

Multi-Customer Microgrid for Enhanced Resilience at Arcata-Eureka Airport

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MISSION

Design, test and integrate innovative solutions to accelerate PG&E's transition to the sustainable grid of the future.

OBJECTIVES

Enable and operate a multi-customer microgrid in grid-connected and islanded modes to satisfy community demand for enhanced resilience.

Demonstrate a viable and replicable model for how to plan, deploy and operate multi-customer microgrids in California.

(1) Single-customer facility

Description

- Customer-side of the meter
- Military bases, prisons, commercial facilities, campuses, hospitals

Key Drivers

- Customer reliability & resilience
- Avoided customer outage costs

Example

- Blue Lake Rancheria (operational)



(2) Remote

Description

- Utility-sponsored projects, typically hybrid ownership (e.g., utility-owned distribution assets, customer-owned DG)

Key Driver

- Potential T&D alternative in remote locations

Example

- Angel Island (planning)



(3) Multi-customer on-grid

Description

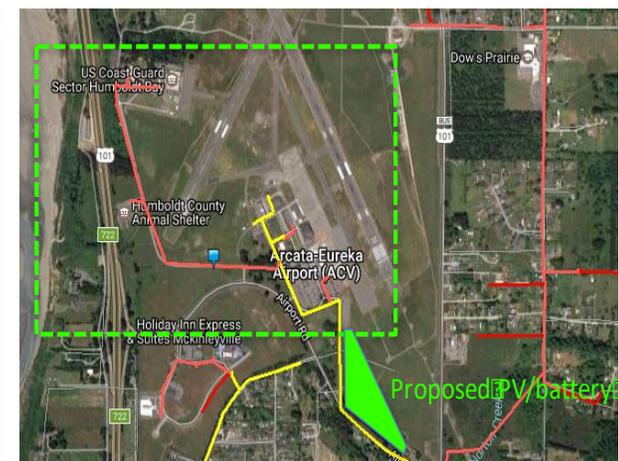
- Typically cities seeking to enable critical facilities to island in the event of broader grid outage and enhance local resilience

Key Driver

- Community resilience

Example

- Arcata Airport (planning)



Technical Design

- Interconnection and service planning
- System protection design

Operations Integration

- Controls architecture for islanding operations
- System telemetry to the PG&E Distribution Control Center
- Communications and cybersecurity protocols
- Advanced controller testing and validation

Replicability

- Equipment standards development
- Experimental microgrid tariffs and future business models

- PG&E is responsible for delivering safe and reliable power to all microgrid customers in both islanded and grid-connected modes.
- This project will demonstrate replicable approaches for deploying multi-customer microgrids – a step ahead of the Senate Bill 1339.
- There are opportunities for innovative collaborations to design first-of-its-kind microgrid systems in California.

Thank you.

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