RESILIENT STRUCTURES

June 18, 2025

California Office of Energy Infrastructure Safety (CalOEIS)
715 P Street, 20th Floor
Sacramento, CA 95814

RE: California Office of Energy Infrastructure Safety Docket #2026-2028-Base-WMPs; SCE 2026-2028 Base WMP R0

Resilient Structures ("RS") respectfully submits the following comments regarding Southern California Edison's 2026-2028 Wildfire Mitigation Plan (WMP).

Background on RS

RS is a global leader in the manufacture and design of high-performance Fiber Reinforced Polymer (FRP), or composite, utility poles for electric transmission and distribution applications. Made from a polyurethane resin combined with E-glass fibers, RS poles are built to resist UV damage and withstand the most challenging environmental conditions. State-of-the-art materials and production methods make them a reliable choice for utility infrastructures across a wide range of applications. Their superior strength and long service lives are validated through extensive research and a combination of full-scale mechanical, environmental and field testing.

RS composite poles improve utility wildfire risk mitigation and broader reliability and resiliency goals by:

1. **Hardening critical structures & circuits** - RS poles are non-conductive and non-combustible. They are designed to withstand windspeeds exceeding 180 mph by deflecting under extreme loads and returning to their normal position with no permanent deformation, maintaining performance and making them resilient against a variety of high-risk weather events. Due to their superior strength and the inherent self-extinguishing properties of the resin, they provide a high level of resilience under wildfire conditions. RS poles provide a highly resilient solution for supporting essential pole-mounted equipment— such as transformers, capacitor banks, regulators, and reclosers—or structures serving applications such as hospitals, fuel stations, and industrial plants. The design has been validated by successful field performance through numerous extreme climate events including: hurricanes, ice storms, wildfires, tornadoes, and derechos.

2. **Offering an alternative to structures with high installation cost** - RS poles have a service life of 80 years and do not require scheduled maintenance over their service life. In specific use cases, such as difficult to access locations (e.g., backyards, high mountain ridges, etc.) or environmentally sensitive areas, composite poles can have lower total cost of ownership than conventional poles. The lightweight, modular design of RS poles simplifies transport, accelerates installation timeframes, and reduces installation cost, making them a practical option for complex or remote installation sites.

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3. **Providing a solution in locations where conventional wood & steel structures deteriorate quickly** - RS poles are resistant to pest damage (woodpeckers & termites), rot, and corrosion. They have been proven and maintained their strength/performance around the globe in extreme environments ranging from the Arctic Circle to tropical locations with wet, humid environments.

The company was founded in 1995 and manufactured its first composite poles in 2003. Today, RS has manufacturing and distribution facilities in St. George, Utah; Houston, Texas; and Tilbury, Ontario Canada. RS poles have been deployed globally by over 500 utilities in 30 countries, including over 20,000 poles with Southern California Edison (SCE), 1,000+ poles with SDGE, 200 + poles with Pacific Gas & Electric (PG&E), and 1,000+ poles across other California utilities.

RS and SCE have forged a strong partnership since their initial collaboration in 2011, when SCE adopted the RS-Ackerman Test (summarized in **Appendix A**) for evaluating utility poles for use in high fire risk areas (HFRAs). This ultimately led to SCE's ongoing deployment of composite poles across its service territory (20,000+ to date). The utilization of composite poles by SCE is well-documented in prior General Rate Cases and WMPs, demonstrating a long-standing commitment to improving infrastructure by reducing risks from wildfire and other extreme weather events. To date, RS composite poles have demonstrated exceptional performance across a wide range of actual wildfires, including the Tick Fire in October 2019 (4,600 acres burned) and the 2020 August Complex Fire (over 1 million acres burned). Throughout all California wildfires where RS poles have been installed, they have remained intact and retained their full strength while adjacent wood poles were destroyed.

RS applauds SCE's continued efforts to reduce ignition risks and improve grid resilience across their service territory through the 2026-2028 Wildfire Mitigation Plan and other efforts. In particular, we commend SCE for implementing the full suite of wildfire mitigation solutions, including both targeted undergrounding and a range of overhead hardening strategies, based on a robust analytical approach that prioritizes risk-spend efficiency for WMP investment decisions.

In SCE's highest risk areas, targeted undergrounding, which comes at a high cost, is a sensible approach to greatly minimize future wildfire risks. Conversely, in regions of comparatively lower risk, installing lower-cost fire-resistant wraps on existing wood poles that meet loading requirements, but were not replaced during covered conductor installation (per Section 8.2.3.1 of the WMP), is a beneficial action.

Across a vast majority of high fire risk areas in SCE's territory, and especially in conjunction with the Wildfire Covered Conductor Program, when pole replacement is needed due to loading requirements or inspection results, composite poles offer significant wildfire risk mitigation benefits in a cost-effective manner. Additionally, in high-risk areas where undergrounding is not feasible due to geographic, financial, or timeline constraints, composite poles, coupled with other overhead grid hardening initiatives, offer significant levels of risk reduction.

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RS encourages SCE and the CalOEIS to continue to take a risk-focused approach and deploy tailored risk mitigation strategies without option for blanket, one-size-fits-all approaches.

RS is grateful for the opportunity to provide these comments. We welcome the opportunity to have follow-on conversations with interested stakeholders to provide more detail on composite poles and their capabilities. We look forward to working with Energy Safety and SCE to achieve the objectives of the 2026-2028 Wildfire Mitigation Plan.

Respectfully submitted,

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Appendix A: Southern California Edison and the RS-Ackerman Test

In 2011, RS Technologies collaborated with Professor Mark Ackerman from the University of Alberta to establish and rank wildfire environmental criteria (previously undocumented in the Utility Industry) and to develop a full-scale fire test method that realistically simulates moderate, severe, and extreme wildfire conditions impacting utility poles. This method, known as the RS-Ackerman test, involves embedding a full-sized pole in the ground and surrounding its base with a 10-foot steel shroud. Propane burners introduce flames through openings in the shroud, rapidly exposing the pole to peak temperatures up to 2,332°F (1,278°C) and total heat fluxes of 16,540 kW-s/m^2 over established test durations. After exposure, the pole undergoes a vertical bend test to assess any strength loss due to fire damage. The RS pole successfully survives the testing criteria by achieving an ultimate (breaking) strength well above published maximum loading levels thereby ensuring the RS pole will survive these wildfire conditions.

Southern California Edison (SCE) adopted this rigorous testing protocol to evaluate and enhance the fire resilience of their utility poles, particularly in high fire-threat areas. The RS-Ackerman test's realistic simulation of wildfire conditions provided SCE with confidence in deploying composite poles across their distribution network. These composite poles demonstrated exceptional performance across a wide range of actual wildfires, including the Tick Fire in October 2019 (4,600 acres burned) and the 2020 August Complex Fire (>1 million acres burned), where they remained intact while adjacent wood poles were destroyed.

To verify composite pole strength after real world severe fire exposure, SCE removed four RS composite poles from service that had been exposed to actual fires to perform full-scale bend testing to failure, and found that the results were consistent with new poles and RS's published pole performance parameters - indicating that the fire exposure had little to no impact on pole strength and stiffness. This validation led SCE to successfully Rate Base composite poles by integrating them into their Wildfire Mitigation Plan strategy, targeting the replacement of approximately 40% of poles in high fire-risk regions with composite poles.

Today, more than 20,000 RS composite poles are deployed across the SCE service territory in a wide range of High Fire Risk and Grid Resiliency applications.

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