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Technical Committee Meeting
Thursday, April 2, 2020
8:30 A.M.

The Technical Committee Meeting will be conducted pursuant to the provisions of the Governor’s Executive Order N-29-20 (March 17, 2020) which suspends certain requirements of the Ralph M. Brown Act. Technical Committee Members will be teleconferencing into the Technical Committee Meeting.

Members of the public who wish to observe the meeting may do so telephonically via the following teleconference call-in number and meeting ID:

Dial: 1-669-900-9128
Meeting ID - 229 126 731

For Viewing Access Join Zoom Meeting:
https://zoom.us/j/229126731

1. Roll Call/Quorum
2. Board Announcements (Discussion)
3. Public Open Time (Discussion) - Members of the public who wish to address the meeting by offering a comment may do so telephonically at this time using the above teleconference call-in number and meeting ID.
4. Report from Chief Executive Officer (Discussion)
5. Consent Calendar (Discussion/Action)
   C.1 Approval of 2.6.20 Meeting Minutes
6. MCE Principles of Preferred Resources for Microgrid Development Related to Public Safety Power Shut Offs (Discussion/Action)

If you are a person with a disability and require this document in an alternate format (example: Braille, Large Print, Audiotape, CD-ROM), you may request it by using the contact information below. If you require accommodation (example: ASL Interpreter, reader, note taker) to participate in any MCE program, service or activity, you may request an accommodation by calling (415) 464-6032 (voice) or 711 for the California Relay Service or by e-mail at djackson@mceCleanEnergy.org not less than four work days in advance of the event.
7. Incremental Capacity Procurement (Discussion)
8. Committee Matters & Staff Matters (Discussion)
9. Adjourn

DISABLED ACCOMMODATION: If you have a disability which requires an accommodation, or an alternative format, please contact the Clerk of the Board at (925) 378-6732 as soon as possible to ensure arrangements for accommodation.
1. **Roll Call**

   Chair Kate Sears called the regular Technical Committee meeting to order at 8:32 A.M. with quorum established by roll call.

2. **Board Announcements (Discussion)**

   There were none.
3. **Public Open Time (Discussion)**

There were no speakers.

4. **Report from Chief Executive Officer (Discussion)**

CEO, Dawn Weisz, reported the following:
- Bids are currently being evaluated for a Battery Storage Request for Offers
- MCE was awarded a $750,000 grant from the Marin Community Foundation to be used for low income resiliency programs

5. **Consent Calendar (Discussion/Action)**

C.1 Approval of 12.5.19 Meeting Minutes
C.2 First Amendment to the Seventh Agreement with Braun Blaising Smith Wynne, P.C.

Chair Sears opened the public comment period and there were no comments.

| Action: It was M/S/C (Haroff/Lyman) to approve Consent Calendar. Motion carried by unanimous vote. (Absent: Directors Greene, Perkins, and Schroder). |

6. **GHG-free Allocation from PG&E (Discussion/Action)**

Senior Policy Counsel, Michael Callahan, presented this item and addressed questions from Committee members.

Chair Sears opened the public comment period and there were comments from members of the public Howdy Douday in El Cerrito, Dan Segedin, Bill Wilson, Gopar Shanker and Rebekah Collins in San Rafael.

| Action: It was M/S/C (Haroff/Withy) to reject the nuclear allocation and accept the hydroelectricity allocation in the Interim Proposal of the CPUC Power Charge Indifference Adjustment (PCIA) proceeding, Phase 2, Working Group 3; and reconsider the allocations under the PCIA Proposal before Q4 2020. Motion carried by unanimous vote. (Absent: Directors Greene, Perkins, and Schroder). |

7. **Potential Prepayment of Certain MCE Renewable Power Purchase Agreements to Reduce Cost (Discussion)**

Garth Salisbury, Director of Finance, presented this item and addressed questions from Committee members.
Chair Sears opened the public comment period and there were comments from member of the public Ken Strong in San Rafael.

Action: No action was required.

8. Update to MCE's Feed-in-Tariff Program (Discussion)

Senior Power Procurement Manager, David Potovsky and Power Procurement Manager, Bill Pascoe, presented this item and addressed questions from Committee members.

Chair Sears opened the public comment period and there were comments from member of the public Howdy Goudey in El Cerrito.

Action: No action was required.

9. Open Season 2020 Solicitation (Discussion)

Senior Power Procurement Manager, David Potovsky presented this item and addressed questions from Committee members.

Chair Sears opened the public comment period and there were no comments.

Action: No action was required.

10. Committee & Staff Matters (Discussion)

11. Adjournment

Chair Sears adjourned the meeting at 10:26 a.m. to the next scheduled Technical Committee Meeting on March 5, 2020.

Kathrin Sears, Chair

Attest:

Dawn Weisz, Secretary
April 2, 2020

TO: MCE Technical Committee

FROM: Shalini Swaroop, General Counsel

RE: MCE Principles of Preferred Resources for Microgrid Development Related to Public Safety Power Shut Offs (Agenda item #6)

ATTACHMENTS: A. Principles of Preferred Resources for Microgrid Development Related to Public Safety Power Shut Offs  
B. MCE Building Energy Resilient Communities – 3 Tracks

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Dear Technical Committee Members:

Summary

In the wake of 2019’s extensive Public Safety Power Shutoff (PSPS) events, especially in PG&E service territory, both MCE and the state as a whole have focused on resiliency efforts. At MCE, we want to help empower our customers by piloting advanced technology such as battery storage and small-scale microgrids to retain essential power supply during PSPS events and naturally occurring outages while minimizing the use of carbon-emitting generators. MCE is making strategic investments to support the resiliency of our critical facilities and vulnerable customers along three tracks:

Resiliency Track 1: Critical Facilities: In partnership with local governments and community contacts, MCE has identified approximately 60 critical facilities and is supporting them in exploring resiliency solutions.

Resiliency Track 2: Residential & Small/ Medium Commercial Customers: MCE’s Battery Energy Storage Resiliency Program Request for Proposal (RFP), issued in December 2019, was designed to seek vendors to help develop a comprehensive program to identify and deploy energy storage solutions for resiliency purposes. While MCE’s energy storage program(s) will be available for all customers, the program(s) will prioritize vulnerable customers such as low-income customers and those with a medical need. MCE is seeking to leverage these battery resources to also provide valuable grid services.
Resiliency Track 3: Neighborhood Microgrids: MCE is investigating options for neighborhood microgrid solutions that could provide full autonomy during PSPS events.

These efforts will support our communities during PSPS events and will also advance MCE’s mission of reducing greenhouse gas emissions in the longer term.

While project development guidelines and processes, as well as programs and incentives, exist in CA to foster the development of “behind-the-meter”, or customer-sided, microgrids, developing community-scale or “front-of-the-meter” microgrids is a relatively new endeavor. Many stakeholders are currently involved in developing guidelines, programs, tariffs and incentives for community-scale microgrids. Community-scale microgrids typically involve multiple customers behind multiple meters, served by multiple different generation and storage resources. Microgrids can be powered by clean technology like solar power and batteries. However, they can also be powered by fossil generation like gas or diesel power.

While communities and policymakers must act swiftly to develop community-scale microgrids and improve resiliency in the face of PSPS events, California must not commit to permanent resources for microgrid development that will slow or reverse our progress toward the state’s greenhouse gas (GHG) reduction goals. Communities should not have to make an artificially-constrained choice between dirty power or no power at all.

For this reason, MCE is proposing to adopt “Principles of Preferred Resources for Microgrid Development Related to Public Safety Power Shut-Offs”, under which the Board defines the standards and “loading order” when developing community-scale microgrids in MCE’s service area in response to PSPS events.

Background

A microgrid is a local energy grid with control capability, which means it can disconnect from the big, traditional grid and operate autonomously. Generally, microgrids have four elements: (1) a switch to “island” from the big grid and allow the microgrid to operate without sending power back onto the big grid; (2) a power generator of some kind; (3) storage, such as battery or stored fuel; and (4) controls that prioritize loads.

Most operating microgrids in California today are owned and managed by a single entity, such as residential or commercial customers owning a solar + storage project or a college operating several different generation and storage technologies to power its campus. In the near future, microgrids will likely include more complex mixes of customers, such as all of the homes and businesses in a rural town, or all of the customers on a single distribution circuit, or potentially as large as all of the customers connected to a single substation.

PG&E recently issued its proposals for microgrid development and resiliency activities in response to PSPS events, focusing on four main initiatives:
1. **Distributed Generation-Enabled Microgrid Services (DGEMS) Permanent Generation Proposal**: PG&E proposed over 500MW of permanent generation (10 years or more), likely natural gas resources, at or near 20 substations, 7 of them located MCE’s service area. On March 19, PG&E announced that they won’t pursue projects in 2020 anymore, hence the earliest expected online date for these resources would be 2021.

2. **DGEMS Make-Ready Program**: Would cover distribution system upgrades to make substations ready to accommodate localized generation for microgrids.

3. **Temporary Generation Program (TGP)**: Would provide 300MW of mobile, diesel-fueled generation at substations, for critical facilities and resiliency zones (critical commercial corridors).

4. **Community Microgrid Enablement Program (CMEP)**: Would establish a program to empower local stakeholders to initiate community microgrid solutions.

After careful review of PG&E’s proposals, MCE is concerned that (1) PG&E is not appropriately addressing cost-effective planning; (2) is not solving grid problems with grid solutions; (3) is not sufficiently communicating with local officials, and (3) is proposing expensive, dirty technology in our communities without alternatives, or transparency around costs and health impacts.

**Fiscal Impacts**

MCE bears no direct financial responsibility for the resolution of PSPS events. However, our communities have a significant financial interest in eliminating or greatly reducing the harm from PSPS events. There will be no impacts to the MCE budget related to the approval of these Principles.

**Recommendation**

Adopt the attached Principles of Preferred Resources for Microgrid Development Related to Public Safety Power Shut Offs to guide resiliency efforts in MCE’s service area in response to PSPS and any other planned and/or long-duration power outages.

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1 The PG&E substations identified in MCE service area are: San Rafael, Alto, Highway, Las Gallinas, Ignacio, Greenbrae and Carquinez with a combined capacity of 251MW.
Principles of Preferred Resources for Microgrid Development
Related to Public Safety Power Shutoffs

I. **Wires solutions to wires problems.** As the distribution utility serving MCE customers, PG&E should focus on improving the condition and management of its grid. A better PG&E grid will reduce the risk of both utility-caused catastrophic wildfires and long, widespread public safety power shut off (PSPS) events. This focus should include, but not be limited to:

- Grid hardening;
- Reclosers and SCADA;
- Targeted undergrounding;
- Vegetation management;
- Updating interconnection policies to expedite renewable, storage, and islanding solutions (e.g., eliminating costs to islanding renewable systems that have already been built); and
- Making system adjustments that allow Net Energy Metering (NEM) customers to deliver power to the grid during PSPS events.

As PG&E appropriately addresses grid upgrades, the need for new, costly, localized generation solutions for microgrid development will be drastically reduced. Any proposal for microgrid development must consider all feasible wire upgrades first before sizing generation for residual load.

II. **Fossil-fueled backup generation must be temporary.** Any localized fossil-fueled generation PG&E plans to deploy to minimize the impacts of PSPS events must be temporary (i.e., must be used for less than 3 years), for several reasons. First, if PG&E focuses appropriately on maintaining a robust, reliable, and flexible distribution and transmission system, the need for generation solutions will be reduced and/or mitigated in future years. Secondly, due to serious local emissions and health impacts of fossil-fueled generation, PG&E must be required to focus on clean microgrid generation projects in the medium to long term.
III. **Follow the State’s loading order.** PG&E’s mismanagement of its grid must not cause the state to backslide on its critical commitments to clean power and GHG reduction. Similarly, the increased wildfire risk must not be met with additional fossil generation, one of the key driving forces of climate change. Simply put, California cannot fight this fire with fire. Our response must adhere to the loading order adopted by the CEC and CAISO, adapted to distribution scale, as follows:

1. Demand response and energy efficiency. Specific to the PSPS context, this should also include prioritizing essential loads ahead of flexible loads.
2. Renewable Portfolio Standard (RPS)-eligible renewable generation, including solar, wind, small hydro, geothermal, biomass and biogas (not including offsets).
3. Batteries and other forms of storage.
4. Combined Heat & Power (CHP), which allows fossil generation but requires that all waste heat to be captured and put to valuable use, and that all local gas usage is offset with biomethane.
5. Only as a last resort, and on a temporary basis, should gas generation be considered to meet any remaining residual need, with projects that include biomethane offsets prioritized over projects that do not.

IV. **Full transparency.** PG&E must fully and publicly disclose the costs and emissions impacts\(^1\) of any microgrid and resiliency activities for stakeholder review prior to developing projects and expending ratepayer dollars. Stakeholders must include, at a minimum, local governments, CCAs, the California Public Utilities Commission, California Air Resources Board, all Air Quality Management Districts in which generators are being deployed, as well as interested members of the public.

V. **Collaboration and partnership.** MCE strives to work collaboratively with PG&E to improve resiliency for our communities. This collaboration must respect MCE’s existing obligation and authority to procure electric generation on behalf of our customers and advance MCE’s mission to reduce greenhouse gas emissions.

VI. **Share fairly.** CCAs across PG&E’s service territory are making investments in our communities’ resiliency. Because the need for these investments arises largely from PG&E’s mismanagement of its grid, PG&E should provide funds to support local resiliency projects, including those led by CCAs.

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\(^1\) Including, but not limited to, carbon, particulate matter (PM), nitrogen oxide (NOx), sulphur dioxide (SO2), mercury, and volatile organic compounds (VOC).
Building Resilient Communities
Energy independence and resiliency without fossil fuels

MCE is developing programs to mitigate the impacts of grid outages threatening the safety, reliability, health and welfare of our customers, which disproportionately affect vulnerable populations, while supporting decarbonization and statewide efforts to improve overall grid reliability. MCE’s Board of Directors approved the creation of a $3M Resiliency Fund to support these efforts. MCE will continue to empower our communities by piloting advanced energy technologies such as battery storage and community microgrids enabling islanding to retain essential power supply during public safety power shutoff (PSPS) events and other outages - all while minimizing the use of carbon-emitting generators and fossil fuel technologies.

MCE has received several bids in response to a solicitation issued in December 2019 seeking qualified organizations and businesses to support the programmatic deployment of 15 MWh of dispatchable behind-the-meter battery energy storage systems to MCE customers over a 2-year period, launching in Q2 2020.

In partnership with the organization(s) selected through this solicitation, MCE is developing an energy storage program that offers innovative, valuable, and affordable energy storage options to enhance resiliency and reliability for customers. MCE is considering offering upfront incentives for our most vulnerable customers, while also providing new opportunities for MCE to manage peak loads and generate value in wholesale markets. This will benefit California’s energy landscape as a whole by addressing the growing “Duck Curve” issues through clean, reliable, and smart demand-side management (DSM) strategies enabled by energy storage technologies, and will help MCE keep costs low for all of its customers.

Resiliency Track 1: Critical Facilities
MCE is giving special consideration to critical facilities in need of clean, reliable backup power solutions, such as emergency shelters, fire stations, and health centers, that provide important community services during planned and unplanned power shutoffs. In partnership with local government and community contacts, we have identified approximately 60 critical facilities throughout our service area and are exploring options to support the implementation of on-site distributed energy resources.

MCE will be selecting 5 sites throughout its service area to provide full life-cycle project development support. This includes an in-depth technical analysis with recommended battery size and design based on cost savings and resiliency benefit, estimated project costs/benefits, independent support in the selection of a battery manufacturer/contractor, facilitated access to existing resiliency funding opportunities such as the Self-Generation Incentive Program (SGIP), and some financial support to help close the gap between existing incentives and project costs for five of the most critical sites, with at least one in each of the counties served by MCE.

Last updated 2/14/20
MCE is also supporting additional critical facilities that are further along in exploring resiliency solutions and may not need full life-cycle project development. One such example is the Tomales Grid Resiliency Zone project that is underway at the Shoreline Unified School District in Marin County, which would become a designated resiliency site during emergencies.

**Resiliency Track 2: Residential & Small/Medium Commercial Customers**

MCE’s Behind-the-Meter Battery Energy Storage Resiliency Program Request for Proposals (RFP) seeks vendors that can help develop a comprehensive program to identify and deploy energy storage solutions for backup and resiliency, particularly for customers with existing solar. MCE is seeking to leverage these battery resources to also provide valuable grid services in support of our mission for reducing GHG emissions and maintaining low costs, along with helping customers reduce their energy costs.

One of MCE’s key principals is to help vulnerable customers gain access to cleaner and more resilient energy options. MCE serves approximately 69,500 low-income customers, 12,500 medically-impacted customers, and approximately 40,000 customer accounts located in disadvantaged communities (DACs).

While MCE’s energy storage program will be available to all customers, the program will be designed to help these priority customers remain safe during PSPS and other grid outages. Priority residential customers include low-income customers, those with serious medical needs that could become life threatening without power, and those in state-designated DACs. Priority commercial customers include small and medium businesses located in DACs and/or state-designated Tier 2 or Tier 3 High Fire Threat Districts, and those that provide critical support for communities during Public Safety Power Shutoff events and/or natural disasters, such as schools, community centers and other State-designated shelters, food banks, medical facilities, nursing homes, emergency services providers, etc..

MCE will initially focus on engaging priority customers who already own an on-site solar system and are on a net-energy metering (NEM) tariff. This initial focus is strategic because adding dispatchable energy storage to existing NEM solar accounts is expected to produce significant co-benefits for MCE and its customers during multiple day power outages.

MCE aims to remove barriers to participation by offering significant financial incentives for priority customers with no upfront out-of-pocket costs. MCE is also exploring simple and affordable repayment options to repay any balance remaining for nonpriority customers. MCE may develop a post-installation incentive similar to, and in addition to the SGIP incentive for our priority customers. For all other customers, MCE is considering rate-based incentive structures, which may include monthly bill credits, SGIP-eligible time-of-use rates, or, in the future, more sophisticated dynamic pricing options.

**Track 3: Neighborhood Microgrids**

MCE is investigating options for neighborhood microgrid solutions that could provide full autonomy, meeting the energy needs of the community served without the need for external inputs or outputs, while providing enhanced reliability to avoid planned or unplanned outages. A centralized microgrid in Calistoga could have multiple technologies in operation, including solar, battery storage, hydrogen production and storage, and fuel cells that would link buildings...
together to form an island. The microgrid could connect to the grid and respond within seconds
to a request for power, demand response, and frequency/voltage regulation.

**Funding Sources:**

**MCE Resiliency Fund**
MCE’s Board of Directors approved the creation of a $3M Resiliency Fund on November 21, 2019, created in large part as a response to PG&E’s PSPS events. MCE intends to use these funds to close the gap when other funding sources don’t cover the entire project costs and could be applied to Tracks 1, 2, or 3.

**Marin Community Foundation Grant**
MCE has received a $750,000 grant from the Marin Community Foundation to expand our resiliency efforts in Tracks 1 and 2, specifically targeting non-profit agencies that provide essential services during emergencies, and low-income multifamily residents in Marin county that lack the ability to acquire clean backup power solutions. Funds from the Marin Community Foundation would be used for new battery storage systems paired with solar generation that are able to island in the event of a PSPS event or emergency.

**CPUC Self-Generation Incentive Program (SGIP)**
SGIP was established by the CPUC in 2001 and provides incentives to support existing, new, and emerging distributed energy resources. SGIP provides rebates for qualifying distributed energy systems installed on the customer’s side of the utility meter. In 2017, the Commission issued a decision establishing the SGIP Equity budget with the following three objectives: 1) bring positive economic and workforce development opportunities to the state’s most disadvantaged communities; 2) help reduce or avoid the need to operate conventional gas facilities in these communities, which are exposed to some of the poorest air quality in the state; and 3) ensure that low-income customers and non-profit or public sector organizations in disadvantaged or low-income communities have access to energy storage resources incentivized through SGIP.

In January 2020, the CPUC authorized over $500 Million in incentive dollars for the newly established equity resiliency budget through 2024. The equity resiliency budget targets low-income and medically vulnerable customers located in Tier 3 and Tier 2 high fire threat districts, and those who have experienced two or more PSPS events to date. Customers who have participated in one of California’s low-income solar programs are also eligible to participate. Finally, the program also provides incentives for specific critical facilities serving those vulnerable customers and communities. MCE will leverage SGIP incentives as applicable under MCE’s Resiliency Tracks 1, 2, or 3.

In addition, MCE has submitted a proposal to become a community outreach partner under the SGIP Equity Budget to partner with PG&E on SGIP Equity marketing, education and outreach initiatives. Under this initiative, MCE would identify eligible customers in our service area and facilitate access to SGIP incentives, substantially increasing the adoption of battery storage.
Incremental Capacity Procurement
Technical Committee
April 2, 2020
In November 2019, the California Public Utilities Commission (CPUC) directed load-serving entities to procure 3,300 MW of “incremental capacity.”

- No analysis done by the CPUC prior to this allocation
- CCA requests for supporting data was ignored

“Incremental capacity” is defined as Resource Adequacy (RA) capacity that is incremental to the CPUC list of baseline resources

- MCE’s share of the requirement is **87.5 MW** by 2023
  - 43.75 MW online by 8/1/21
  - 65.63 MW online by 8/1/22
  - 87.5 MW online by 8/1/23

- MCE elected to self-provide, rather than allow PG&E to procure our need
Counting Rules

- September Net Qualifying Capacity (NQC) is used to determine the volume

- Contracts must have the following terms:
  - New Resources: 10+ years
  - Energy Efficiency: 5+ years
  - Existing Resources: 3+ years
MCE Procurement Work

- MCE staff explored the following options:
  - Incremental Stand-Alone storage
  - Incremental Photovoltaic + Storage
  - Imports
  - Existing resources (i.e., Sutter Energy Center)

- MCE led a joint-CCA procurement effort to collectively procure 200 MW of capacity from Sutter Energy Center. Participating CCAs were:
  - Peninsula Clean Energy
  - Silicon Valley Clean Energy
  - San Jose Clean Energy
Sutter Overview

- Size: 578 MW
- Technology: combined cycle gas turbine plant
- Location: Yuba City (within the Balancing Authority of Northern California)
- Commercial Operation Date: July 2001
- Owner/Operator: Calpine

AI #07: Incremental Capacity Procurement
Sutter Regulatory Overview

CPUC Exemptions for Sutter:
- Existing resource (in cold layup) that is eligible to qualify under the CPUC incremental capacity requirements
- Physically located outside of the California Independent System Operator (CAISO) grid – but will not be treated as an import (exempt from 20% import cap)

Key Arrangements for Sutter to Qualify
- Import Capability
- Pseudo-Tie Agreement with CAISO and the Balancing Authority of Northern California
- Transmission Arrangement with Western Area Power Administration
MCE Contract with Calpine

Transaction details:

- **Seller:** Calpine
- **Buyer:** MCE
- **Effective Date:** 2/28/20
- **Term:** 1/1/2021 through 12/31/2023
- **Products**
  - California Resource Adequacy
  - CPUC-mandated incremental capacity
- **Capacity:** 69.55 MW

Choosing an existing resource allowed MCE to contract for only 3 years, aligning with our objective of avoiding long-term, fossil-based RA contracts.
Next Steps

- MCE to monitor Calpine’s progress on Sutter arrangements.
- MCE will be contracting for an additional 17.95 MW of incremental capacity to be commercially available by 8/1/2023.
- MCE must report to the CPUC on our overall progress in upcoming compliance Integrated Resource Plan (IRP) (due 7/1/20).
- MCE to continue monitoring the IRP proceeding, as there may be changes to incremental capacity requirements ordered by the CPUC.
Thank You

CB Hall
Senior Power Procurement Manager

AI #07: Incremental Capacity Procurement