# Policy & Market Mechanisms for Microgrids:

## Opportunities & Challenges in the West Coast

Allie Detrio
Senior Advisor, Microgrid Resources Coalition
Chief Strategist, Reimagine Power Inc.

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# Microgrids: The Opportunity to Revolutionize the Power Sector

- 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.

# West Coast Microgrid Policy

## California

### Legislative

- 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.
  - Passed and signed into law September 2018
- SB 774 (Stern) – 2019 – 2020
  - Support 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
  - Status: Currently in Assembly U&E, hearing not set

### Regulatory

- CPUC Order R.19-09-009 (2019 – 2020)
  - Scoping Ruling issued December 2019
  - Breaks proceeding into 3 tracks: short, medium, long term solutions
  - Expected to take ~24 months

## Hawaii

### Legislative

- Act 200 (HB 2110) – 2018
  - Directs the HPUC to develop a Microgrid Services Tariff to accelerate microgrid deployment
  - Passed and signed into law July 2018
- HB 1583 (Lowen, et al) – 2019 – 2020
  - Authorizes the Department of Education to evaluate feasibility of microgrids to provide backup power in emergencies
  - Status: Currently in House; carried over to 2020 legislative session resumed January 15th

### Regulatory

- HPUC Docket 2018-0163 – 2019 – 2020
  - Order issued instituting the creation of working groups for interconnection and market facilitation
  - Initial tariff proposals due January 2020
  - Final tariff proposal report due March 2020
  - Work ongoing, decision and order expected April 2020

# 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
  - Establish more concrete timelines within each stage of the process and require IOUs to meet those timelines

## 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
- Transmission Access Charges
  - Reassess TAC and ensure that associated costs fairly reflect actual use of transmission by microgrids
- 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: The Opportunity to Revolutionize the Power Sector

- Microgrids can provide solutions to many West Coast 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 and Hawaii should boldly lead the way in facilitating the commercialization of a robust and diverse microgrid market *as is the statutory intent of the states' 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!

Allie Detrio
Senior Advisor, Microgrid Resources Coalition
Chief Strategist, Reimagine Power Inc.
allie@reimagine-power.com