



September 1, 2021



# Resilient Grid VIII Functional Exercise

Emergency Operations Center  
After-Action Report

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# Exercise Overview

<b>Exercise Name</b>	Southern California Edison (SCE) Resilient Grid VIII (RGVIII) Functional Exercise (FE)
<b>Exercise Date</b>	August 19, 2021, 8:00 a.m. – 5:00 p.m. PDT
<b>Scope</b>	This exercise provided an opportunity for SCE personnel with Incident Support Team (IST), Incident Management Team (IMT), and Business Continuity Team (BCT) roles, along with SCE personnel with other incident responsibilities, to exercise their roles and responsibilities. The exercise also provided an opportunity for personnel to evaluate company preparedness, coordination, and response capabilities. Further, the exercise assisted in building cooperative relationships among internal and external partners.
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Demonstrate SCE's ability to effectively coordinate and execute the response to a complex and multi-incident event in multiple locations throughout the service territory.</li> <li>2. Demonstrate the ability to provide timely and accurate communications, both internally and externally to SCE, in accordance with established SCE plans and guidelines.</li> <li>3. Evaluate the capability of the Dedicated Public Safety Power Shutoff (PSPS) Team to fully integrate and operate in SCE's response structure during a complex incident.</li> <li>4. Demonstrate the ability to activate and execute the SCE Storm Plan and the Electricity Emergency Action Plan, as well as established PSPS protocols and procedures.</li> <li>5. Evaluate SCE mutual assistance protocols in response to multiple-incident events in multiple locations throughout the service territory.</li> </ol>
<b>Scenario</b>	Complex wildfires with Public Safety Power Shutoffs and rotating outages during a heat storm.
<b>Points of Contact</b>	<u><a href="#">[Employee Name Removed]</a></u>

## Exercise Summary

This was the eighth annual exercise in the Resilient Grid series held by SCE. As in previous Resilient Grid exercises, this exercise provided an opportunity to evaluate overarching company preparedness, coordination, and response capabilities as well as specific roles and responsibilities of participating SCE personnel. In addition to exercising roles and responsibilities, the exercise also assisted in building cooperative relationships among and between internal and external partners during a complex wildfire scenario with PSPS and heat storm conditions.

The simulated hazards threatened different facets of SCE infrastructure and challenged players to respond in real-time to solve operational concerns. In particular, this exercise used a regional heat wave weather scenario that resulted in rotating outages, public safety power shutoffs, and wildfires. This required participants to respond to power outages, load shed directions, proactive mitigation to avoid sparking fires, and responding to structural impacts from wildfires and heat. In addition to operational impacts, the scenario drove public and customer messaging, inter-agency coordination, and resource allocation.

Participants worked through the established incident command process, utilizing all pertinent plans, policies, and procedures in response to the proposed scenario.

Due to COVID-19, personnel participated virtually in this exercise via Microsoft Teams.

The exercise was designed and developed at the direction of the SCE Business Resiliency Department and in close consultation with trusted agents from organizations within SCE. Feedback and input was solicited from several state agencies, communications providers, representatives of the Access and Functional Needs (AFN) community and other public safety partners within the SCE service area, and to the extent possible incorporated into exercise play.

## Exercise Control and Evaluation

Evaluators were assigned to each section to evaluate whether critical objectives were met. All primary staff sections in the Emergency Operations Center (EOC) were assigned controllers from SCE and evaluators from Hagerty Consulting. The exercise had a SimCell led by a team from Prestige Analytics. Exercise observation and evaluation assessed the flow of information, coordination, and communication between IMTs and completion of exercise objectives.

## Scenario Overview

This complex exercise scenario included four simulated wildfires, a simulated PSPS event involving approximately 72 distribution and transmission level circuits, a simulated significant heat storm, and simulated rolling power outages. The start of the exercise (StartEx) took place 48 hours into a simulated significant heat storm event. At StartEx, teams engaged with a power outage task force due to warnings issued by the California Independent System Operator (CAISO). The first simulated fire started in Ventura County 24 hours after the simulated heat storm began. The simulated heat storm and wildfire affected 16 SCE districts and triggered evacuations

when 2,000 acres burned. The second simulated fire, the Highland Fire, occurred in the San Geronio Pass in the Southeast portion of SCE's territory. In the early afternoon of the exercise, a third simulated fire, the Cherry Fire, erupted in Los Angeles and caused disruption to power lines. An hour later, the simulated Hook Creek fire in San Bernardino County was reported, which led to evacuations in Lake Arrowhead. Additionally, simulated PSPS events and additional power outages occurred, adding to the complexity of the scenario.

## Exercise Assumptions and Artificialities

As in any exercise, assumptions and artificialities were necessary to complete play in the time allotted and to account for logistical limitations. Participating teams and OUs had to balance exercise play with extenuating circumstances and prioritize real-world emergencies.

### Assumptions

Assumptions constitute the implied factual foundation for the exercise and were in place before the exercise started. The following assumptions applied to the exercise:

- The exercise was conducted in a fully evaluated environment wherein teams' capabilities, plans, and processes were assessed.
- The exercise scenario was plausible, and events occurred as they were presented.
- Exercise simulation was realistic and plausible and contained sufficient detail from which players could respond as if the simulated incident were real.
- Timelines and duration of specific scenario events were condensed to accomplish exercise objectives.
- All SCE personnel operating remotely or away from the Emergency Operations Center (EOC) had power and access to the resources they needed to respond and participate while operating in a virtual environment.
- Unless specified through a scenario inject, simulated healthcare facilities, supply chains, and essential services were operating at real-world capacity.

### Artificialities

During this exercise, the following artificialities applied:

- Exercise communication and coordination was limited to designated participating exercise agencies/organizations, venues, individuals, and the Simulation Cell (SimCell).
- Certain SCE-related disruptions/impacts were simulated and did not affect real-world operations in any way.

# Exercise Analysis

## Analysis Overview

The following sections were evaluated during the RGVIII FE and are addressed in this AAR:

- Logistics Section and Finance & Administration Section
- Operations Section – Public Safety Power Shutoffs (PSPS) Branch
- Operations Section – Storm Response
- Operations Section – Rotating Outage Task Force
- Planning Section
- Unified Command and Command Staff

## Evaluation Disclosure

Throughout the exercise there were several actions taken by exercise players that may have been unobservable due to virtual platform accessibility restrictions for some evaluators. The following analysis of exercise play **was** performed by assessing the actions that were able to be observed by evaluators.

## Analysis Format

There are two primary components of feedback provided for each functional area or topic covered in this report: observed strengths and identified areas for improvement. The strengths are highlighted to ensure the elements that led to successful response operations are not unintentionally changed while pursuing improved performance for response activities. Areas for improvement are provided to be used in the implementation of the improvement plan following the exercise. Each area for improvement includes observations and an analysis of the issue.



## Observed Strengths

### Logistics and Finance & Administration Sections

**Strength 1:** The Finance & Administration Section properly utilized organizational concepts and skills and exhibited strengths working with internal plans and serving in roles for the good of the team. Team members were all given roles and tasks for which they were responsible, and plans were made for specific follow up at given times and places. All team members consistently worked together to gather information, share information they possessed with the group, and identify other parties with which communication was necessary. The section appeared capable of managing their complex tasks, especially following group brainstorming sessions that allowed for learning opportunities.

### Operations Section – Public Safety Power Shutoffs (PSPS) Branch

**Strength 2:** The PSPS IMT displayed strong response capabilities reflecting their training and activation frequency.

### Operations Section – Storm Response

**Strength 3:** Players addressed problems and challenges by coordinating and working together. The team effectively determined objectives and developed a strategy to address the challenges presented to them. Additionally, the Branch effectively coordinated with other organizations to gather data related to the status of SCE facilities, changing weather conditions, impacts to generation, transmission, and distribution, and other pertinent incident information.

### Operations Section – Rotating Outage Task Force

**Strength 4:** The Rotating Outage Task Force members communicated well as a group and appeared comfortable and familiar with their roles. When the Task Force Leader approached each person on the team, there was no hesitation relaying their actions for the given scenario. The Rotating Outage Task Force identified which blocks were next for rotating outages, and the Storm Chief confirmed at the DOC level that no priority customers needed to be skipped on the identified circuits. The team accurately identified what notifications would be made when, along with how they would be delivered. The team was proactive in identifying future actions and preparing for further load shed directions.

**Strength 5:** The team appropriately recognized the need to abide by the FERC Standards of Conduct while sharing information given that a market function employee was part of the group.

### Unified Command

**Strength 6:** The IST Incident Commander (IC) effectively and appropriately assigned roles and responsibilities to Deputy ICs, which resulted in evenly distributed workloads across the team.

**Strength 7:** The Unified Command staff utilized a collaborative and proactive approach to messaging. The PIOs demonstrated strengths utilizing their existing SCE Plans to accomplish their roles and showed significant transparency and collaboration in the process. The PIOs were active, extremely responsive, and engaged throughout the exercise, providing a steady stream of “one voice” messaging to address the incident.

## Areas for Improvement

### Incident Leadership

**Area for Improvement 1:** Functional areas such as the Rotating Outage Task Force and groups/teams dealing with PSPS and Storm Response tended to silo response activities and could have shared information more broadly across the response structure.

**Analysis:** This shortcoming reduced the effectiveness of the broader team in managing the overall incident.

### Planning Section Efficiency

**Area for Improvement 2:** The Planning Section was overly focused on producing an Incident Action Plan (IAP) for the following operational period.

**Analysis:** The Planning Section should have invested more time in creating and sharing a common operating picture as the incident unfolded. Had the Planning section done this, the IMT would have been more effective.

### Process

**Area for Improvement 3:** The generator request process was not properly followed.

**Analysis:** This could have resulted in requests being misdirected or delayed, neither of which is beneficial nor supportive to the requesting organization.



## Appendix A: Improvement Plan

Issue/Area of Improvement	Corrective Action	Primary Group Responsible	Group POC	Start Date	End Date
<b>Incident Leadership</b> Functional areas such as the Rotating Outage Task Force and groups/ teams dealing with PSPS and Storm Response tended to silo response activities and could have shared information more broadly across the response structure. This shortcoming reduced the effectiveness of the broader team in managing the overall incident.	During training and requalification reinforce the importance of effective Command and General Staff meetings and expectation setting.  During training and requalification share best practices for managing remote operations.	Business Resiliency	[Employee Name Removed]	10/1/2021	3/31/2022
<b>Planning Section</b> The Planning Section was overly focused on producing an Incident Action Plan (IAP) for the following operational period and should have invested more time in creating and sharing a common operating picture as the incident unfolded. Had the Planning section done this, the IMT would have been more effective.	Drive greater consistency and quality in the Planning Section by staffing it with personnel from Business Resiliency who are both trained and practiced in executing this role.	Business Resiliency	Employee Name Removed	10/1/2021	3/31/2022

Issue/Area of Improvement	Corrective Action	Primary Group Responsible	Group POC	Start Date	End Date
<b>Process</b>  The generator request process was not followed. This could result in requests being misdirected or significantly delayed.	Brief the new process at the Dedicated PSPS IMT staff meeting.	Business Resiliency	[Employee Name Removed]	10/6/2021	10/6/2021