Safety Policy Division Review of Southern California Edison's 2021 Safety Performance Metrics Submittal Pursuant to Decision 19-04-020

By Richard White in consultation with Steven Haine
Safety Culture and Governance Section Safety Policy Division

I. Purpose

Pursuant to Ordering Paragraph 2 in Decision (D.)19-04-020 of the Safety Model Assessment Phase (S-MAP) proceeding, Application (A.) 15-05-002 et al., Southern California Edison (SCE) submitted a Safety Performance Metrics Report (SPM) to the California Public Utilities Commission (CPUC or Commission). SCE also and distributed the report to members on the service list in A.15-05-002.

D.19-04-020 directed CPUC's Safety and Enforcement Division (SED) staff to review the submitted safety performance metrics reports. The Risk Assessment and Safety Analytics (RASA) branch (formally part of SED) is responsible for the evaluation of these reports and has migrated from the SED 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 D.19-04-020. Their report is divided into two sections:

Chapter 1 – Introduction: This provides the narratives required by D. 19-04-020, including;

(A) Reviews of SPD's recommendations from its review of SCE's 2019 SPMR
(B) Examples of how SCE has used the Safety Performance Metrics data.
(C) Discussion on which SPM metrics are linked to executive compensation.
(D) Explains how the safety metrics data reflects progress against SCE's RAMP and General Rate Case (GRC).
(E) A narrative overview of each of the Safety Performance Metrics.

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 2020 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

Category	Safety Performance Metric		Unit
	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

Overview of the 2020 SCE Safety Performance Metric Portfolio

To evaluate the SCE SPM portfolio, SPD staff generated a SPM Progress metric. The Progress metric is defined as the absolute value of the % change in the 2020 metric performance compared to the 10-year average performance of the metric. A directional factor (+1 = increase in safety performance, -1 = decrease in safety performance) is multiplied by the base Progress metric to indicate the desirability of progress.

Progress metrics in this report that reflect improved safety performance are shown in green, and metrics that reflect poorer safety outcomes compared to prior year averages are red with a minus(-) sign.

For example, Metric 2 (Wires Down) on Major Event Days (MED) has an increase in occurrences in 2020 over the 10-year average by 25%. Because more Wires Down occurrences indicate a decrease in safety, we coded this metric as -25%. Conversely, Metric 14 (Employee SIFs) had a 9.1% decrease over the 10-year average, indicating an increase in safety performance – this is shown as a positive number in green as 9.1%.

Metrics with fewer than five years of data and the Flight Accident Metric, #23, were excluded from the Progress metric due to a small number of incidents. Of the eleven SCE SPM metrics, eight had a sufficient number of accumulated data in 2020 to be scored. Of these, SCE performed better than average on four metrics and performed below average on the other four. SPD's Progress metric is summarized in Figure 1.

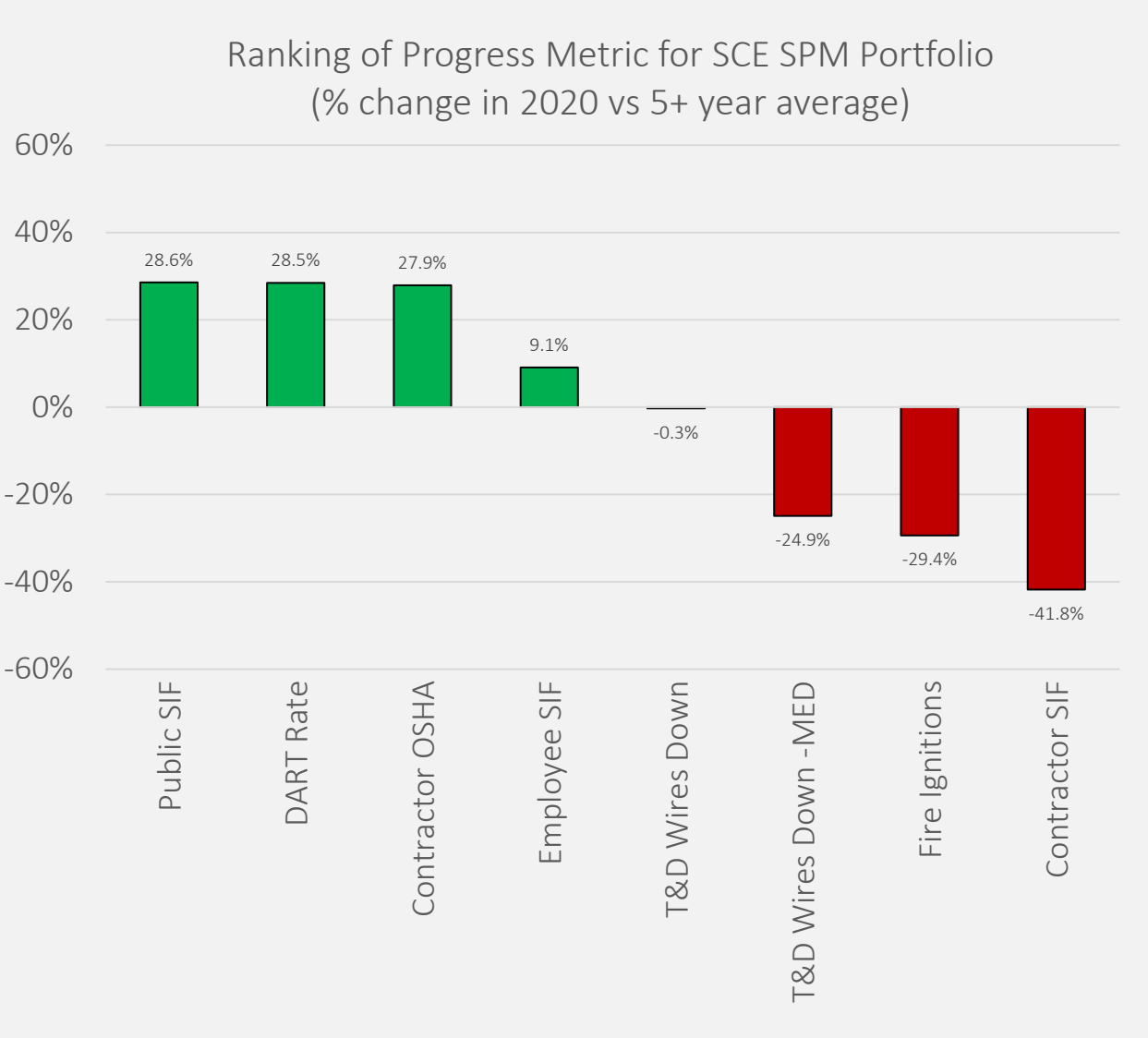


Figure 1. Evaluation of SCE's 2020 Metric Performance. Positive values indicate an improvement in performance in 2020 compared to the historical average; negative values indicate a worsening in performance for 2020 compared to the historical average.

It should be noted that only three of the four electric sector metrics had sufficient data to be scored**.** All three had negative progress values in 2020.

I. Compliance with Requirements in D.19-04-020

This section reviews whether SCE submitted the information required in D.19-04-020.

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

Of the 11 metrics, SCE has the full ten years of data on three metrics. Two metrics had seven years of data, four metrics had six years of data, one metric had four years of data, and one metric had two years of data. Information on the number of years of data provided for each metric is summarized in Figure 1.

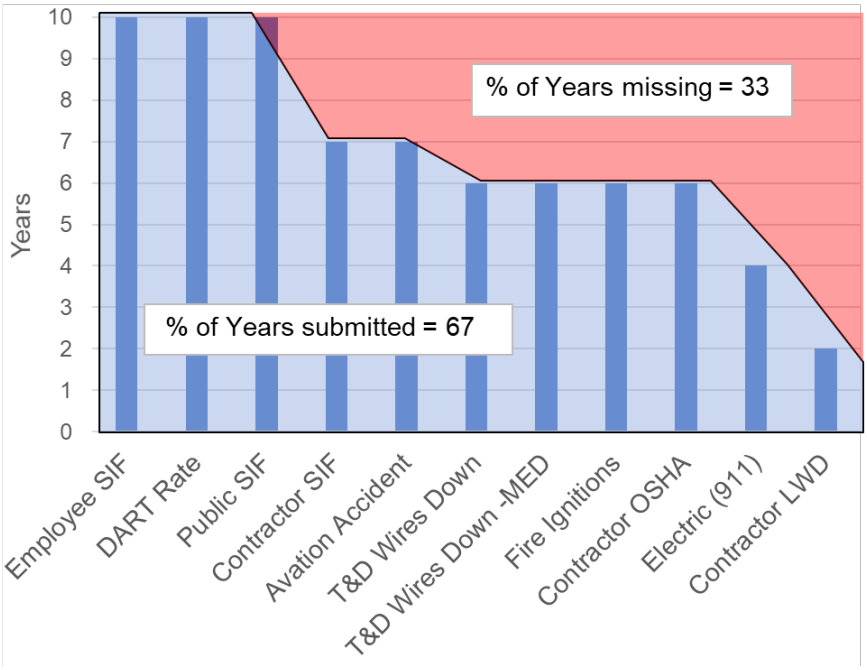


Figure 2. Years of Data per Metric. The shaded area in the top right of Figure 1corresponds to the additional years of data needed for SCE to have 10 years of data for all metrics.

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

SCE provided Public Serious Injuries and Fatalities data sixty days prior to the due date for this report, fulfilling this requirement.

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 employees holding Director-level or higher positions receive annual incentive awards under Executive Incentive Compensation (EIC) plan. Achievement of specific safety, operating, financial and strategic objectives directly impacts the level of incentives paid under the 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 retains the discretion to reduce or eliminate annual incentive awards should circumstances warrant.

Four of the eleven Safety Performance Metrics (Employee SIF, Contractor SIF, Public SIF, and Employee DART Rate) were included in SCE EIC program.

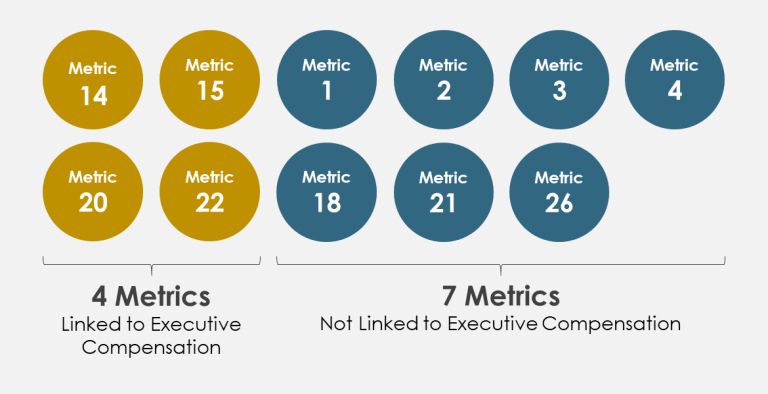


Figure 3. SCE Executive Compensation in 2020. Four of SCE's 11 metrics were linked to executive compensation in 2020.

SCE states its"year-end performance resulted in an aggregate goal score of 120 across the goal categories for Safety and Resiliency, Financial Performance and Operational Excellence and Strategic Advancement." The safety and resilience component accounts for 45 points of this score. SCE also states that "during 2020, on average, SCE's senior vice presidents had their EIC awards reduced by 13 points." This reduction is linked to three contractor fatalities and a third-party contractor being seriously injured from contact with a power line, and SIF rate worse than the target. (See Metrics 20 and 14)

Observations:

On its face, it seems that compensation was reduced by 11% due to negative SPM performance. At the same time, however, the compensation package adds "points" for achievement on several other "Success Measures." These Success Measures include:

- "Public Safety: Reduce risk of public injury related to electric Infrastructure -
- Improvements will be measured utilizing metrics such as public awareness of hazards, *e.g.*, wire down."

As noted in section 2 of this report, both Wires Down metrics have negative progress values, i.e. the metrics performed worse in 2020 than their 10-year average. Executive compensation is a very complex topic since it invariably involves tradeoffs between competing interests. A detailed review of SCE EIC practices is beyond the scope of this report.

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 four metrics identified above are linked to all director-level and higher positions.

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, on a sample basis, the internal audit teams verifies that the reporting for the corporate goals that determine payouts were accurate by obtaining supporting documentation, reviewing and validating the accuracy of how the goal obtainment was assessed, and validating the data by comparing to internal and external sources.

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 provides several examples of recent initiatives that fulfill this requirement.

Use of SPM data to improve staff and/or contractor training, and/or to take corrective actions to minimize top risks or risk drivers:

Public Safety

- *Targeted Public Communications Addressing Public Safety Risks:* SCE uses Public Serious Injuries and Fatalities (SIF) data and Excavation Incident data to evaluate the risk to the public of electrical contact with underground equipment due to excavation (Dig-ins).
- *Meter Alarm of Down Energized Conductor (MADEC):* A machine-learning algorithm, MADEC (Meter alarming for downed energized conductor), quickly identifies high-impedance electrical faults signaling possible energized wire-down events.

Employee safety:

- *Safety Predictive Analytics:* A predictive modeling tool that leverages historical data from serious injuries and fatalities. SPM flags work orders with elevated risk or associated with past injury and fatality to workers and identifies the key factors contributing to the high risk.
- *Risk Based Safety Program:* Risk-Based Safety Program focuses on SIF elimination through prioritizing, evaluating, and developing mitigations for risks that result in SIFs.

Contractor safety:

- *Enhancement of Contractor Safety Standards:* SCE's 2021 Contractor Safety program has been enhanced to improve oversight of our contractors engaging in higher risk assignments.

Use of SPM Data to Support Risk-Based Decision-Making as Required in the SMAP and RAMP Processes

- *Wildfire Risk Reduction Modeling (WRRM).* SCE developed asset specific probability of ignition (POI) models for transmission and Subtransmission assets to supplement existing distribution asset models.
- *Fire Incident Preliminary Analysis (FIPA) Process:* Fire Incident Preliminary Analysis (FIPA) process does more in-depth investigations into all ignitions that occurred in connection with SCE's electric facilities and help further wildfire mitigation efforts and risk modeling.
- *Wires Down Risk Model*: SCE uses historical wire-down events and a predictive analytics model to inform the scope for the overhead conductor program (OCP).

While SCE provides more than the minimum number of examples required, they do not indicate or discuss the relationship of Safety Performance Metrics to these new efforts. It appears that the SPM metrics may not be directly related to these efforts. All of the IOUs required to submit these reports have provided examples that do not necessarily demonstrate direct use of the SPMs. The requirement in paragraph 6 (d) presumes that the IOUs will use the SPMs in their safety improvement efforts. The IOUs use a variety of key performance indicators (KPIs) other than the SPMs to improve safety performance. The examples provided may or may not directly rely on SPMs originating from the Commission and parties in the S-MAP proceedings.

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 mentions that the SPM are used in some way to develop the bowtie structures in the RIDM.

SCE also acknowledges that the 2020 SPM data indicates mixed results, e.g., improvement in employee DART rates, while also experiencing increasing contractor SIF rate. SCE states that it "has more work ahead to ultimately achieve and maintain a strong safety culture and injury-free Workplace."

While SCE has several programs that utilize SPM data to some extent, overall, SCE appears to rely on systems and metrics other than Safety Performance Metrics in their efforts to achieve their RAMP or GRC goals. Decision 19-04-020 requires reporting of the metrics but does not require that they necessarily be used for decision-making purposes.

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 $1.05B. This was $13M less than authorized. See table below.

Total capital spending for safety, reliability, and maintenance activities was $3.25B. This was $298M under authorized expenditures in capital. SCE's response provides the information required in this ordering paragraph.

O&M Spending Accountability Report Variances by Category for Safety, Reliability and Maintenance Activities ($000s)

Category	2020 Recorded	2020 Authorized	Recorded Less Authorized Variance	% Variance (Rec. - Auth.)/Auth
Distribution	$352,121	$322,717	$29,404	9.1%
Transmission	$109,711	$106,272	$3,440	3.2%
Generation	$154,409	$171,585	($17,176)	-10.0%
Other	$431,463	$460,283	($28,821)	-6.3%
Grand Total	**$1,047,704**	**$1,060,858**	**($13,153)**	**-1.2%**

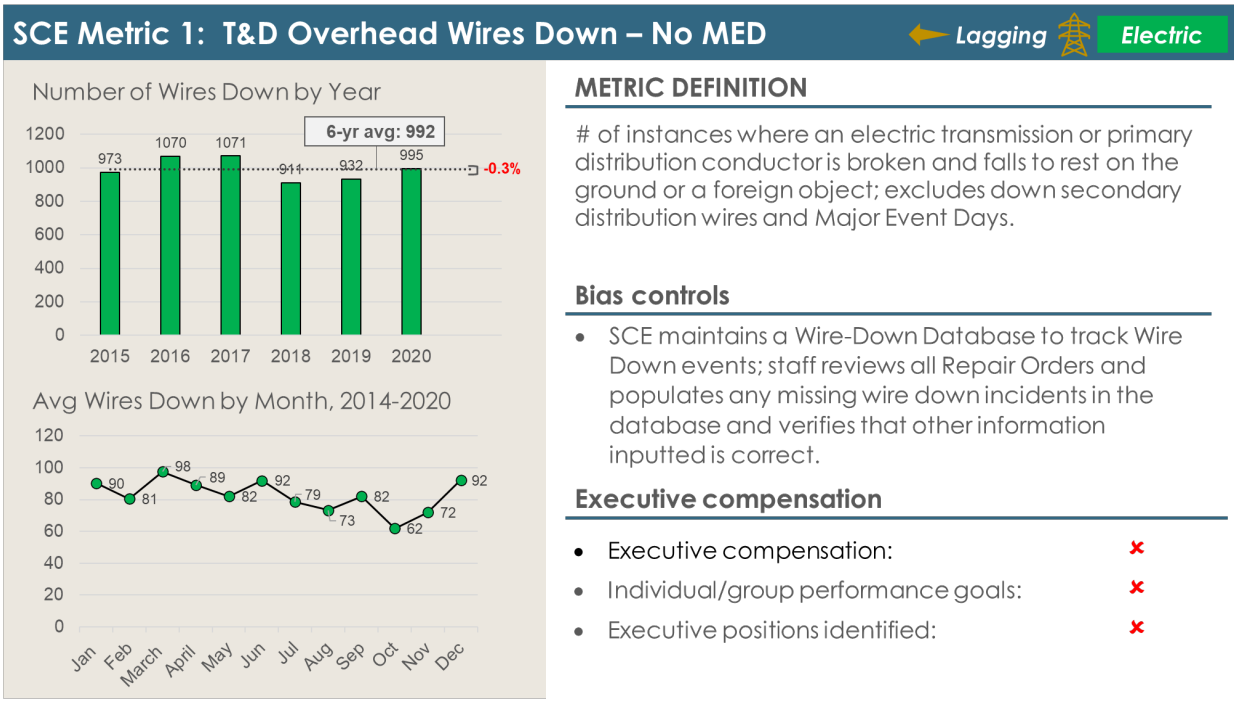
Capital Spending Accountability Report Variances by Category for Safety, Reliability and Maintenance Activities ($000s)

Category	2020 Recorded	2020 Authorized	Recorded Less Authorized Variance	% Variance (Rec. - Auth.)/Auth
Distribution	$1,668,871	$1,818,799	($149,928)	-8.2%
Transmission	$884,351	$1,108,328	($223,977)	-20.2%
Generation	$69,479	$109,802	($40,322)	-36.7%
Other	$624,804	$508,590	$116,213	22.9%
Grand Total	**$3,247,505**	**$3,545,519**	**($298,014)**	**-8.4%**

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

I. Summary of 2020 Metrics

This section includes an overview of information submitted for each of SCE's 11 Safety Performance Metrics.



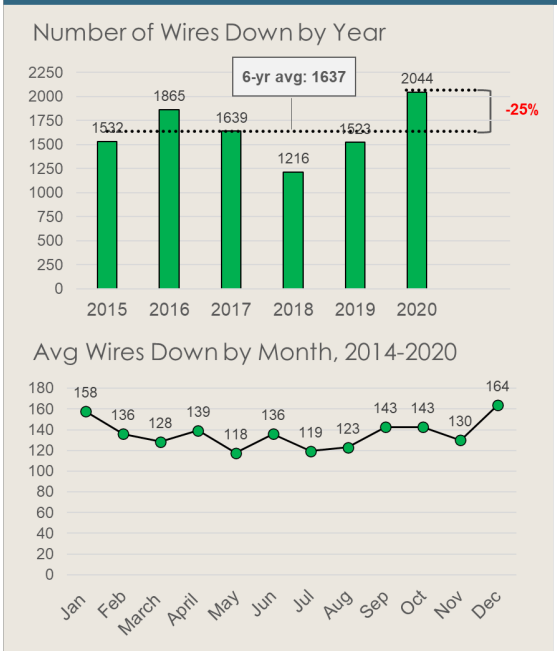
Metric 1 Summary & Evaluation: SCE submitted partial monthly data on this metric for 2014 and complete monthly data for 2015-2020. SCE's data shows an essentially flat trend over the period from 2015-2020. SCE uses this metric to measure and understand the risks associated with contact with energized conductors, 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.

SCE has also included its own new metric "SCE Metric 1a." As SCE states, this new metric "supplements Safety Performance Metric 1 by including MEDs. A side-by-side comparison of the metric with and without MEDs is helpful to understand differences in system performance between normal operating conditions and conditions of higher operational or design stress."

Observations: See observations on Metric 2.

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; staff reviews all Repair Orders and populates any missing wire down incidents in the database and verifies that other information inputted is correct.

Executive compensation

- Executive compensation: ✘
- Individual/group performance goals: ✘
- Executive positions identified: ✘

Metric 2 Summary & Evaluation:

Metric 2 (T&D Wires Down with MED) experienced a significant increase in 2020. The 2,044 events are 25% higher than the six-year average. SCE states, "This increase is attributable in part due to SCE's expanded efforts to capture secondary and service drop Wires Down events during 2020. In 2020, there were notable increases in wire down events related to contact from vegetation, animal contact, vehicle contact and connector damage or failures."

SCE discusses several programs they have in place to mitigate these events - including:

- Energy Theft Detection Program: A program to proactively identify safety issues from meter bypasses that could lead to overloading and Wires Down events using a energy theft detection algorithm.
- Overhead Conductor Program(OCP): The OCP replaces small conductors and installs protective devices to limit the amount of damage that conductors experience during fault conditions.
- Inspection Programs: SCE has several inspection and remediation programs to address the degradation of equipment and structures.
- Long Span Initiative (LSI) Remediation: SCE uses Light Detection and Ranging Technology (LiDAR) to identify potential "long-span" risks on the overhead distribution system.
- Secondary Connector and Conductor Failure: SCE issued a bulletin to field staff to inform them how and when to cover secondary connectors.

Vegetation Management: SCE has several vegetation management initiatives focused on preventing wire down events and ignitions.

SCE has also included its own new metric "SCE Metric 2a," which differs from Safety Performance Metric 2 by excluding MEDs.

SCE also includes a response to SPD's 2019 recommendation to provide more context to understand the potential risk drivers of Wire Down events. SCE provides the table below with 14 "Risk Event Drivers" for Wire Down events for each of the last six years.

Wire Down Risk Event Drivers

Cause category	Sub-cause category	2015	2016	2017	2018	2019	2020	5 Year Avg (2015–2019)	% over/ under Avg.
Contact from object - Distribution	Veg. contact- Distribution	279	357	384	158	308	424	297	43%
Contact from object - Distribution	Animal contact- Distribution	74	57	53	48	38	70	54	30%
Contact from object - Distribution	Balloon contact- Distribution	115	112	115	134	98	108	115	-6%
Contact from object - Distribution	Vehicle contact- Distribution	227	349	248	267	269	383	272	41%
Contact from object - Distribution	Other contact from object - Distribution	0	1	0	0	1	0	0	-100%
Equipment / facility failure - Distribution	Connector damage or failure- Distribution	84	106	81	75	68	122	83	47%
Equipment / facility failure - Distribution	Splice damage or failure — Distribution	35	28	24	24	28	29	28	4%
Equipment / facility failure - Distribution	Crossarm damage or failure - Distribution	31	26	26	25	35	35	29	22%
Equipment / facility failure - Distribution	Lightning arrestor damage or failure- Distribution	0	0	3	0	2	1	1	0%
Equipment / facility failure - Distribution	Tap damage or failure - Distribution	0	0	4	5	12	10	4	138%
Equipment / facility failure - Distribution	Other - Distribution	685	824	667	423	607	751	641	17%
Wire-to-wire contact - Distribution	Wire-to-wire contact / contamination- Distribution	0	0	1	2	1	7	1	775%
Other- Distribution	All Other- Distribution	0	0	33	53	54	102	28	264%
All Transmission		2	5	0	2	3	2	2	-17%
Total		**1,532**	**1,865**	**1,639**	**1,216**	**1,524**	**2,044**	**1,555**	**31%**

In SPD's Review of SCE 2020 SPM Submittal, SPD suggested that the ratio of Wires Down to total wire miles could be useful metric for comparing across utilities. SCE, however, takes issue with this proposed metric stating, "SCE respectfully submits that the proposed ratio would not be an effective measure for comparison across the IOUs. Notably, these metrics include transmission Wires Down and primary, secondary, service and unknown distributions Wires Down. An aggregated ratio without segmenting into the sub-categories described above does not provide a meaningful comparison across utilities or year over year for a single utility."

Observations: In the six years of reported data, SCE has experienced the highest number of Wire Down events in 2020, with an increase in Wires Down of 34% from 2019 to 2020. As mentioned above, SCE

attributes this "in part due to SCE's expanded efforts to capture secondary and service drop Wires Down events during 2020." SCE does not provide an assessment of how much of the 2020 increase may be due to expanded efforts and how much may be attributed to other factors such as weather, COVID-19, infrastructure degradation, etc. The staff cannot assess the value and impact of the methodological changes described without any such assessment.

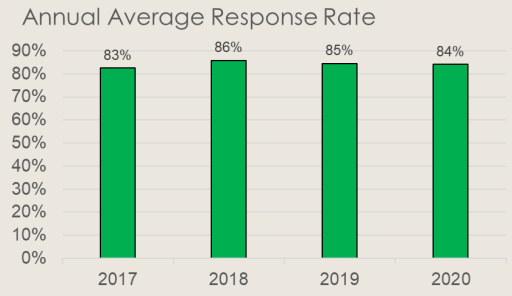
It should be noted "Risk Event" categories identified by SCE shows that, over the six-year history, 19% of events are due to vegetation, 18% of events are due to vehicle contact, and 42% are attributed to "Other-Distribution" and "All Other – Distribution." These "other" categories are the largest contributor to Wires Down events. As mentioned above, it is difficult for Staff to assess the value and impact of the programmatic mitigations mentioned in the SCE report given these vague descriptions.

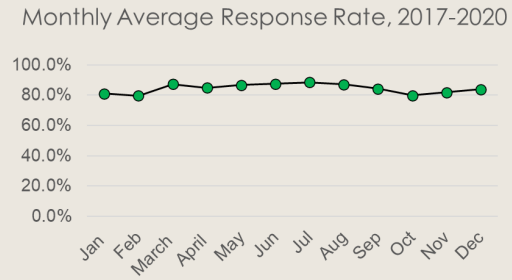
SCE, is aware of the deficiency of categorizing Wired Down events as "Other." As SCE states, "In April 2019, SCE launched the Fire Incident Preliminary Analysis (FIPA) process to perform more in-depth investigations into all ignitions that occurred in connection with our electric facilities."

SCE also comments that "In 2020, the FIPA team analyzed 795 events. In 2021, SCE has expanded the presentation of its faults and wire-down causes to add categories not listed in the Wildfire Safety Division (WSD) list. This will allow greater visibility to causes that were previously designated as 'Other.'

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 Samsara vehicle tracking and OMS verification to validate the correct arrival time for emergency calls.

Executive compensation

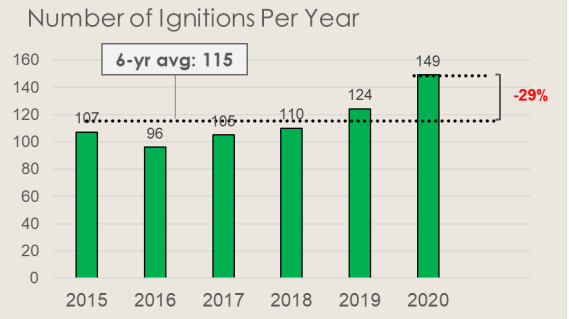
- Executive compensation: ✗
- Individual/group performance goals: ✗
- Executive positions identified: ✗

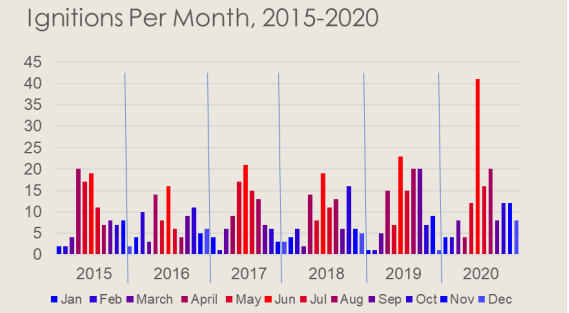
Metric 3 Summary & Evaluation: SCE's states that metric data for Electric Emergency Response is specific to 911 calls that come through a public agency (e.g., police, fire, CHP). To fill in the correct arrival time for emergency calls, Dispatch Supervisors research the call using Telogis vehicle tracking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

Observations: SCE's performance for this metric has remained relatively steady over the four years reported, and there is little seasonal variation.

SCE Metric 4: Fire Ignitions

Lagging | Electric





METRIC DEFINITION

of powerline-involved fire incidents 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

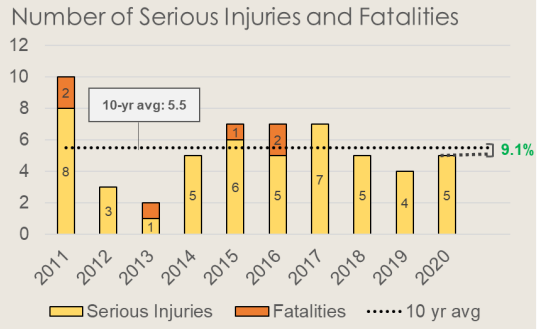
- Executive compensation: ✗
- Individual/group performance goals: ✗
- Executive positions identified: ✗

Metric 4 Summary & Evaluation: There has been an increase in the number of ignitions per year since 2015, likely due to an increase in overall wildfire activity in Southern California since 2015. Ignitions are highest from April to August, and begin tapering off in September. 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 (HFRAs) and is anticipated to reduce contact-from-object and wire-to-wire ignition risks and the frequency of wire down events. This began because data showed that contact-from-object and wire-to-wire faults in SCE's HFRA were associated with 60% of suspected ignitions that led to wildfire events.

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

Observations: Despite SCE's risk mitigation efforts, 2020 saw the highest number of ignitions of the five years reported.

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



5/0

Number of serious injuries/ fatalities in 2020

4.9/ 0.6

Average number of serious injuries/ fatalities, 2011-2020

METRIC DEFINITION

of employee work-related injuries or illnesses 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

- Executive compensation: ✓
- Individual/group performance goals: ✓
- Executive positions identified: ✓

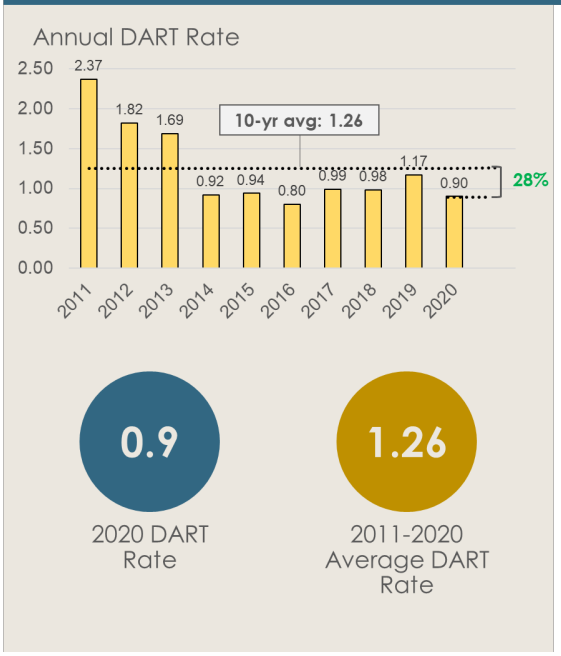
Metric 14 Summary & Evaluation: Over the last two years, SCE states that they have seen a downward trend in this metric because of safety efforts and activities aimed at eliminating serious injuries and fatalities. However, the data do not show a significant improvement over the 10-year average. SCE 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 to help ensure that reporting of metrics is objective. Additionally, an Incident Screener follows CalOSHA 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 2020 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 attributable to random statistical variations. SCE reports that this metric is tied to executive 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

- Executive compensation: ✓
- Individual/group performance goals: ✓
- Executive positions identified: ✓

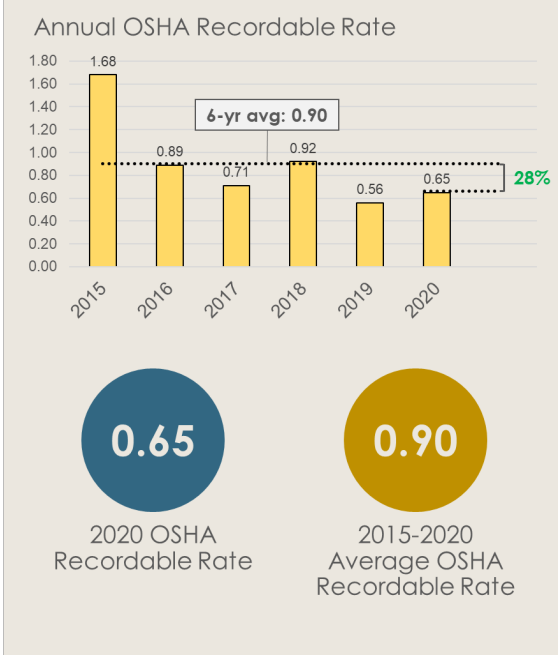
Metric 15 Summary & Evaluation: SCE has tracked Employee DART rate for 10 years and uses it as a metric for corporate goals. SCE uses injury and incident data related to the Employee Serious Injuries and Fatalities (SIF) and Employee DART Rate metrics to prioritize and mitigate top safety risks. SCE discusses monthly DART injuries at monthly Executive Safety Meetings to learn from incidents and prevent recurrence. SCE notes that DART Rates have decreased due to safety programs and culture initiatives implemented at SCE. However, in 2019, DART rates increased slightly due to significant wildfire mitigation activities, which caused many employees to perform activities beyond their normal job duties. However, in 2020, despite continued wildfire mitigation efforts, the DART rate fell back to the same level seen between 2014 and 2018.

To control for bias for metrics linked to executive compensation, SCE conducts annual internal audits of corporate goal metrics to help ensure that reporting of metrics is objective. Additionally, SCE has an OSHA Record keeper to classify 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, but declined to pre-2019 levels in 2020.

SCE Metric 18: Contractor OSHA Recordable Rate

Lagging — Injuries



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.

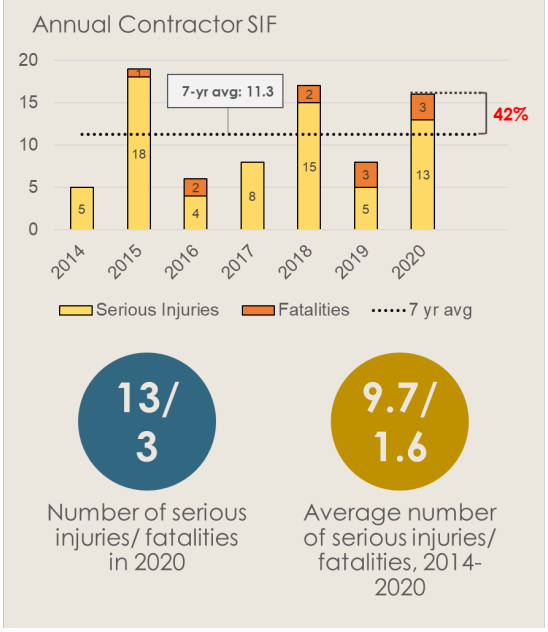
Executive compensation

- Executive compensation: ✗
- Individual/group performance goals: ✗
- Executive positions identified: ✗

Metric 18 Summary & Evaluation: Contractor OSHA Recordable rates show a downward trend from 2015-2019. 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 show a downward trend from 2015-2019.

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



13/ 3

Number of serious injuries/ fatalities in 2020

9.7/ 1.6

Average number of serious injuries/ fatalities, 2014-2020

METRIC DEFINITION

of contractor work-related injuries or illnesses 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

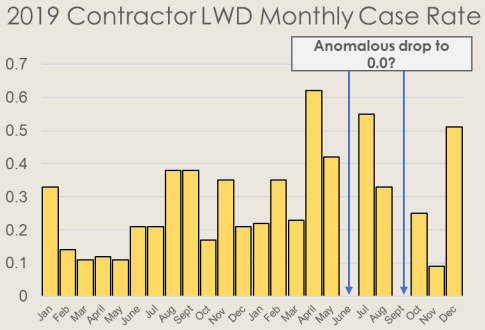
- Executive compensation: ✓
- Individual/group performance goals: ✓
- Executive positions identified: ✓

Metric 20 Summary & Evaluation: SCE saw a substantial increase in Contractor Serious Injuries and Fatalities (SIF) in 2020 over the seven-year average. However, SCE suggests that the rise in contractor hours is a primary reason for this increase, and they point out that if you look at Contractor SIF as a rate that factors in total contractor hours, the rate fell to 18% below the five-year average. 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 to help ensure that reporting of metrics is objective.

Observations: SCE's Contractor fatalities in both 2019 and 2020 occurred under a wide range of situations and had disparate causes; nonetheless, SCE indicated they described new mitigation policies designed to reduce the likelihood of each cause of death being repeated. While SCE attributes the increase in contractor SIFs to the substantial increase in risk exposure associated with increased hours worked, they did see their SIF rate double from 2019 to 2020. The fact that their Contractor SIF rate was below the five-year average can be explained by relatively high SIF Rates in 2015 and 2018.

SCE Metric 21: Contractor Lost Work Day Case Rate

Lagging | Injuries



0.23
2019 Average LWD Rate

0.29
2020 Average LWD Rate

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.

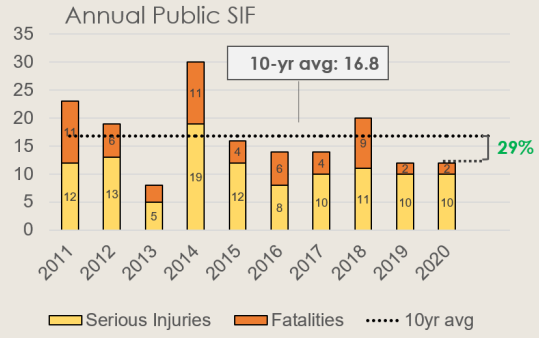
Executive compensation

- Executive compensation: ✗
- Individual/group performance goals: ✗
- Executive positions identified: ✗

Metric 21 Summary & Evaluation: There was a small increase from 2019 to 2020 on this metric. This was the first year that SCE tracked this Contractor LWD case rate, so we will continue to assess trends in future years. 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.

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

Lagging | Injuries



10/ 2

Number of serious injuries/ fatalities in 2020

11/ 5.8

Average number of serious injuries/ fatalities, 2011-2020

METRIC DEFINITION

fatalities or personal injuries requiring in-patient hospitalization involving utility facilities or equipment. Equipment includes utility vehicles used during the course of business.

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

- Executive compensation: ✓
- Individual/group performance goals: ✓
- Executive positions identified: ✓

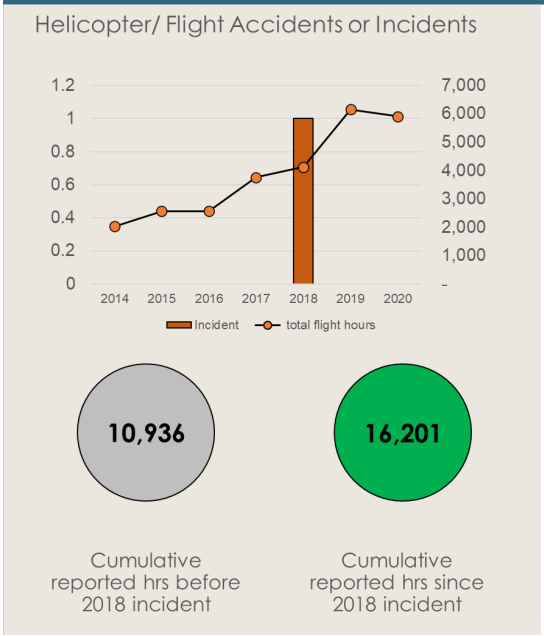
Metric 22 Summary & Evaluation: SCE states that in 2020, six of the SIF incidents were related to overhead electrical contact, five were related to underground electrical contact, and one was related to equipment failure other than conductors or poles. Six of the 12 incidents were related to the sub-category of contact with intact overhead conductors, four to theft/ vandalism, one to excavation damage (dig-in), and one to underground equipment failure. Eleven of the 12 incidents involved distribution infrastructure, and one 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, if necessary, reclassifies SIF incidents with additional information.

Observations: SCE pointed out that nearly half of their Public SIF incidents were related to theft and vandalism. They reported that they are looking to mobile surveillance systems to deter these difficult to prevent activities. They also reported that individuals who predominantly speak Spanish trimming trees near power lines without proper certification have suffered serious injuries due to contact with overhead lines. To address this, SCE indicated they increased their public education efforts in both Spanish and English.

SCE Metric 23: Helicopter / Flight Accident or Incident

Lagging | Vehicle



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

- Executive compensation: ✗
- Individual/group performance goals: ✗
- Executive positions identified: ✗

Metric 23 Summary & Evaluation & Evaluation: 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. All Aviation Service Providers must pass a technical qualification pursuant to 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.

II. Conclusion & Recommendations

SCE's second SPM Report complies with the requirements in D.19-04-020. SCE responded to SPD's comments and recommendations from last year's evaluation adding supplemental data and providing additional context to their reported metrics.