, models will be updated to reflect the knowledge gained through those activities, further reducing the consequence of serious injury or fatality to a member of the public.

SCE has additional controls and mitigations in place. The PSPS program allows for strategic, proactive shutoff ahead of a threshold defined wind event to mitigate the potential for an adverse outcome such as a wildfire. Close monitoring of weather stations and high-definition cameras also support incident management and prevention.

The Expanded Claims Investigation (ECI) process focuses on public safety events 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 is tracking unique details across incidents to evaluate if leading indicators are trending in a manner that allows us to leverage earlier mitigation strategies - reducing the potential for a serious injury or fatality before a reportable event occurs.

A focused effort is underway to understand the potential data available to explore close call information. The intent is to establish a better understanding of the precursor events that may lead to a serious injury or fatality. Development of this data may be beneficial in its ability to provide insights and leading indicators that can be more proactively addressed to reduce the serious harm posed to the public.

SCE's public outreach programs continue to evolve. Our primary messaging changes as a direct result of the incidents observed over time. These messages provide education and essential information to the public through several channels, including billboards, radio spots, mailers, geo-fencing, and television campaigns - all in multiple languages. External safety communication programs

are developed and maintained by Corporate Communications. Topics cover such dangers as contact with downed wires, releasing metallic balloons, and the 'Call Before You Dig' 811 program. SCE outlines the desired steps to staying safe and contacting 9-1-1, then SCE, to report the hazard.

An example of a recent change was the shift in messaging around tree trimming. The prior message highlighted the importance of maintaining a 10' safe distance from power lines when trimming. That has now been replaced with a call to action for customers to leverage our 'Make Safe' program, allowing SCE to assess their field conditions and make necessary trims that keep customers and their contractors away from our lines.

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

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

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. <u>Metric Specific Bias Controls Discussion</u>

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. <u>Metric 21: Helicopter / Flight Accident or Incident</u>

 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-12 and Table II-36. 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 operate near electrical wires. This program is open to all general aviation pilots including first responders.



Figure II-12 Summary of Annual Metric Data

As indicated above in Figure II-12, SCE did not have any incidents that met the metric definition in 2022.

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	24.2
2019	0	6,238	0.00
2020	0	6,072	0.00
2021	1	6,988	14.3
2022	0	8,343	0.00
2014 - 2022 Totals	2	43,646	4.6

 Table II-36

 Annual Historical Data for Helicopter / Flight Accident or Incident Metric

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

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. <u>Metric Specific Bias Controls Discussion</u>

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. <u>Metric 25. Wires-Down not resulting in Automatic De-energization</u>

Table II-37Wires-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.

1. Metric Data and Discussion

The annual monthly historical data for distribution and transmission is shown below in

Table II-38.

Distribution M	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%
2022	33.3%	44.0%	40.0%	44.4%	47.6%	48.8%	40.3%	34.9%	36.6%	35.7%	41.9%	46.0%	41.1%
Avg by Month	19.5%	24.1%	20.9%	25.4%	26.4%	25.7%	27.4%	26.8%	25.8%	26.7%	30.3%	26.5%	25.6%
Transmission N	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%
2022	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	43%
Avg by Month	0%	0%	14%	7%	0%	14%	14%	7%	14%	0%	21%	0%	11%

Table II-38Wires-Down not resulting in Automatic De-energization Data – Historical Monthly Data47

⁴⁷ 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.

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

As shown above in Table II-38, there was a large increase in the 2022 distribution energized wire down events. In 2022 SCE employed a different methodology utilizing Advanced Meter Information (AMI) to determine whether a distribution wire down event was energized. The AMI data concluded that 59% were definitely not energized, but that resulted in 41% being deemed energized in 2022. SCE acknowledges that this may mean some false positives and the % energized is less than the numbers reported above. SCE is in the process of revamping our Repair Order forms to be able to collect additional data to help collect this metric information.

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 an 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.

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As part of our wildfire mitigation efforts SCE is investing in some alternative technologies that have the ability to reduce potential energized wires down that could lead to fire ignitions. Those alternative technologies are briefly discussed below.

High Impedance Relays utilize multiple protective elements to reduce wildfire ignition risks caused by energized wire down events by detecting High Impedance (Hi-Z) conditions such as downed conductors or arcing events. In lab testing, SCE has demonstrated that the High Impedance Relay technology can detect Hi-Z conditions; however, SCE is still validating the technology's efficiency in the field in detecting actual Hi-Z events. Detecting Hi-Z conditions is an industry-wide challenge. SCE's traditional feeder protection elements are based on overcurrent. This means that the protection elements rely on fault magnitude to trigger the relay to operate. In a Hi-Z event, however, the fault magnitude is relatively small to non-existent. Therefore, protection schemes that can detect Hi-Z conditions can reduce the propagation of low magnitude fault conditions, and thereby reduce ignition risk from an energized wire down event.

SCE has and will continue to deploy Distribution Open Phase Detection (DPOD) and Transmission Open Phase Detection (TOPD) schemes. These mitigations represent schemes to detect one or more open phase (broken conductor) conditions on the distribution and transmission systems. These advanced protection detection schemes focus on reducing ignitions associated with energized wire-down incidents, for both bare and covered conductor systems. The capabilities should allow the protection system to isolate a separated conductor prior to the wire contacting the earth, while leveraging the standard distribution hardware.

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

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. <u>Metric Specific Bias Controls Discussion</u>

SCE distribution and transmission engineering groups review wire down 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

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.

Table II-39Missed Inspections and Patrols for Electric Circuits

1. <u>Metric Data and Discussion</u>

The annual historical data for distribution and transmission inspections is shown below in

Table II-40.

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Annual Average
Distribution Detailed	2%	4%	3%	2%	1%	1%	1%	1%	2%	2%	4%	2%
Distribution Patrols	0%	0%	1%	0%	2%	2%	2%	1%	2%	0%	3%	1%
Transmission Detailed	-	-	-	-	-	-	12%	12%	2%	3%	0%	6%
Transmission Patrols	0.4%	0.6%	0.1%	0.0%	0.3%	0.1%	7.1%	9.4%	2.5%	1.8%	0.1%	2.0%

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

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 nonconformances with GO 95 that require corrective action, (2) determine what corrective action is required and prioritize corrective action in alignment with the Distribution Inspection & Maintenance Program, and (3) perform minor repairs 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

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be times, in spite of reasonable 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 GO 95:

- 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 GO 95, 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 companywide program established to maintain the transmission system and communication network in accordance with good utility practices and the GO 95, GO 128, and GO 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 GO 95:

- 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 GO 95, 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-41Overhead 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-42.48

Table II-42Overhead 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%
2022	4.3%	4.2%	4.2%	4.1%	4.1%	4.5%	4.0%	4.0%	3.9%	3.9%	3.8%	3.8%	3.8%

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.

⁴⁸ 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.

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

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. <u>Metric Specific Bias Controls Discussion</u>

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)

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.

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

1. <u>Metric Data and Discussion</u>

The annual GO 95 Corrective Actions data is presented below in Figure II-13 and monthly data is presented in Table II-44.



Figure II-13 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 Dist	ribution His	torical Da	ata:										
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%
2022	69%	87%	88%	88%	90%	92%	90%	95%	89%	89%	90%	91%	89%
Avg by Month	82%	84%	85%	81%	85%	87%	85%	86%	83%	83%	86%	92%	86%
Monthly Tra	nsmission Hi	istorical I	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%
2022	68%	65%	71%	81%	83%	92%	87%	79%	66%	71%	63%	70%	77%
Avg by	000/	(- 0)		<	1.00					<= 0.1	- 10/		

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 California Coastal Commission, multiple forest agencies, 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). As discussed in depth in its 2023-2025 WMP, in 2023, SCE plans to update its prioritization methodology for its backlog and apply it to all open notifications. SCE will also investigate the possibility of informing open notification prioritization methodology with additional factors such as PSPS and AOCs. Similarly, SCE will investigate how it can de-prioritize low-risk notifications while balancing compliance requirements to reduce the backlog and continue to prioritize higher ignition risk open notifications.

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

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's 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 to address corrective actions and understand the program deviations for future process improvements.

Q. Metric 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.

Table II-45Overhead Conductor Safety Index

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 and it
is unclear how SCE would demonstrate the data this report.⁴⁹ SCE would like to clarify a statement that we made in our previous SPMR. In our previous SPMR, SCE stated that we "assumed that the spirit of this metric aligns with our Wires Down metric definition as stated in Metrics 1 and 2"⁵⁰ and that the numbers we provided last year for this metric used the data from those metrics divided by total overhead circuit miles. SCE believes that the data we collect for metrics 1 and 2 would encompass all 5 of the components listed above and is therefore the appropriate values to use for wire down events in this metric.

Metric Criteria	Explanation for Why This is Part of Metric 1 and/or 2
1) A conductor or splice becomes physically broken	If a splice or conductor becomes physically broken this would clearly meet the definition in Metric 1 or 2.
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);	As SCE stated multiple times in written comments and in workshops in the Risk OIR, it is not clear what staff means by "dislodged from its intended position." SCE assumes this means dislodged to the point it would trigger a notification which would be considered a wire down event that is included in Metrics 1 or 2.
3) A conductor falls from its intended position to rest on the ground or a foreign object;	If a splice or conductor becomes physically broken this would clearly meet the definition in Metric 1 or 2.
4) A conductor comes into contact with communication circuits, guy wires, or conductors of a lower voltage; or	If a conductor fails and contacts another circuit below, it will usually result in the wire failing or the wire it contacted to fail, and this clearly meets the definition in Metric 1 or 2.
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.	If a power pole is leaning by more than 45 degrees, this would result in the conductor being less than 6 feet from the ground and would meet the definition in Metric 1 or 2.

Table II-46Overhead Conductor Safety Index

For a discussion of activities and initiatives that SCE is undertaking to reduce wire down

events please refer to Section II.B.1.

⁴⁹ For instance, if a WD event covered multiple categories (a wire down where splice becomes broken and is therefore dislodged from its intended position and rests on the ground would cover criteria 1, 2 and 3), would SCE include that in each category or just choose one category?

⁵⁰ See Southern California Edison Company's 2021 Safety Performance Metrics Report, p. 93.



Figure II-14 Annual Overhead Conductor Safety Index Data

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

The Overhead Conductor Safety Index 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. <u>Metric Specific Bias Controls Discussion</u>

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 2022 Safety Performance Metrics – Historical Data



Southern California Edison Safety Performance Metrics

Metric Name	Risks	Metric Category	^y 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 firs 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
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 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
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
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	Vehicle	Number of accidents or incidents (as defined in 49 CFR Section	Defined by Federal Aviation Regulations (FARs), reportable to Federation Aviation Administration
25. Wires-Down not resulting in Automatic De-energization	<u>Operations</u> 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)	2 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 1) SCE's Approved Safety Performance Metrics from D21-11-009 App	wildfire Transmission Qverhead Conductor endix B	Electric	Number of occurrences per circuit mile	overnead 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 bytotal.circuit.miles.in.the.system.x.1.000:

A-1



Date	1. T&D Overhead Wires Down	2. T&D Overhead Wires Down - Major Event Days	3. Electric Emergency Response (Avg) w/MEDs	3. Electric Emergency Response (Median) w/MEDs	4. Fire Ignitions	14. Employee Days Away, Restricted and Transfer (DART) Rate	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	16. Rate of SIF Actual (Contractor)	16. Rate of SIF Actual (Contractor) - Cal OSHA Actuals	17. Rate of SIF Potential (Employee)	18. Rate of SIF Potential (Contractor)
D 22	71	110	47.9	27.0	1	0.00	0.000	Cal OSHA Acutals	0.2(2	0.121	0.210	0.000
Nov-22	90	222	51.7	37.0	8	0.88	0.000	0.000	0.263	0.131	0.219	0.000
Oct-22	65	105	43.8	34.0	5	1.20	0.093	0.093	0.000	0.116	0.278	0.120
Sep-22	75	203	78.9	40.0	11	1.10	0.000	0.000	0.000	0.000	0.184	0.240
Aug-22	87	163	50.9	36.0	12	1.30	0.000	0.000	0.000	0.000	0.000	0.370
Jun-22	78	145	56.2	38.0	21	1.76	0.000	0.000	0.122	0.124	0.093	0.370
May-22	85	153	43.1	34.0	18	1.73	0.000	0.000	0.120	0.120	0.096	0.120
Apr-22	78	132	45.8	36.0	10	1.35	0.000	0.000	0.237	0.237	0.000	0.240
Mar-22	75	113	42.5	35.0	9	1.30	0.087	0.087	0.000	0.000	0.000	0.560
Jan-22	65	162	239.1	41.0	9	0.80	0.100	0.100	0.000	0.000	0.100	0.230
Dec-21	91	249	87.9	38.0	4	0.73	0.000	0.000	0.000	0.000	0.208	0.000
Nov-21	54	125	62.4	38.0	3	0.95	0.000	0.000	0.414	0.207	0.210	0.520
Oct-21	108	166	57.7	37.0	12	1.56	0.000	0.000	0.091	0.091	0.368	0.270
Sep-21 Aug-21	75	115	43.5	36.0	21	0.99	0.000	0.094	0.206	0.103	0.187	0.520
Jul-21	73	178	12.7	2010	23	0.66	0.095	0.000	0.000	0.000	0.000	0.450
Jun-21	95	197			30	1.32	0.000	0.176	0.000	0.000	0.000	0.420
May-21	93	163			20	0.86	0.095	0.095	0.317	0.317	0.095	0.210
Apr-21	69	128	36.3	29.0	16	1.40	0.000	0.000	0.000	0.000	0.611	0.710
Feb-21	79	145	44.3	32.0	11	0.85	0.000	0.094	0.000	0.000	0.094	0.600
Jan-21	129	311	60.0	33.0	12	0.84	0.094	0.188	0.243	0.121	0.094	0.490
Dec-20	57	181	44.0	32.0	7	0.93	0.000	0.000	0.409	0.102	0.093	0.310
Nov-20	101	208	82.1	35.0	12	0.40	0.000	0.000	0.000	0.000	0.201	0.640
Oct-20 Sep-20	58	220 198	127.2 65.9	33.0 32.0	11 &	0.87	0.079	0.079	0.247	0.164	0.000	0.250
Aug-20	105	190	38.6	29.0	20	1.20	0.000	0.086	0.217	0.217	0.259	0.430
Jul-20	78	135	35.4	30.0	16	0.93	0.085	0.255	0.436	0.436	0.085	0.220
Jun-20	119	207	37.1	30.0	42	0.25	0.083	0.083	0.105	0.000	0.083	0.740
May-20	92	178	36.2	29.0	12	0.78	0.000	0.087	0.105	0.105	0.000	0.110
Apr-20 Mar-20	98	154	39.2	28.0	4 8	0.49	0.081	0.162	0.493	0.493	0.256	0.370
Feb-20	89	149	51.5	33.0	4	0.87	0.000	0.097	0.115	0.231	0.097	0.580
Jan-20	66	106	40.2	32.0	4	1.55	0.000	0.091	0.109	0.109	0.000	0.540
Dec-19	126	228	69.3	35.0	1	0.51	0.000	0.102	0.104	0.000	0.102	0.210
Nov-19	74	176	107.8	34.0	9	0.94	0.000	0.000	0.088	0.000	0.419	0.090
Sep-19	77	128	47.5	31.5	20	1.32	0.000	0.000	0.094	0.087	0.188	0.610
Aug-19	50	90	37.9	32.0	20	1.23	0.175	0.175	0.095	0.190	0.175	0.190
Jul-19	85	121	36.2	30.0	15	1.37	0.091	0.091	0.107	0.215	0.091	0.860
Jun-19	77	110	37.8	31.0	23	0.87	0.000	0.000	0.209	0.209	0.097	1.150
May-19	83	115	37.2	30.0	6	1.89	0.000	0.000	0.112	0.112	0.180	0.330
Mar-19	78	131	37.4	31.0	5	1.77	0.000	0.092	0.223	0.000	0.092	0.330
Feb-19	86	251	59.0	37.0	1	1.49	0.000	0.199	0.139	0.000	0.398	0.420
Jan-19	118	207	43.5	31.0	1	0.82	0.000	0.000	0.335	0.000	0.000	0.330
Dec-18	84	143	40.3	33.0	5	1.10	0.000	0.110	0.531	0.354	0.000	0.710
Nov-18	53	170	45.1	32.0	6	0.61	0.000	0.000	0.210	0.105	0.204	0.420
Sep-18	75	104	36.2	31.0	6	1.25	0.000	0.000	0.257	0.128	0.000	0.510
Aug-18	72	83	35.9	30.0	13	1.22	0.087	0.087	0.577	0.000	0.175	0.430
Jul-18	57	162	41.4	31.0	11	0.88	0.098	0.098	0.147	0.147	0.098	0.150
Jun-18 May 18	127	193	36.2	30.0	18	0.58	0.097	0.097	0.425	0.283	0.097	0.570
Apr-18	100	189	35.6	29.0	14	0.59	0.093	0.180	0.141	0.000	0.098	0.420
Mar-18	102	155	35.0	30.0	2	0.65	0.093	0.186	0.451	0.451	0.186	1.050
Feb-18	93	151	36.8	30.0	6	1.06	0.000	0.317	0.000	0.000	0.106	0.710
Jan-18	67	133	56.3	34.0	4	0.77	0.000	0.289	0.174	0.174	0.000	1.040
Dec-17	68	164 88	52.6 38.2	33.0 34.0	3	0.32	0.000	0.000			0.324	
Oct-17	79	171	37.7	31.0	6	0.91	0.091	0.091			0.455	
Sep-17	119	245	44.2	33.0	7	0.79	0.099	0.099			0.198	
Aug-17	91	231	45.9	32.0	13	1.78	0.000	0.178			0.801	
Jul-17	93	152	38.9	33.0	15	1.16	0.000	0.000			0.739	
Mav-17	105	208	44.4	33.0	17	1.33	0.095	0.203			0.203	
Apr-17	93	232	64.1	40.0	9	0.83	0.000	0.000			0.415	
Mar-17	138	261	54.1	36.0	6	0.99	0.181	0.181			0.452	
Feb-17	88	222	65.5	42.5	1	0.84	0.000	0.000			0.314	
Jan-17/ Dec-16	131	413 230	oU.1	39.0	4	1.10	0.100	0.200			0.300	
Nov-16	81	214			5	0.66	0.000	0.000				
Oct-16	76	245			11	1.26	0.000	0.097				
Sep-16	108	262			9	0.88	0.196	0.196				
Aug-16	73	207			4	1.33	0.000	0.177				
Jui-16	82	191			0 16	0.52	0.000	0.105				
May-16	97	134			8	0.68	0.000	0.097				
Apr-16	127	208			14	0.48	0.096	0.096				
Mar-16	110	158			3	0.81	0.000	0.000				
Feb-16	86	164			10	0.89	0.099	0.099				
Jan-16 Dec-15	95	164			2	0.71	0.203	0.203				
Nov-15	78	126			8	0.11	0.000	0.000				
Oct-15	79	139			7	0.81	0.000	0.090				
Sep-15	77	154			8	1.19	0.000	0.000				
Aug-15	67	133			7	0.92	0.092	0.092				
Jun-15	81	132			19	0.35	0.000	0.088				
May-15	74	101			17	0.85	0.190	0.190				



Date	1. T&D Overhead Wires Down	2. T&D Overhead Wires Down - Major Event Days	3. Electric Emergency Response (Avg) w/MEDs	3. Electric Emergency Response (Median) w/MEDs	4. Fire Ignitions	14. Employee Days Away, Restricted and Transfer (DART) Rate	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee) - Cal OSHA Acutals	16. Rate of SIF Actual (Contractor)	16. Rate of 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	0.088				
Mar-15	96	125			4	1.46	0.086	0.514				
Feb-15	55	77			2	1.16	0.000	0.000				
Jan-15	88	132			2	1.40	0.087	0.175				
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						2.30						
Dec 12						1.79						
Nev 12						1.04						
Oct-12						1.51						
Sep-12						1.77						
Δυσ-12						1.77						
Inl-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						



	19. Contractor Days	20. Public Serious	21. Helico	pter / Flight Accident	or Incident	25. Wires-Down not resulting in	25. Wires-Down not resulting in	27. Overhead Conductor Size in	29. GO-95 Corrective Actions	29. GO-95 Corrective Actions
Date	Away, Restricted	Injuries and			<i></i>	Automatic De-	Automatic De-	High Fire Threat	(Tiers 2 and 3,	(Tiers 2 and 3,
	I ransfer (DAR I)	Fatalities	Total Incident Count	Total Flight Hours	Total Incident Rate	energization - Distribution	energization - Transmission	3, HFTD)	HFTD) - Distribution	HFTD) - Transmission
Dec-22	0.530	0	0	651.79	0	46.0%	0%	3.8%	91%	70%
Nov-22	0.140	0	0	619.70	0	41.9%	0%	3.8%	90%	63%
Oct-22 Sep-22	0.350	0	0	750.80	0	35.7%	0%	3.9%	89%	71% 66%
Aug-22	0.240	0	0	740.63	0	34.9%	0%	4.0%	95%	79%
Jul-22	0.120	1	0	718.30	0	40.3%	100%	4.0%	90%	87%
Jun-22	0.370	0	0	1061.55	0	48.8%	0%	4.5%	92%	92%
May-22	0.240	1	0	701.55	0	47.6%	0%	4.1%	90%	83%
Mar-22	0.110	1	0	860.80	0	40.0%	100%	4.2%	88%	71%
Feb-22	0.230	0	0	886.10	0	44.0%	0%	4.2%	87%	65%
Jan-22	0.110	1	0	833.30	0	33.3%	0%	4.3%	69%	68%
Dec-21	0.340	0	0	548.21	0	16.7%	0%	4.3%	92%	78%
Oct-21	0.320	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%
May-21	0.420	0	1.00	499.71	200	11.4%	0%	4.7%	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 Dec-20	0.360	0	0	447.01 659.8	0	16.0% 16.7%	U% 0%		84% 90%	83% 84%
Nov-20	0.270	0	0	1090.2	0	<u></u> <u>2</u> 6.5%	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	190.1 358 2	0	24.1%	0%		83%	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%
Jan-20	0.220	2	0	347.9	0	9.2%	0%		92%	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%
Aug-19	0.470	0	0	325.8	0		50%		81%	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 Mar-19	0.240	0	0	404.1	0		0%		80%	65% 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 Oct-18	0.210	4	0	325.5	0		0%		84%	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 May-18	0.990	3	1	405.4	247		0%		79% 70%	47%
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 Dec-17	0.170	0	0	324.1	0		0%		78%	85%
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%			
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%			
Jan-17		0	0	140.1 198.6	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% 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 Mar-16		1	0	156.5 175.2	0		0% 0%			



Data	19. Contractor Days	20. Public Serious	21. Helicoj	oter / Flight Accident	or Incident	25. Wires-Down not resulting in	25. Wires-Down not resulting in	27. Overhead Conductor Size in High Fire Threat	29. GO-95 Corrective Actions (Tiors 2 and 3	29. GO-95 Corrective Actions
Date	Transfer (DART)	Fatalities	Total Incident Count	Total Flight Hours	Total Incident Rate	energization - Distribution	energization - Transmission	District (Tiers 2 and 3, HFTD)	HFTD) - Distribution	(FIETS 2 and 3, HFTD) - Transmission
Feb-16		1	0	183.4	0		0%			
Jan-16		2	0	157.6	0		0%			
Dec-15		0	0	250.9	0					
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	1/8.2	0					
Mar-14		2	0	110.9	0					
Feb-14		3	0	100.7	0					
Jan-14		0	0	109.7	0					
Nev 12		0								
Oct 13		2								
Sen-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								

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	14. 4. Fire Ignitions Restric	Employee Days Away, cted 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 (Contracto	19. Contractor Days Away or) 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 - Distribution	32.Overhead Conductor Safety Index - Transmission
2012						1.82						19						
2013						1.69						8						
2014	641	1,040				0.92						30						
2015	973	1,532			107	0.94	0.115					16					22.691	0.1
2016	1,138	2,414			96	0.80	0.107					14		0%			26.123	1.6
2017	1,177	2,617	48.4	34.0	105	0.99	0.107		0.411			14		0%			27.267	0.8
2018	960	1,760	49.0	31.0	109	0.98	0.113	0.323	0.113	0.60	0.55	20		0%	81%	62%	22.248	0.6
2019	963	1,819	52.1	32.0	123	1.17	0.054	0.134	0.155	0.46	0.35	12		9%	86%	50%	22.434	1.6
2020	1,004	2,069	54.6	31.0	148	0.90	0.124	0.192	0.102	0.43	0.45	12	17%	17%	88%	78%	23.181	0.9
2021	1,041	2,063	55.8	35.0	173	1.05	0.062	0.124	0.193	0.39	0.36	9	19%	8%	84%	77%	24.209	0.5
2022	931	1,826	67.4	36.0	125	1.18	0.088	0.06	0.112	0.25	0.26	5	41%	43%	89%	77%	21.571	0.6

A-6

Percent Im	provement/Decline	e in SCE's 2022 N	Metric Performance	Compared to	Historical Averag	e*
						_

Metric Name	2022 Performance	Historical Average	Percent Improvement/Decline in SCE's 2022 Metric Performance Compared to Historical Average	Average Notes
1. T&D Overhead Wires Down	931	1,047	11.1%	6 year Average (2016 - 2021)
2. T&D Overhead Wires Down - Major Event Days	1,826	2,124	14.0%	6 year Average (2016 - 2021)
3. Electric Emergency Response - Average	67.4	52.0	-29.7%	5 year Average (2017 - 2021)
4. Fire Ignitions	125	123	-1.6%	7 year Average (2015 - 2021)
14. Employee Days Away, Restricted and Transfer (DART) Rate	1.18	1.02	-15.9%	5 year Average (2017 - 2021)
15. Rate of Serious Injuries or Fatalities (SIF) Actual (Employee)	0.09	0.10	9.7%	7 year Average (2015 - 2021)
16. Rate of SIF Actual (Contractor)	0.060	0.193	69.0%	4 Year Average (2018 - 2021)
17. Rate of SIF Potential (Employee)	0.112	0.195	42.5%	5 year Average (2017 - 2021)
18. Rate of SIF Potential (Contractor)	0.250	0.470	46.8%	4 Year Average (2018 - 2021)
19. Contractor Days Away, Restricted Transfer (DART)	0.26	0.4	39.2%	4 Year Average (2018 - 2021)
20. Public Serious Injuries and Fatalities	5	13	62.7%	5 year Average (2017 - 2021)
21. Helicopter/ Flight Accident or Incident	N/A	N/A	N/A	N/A
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	4%	2%	-94.4%	9 Year Average (2013 - 2021)
Distribution Patrols	5 3%	1%	-182.6%	9 Year Average (2013 - 2021)
Transmission Detailed	l 0%	7%	96.1%	4 Year Average (2018 - 2021)
Transmission Patrols	5 0%	2%	95.2%	9 Year Average (2013 - 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	n 89%	85%	-4.4%	4 Year Average (2018 - 2021)
Transmissio	n 77%	67%	-14.9%	4 Year Average (2018 - 2021)
32.Overhead Conductor Safety Index				
Distribution	n 21.6	24.0	10.2%	7 year Average (2015 - 2021)
Transmission	n 0.6	0.9	31.9%	7 year Average (2015 - 2021)

*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 Desc
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 con- rest on the ground or a foreign object; a conductor is considered energized unle secondary distribution wires and "Major Event Days" (typica

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
2022	65	86	75	78	85	76	78	87	75	65	90	71	931	78
Average by Month	95	83	100	88	87	93	79	79	81	70	74	94	-	-

Annual Historical Data:		
<u>Year</u>	<u>Metric #1</u>	<u>6 Yr. Avg</u>
2014	641	1,047
2015	973	1,047
2016	1,138	1,047
2017	1,177	1,047
2018	960	1,047
2019	963	1,047
2020	1,004	1,047
2021	1,041	1,047
2022	931	1,047
6 Year Average	1,047	



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nductor is broken, or remains intact, and falls from its intended position to ess confirmed in an idle state (i.e. normally de-energized); excludes down ally due to severe storm events) as defined by the IEEE.



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

Metric Name	Risks	Category	Units	Metric Desc
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 condu on the ground or a foreign object; a conductor is considered energized unless conf distribution wires. Includes "Major Event Days" (typically

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	207	251	135	131	115	110	121	90	127	128	176	228	1,819	152
2020	106	149	141	154	178	207	135	192	198	220	208	181	2,069	172
2021	311	145	173	128	163	197	178	113	115	166	125	249	2,063	172
2022	162	124	113	132	153	196	143	163	203	105	222	110	1,826	152
Average by Month	212	160	158	160	146	171	148	148	170	158	159	190	1,893	164

Annual Historical Data:			
<u>Year</u>	<u>Metric #2</u>	<u>6 Yr. Avg</u>	
2014	1,040	2,124	
2015	1,532	2,124	
2016	2,414	2,124	
2017	2,617	2,124	
2018	1,760	2,124	
2019	1,819	2,124	
2020	2,069	2,124	
2021	2,063	2,124	
2022	1,826	2,124	
6 Year Average	2,124		



cription

uctor is broken, or remains intact, and falls from its intended position to rest firmed in an idle state (i.e. normally de-energized); includes down secondary v due to severe storm events) as defined by the IEEE.



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 Re	spond											
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	60.1	65.5	54.1	64.1	44.4	43.7	38.9	45.9	44.2	37.7	38.2	52.6	48.4
2018	56.3	36.8	35.0	35.6	36.0	36.2	41.4	35.9	36.2	120.8	45.1	40.3	49.0
2019	43.5	59.0	37.4	52.7	37.2	37.8	36.2	37.9	42.9	47.5	107.8	69.3	52.1
2020	40.2	51.5	36.1	39.2	36.2	37.1	35.4	38.6	65.9	127.2	82.1	44.0	54.6
2021	60.0	44.3	36.3					42.7	43.5	57.7	62.4	87.9	55.8
2022	239.1	42.6	42.5	45.8	43.1	56.2	43.3	50.9	78.9	43.8	51.7	47.8	67.4
Average by Month	83.2	50.0	40.2	47.5	39.4	42.2	39.1	42.0	51.9	72.5	64.5	57.0	58.6

**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.

Ionthly Historical Data - Median Time to Respond													
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	39	42.5	36	40	33	34	33	32	33	31	34	33	34.0
2018	34	30	30	29	30	30	31	30	31	39	32	33	31.0
2019	31	37	31	32	30	31	30	32	31.5	32	34	35	32.0
2020	32	33	30	28	29	30	30	29	32	33	35	32	31.0
2021	33	32	29					33	36	37	38	38	35.0
2022	41	35	35	36	34	38	34	36	40	34	37	37	36.0
Average by Month	35.0	34.9	31.8	33.0	31.2	32.6	31.6	32.0	33.9	34.3	35.0	34.7	

**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:		
<u>Year</u>	<u>Avg Time to</u> <u>Respond (w/MED)</u>	<u>Median Time to</u> <u>Respond</u> (w/MED)
2017	48.45	34.00
2018	48.99	31.00
2019	52.12	32.00
2020	54.60	31.00
2021	55.79	35.00
2022	67.43	36.00
5 Year Averrage	51.99	32.60





3 - Electric Emergency Response (Excluding Major Event Days)

Metric Name	Risks	Category	Units					Metric	Description	n	
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 notifica notification average tin	time and me tion to the ti ns originating ne and media	dian time in me a represe g from 911 c an time shall	minutes to r ntative (or q alls and calls be provided	espond on-si ualified first s made direc in incremen not a	te to an elec responder) tly to the uti ts as defined s a metric.	tric-related e arrived onsit lities' safety l in GO 112-	n e. h F
Monthly Historical Dat	a - Average Time to Res	pond									
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Γ
2017	53.3	56.2	54.1	64.1	44.4	43.7	38.9	42.1	44.2	37.7	Γ
2010	25.4	26.0	25.0	25 (26.0	262	20.0	25.0	262	20.2	Т

Monthly Historical Data - Average Time to Respond													
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Totals
2017	53.3	56.2	54.1	64.1	44.4	43.7	38.9	42.1	44.2	37.7	38.2	41.0	46.1
2018	35.4	36.8	35.0	35.6	36.0	36.2	39.6	35.9	36.2	39.3	44.4	40.3	37.5
2019	43.5	47.3	37.4	36.8	37.2	37.8	36.2	38.3	43.0	38.7	45.4	47.2	40.8
2020	40.2	51.5	36.1	39.2	36.2	37.1	35.4	38.9	37.3	44.4	83.9	44.0	44.1
2021	39.6	44.3	36.3					42.5	43.5	55.3	42.5	52.4	44.8
2022	56.3	42.6	42.5	45.8	43.1	45.4	43.3	50.9	54.7	43.8	46.3	47.8	46.9
Average by Month	44.7	46.4	40.2	44.3	39.4	40.0	38.7	41.4	43.2	43.2	50.1	45.4	

**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	37.50	41.00	36.00	40.00	33.00	34.00	33.00	31.00	33.00	31.00	34.00	32.00	34.0
2018	31.00	30.00	30.00	29.00	30.00	30.00	31.00	30.00	31.00	31.00	33.00	33.00	31.0
2019	31.00	35.00	31.00	31.00	30.00	31.00	30.00	32.00	31.00	31.00	33.00	34.00	32.0
2020	32.00	33.00	30.00	28.00	29.00	30.00	30.00	30.00	29.00	29.00	34.00	32.00	30.0
2021	31.00	32.00	29.00					33.00	36.00	37.00	37.00	36.00	34.0
2022	35.00	35.00	35.00	36.00	34.00	36.00	34.00	36.00	38.00	34.00	34.00	37.00	35.0
Average by Month	32.9	34.8	31.8	32.0	30.5	31.3	31.0	30.8	31.0	30.5	33.5	32.8	32.7

**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:		
<u>Year</u>	<u>Avg Time to</u> <u>Respond (w/o</u> <u>MED)</u>	<u>Median Time to</u> <u>Respond (w/o</u> <u>MED)</u>
2017	46.10	34.00
2018	37.51	31.00
2019	40.77	32.00
2020	44.10	30.00
2021	44.76	34.00
2022	46.86	35.00
5 Year Averrage	42.65	32.20



nergency notification from the time of Emergency notification includes all otlines. The data used to determine the 123.2 (c) as supplemental information,

WITHOUT MEDS														
	Count of < 05	Count of ≥ 05	Count of ≥ 10	Count of ≥ 15	Count of ≥ 20	Count of ≥ 25	Count of \geq 30	Count of ≥ 35	Count of ≥ 40	Count of ≥ 45	Count of ≥ 50	Count of ≥ 55	Count of ≥ 60	
Year / Month	Min	Min < 10 Min	Min < 15 Min	Min < 20 Min	Min < 25 Min	Min < 30 Min	Min < 35 Min	Min < 40 Min	Min < 45 Min	Min < 50 Min	Min < 55 Min	Min < 60 Min	Min	Totals
2017	/18	203	404	636	773	790	716	659	522	403	363	270	1120	6.976
2017	40	203	404	030	775	750	710	035	322	405	303	270	1105	0,570
1	1	8	24	37	39	35	37	31	21	25	25	21	100	404
2	0	4	21	17	26	30	35	22	24	25	16	13	94	327
3	2	8	27	46	55	43	55	46	43	31	29	20	89	494
Λ	3	15	40	17	60	76	54	66	61	/1	5/	30	178	725
-	5	15	40	47	00	70	54	00	50	41	29	50	170	725
5	2	1/	45	46	82	82	56	47	50	42	28	19	122	638
6	7	34	35	68	66	80	57	53	50	53	32	30	107	672
7	3	27	44	73	69	70	77	74	46	36	33	25	90	667
Q	6	20	20	68	0/	71	82	71	40	22	20	10	02	645
0	0	20	33	00	54	71	02	71	40	23	50	10	85	045
9	14	18	34	61	72	76	64	76	47	43	33	20	99	657
10	2	28	37	67	81	81	68	58	47	39	23	22	87	640
11	4	12	27	35	44	76	61	60	49	21	27	28	63	507
12	1	12	21	71	85	70	70	55	10	24	22	24	77	600
12	4	12	51	/1	65	70	70	55	44	24	55	24	11	000
2018	51	236	516	809	955	948	848	636	526	444	357	251	873	7,450
1	3	16	42	54	58	57	59	45	41	30	33	22	49	509
2	7	29	40	63	75	95	63	64	47	28	30	23	65	629
2	2	22	19	70	101	88	84	54	61	15	22	10	67	712
5	5	52	40	79	101	00	04	54	01	45	52	10	07	/12
4	1	14	52	63	78	98	67	50	34	36	26	21	59	599
5	3	21	49	64	77	66	71	54	40	34	27	20	55	581
6	5	19	48	79	81	79	89	52	46	32	27	15	61	633
7	3	21	10	90 80	01	70	70	62	10	50	24	26	02	680
	4	21	49	8U 	91	/ð	/ð	02	45	50	24	20	ō3	089
8	6	25	35	75	110	97	75	47	42	41	42	23	81	699
9	5	16	39	64	75	80	60	62	35	37	29	21	74	597
10	6	18	42	63	77	69	65	53	47	35	26	20	88	609
11	2	12	20	61	60	50	65	20	11	20	20	17	00	521
11	э -	12	50	10	50	00	20	50	44	52	23	1/	30	551
12	5	13	42	64	72	83	72	63	46	44	32	25	101	662
2019	66	267	550	889	1120	1064	938	769	676	514	412	289	1282	8,836
1	8	19	48	93	95	106	77	67	54	54	35	20	132	808
-		10	20	10			E 0	E0	Б. Е.О.	л1 Л1	35 2E	20	100	E00
2	Z	10	32	48	//	12	53	53	50	41	35	25	100	598
3	5	21	52	85	89	99	83	69	46	42	34	26	105	756
4	0	22	35	63	96	75	99	51	44	34	42	19	82	662
5	6	31	44	63	103	84	71	64	50	36	30	14	92	688
5	0	31	44	03	105	75	71	04	50	30	30	14	52	000
6	6	21	47	/9	94	/5	61	67	55	36	38	29	87	695
7	9	29	63	100	105	108	96	86	76	52	37	24	82	867
8	11	26	41	72	84	92	76	61	59	44	31	28	106	731
9	5	10	55	7/	102	96	01	61	51	40	31	26	13/	785
5	5	19	55	74	102	50	51	52	51	40	51	20	134	785
10	2	16	40	62	//	95	61	53	70	38	19	18	66	61/
11	6	29	43	82	98	71	97	65	62	52	38	22	151	816
12	6	24	50	68	100	91	73	72	59	45	42	38	145	813
2020	06	245	724	1021	1224	1091	1020	775	607	400	250	205	1207	0.462
2020	96	545	/ 54	1051	1224	1001	1030	115	607	490	556	305	1567	9,405
1	7	25	55	76	64	76	76	50	53	30	33	30	101	676
2	3	20	66	74	97	86	95	57	57	42	32	35	151	815
3	6	25	48	103	95	92	78	71	40	45	31	35	94	763
3	0	20	- 1 0	105	00	52	70 F0	, <u>r</u>	40		21	15	74	(00)
4	8	22	50	84	99	66	59	50	44	25	21	15	/4	623
5	9	25	66	82	79	79	80	46	35	38	12	17	85	653
6	10	25	68	93	127	92	95	76	63	36	26	30	116	857
7	3	38	62	92	124	96	88	73	50	54	37	25	99	841
0	10	41	67	101	120	120	102	01	50	10	27	20	127	060
0	-	41	0/	101	120	120	202	91	52	40	5/	25	127	900
9	7	30	67	86	100	91	98	47	44	44	25	23	86	748
10	12	25	70	83	104	86	82	58	48	38	26	23	103	758
11	11	30	50	77	89	94	83	71	60	45	35	18	200	863
12	 Q	20	65	<u>80</u>	116	05	02	70	61	/5	/2	21	151	906
12	5	55	05	00	110	55	33	13	202		тJ	51	101	10010
2021	/2	2/1	625	980	1207	1135	1072	934	802	652	531	459	21/8	10,918
1	9	27	66	87	90	93	80	56	53	50	38	28	138	815
2	4	19	60	71	91	76	70	74	50	44	36	28	110	733
3	11	32	79	112	115	85	75	80	53	Δ٦	۵2	29	112	869
1		24	16	70	71	04	66	E0	55 ED	24	21	24	210	700
4	/	24	40	/0	/ 1	94	00	50	52	54	21	54	213	190
5	3	19	34	73	67	95	95	68	67	62	38	45	253	919
6	8	40	89	148	157	141	131	103	118	75	75	70	242	1,397
7	10	24	54	99	138	124	140	126	106	75	59	45	282	1.282
0	 E	20	/1	61	100	00	05	67	<u> </u>	52	40	22	1/5	<u></u>
0	5	20	41	04	103	33	30		54	55	40	55	145	025
9	3	16	39	65	108	88	63	75	69	53	39	34	150	802
10	5	27	40	75	96	99	94	84	61	57	38	32	231	939
11	2	16	32	50	75	61	66	67	65	54	41	40	120	689
12	5	7	45	65	90	80	97	84	54	52	54	Δ1	175	850
12	5	/	т <u>у</u>	05	50	00	57		J .	55	J 4	71	1/ J	0.50
2022	72	228	513	832	1066	1083	933	831	742	580	457	397	1983	9,717
1	5	14	42	67	65	75	67	70	40	38	46	21	135	685
2	7	26	43	69	89	106	85	70	70	43	44	43	160	855
-	C	16	20	65	05	110	66	70	65	67	40	24	1/5	017
3	D	10	38	65	95	113	00	12	60	62	40	34	145	110
4	5	18	48	79	94	87	71	76	55	51	41	46	185	856
5	8	25	56	72	101	94	77	69	67	39	37	36	172	853
6	2	19	51	73	82	72	72	68	66	52	36	31	152	776
7	- ว	25	27	£1	02	102	72	EC	60	52 E0	24	27	134	767
1	3	25	57	10	92	103	12	סכ	03	50	54	5/	134	/0/
8	5	15	38	66	93	98	79	66	77	38	25	36	187	823
9	5	18	44	85	83	102	85	73	72	54	42	31	235	929
10	Q	11	/12	71	Q1	83	65	70	51	Λ7	22	24	1/0	720
10	4.4			, <u>,</u>		75	07				32	27	1-0	, , , , , , , , , , , , , , , , , , , ,
11	11	22	39	68	99	/5	97	67	57	58	38	33	153	81/
12	7	16	34	56	82	75	97	74	59	48	42	25	185	800

With MEDs														
	Count of < 05	Count of ≥ 05	Count of ≥ 10	Count of ≥ 15	Count of ≥ 20	Count of ≥ 25	Count of ≥ 30	Count of ≥ 35	Count of ≥ 40	Count of ≥ 45	Count of ≥ 50	Count of ≥ 55	Count of ≥ 60	1
Year / Month	Min	Min < 10 Min	Min < 15 Min	Min < 20 Min	Min < 25 Min	Min < 30 Min	Min < 35 Min	Min < 40 Min	Min <45 Min	Min < 50 Min	Min < 55 Min	Min <60 Min	Min	Totals
2017	50	208	420	660	805	824	744	684	550	425	375	281	1328	7,354
1	2	9	24	39	41	40	39	31	23	25	27	21	126	447
2	0	4	23	20	26	31	35	22	24	26	17	15	109	352
3	2	8	27	46	55	43	55	46	43	31	29	20	89	494
4	3	15	40	47	60	76	54	66	61	41	54	30	178	725
5	2	17	45	46	82	82	56	47	50	42	28	19	122	638
6	7	3/	35	68	66	80	57	53	50	53	32	30	107	672
7	2	27	33	72	60	70		74	30	26	22	25	107	667
/	3	27	44	73	69	70	//	74	46	36	33	25	90	667
8	6	21	40	/2	97	/8	88	74	43	32	33	21	115	/20
9	14	18	34	61	72	76	64	76	47	43	33	20	99	657
10	2	28	37	67	81	81	68	58	47	39	23	22	87	640
11	4	12	27	35	44	76	61	60	49	21	27	28	63	507
12	5	15	44	86	112	91	90	77	67	36	39	30	143	835
2018	53	255	562	871	1028	1035	913	692	572	483	387	276	1243	8,370
1	3	19	57	64	68	74	75	54	54	37	40	27	133	705
2	7	29	40	63	75	95	63	64	47	28	30	23	65	629
3	3	32	48	79	101	88	84	54	61	45	32	18	67	712
4	1	14	52	63	78	98	67	50	34	36	26	21	59	599
5	3	21	49	64	77	66	71	54	40	34	27	20	55	581
6	5	19	48	79	81	79	89	52	46	32	27	15	61	633
7	4	25	57	91 91	102	96	92	73	Δ7	52	26	29	112	811
9		25	25	75	110	07	75	л <u>л</u>	10	л1	10	23	Q1	600
0	5	16	20	61	75	20	60	47 60	25	27	70	23	7/	507
10	5	25	27	70	75	00	70	02 CF	55	57	23	21	205	045
10	0 F	20	48	/ð	92	04 05	19	C0	00	44	30	33	295	345
11	5	1/	4/	8/	97	95	80 70	54	00	48	40	21	140	/9/
12	5	13	42	64	/2	83	12	63	46	44	32	25	101	002
2019	73	290	591	959	1203	1150	1013	828	735	554	448	304	1579	9,727
1	8	19	48	93	95	106	77	67	54	54	35	20	132	808
2	2	13	37	59	88	89	63	64	58	46	48	27	190	784
3	5	21	52	85	89	99	83	69	46	42	34	26	105	756
4	2	26	37	69	100	83	107	57	45	37	46	19	130	758
5	6	31	44	63	103	84	71	64	50	36	30	14	92	688
6	6	21	47	79	94	75	61	67	55	36	38	29	87	695
7	9	29	63	100	105	108	96	86	76	52	37	24	82	867
8	11	27	41	78	92	101	81	61	63	48	33	28	107	771
9	5	19	56	78	105	97	94	61	57	41	32	26	137	808
10	7	27	58	86	108	126	91	81	92	53	29	25	121	904
11	6	32	50	89	110	80	107	74	71	59	41	26	202	947
12	6	25	58	80	114	102	82	77	68	50	45	40	194	941
2020	99	353	754	1059	1252	1119	1063	800	624	517	370	319	1643	9,972
1	7	25	55	76	64	76	76	50	53	30	33	30	101	676
2	3	20	66	70	97	86	95	57	57	42	32	35	151	815
2	5	20	48	102	05	02	78	71	40	42	21	25	0/	762
3	0	23	40 E0	203	95	52	78 E0	56	40	45	21	15	74	622
4	8	22	50	04 92	39	70	39	30	44	23	12	13	74	652
5	9	25	68	02	127	79	80	40	55	30	12	17	05	055
0	10	25	68	93	127	92	95	70	63	50	20	30	110	857
/	3	38	62	92	124	96	88	/3	50	54	37	25	99	841
8	12	41	70	108	139	135	110	94	54	51	37	25	130	1,006
9	9	34	/3	100	109	101	112	61	48	56	33	27	192	955
10	13	27	74	88	111	97	88	61	53	43	28	28	230	941
11	11	32	57	79	92	104	89	76	66	52	37	21	220	936
12	8	39	65	80	116	95	93	79	61	45	43	31	151	906
2021	75	288	649	1015	1248	1189	1110	978	832	669	545	477	2455	11,530
1	9	32	71	94	103	101	87	65	55	56	40	32	216	961
2	4	19	60	71	91	76	70	74	50	44	36	28	110	733
3	11	32	79	113	115	85	75	80	53	42	42	29	113	869
4	7	24	46	70	71	94	66	50	52	34	31	34	219	798
5	3	19	34	73	67	95	95	68	67	62	38	45	253	919
6	8	40	89	148	157	141	131	103	118	75	75	70	242	1,397
7	10	24	54	99	138	124	140	126	106	75	59	45	282	1,282
8	5	21	44	67	111	101	98	74	55	53	40	36	152	857
9	3	16	39	65	108	88	63	75	69	53	39	34	150	802
10	5	27	42	76	100	107	96	87	64	57	40	32	249	982
11	3	19	38	63	84	76	77	77	70	57	44	43	185	836
12	7	15	53	76	103	101	112	99	73	61	61	49	284	1.094
2022	72	227	525	<u><u>8</u>57</u>	1001	1105	063	861	770	610	182	121	2255	10 255
1	, , , , , , , , , , , , , , , , , , ,	16	725 //E	7/	7/	ΩΛ	75	76	Г1	10	το2 εο	20	200	076
2	7	26	45	/4 60	00	106	7.5 0E	70	70	42	30	30	160	920
2		10	40	65	07	112	60	70		45	44	45	145	035
3	0 F	10	38	20	90	113	74	72	50	02	40	54	145	01/
4	5	18	48	79	94	8/	/1	/0	55	51	41	40	185	856
5	8	25	56	/2	101	94	//	69	6/	39	3/	36	1/2	853
6	2	21	53	/6	86	/5	/3	/5	/0	54	39	35	204	863
7	3	25	37	61	92	103	72	56	63	50	34	37	134	767
8	5	15	38	66	93	98	79	66	77	38	25	36	187	823
9	5	19	48	92	87	108	91	78	78	65	49	34	324	1,078
10	8	14	43	71	91	83	65	70	51	47	32	24	140	739
11	11	26	42	76	107	79	112	79	66	71	49	44	216	978
12	7	16	34	56	82	75	97	74	59	48	42	25	185	800
-					•	•		•		•	•		•	



#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 Co 015.

Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
2014	N/A	N/A	N/A	N/A	1	6	6	6	5	3
2015	2	2	4	20	17	19	11	7	8	7
2016	4	10	3	14	8	16	6	4	9	11
2017	4	1	6	9	17	21	15	13	7	6
2018	4	6	2	14	8	18	11	13	6	16
2019	1	1	5	15	6	23	15	20	20	7
2020	4	4	8	4	12	42	16	20	8	11
2021	12	11	7	16	20	30	23	21	14	12
2022	9	9	9	10	18	21	12	12	11	5
Average by Month	5	6	6	13	12	22	13	13	10	9

Annual Historical Data:	
Year	Value
2014	39
2015	107
2016	96
2017	105
2018	109
2019	123
2020	148
2021	173
2022	125
7 Year Average	123

Annual Historical Chart







125

2022

173

2021

— 7 Yr. Average





#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 i 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
2022	0.80	0.51	1.30	1.35	1.73	1.76	1.53	1.30	1.10	1.20	0.53	0.88	1.18
Average by Month	1.18	1.20	1.19	1.08	1.34	1.04	1.11	1.31	1.20	1.24	0.80	0.80	-

Annual Historical Data:			
<u>Year</u>	Value	5 Year Average	10 Year Average
2012	1.82		1.13
2013	1.69		1.13
2014	0.92		1.13
2015	0.94		1.13
2016	0.80	1.02	1.13
2017	0.99	1.02	1.13
2018	0.98	1.02	1.13
2019	1.17	1.02	1.13
2020	0.90	1.02	1.13
2021	1.05	1.02	1.13
2022	1.18	1.02	1.13
5 Year Average	1.02		
10 Year Average	1.13		



in Days Away from work and/or Days on



#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 worked, where SIF Actual is counted using the methodology developed by the Edis Committee (OHSC) Safety and Classification Learning Model. If a utility has methodology for assessing SIF Actual, the utility may use that method for reporting a method other than the EEI Safety Classification Model, it must explain how its m use it. As a supplemental reporting requirement to the SIF Actual Rate for compa based on OSHA reporting requirements under Section 6

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
2022	0.100	0.102	0.260	0.097	0.192	0.000	0.000	0.087	0.000	0.093	0.000	0.109	0.088
Average by Month	0.156	0.114	0.185	0.067	0.130	0.114	0.069	0.110	0.081	0.056	0.000	0.053	-

Annual Historical Data:

<u>Year</u>	<u>SIF Rate</u>	<u>5 Yr Average</u>
2015	0.115	0.097
2016	0.107	0.097
2017	0.107	0.097
2018	0.113	0.097
2019	0.054	0.097
2020	0.124	0.097
2021	0.062	0.097
2022	0.088	0.097
7 Year Average	0.0974	



F-Actual cases among employees x 200,000 / employee hours ison Electrical Institute's (EEI) Occupational Health and Safety implemented a replicable, substantially similar evaluation this metric. If a utility opts to report the rate of SIF Actual using nethodology for counting SIF Actual differs and why it chose to arative purposes, all utilities shall also provide SIF Actual data 5409.1 of the California Labor Code.



#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[5] (Contractor) is calculated using the formula: Number of SIF-Actual 200,000 / contractor hours worked, where SIF Actual is counted using the methodology d and Classification Learning Model. If a utility has implemented a replicable, substantially for assessing incidents where a SIF occurred, the utility may use that method for report report the rate of SIF Actual using a method other than the EEI Safety Classification I methodology for counting SIF Actual differs and why it chose to use it. As a supplemented actual Rate for comparative purposes, all utilities shall also report SIF Actual Rate d requirements under Section 6400 L of the California Labor (Contractor) is calculated using the statements.

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
2022	0.000	0.117	0.000	0.118	0.000	0.124	0.122	0.000	0.000	0.000	0.000	0.263	0.060
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:				Annual Hist	orical Char
<u>Year</u>	SIF Rate	4 Yr Average	0.350	0.323	
2018	0.323	0.193	0.300		
2010	0.124	0.102	0.250		
2019	0.134	0.193	0.200 gate		
2020	0.192	0.193	9 .150		0
2021	0.124	0.193	0.100		
2022	0.060	0.193	0.050		
4 Year Average	0.1933		0.000		



ctual cases among contractors x

leveloped by the EEI OHSC Safety ly similar evaluation methodology ing this metric. If a utility opts to Model, it must explain how its tal reporting requirement to the SIF lata based on OSHA reporting



#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	Number 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 Potential SIF incidents are identified using the EEI Safety Classification and Learnin If a utility has implemented a replicable, substantially similar evaluation methodolog for reporting this metric. If a utility opts to report the rate of SIF Potential using a me explain how its methodology for counting SIF Potential differs and why it chose to use the substantial SIF. Boto (Employee) all using the substantial SIF potential substantial SIF. Boto (Employee) all using the substantial SIF potential substantial su

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
2022	0.100	0.000	0.000	0.000	0.096	0.093	0.204	0.000	0.184	0.278	0.213	0.219	0.112
Average by Month	0.082	0.168	0.178	0.203	0.156	0.109	0.203	0.295	0.155	0.226	0.244	0.158	-

Annual Historical Data:

<u>Year</u>	Potential SIF Rate	<u>5 Yr Average</u>
2017	0.411	
2018	0.113	0.195
2019	0.155	0.195
2020	0.102	0.195
2021	0.193	0.195
2022	0.112	0.195
5 Year Average	0.1948	



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ing Model.[4]

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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 Potensial cases among contractors x 200,000/contractor hours worked, where a SIF incident, is SIF. Potential SIF incidents are identified using the EEI Safety Classification and Le If a utility has implemented a replicable, substantially similar evaluation methodolog for reporting this metric. If a utility opts to report the rate of SIF Potential using a methodology for counting SIF Potential differs and why it chose to u As a supplemental reporting requirement to the Potential SIF Rate (Contractor), all u from SIF Potential (Contractor) incidents.

Monthly Historical Data:

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
2018	1.040	0.710	1.050	0.420	1.040	0.570	0.150	0.430	0.510
2019	0.330	0.420	0.330	0.590	0.330	1.150	0.860	0.190	0.470
2020	0.540	0.580	0.450	0.370	0.110	0.740	0.220	0.430	0.530
2021	0.490	0.600	0.340	0.710	0.210	0.420	0.450	0.200	0.520
2022	0.440	0.230	0.560	0.240	0.120	0.370	0.240	0.370	0.240
Average by Month	0.600	0.578	0.543	0.523	0.423	0.720	0.420	0.313	0.508

Annual Historical Data:

<u>Year</u>	Potential SIF Rate	<u>4 Yr Average</u>
2018	0.600	0.470
2019	0.460	0.470
2020	0.430	0.470
2021	0.390	0.470
2022	0.250	0.470
4 Year Average	0.4700	





otential

in this case would be events that could have led to a reportable earning Model.[5]

utilities shall provide information about key lessons learned

Nov **Annual Totals** Oct Dec 0.380 0.420 0.710 0.600 0.610 0.090 0.210 0.460 0.250 0.640 0.310 0.430 0.270 0.520 0.000 0.390 0.120 0.000 0.000 0.250 0.378 0.418 0.308 -



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 and injuries that involve job transfer or restricted work activity. DART 1 200,000 divided by contractor hours w

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
2022	0.110	0.230	0.110	0.590	0.240	0.370	0.120	0.240	0.120	0.350	0.140	0.530	0.260
Average by Month	0.272	0.282	0.312	0.478	0.400	0.544	0.512	0.588	0.288	0.308	0.280	0.500	0.394

Annual Historical Data:									
<u>Year</u>	Value	4 Yr Average							
2018	0.55	0.43							
2019	0.35	0.43							
2020	0.45	0.43							
2021	0.36	0.43							
2022	0.26	0.43							
4 Year Average	0.43								



e OSHA-recordable Lost Work Day Cases Rate is calculated as DART Cases times worked.



#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 facil during the course of busine

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
2022	1	0	1	0	1	0	1	0	0	1	0	0	5
Average by Month	0.8	1.1	1.0	0.8	2.0	1.4	1.6	1.5	0.6	1.5	1.5	0.6	

Annual Historical Data:				
<u>Year</u>	<u>Serious Injury</u>	<u>Fatality</u>	<u>Total</u>	<u>10 Yr Average</u>
2011	12	11	23	
2012	13	6	19	15.4
2013	5	3	8	15.4
2014	19	11	30	15.4
2015	12	4	16	15.4
2016	8	6	14	15.4
2017	10	4	14	15.4
2018	11	9	20	15.4
2019	10	2	12	15.4
2020	10	2	12	15.4
2021	5	4	9	15.4
2022	2	3	5	15.4
5 Year Average	9	4	13	
10 Year Average	10.3	5.1	15.4	



ilities or equipment. Equipment includes utility vehicles used ess.



#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 of Federal Regulations (CFR)-830

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

Annual Historical Data:				Annual Hist	torical Cha	rt						
<u>Year</u>	<u># of accidents or</u> <u>incidents per</u> <u>100,000 flight</u> hours	<u># of accidents or</u> <u>incidents</u>	<u>Total Flight Hours</u>	30 11ight 25					24.2			
2014	-	0	2,031	8								
2015	-	0	2,574	0								
2016	-	0	2,567	ີ 20								
2017	-	0	3,764	s pe								14.2
2018	24.2	1	4,131	u 15								14.3
2019	-	0	6,238	hou								
2020	-	0	6,072	<u> </u>								
2021	14.3	1	6,988	5								
2022	-	0	9,282	ents						6,238		
2014 - 2022 Totals	4.6	2	43,646	f accide	2,031	2,574	2,567	3,764	4,1 1	.31	6,07	'2 6,988 1
				• • #	2014	2015	2016	2017	2018	2019	2020	2021
				-	# of accid	ents or inc	idents per 1	100,000 flig	ht hours	# 0	of accidents	or incidents









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 result in automatic (i.e., not manually activated) de-energization by circuit breakers, and reclosers, etc. on all portions of a downed conductor that rea This metric does not consider possible energization due to induced voltag circuits. Metric excludes secondary conductors and service drops. The metric is reported as a percentage of all wires down events in the past Separate metrics are provided for transmission and distribution systems.

Distribution Monthly His	stribution 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%	
2022	33.3%	44.0%	40.0%	44.4%	47.6%	48.8%	40.3%	34.9%	36.6%	35.7%	41.9%	46.0%	41.1%	
Average by Month	19.5%	24.1%	20.9%	25.4%	26.4%	25.7%	27.4%	26.8%	25.8%	26.7%	30.3%	26.5%	25.6%	

Transmission Monthly Historical Data:

Data	Ion	Tab	Мон	Amu	Mon	Tum	Ĭl	Ang	Som	Oat	Nov	Dee	Annual Totala
Date	Jall	reb	wiar	Арг	Iviay	Juli	JUI	Aug	Sep	Oct	INUV	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%
2022	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	43%
Average by Month	0%	0%	14%	7%	0%	14%	14%	7%	14%	0%	21%	0%	11%

Annual Historical Data:		
<u>Year</u>	Distribution	Transmission
2016		0%
2017		0%
2018		0%
2019		9%
2020	17%	17%
2021	19%	8%
2022	41%	43%

Annual Historical Chart % of Wires Down Not Automatically De-enerized 60% % of Wires Down Not Automatically De-enerized %0% 17% 9% 0% 0% 0% 0% 2017 2020 2016 2018 2019

in the past calendar year that did not it protection devices such as fuses, circuit est on the ground.

ges from magnetic coupling of parallel

calendar year.





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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Annual Average
Distribution Detailed	4%	3%	2%	1%	1%	1%	1%	2%	2%	4%	2%
Distribution Patrols	0%	1%	0%	2%	2%	2%	1%	2%	0%	3%	1%
Transmission Detailed						12%	12%	2%	3%	0%	6%
Transmission Patrols	0.60%	0.10%	0.00%	0.30%	0.10%	7%	9%	3%	2%	0%	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 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%
2022	4.3%	4.2%	4.2%	4.1%	4.1%	4.5%	4.0%	4.0%	3.9%	3.9%	3.8%	3.8%	3.8%
Average by Month	N/A	N/A	N/A	N/A	N/A	4.6%	4.3%	4.2%	4.2%	4.1%	4.1%	4.1%	-

1 3 HFTD that is #6 copper. Secondary



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 Level 2 notifications that were due in the calendar year in Tiers 2 and 3, HFTD. Consistent with GC provisions, the proposed metric should exclude notifications that qualify for extensions under re- 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%
2022	69%	87%	88%	88%	90%	92%	90%	95%	89%	89%	90%	91%	89%
Average by Month	82%	84%	85%	81%	85%	87%	85%	86%	83%	83%	86%	92%	86%

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%
2022	68%	65%	71%	81%	83%	92%	87%	79%	66%	71%	63%	70%	77%
Average by Month	80%	67%	66%	67%	65%	72%	65%	68%	73%	67%	74%	77%	69%

nnual Historical Data:									
Year	Distribution	Transmission							
2018	81%	62%							
2019	86%	50%							
2020	88%	78%							
2021	84%	77%							
2022	89%	77%							
4 Year Average	85%	67%							



ne divided by the total number of Priority , HFTD. Consistent with GO 95 Rule 18 alify for extensions under reasonable



32. Overhead Conductor Safety Index

Metric Name	Risks	Category	Units	Me
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 occurs satisfying one or more of the following conditions divided by tot 1) A conductor or splice becomes physically broken; 2) A conductor is dislodged from its intended design position du or contact with foreign objects (including vegetation); 3) A conductor falls from its intended position to rest on the gro 4) A conductor comes into contact with communication circuits, 5) A power pole carrying normally energized conductors leans be when measured at ground level. Separate metrics are reported for transmission and primary voltation are not included in this metric.

Innual Distribution Historical Data:									
\									
Year	2015	2016	2017	2018	2019	2020	2021	2022	Annual A
Wire Downs Count:	972	1,119	1,168	953	961	993	1,037	924	1,0
Circuit Miles	42,836	42,836	42,836	42,836	42,836	42,836	42,836	42,836	42,8
Annual Index	22.7	26.1	27.3	22.2	22.4	23.2	24.2	21.6	23.

Annual Transmission Historical Data:

Date	2015	2016	2017	2018	2019	2020	2021	2022	Annual
Wire Downs Count:	1.00	19.00	9.00	7.00	19.00	11.00	6.00	7.00	1
Circuit Miles	11,893	11,893	11,893	11,893	11,893	11,893	11,893	11,893	11,
Annual Index	0.1	1.6	0.8	0.6	1.6	0.9	0.5	0.6	0.



A-26

etric Description

rrences on overhead transmission or primary voltage distribution conductors tal circuit miles in the system x 1,000:

ue to either malfunction of its attachment points and/or supporting structures

ound or a foreign object;

, guy wires, or conductors of a lower voltage; or

by more than 45 degrees in any direction relative to the vertical reference

age distribution conductors. Secondary voltage conductors and service drops

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022			