

Safety Policy Division Review of Southern California Edison's 2020 Safety Performance Metrics Submittal Pursuant to Decision 19-04-020

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I. Purpose

On April 1, 2020, pursuant to Ordering Paragraph 2 in Decision (D.)19-04-020 of the Safety Model Assessment Phase (S-MAP) proceeding, A.15-05-002 et al, Southern California Edison (SCE) filed with the California Public Utilities Commission (CPUC or Commission) a Safety Performance Metrics Report. SCE also concurrently distributed the report to members on the service list in A.15-05-002.

D.19-04-020 also directed Safety and Enforcement Division staff to review the submitted safety performance metrics reports. Since the Risk Assessment section that is responsible for the evaluation of these reports has migrated from the Safety Enforcement Division to the Safety Policy Division (SPD), this letter summarizes SPD staff's evaluation results on SCE's Safety Performance Metrics Report.

II. Overview of SCE Report

SCE submitted data on 11 metrics as required by A.15-05-002 (Table 1). Their report is divided into two sections:

- **Chapter 1 – Introduction:** provides the narratives required by D. 19-04-020, including
 - (A) SCE's Use of Metrics Data;
 - (B) Description of Bias Controls; and
 - (C) Interim Risk Mitigation Accountability Report (RMAR) Requirements; and
- **Chapter 2 – SCE Safety Performance Metric Data:** provides information on each of the 11 metrics SCE is required to report on.

Table 1. SCE's 2019 Safety Performance Metrics.

Category	Safety Performance Metric	Unit
Electric	1 Transmission and Distribution (T&D) Overhead Wires Down	Number of wire down events
	2 T&D Overhead Wires Down – Major Event Days (MED)	Number of wire down events
	3 Electric Emergency Response (911)	Percentage of time response is within 60 mins
	4 Fire Ignitions	Number of ignitions
Injuries	14 Employee Serious Injuries and Fatalities (SIF)	Number of Serious Injuries/ Fatalities
	15 Employee Days Away, Restricted, or Transferred (DART) Rate	DART Cases times 200,000 divided by employee hours worked
	18 Contractor OSHA Recordables Rate	OSHA recordable times 200,000 divided by contractor hours worked associated with work for the reporting utility
	20 Contractor SIF	Number of work related serious injuries or fatalities associated with work for the reporting utility
	21 Contractor Lost Work Day (LWD) Case Rate	Number of LWD cases incurred for contractors per 200,000 hours worked Associated with work for the reporting utility
	22 Public SIF	Number of Serious Injuries/ Fatalities
Vehicles	23 Helicopter/ Flight Accident or Incident	Number of accidents or incidents

Observations: In their report, SCE includes ten years of data on three metrics; six years of data on five metrics; five years of data on one metric; three years of data on one metric; and one year of data on one metric. Information on the number of years of data provided for each metric is summarized in Figure 1.

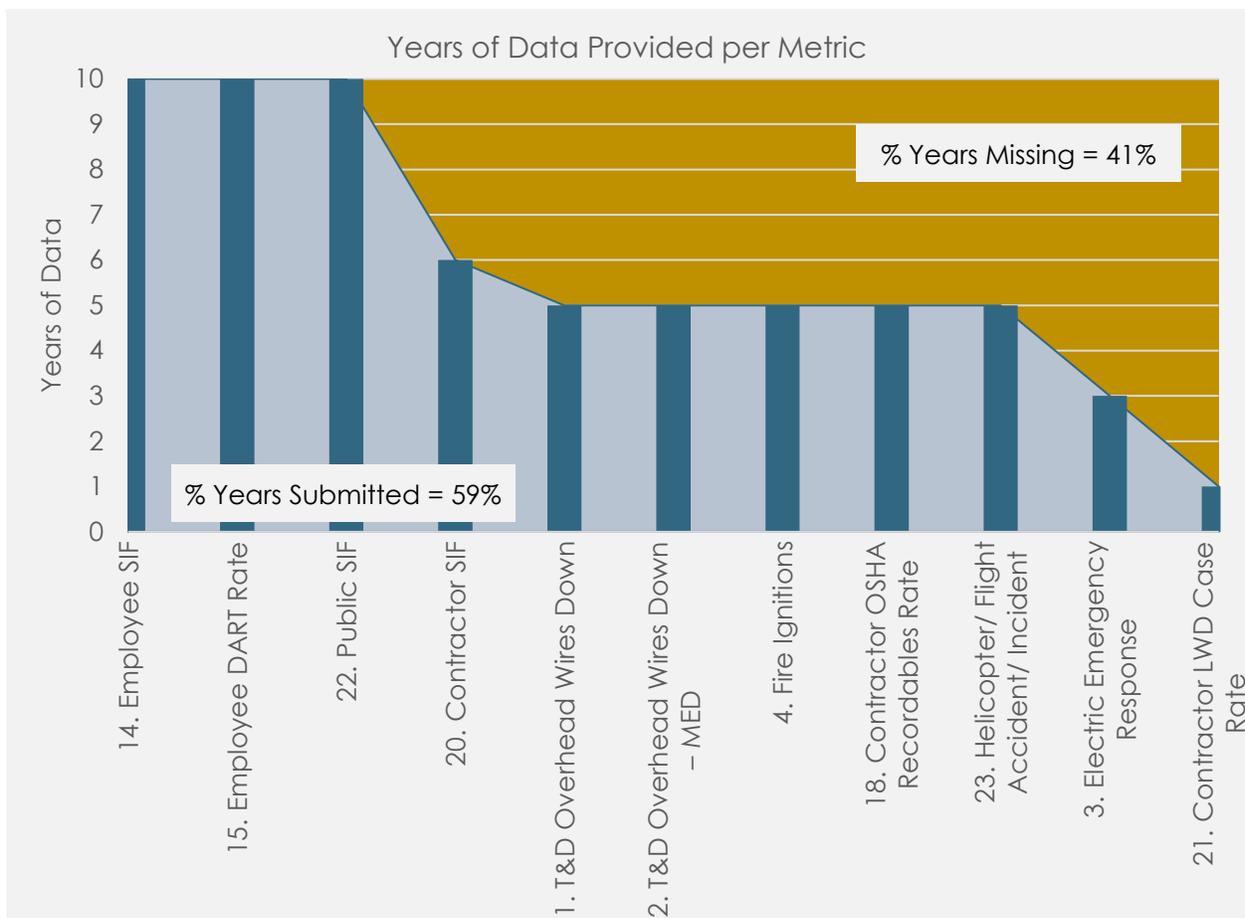


Figure 1. Years of Data per Metric. The shaded area in the top right of Figure 1 corresponds to the additional years of data needed for SCE to have 10 years of data for all metrics.

SCE provides information on which metrics were tied to executive compensation through SCE Corporate Goals in 2019. As shown in Figure 2, four of 11 metrics (approximately 36%) were tied to executive compensation last year.



Figure 2. SCE Metrics Linked to Executive Compensation in 2019. Four of SCE's 11 metrics were linked to executive compensation in 2019.

SCE also describes bias controls in place for their 11 metrics and provides a narrative description of what some metrics are used for. An evaluation of SCE's bias controls listed in their report is displayed in Figure 3.

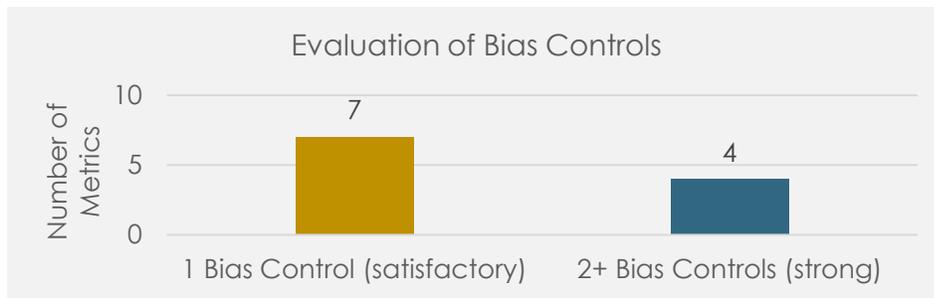


Figure 3. Evaluation of Bias Controls. Four metrics had satisfactory bias controls (1 bias control); 6 metrics had strong bias controls (2+ bias controls); and 1 metric had weak bias controls (0 bias controls reported).

Overall, SCE’s Safety Performance Metrics data shows that for eight out of 11 tracked metrics, SCE performed better in 2019 than the average of preceding years. For one of their 11 metrics, SCE performed worse in 2019 than the average of preceding years. For two metrics, Metric 3 – Electric Emergency Response, and Metric 21 – Contractor LWD Case Rate, there were insufficient years of data (3 and 1 years, respectively) for a meaningful comparison of 2019 to the historical average. SCE’s metric performance is summarized in Figure 4, which shows the percent change in SCE’s 2019 performance compared to the historical average for each metric (excluding Metrics 3 and 21). Positive values show an improvement in metric performance compared to the historical average and negative values show a decline in performance.

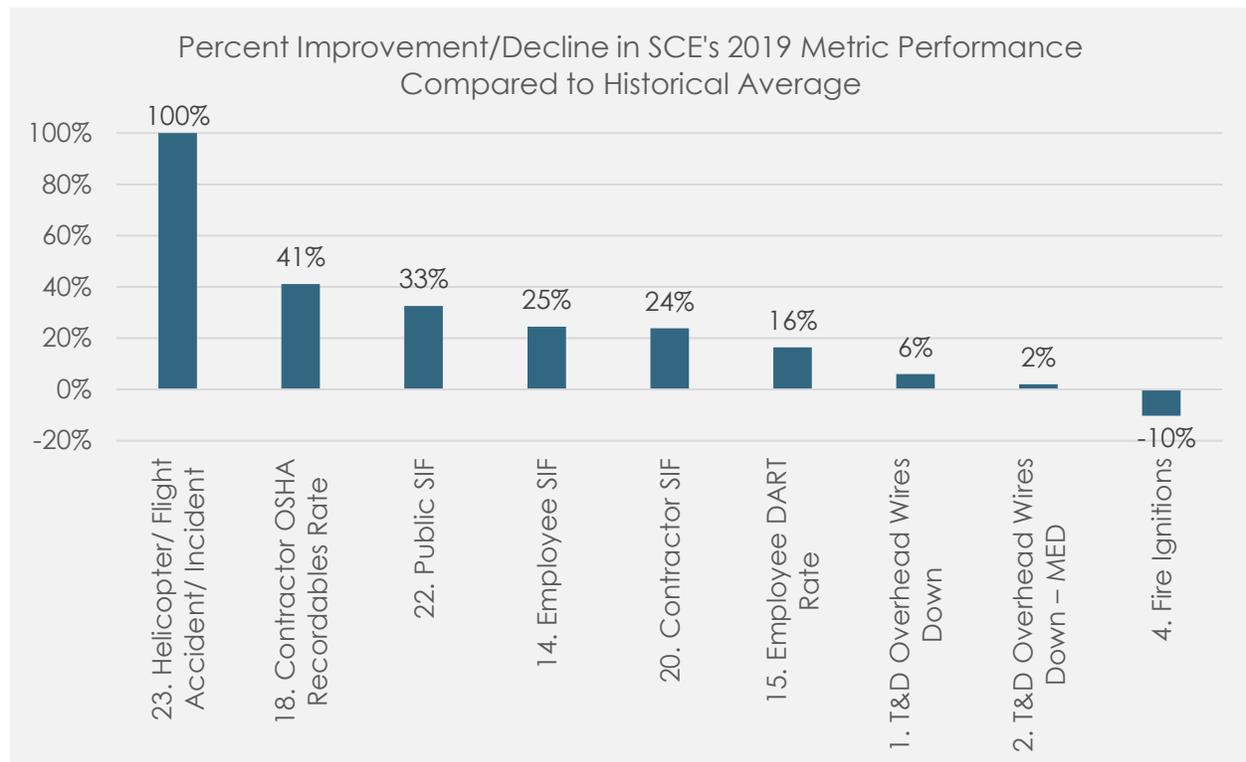


Figure 4. Evaluation of SCE's 2019 Metric Performance. For metrics where a higher value is better, positive values show a percent increase in the metric’s performance in the graph; for metrics where a lower value is better, (e.g., fire ignitions, wires down, SIF, etc.), positive values show a percent decrease in the metric’s performance.

III. Compliance with Requirements in D.19-04-20

This section reviews whether SCE submitted the information required in D.19-04-20.

Ordering Paragraph 2 requires data for the last ten years for all safety performance metrics for which such data exist.

SCE reports that they included data for the last ten years where possible.

Observations: For three of their 11 metrics, SCE included data for the last ten years.

Ordering Paragraph 3 requires the utility to submit current year data on public serious injuries and fatalities (SIF).

Consistent with this ordering paragraph, SCE provided SED staff with its data on Public Serious Injuries and Fatalities sixty days prior to the due date for this report, fulfilling this requirement.

Observations: SCE complies with the requirement in this ordering paragraph.

Ordering Paragraph 6 (a) requires the utility to identify all metrics linked to or used in any way for the purpose of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals, executive compensation.

SCE reports that four of the eleven Safety Performance Metrics (Employee SIF, Contractor SIF, Public SIF, and Employee DART Rate) were linked to executive compensation in 2019 for all director-level and higher positions through the corporate goals component of annual incentive awards. They report that whether SCE meets its corporate goals directly impacts the executive compensation paid through SCE's Executive Incentive Compensation (EIC) Plan. The Compensation and Executive Personnel Committee of the SCE Board of Directors assess company performance against goals for the prior year each February. The Compensation Committee can eliminate or reduce payouts should SCE fail to meet its safety goals; SCE reports that this has happened frequently in recent years.

Observations: SCE's submittal meets the requirements of the decision, but not enough information is provided for staff to be able to evaluate the impact of tying some metrics to executive compensation. For example, SCE states that the Compensation Committee has exercised discretion "frequently" in recent years to reduce or eliminate payouts for not meeting safety goals; however, we do not know in which year(s) this happened, how many executives were impacted, or what percentage of their total bonus compensation this affected. We also do not know whose specific compensation is tied to various metrics beyond "all directors," and how much of their compensation is affected by safety performance. It could be helpful to ascertain the effect of compensation changes on safety performance.

Ordering Paragraph 6 (b) requires the utility to identify the Director-level or higher executive positions to which the metric(s) is linked.

SCE states that the metrics are linked to all director-level and higher positions.

Observations: While, SCE met the requirements of the decision, no additional explanation is given to show how many individuals this applies to or which positions were implicated. A more specific response could provide additional context for evaluating this information but is not required in the ordering paragraph.

Ordering Paragraph 6 (c) requires the utility to describe the bias controls that the utility has in place to ensure that reporting of the metric(s) has not been gamed or skewed to support a financial incentive goal.

SCE reports that annual internal audits of corporate goal metrics help ensure that reporting of metrics is objective. Each year, the internal audit team verifies that the reporting for the corporate goals to determine payouts were accurate by obtaining supporting documentation, reviewing, and validating the accuracy of how the goal obtainment was assessed, and comparing to internal and external sources to validate the data.

Observations: SCE only lists one bias control in place for seven of their 11 metrics. Depending on the efficacy of internal audits in identifying errors or bias, reliability of the metric could be subject to influence by those whose compensation is impacted or reporting mistakes.

Ordering Paragraph 6 (d) requires the utility to provide three to five examples of how the utility has used Safety Performance Metrics (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 of how the utility is using metrics data to support risk-based decision-making as required in the Safety Model Assessment Proceeding and Risk Assessment Mitigation Phase (RAMP) processes.

SCE's provides seven examples of recent initiatives to meet this requirement.

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:

Employee safety:

1. Cause Evaluation Process: Reflecting on data on the number of serious injuries, SCE implemented a systemic cause evaluation process to identify corrective actions and mitigate future incidents. This contributed to reductions in employee fatalities and serious injuries from 2017-2019.
2. Safety Culture Transformation Training: SCE implemented a new safety culture training from 2018 through the first quarter of 2020, which provides cognitive-based tools to enable employees to make safer choices. SCE will assess progress on this course and augment it as necessary to eliminate workforce injuries.
3. Industrial and Office Ergonomics: SCE implemented an effort to reduce the frequency of key drivers associated with potential workforce injuries from industrial and office ergonomic practices. In addition to ergonomics assessments and trainings, they are also including a sit-to-stand desk in each new office.

Contractor safety:

4. Contractor Safety Management Program: In 2017, SCE implemented a contractor Safety Management Program to eliminate contractor serious injuries and fatalities through improved safety oversight of contractors and subcontractors and more effective risk management for contracted work. This effort includes oversight in the contractor work planning process, field monitoring, and incident analysis. SCE also transitioned to a third-party safety administrator to gather and track safety metrics.

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

5. T&D Wires Down: SCE uses this metric to measure and understand the risks associated with contact with energized conductor, evaluating the drivers of wire down events, frequency of those drivers, and consequences of wire down events. Historical data on wire-down events and SCE's predictive analytics model inform prioritization of overhead conductor program activities.

6. Fire Ignitions: SCE evaluates the drivers of ignitions, frequency of those drivers, and consequences associated with fire ignitions, using this understanding to reduce the occurrence of ignitions and mitigate the consequences when ignition occurs. For example, in 2018, SCE launched a Wildfire Covered Conductor Program, which replaces bare overhead conductors with covered conductors in High Fire Risk Areas (HFRA) and is anticipated to reduce contact-from-object and wire-to-wire ignition risks and the frequency of wire down events. This was initiated because of data showing that contact-from-object and wire-to-wire faults in SCE's HFRA were associated with 60% of suspected ignitions associated with wildfire events.
7. Risk Based Safety Program: SCE uses injury and incident data related to the Employee Serious Injuries and Fatalities (SIF) and Employee DART Rate metrics to prioritize and mitigate top safety risks.

Observations: SCE provided the required number of examples. All examples were initiated prior to D.19-04-020.

Ordering Paragraph 6 (e) requires the utility to explain how the safety metrics reflect progress against the utility's RAMP and General Rate Case safety goals.

SCE reports that it continues to advance its risk-informed decision making (RIDM) framework to identify, evaluate, mitigate, and monitor risks. SCE aims to understand the drivers, outcomes, and consequences of risk events, which are mapped out within a "risk bowtie structure" so that these events can be systematically identified, characterized, and addressed. SCE explains that each of the Safety Performance Metrics are used to develop the risk bowtie structure and address some of SCE's top risks as identified in their 2018 RAMP filing.

For each of their 11 metrics, SCE lists which RAMP Risk Chapters the metric is relevant to and how the metric relates to their bowtie structure used for risk-informed decision making (i.e., whether the metric is a driver, triggering event, outcome, consequence, or performance metric). For example, metrics on Transmission & Distribution Overhead Wires Down are linked to the RAMP Risk Chapters on Wildfire and Contact with Energized Equipment; these metrics would be mapped out within the risk bowtie structure as drivers (wildfire risks) and triggering events (contact with energized equipment risk).

Observations: This response provides a clear understanding of how each of the 11 metrics relates to their existing risk-informed decision-making structure and the RAMP process.

Ordering Paragraph 6 (f) requires the utility to provide a high-level summary of their total estimated risk mitigation spending level as approved in their most recent GRC. Total operation and maintenance (O&M) spending for safety, reliability, and maintenance activities was \$1.62B. This was \$5.84M over authorized spending. SCE states these marginal, additional expenditures were made to mitigate public safety and reliability risks associated with wildfires and Public Safety Power Shutoff events.

Total capital spending for safety, reliability, and maintenance activities was \$3.95B. This was \$4.40M over authorized spending.

Observations: SCE's actual spending was relatively close to their adopted spending. They attributed this to planning for risk mitigation. SCE's response provides the information required in this ordering paragraph.

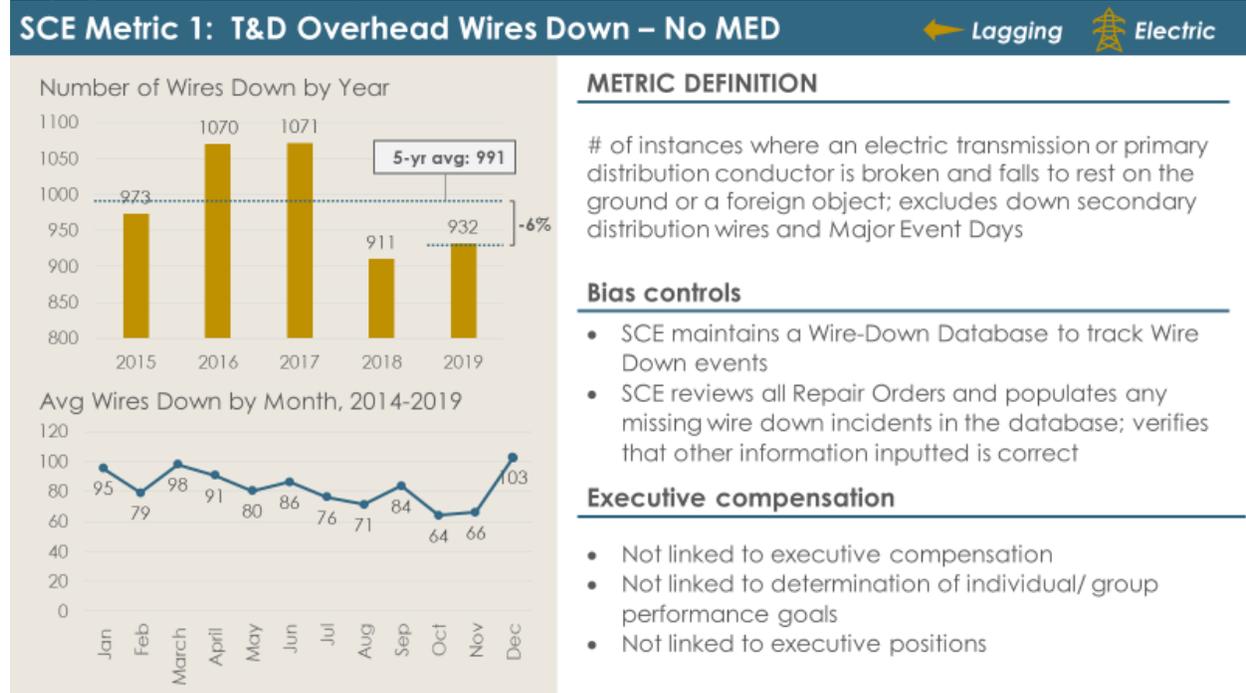
Overall Compliance: SCE's submitted metrics report complies with all the required elements listed in Question 1 above.

IV. Summary of 2019 Metrics

This section includes an overview of information submitted for each of SCE's 11 Safety Performance Metrics. The graphic for each metric shows:

- Whether the metric is a leading or lagging indicator: per D.19-04-020, lagging metrics typically indicate safety performance after safety incidents (for example, the number of explosions due to cross bore intrusions), whereas the related leading metric would anticipate potential future safety incidents (in this example, the number of cross bore intrusions found);
- Data reported by the utility: data is plotted in graphs with the historical average, where relevant, to compare 2019 performance to past performance for the metric.
- The definition of the metric from D.19-04-020, associated bias controls, and executive compensation linkages listed for the metric.

To caveat the metric reviews in the following pages, note that the smaller the number of reported occurrences (relative to the exposure), the higher is the uncertainty associated with the reported metric numbers. For example, Serious Injury and Fatality (SIF) values are so few (relative to the total exposure) in any given year that the reported variations from year to year do not necessarily represent improvements or worsening of safety records. For these metrics with few occurrences relative to exposures, observed trends over a much longer period may be necessary to reach credible conclusions based on the data.



Metric 1 Summary: SCE submitted partial monthly data on this metric for 2014 and complete monthly data for 2015-2019. SCE's data shows a general downward trend in T&D Overhead Wires Down since 2014. SCE notes that it is helpful to include Major Event Days (MED) as a side-by-side comparison with T&D Overhead Wires Down because it shows the differences in system performance between normal operating conditions and conditions of higher operational or design stress. SCE uses this metric to measure and understand the risks associated with contact with energized conductor, evaluating the drivers of wire down events, frequency of those drivers, and consequences of wire down events. Historical data on wire-down events and SCE's predictive analytics model inform prioritization of overhead conductor program activities.

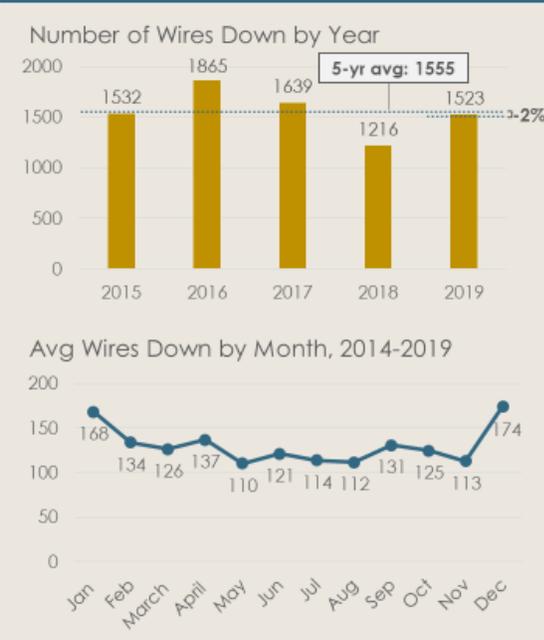
To track this metric, SCE maintains a Wire Down database. A repair order is generated when there is a wire down incident and a troubleman or crew responds to the call. SCE reviews all repair orders and populates any

wire down incidents that are missing and verifies other information; this quality control process is listed as a bias control

Observations: To better evaluate this metric, it would be helpful to know what contributed to the swings in reported wires down events 2015 to 2019. SCE also did not describe why there may be seasonal variation in the number of Wires Down events per month. Additionally, a metric that showed the ratio of wire down events to total transmission and distribution lines may be more useful for comparing across utilities, given their wide variation in service territories. Lastly, SPD notes that the CPUC Wildfire Safety Division classifies Wires Down as a leading indicator in their data taxonomy while the S-MAP proceeding and Safety Metrics Technical Working Group consider this a lagging indicator. In SPD's perspective, it is a lagging indicator because it tracks whether a risk event (wires falling to the ground) occurred, even if it that risk event did not lead to an ignition.

SCE Metric 2: T&D Overhead Wires Down – MED

← Lagging  Electric



METRIC DEFINITION

of instances where an electric transmission or primary distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object; includes down secondary distribution wires and Major Event Days

Bias controls

- SCE maintains a Wire-Down Database to track Wire Down events
- SCE reviews all Repair Orders and populates any missing wire down incidents in the database; verifies that other information inputted is correct

Executive compensation

- Not linked to executive compensation
- Not linked to determination of individual/ group performance goals
- Not linked to executive positions

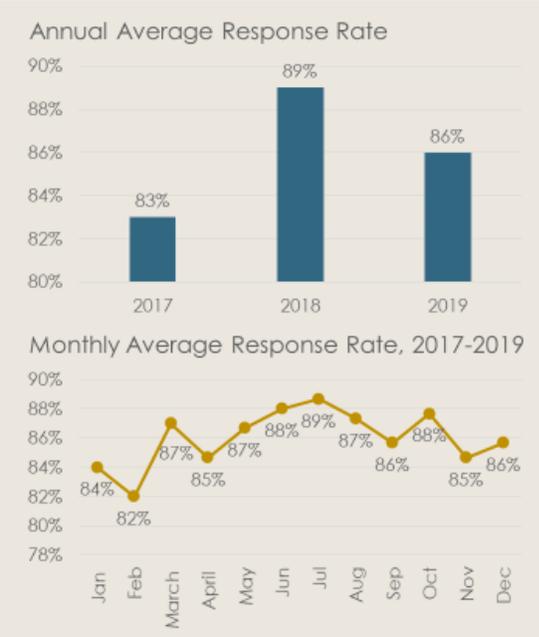
Metric 2 Summary: SCE submitted partial monthly data on this metric for 2014 and complete monthly data for 2015-2019. With secondary distribution wires and Major Event Days (MED) included, this metric shows a slight upward trend since 2014. SCE notes that it is helpful to include a metric excluding MEDs as a side-by-side comparison with T&D Overhead Wires Down for these metrics that include distribution secondary conductors because it shows the differences in system performance between normal operating conditions and conditions of higher operational or design stress. SCE uses this metric to measure and understand the risks associated with contact with energized conductor, evaluating the drivers of Wires Down events, frequency of those drivers, and consequences of wire down events. Historical data on Wires Down events and SCE's predictive analytics model inform prioritization of overhead conductor program activities.

As with Metric 1, to track this metric, SCE maintains a Wires Down database. A repair order is generated when there is a wire down incident and a trouble man or crew responds to the call. SCE reviews all repair orders and populates any wire down incidents that are missing and verifies other information; this quality control process is listed as a bias control.

Observations: SCE submitted additional information to make it possible to compare down wires with and without MEDs, inclusive of and exclusive of secondary distribution wires, CPUC could consider adding metrics requiring this. This would allow the CPUC to compare the data from Metric 1 and Metric 2 more meaningfully.

SCE Metric 3: Electric Emergency Response

← Lagging ⚡ Electric



METRIC DEFINITION

% of time utility personnel respond (are on-site) within one hour after receiving a 911 (electric related) call, with on-site defined as arriving at the premises to which the 911 call relates

Bias controls

- SCE uses Telogis vehicle tracking and OMS verification to fill in the correct arrival time for emergency calls

Executive compensation

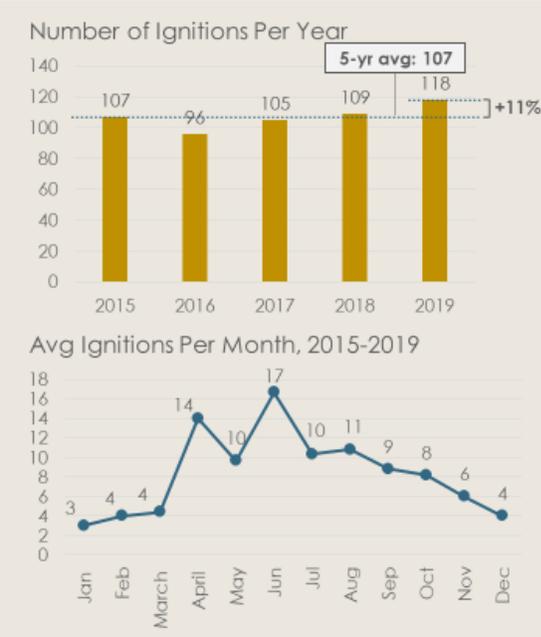
- Not linked to executive compensation
- Not linked to determination of individual/ group performance goals
- Not linked to executive positions

Metric 3 Summary: SCE's states that metric data for Electric Emergency Response is specific to 911 calls that come through a public agency (e.g., police, fire, CHP). To fill in the correct arrival time for emergency calls, Dispatch Supervisors research the call using Telogis vehicle tracking and OMS verification; this process is listed as a bias control.

Observations: While SCE's performance for this metric was slightly worse in 2019 than in the previous year, it is relatively flat over the years reported. The response rates appear to be lightly better on average in middle of summer, but the difference across months is not substantial.

SCE Metric 4: Fire Ignitions

← Lagging  Electric



METRIC DEFINITION

of powerline-involved fire incidents annually reportable to the CPUC per D. 14-02-015. A reportable ignition meets all these criteria: 1) Ignition is associated with a utility's powerlines and 2) something other than the utility's facilities burned and 3) the resulting fire traveled more than one meter from the ignition point

Bias controls

- Potential ignitions are reviewed by team of engineers, analysts, and senior management
- The team ensures ignitions are documented and determines if they meet CPUC's definition for reportable fire ignitions

Executive compensation

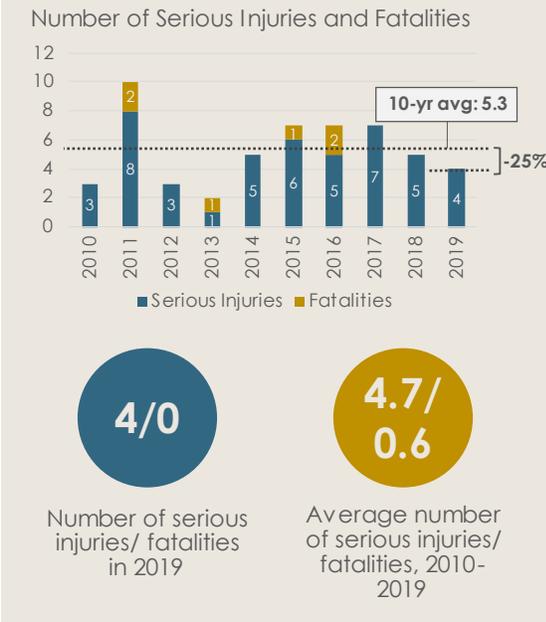
- Not linked to executive compensation
- Not linked to determination of individual/ group performance goals
- Not linked to executive positions

Metric 4 Summary: SCE reports that they evaluate the drivers of ignitions, frequency of those drivers, and consequences associated with fire ignitions, using this understanding to reduce the occurrence of ignitions and mitigate the consequences when ignition occurs. For example, in 2018, SCE launched a Wildfire Covered Conductor Program, which replaces bare overhead conductors with covered conductors in High Fire Risk Areas (HFRA) and is anticipated to reduce contact-from-object and wire-to-wire ignition risks and the frequency of wire down events. This began because of data showing that contact-from-object and wire-to-wire faults in SCE's HFRA were associated with 60% of suspected ignitions associated with wildfire events.

To control for bias, all potential ignitions are reviewed by a team of engineers, analysts, and SCE senior management. According to SCE, this ensures they are documented and allows them to determine if they meet the CPUC's definition for reportable fire ignitions.

Observations: There has been an increase in number of ignitions per year since 2015, likely due to an increase in overall wildfire activity in Southern California since 2015. SCE does not provide additional information or context on this increase, but PG&E saw a similar increase in this period as well. Additionally, SCE does not explain the seasonal variation in ignitions each month. Ignitions are highest from April to August, and begin tapering off in September. While SCE provides information on its new Wildfire Covered Conductor Program, they do not provide initial findings from this program and whether the program impacted metric performance.

SCE Metric 14: Employee Serious Injuries and Fatalities (SIF) ← Lagging + Injuries



METRIC DEFINITION

of employee work-related injuries or illnesses annually that result in a fatality, inpatient hospitalization for more than 24 hours (other than for observation purposes), a loss of any member of the body, or any serious degree of permanent disfigurement

Bias controls

- Annual internal audits of corporate goal metrics on a sample basis to review and validate data
- Staff screens incident using Cal OSHA SIF definition and medical reports to classify SIF; classification is reviewed and approved by Safety Management

Executive compensation

- Linked to executive compensation for all director-level and higher positions through corporate goals component of annual incentive awards
- Linked to determination of individual/ group performance goals

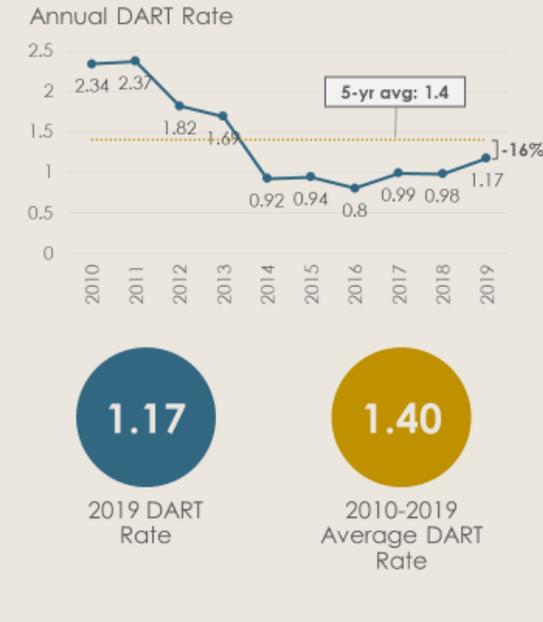
Metric 14 Summary: Over the last two years, SCE states that they have seen a downward trend in this metric because of safety efforts and activities aimed at eliminating serious injuries and fatalities. SCE also mentions that the Senior Management Team discusses each SIF incident at monthly Executive Safety Meetings to ensure accurate reporting and minimize future recurrence of injuries and fatalities. SCE utilized data on SIF to implement Cause Evaluation Process, Safety Culture Transformation Training, and Industrial and Office Ergonomic initiatives.

To control for bias for metrics linked to executive compensation, SCE conducts annual internal audits of corporate goal metrics help ensure that reporting of metrics is objective. Additionally, an Incident Screener follows Cal OSHA SIF definition and medical reports to classify serious injuries and fatalities, and the classification is reviewed and approved by SCE Safety Management.

Observations: While SCE states that they have seen a downward trend in this metric due to safety efforts and activities, there does not seem to be a significant decrease in annual serious injuries reported in 2019 in comparison to the 10-year average. Due to the small number of SIF occurrences, observed trends may not credibly reflect improvements in safety performance. The observed variations may be attributed to random statistical variations. While SCE reports that this metric is tied to executive compensation, they do not provide information on how much it is weighted relative to overall compensation.

SCE Metric 15: Employee DART Rate

← Lagging + Injuries



METRIC DEFINITION

Rate is calculated based on number of OSHA-recordable injuries resulting in Days Away from work and/or Days on Restricted Duty or Job Transfer, and hours worked

Bias controls

- Annual internal audits of corporate goal metrics on a sample basis to review and validate data
- SCE staff record keeper classifies Employee DART injuries based on OSHA rules; classification reviewed by SCE Safety Management

Executive compensation

- Linked to executive compensation for all director-level and higher positions through corporate goals component of annual incentive awards
- Linked to determination of individual/group performance goals

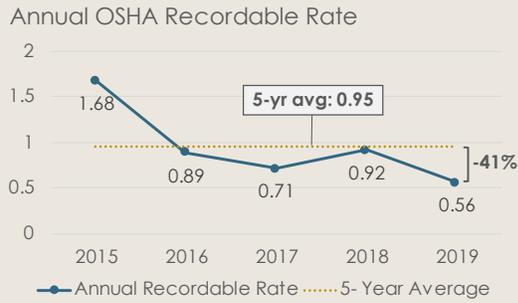
Metric 15 Summary: SCE has tracked Employee DART Rate for 10 years reports that it is used as a metric for evaluating corporate goals. SCE uses injury and incident data related to the Employee Serious Injuries and Fatalities (SIF) and Employee DART Rate metrics to prioritize and mitigate top safety risks. SCE discusses monthly DART injuries at monthly Executive Safety Meetings to learn from incidents and prevent recurrence. SCE notes that DART Rates have decreased since 2014 as a result of safety programs and culture initiatives implemented at SCE. However, in 2019, DART rates increased due to significant wildfire mitigation activities, which caused many employees to perform activities beyond their normal job duties.

To control for bias on metrics linked to executive compensation, SCE conducts annual internal audits of corporate goal metrics help ensure that reporting of metrics is objective. Additionally, SCE reports Employee DART injuries based on OSHA rules; this classification is reviewed and approved by Edison Safety Management.

Observations: SCE reports that DART Rate increased due to significant wildfire mitigation activities in 2019, which caused many employees to perform more higher risk activities. While SCE reports that this metric is tied to executive compensation, they do not provide information on how much it is weighted relative to overall compensation.

SCE Metric 18: Contractor OSHA Recordable Rate

← Lagging + Injuries



2019 OSHA Recordable Rate



2015-2019 Average OSHA Recordable Rate

METRIC DEFINITION

Rate is calculated as # of OSHA recordable incidents x 200,000 divided by contractor hours worked, where an OSHA recordable incident is an occupational (job-related) injury or illness that requires medical treatment beyond first aid, or results in work restrictions, death or loss of consciousness

Bias controls

- To improve quality control of contractor safety performance data, SCE verifies submitted Site Tracker data with Contractor Incident Reports

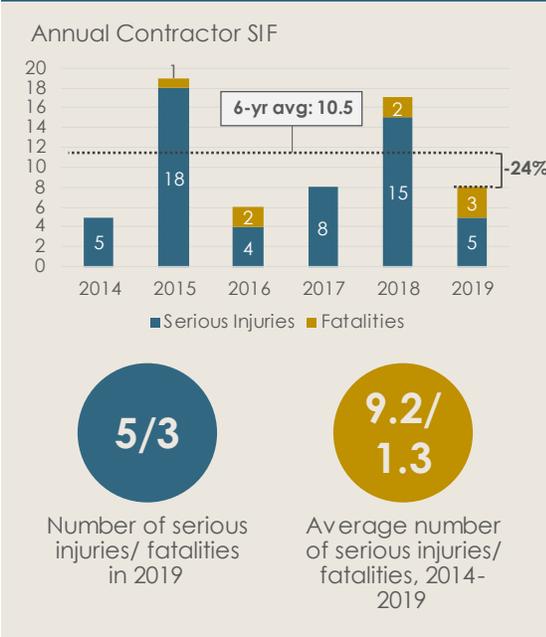
Executive compensation

- Not linked to executive compensation
- Not linked to determination of individual/ group performance goals
- Not linked to executive positions

Metric 18 Summary: To improve quality control of contractor safety performance data, SCE verifies submitted Site Tracker data with Contractor Incident Reports; this is listed as a bias control for the metric.

Observations: Contractor OSHA Recordable rates appear to show a clear downward trend from 2015-2019, additional years of data could demonstrate if this pattern is sustained.

SCE Metric 20: Contractor Serious Injuries and Fatalities (SIF) ← Lagging + Injuries



METRIC DEFINITION

of contractor workrelated injuries or illnesses annually that result in a fatality, inpatient hospitalization for more than 24 hours (other than for observation purposes), a loss of any member of the body, or any serious degree of permanent disfigurement

Bias controls

- Annual internal audits of corporate goal metrics on a sample basis to review and validate data
- To improve quality control of contractor safety performance data, SCE verifies submitted Site Tracker data with Contractor Incident Reports

Executive compensation

- Linked to executive compensation for all director-level and higher positions through corporate goals component of annual incentive awards
- Linked to determination of individual/ group performance goals

Metric 20 Summary: SCE notes that they used data on Contractor SIF to inform a Contractor Safety Management Program, which provides oversight to the contractor work planning process, field monitoring, and incident analysis. To improve quality control of contractor safety performance data, SCE verifies submitted Site Tracker data with Contractor Incident Reports. This is listed as a bias control for the metric. Additionally, to control for bias for all metrics linked to executive compensation, SCE conducts annual internal audits of corporate goal metrics help ensure that reporting of metrics is objective.

Observations: SCE’s highest reported contractor fatality rate was in 2019, but SCE does not provide an explanation for what hazards caused this and the precautions they will take to learn from mistakes and prevent future fatalities. SCE also does not provide context on why there were so many serious injuries in 2015 and 2018 and any resulting corrective actions. Additionally, while SCE reports that this metric is tied to executive compensation, they do not provide information on how much it is weighted relative to overall compensation.

SCE Metric 21: Contractor Lost Work Day Case Rate

← Lagging + Injuries

2019 Contractor LWD Monthly Case Rate



2019 Contractor LWD Monthly Case Rate

Month	Rate	Month	Rate
Jan	0.33	Jul	0.21
Feb	0.14	Aug	0.38
Mar	0.11	Sept	0.38
April	0.12	Oct	0.17
May	0.11	Nov	0.35
June	0.21	Dec	0.21
Average		0.23	

METRIC DEFINITION

Rate = # of LWD cases incurred for contractors per 200,000 productive hours worked for the reporting utility, where a Lost Workday Case is a current year OSHA Recordable incident that has resulted in at least one lost workday

Bias controls

- To improve quality control of contractor safety performance data, SCE verifies submitted Site Tracker data with Contractor Incident Reports

Executive compensation

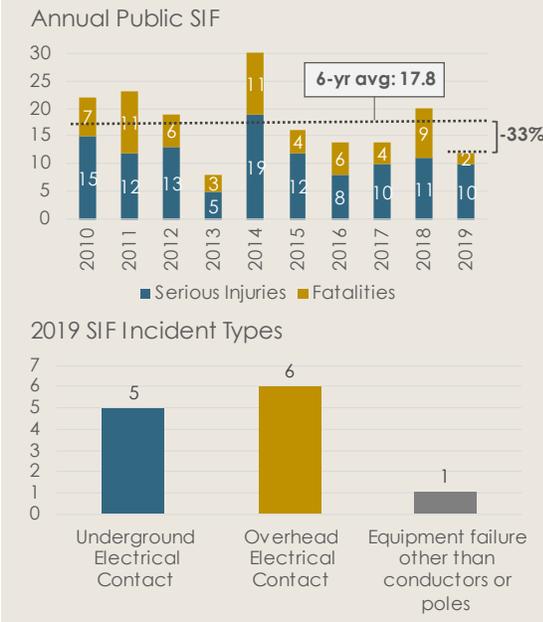
- Not linked to executive compensation
- Not linked to determination of individual/ group performance goals
- Not linked to executive positions

Metric 21 Summary: To improve quality control of contractor safety performance data, SCE verifies submitted Site Tracker data with Contractor Incident Reports; this is listed as a bias control.

Observations: This was the first year that SCE tracked this metric. Contractor Lost Work Day Case Rate in certain varies considerably throughout the year in ways that don't appear to be seasonal.

SCE Metric 22: Public Serious Injuries and Fatalities (SIF)

← Lagging + Injuries



METRIC DEFINITION

of public work-related injuries or illnesses annually that result in a fatality, inpatient hospitalization for more than 24 hours (other than for observation purposes), a loss of any member of the body, or any serious degree of permanent disfigurement

Bias controls

- Annual internal audits of corporate goal metrics on a sample basis to review and validate data
- SCE's claims department investigates and reclassifies SIF incidents as needed as additional information is gathered.

Executive compensation

- Linked to executive compensation for all director-level and higher positions through corporate goals component of annual incentive awards
- Linked to determination of individual/ group performance goals

Metric 22 Summary: SCE states that in 2019, six of the SIF incidents were related to overhead electrical contact, five were related to underground electrical contact; and one was related to equipment failure other than conductors or poles. Six of the 12 incidents were related to the sub-category of contact with intact overhead conductors; 4 to theft/ vandalism; 1 to excavation damage (dig-in); and 1 to underground equipment failure. 11 of the 12 incidents involved distribution infrastructure; 1 involved substation infrastructure..

Since this metric is part of SCE's corporate goals, it is subject to its internal audit process to control for bias. Additionally, SCE's claims department investigates and reclassifies SIF incidents if necessary as additional information is gathered.

Observations: SCE does not state what it is doing to address the most frequent risk drivers and decrease its public serious injuries and fatalities

SCE Metric 23: Helicopter / Flight Accident or Incident

← Lagging 🚁 Vehicles

Helicopter/ Flight Accidents or Incidents

Year	# of accidents or incidents	Total flight hrs	# of accidents or incidents per 100,000 flight hrs
2014	0	2,031	-
2015	0	2,574	-
2016	0	2,567	-
2017	0	3,764	-
2018	1	4,131	24.21
2019	0	6,154	-
Avg	1.0	21,221	4.71

METRIC DEFINITION

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 FAA per 49-CFR-830.

Bias controls

- SCE uses an industry device called a Hobbs meter to measure total flight hours and contractors.
- SCE internally reviews/ verifies that helicopter incidents and accidents meet definition of Federal Aviation Regulations

Executive compensation

- Not linked to executive compensation
- Not linked to determination of individual/ group performance goals
- Not linked to executive positions

Metric 23 Summary: SCE describes actions they take to ensure aviation safety with contractors and the public. SCE has a Use of Company Owned, Contract, and Chartered Aircraft Policy. All contractors have to comply with the Contractor Safety Policy and are required to attend a contractor Safety Forum, and all Aviation Service Providers must pass a technical qualification pursuant the SCE Air Operations policy. Additionally, SCE performs observations of contract helicopter vendors during missions and provides feedback to the contractor on safety behavior. Air operations also has an annual outreach program for flying to prevent wire strikes.

Observations: SCE's narrative for this metric thoroughly explains related safety measures and bias controls in place and shows a commitment to preventing helicopter or flight incidents.

V. Conclusion & Recommendations

SCE's first SPM Report is in compliance with the requirements of D.19-04-020. SCE's Safety Performance Metrics data reflect improvement on eight out of 11 tracked metrics over the average of the prior reported years. For ignitions, SCE performed more poorly in 2019 than the average of preceding years. For two metrics, Metric 3 – Electric Emergency Response, and Metric 21 – Contractor LWD Case Rate, there were insufficient data (3 and 1 years, respectively) for a meaningful comparison of 2019 to the historical average.

For reporting in future years, SCE should consider the following:

- Inclusion of more specific information on executive compensation for each of their metrics, including how much each metric is weighted within total compensation and which specific executive positions are affected.
- In the narrative context for metrics, SCE should provide information on whether performance for that metric was above or below average, and if possible, provide context to explain performance in the most recent year. SCE should also provide context on potential risk drivers for the metric.

CPUC is considering the development of Safety and Operational Metrics as part of the S-MAP proceeding (R.20-07-013) that could supersede these Safety Performance Metrics. Such a framework could include adding leading indicators for SCE to proactively anticipate trends in their safety culture (all 11 metrics are lagging indicators), requiring utilities to compare their metrics to short and long-term trends, and require utilities to set targets metrics where appropriate.

Finally, some metrics such as SIFs would be more useful for comparison and contextual purposes if they were expressed as rates rather than raw numbers. For example, SCE's employee SIFs are not comparable to PG&E's SIFs because SCE has substantially fewer employees and thus lower exposure. It is also important to note that for SIFs, it is not possible at this point to draw conclusions about trends or predict future year SIFs based on reportable data because the population of incidents relative to exposure is so small. It will take several years to discern meaningful patterns on low this type of low populations metric.