Welcome!

CCAs and Community Resilience: Responding to Electricity Grid Outages, Planned and Unplanned

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Your CPX Webinar Team

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Housekeeping

• This webinar is being recorded
• Everyone is in listen-only mode – enter questions in your control panel at any time
• Q&A will be in the last 10-15 minutes
Handouts
(See your control panel)

• Slide Decks
• Presenter Bios
Climate Center Programs

- ACE Initiative
  - check it out
  - Check it out

- DER Hub
  - Check it out
  - Check it out

- NREL SEIN
  - Check it out
  - Check it out

- MCE-BEO & NavigaDER
  - Check it out
  - Check it out
For the Climate Center it’s all about rapid decarbonization.

The Climate Center’s rapid decarbonization campaign translates the urgent need for bold action and the groundswell of public support into actual speed and scale greenhouse gas emissions reductions commensurate with the crisis.

The goal of the campaign is to enact by 2025 in California the bold policies required by science to be on track for a safe, stabilized climate by 2030, securing a vibrant, equitable, and healthful future for all.
CCAs and resilience – The Climate Center perspective

• It’s a pathfinding endeavor
• CCAs are platforms for innovation
• CCAs are uniquely well-positioned to play an important role
• Doing it right results in rapid decarbonization
The Role of CCAs in Creating a Reliable Energy System Within California IOU Territories
6,000 homes lost = We know why PSPS events are needed
First: Grid Repairs

CCAs advocate for the fastest, least-cost and cleanest solutions to minimize the scale, duration and harm of PSPS events. Before considering local generation:

- Analyze circuits to identify if switches can isolate fire threat areas and minimize the number of affected customers;
- Analyze substations to identify if circuits can be reassigned to alternate substations in lower fire threat areas;
- Get IOU to design and estimate costs for hardening grid to have a “clean baseline” cost against which any new local generation or microgrids can be compared.
First: Grid Repairs

Sub: Rincon 1101
100% 2019 PSPS Impact
3,109 Customers
1 potential switch
2% of customers NE of potential switch in wildlands
98% of customers S of potential switch in urban setting

One source of PG&E data is publicly available at:
tinyurl.com/vfx2nw7
Second: Preferred Resources

CCA governing boards have jurisdiction over all generating resources for CCA customers. Therefore:

- Establish policy governing preferred generating resources to address PSPS events;
- Communicate policy to IOU and CPUC.

Consider aggregated resources owned by customers and CCA. Do not limit to IOU-owned resources.

Address whether pipeline biomethane offsets for natural gas will be allowed.

Address tradeoff of continued PSPS events versus construction of 30-year local gas-fired generation.
Third: CCA Programs

Education - what are the options for backup power in homes, schools, retail, industrial sites?

Incentives & Financing - support for purchasing clean technology

Technical Support - for analyzing microgrid value and potential

Contractor Training - e.g., for retrofits of existing home solar to include storage

DR Resource - research/experiment in developing large-scale aggregation of customer-owned resources for immediate use in shaping CCA load and for future potential use in microgrid.
Advanced Energy Center

SCP is building a 10,000 square foot energy store and training center that will open later in 2020.

Showcase for electric home appliances and equipment for keeping power on during Public Safety Power shutoffs.

Customers and building professionals can:

- Take classes on advanced energy topics
- Request contractor bids
- Purchase equipment and controls with incentives using zero interest loans paid back on their electric bill
- Learn about all of SCP customer programs in one place
- Try cooking in SCP’s zero carbon kitchen
Advanced Energy Rebuild

Partnership between SCP, PG&E, and the Bay Area Air Quality Management District in response to the October 2017 North Bay wildfires

Offers incentive packages between $7,500 - $17,500 to help rebuild energy-efficient and all-electric homes

Incentivized features include:
- Heat Pump Water Heaters
- Water efficient landscaping
- Energy Star appliances
- EV charging stations

Recent applications are increasingly using solar+storage option for PSPS
Peninsula Clean Energy is the official electricity provider for San Mateo County with cleaner and greener power at lower rates

**Two Electricity Options**

- **ECOplus**
  - Automatically enrolled
  - 50% Renewable
  - 95% Greenhouse Gas Free
  - 5% lower rates than PG&E

- **ECO100**
  - Opt-up choice
  - 100% Renewable
  - Slight premium of $4 more per month
Background and Timeline

- San Mateo County experienced its first Public Safety Power Shutoff (PSPS) event 10/9-10/12/19

- October 2019: PCE staff presented resiliency plan for Peninsula Clean Energy Board approval to commit up to $10 MM over 3 years to develop programs to address the problems created by PSPS and other resiliency events. Final resiliency strategy and plan to be presented to board for approval in January 2020.

- November 2019: Peninsula Clean Energy, along with EBCE, SVCE, SVP and CPAU, issued RFP to procure 10 MW of Distributed Resource Adequacy Capacity
San Mateo County PSPS Impact

• Occurs when PG&E decides it is necessary to turn off power because dry and windy conditions create a fire risk
• The largest PSPS event affecting Peninsula Clean Energy’s customers occurred on 10/26 – 10/28
• This map shows the areas in San Mateo County that were affected by this event
• 57,000 Peninsula Clean Energy customers were impacted

October 26th PSPS Event
High Fire Threat Districts

• Developed by CPUC to identify areas where:
  • (1) there is an elevated risk for destructive power line fires, and
  • (2) where stricter fire-safety regulations should apply
Earthquake Risks
Sea Level Rise Risks
Resiliency Strategic Objectives

1. Address the needs of our most medically threatened customers before next fire season

2. Leverage resiliency programs towards Peninsula Clean Energy’s goal to source 100% renewable energy on a time-coincident basis

3. Establish a platform for long-term energy resiliency business models

4. Identify opportunities to create a paradigm shift towards pervasive resiliency built into complementary efforts
Resiliency Strategy Program Summary

- Medically Fragile
  - Resiliency for Customers
  - Distributed RA

- Community Response Centers
  - Municipal CRCs

- Critical Infrastructure
  - Municipal CRCs
  - Identify and Catalog

- Future Programs
  - CEC Grant
  - EVs as Backup Power
  - E-Buses for Backup Power
  - Retrofit Existing Solar
  - Multi-site Microgrids
  - Community Solar
  - S+S for MUDs
  - DCFC Storage

Shading indicates a program already in progress
## Program Descriptions

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<th>Program</th>
<th>Summary</th>
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<tbody>
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<td>Medically Fragile Customers</td>
<td>Microgrids for customers who are medically threatened and live in high fire threat districts; Hospital partnerships to identify customers with medical needs (coordinate with EBCE)</td>
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<tr>
<td>Municipal CRCs</td>
<td>Scope and deploy clean backup power for community resiliency centers (CRCs) (Resilient Facilities program with EBCE)</td>
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<tr>
<td>Critical Infrastructure</td>
<td>Identify and catalog the existing critical facilities in our service territory to inform future resiliency programs</td>
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<tr>
<td>Distributed RA</td>
<td>Microgrids for residential and commercial customers; RA procurement for Peninsula Clean Energy</td>
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Distributed Resource RFP

• Joint procurement for a comprehensive offering to provide Resource Adequacy (RA) capacity and resilience to residential and commercial customers through the development of customer-sited Distributed Energy Resources (DERs).
• Targeting ~33 MW program volume across 4 LSEs
• Carve out for Disadvantaged communities
Distributed Resource RFP

Program Goals

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

• Support the deployment of meaningful resilience projects for their customers to address power outage impacts including Public Safety Power Shutoff (PSPS) impacts.

• Procure economically viable and competitive RA capacity.

Program Timeline

• Solicitation closed on 12/23/2019.

• Peninsula Clean Energy received 19 offers representing 60 MW DER solutions.

• Currently evaluating offers with expectation to finalize decision in April 2020.
Questions?

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Q&A

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Dates & Reminders

• The webinar recording will be posted at: cleanpowerexchange.org/webinars/
• InfoCast CCA Summit January 22-24th, Sacramento
• Next LEAN Energy US Market Webinar: Feb 14
• Next Climate Center CPX Webinar: March 18, topic TBD
• ACE Conference – May 18, Sac State
Thank you!

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