EAST BAY COMMUNITY ENERGY

RESILIENCE AND RA FROM DISTRIBUTED BATTERIES

PRESENTED BY: JP ROSS

DATE: DECEMBER 12, 2019

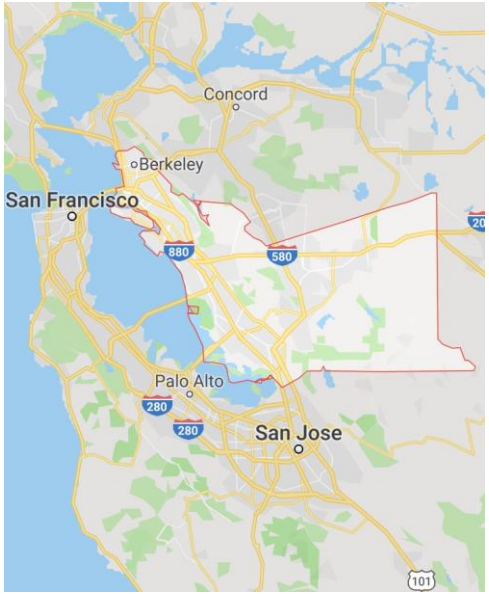
AGENDA

- EBCE Resilience Activities
- PSPS Impacts
- Overview of Joint LSE RFP for Resilience and RA
- Challenges and Potential Solutions to Valuing BTM Batteries for RA

EAST BAY COMMUNITY ENERGY

WHAT IS EBCE?

- East Bay Community Energy (EBCE) is the Community Choice Aggregator (CCA) for Alameda County
- Electric utility serving 560k meters/1.3M residents
- Annual load of 6TWh
- Board oversight by elected officials
- EBCE reinvests earnings back into the community to create local green energy jobs, local energy programs, and clean power projects



EBCE Electricity Products

Bright Choice

Brilliant 100

Renewable 100

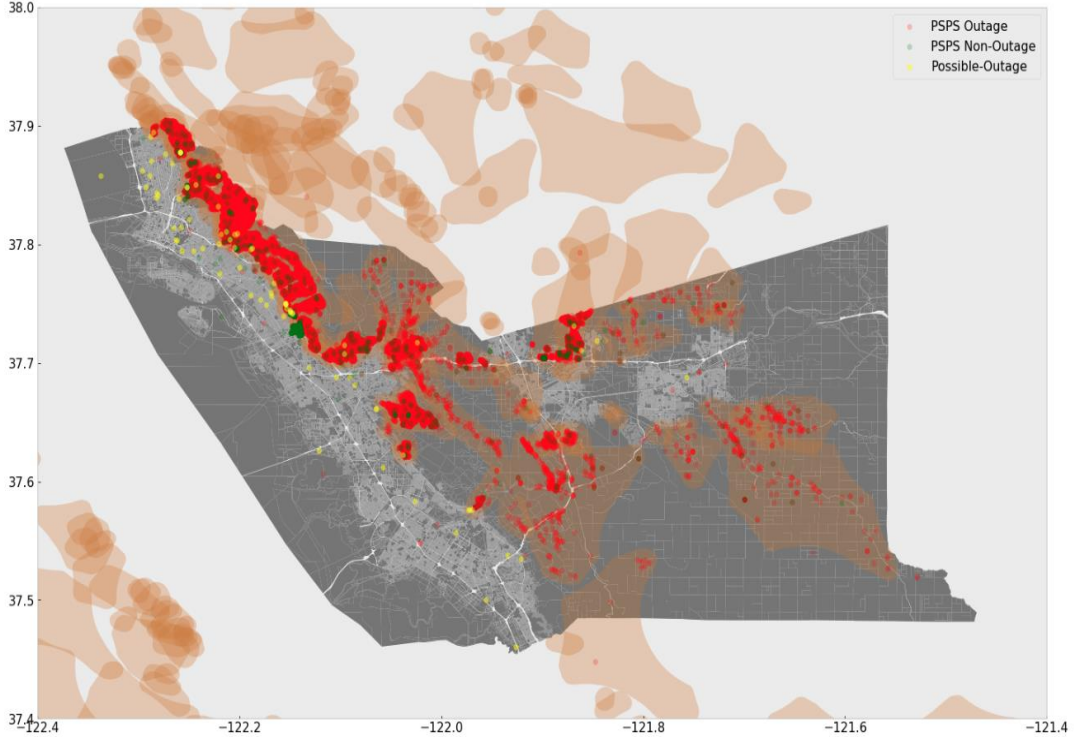
EAST BAY COMMUNITY ENERGY

EBCE RESILIENCE ACTIVITIES

- Solar + Storage for critical facilities
  - BAAQMD supported grant to identify critical facilities in Alameda and San Mateo Counties and issue solicitation for installation services
- **Solar + Storage RFP for Resilience and Resource Adequacy**
  - **Solicitation for 32.7 MW of RA from distributed storage across 4 LSEs**
- Medical Baseline Resilience Program
  - Develop resilient power solutions for medical baseline customers endangered by PSPS events

EAST BAY COMMUNITY ENERGY

EBCE PSPS IMPACTS



- PSPS events impacted over 50,000 EBCE accounts
- Over 1,000 medical baseline customers impacted
- ~300 customers not on shutoff list exhibited load reduction similar to impacted customers (yellow)
- >1,300 accounts that expected a shut-off did retained power (green)

EAST BAY COMMUNITY ENERGY

JOINT LSE RFP FOR RESILIENCE AND RA

EAST BAY COMMUNITY ENERGY

RFP PURPOSE: RA + RESILIENCE

EBCE, PCE, SVCE and SVP issued an RFP on 11/ 5 seeking proposals for a minimum of 32.7MW of cost-effective Resource Adequacy (RA) from behind the meter Solar & Storage systems. Systems will deliver resilience for customers during PSPS events.

EAST BAY COMMUNITY ENERGY

RFP GOALS

- Expand the market for distributed RA capacity and accelerate the adoption of DERs in our service territories.

- Support the deployment of meaningful resilience projects for our customers to address Public Safety Power Shutoff (PSPS) impacts.

- Procure economically viable and competitive RA capacity.

EAST BAY COMMUNITY ENERGY

RFP SUMMARY

- Pursuing at least 32.7MW of Local RA. 10MW for each CCA and 2.7MW for SVP
- Residential and Commercial accounts are eligible
- Minimum 50% deployed on residential accounts and priority set asides for CARE/FERA, DAC, Low Income and medical baseline
- RA expected to be online in 9/20 and 9/21 for RA filing and fire seasons
- New and Existing solar, solar & storage systems that provide backup power are eligible
- PDR is expected RA mechanism, creative approaches that fully value BTM batteries will be considered

EAST BAY COMMUNITY ENERGY

GO TO MARKET

- LSEs looking for creative approaches to enrolling customers
- Vendors will work propose a strategy for driving deployment of the portfolio of aggregated DER systems and working with LSEs to enroll customers
- LSEs provided anonymized interval data with rooftop solar potential for 5% of commercial accounts to assist vendors with pricing bids
- LSEs will make marketing assets available to target priority customers (CARE/FERA, Medical baseline, DAC and Low-Income Communities) to lower acquisition costs

EAST BAY COMMUNITY ENERGY

DELIVERING RESILIENCE AND RA WITH DISTRIBUTED BATTERIES

EAST BAY COMMUNITY ENERGY

BATTERIES AND PDR

- Administrative constraints undervalue behind the meter (BTM) batteries for Resource Adequacy and will delay deployment

1. PDR does not compensate for exports, so RA value is limited to customer load, up to 80% of battery capacity in residential applications
2. The Load Impact Protocol, which requires a year of operating history and is set annually is not applicable to smaller, rapidly scaling technologies, like batteries

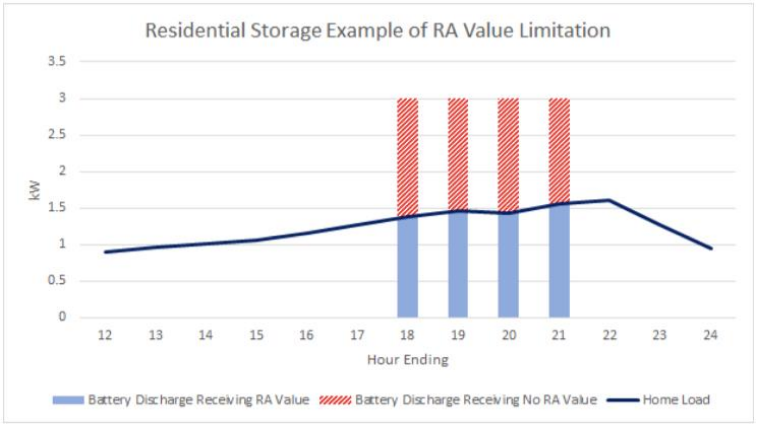
EAST BAY COMMUNITY ENERGY

1. LIMITING EXPORTS LIMITS VALUE

- BTM batteries are not like traditional Demand Response (turning off lights, reducing manufacturing load, managing cooling loads) which can only reduce onsite energy demand
- On hot days when the grid needs energy and batteries have energy to give, we say “No thanks, no exports!”
- Residential load is ~1kw, batteries are ~5kW => 80% reduction in capacity value

Load Reduction

Battery Exports



EAST BA COMMUNITY ENERGY

2. LIP WILL DELAY BATTERY DEPLOYMENT

- D19-06-026 requires new IOU and 3rd party DR to go through Load Impact Protocol (LIP)
- 3rd parties have reported significant reductions in Qualifying Capacity (QC) from the value recommended by independent evaluators
- LIP is a black box process with no recourse to understand methodology or dispute results
- Most concerning, the PUC appears to be freezing QC based on past enrollment, not accounting for program growth, for up to three years
  - This would dramatically constrain participation in the Joint LSE procurement if a growing portfolio of new batteries would not be eligible for RA value for years

EAST BAY COMMUNITY ENERGY

CHALLENGES AND SOLUTIONS

Problem: Electricity service has become unreliable and customers are demanding resilient solutions. In addition, resource adequacy markets are constrained. Behind the meter batteries solve both these issues simultaneously, but the current PDR rules will limit Solar + Storage deployment for Resilience and RA.

Potential Solutions:

Solution 1 - CEC: Submit contracted BTM batteries as permanent load shift in annual CEC Load forecast, reducing LSE RA obligation

Solution 2 - CAISO: Modify PDR rules to allow for energy exports

Solution 3 – CPUC: Recognize RA value of exports from BTM batteries enrolled in PDR

Solution 4 – CPUC: Modify LIP to promote flexible BTM assets

EAST BAY COMMUNITY ENERGY