



The Role of Microgrids in the Aftermath of Wildfires & Public Safety Power Shutoffs

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PSPS: Devastation leads to opportunity

- ◆ Achieving true resilience and decarbonization will require us to rethink how we modernize our grid and value distributed energy resources.
- ◆ Microgrids necessitate that policymakers rethink the planning, project management and construction process for building a cleaner, safer, resilient, and more technologically advanced grid.
- ◆ MRC encourages policymakers to reimagine the roles of the utility, developers, customers, and the regulatory model that governs the power sector and energy markets.
- ◆ Be bold and forward thinking – embrace and nurture innovation in clean energy technology and market diversity.

Governor's Office

- ◆ Resiliency, decarbonization, and climate adaptation are prominent in the Governor's proposed budget.
- ◆ Over \$12 Billion is being allocated to climate change mitigation efforts across the board and reflected in the Governor's 2020 Proposed Budget
 - ◆ Issued January 10, 2020
 - ◆ May revise in the Spring
 - ◆ Final budget approved by June 15, 2020
- ◆ The Governor's office is working with several legislators on budget bills that will direct the allocation of funds to state agencies and local governments.
- ◆ Community Resilience & Climate Adaptation
 - ◆ SB 45 (Allen, et al.) - \$5.5 BILLION Resiliency Bond
 - ◆ Wildfire Mitigation, forest health, vegetation management, biomass energy
 - ◆ Decarbonization and GHG emissions reduction – prioritize DAC and vulnerable pop.

California Microgrid Legislation

2018

- ◇ **SB 1339 (Stern) – 2018**
 - ◇ Directs the CPUC to create interconnection process and separate tariffs *as necessary* to facilitate the commercialization of microgrids by Dec 2020.
 - ◇ Concerns about cost-shifting by many legislators and opposition by utilities and labor
 - ◇ Passed out of legislature on 8/31/19
 - ◇ Signed into law September 2018
 - ◇ Camp Fire and PSPS had not happened at this point

2019-2020

- ◇ **SB 774 (Stern) – 2019 – 2020**
 - ◇ Supports the development of microgrids for critical facilities and accelerate the growth of microgrids by building on SB 1339
 - ◇ Focus on local government procurement of microgrids and removing regulatory barriers not addressed in 1339
 - ◇ MRC advocating for addressing standby charges, over-the-fence rules, and easing public procurement process
 - ◇ Status: Currently in Assembly U&E, hearing not set

California Microgrid Regulation

- ◆ CPUC Order R.19-09-009 (2019 – 2020) implementation of SB 1339
 - ◆ Scoping Ruling issued December 2019
 - ◆ Amended topic to include “and resiliency strategies” to address issues with PSPS
 - ◆ Breaks proceeding into 3 tracks: short, medium, long term solutions
 - ◆ Track 1 – utility and staff proposals for near-term solutions
 - ◆ Focus on critical facilities, local government data access, and actions that can be taken before 2020 fire season
 - ◆ Opening comments for Track 1 due January 30th – over 50 parties commented
 - ◆ Reply comments for Track 1 due February 6th
 - ◆ Track 1 expected to conclude in March 2020; Track 2 scope issued soon after

Commercializing Microgrids

Opportunities

- ◆ **Microgrid project siting at public, critical and essential service facilities**
 - ◆ Schools, community centers, local govt, grocery stores, gas stations, etc.
- ◆ **Blue sky conditions:**
 - ◆ Provides grid services to the utility
 - ◆ Cost savings and clean energy to customers
- ◆ **Black sky conditions:**
 - ◆ Provide backup power to facilities
 - ◆ Serve as resiliency centers for the community
- ◆ **Microgrid Services Agreements**
 - ◆ Shift CAPEX to OPEX
 - ◆ Asset and risk management
 - ◆ Compensation for public benefits

Challenges

- ◆ **Regulatory barriers**
 - ◆ PU Code exemptions or changes needed
 - ◆ Flexibility in interpretation of laws
 - ◆ Over the fence, right of way regs
 - ◆ Definition of a Public Utility/Electrical Corp
- ◆ **Interconnection**
 - ◆ Lengthy timelines for development and interconnection
 - ◆ Uncertainty and lack of transparency with interconnection costs
- ◆ **Market Participation**
 - ◆ Allow microgrids to easily access and participate in markets for services
 - ◆ Encourage multiple use applications
 - ◆ Utilities develop tariffs specifically for microgrids

Addressing microgrid roadblocks

Technical barriers

- ◇ Pairing technologies
 - ◇ Acknowledge generation, storage, and controls as distinguished and different
 - ◇ Utilities should evaluate the aggregate performance of microgrids with multiple resources with respect to interaction with the larger grid
- ◇ Address sizing issues
 - ◇ Remove nameplate capacity limits and allow sizing flexibility
 - ◇ Allow projects to be sized to meet customer/community needs during an emergency.
- ◇ Streamline interconnection process
 - ◇ Develop standardized process that makes pairing technologies and sizing for resiliency easier in the interconnection process
 - ◇ Establish standard and transparent interconnection costs up front

Financial barriers

- ◇ Departing load charges
 - ◇ Exempt critical facility and public agency microgrids from PCIA charges
- ◇ Standby charges
 - ◇ SBCs are calculated assuming an improbable worse case scenario that does not reflect the practical reality of grid operations and customer behavior in the real world
 - ◇ SBCs should be minimized and develop clear rules for maximum charges
- ◇ Interconnection costs
 - ◇ Conduct a thorough review of all interconnection costs and identify opportunities for reduction or elimination of excessive fees
 - ◇ Special Facilities Agreements, ITCC taxes, cost of ownership, and other costs need to be reexamined

Longer term solutions

Market mechanisms

- ◆ Create a resilience tariff
 - ◆ Encourage longer duration resources that have the ability to island
 - ◆ Critical facility public benefit payments
- ◆ Support hybrid microgrids and facilitate public-private partnerships
 - ◆ Non-utility operated microgrids that use utility wires are 100% feasible. They require reasonable payment for use of utility wires and grid infrastructure
 - ◆ In other states payment is determined through *collaborative* negotiation and partnerships between parties
- ◆ Create more pathways for microgrids to participate in wholesale, local capacity and ancillary services markets

Policy

- ◆ Revise regulations to enable community-level microgrids
 - ◆ CA PU Code 218 over-the-fence rule
- ◆ Establish roles and requirements for microgrid owners and/or operators
 - ◆ Rules and cost recovery for being single point of interconnection at the grid edge
 - ◆ Establish safety and liability provisions
 - ◆ Commitment to decarbonization in line with state 100% goal timelines
- ◆ Microgrids prioritized as lower risk alternatives for grid investment
 - ◆ Explore remote grids as alternatives to investments in new transmission infrastructure for rural communities

Microgrids & PSPS: The Opportunity to Revolutionize the Power Sector

- ◆ **Microgrids can provide solutions to many California climate policy goals:**
 - ◆ Resiliency and mitigating outages, whether planned or unplanned
 - ◆ Integrating high penetration of DERs and balancing renewable resource intermittency
 - ◆ Building decarbonization and energy efficiency
 - ◆ Electric vehicle demand integration
 - ◆ Resource Adequacy and capacity constraints
 - ◆ Prioritize communities and equity in energy planning
- ◆ **California should boldly lead the way in facilitating the commercialization of a robust and diverse microgrid market *as is the statutory intent of the microgrid legislation***
- ◆ ***Microgrid market development will have the effect of managing the impacts of PSPS, addressing the critical resiliency needs of communities, and advancing state climate and sustainability policy goals***

What is the value of Resiliency?

Q&A – Thank You!

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