

SDG&E Response to ALJ Ruling Microgrid OIR Track 1

January 27, 2020



SDG&E PSPS Resilience Update



- SDG&E's efforts to mitigate wildfire risks and enhance system resilience come from its experience since 2007 fires and represent ongoing efforts preceding this Microgrid OIR
 - Mapped our entire system based on fire risk in 2008
 - Focused on hardening and situational awareness efforts in the highest-risk areas
 - Meteorology program includes 190 weather stations, permitting early warning of fire threats and more specific targeting of PSPS, including duration
 - Ongoing efforts to improve sectionalizing capability, to enable detailed segmentation at a more granular level minimizing customer impacts
 - Extensive cooperation and planning with local governments and state agencies
 - Robust customer outreach and education program
- Ongoing system resiliency activities already in process as authorized in other proceedings, notably the Wildfire Mitigation Plan ("WMP"), and as reported in the Risk Assessment Mitigation Phase ("RAMP") report
- With increasing impacts from climate change, community growth, and other societal forces, we continue to review and refine our wildfire risk mitigation strategy to reduce adverse impacts



Microgrid OIR | Track 1 Proposed Activities



SDG&E has proposed two projects to further mitigate the impacts of PSPS events and promote microgrid deployment that could potentially be in-service by the end of 2020:

1. Procurement of a Local Area Distribution Controller (“LADC”), or field level microgrid controller

- A proprietary software and hardware solution developed by an SDG&E affiliate, PXiSE, selected after a thorough RFP process monitored by an independent evaluator, and conducted in compliance with the Affiliate Rules
- Enables grid operator to monitor, manage and control the component resources of the microgrid; key to timely microgrid implementation
- Provide resiliency through black-start (via grid-forming DER), minimal-impact island transition, and load-shedding

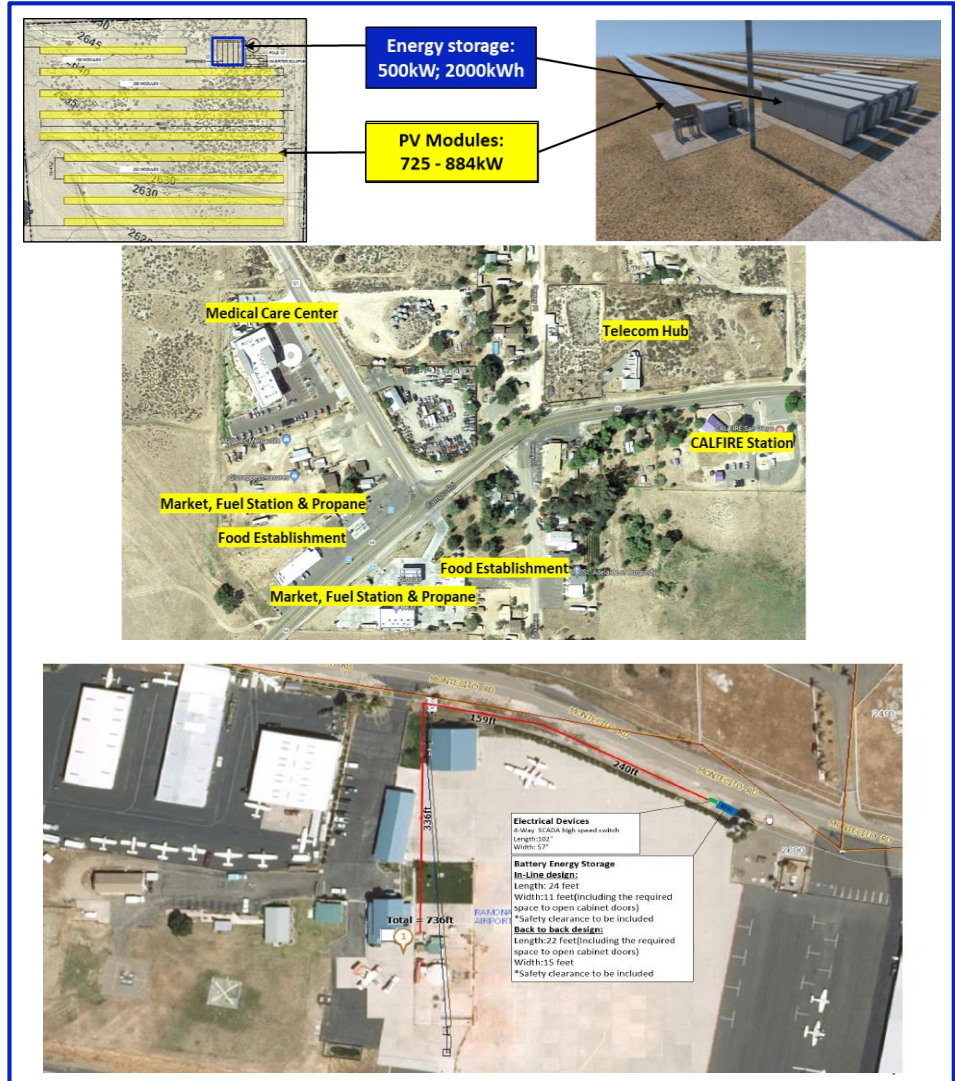
2. Electric Vehicle Charging Infrastructure

- Installed at critical facilities within the microgrids that SDG&E is deploying in anticipation of the 2020 fire season
- Supports customer mobility, including emergency evacuation
- Installed behind a utility meter, and charging on a EV-TOU time-varying rate
- For microgrid and resiliency purposes, proposing an end-to-end infrastructure, including EV charging stations



WMP Microgrid Planned Activities

- SDG&E has three microgrid projects currently in development that could be in-service by the end of 2020: Cameron Corners, Ramona Air Attack Base, and Desert Circuit 221
- SDG&E is deploying these microgrids consistent with its current Commission-approved 2019 WMP “Backup Power for Resilience” program
- Microgrid selection criteria is reported in SDG&E’s RAMP filing





WMP Microgrids | Project Detail

- **Cameron Corners**

- Low income community located in Tier 3 HFTD
- Serves critical customers including a medical care facility, CAL FIRE station, telecom switching center, gas (and propane) stations, convenience stores and local food establishments
- Sustainable solution utilizing renewable resources and storage, displaces known fossil fuel back-up generation
- 725-884 kW solar photovoltaic array, 2,000 kWh energy storage resource; both the microgrid generation assets and necessary SCADA switches coordinated and controlled via local area distribution controller (LADC)

- **Ramona Air Attack Base**

- In Tier 2 HFTD, and directly adjacent to a low income community
- Serves critical customers; CAL FIRE Air Support, United States Forest Service Air Support, and fire-retardant mixing stations
- Phase 2 may integrate a nearby waste water treatment facility
- 2,000 kWh energy storage resource; both the microgrid generation assets and necessary SCADA switches coordinated and controlled via LADC

- **Desert Circuit 221**

- Low income community, distribution line feeding this community runs through Tier 3 HFTD
- Island all residential customers, and critical customers (San Diego Country Fire Station and Community Center)
- Potentially leverage available behind-the-meter, third-party owned distributed energy resources (DERs)



A  Sempra Energy utility®

Q&A