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California State Assembly

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Wednesday, February 19, 2025
1:30 p.m. – State Capitol, Room 437

OVERSIGHT HEARING

Utility Wildfire Preparedness and Response: Focus on the 2025 Southern California Power Outages and Restoration

On Monday, January 6, 2025, the National Weather Service (NWS) issued a red flag warning to Los Angeles and Ventura counties, labeling the imminent windstorm a rare “particularly dangerous situation.”¹ Such warnings are issued when conditions of extreme winds, low humidity, and low vegetation moisture converge to pose extreme fire risk. The warning, in effect from January 7th through January 9th, was labeled by the NWS as “about as bad as it gets in terms of fire weather.” In response, the state prepositioned firefighting resources in the area;² while local utilities prepared for potential loss of service. By 5:30 p.m., Southern California Edison (SCE) had over 400,000 customers under consideration for potential de-energization – via a Public Safety Power Shutoff (PSPS); roughly an eighth of all SCE customers.³ This included over 10,000 medically compromised customers, and would impact three tribes. The NWS had also issued a fire watch for inland Orange County and the mountainous areas of San Diego County, leading San Diego Gas & Electric (SDG&E) to notify close to 65,000 customers of a potential PSPS.

By January 8, 2025, approximately 350,000 SCE customers and 9,000 SDG&E customers were without power.⁴ Earlier on Tuesday, January 7, 2025, the Palisades⁵ and Eaton Fires⁶ had sparked in Los Angeles County, causing large evacuations and enormous devastation to affected communities, including further disruptions in critical energy service. As of the early

¹ NWS Los Angeles, X post, January 6, 2025, 6:47pm; <https://x.com/NWSLosAngeles/status/1876460729848782871>

² “California mobilizes resources to Southern California during windstorm and fire weather conditions;” Press release, Office of Governor Newsom; January 6, 2025; <https://www.gov.ca.gov/2025/01/06/california-mobilizes-resources-to-southern-california-during-windstorm-and-fire-weather-conditions/>

³ Based on an estimated SCE customer base of about 5 million accounts; “About SCE” website; accessed Jan 16, 2025; <https://www.edisoncareers.com/about-sce/>

⁴ Robbins, G., Nikolewski, R., and Kucher, K.; “SDG&E rapidly turning off power to customers as Santa Ana winds slam San Diego County;” *San Diego Union Tribune*; January 8, 2025.

<https://www.sandiegouniontribune.com/2025/01/07/firefighters-power-line-workers-scanning-san-diego-county-for-wind-driven-fires/>

⁵ <https://www.fire.ca.gov/incidents/2025/1/7/palisades-fire>

⁶ <https://www.fire.ca.gov/incidents/2025/1/7/eaton-fire>

afternoon on January 8th, the Los Angeles Department of Water and Power (LADWP), which does not initiate proactive PSPS, had approximately 155,000 customers without power – roughly a tenth of their electric service⁷ – due to equipment damage from wind and fire or to support firefighting efforts. Southern California Gas (SoCalGas) had also temporarily shut off gas service to approximately 15,000 customers in the Malibu area.

On January 12, 2025, as fires continued to rage and power service remained disrupted, the NWS warned of another “particularly dangerous situation” wind event.⁸ Outages were occurring dynamically; customers were losing power and regaining power throughout Los Angeles County as the utilities sought to stay ahead of the disruptions. As of that morning, LADWP had approximately 16,000 customers without power, most of whom in the fire-affected areas of Pacific Palisades and Brentwood.⁹ While at the same time, LADWP had restored more than 360,000 customers since the start of the windstorms.¹⁰ SCE had replaced over 23,000 feet of conductor from the windstorm and fire areas and deployed over 3,500 workers to support restoration. Despite this, as of that afternoon, 38,300 SCE customers were without power. Restoration of SoCalGas meters in unimpacted (by fire) areas of Malibu and Pasadena had also begun.

Over the subsequent days, more Santa Ana windstorms impacted Southern California, leading to more PSPS events; while restoration efforts occurred concurrently in SCE, SDG&E, LADWP, and SoCalGas territories. By early February, almost a month after the fires began, the Palisades and Eaton Fires were fully contained. Other fires, such as the Hughes Fire in Los Angeles County and the Lilac and Pala Fires in San Diego County, which had ignited during the later January windstorms, were also contained.¹¹ These firestorms resulted in the loss of 29 lives, thousands of structures destroyed, and tens of thousands of acres burned.¹² The persistence and duration of the PSPS events, as windstorm after windstorm battered the region, added to the hardship. Communities already facing loss of lives and property, or accommodating displaced residents, were met with school closures, loss of traffic signals, loss of phone and internet service for many, closed businesses, and the need to charge critical medical equipment. Even communities that had invested in backup supplies in response to past PSPS events were faced with power loss, as the duration of the outages exceeded their backup capabilities.

While the PSPS events are largely concluded and rebuilding work is underway, an accounting and analysis of the response and restoration efforts remains. The January 2025 utility PSPS Post-Event reports to the California Public Utilities Commission (CPUC) have yet to be filed.¹³ The impacted utilities have begun recording cost in their Catastrophic Event Memorandum Accounts (CEMAs), but the full cost of response and recovery is unknown.

⁷ LADWP has approximately 1.5 million electric customers

⁸ NWS Los Angeles, X post, January 12, 2025, 2:14 pm; <https://x.com/NWSLosAngeles/status/1878566192996372732>

⁹ Even though

¹⁰ Note: unclear if this customer number is unique customer-impacts or inclusive of the same customer being repeatedly impacted.

¹¹ CBS News data from National Interagency Fire Center and Cal Fire data; last accessed Feb. 17, 2025;

<https://www.cbsnews.com/news/los-angeles-fire-containment-2025/>

¹² Note these numbers are preliminary. Cal Fire “Top 20 Most Destructive California Wildfires;” https://34c031f8-c9fd-4018-8c5a-4159cdf6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/top20_destruction.pdf?rev=8d25d868e50f40aea60833642d65b449&hash=1DBAA251C9CC52EDC5AAEA2358158664

¹³ As of February 17, 2025; <https://www.cpuc.ca.gov/consumer-support/psps/utility-company-psps-reports-post-event-and-post-season>

The purpose of this hearing is to provide an opportunity to hear from the impacted utilities and relevant state and local agencies on what lessons may be learned, or what merits additional attention and action, regarding the proactive power shutoffs in the region prior to and during the fires. Moreover, it is an opportunity to receive utility restoration plans, potential re-powering timelines, and cost. This hearing will focus on energy infrastructure, as is appropriate for this committee. Subsequent Assembly committee hearings will focus on the broader response, recovery and rebuilding efforts in the region.¹⁴

Findings

- *PSPS is meant to be a stop-gap measure while utilities harden their systems. The number and duration of events were meant to decrease over time, as utilities became better at predicting weather impacts, more surgical at shutting down specific circuits, and faster at deploying line hardening (or undergrounding) work.*
- *Over the past few years, PSPS seemed to be trending toward smaller and less frequent occurrences; however, 2024 showed a marked increase. As the IOUs have not yet reported on the PSPS events of January 2025, it is difficult to understand how anomalous their scale and scope were.*¹⁵
- *Establishing routine communication protocols and continually seeking reductions of event duration and frequency should be first priorities. While the last 6 years of PSPS regulation focused on these priorities, early observations from the recent Southern California windstorms indicate more work is needed.*

PSPS Tradeoffs. Electric utilities routinely shut off power to their equipment – via a planned outage – to conduct repairs, upgrade equipment, or respond to emergencies. They may also shut off power due to unplanned events, such as accidents, equipment failure, or localized floods; however these are generally limited in both scope and duration. The proactive de-energization contemplated under a PSPS is a unique type of outage, specific to weather that increases wildfire risk. Prior to a PSPS event, areas identified as having significant fire risk would, ideally, be segmented into regions where electrical power can be operated independently. Fire severity factors –wind speed, humidity, vegetation conditions, age or condition of infrastructure – would be monitored for each segment on a real-time basis and the risk to associated energy infrastructure evaluated. During a weather event, if factors show that a power line fire is likely to occur in any segment, the electrical power to that segment would be turned off. Care would then be taken – most likely through ground observations – to ensure equipment is functioning and safe prior to re-energizing the segment.

Ensuring PSPS events are as precise and infrequent as possible is dependent upon the utility’s ability to monitor conditions in real-time (via weather stations and ground crews), understand the risks associated with their system, and design their system to isolate power losses to as small an area as possible. The utility must also maintain clear communication with customers

¹⁴ *Upcoming*: Joint Hearing of Emergency Management, Housing, and Economic Development Committees on “Recovering and Rebuilding after the Los Angeles Wildfires,” scheduled for 9 a.m., Wednesday, February 26, 2025.

¹⁵ Eisner, C., McMillan, N., and Smith, G.; “Power line sparked new fires in LA after the Eaton Fire began, radio traffic shows,” *NPR*; February 17, 2025. <https://www.npr.org/2025/02/17/nx-s1-5282086/los-angeles-eaton-fire-altadena-power-lines>

and critical partners before, during, and after a PSPS. Regardless of informing customers, removing power brings a number of societal costs and safety risks, including¹⁶ disruption to other utilities, critical facilities – police and fire stations, 9-1-1 dispatch centers, or healthcare facilities; increased or severe risk to vulnerable customers, such as the disabled or electrically-dependent populations; economic consequences of business disruptions (airports, schools, retail stores, gas stations, and restaurants without power); and potential load shedding (i.e. power loss) in un-impacted areas due to the need to balance the grid.¹⁷

For these reasons, PSPS creates a dilemma when contemplating electric utility safety – a safety concern if you keep the power on and risk downed lines cause wildfires; and a safety concern if you shut off the power and impact effective emergency response, public safety, and medical needs, as well as basic community functions. An appropriate PSPS protocol must account for the unintended consequences and remain focused on maximizing public safety.¹⁸ balancing the reduction of power line fires while minimizing customer impacts. Part of maintaining that appropriate balance is ensuring any PSPS is as limited in scope and duration as possible, and to work year-after-year to reduce the size and time of each event.

History of PSPS in the state. California Public Utilities Code § 451 and § 399.2(a) give electric utilities authority to shut off electric power in order to protect public safety. This authority includes shutting off power for the prevention of fires caused by strong winds. In 2008, following the devastating wildfires in SDG&E territory, SDG&E filed an advice letter¹⁹ and subsequent application²⁰ requesting CPUC approval of proactive de-energization measures proposed in its Fire Preparedness Plan.²¹ SDG&E also requested that such power shut-offs would qualify for an exemption from liability under SDG&E’s Tariff Rule 14. In 2009, the CPUC denied the application without prejudice.²²

The CPUC noted its denial did not “affect SDG&E’s authority under § 451 and § 399.2(a) [of the Public Utilities Code] to shut off power in emergency situations when necessary to protect public safety.” This statutory authority provided SDG&E with the ability to shut off power under conditions it deemed hazardous, a position which elicited many stakeholder concerns regarding proper notifications and customer protections during such events. Ultimately, a Petition for Modification (PFM) was filed by the Disability Rights Advocates²³ requesting the CPUC clarify that SDG&E must take appropriate steps to warn the public if and when it shuts off power. A subsequent 2012 decision²⁴ granted the PFM, affirmed SDG&E’s authority to issue a PSPS during hazardous conditions, and clarified the CPUC’s authority to conduct a post-event reasonableness review of any PSPS event. The decision also requires SDG&E to notify the Commission’s Consumer Protection and Safety Division, now

¹⁶ pg. 7 “When to Turn Off the Power? Cost/Benefit Outline for Proactive De-Energization”; Joseph Mitchell, Ph.D.; March 27, 2009; <http://www.mbartek.com/power-lines-fire/17-cost-benefit-outline-for-proactive-de-energization>

¹⁷ CAISO “Briefing on California’s Public Safety Power Shutoff (PSPS) program”; John Phipps; July 24, 2019; <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiJ9-7x7fDjAhXTFzQIHQYZBKwQFjAAegQIAhAC&url=http%3A%2F%2Fwww.aiso.com%2FDocuments%2FBriefing-CaliforniasPublicSafetyPowerShut-OffProgram-Presentation-Jul2019.pdf&usq=AOvVaw1OVzByVg71WeD-UNdPaolI>

¹⁸ Mussey Grade Road Alliance Phase I De-Energization Comments in R.18-12-005; filed March 25, 2019

¹⁹ 2025-E

²⁰ A. 08-12-021

²¹ https://www.sdge.com/sites/default/files/documents/SDGE_Fire_Prevention_Plan_2018.pdf

²² D. 09-09-030

²³ PFM of D. 09-09-030 by DRA; Sept. 7, 2010; A.08-12-021

²⁴ D. 12-04-024

the Safety and Enforcement Division (SED), of the shut-off within 12 hours and submit a report to SED with a detailed explanation of its decision to shut off the power.

Following several catastrophic fires in 2017, including some ignited by utility infrastructure – such as several of the North Bay fires – Pacific Gas & Electric Company (PG&E) sought to proactively shutoff power as a fire prevention measure. SCE had already used de-energization of electric lines in December 2017, affecting about 8,000 customers in Idyllwild including those served by De Anza Electric Cooperative which receives power via SCE lines. In July 2018, the CPUC adopted a staff resolution to extend the reasonableness, public notification, mitigation, and reporting requirements of the 2012 SDG&E decision to all electric investor-owned utilities (IOUs), including PG&E and SCE. Under Resolution ESRB-8,²⁵ the CPUC also requires the IOUs to meet with local communities before putting the power shutoff practices in effect in a particular area, requires feasible and appropriate customer notifications prior to a de-energization event, and requires notification to the SED as soon as practicable after a decision to initiate a PSPS and within 12 hours after the last service is restored. In December 2018, the CPUC opened rulemaking R. 18-12-005 to examine utility de-energization protocols. The first decision in the proceeding was adopted in June 2019 and updated the notification guidelines of ESRB-8 to clarify first points of contact, necessary information to specific customer groups, and more thorough post-event reporting requirements.²⁶ The CPUC adopted subsequent decisions in 2020²⁷ and 2021,²⁸ further refining the PSPS guidelines. In December 2024, the CPUC resolved and closed the proceeding.²⁹

PSPS Safety Protocols. The CPUC’s adopted protocols for de-energizing electric lines primarily focus on ensuring timely and detailed communication before, during, and after events; as well as requiring restoration within 24 hours from the termination of the PSPS event, unless it is unsafe to do so.³⁰ Threshold issues the CPUC adopted included who should receive notice and when; who should be responsible for notification; how different customer groups should be identified; the information that should be included in notifications in advance of and directly preceding a PSPS event; the methods of communication; and how the IOUs should communicate and coordinate with specified partners before and during an event. The CPUC adopted definitions for “public safety partners,” “critical facilities,” and “critical infrastructure.”³¹ The public safety partners receive priority notification of a PSPS event. The critical facilities and critical infrastructure are those that are essential to public safety and that require additional assistance and advance planning to ensure safety. The CPUC adopted an interim list of these facilities; but electric IOUs often list additional or differing facilities in their Wildfire Mitigation Plans.³² The IOUs also maintain plans to support individuals with

²⁵Resolution ESRB-8; July 12, 2018. <https://docs.cpuc.ca.gov/publisheddocs/published/g000/m218/k186/218186823.pdf>

²⁶ D. 19-05-042

²⁷ D. 20-05-051

²⁸ D. 21-06-034

²⁹ D. 24-12-005; though the proceeding has since been reopened.

³⁰ D. 20-05-051, p. A6

³¹ D. 19-05-042, Appendix A.

³² CPUC Staff “Unofficial Compendium of PSPS Guidelines and Rules (as of July 5, 2022);” filed July 12, 2022; R. 18-12-005; <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/psps/psps-compendium-12-july-2022.pdf>

access and functional needs who are electricity dependent;³³ such individuals often receive in-person notification prior to outages.

While communication of a PSPS event has been the focus of the CPUC, the decision criteria for calling a PSPS are largely left to the discretion of the IOU.³⁴ The CPUC has advised IOUs that they “should shut-off power only as a last resort,”³⁵ and affirmed its authority to assess the reasonableness of the IOUs to shut off power. The CPUC also has a staff-level citation program for enforcing PSPS compliance.³⁶ As a result, most IOUs use detailed thresholds and criteria when calling a PSPS event. For SCE, the thresholds are pre-set for dangerous wind conditions that create increased fire potential; i.e., wind speeds, humidity, and fuel moisture levels.³⁷ All circuits have an activation threshold, defined by the Fire Potential Index (FPI)³⁸ and the wind speed, at which they are considered at risk. Activation thresholds are computed for each circuit for the season. For each PSPS event, every circuit also has a de-energization threshold. De-energization thresholds are determined separately for each circuit to prioritize circuits for de-energization based on the specific risks of the event. SCE emphasizes the importance of distinguishing between these thresholds for large events where many circuits must be evaluated simultaneously.³⁹ Most IOUs employ super computers and machine

Critical Communications

The CPUC adopted various definitions to inform IOU coordination and communication during PSPS events. These include “public safety partners” and “critical facilities/infrastructure.” [D.19-05-042]

Public Safety Partners –

- first/emergency responders;
- water, wastewater and communication providers;
- community choice aggregators;
- affected publicly-owned utilities (POUs)/electrical cooperatives;
- the CPUC; the California Office of Emergency Services; and Cal FIRE

Critical Facilities –

- Emergency Services (police, fire, emergency operations centers, tribal government providers);
- Government Facilities (schools, jails/prisons, homeless shelters, community/senior centers, voting centers)
- Healthcare (medical facilities, cooling/warming centers, etc.)
- Vital Utilities (energy, water, wastewater, communications, and 9-1-1 service)
- Hazardous Materials and Chemical Facilities
- Transportation (including major public transit)
- Emergency Feeding Organizations

³³ “Southern California Edison Company’s (U 338-E) 2025 Plan To Support Access And Functional Needs Population During Public Safety Power Shutoffs;” R.18-12-005; filed January 31, 2025; <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M555/K961/555961239.PDF>

³⁴ D. 12-04-024 at 29.

³⁵ D. 12-04-024 at 30.

³⁶ Resolution WSEB-1; September 21, 2023;

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M520/K467/520467882.PDF>

³⁷ SCE’s detailed technical paper, Quantitative and Qualitative Factors for PSPS Decision-Making, <https://energized.edison.com/pmps-decision-making>.

³⁸ 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+). Factors include: wind speed; dew point depression; potential fire intensity as measured in “energy release component;” fuel moisture factors; and a vegetation greenness analysis.

³⁹ SCE; “Quantitative and Qualitative Factors for PSPS Decision-Making;” revision November 6, 2023;

https://download.newsroom.edison.com/create_memory_file/?f_id=609d61cbb3aed37d0f3d5f6a&content_verified=True

learning to forecast and compute these thresholds accurately.⁴⁰ Refining these models is a burgeoning area of research.⁴¹ Machine learning is likewise being used to study power system management in the rare cases where PSPSes lead to large grid events, such as de-energization of transmission lines.⁴² Recent reporting in the *Los Angeles Times*⁴³ discusses such power system scenarios conducted by the California Independent System Operator (CAISO) in 2022;⁴⁴ however, most PSPS events occur at the distribution voltage level with loads managed locally.

While IOUs conduct PSPS at their discretion, following protocols established by the CPUC, publicly owned utilities (POUs) – such as LADWP – have no requirements nor standard protocols for preemptive de-energization of lines during elevated wildfire risk. Since the passage of SB 901 (Dodd, Chapter 626, Statutes of 2018),⁴⁵ IOUs and POUs are required to file Wildfire Mitigation Plans (WMP) that include protocols for “deenergizing portions of the electrical distribution system.”⁴⁶ To date, LADWP has no PSPS procedure; rather it de-energizes on a per incident basis. As noted in LADWP’s 2023-2025 WMP: “impacts of preemptive and wind-event triggered proactive power shut-off procedures were considered during the development of this Plan. However, LADWP has determined that the adverse impact on health, safety, and quality of life of its customers outweighs the perceived benefits derived from pre-emptive power shut-offs.”⁴⁷

PSPS Over Time. When first developed, PSPS was characterized as a “tool of last resort,” meant to be a stop-gap action while utilities worked quickly to harden their systems. The number and duration of events were meant to decrease over time, as utilities became better at predicting weather impacts, more surgical at shutting down specific circuits, and faster at deploying line hardening (or undergrounding) work. Over the past few years, PSPS seemed to be trending in this direction; however, 2024 showed a marked increase, as shown in Figure 1. Grid hardening efforts by the IOUs should reduce the number of customers who experience a PSPS, if weather conditions are kept constant. However, such annual comparisons are challenged if weather conditions vary significantly year-over-year.

⁴⁰ Ibid, and PG&E; U 39 E Report; Dec. 23, 2024; <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/reports/psps-post-event-reports/2024/r1812005pge1292024-psps-postevent-report122324.pdf>

⁴¹ Yao, M., et al; “Predicting electricity infrastructure induced wildfire risk in California;” *Environ. Res. Lett.* 17 (2022) 094035.

⁴² Hong, W., et al.; “Data-Driven Power System Optimal Decision Making Strategy under Wildfire Events;” *Hawaii International Conference on System Sciences*; February 1, 2022; LLNL-CONF-831390

⁴³ Connor Sheets; “Edison knew before Eaton fire that cutting power risked igniting blaze, records show;” *Los Angeles Times*; Feb. 13, 2025.

⁴⁴ CAISO 2021-2022 Transmission Plan; board approved March 17, 2022;

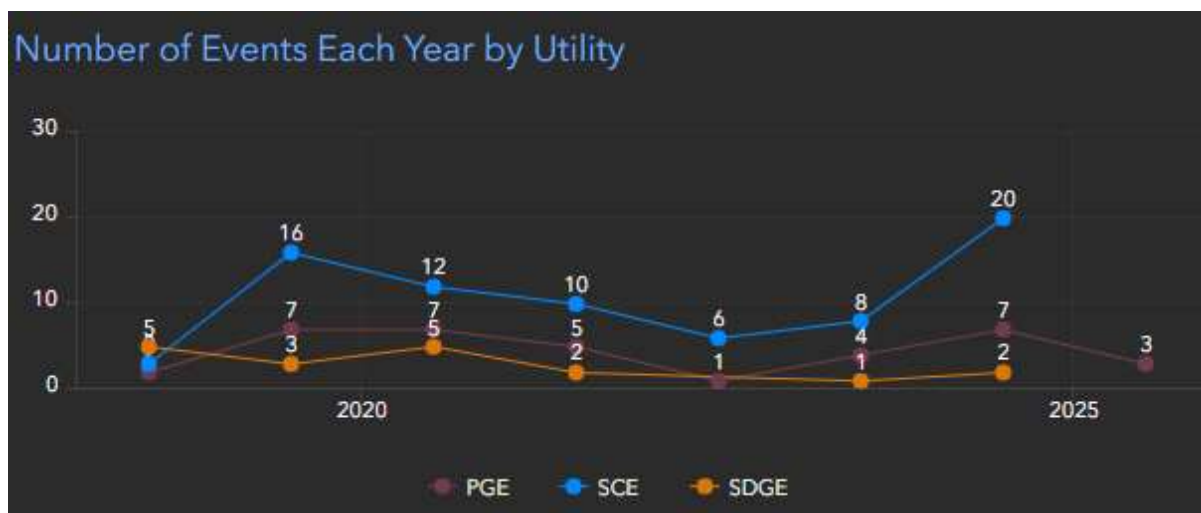
<file:///C:/Users/shybutla/Downloads/ISOBoardApproved-2021-2022TransmissionPlan.pdf>

⁴⁵ Subsequently refined in AB 1054 (Holden, Chapter 79, Statutes of 2019) and SB 560 (McGuire, Chapter 410, Statutes of 2019)

⁴⁶ PUC § 8386 (IOUs) and § 8387 (POUs)

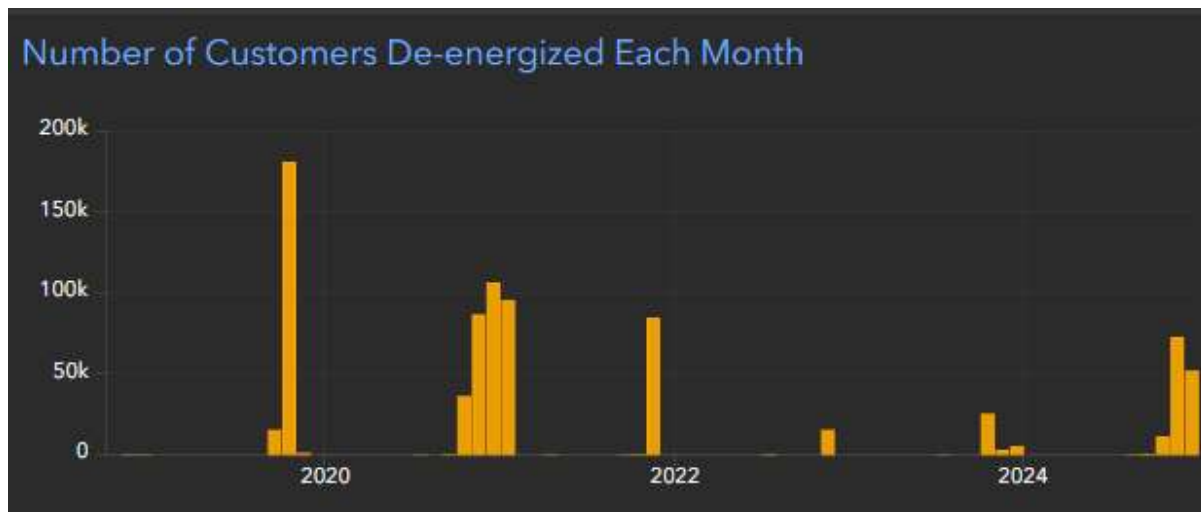
⁴⁷ Pg. 45, LADWP 2023-2025 WMP; June 2024; <https://www.ladwp.com/sites/default/files/2024-06/2024%20LADWP%20Wildfire%20Mitigation%20Plan.pdf>

Figure 1. PSPS Events by year by IOU, with PG&E (purple), SCE (blue), and SDG&E (orange). Data from CPUC Public PSPS Dashboard.⁴⁸



According to recent reporting, SCE estimates it has reduced the probability of catastrophic wildfires associated with its equipment by as much as 80% since 2018.⁴⁹ During the same time span, Figure 1 shows a year-over-year decline in PSPS event numbers (until 2024). These trends are mirrored in the number of customers de-energized, where for both PG&E and SCE their highest customer impacts were in October 2019. Data from the January 2025 PSPS events in Southern California have yet to be submitted.⁵⁰

Figure 2. Number of SCE customers de-energized by month, with the high in October 2019 of 181,000+ customers and the most recently reported of 52,000+ customers in December 2024. Data from CPUC Public PSPS Dashboard.⁴⁵



January 2025 Southern California PSPS Events. As noted above, hundreds of thousands of customers in Southern California were without power – either due to continuous or prolonged PSPS events or from wildfire or wind damage – for days and weeks. These outages impacted customers from SCE, SDG&E, LADWP, Pasadena Water & Power, Glendale Water &

⁴⁸ <https://capuc.maps.arcgis.com/apps/dashboards/ecd21b1c204f47da8b1fcc4c5c3b7d3a>

⁴⁹ *California Energy Markets*; No. 1830; pg. 13; January 21, 2025.

⁵⁰ Eisner, C., McMillan, N., and Smith, G.; “Power line sparked new fires in LA after the Eaton Fire began, radio traffic shows;” *NPR*; February 17, 2025. <https://www.npr.org/2025/02/17/nx-s1-5282086/los-angeles-eaton-fire-altadena-power-lines>

Power, and Burbank Water & Power. SoCalGas customers also experienced loss of gas service, both within and outside the area impacted by fire. The customer outages were dynamic, as subsequent storms and PSPS events overlapped with restoration efforts.⁵¹ LADWP noted by January 13, 2025, over 17,000 customers were without power; yet over 357,000 customers had been restored since the start of the windstorms. SCE, for its part, noted the around-the-clock damage assessment teams that had, by January 21, 2025, replaced 92,000+ feet of conductor, 273 poles, and 465 transformers in an effort to restore power where possible since the windstorms began in early January.

The duration of the PSPS events, as windstorm after windstorm battered the region, amplified their impact. While the IOUs deploy machine learning and a network of weather stations to surgically call for a PSPS, it is unclear whether the same level of modeling and station-level data are used to inform re-energization. SCE has noted their re-energization plan requires inspection and patrol of every de-energized circuit; patrols which are not triggered until winds decrease below certain thresholds. It is unclear whether the wind decrease needed for re-energization is based on NWS county-specific guidance, or more granular SCE weather station data.

During the PSPSes, communities already facing loss of lives and property, or accommodating displaced neighbors, were met with school closures, loss of traffic signals, loss of phone and internet service, closed businesses, and the need to charge critical medical equipment. Even communities that had invested in backup supplies in response to past PSPS events were faced with power loss, as the duration of the outages exceeded their backup capabilities. Communities in the SCE region also raised frustration with communication, noting circuit maps lacked detail, emails were too frequent and difficult to assess,⁵² and members of the public had no one at the utility to call to receive updated information.

To add to the communication confusion, there has been recent reporting on radio traffic during the Eaton Fire that suggests SCE struggled to both de-energize quickly and ensure re-energization was not rushed.⁵³ One responding firefighter noted an “Edison rep” had indicated SCE was “short on manpower, so we’re just going to have to treat everything as live.”⁵⁴ SCE did comment that they were “adequately staffed for the event.” There are also indications that SCE re-energized too quickly in some areas, with SCE workers reportedly repowering areas with damaged lines. As any outage response – including PSPS events – must maximize public safety, a balance should be struck in reducing the risk of power line fires with minimizing customer impacts. It is difficult to ascertain whether utility response

⁵¹ SCE notes, “for multiday events, with gaps of even a few hours, field crews will attempt to restore customers before the second period of concern begins even if this will require a repeat de-energization.” “Quantitative and Qualitative Factors for PSPS Decision-Making;” revision November 6, 2023;

https://download.newsroom.edison.com/create_memory_file/?f_id=609d61cbb3aed37d0f3d5f6a&content_verified=True

⁵² Cities in Ventura County noting emails from SCE ran into the hundreds (700+) during the events; such a deluge making it difficult to parse what was critical and timely information.

⁵³ Eisner, C., McMillan, N., and Smith, G.; “Power line sparked new fires in LA after the Eaton Fire began, radio traffic shows;” *NPR*; February 17, 2025. <https://www.npr.org/2025/02/17/nx-s1-5282086/los-angeles-eaton-fire-altadena-power-lines>

⁵⁴ Eisner, C., McMillan, N., and Smith, G.; “Power line sparked new fires in LA after the Eaton Fire began, radio traffic shows;” *NPR*; February 17, 2025. <https://www.npr.org/2025/02/17/nx-s1-5282086/los-angeles-eaton-fire-altadena-power-lines>

during the January 2025 PSPS events struck the appropriate balance, as reports from those events have yet to be submitted to the CPUC.⁵⁵

Restoration and Rebuilding. With much of the wind and fire activity in Southern California abated, the communities have begun the arduous process of clean up and eventual rebuilding. Recovery work is underway in the communities devastated by wildfire, with the physical loss to property and associated infrastructure needing to be rebuilt. But also in the communities impacted by PSPS, with loss of food or other economic hardship needing to be replaced and strategies for minimizing future events evaluated.

System-wide Rebuilding. Many of the fire-impacted areas will need all new electric and gas infrastructure to repower facilities. As part of Governor Newsom’s February 13, 2025, executive order (EO N-20-25), supportive infrastructure, including utilities, “necessary to construct, install or use... facilities” have California Environmental Quality Act (CEQA) requirements suspended.⁵⁶ It is unclear just how much utility infrastructure is implicated in such a waiver. Presumably infrastructure connecting individual structures to distribution lines or pipes – such as service drops or smart meters – is included; community-wide pole replacement, undergrounding projects, or substation repairs and upgrades are less clear. LADWP has begun considering rebuilding options for the Pacific Palisades and neighboring areas, contemplating bolstering community resilience during the rebuild. These considerations include area-wide smart meter installations, upgrading circuit capacity (from 5kV to 12-15kV), and potentially undergrounding distribution lines. Such capacity upgrades were contemplated as part of Los Angeles’s 2021 National Renewable Energy Lab (NREL) study for achieving the City’s 100% clean energy goal,⁵⁷ and was highlighted as enabling much larger volumes of local, distributed clean energy resources (such as rooftop solar). Some federal grant programs – such as the Federal Emergency Management Agency (FEMA)’s Hazard Mitigation Assistance programs⁵⁸ – provide funding for local and tribal governments to rebuild in ways that reduce, or mitigate, future disasters; with utility work eligible for funding in some circumstances.⁵⁹ Impacted IOUs have begun recording cost in their Catastrophic Event Memorandum Accounts (CEMAs), but the full cost of response and recovery is unknown. For instance, SoCalGas has recorded over \$40 million in restoration costs.⁶⁰ The utility is unable to forecast the total estimated expense for the “nearly 12,000 long-term restorations” still needed.

Individual Facility Rebuilding. As part of the Governor’s January 12, 2025, executive order (EO N-4-25) state officials – including the California Energy Commission – are to report within 60 days whether any provisions of the building code should be suspended for people

⁵⁵ Eisner, C., McMillan, N., and Smith, G.; “Power line sparked new fires in LA after the Eaton Fire began, radio traffic shows;” *NPR*; February 17, 2025. <https://www.npr.org/2025/02/17/nx-s1-5282086/los-angeles-eaton-fire-altadena-power-lines>

⁵⁶ Ordering Paragraph 2(d); EO N-20-25; February 13, 2025.

⁵⁷ Pg. 54, NREL, “LA 100: the Los Angeles 100% Renewable Energy Study;” Chapter 7: Distribution System Analysis; March 2021; <https://www.nrel.gov/docs/fy21osti/79444-7.pdf>

⁵⁸ <https://www.fema.gov/fact-sheet/summary-fema-hazard-mitigation-assistance-hma-programs>

⁵⁹ Press Release from Office of Governor Newsom, “California secures expanded federal funding to repair firestorm-damaged public infrastructure;” January 15, 2025. <https://www.gov.ca.gov/2025/01/15/california-secures-expanded-federal-funding-to-repair-firestorm-damaged-public-infrastructure/>

⁶⁰ Joseph Mock, SoCalGas letter to Rachel Peterson, “Re: Catastrophic Event Memorandum Account – Palisades, Eaton, and Other January 2025 Wildfires;” February 6, 2025.

building back from the L.A. County wildfires.⁶¹ This is inclusive of the energy efficiency portions of the building codes. On January 13, 2025, Mayor Karen Bass issued a sweeping executive order (Emergency EO-1) to “clear the way for Los Angeles residents to rapidly rebuild the homes lost.”⁶² As part of the EO, the City’s December 2022 Ordinance⁶³ requiring all new construction be all-electric was suspended. Such efforts are likely seeking to prioritize expediency and reduce cost, although different opinions arise as to how much additional expense all-electric homes would be compared to gas (estimates range from \$757 to \$2,500 in additional upfront costs).⁶⁴

PSPS Recovery. Many of the financial impacts of PSPS events are borne by individual customers, via economic loss from business and school closures or food and medicine spoilage. IOUs establish Community Resource Centers during PSPS events to provide battery charging, heating/cooling, and sometimes limited refrigeration capacity. IOUs likewise maintain a list of vulnerable customers who are eligible for backup power systems or prioritized during re-energization due to medical safety. Limited federal support, such as the Disaster Supplemental Nutrition Assistance Program (D-SNAP), provide benefits when SNAP recipients lose food as a result of power outages or other emergency events.⁶⁵ However much of the financial burden of PSPS recovery falls on the individual customer or community, as most insurance does not cover PSPS losses due to their being “planned” events.

Re-examining past norms. The scale of the devastation in Southern California, and the size and duration of the Santa Ana windstorms that proceeded and stoked the devastation, has caused many to reflect on past assumptions related to wildfire response in the state. Evidence suggests that judicious use of deenergization has been one factor that has led to California’s IOUs’ improved wildfire safety records since 2018. The important place that PSPS has as an effective mitigation that can be used under high wind conditions must be appropriately balanced, as overuse comes with its own set of harms and risks. Establishing routine communication protocols and continually seeking reductions of event duration should be first priorities. While the last 6 years of PSPS regulation focused on these priorities, the recent Southern California windstorms indicate more work is needed. The efforts to restore and rebuild must also be mindful of potential tradeoffs. Finding opportunities to initiate long-overdue system upgrades or enhancements as part of the restoration efforts, so long as cost and expediency are not sacrificed, should be maximized.

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⁶¹ Ordering Paragraph 5; EO N-4-25; January 12, 2025.

⁶² Press Release, Office of Mayor Bass; “Mayor Bass Issues Sweeping Executive Order to Clear Way for Angelenos to Rebuild their Homes Fast;” January 13, 2025. Emergency EO #1

⁶³ Ordinance #187714; December 10, 2022; https://clkrep.lacity.org/online/docs/2022/22-0151_ord_187714_1-23-23.pdf

⁶⁴ Sammy Roth; “Column: The Los Angeles fires are no excuse to slow down on clean energy;” *Los Angeles Times*; January 30, 2025.

⁶⁵ USDA Food and Nutrition Service; “California Disaster Nutrition Assistance” webpage; last accessed February 17, 2025; <https://www.fns.usda.gov/disaster/california#:~:text=On%20Dec.,events%20that%20began%20on%20Nov.>