SOUTHERN CALIFORNIA EDISON
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Diana S. Gallegos
State Regulatory Relations
diana.gallegos@sce.com

November 1, 2021

Leslie Palmer, Director
Safety Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

SUBJECT: SCE PSPS Post Event Report – October 16 to October 18, 2021

Dear Director Palmer:

As required by Resolution ESRB-8 and in accordance with Ordering Paragraph 1 of California Public Utilities Commission (CPUC) Decision (D.) 19-05-042, Southern California Edison Company (SCE) respectfully submits a compliance report for the PSPS high threat event that was initiated on October 16, 2021 and completed on October 18, 2021.

This report has been verified by an SCE officer in accordance with Rule 1.11 of the Commission's Rules of Practice and Procedure.

If you have any questions, please do not hesitate to call.

Sincerely,

DocuSigned by:
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Diana S. Gallegos
Director, State Regulatory Relations

cc: ESRB_ComplianceFilings@cpuc.ca.gov

Southern California Edison
Public Safety Power Shutoff (PSPS) Post-Event Report
October 16, 2021

Filed with: The California Public Utilities Commission
Submitted to: Director of the Safety and Enforcement Division
Dated: November 1, 2021

Table of Contents

Introduction[1]

SCE submits this post-event report to address the potential high threat event[2] that started on October 16th, 2021 at 8 am and ended on October 18th at 9 am impacting portions of Inyo County, and to demonstrate its compliance with the directives of Resolution ESRB-8 and the requirements imposed by California Public Utilities Commission (CPUC or Commission) PSPS Order to Instituting Rulemaking (OIR) Phase 1 (Decision (D.) 19-05-042), Phase 2 (D.20-05-051), Phase 3 (D.21-06-034) and PSPS Order Instituting Investigation (OII) (D.21-06-014). SCE did not de-energize any customers during this event. This report explains SCE's decision to call, sustain, and conclude the event, and provides detailed information to facilitate the Commission's evaluation of SCE's compliance with applicable PSPS guidelines.

SCE appreciates that proactive de-energizations pose significant challenges and hardships for our customers and the Public Safety Partners that provide vital services to the affected communities. SCE's decision to activate its PSPS protocol is based on careful consideration and weighing of multiple factors, including forecasted weather, fuel conditions, infrastructure vulnerabilities, and potential impacts of PSPS on Public Safety Partners and the communities we serve.

SCE remains committed to continuously improving its PSPS processes and welcomes input from its customers, Public Safety Partners, community representatives, and local governments on ways we can work together to minimize the impact of PSPS events on all stakeholders.

[1]On October 18, 2021 at 4:16 pm, Administrative Law Judges Regina DeAngelis and Valerie Kao issued by e-mail ruling the Safety and Enforcement Division's (SED) final post-event reporting template, directing the IOUs to "rely on this template for future reporting." SCE appreciates SED's consideration and responsiveness to its comments on the draft version of the template, and the flexibility afforded to cross-reference rather than repeat certain required information. The final reporting template included new reporting requirements not reflected in the draft version of the template, structural modifications, and clarifications of certain terminology such as "hazards." SCE was already in the process of preparing three PSPS post-event reports when the final template was issued. Given the short implementation window, SCE has endeavored to update its forthcoming post-event reports to the extent possible to adhere to SED's final template. However, given the fast-approaching report filing deadlines and the fact that some of the newly required information will not be available within 10 business days of the PSPS event, this report may deviate in some ways from the final template. SCE has included explanatory notes for any such instances.

[2] SCE has used October 16, 2021 to date this report as that was the day the PSPS Dedicated Incident Management Team (IMT) was activated to manage this high threat event.

Section 1. Executive Summary

1. Brief description of the PSPS event starting from the time when the utility's Emergency Operation Center is activated until service to all customers had been restored.

This PSPS event began when SCE activated its Emergency Operations Center on October 16, 2021, at 8 am. SCE had been actively managing another ongoing PSPS event forecasted to be concluded on October 15th at 3 pm. During that event, SCE's meteorologists identified the additional potential for fire weather conditions in localized portions of Inyo County on the Birchim circuit and Mono County on the Tufa circuit beginning on October 17th with a final period of concern from 3 pm on October 17th to 9 am on October 18th.

Given this forecast, SCE's meteorology and fire science experts maintained close communication with the Geographic Area Coordination Center (GACC)[3] to evaluate the potential fire weather. During this communication, the GACC indicated agreement with SCE's forecast of elevated fire weather. SCE activated its PSPS Dedicated Incident Management Team (IMT) on October 17th at approximately 8 am to manage this event. The Tufa circuit, with only one customer in scope, was removed from scope prior to the period of concern for that circuit on October 17th, leaving only the Birchim circuit with 3 customers in scope for potential de-energization on one segment during the period of concern. Given observed rapidly escalating wind conditions close to de-energization thresholds during the period of concern, an additional segment of the Birchim circuit came into scope, and 405 customers on that segment were notified of the imminent potential for proactive de-energization. Leveraging observed real-time weather station data and information from live field observers monitoring prevailing environmental conditions, such as potential damage from wind gusts, airborne vegetation, or flying debris, SCE was ultimately able to avoid de-energizing any circuits during this event.

[3] The GACC is the physical location of an interagency, regional operation center for the effective coordination, mobilization, and demobilization of federal state and local wildland fire agencies through logistical coordination of resources throughout the geographic area, as well as with other geographic areas.

2. A table including the maximum number of customers notified[4] and actually de-energized; number of counties de-energized; number of tribes de-energized; number of Medical Baseline customers de-energized; number of transmission and distribution circuits de-energized; damage/hazard count; number of critical facilities and infrastructure de-energized.

3. Table 1: PSPS Event Summary

PSPS Event Summary										
Total Customers			De-energized				Number of Circuits			Damage/ Hazard Count
PSPS Notified	De-energized	Cancelled	MBL Customers	Number of Counties	Number of Tribes	Critical Facilities and Infrastucture	Transmission De-energized	Distribution Circuits in Scope	Distribution De-energized	
409	0	409	0	0	0	0	0	2	0	0

4. A PDF map depicting the de-energized area(s).

N/A. SCE did not de-energize any circuits during this PSPS event.

[4] SCE makes every effort to notify customers, public safety partners, and other impacted entities within two hours of a decision to cancel an anticipated de-energization event or to remove from scope. When the period of concern is over for a circuit or a circuit segment originally in scope, SCE sends an "All-Clear – Event Avoided" cancellation notification to impacted entities and customers who had been notified of a potential de-energization, but not de-energized. Because weather conditions can change unexpectedly, SCE is not always able to make a final decision that notified customers will not experience a de-energization until an "All Clear" declaration had been issued for all circuits in scope for the PSPS event. If conditions during a PSPS event do not support a decision to cancel or to remove from scope any of the notified customers before an "All Clear" declaration for all circuits in scope, the corresponding entries in Table 1: PSPS Event Summary, Table 3: Notifications Timeline, and Table 6: Breakdown of Notification Failures will state "Not Applicable" or "N/A."

Section 2. Decision-Making Process

1. **A table showing factors considered in the decision to shut off power for each circuit de-energized, including sustained and gust wind speeds, temperature, humidity, and moisture in the vicinity of the de-energized circuits.**[5]

   SCE did not de-energize any circuits during this PSPS event. The Tufa circuit was removed from scope prior to the period of concern on October 17th because the wind and FPI thresholds forecasted for this circuit no longer met criteria. As the period of concern for a previously identified portion of the Birchim circuit (originally impacting 3 customers) developed, observed winds necessitated notification to 405 additional customers on another segment of the Birchim circuit, as SCE observed winds exceeding 90% of the de-energization thresholds for over 30 minutes. Shortly after a 1-4 hour notification was sent to the customers on the Birchim circuit, wind speeds began to decrease for all portions of the Birchim circuit. The IMT continued to maintain situational awareness through live field observations and weather station readings. Real-time FPI ratings did not exceed thresholds, and no pre-emptive de-energization was needed. *See* Section 1-1 above for additional information.

2. **Decision criteria and detailed thresholds leading to de-energization including the latest forecasted weather parameters versus actual weather. Also include a PSPS decision-making diagram(s)/flowchart(s) or equivalent along with narrative description.**

   SCE uses preset thresholds for dangerous wind speeds, low humidity, and dry fuels as the basis for PSPS decision-making as described in SCE's technical paper.[6] These thresholds are set for each of the circuits in SCE-designated high fire risk areas (HFRAs) and are continuously reviewed to calibrate the risk of significant events against the potential for harm to customers from the loss of power.

   In 2021, based on an examination of 26 years of historical fire activity, SCE updated its Fire Potential Index (FPI)[7] thresholds for all but one fire climate zone within our service area. Simultaneously, grid hardening efforts, including replacing bare wire with covered conductor, are reducing ignition risk and thereby allowing SCE to raise thresholds on many of the circuits most frequently impacted in 2019 and 2020.

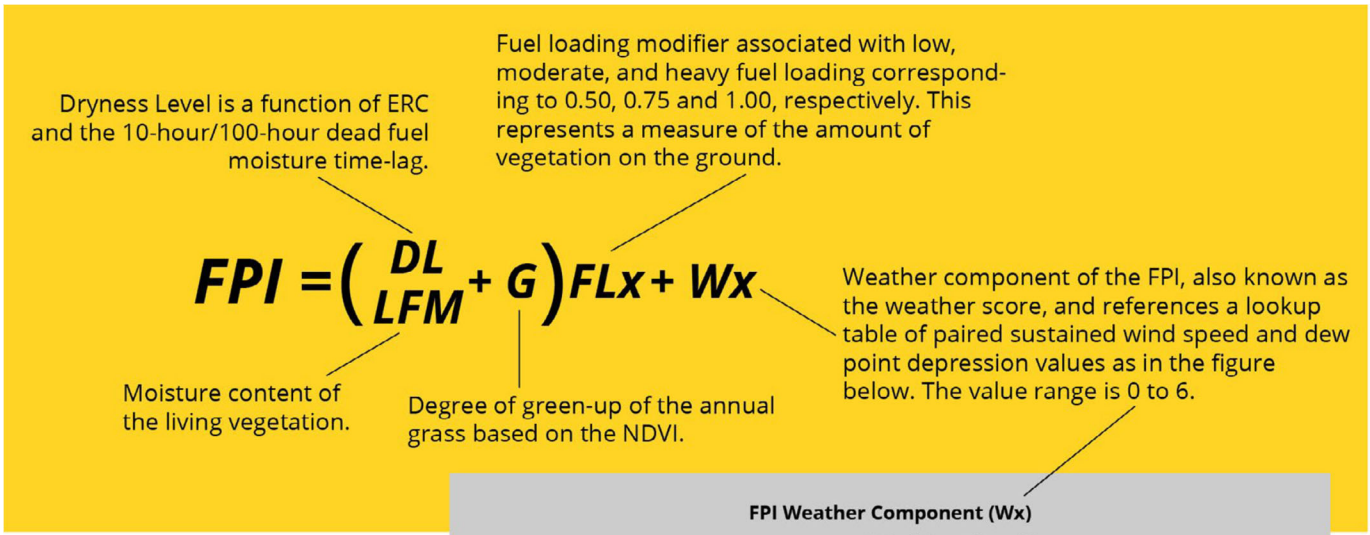
   All circuits have an activation threshold, defined by the FPI and the wind speed at which they are considered at risk. Activation thresholds are computed for each circuit for the season.

   FPI is calculated using the following inputs:

[5] SCE includes temperature, humidity, and moisture in its Fire Potential Index rating calculations as detailed in this section.
[6] SCE's detailed technical paper, Quantitative and Qualitative Factors for PSPS Decision-Making, can be found at https://energized.edison.com/psps-decision-making and in Attachment C of this report.
[7] The SCE Fire Potential Index (FPI),[7] is a tool that utilizes weather data to include temperature and humidity, fuel conditions, and vegetation moisture content to rate the daily fire potential across our service region. FPI estimates the likelihood of a spark turning into a major wildfire. FPI uses a whole-number scale with a range from 1 to 17 and are categorized as normal (1-11), elevated (12-14) and extreme (15+). Historical FPI and state and federal fire data show that the most severe fires in terms of number of acres damaged occur at the higher levels of FPI.

- Wind speed—Sustained wind velocity at 6 meters above ground level.
- Dew point depression—The dryness of the air as represented by the difference between air temperature and dew point temperature at 2 meters above ground level.
- Energy release component (ERC)— "The available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire … reflects the contribution of all live and dead fuels to potential fire intensity."[8]
- 10-hour dead fuel moisture—A measure of the amount of moisture in ¼-inch diameter dead fuels, such as small twigs and sticks.
- 100-hour dead fuel moisture—A measure of the amount of moisture in 1- to 3-inch diameter dead fuels, i.e., dead, woody material such as small branches.
- Live fuel moisture—A measure of the amount of moisture in living vegetation.
- Normalized Difference Vegetation Index (NDVI)— "… used to quantify vegetation greenness and is useful in understanding vegetation density and assessing changes in plant health."[9]

Visual 1. Fire Potential Index Equation[10]



FPI Weather Component (Wx)

Dew Point Depression	Wind Speed (mph) <=5	6-10	11-16	17-22	23-28	>=29
>=50	2	3	3	4	5	6
40-49	2	2	3	3	4	5
30-39	1	2	2	3	3	4
20-29	1	1	2	2	3	3
10-19	0	0	1	1	1	1
<10	0	0	0	0	0	0

[8]U.S. Department of Agriculture. n.d. "Energy Release Component (ERC) Fact Sheet." Forest Service. Accessed April 14, 2021. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5339121.pdf.
[9] U.S. Department of the Interior. n.d. Landsat Normalized Difference Vegetation Index. Accessed April 14, 2021. https://www.usgs.gov/core-science-systems/nli/landsat/landsat-normalized-difference-vegetation-index?qt-science_support_page_related_con=0#qt-science_support_page_related_con.
[10] Fire Potential Index adapted from San Diego Gas & Electric (https://www.sdge.com/sites/default/files/regulatory/SDGE_Fire_Prevention_Plan_2018.pdf, pages 25-27) and modified to serve SCE's needs, including the insertion of the Live Fuel Moisture variable.

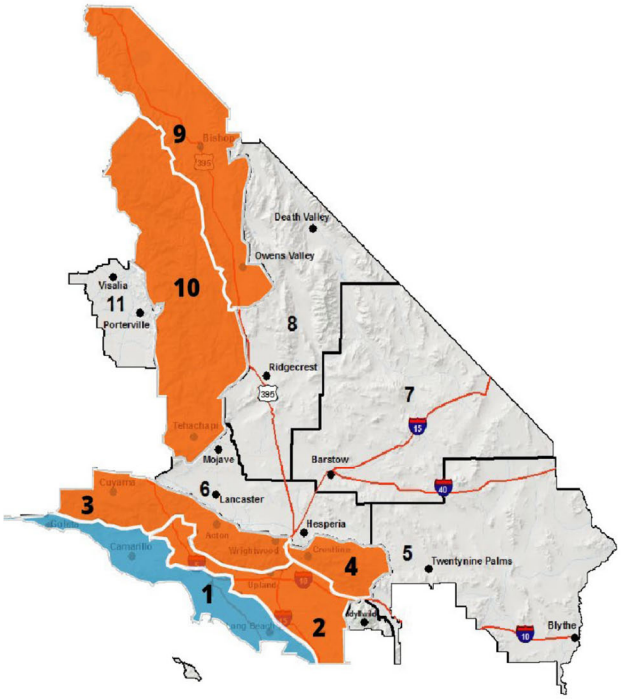
Previously, SCE set the activation threshold at the FPI of 12. Starting on September 1, 2021, SCE has set the FPI at 13 for most areas and most events based on a risk analysis of historical fire data.[11] Exceptions in which the FPI threshold will continue to be set at 12 include:

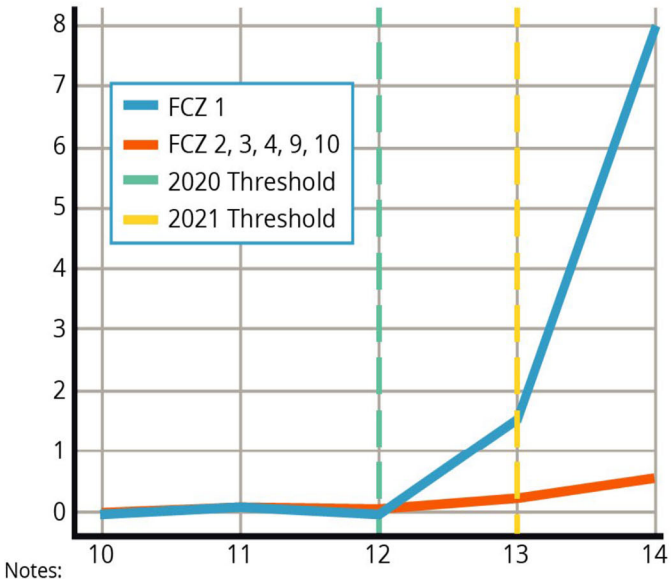
- Fire Climate Zone 1 (FCZ1) (Coastal region) — The threshold for FCZ1 is staying at 12 because probability calculations indicated a significantly higher ignition risk factor at an FPI threshold of 13 for this FCZ than for the other FCZs (2, 3, 4, 9, and 10).

- Geographic Area Coordination Center (GACC) preparedness level of 4 or 5 — The GACC coordinates multiple federal and state agencies to track and manage regional fire resources. It provides a daily fire preparedness level on a score of 1-5. A high score signals that there could be resource issues in responding to a fire.

- Circuits located in an active Fire Science Area of Concern (AOC) — AOCs are areas within FCZs that are at high risk for fire with significant community impact. This designation is based on factors that are common to FPI as well as egress, fire history, and fire consequence. Further details about AOCs can be found in SCE's Wildfire Mitigation Plan.[12]

Visual 2. Probability of Wind-Driven Fires at 10,000 Acres at FPI 12 and 13[13]





Notes:
1. Based on an analysis of fire data from 1992-2017.
2. FPI is calculated as a whole number (there are no fractional FPI values).
3. Fires of less than 10,000 acres are not represented on this graph.

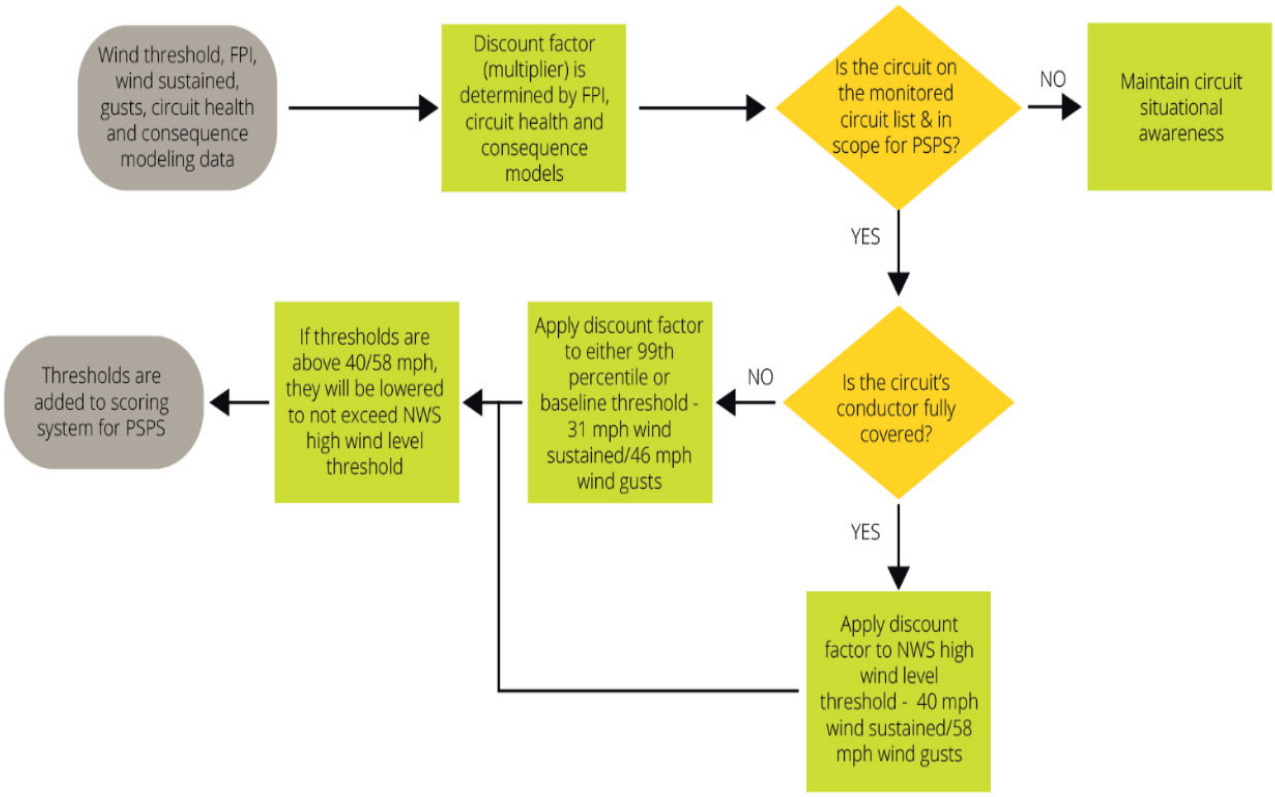
For each PSPS event, every circuit also has a de-energization threshold. De-energization thresholds

[11] Short, Karen C. 2017. Spatial wildfire occurrence data for the United States, 1992-2015 [FPA_FOD_20170508]. 4th Edition. Fort Collins, CO: Forest Service Research Data Archive https://doi.org/10.2737/RDS-2013-0009.4 Supplemented with 2016-2017 ignition data supplied directly by CalFIRE via email.
[12] SCE's 2021 Wildfire Mitigation Plan Update dated February 5, 2021.
[13] Based on back cast FPI calculation.

are determined separately for each circuit to prioritize circuits for de-energization based on the specific risks of the event. This is particularly important for large events where many circuits must be evaluated simultaneously. There are a handful of circuits that have legacy thresholds below the NWS advisory level because they have a history of local circuit outages at lower wind speeds.

De-energization thresholds account for circuit health, including any issues identified through patrols, and are also informed by a consequence score for each specific high fire risk area. The consequence score estimates the impact of an ignition on communities. The higher the score, the greater the risk to a particular location from wildfires. SCE's process for calculating de-energization thresholds is outlined below.

Visual 3. PSPS Decision-Making Flowchart/Diagram



If actual conditions suggest more risk, or in large-scale events when many circuits are under consideration for shutoffs, the de-energization thresholds may be lowered (discounted), meaning power on a circuit will be turned off at lower wind speeds. This step prioritizes the circuits that represent the highest risk to be evaluated for de-energization before circuits at lower risk. Conversely, de-energization thresholds are raised for segments or circuits that have had covered conductor installed. The de-energization threshold for segments with covered conductor is 40 mph sustained/58 mph gusts, which aligns with the National Weather Service high wind warning level for windspeeds at which infrastructure damage may occur.

Thresholds for this PSPS event were set as follows:

- FPI threshold rating was set at 13 in the areas of concern.
- Wind speed thresholds for monitoring circuits in scope were set at 31 MPH sustained and 46 MPH gust.

- De-energization thresholds for both circuits in scope were set at 40 MPH sustained and 58 MPH gusts.

Forecast weather parameters for this event were as follows:

- Peak gusts up to 65 MPH were possible in the areas of concern, with more widespread gusts of 35-55 MPH likely. Humidity levels were forecast to decrease to around 10-30% by the morning hours of October 18th.

3. A thorough and detailed description of the quantitative and qualitative factors it considered in calling, sustaining, or curtailing each de-energization event including any fire risk or PSPS risk modeling results, and a specification of the factors that led to the conclusion of thede-energization event.

SCE's PSPS decisions are based on quantitative analyses while accounting for qualitative factors such as societal and emergency management impacts. SCE makes PSPS decisions predominantly at the distribution grid level. The decision not to de-energize customers during this high-threat PSPS event was based on considering and weighing the quantitative and qualitative factors detailed below.

- Coordination with the GACC regarding the potential for elevated fire weather within the SCE service territory during the period of concern. The GACC agreed with SCE's forecast of elevated fire weather potential for Inyo and Mono County.

- Ongoing assessments before the period of concern from SCE's in-house meteorologists using high-resolution weather models to determine the potential scope of the PSPS event; real time weather data from SCE weather stations and publicly available weather stations during the period of concern to inform actual de-energization decisions.

- Fire spread modeling to confirm areas having the greatest potential for significant fire activity. Results of this modeling identified the potential for fire in the 1,000 to 5,000-acre range during the period of concern.

- Relative humidity levels. Relative humidity levels in the areas of concern for this PSPS event ranged from 10% to 20%.

- Actual weather parameters for this PSPS event, including wind speeds and Fire Potential Index ratings for the circuits in scope relative to the preset thresholds for these circuits. Neither wind speed nor FPI rating thresholds for de-energization were attained for this event.

- National Weather Service-issued watches and warnings for areas of concern in the SCE service Territory. A Red Flag Warning and a High Wind Warning were in effect for Mono County and a Wind Advisory was in effect for Inyo County.

SCE considered the following factors when deciding to conclude this high threat event.

- Observed wind speeds and FPI ratings. Neither wind speed nor FPI thresholds for de-energization were met for this event during the period of concern. The Birchim circuit did not consistently exceed the de-energized wind thresholds of 40 MPH sustained with gusts of 58 MPH. Peak wind across the Birchim circuit were measured at 63 mph, but this wind speed was an outlier and occurred only once. Other wind gusts across the circuit did not exceed 54 mph.

4. **An explanation of how the utility determined that the benefit of de-energization outweighed potential public safety risks, and analysis of the risks of de-energization against not de-energizing. The utility must identify and quantify customer, resident, and the general public risks and harms from de-energization and clearly explain risk models, risk assessment processes, and how the power disruptions to customers, residents, and the general public is weighed against the benefits of a proactive de-energization.**

   For each de-energization event, SCE assesses and compares potential public safety risks associated with proactive de-energization (PSPS risk) and simulated wildfire risk (PSPS benefit in avoiding a wildfire) for all circuits in scope, using its PSPS In-Event Risk Comparison Tool.[14] Inputs into this Tool include, among others, in-event weather and wildfire simulation models, as well as circuit-specific data. The results of the analysis are displayed on the Incident Commander Dashboard and used by Incident Commanders to inform de-energization decisions, in conjunction with other relevant quantitative and qualitative factors described in Section 2 of this report. Incident Commanders consider the output of the Tool to assess the risk versus the benefit of de-energization on a circuit-by-circuit basis.

   The comparative PSPS and wildfire risk estimates are based on the following circuit-specific criteria and information:

- **PSPS Risk**: Customers served, estimated population, and the relative ranking of the circuits in scope by the percentage of Access and Functional Needs (AFN) and Non-Residential Critical Infrastructure (NRCI) customers.

- **Wildfire Risk**: Wildfire simulations (using Technosylva FireCast[15] modeling) for potential ignitions based on dynamic, in-event weather and wind conditions in proximity to the circuits in scope for de-energization. These conditions are used to determine the extent of an estimated fire footprint (or fire shed). Within that fire shed, the risk of a wildfire is calculated based on the number of structures, population, and acres potentially threatened within the impacted area.

  This information is used to calculate potential Safety, Financial, and Reliability impacts (or attributes) of: (1) a wildfire and (2) a proactive de-energization event, as summarized in the table below:

Risk Attribute	Wildfire Consequences	PSPS Consequences
Safety	SCE calculates the estimated number of fatalities and serious injuries based on a forecast of impacted population within the Technosylva wildfire consequence	SCE leverages epidemiological studies and information drawn from past widespread power outage events including the 2003 Northeast Blackout, the 2011 Southwest

[14] SCE will continue to refine the PSPS In-Event Risk Comparison Tool based on real-time experience, additional data, modeling enhancements, and ongoing benchmarking with other IOUs. Estimates and assumptions described herein are based on risk models reflecting current industry best practices (such as FireCast) and are subject to being updated as the modeling improves.

[15] Technosylva is a suite of wildfire simulation models or tools. While relying on a similar underlying fire propagation engine, each model is designed to support a unique use case. FireCast is specifically designed to forecast ignition risk associated with electric utility assets over a 3-day horizon based on expected short-term weather conditions.

Risk Attribute	Wildfire Consequences	PSPS Consequences
	simulation. This number, in turn, is converted into the Safety index.	Blackout, and the IOUs' 2019 PSPS post-event reports.[16] The resulting estimates of fatalities and serious injuries per customer minutes interrupted (CMI) are intended to approximate potential safety consequences due to the power outage, such as illnesses resulting from food spoilage or exacerbation of existing underlying health conditions. SCE enhanced the PSPS safety attribute through the application of a circuit-specific AFN/NRCI multiplier. This multiplier represents the relative ranking of each circuit based on the number of AFN and NRCI customers on the circuit.
Reliability	SCE assumes 24 hours without power per customer on each circuit in scope due to wildfire. This duration was used to maintain consistency with Technosylva 24-hour fire propagation simulation, as well as the PSPS impact duration.	SCE estimates the total customer minutes interrupted (CMI) due to proactive de-energization on a circuit. It is the product of the number of customers on a circuit and the total number of minutes of estimated interruption. SCE assumes 1,440 CMI per customer (24 hours x 60 minutes) to represent de-energization over a 24-hour period.
Financial	SCE calculates the financial impact of wildfire by assigning a dollar value to the buildings and acres within the fire shed potentially threatened by wildfire. For buildings, SCE uses a system average replacement value assumption. For acres, SCE uses assumed costs of suppression and restoration.[17]	SCE conservatively assumes $250[18] per customer, per de-energization event to quantify potential financial losses for the purpose of comparing PSPS risk to wildfire risk. The figure represents potential customer losses, such as lost revenue/income, food spoilage, cost of alternative accommodations, and equipment/property damage. This value is based on a Value of Lost Load (VoLL), which is a widely accepted industry methodology to estimate a customer's willingness to accept compensation for service interruption. VoLL is dependent on many factors, including the type of customer, the duration of the outage,

[16] *See, e.g.,* Anderson, G.B., Bell, M.B (2012). Lights Out: Impact of the August 2003 Power Outage on Mortality in New York, NY, *Epidemiology* 23(2) 189-193. doi: 10.1097/EDE.0b013e318245c61c.
[17] *See* SCE 2018 Risk Assessment Mitigation Phase (RAMP) (I.18-11-006) Workpapers, Chapter 10.
[18] SCE utilizes $250 per customer, per de-energization event to approximate potential financial losses on average, recognizing that some customers may experience no financial impact, while other customers' losses may exceed $250. The $250 value is a conservative assumption used for the limited purpose of estimating the potential financial consequences of PSPS as one of many inputs into SCE's PSPS In-Event Risk Comparison Tool. It is not an acknowledgment that any given customer has or will incur losses in this amount, and SCE reserves the right to argue otherwise in litigation and other claim resolution contexts, as well as in CPUC regulatory proceedings.

Risk Attribute	Wildfire Consequences	PSPS Consequences
		the time of year, the number of interruptions a customer has experienced. SCE's VoLL estimate is consistent with academic and internal studies to estimate VoLL for a single-family residential customer for a 24-hour period.

SCE quantifies the resulting PSPS risks and wildfire risks using natural unit consequences for each risk type or attribute; structures impacted, acres burned, customer minutes interrupted, serious injuries and fatalities, etc. "Safety" risk is expressed as an index, "Reliability" risk is measured in terms of customer minutes interrupted (CMI), and "Financial" risk is measured in dollar amounts.

SCE then applies a Multi-Attribute Risk Score (MARS) framework to convert these natural unit consequences to unitless risk scores—one score for PSPS risks and one score for wildfire risks.[19] These risk scores are compared to each other by dividing the wildfire risk score (*i.e.*, the potential benefit of PSPS) by the PSPS risk score (*i.e.*, the potential public harm of PSPS), yielding a benefit/risk ratio for each circuit in scope of the PSPS event. If the resulting ratio is equal to 1, the risks are equivalent. If the ratio is greater than one, the wildfire risk exceeds the PSPS risk (the higher the resulting number, the more the wildfire risk outweighs the PSPS risk). If the ratio is less than 1, the PSPS risk outweighs the wildfire risk.

The table below displays circuit-specific inputs—such as the number of customers on a circuit, AFN/NRCI multiplier, number of acres and buildings potentially threatened—which are used to calculate the PSPS and wildfire risk scores (shown in columns titled "PSPS Risk" and "Wildfire Risk") and drive the final output of the Tool. These risk scores are then compared in the last column (highlighted in yellow) titled "FireCast Output Ratio," which shows the ratios of wildfire risk (corresponding to potential benefit of PSPS) to PSPS risk (corresponding to potential public harm from PSPS) for each circuit in scope. All ratios in the "FireCast Output Ratio" column for are greater than 1, meaning that the wildfire risk exceeded PSPS risk for all circuits in scope. These results were presented to the Incident Commanders in advance of de-energization to inform PSPS decision-making.

[19] MARS is SCE's version of Multi-Attribute Value Function (MAVF). The MAVF was developed as part of the Safety Model Assessment (S-MAP) proceeding and is used in the utilities' 2018 Risk Assessment Mitigation Phase (RAMP) Report (I.18-11006, pp. 1-28) filings to compare risks and mitigation alternatives. SCE has improved its MARS framework since first developing it for the 2018 RAMP. SCE MARS 2.0 attributes, units, weights, ranges, and scales are shown below.

Attribute	Unit	Weight	Range	Scaling
Safety	Index	50%	0 – 100	Linear
Reliability	CMI	25%	0 – 2 billion	Linear
Financial	$	25%	0 – 5 billion	Linear

Table 2: PSPS Risk vs. Benefit Comparison Tool

In-Event PSPS Risk Comparison Tool										
Circuit	All Customers	Population	AFN/NRCI Multiplier	24 Hour CMI (24 x 60)	Firecast Acres	Firecast Buildings	Firecast Population	PSPS Risk (24 hr Impact-PSPS Model	Wildfire Risk (24hr Impact-PSPS Model)	Firecast Output Ratio
BIRCHIM	569	1707	1.18	1440	5260.58	214	324	0.00011988	0.011556036	96.395
TUFA	112	336	1.32	1440	6667.83	155	84	0.00002383	0.00747178	313.564

For this high-threat event, the results of the PSPS In-Event Risk Comparison Tool supported SCE's decision to consider de-energizing Birchim and Tufa circuits, indicating that each circuit in scope for potential de-energization during this event had a PSPS benefit/risk ratio greater than 1.[20] . Therefore, the estimated benefit of PSPS outweighed the estimated risk of PSPS for each circuit in scope.

5. Explanation of alternatives considered and evaluation of eachalternative.

Ahead of the period of concern when fire weather that could potentially impact the SCE service territory is forecasted (and conditions warrant), SCE undertakes precautionary measures to prevent the need for PSPS and/or to minimize customer impacts, including enacting operating restrictions,[21] implementing fast curve settings,[22] and performing switching operations where possible on circuits in scope for potential de-energization. SCE also pre-patrols circuits in scope and deploys field personnel to circuits at risk to monitor real-time weather and Fire Potential Index data. Once in the period of concern, SCE employs PSPS as a last resort measure only when it is necessary to protect public safety, and there are no other available alternatives to mitigate identified wildfire risk. SCE only de-energizes those circuits and/or circuit sections where event-specific thresholds and de-energization triggers are being exceeded after exhausting all other alternatives.

During this event, SCE considered various measures to limit the scope of the event and to mitigate potential impacts to customers. Sectionalization and weather stations allowed SCE to limit the scope of a potential de-energization on the Birchim circuit to fewer customers. Segment 3 of the Birchim circuit was also evaluated for the possibility to temporarily transfer customers to an adjacent segment on that circuit. However, the adjacent segment was forecast to experience the same winds and would not have been a good alternative. The Tufa circuit was removed from scope prior to the period of concern due to revised forecasts by SCE meteorologists projecting the FPI rating would remain below the recently increased FPI threshold of 13.

[20] The table showing the results of the PSPS Risk vs. Benefit Comparison Tool includes ratios for all circuits on the monitored circuit list for this event, all of which indicate the benefit of wildfire avoidance (achieved through PSPS or other mitigation measures) exceeded PSPS risk. As noted above, the results of the Risk vs. Benefit Comparison Tool are among many quantitative and qualitative factors considered by SCE in its PSPS decision-making process. Although the ratios shown for the two circuits in scope supported a potential de-energization, SCE ultimately avoided the need to de-energize any circuits by closely monitoring wind patterns and other FPI inputs relative to preset thresholds.

[21] SCE's System Operating Bulletin No. 322 includes restrictions to limit the potential for a spark to occur or mitigate the risk of an ignition such as limits to circuit switching, recloser operations (e.g., blocking of automatic circuit reclosers), and requirements for personnel to be physically present when operating equipment and circuits subject to hot work restrictions.

[22] Fast curve settings reduce fault energy by increasing the speed with which a protective relay reacts to most fault currents. Fast curve settings can reduce heating, arcing, and sparking for many faults compared to conventional protection equipment settings. More details are in SCE's 2021 Wildfire Mitigation Plan Update (Revised), initiative SH-6.

Throughout the event, SCE relied on real-time weather station data and information from live field observers monitoring prevailing environmental conditions, such as potential damage from wind gusts, airborne vegetation, or flying debris. Leveraging this information in real time during the period of concern, SCE was able to avoid de-energizing any of the circuits in scope during this event.

Section 3. De-Energized Time, Place, Duration and Customers

1. The summary of time, place and duration of the event, broken down by phase if applicable.

This PSPS event began when SCE activated its Emergency Operations Center on October 16, 2021, at 8 am and ended for all circuits in scope on October 18th at 6 am when the period of concern for this event ended. This event encompassed circuits in Inyo county and SCE did not de-energize any customers during this event. *See* Section 1-1 above for additional information.

2. A zipped geodatabase file that includes PSPS event polygons of de-energized areas. The file should include items that are required in Section 3.3.

N/A. SCE did not de-energize any customers during this event.

3. A list of circuits de-energized, with the following information for eachcircuit. This information should be provided in both a PDF and excel spreadsheet.

- County
- De-energization date/time
- Restoration date/time
- "All Clear" declaration date/time
- General Order (GO) 95, Rule 21.2-D Zone 1, Tier 2, or Tier 3classification or non-High Fire Threat District
- Total customers de-energized
- Residential customers de-energized
- Commercial/Industrial customers de-energized
- Medical Baseline (MBL) customers de-energized
- AFN other than MBL customers de-energized[23]
- Other Customers
- Distribution or transmission classification

N/A. SCE did not de-energize any circuits or customers during this event.

[23]The final post-event report template issued by SED on October 18, 2021 included for the first time a new requirement to provide a count of de-energized AFN customers other than customers enrolled in MBL. SCE maintains extensive data on customer populations, such as income-qualified customers enrolled in CARE and FERA programs and customers who receive Braille or large-font bills, that are included in the broad AFN definition referenced in CPUC decisions (*see, e.g.*, D.21-06-034 at pp. 104-105 n.255 quoting Gov. Code Sec. 8593.3(f)(1)). However, SCE does not currently have the capability to accurately identify within 10 business days of a PSPS event which of these customer groups had been impacted by a proactive de-energization. In addition, there may be significant overlap between AFN customer categories such as income-qualified, older adults (65+), large font bill recipients. At this time SCE is able to report on impacted AFN customers who have self-certified as sensitive (i.e., customers who have identified themselves as more reliant on electricity than the general population due to a medical or other condition, but who are not enrolled in SCE's MBL or Critical Care programs). SCE can also identify impacted customers that provide shelter to the homeless population, as these entities are included among critical facilities and infrastructure. SCE will endeavor to provide more complete data on impacted AFN customers in the annual post-season report.

Section 4. Damage and Hazards to Overhead Facilities

1. **Description of all found wind-related damages or hazards to the utility's overhead facilities in the areas where power is shut off.**

   N/A. SCE did not de-energize any circuits during this event.

2. **A table showing circuit name and structure identifier (if applicable) for each damage or hazard, county that each damage or hazard is located in, whether the damage or hazard is in a High Fire Threat District (HFTD) or non- HFTD and the type of damage/hazard.**

   N/A. SCE did not de-energize any circuits during this event.

3. **A zipped geodatabase file that includes the PSPS event damage and hazard points. The file should include fields that are in the table above.**

   N/A. SCE did not de-energize any circuits during this event.

4. **A PDF map identifying the location of each damage or hazard.**

   N/A. SCE did not identify any wind-related damage to overhead powerline facilities in de-energized areas.

Section 5. Notification

1. **A description of the notice to public safety partners, local/tribal governments, paratransit agencies that may serve all the known transit or paratransit dependent persons that may need access to a community resource center, multi-family building account holders/building managers in the AFN community[24], and all customers, including the means by which utilities provide notice to customers of the locations/hours/services available for CRCs, and where to access electricity during the hours the CRC is closed.**

   SCE includes paratransit agencies in its PSPS notifications and classifies these agencies as critical facilities and infrastructure to ensure they receive priority notifications. All multi-family building SCE account holders receive customer notifications. In its customer notification, SCE directs potentially impacted customers to www.sce.com/psps for information related to the location, hours, and services available at Community Resource Centers. Instructions on where customers can access electricity during the hours the centers are closed will also be made available with the launch of a new PSPS webpage targeted for later this year. A description of the notice types provided to public safety partners, local governments and Tribal Nations, and all customers is provided below. Not all types of notice shown in the table are applicable to this event, as SCE ultimately did not de-energize any customers.

   Table 3: Notification Descriptions

Notification Descriptions		
Type of Notification	**Recipients**	**Description**
Initial	Local and Tribal governments and other stakeholders including CBOs serving the AFN population and Public Safety Partners	Initial Notification of Potential PSPS event when circuits are first identified for potential de-energization
Imminent De-Energize	Local and Tribal governments and other stakeholders including CBOs serving the AFN population	Imminent De-Energize Notification of Expected Shutoff for PSPS Event
De-Energized	Local and Tribal governments and other stakeholders including CBOs serving the AFN population	Shutoff Notice for PSPS Event
Update	Local and Tribal governments and other stakeholders including CBOs serving the AFN population	Update Notice for PSPS Event
Imminent Re-Energize	Local and Tribal governments and other stakeholders including CBOs serving the AFN population	Notification of Inspection for PSPS restoration

[24]SCE notifies multi-family building account holders in the ordinary course along with other customers of record in scope for a potential de-energization. SCE does not currently have a way to identify which multi-family building account holders have residents in their buildings who may be members of the AFN community. SCE conducts PSPS-related outreach via flyers and trade publications to increase awareness of PSPS among building/property managers who are not account holders. SCE also recently instituted an address-level alert program, which allows non-SCE account holders (such as building/property managers) to sign up for PSPS alerts for specific addresses.

Notification Descriptions		
Type of Notification	**Recipients**	**Description**
Re-Energized	Local and Tribal governments and other stakeholders including CBOs serving the AFN population	SCE Restoration Notice for PSPS Event
Event-Concluded-All Clear	Local and Tribal governments and other stakeholders including CBOs serving the AFN population	PSPS Event Concluded - Power has been restored to all affected customers
Initial	Public Safety Partners (Water/Wastewater, Hospitals, Telco's,) Critical Facilities & Infrastructure (including paratransit), Customers (including multi-family building account holders)	Initial Notification of Potential PSPS event when circuits are first identified for potential de-energization
Update	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Facilities & Infrastructure (including paratransit), Customers (including multi-family building account holders)	Update Notice for PSPS event
PSPS Expected (Imminent Shutoff) (Warning)	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Facilities & Infrastructure (including paratransit), Customers (including multi-family building account holders)	Imminent De-Energize Notification of Expected Shutoff for PSPS Event
De-Energized	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Infrastructure (including paratransit), Customers (including multi-family building account holders)	De-energization occurs
Continued Shutoff	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Infrastructure (including paratransit), Customers (including multi-family building account holders)	When de-energization continues overnight, sent to customers the next morning
Prepare to Restore (Statement)	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Infrastructure (including paratransit), Customers (including multi-family building account holders)	Before Re-energization occurs
PSPS All Clear - Event Avoided	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Infrastructure (including paratransit), Customers	When circuits are no longer being considered for PSPS and were not de-energized

Notification Descriptions		
Type of Notification	**Recipients**	**Description**
(Statement)	(including multi-family building account holders)	
PSPS Ended Restored & All Clear	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Infrastructure (including paratransit), Customers (including multi-family building account holders)	When circuits were de-energized and have been restored and are no longer being monitored
PSPS Temporarily Restored; NOT All Clear, PSPS Risk Remains	Public Safety Partners (Water/Wastewater, Hospitals, Telco's) Critical Infrastructure (including paratransit), Customers (including multi-family building account holders)	When circuit is temporarily restored but still at risk for PSPS (usually when there is a break in POC)

2. **Notification timeline including prior to de-energization, initiation, restoration and cancellation, if applicable. The timeline should include the required minimum timeline and approximate time notifications were sent.**

   Throughout the PSPS event, SCE made significant effort to notify public safety partners, local/tribal governments, critical facilities and infrastructure, and customers in accordance with the minimum timelines set forth by the CPUC in PSPS Phase 1 Guidelines (D.19-05-042), weather and other factors permitting.

   Table 4: Notification Timeline in the attached data workbook describes the notifications SCE sent for this event, including approximate times of notifications sent to local/tribal governments, public safety partners, and customers prior to potential de-energization and after the decision to cancel the de-energization or remove from scope in accordance with the minimum timelines set forth by the CPUC PSPS Phase 1 Guidelines (D.19-05-042).

3. **For those customers where positive or affirmative notification was attempted, use the following table to report the accounting of the customers (which tariff and/or access and functional needs population designation), the number of notification attempts made, the timing of attempts, who made the notification attempt (utility or public safety partner) and the number of customers for whom positive notification was achieved. "Notification attempts made" and "Successful positive notification" must include the unique number of customer counts. When the actual notification attempts made is less than the numberof customers that need positive notifications, the utilities must explain the reason. In addition, the utilities must explain the reason for any unsuccessful positive notifications.**

Table 5: Positive Notification

Positive Notification					
Category	Total Number of Customers	Timing Attempts	Notification Attempts	Successful Positive Notification	Who Made the Notification
Medical Baseline[1]	6	Daily	6	6	SCE
Self-Certify Vulnerable[2]	Not available	Daily	Not available	Not available	

[1]SCE does not differentiate between Medical Baseline and Medical Baseline behind the Master Meter for the purposes of notifications and both are included here

[2]Data is not available as of the date of filing of the post event report and will be provided in the annual post season reports

4. **A copy or scripts of all notifications with a list of all languages that each type of notification was provided in, the timing of notifications, the methods of notifications and who made the notifications (utility or public safety partners).**

   Scripts of all notifications are attached hereto in Appendix, Attachment A. SCE performs all primary customer notifications and encourages public safety partners to amplify PSPS messages on their platforms as appropriate. SCE offers all notifications in the following languages: English, Spanish, Cantonese, Mandarin, Vietnamese, Tagalog, and Korean. SCE is in the process of implementing the following additional languages: Khmer, Armenian, Farsi, Arabic, Japanese, Russian, Punjabi, Thai, Hmong, Portuguese, Hindi, French, German, Mixteco (indigenous - spoken only), Zapoteco (indigenous - spoken only), and Purapecha (indigenous - spoken only).

5. **If the utility fails to provide notifications according to the minimumtimelines set forth in D.19-05-042 and D.21-06-034, use the following table to report a breakdown of the notification failure and an explanation of what caused the failure.**

   N/A. SCE is not aware of any notification failures during this event.

6. **Explain how the utility will correct the notification failures.**

   N/A. SCE is not aware of any notification failures during this event.

7. **Enumerate and explain the cause of any false communications citing the sources of changing data.**

   SCE is aware of the following situations during this PSPS event that may be viewed as "false communications," as clarified by the Commission in D.21-06-034 (pp. 78-80).

   Missed/Insufficient Notification
   - N/A.

   Incorrect Notification
   - N/A.

   Cancelled notifications:
   - SCE utilized weather forecasts to determine potential circuits in scope for this PSPS event for the purposes of advance notification to customers. Once these in-scope circuits were identified, SCE further mitigated impacts to these customers as detailed in Section 10: Mitigation to Reduce Impact of this report, ultimately decreasing the final number of

customers in scope for potential de-energization. There was a difference between the original scope and the final scope of this event given these mitigation measures, which resulted in SCE sending cancellation notices to 409 customers during this event.

Section 6. Local and State Public Safety Partner Engagement

1. **List the organization names of public safety partners including, but not limited to, local governments, tribal representatives, first responders, emergency management, and critical facilities and infrastructure the utility contacted prior to de-energization, the date and time on which they were contacted, and whether the areas affectedby the de-energization are classified as Zone 1, Tier 2, or Tier 3 as per the definition in CPUC General Order 95, Rule 21.2-D.**

   Please see Table 6: Public Safety Partners Contacted in the attached event data workbook for a list of local public safety partners that received notifications related to this event.

2. **List the names of all entities invited to the utility's Emergency Operations Center for a PSPS event, the method used to make this invitation, and whether a different form of communication was preferred by any entity invited to the utility's emergency operation center.**

   SCE extends a daily invitation for agency representatives to its Emergency Operations Center (currently virtual only) during agency coordination calls with public safety partners and critical infrastructure providers. SCE also shares daily situational reports from these calls with all impacted public safety partners and critical infrastructure providers that includes contact information for requesting/receiving an agency representative to the Emergency Operations Center. Given that there were no critical facilities or infrastructure in scope for this event, SCE did not host a daily briefing for these entities and no coordination calls or invites to the SCE Emergency Operations Center were extended to them for this event.

   Table 7: Entities Invited to SCE Emergency Operations Center

Entities Invited to SCE Emergency Operations Center	
Entity	**Type**
Cal Fire	Public Safety Partner
California Governor's Office of Emergency Services (CalOES)	Public Safety Partner
California Health and Human Services (CHHS)	Public Safety Partner
California Public Utitilies Commission (CPUC)	Public Safety Partner
Energy Safety	Public Safety Partner

3. **A statement verifying the availability to public safety partners of accurate and timely geospatial information, and real time updates to the GIS shapefiles in preparation for an imminent PSPS event and during a PSPS event.**

   SCE provided accurate and timely geospatial information and real-time updates to GIS shapefiles via the SCE Representational State Transfer Service (REST) to public safety partners before and during the PSPS event. SCE also made this information available to customers at www.sce.com/psps and provided this information to public safety partners on its Public Safety Partner Portal (Portal). SCE is aware of and working to resolve a limitation the Portal has in which tabular format data does not match the graphical format. On Sunday, October 17, at approximately 6pm, SCE's Public Safety Partner Portal map was showing all circuits in HFRA as in scope for the event. SCE alerted the vendor and the issue was resolved the same evening.

4. **A description and evaluation of engagement with local and state publicsafety partners in providing advanced outreach and notification during the PSPS event.**

   SCE submitted the required CalOES Notification forms via the State Dashboard beginning on October 16th and continuing through October 18th, as well as when there were any applicable changes to scope.[25] SCE conducted operational briefings on October 16th with State and local public safety partners to provide critical incident updates and a forum for resolving issues. SCE also provided a briefing deck related to the event in lieu of a call with critical infrastructure providers. On October 17th, SCE conducted the Statewide Executive briefing but did not conduct an operational briefing with impacted counties or critical infrastructure providers given the limited scope of this event. SCE maintained contact with both Inyo county during this event to provide a forum for resolving issues. Table 7: Public Safety Partners Contacted in the attached event data workbook details a list of local public safety partners that received notifications related to this event.

5. **Specific engagement with local communities regarding the notification and support provided to the AFN community.**

   SCE provided notification of this PSPS event to the 211 California Network on October 17th, for its awareness, and also provided 24-hour contact information for SCE to escalate any unidentified community issues. Given that there were no residential customers impacted by a proactive de-energization during this event, additional engagement with and support of the Access and Functional Needs community were not activated for this event.

6. **Provide the following information on backup power (including mobile backup power) with the name and email address of a utility contact for customers for each of the following topics:**

   a. Description of the backup generators available for critical facility and infrastructure customers before and during thePSPS.

      SCE maintains a total of 20 mobile generators for use by critical facilities and infrastructure during PSPS events as needed.

   b. The capacity and estimated maximum duration of operation of the backup generators available for critical facility and infrastructure customers before and during the PSPS.

      The generators SCE maintains for PSPS events are rated at 20-500 KW and have an estimated maximum duration of operation of 24 hours with a continuous fuel plan to ensure there is no interruption of power while the generators are deployed for usage.

   c. The total number of backup generators provided to critical facility and

[25] SCE is required to notify CalOES when the following scope changes occur outside of the normal 7am and 3pm updates: more than +/- 25K customers de-energized, +/- any counties in scope, change in POC duration +/- a day or two.

infrastructure customer's site immediately beforeand during the PSPS.

N/A. No critical facilities and infrastructure customers were in scope for this event; as such SCE did not deploy any backup generation to critical facility and infrastructure customers during this event.

d. How the utility deployed this backup generation to the critical facility and infrastructure customer's site.

N/A. No critical facilities and infrastructure customers were in scope for this event; as such SCE did not deploy any back-up generation to critical facility and infrastructure customers during this event.

e. An explanation of how the utility prioritized how to distribute available backup generation.

N/A. No critical facilities and infrastructure customers were in scope for this event; as such SCE did not deploy any back-up generation to critical facility and infrastructure customers during this event.

f. Identify the critical facility and infrastructure customers that received backup generation.

N/A. No critical facilities and infrastructure customers were in scope for this event; as such SCE did not deploy any back-up generation to critical facility and infrastructure customers during this event.

Any questions related to the information under this item may be directed to SCE at the following e-mail address: SCEBCDCustomersupport@sce.com.[26]

[26] Although there is no designated contact person for questions, this e-mail inbox is monitored by SCE's Business Customer Division.

Section 7. Complaints and Claims

1. **The number and nature of complaints received as the result of the de-energization event and claims that are filed against the utility because of de-energization. The utility must completely report all the informal and formal complaints, meaning any expression of grief, pain, or dissatisfaction, from various sources, filed either with CPUC or receivedby the utility as a result of the PSPS event.**

   There were 6 reported complaints or claims associated with this PSPS event. SCE will include any future complaints or claims related to this PSPS event received after the filing of date of this report in its annual post-season report.

   Table 8: Count and Nature of Complaints Received

Count and Nature of Complaints Received	
Nature of Complaints	**Number of Complaints**
PSPS Frequency/Duration Including, but not limited to complaints regarding the frequency and/or duration of PSPS events, Including delays in restoring power, scope of PSPS and dynamic of weather conditions.	2
Safety/Health Concern Including, but not limited to complaints regarding difficulties experienced by AFN/MBL populations, traffic accidents due to non-operating traffic lights, inability to get medical help, well water or access to clean water, inability to keep property cool/warm during outage raising health concern	0
Communications/Notifications Including, but not limited to complaints regarding lack of notice, excessive notices, confusing notice, false alarm notice, problems with getting up-to-date information, inaccurate information provided, not being able to get information in the prevalent languages and/or information accessibility, complaints about website, Public Safety Partner Portal, REST/DAM sites (as applicable)	0
Outreach/Assistance Including, but not limited to complaints regarding community resource centers, community crew vehicles, backup power, hotel vouchers, other assistance provided by utility to mitigate impact of PSPS	0
General PSPS Dissatisfaction/Other Including, but not limited to complaints about being without power during PSPS event and related hardships such as food loss, income loss, inability to work/attend school, plus any PSPS-related complaints that do not fall into any other category.	4
Total	**6**

Section 8. Power Restoration Timeline

1. **A detailed explanation of the steps the utility took to restore power; including the timeline for power restoration, broken down by phase if applicable.**

   N/A. SCE did not de-energize any circuits during this event.

2. **For any circuits that require more than 24 hours to restore, the utility shall use the following table to explain why it was unable to restore each circuit within this timeframe.**

   N/A. SCE did not de-energize any circuits during this event.

Section 9. Community Resource Centers

1. **Report community resource center information including the address of each location during a de-energization event, the location (in a building, a trailer, etc.), the assistance available at each location, the days and hours that it was open, and attendance (i.e., number of visitors).**

   N/A. SCE did not de-energize any customers during this high-threat event and, accordingly, deployed no community assistance locations for this event.

2. **Any deviations and explanations from the CRC requirement including operation hours, ADA accessibility, and equipment.**

   N/A. SCE did not de-energize any customers during this high-threat event and, accordingly, deployed no community assistance locations for this event.

3. **A map identifying the location of each CRC and the de-energized areas.**

   N/A. SCE did not de-energize any customers during this high-threat event and, accordingly, deployed no community assistance locations for this event.

Section 10. Mitigation to Reduce Impact

1. **Mitigation actions and impacts (both waterfall graph and map) including: sectionalization devices temporary generation, microgrids,permanent backup generation, transmission switching, covered conductor, and any other grid hardening that mitigated the impact of the event.**

   N/A. SCE did not de-energize any circuits during this high-threat event, based on consideration of above-referenced quantitative and qualitative factors such as actual weather conditions not meeting de-energization thresholds. As such, no customers were impacted by de-energization during this high threat event. Therefore, actions to mitigate impact such as sectionalization devices did not need to be deployed and are not shown.

Section 11. Lessons Learned

This section must include, at a minimum:

1. **Threshold analysis and the results of the utility's examination of whether its thresholds are adequate and correctly applied in the de-energized areas.**

   SCE believes our thresholds are adequate and correctly applied in de-energized areas as detailed in Attachment B - Quantitative and Qualitative Factors in PSPS Decision-Making Technical Paper.

2. **Any lessons learned that will lead to future improvement for the utility.**

   Table 9: Lessons Learned

Lessons Learned		
Issue	**Discussion**	**Resolution**
During this high threat event with very few circuits in scope, it may be beneficial to deviate from the prescribed daily Statewide Executive Briefing Call schedule.	There is no official process for cancelling Statewide Executive Briefing Calls.	Work with the CalOES State Warning Center to create a defined process for cancelling Statewide Executive Briefing calls as warranted.

Section 12. Other Relevant Information

1. This section includes any other relevant information determined by the utility.

SCE has instituted an engagement survey process to capture feedback from State and County public safety partners, and critical infrastructure during PSPS events. SCE encourages these stakeholders to provide survey feedback in daily coordination calls and also emails links to the engagement survey once the event has concluded. Three participants completed SCE's engagement survey; of those three, all rated the engagement with SCE as positive as detailed in the tables below.

Agency Type (Single Choice)

What type of agency do you represent?

Total: 3 responses

		Total
		Total
1	Emergency Management	3
2	Fire	67%
3	Law	0%
4	Local government	0%
5	State government	0%
6	Telecommunications	0%
7	Tribal government	0%
8	Waste-Water	0%
9	Water	0%
10	Other type of agency	0%

Overall Engagement Rating (Single Choice)

How would you rate our overall engagement with you during this PSPS event?

By engagement we mean all our interactions with you (i.e., across all briefings, your SCE emergency management contact(s), and the SCE portal) and the information we shared with you during all those interactions.

Total: 3 responses

		Total
	Total	3
1	Poor	0%
2	Fair	0%
3	Average	0%
4	Good	67%
5	Excellent	33%

Officer Verification

I am an officer of the applicant corporation herein and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing document are true.

I declare under penalty of perjury that the foregoing is true and correct. Executed this 1st day of November 2021 in Cerritos, California

DocuSigned by:
Erik Takayesu
420B7563804B477...

Erik Takayesu
Vice President,
Asset Strategy & Planning

Appendix

Attachment A-Public Safety Partner and Customer Notification Scripts

Initial (72-hour) LNO Notification

Description:

Sent one time per county, preferably starting 72 hours in advance of a possible PSPS event, when possible, alerting contacts that our weather specialists forecast potential extreme weather ahead. Includes the Situational Awareness (SA) spreadsheet with information about weather event timing and circuits and locations that could be impacted. Sent to all impacted jurisdictions and other LNO contacts, grouped by county.

Notification Subject Line and Message

SCE Initial Notice for PSPS Event in COUNTY NAME on [start POC DATE].

Public Safety Power Shutoff initial notification for official use: Due to projected fire weather conditions, we may need to shut off power in high fire risk areas in COUNTY NAME. Please refer to the attached spreadsheet for status and periods of concern for specific circuits.

We are working to reduce the number of customers affected and weather patterns might change, so **not all circuits on the watch list will have their power shut off.**

Customers on the affected circuits will be notified starting two days before the forecasted start date, however the maps on sce.com/psps will reflect this information today.

We have set up an incident management team for this event including in-house meteorologists, fire scientists, liaison and public information officers, and other technical staff.

Recommended Language to Share with the Public: *SCE is forecasting dangerous wind-driven fire conditions starting in the next three days and might need to shut off power during this time. For more information, visit sce.com/PSPS.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a

weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:
Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com
SCE Contact Information for Public Officials only (Please DO NOT share with the public)
First Responders and Emergency Managers:
Phone: Business Resiliency Duty Manager 24/7 hotline: **(800) 674-4478**
Email: Business Resiliency Duty Manager/emergencies: BusinessResiliencyDutyManager@sce.com--Only monitored during emergency activations.
Government/tribal officials:
Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.
Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**
SCE Contact Information for the Public: (Please DO share this information via web and social media).
Outage-specific customer service issues: 800-611-1911
Billing and service inquiries: 800-684-8123
PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.

Updated Conditions (Update) Notification

Description:

Sent once daily after the Initial Notification to provide updates as the period of concern approaches. Includes the Situational Awareness (SA) spreadsheet with information about weather event timing and circuits and locations that could be/are impacted. Sent to all impacted jurisdictions, grouped by county.

Notification Subject Line and Message:

SCE Update Notice for PSPS Event in [County Name].

Public Safety Power Shut-Off update notification for official use: We are providing ongoing information and periods of concern for PSPS circuits in [County Name], based on updated weather reports. A complete list, including both the forecasted start and end times for all circuits is attached.

Customers on the affected circuits are being updated if they are within two days of the period of concern, or if there has been a change to their status. The map on sce.com/psps is being continually updated to reflect current status.

Information about Community Resource Centers and Community Crew Vehicles will be available one day in advance of the period of concern at sce.com/psps.

Recommended Language to Share with the Public: *SCE is forecasting dangerous wind-driven fire conditions and might need to shut off power. For more information, visit sce.com/PSPS.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:

Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com

SCE Contact Information for Public Officials only (Please DO NOT share with the public)
First Responders and Emergency Managers:
Phone: Business Resiliency Duty Manager 24/7 hotline: **(800) 674-4478**
Email: Business Resiliency Duty Manager/emergencies: BusinessResiliencyDutyManager@sce.com--Only monitored during emergency activations.
Government/tribal officials:
Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.
Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**
SCE Contact Information for the Public: (Please DO share this information via web and social media).
Outage-specific customer service issues: 800-611-1911
Billing and service inquiries: 800-684-8123
PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.

Expected De-Energize Notification (previously: Imminent De-Energization)
Description:
Sent up to 4 hours in advance of expected power shut off, when possible, for specific circuit(s). No spreadsheet attachment, all content is on the body of the notification. Sent to all impacted jurisdictions. Note: as of 5/15/2021 we still don't have a way to eliminate duplicate notifications when a circuit crosses county lines – all jurisdictions are included with each notification sent for a circuit.
Notification Subject Line and Message:
SCE Expected Shutoff Notice for PSPS Event in County Name.
Public Safety Power Shutoff update notification for official use: SCE may need to shut off power in the next 4 hours to reduce the risk of wildfire ignition. Areas that may be impacted include:
Circuit: [CIRCUIT name]
County:
Segment: [if listed]
Incorporated City of:
Unincorporated County Area:
Shutoffs may occur earlier or later depending on actual weather conditions.

This notice expires after 4 hours; however, the listed circuit(s) will remain on the watch list and will be subject to PSPS until the conclusion of this weather event.

Customers on the affected circuits are being notified. Information about Community Resource Centers and Community Crew Vehicles is available at sce.com/psps.

Recommended Language to Share with the Public: *Due to current weather conditions increasing the risk of wildfires, SCE may shut off power on specific circuits within the next 4 hours to protect public safety. Visit sce.com/PSPS for more information about the shutoffs and SCE's available customer care options.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:
Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com
SCE Contact Information for Public Officials only (Please DO NOT share with the public)
First Responders and Emergency Managers:
Phone: Business Resiliency Duty Manager 24/7 hotline: **(800) 674-4478**
Email: Business Resiliency Duty Manager/emergencies: BusinessResiliencyDutyManager@sce.com--Only monitored during emergency activations.
Government/tribal officials:
Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.
Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**
SCE Contact Information for the Public: (Please DO share this information via web and social media).
Outage-specific customer service issues: 800-611-1911
Billing and service inquiries: 800-684-8123
PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.

Shutoff Notification (De-energization notification)

Description:
Sent after a PSPS power shut off has been authorized for specific circuit(s). No spreadsheet attachment, all content is on the body of the notification. In 2021 these no longer include the official date/time of the de-energization. Sent to all impacted jurisdictions, grouped by County.
Notification Subject Line and Message:
SCE Shutoff Notice for PSPS Event on [CIRCUIT NAME] Circuit in [COUNTY NAME].
Public Safety Power Shutoff update notification for official use: SCE is shutting off power to reduce the risk of wildfire ignition.

Impacted circuits and locations are:
Circuit: [CIRCUIT name]
County: [COUNTY NAME].
Segment: *If entered in Pega*
Incorporated City of: [Incorporated City]
Unincorporated County Area: [unincorporated area description]
SCE is notifying customers who are being shut off. The map on sce.com/psps are being updated to reflect the current PSPS outages. Information about Community Resource Centers and Community Crew Vehicles is available at sce.com/psps.

When weather conditions improve, crews will inspect and repair the lines and restore power. Typically power is restored 3 to 8 hours after the end of the weather event.

Recommended Language to Share with the Public: *Power has been shut off as part of public safety power shutoffs in our area. Please remember that all non-working traffic lights should be considered 4-way stop signs. Visit sce.com/PSPS for more information about the shutoffs and SCE's available customer care options.* _____

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:
Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com
SCE Contact Information for Public Officials only (Please DO NOT share with the public)
First Responders and Emergency Managers:
Phone: Business Resiliency Duty Manager 24/7 hotline: **(800) 674-4478**
Email: Business Resiliency Duty Manager/emergencies: BusinessResiliencyDutyManager@sce.com--Only monitored during emergency activations.
Government/tribal officials:
Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.
Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**
SCE Contact Information for the Public: (Please DO share this information via web and social media).
Outage-specific customer service issues: 800-611-1911
Billing and service inquiries: 800-684-8123
PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.

Patrol and Inspection (formerly: imminent re-en)
Description:
Sent once inspections are underway and with 1-hour advance notice of expected power restoration, when possible, for specific circuit(s). No spreadsheet attachment, all content is on the body of the notification. Sent to all impacted jurisdictions, grouped by County.
Notification Subject Line and Message:
SCE is inspecting [CIRCUIT NAME] Circuit in [COUNTY NAME] for PSPS restoration.
Public Safety Power Shutoff update notification for official use: Our crews are inspecting the following circuits or circuit segments to restore power as soon as it is safe to do so:
Circuit: [CIRCUIT name]
Segment(s): *if entered in Pega*
Incorporated City: [incorporated city]
Unincorporated County Area: [unincorporated area description]
Typically, power is restored in 3-8 hours. Exceptions include circuits in remote areas and circuits that have sustained significant damage.

SCE is notifying customers. The map on sce.com/psps will be updated to reflect the current status.

Recommended Language to Share with the Public: *SCE is inspecting its lines and, in most cases, will restore power within 3-8 hours. Exceptions include circuits in remote areas and circuits that have sustained significant damage. Please remember to treat all traffic lights that are out as 4-way stops. Visit sce.com/PSPS for more information.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:
Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.

REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com

SCE Contact Information for Public Officials only (Please DO NOT share with the public)

First Responders and Emergency Managers:

Phone: Business Resiliency Duty Manager 24/7 hotline: **(800) 674-4478**

Email: Business Resiliency Duty Manager/emergencies: BusinessResiliencyDutyManager@sce.com--Only monitored during emergency activations.

Government/tribal officials:

Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.

Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**

SCE Contact Information for the Public: (Please DO share this information via web and social media).

Outage-specific customer service issues: 800-611-1911

Billing and service inquiries: 800-684-8123

PSPS event status: sce.com/PSPS

Non-PSPS outages: sce.com/outages

Update customer contact information: sce.com/pspsalerts.

Restore Notification (formerly: RE-ENERGIZE)
Description:
Sent after a PSPS re-energization has occurred for specific circuit(s). No spreadsheet attachment, all content is on the body of the notification. Sent to all impacted jurisdictions, grouped by County.
Notification Subject Line and Message:
Important: SCE Restoration Notice for PSPS Event on [CIRCUIT NAME] Circuit in [COUNTY NAME].
Public Safety Power Shutoff update notification for official use:
SCE crews have restored power on the following circuit or circuit segments:
Circuit: [CIRCUIT name]
Segment(s): *if entered in Pega*
Incorporated City: [incorporated city]
Unincorporated County Area: [unincorporated area description]
SCE is also notifying customers that power has been turned back on.

Recommended Language to Share with the Public: *SCE has restored power that was shut off during the PSPS event. Visit sce.com/PSPS for more information. If your power is out, visit sce.com/outages.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:
Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com

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Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.
Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**
SCE Contact Information for the Public: (Please DO share this information via web and social media).
Outage-specific customer service issues: 800-611-1911
Billing and service inquiries: 800-684-8123
PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.

Event Concluded Notification

Example 1: Use when ALL circuits have been restored. If any remain off, use Example 2, below. ***Note: this is not a county-specific "all clear."*** *The automation system figures out all the jurisdictions that were notified during a specific activation and sends to each of them a finaly event all-clear..* ***This is a single last activity performed at the end of the activation that includes all involved in the activation that the event is over.*** ***DO NOT*** *send this notification while a PSPS activation is still in progress -- it will incorrectly tell ALL jurisdictions that the event is over!*

Notification Subject Line and Message:

SCE PSPS Event Concluded in [COUNTY NAME].

Public Safety Power Shutoff update notification for official use:

Power has been restored to all customers in [county name.] and the PSPS event has concluded,

Recommended Language to Share with the Public: *The public safety power shutoff in your area has concluded. If your power is still out, please visit sce.com/outages for more information.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

For More Information:

Public Safety Partner Portal (available June 1, 2021)
PDFs of High Fire Risk Area (HFRA) circuit maps and GIS layers: sce.com/maps.
Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
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PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.
Example 2: Use when most circuits have been restored but one or more circuit remains de-energized. Note: this is not a county-specific "all clear." *When the POC has passed but some circuits remain out, most typically because of 1) delays in patrol (for example requiring air-ops), 2) significant repairs required, or 3) access prohibited by fire crews. Those circuits may be transitioned to Operations and closed out from a PSPS standpoint. That information is included in the Event Concluded notification, indicating power is not fully restored for that circuit(s).* ***DO NOT*** *send this notification while a PSPS activation is still in progress -- it will incorrectly tell ALL jurisdictions that the event is over!*

Notification Subject Line and Message:
SCE PSPS Event Concluded Notice for [COUNTY NAME].
Public Safety Power Shutoff update notification for official use:
The PSPS event has concluded, however some customers in [county name] remain without power.

Repairs and restoration for these customers will be handled by SCE's regular grid operations:
Circuit:
Segments:
Incorporated City of:
Unincorporated County Area:
Reason for continued outage:
Recommended Language to Share with the Public: *The public safety power shutoff in your area has concluded, however some customers remain without power. If your power is still out, please visit sce.com/outages for more information.*

Message cadence: The SCE Liaison Officer provides a rolling three-day advance warning of potential PSPS events, when possible, and sends update notifications every day. We will also notify you with time-sensitive shutoff and restoration information at the circuit level. Sudden weather changes may impact SCE's ability to provide advanced notice: a shutoff could occur sooner than anticipated.

Spreadsheet content: All circuits currently on the watch list in your county are listed in the attached spreadsheet. As the weather forecast becomes more exact, additional circuits could be added or removed from our watch lists. Circuits marked *Updated Period of Concern* in the Circuit

Notification Status column will have new periods of concern or other changed status. Definitions are on the second tab of the spreadsheet. Please email SCELiaisonOfficer@sce.com with concerns or questions about the spreadsheet.

Weather forecasting: SCE's forecasting relies on in-house meteorologists and fire scientists. SCE may notify for a potential PSPS in advance of Red Flag Warnings being declared by the National Weather Service, and weather forecasts on radio and television may provide different information.

Online outage information: Information and maps are available at sce.com/PSPS starting three days before the forecasted start date. If an outage does not appear on the PSPS map, it might be a weather-related or repair outage in the same area. These are mapped and listed at sce.com/outages.

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Weather conditions: sce.com/fireweather.
Post-PSPS reports:sce.com/psps.
REST service (web-based password-protected access to GIS layers), contact: SCERestInfo@sce.com
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Government/tribal officials:
Phone: Liaison (government relations) 24/7 hotline: 800-737-9811. Only monitored during emergency activations.
Email: SCELiaisonOfficer@sce.com. **Note: Only monitored during emergency activations.**
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Outage-specific customer service issues: 800-611-1911
Billing and service inquiries: 800-684-8123
PSPS event status: sce.com/PSPS
Non-PSPS outages: sce.com/outages
Update customer contact information: sce.com/pspsalerts.

PSPS Variable Notification Templates-Customers
9/29/2021 Activation

1 | Initial Notification

TEXT/SMS

SCE Safety Outage Alert: High winds and fire conditions are forecasted in your area from ^Day of week^ ^morning/afternoon/evening^ through ^End Day of week^ ^morning/afternoon/evening^. We may have to shut off your power to decrease risk of dangerous wildfires. We are working to reduce the number of customers affected. We'll keep you updated so you know whether your power will be shut off. Visit sce.com/psps for the latest information. For downed power lines, call 911. View in more languages: www.sce.com/PSPSInitial Please reply with 1 to confirm receipt of this message.

VOICE

Important SCE safety outage alert. To continue in English, press 1. [Spanish press 2], all other languages press 3…. High winds and fire conditions are forecasted in your area from ^Day of week^ ^morning/afternoon/evening^ through ^End Day of week^ ^morning/afternoon/ evening^. We may have to shut off your power to decrease risk of dangerous wildfires. We are working to reduce the number of customers affected. We'll keep you updated so you know whether your power will be shut off. Visit sce dot com slash psps for the latest information. If you see a downed power line call 911.

EMAIL

***Subject*:** SCE Safety Outage Initial Notification: Public Safety Power Shutoff (PSPS)
From: do_not_reply@scewebservices.com Southern California Edison

For more information on PSPS in your preferred language, click below:

ESPAÑOL	한국어	中文	TIẾNG VIỆT	TAGALOG
1-800-441-2233	1-800-628-3061	1-800-843-8343	1-800-327-3031	1-800-655-4555

MORE LANGUAGES

Important Safety Message from Southern California Edison:

High winds and dangerous fire conditions are forecasted in your area from ^Day of week^ ^morning/afternoon/evening^ through ^End Day of week^ ^morning/afternoon/evening^. We may have to shut off your power to decrease risk of dangerous wildfires. We are working to reduce the number of customers affected. We'll keep you updated so you know whether your power will be shut off.

This alert applies to the following address(es):

Customer Address
Service Account
Meter Number
Rate

- For the latest updates, outage map, and information about customer care services, visit sce.com/psps.
- For information about preparing for a power outage, visit sce.com/safety/family/emergency-tips.
- REMEMBER: If you see a downed power line call 911 first, and then notify SCE at 1-800-611-1911.

Thank you for your patience as we work to keep your community safe!

4| Imminent Shutdown
PSPS EXPECTED 1-4 HOURS BEFORE SHUTOFF

TEXT/SMS

SCE Safety Outage Alert: It's likely we will need to shut off your power in the next 4 hours due to wind-driven fire conditions in your area. Conditions could last through ^End Day of week^ ^morning /afternoon /evening^. We'll keep you updated and notify you again at the time of shutoff if we need to shut off your power. Weather could affect shutoff timing and wind-related outages may also occur. Thanks for your patience. Visit sce.com/psps for the latest information and availability of community resources. For downed power lines, call 911. View in more languages: www.sce.com/PSPSExpected Please reply with 1 to confirm receipt of this message.

VOICE

Important SCE safety outage alert. To continue in English, press 1. [Spanish press 2], all other languages press 3…. It's likely we will need to turn off your power in the next 4 hours due to wind-driven fire conditions in your area. Conditions could last through ^End Day of week^ ^morning /afternoon /evening^. We'll keep you updated and notify you again at the time of shutoff if we need to turn off your power. Weather could affect shutoff timing and wind-related outages may also occur. Thank you for your patience. Visit sce dot com slash psps for the latest information and availability of community resources. If you see a downed power line call 911.

EMAIL

Subject: SCE Safety Outage Alert: Expected Public Safety Power Shutoff (PSPS)
From: do_not_reply@scewebservices.com Southern California Edison

For more information on PSPS in your preferred language, click below:

ESPAÑOL	한국어	中文	TIẾNG VIỆT	TAGALOG
1-800-441-2233	1-800-628-3061	1-800-843-8343	1-800-327-3031	1-800-655-4555

MORE LANGUAGES

Important Safety Message from Southern California Edison:

It's likely we will need to turn off your power in the next 4 hours due to wind-driven fire conditions in your area. Conditions could last through ^End Day of week^ ^morning /afternoon /evening^. We continue working to reduce the number of customers affected. We'll keep you updated and notify you again at the time of shutoff if we need to turn off your power. Weather could affect shutoff timing and wind-related outages may also occur.
We understand this is inconvenient. We appreciate your patience as we work to keep your community safe.
This alert applies to the following address(es):
Customer Address
Service Account
Meter Number
Rate
For the latest updates, outage map, and availability of community resources, visit sce.com/psps.

For information about preparing for a power outage, visit sce.com/safety/family/emergency-tips.

REMEMBER: If you see a downed power line, call 911 first, and then notify SCE at 1-800-611-1911.

Thank you again for your continued patience as we work to keep your community safe!

5 | De-Energized

SMS/TEXT

SCE Start of Shutoff Alert: We are temporarily shutting off your power due to high risk of wind-driven wildfire in your area. These conditions could last through ^End Day of week^ ^morning/ afternoon/ evening^. We will restore your power as soon as it's safe. Restoration typically takes 3-8 hours but could take longer if there is damage in your area. Remember to turn off or unplug appliances or equipment that may start automatically when power is restored. Thanks for your patience. Visit sce.com/psps for

the latest information and availability of community resources. For downed power lines, call 911. View in more languages: www.sce.com/PSPSShutoff Please reply with 1 to confirm receipt of this message.

VOICE

Important SCE safety outage alert. To continue in English, press 1. [Spanish press 2], all other languages press 3…. We are temporarily shutting off your power due to high risk of wind-driven wildfire in your area. These conditions could last through ^End Day of week^ ^morning/ afternoon/ evening^. We will restore your power as soon as it's safe. Restoration typically takes 3 to 8 hours but could take longer if there is damage in your area. Remember to turn off or unplug appliances or equipment that may start automatically when power is restored. Thank you for your patience. Visit sce dot com slash psps for the latest information and availability of community resources. If you see a downed power line call 911.

EMAIL

Subject: SCE Safety Outage Alert: Start of Public Safety Power Shutoff (PSPS)
From: do_not_reply@scewebservices.com Southern California Edison

For more information on PSPS in your preferred language, click below:

ESPAÑOL	한국어	中文	TIẾNG VIỆT	TAGALOG
1-800-441-2233	1-800-628-3061	1-800-843-8343	1-800-327-3031	1-800-655-4555

MORE LANGUAGES

Important Safety Message from Southern California Edison:

We are temporarily shutting off your power due to high risk of wind-driven wildfire in your area. These conditions could last through ^End Day of week^ ^morning/ afternoon/ evening^. We will restore your power as soon as it's safe. Restoration typically takes 3-8 hours but could take longer if there is damage in your area. Please remember to turn off or unplug appliances or equipment that may start automatically when power is restored. We will update you as conditions change.

This alert applies to the following address(es):

Customer Address
Service Account
Meter Number
Rate

For the latest information, outage map, and availability of community resources, visit sce.com/psps.

REMEMBER: If you see a downed power line, call 911 first and then notify SCE at 1-800-611-1911.
We understand this is inconvenient. We appreciate your continued patience as we work

to keep your community safe.

7 | PREPARING TO RE-ENERGIZE (IMMINENT RESTORATION)

SMS/TEXT

SCE PSPS Safe Restoration Alert: We're working to restore power in your area now that winds have died down. This typically takes 3-8 hours but could take longer if there is damage in your area. We will alert you again when your power comes back on. Please turn off or unplug appliances or equipment that may start automatically when power is restored and inspect your property for downed power lines. Visit sce.com/psps for the latest information and availability of community resources. For downed power lines, call 911. Thank you for your patience as we work to keep your community safe. View in more languages: www.sce.com/PSPSPrepRestore Please reply with 1 to confirm receipt of this message.

VOICE

Important SCE safe restoration alert. To continue in English, press 1. [Spanish press 2], all other languages press 3…. We're working to restore power in your area now that winds have died down. This process typically takes 3 to 8 hours but could take longer if there is damage in your area. We will alert you again when your power comes back on. Please turn off or unplug appliances or equipment that may start automatically when power is restored and inspect your property for downed power lines. If you see a downed power line stay away and call 911. For more information on the restoration process and availability of community resources, please visit sce dot com slash psps. Thank you for your patience as we work to keep your community safe.

EMAIL

Subject: SCE PSPS Safe Restoration Alert: Power will be Restored Soon
From: do_not_reply@scewebservices.com Southern California Edison

For more information on PSPS in your preferred language, click below:

ESPAÑOL	한국어	中文	TIẾNG VIỆT	TAGALOG
1-800-441-2233	1-800-628-3061	1-800-843-8343	1-800-327-3031	1-800-655-4555

MORE LANGUAGES

Important Safety Message from Southern California Edison:

We're working to restore power in your area now that winds have died down. This process typically takes 3-8 hours but could take longer if there is damage in your area. We will alert you again when your power comes back on. Please turn off or unplug appliances or equipment that may start automatically when power is restored and inspect your property for downed power lines. If you see a downed power line, stay away and call 911 first, then report it to SCE at 1-800-611-1911.

This alert applies to the following address(es):

Customer Address
Service Account
Meter Number
Rate

For more information on SCE's restoration process and availability of community resources, please visit sce.com/psps.

We understand that Public Safety Power Shutoff events can be disruptive and thank you for your patience as we work to keep your community safe.

9-A | PSPS ENDED - RESTORED & ALL CLEAR [NO MORE RISK OF PSPS]

SMS/TEXT

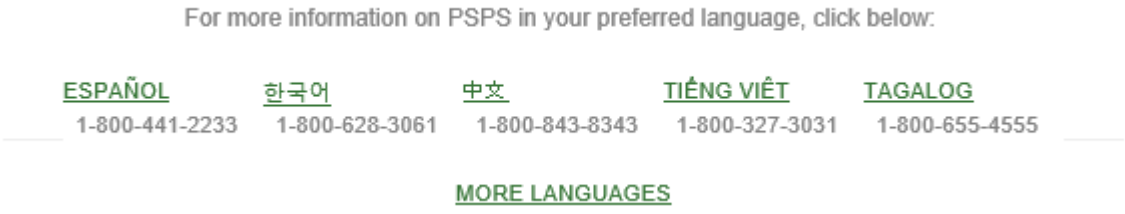
SCE PSPS Safe Restoration Alert: We were able to restore power in your area and end this Public Safety Power Shutoff due to improved weather conditions. If your power is still off, please call 1-800-611-1911 or visit sce.com/outage. We understand that safety outages are inconvenient, and thank you for your patience. View in more languages: www.sce.com/PSPSEnded Please reply with 1 to confirm receipt of this message. Please reply with 1 to confirm receipt of this message.

VOICE

Important SCE safe restoration alert... To continue in English, press 1. [Spanish press 2], all other languages press 3…. We were able to restore power in your area and end this Public Safety Power Shutoff due to improved weather conditions. If your power is still off, please call 1-800-611-1911 or visit sce dot com slash outage. We understand that safety outages are inconvenient and thank you for your patience.

EMAIL

Subject: SCE PSPS Safe Restoration Alert: All Power Restored
From: do_not_reply@scewebservices.com Southern California Edison



Important Safety Message from Southern California Edison:

We were able to restore power in your area and end this Public Safety Power Shutoff due to improved weather conditions. If your power is still off, please call 1-800-611-1911 or visit sce.com/outage. We understand that safety outages are inconvenient and thank you for your patience.

This alert applies to the following address(es):

Customer Address
Service Account
Meter Number
Rate

For more information about PSPS and wildfire safety, please visit sce.com/psps.

Attachment B-Quantitative and Qualitative Factors in PSPS Decision-Making Technical Paper

Attachment C-PSPS Event Data Workbook (Excel File Under Separate Cover)

SOUTHERN CALIFORNIA EDISON®

PUBLIC SAFETY POWER SHUTOFF:

DECISION-MAKING

PUBLIC SAFETY POWER SHUTOFFS ARE A TOOL OF LAST RESORT TO PROTECT OUR COMMUNITIES FROM THE THREAT OF WILDFIRE.

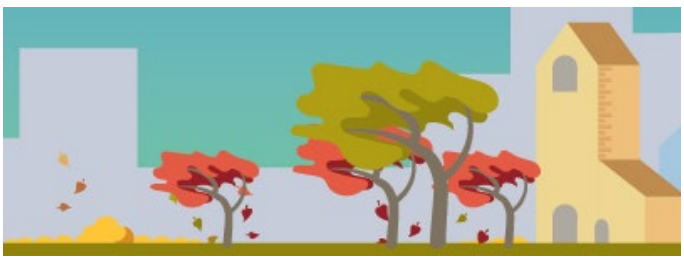
FOR EACH PSPS

1 IS THIS SHUTOFF NEEDED TO PROTECT PUBLIC SAFETY?

2 CAN WE SAFELY REDUCE THE NUMBER OF CUSTOMERS WHO LOSE POWER?

-5 DAYS FORECASTING | -3 DAYS FORECASTING | -2 DAYS FORECASTING | DAY OF THE PSPS EVENT

We consider PSPS when weather and fire experts forecast dangerous conditions, including strong winds, very dry vegetation and low humidity. Combined, these create the risk that flying debris or other damage to our wires and equipment could cause a fire with the potential to spread rapidly.



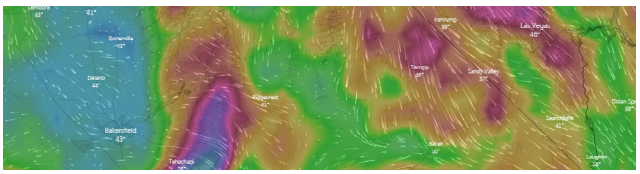
Updated: 3/26/2021

-5 DAYS FORECASTING

-3 DAYS FORECASTING

-2 DAYS FORECASTING

DAY OF THE PSPS EVENT



Our meteorologists and fire scientists continue to review weather conditions, using both internal and external weather models and National Weather Service forecasts, alerts and warnings.

The PSPS Incident Management Team develops a list of circuits that could be impacted. We speak with county offices of emergency management to discuss any public safety issues.

The team is led by an incident commander. Incident commanders undergo continual training for this role and are responsible for all shutoff decisions.

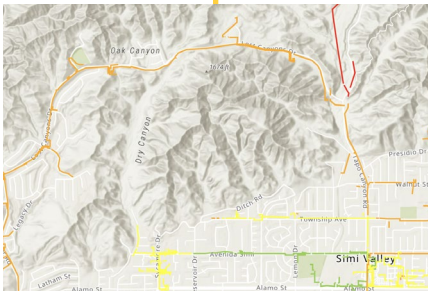
Field crews look for factors that could increase the risk of fire such as existing damage or other hazards to poles and wires.

DECISION POINT

If the weather report is inconclusive, we will wait for additional weather reports or field assessments before we notify customers. We confer with the National Geographic Area Coordination Center (GACC) about fire danger risk.

DECISION POINT

The PSPS Incident Management Team reviews options for supplying customers with power from different circuits to keep them energized.



-5 DAYS FORECASTING | -3 DAYS FORECASTING | -2 DAYS FORECASTING | DAY OF THE PSPS EVENT

DECISION POINT

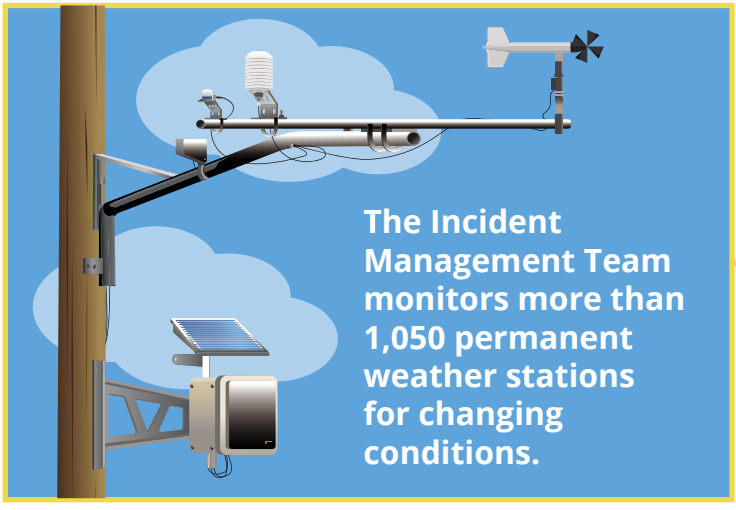
The Incident Management Team looks at twice-daily weather reports to see if the weather pattern has shifted. As the forecast becomes more precise, we update the list of circuits that might be impacted. If the weather pattern has weakened, or shifted outside of high fire risk areas, we will cancel the event.

We notify customers.

We try to visit our Critical Care and Medical Baseline customers who rely on life-saving medical equipment to confirm they have been informed about the event.

-5 DAYS FORECASTING | -3 DAYS FORECASTING | -2 DAYS FORECASTING | DAY OF THE PSPS EVENT

3-6 Hours: Before the winds are forecasted to hit peak speeds, the Incident Management Team begins monitoring conditions. A team, including experts in grid operations, meteorology and fire science, advise the incident commander, who will make the final decisions to shut off power.



The Incident Management Team monitors more than 1,050 permanent weather stations for changing conditions.

As the winds increase, field crews provide mobile weather station reports and report flying debris or other hazards.

-5 DAYS FORECASTING | -3 DAYS FORECASTING | -2 DAYS FORECASTING | DAY OF THE PSPS EVENT

10 MINS.

DECISION POINT

Weather:

Every 10 minutes, weather station readings are updated for each circuit. Meteorologists identify weather trends that could slow or speed up decision-making.

DECISION POINT

Grid Operations:

The team looks for opportunities to turn off individual segments of a circuit to keep the rest of the circuit powered.

DECISION POINT

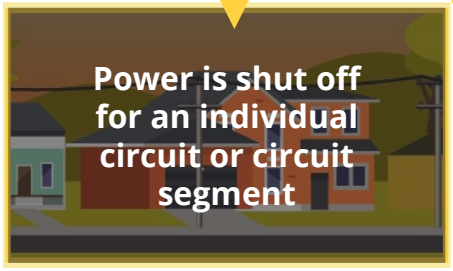
Recommendation:

The lead PSPS operator recommends shutting off power to a circuit or segment when wind speeds are about to hit or exceed our predetermined threshold for unsafe conditions, or field crews advise of an urgent hazard in the field.

DECISION POINT

Authorization:

The incident commander reviews the recommendation and asks follow-up questions, if necessary, before approving the decision.



AS THE WINDS DIE DOWN, POWER IS RESTORED TO ALL CUSTOMERS

When dangerous winds diminish, field crews inspect the lines that had been shut off. Usually, this is done by crews in utility trucks. If there is no damage to the lines, electricity will be restored immediately. The average time for restoration in 2020 was five to six hours, excluding lines that were damaged or required air or foot patrol. Some of these patrols will take longer because they must be done in daylight hours.

Attachment C-PSPS Event Data Workbook (Excel File Under Separate Cover)