

Microgrid and Resiliency Strategies OIR (R. 19-09-009)

SCE's Proposal of 2020 Microgrid and Resiliency
Activities to Mitigate Impacts of PSPS and Wildfires

January 27, 2020

SCE's Proposal of Microgrid and Resiliency Activities in 2020 and Response to ALJ Ruling

In its January 21, 2020 filing, SCE discusses a new 2020 PSPS microgrid pilot, in-flight microgrids and microgrid-related activities in SCE's service territory, and ongoing wildfire and PSPS mitigation/resiliency strategies.

- SCE views PSPS resiliency as reducing the frequency of PSPS events, reducing the number of customers affected by those events, and reducing the duration of those events.
- While SCE recognizes the potential of microgrids to help achieve these goals, other resiliency activities (e.g. grid hardening, grid sectionalization, and establishing CRCs), will also help SCE to achieve its PSPS resiliency goals, and may be the most cost-effective long-term solutions.

Summary of SCE's Proposal: SCE's 2020 PSPS Microgrid Pilot

SCE is piloting an approach to determine where on SCE's grid multi-customer microgrids have the best potential to cost-effectively mitigate PSPS impacts (shortlist on next slide).

Pilot objectives

- 1) Demonstrate accelerated deployment of microgrid solutions to provide near-term benefits to customers to mitigate the impacts of PSPS
- 2) Demonstrate microgrid control and communication capabilities that will allow SCE to, over time, incorporate advanced, clean, renewable technologies, including customer-owned distributed energy resources (DERs), and minimize (and eventually eliminate) the use of fossil fuel for microgrids

Expected Learnings from Pilot Deployment

- 1) Lessons learned regarding accelerated deployment of a microgrid
- 2) Designing a microgrid for PSPS resilience specifically
- 3) Designing a microgrid that can be modified over time and to eliminate fossil fuels
- 4) Designing and operating a microgrid to include customer-owned BTM DERs
- 5) Partnering with third parties on microgrid development

Summary of SCE's Proposal: SCE's 2020 PSPS Microgrid Pilot Candidate Selection Approach

Begin with high frequency PSPS circuits (2+ events in 2018-19)

64

Filter for locations that can safely remain energized during PSPS

36

Screen out locations that already have other planned mitigations

25

Prioritize candidate locations based on key criteria & establish shortlist

6

Six candidate locations identified in Los Angeles, Riverside, San Bernardino, and Ventura counties. Next, SCE will evaluate vendor proposals and determine final microgrid locations



X = number of circuits remaining

Summary of SCE's Proposal: In-flight Microgrid and Resiliency Activities

In-flight Microgrid and Microgrid-Related Activities, Pilots, & Demos

Fort Irwin Microgrid
Smart City EPIC III Demo
Control and Protection for Microgrid and VPP EPIC III Demo
Solar + Storage Customer Resiliency Pilot

Customer-Requested Microgrids

Port of Long Beach
Lancaster
Montecito

Other Resiliency Strategies

Circuit-specific Evaluation and Planning
IQCC Customer Battery Backup Incentive Program
Customer Resiliency Equipment Incentive Pilot
Community Resource Centers
Remote Controlled Switches
Circuit Sectionalization
Updating and Refining SCE's Risk Models that Inform PSPS Decisions