Technical Committee Meeting
Thursday, April 4, 2019
8:30 A.M.

Charles F. McGlashan Board Room, 1125 Tamalpais Avenue, San Rafael, CA 94901
Mt. Diablo Room, 2300 Clayton Road, Suite 1150, Concord, CA 94520
City of El Cerrito, 10890 San Pablo Avenue, Hillside Conference Room, El Cerrito, CA 94530
City of San Ramon, 7000 Bollinger Canyon Road, Room 256, San Ramon, CA 94583

1. Roll Call/Quorum
2. Board Announcements (Discussion)
3. Public Open Time (Discussion)
4. Report from Chief Executive Officer (Discussion)
5. Consent Calendar (Discussion/Action)
   C.1 Approval of 2.7.19 Meeting Minutes
6. MCE Power Supply Overview (Discussion)
7. Legislative Update (Discussion)
8. Committee Matters & Staff Matters (Discussion)
9. Adjourn
1. **Roll Call & Quorum**

   **Present:**
   - Kevin Haroff, City of Larkspur (San Rafael)
   - Greg Lyman, City of El Cerrito (El Cerrito)
   - Scott Perkins, City of San Ramon (San Ramon)
   - Kate Sears, County of Marin (San Rafael)
   - Ray Withy, City of Sausalito (San Rafael)

   **Absent:**
   - Rob Schroder, City of Martinez

   **Staff & Others:**
   - Jesica Brooks, Board Assistant (San Rafael)
   - Sherry Clark, Internal Operations Assistant (Concord)
   - Darlene Jackson, Board Clerk (Concord)
   - Vicken Kasarjian, Chief Operating Officer (San Rafael)
   - Taylor Sherman, Internal Operations Assistant (San Rafael)
   - Shalini Swaroop, General Counsel (San Rafael)
   - Dawn Weisz, Chief Executive Officer (San Rafael)
   - Brett Wiley, Customer Programs Manager (San Rafael)

The regular Technical Committee meeting was called to order by Chair Kate Sears at 8:31 A.M. Quorum was established by roll call.

2. **Board Announcements (Discussion)**

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

Committee Chair Sears asked for public comment and there were comments from member of the public, Dan Segedin.

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

CEO, Dawn Weisz, reported on the following:

- Seven new Board members coming on board and scheduled for orientation on February 27.
- Risk Oversight Committee update.
- Delay in MCE ratesetting due to PG&E bankruptcy and their pending ratesetting.
- There will be no February Board meeting, but we will have a regular Board meeting in March.

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

C.1 Approval of 11.1.18 Meeting Minutes

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

Action: It was M/S/C (Lyman/Withy) to approve **11.1.18 meeting minutes**. Motion carried by unanimous roll call vote (Absent: Director Schroder).

6. **Marin Reach Codes (Discussion)**

Alice Zanmiller, Planner, County of Marin, introduced this item and addressed questions from Committee members.

Chair Sears opened the public comment period and there were comments from member of the public, Carleen Cullen.

Action: No action required.

7. **EV Charging Update (Discussion)**

Brett Wiley, Customer Programs Manager, introduced this item and addressed questions from Committee members.
Chair Sears opened the public comment period and there were comments from members of the public, Kurt Johnson, Carleen Cullen, Howdy Dowdy, and Doug Wilson.

**Action:** No action required.

8. **CPUC PG&E Safety and Restructuring Proceeding (Discussion)**

Shalini Swaroop, General Counsel, and CEO Dawn Weisz, introduced this item and addressed questions from Committee members.

Chair Sears opened the public comment period and there were comments from members of the public, Ken Strong, Kurt Johnson, and Howdy Dowdy.

**Action:** No action required.

9. **Committee Matters & Staff Matters (Discussion)**

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

**Action:** No action required.

10. **Adjournment**

Chair Sears adjourned the meeting at 10:14 A.M. to the next scheduled Technical Committee Meeting on March 7, 2019.

___________________________________________
Kate Sears, Chair

Attest:

___________________________________________
Dawn Weisz, Chief Executive Officer
MCE Power Supply Overview

April 4, 2019
MCE and its Stakeholders

**BALANCING AUTHORITY**

CAISO
- Market Operator
- Regulated by FERC and NERC

**SERVICE PROVIDERS**

- Scheduling Agent: ZGlobal
- Call Center & SQMD Provider: Calpine
- Energy Procurement Consultant: PEA
- Power Contracts Attorney: Steve Hall

**RETAIL ELECTRICITY PROVIDER**

MCE
- Community Choice Aggregator
- Load Serving Entity with ~470K customers
- Located within CAISO and within PG&E Territory
- Governed by Local Board with Rate-setting Authority

**UTILITY**

PG&E
- Transmission & Distribution Owner/Operator
- Metering and Billing Provider of Load Profiles

**REGULATORS**

- California Public Utilities Commission
- California Energy Commission
- California Air Resource Board

**MCE is not:**

- Balancing Authority
- Utility/IOU
- T&D Provider
- Generation Owner
- IPP/Trading Shop

AI #06: MCE Power Supply Overview
MCE Power Supply: Presentation Overview

**Load Forecasting**: Multi-year forecast of MCE customer load based on customer counts and consumption patterns, weather and demand-side resources.

**Resource Planning**: Multi-year resource plan to meet renewable, carbon-free, Resource Adequacy requirements and hedging needs.

**Procurement**: Competitive solicitations, bilateral negotiations and standard offer contracts for energy, capacity, attributes and/or hedge value via power purchase agreements.

**Project Development**: Administration of contracts to ensure that all milestones are met for new generating facilities (such as construction, interconnection, and testing for commercial operation).

**Bidding & Scheduling**: California Independent System Operator ("CAISO")
- CAISO Load: week-ahead forecasting and Day-Ahead self-scheduling

**Contract Administration**: Prudently administering contracts to mitigate risk and ensure the appropriate value of the contract on behalf of MCE’s customers.

**Settlements**: Validation and reconciliation of power deliveries, renewable energy credit transfers and invoice calculations in line with contract terms.


**Process Improvement**: Develop software to facilitate procurement based on a complete and accurate understanding of MCE’s projected load, supply and corresponding risks.
# MCE Power Supply: Primary Responsibilities

<table>
<thead>
<tr>
<th>Current Responsibilities</th>
<th>MCE Staff</th>
<th>PEA</th>
<th>Z-Global</th>
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<tbody>
<tr>
<td>Long-Term Load Forecasting</td>
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<td>✓</td>
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<tr>
<td>Resource Planning: RPS, GHG-Free, RA, Hedging needs</td>
<td>✓</td>
<td>✓</td>
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<td>Market Intelligence: forward curves, quotes, valuations, etc.</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Reporting: compliance reporting, MCE &amp; CalCCA metrics</td>
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<tr>
<td>MCE Support: Regulatory, Customer Programs, Public Affairs</td>
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MCE Power Supply: Load Forecasting

What is Load Forecasting:
• Model for understanding MCE’s anticipated load

Timeframe:
• 10 year outlook (Integrated Resource Plan)
• 1 year outlook (rate setting)
• Monthly outlook (credit risk policy)
• Day-ahead (scheduling)

How:
• ZGlobal and PEA models
• Using customer counts
• Consumption patterns
• Weather and demand-side resources

Challenges:
• Forecasting demand side resources and Net Energy Metering
• Multiple inclusion periods with differentiated geographical needs
MCE Power Supply: Load Forecasting

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Current Responsibilities

1. Load Forecasting
2. Resource Planning
3. Procurement
4. Project Development
5. CAISO Operations
6. Contract Administration
7. Settlements
8. Reporting
9. Process Improvement
MCE Power Supply: **Resource Planning**

**Current Responsibilities**

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**What is Resource Planning:**
- Mapping out MCE’s power resource needs, down to the hour and as much as 10 years in advance
- Ensuring that MCE will meet Board-approved targets and regulatory requirements, while minimizing expected costs, market and credit risk, and contract settlement complexity

**What does MCE Procure?**
1. Clean Energy
2. Hedges
3. Resource Adequacy
4. **CAISO System Power:** (MCE’s CAISO Load – MCE’s Clean Energy)

**Challenges:**
- Evolving power supply regulations
- Supplier performance
- Load uncertainty
MCE Power Supply: **Procurement and Sales**

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**Current Responsibilities**

- **Market Intelligence:** forward curves, quotes, valuations, etc.
- **Market Development:** new confirm structures, market outreach
- **Renewable and GHG-free Procurement and Sales**
- **RA and Fixed System Hedge Procurement and Sales**

**What is Procurement:**

- Meeting MCE’s energy and RA targets through formal and informal solicitations

**Timeline:**

- Long-term (10+ years), intermediate (2-10 years) and short-term (<1 year)
- Monthly contracting: RA and Hedging

**How:**

- Determining open positions from Load and Resource Balance model
- Engaging the market using formal and informal solicitations
- Using standard offer agreements (MCE uses 3 main form contracts)
- Negotiating commercial and credit terms
- Using legal review and internal approval processes

**Challenges:**

- Transparent market intelligence
- Finding new suppliers and educating them on CCAs and their product needs
MCE Power Supply: **Project Development**

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**What is Project Development:**
- Facilitating projects to achieve Commercial Operation under Power Purchase Agreements
- Managing Contract terms and conditions
- Milestone monitoring and permitted delay days

**Timeline:**
- Related to new construction
- Based on guaranteed milestones set forth in PPA

**How:**
- Ensuring that all appropriate milestones have been such as:
  - Permitting
  - Construction Start
  - Interconnection
  - Testing and clearance for Commercial Operation by transmission operator, CAISO, and MCE
- Once MCE accepts Commercial Operation, Delivery Term and payment triggered

**Challenges:**
- Lack of management tool, all work done through manual systems
- Legacy, above-market contracts
# MCE Power Supply: CAISO Market Operations

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What are CAISO Market Operations:
- CAISO Load: week-ahead forecasting and day-ahead self-scheduling
- CAISO Supply: bidding and scheduling into the day-ahead and real-time markets
- CAISO Congestion Hedging: annual basis

Timeline:
- Day-ahead for load and supply
- Year-ahead for Congestion Revenue Rights (CRRs)
- Month-ahead for CRRs

How:
- ZGlobal as MCE’s scheduling agent

Challenges:
- Timeliness and completeness of input data and sophistication of forecasting processes
- Alignment between long-term procurement forecasting and short term market operations
MCE Power Supply: Contract Administration

What is Contract Administration:

Every contract is different!

- Understanding complex contract structures, language and relationships
- First point of contact with counterparty managing all notices, issues, questions, etc.
- Facilitating developing projects through commercial operation
- Managing disputes, delays and damages
- Tracking operations of project, for example:
  - Renewable Energy Credits (RECs) match energy deliveries
  - Tracking invoiced amounts against guaranteed deliveries
- Lead on contract amendments, letter agreements, estoppels, and related documents
- Enforcing credit terms of agreement and working with MCE Finance to ensure collateral is maintained via letter of credit or guarantee.
- Maintenance of contract information to support data requests, mitigate liability, and ensure prudent the most value of the contract to MCE’s customers
MCE Power Supply: Settlements

Current Responsibilities

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What are Settlements:
• CAISO Settlements: payments for load and other market participation charges
• Contract Settlements: validation and reconciliation of power deliveries, Renewable Energy Credit (REC) transfers and invoice calculations in line with contract terms

How:
• CAISO Settlements: ZGlobal and PEA perform daily analysis and validation.Reviewed with MCE on a weekly basis.
• Contract Settlements: validation of energy invoices from contract suppliers is validated by MCE Contract Managers

Timeline:
• Weekly and monthly

Challenges:
• Complex legacy settlement structures
• Manual tracking of volumes, RECs and deliveries
MCE Power Supply: **Reporting**

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**What are MCE’s Reporting Obligations:**
- Renewable Portfolio Standard (CPUC & CEC)
- Resource Adequacy (CPUC, CEC & CAISO)
- Integrated Resource Plans (MCE and CPUC)
- PSD (Power Source Disclosure - CEC)
- GHG Reporting (CARB)
- Retail Sales Reporting (Energy Information Administration - EIA)
- Ad Hoc Data requests

**Timeline:**
Monthly, annually

**How:**
Using manually updated spreadsheets

**Challenges:**
- Lack of database of information
- Changing rules and regulations
- Ability to backfill
**MCE Power Supply: Process Improvements**

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**What are Process Improvements:**

- Systems and software to support Power Resources in its contract management and portfolio management

**Key opportunities identified:**

- Software that enables
  - Swift development of compliance reports
  - Oversight of contracts to mitigate risk and ensure all appropriate terms, conditions and milestones are met
  - Analysis of existing energy portfolio, MCE load, open positions, and how to best fill positions from clean sources
  - Load modification analysis and its effect on hourly energy gross margin
  - Load Forecasting

**How:**

- Request for Proposals from software vendors to meet contract management and portfolio management needs
- Continuous improvement mindset of team
MCE Power Supply: Financial Overview

1. PPA payments
   for physical power, attributes, RA

2. Contract for difference payments
   for physical power, attributes

3. Fixed price hedge payments
   for rights to payments that settle against generation prices

4. Index+ payments
   for attributes (with requirement for physical power deliveries to CAISO)

5. RA-Only payments
   for Resource Adequacy

A. Load Payments
   for physical power, settled against load prices

B. Revenue from physical power
   settled against generation prices

C. IST Payments
   settled against generation prices

D. Revenue from CRRs
   settled against the difference between generation prices and load prices

E. Other CAISO Charges
   proportional to load magnitude

MCE Customers

generation charges

PG&E

delivery charges, including PCIA

generation charges
Thank You

Lindsay Saxby
Manager of Power Resources
March 21, 2019

The Honorable Senator Hueso  
Chair, Senate Energy & Utilities Committee  
State Capitol, Room 4035  
Sacramento, CA 95814

Re: SB 255 (Bradford) — Support

Dear Chairman Hueso,

On behalf of Marin Clean Energy (MCE), I write in support of SB 255, which will encourage supplier diversity efforts from a number of energy market participants, including Community Choice Aggregators (CCAs). MCE is a local government agency that provides electricity generation services to over 470,000 customers in Marin, Napa, Contra Costa, and Solano counties. MCE supports both the top-down supplier diversity efforts envisioned by Assemblymember Gwen Moore in AB 3678 (1986) as well as additional bottom-up workforce development opportunities for disadvantaged communities.

MCE is a proud supporter of supplier diversity. MCE’s Sustainable Workforce and Diversity Policy prioritizes sustainable workforce opportunities, local economic sustainability, and diversity inclusion through contracting and agency initiatives. MCE currently requests contractors voluntarily disclose their General Order (GO) 156 certification status and their efforts to work with DBEs for power purchase agreements, Feed-in-Tariffs, customer programs, and new contractors. From these requests, MCE found that 23% of its respondents self-identify as certified under GO 156 or use subcontractors that are certified. MCE also found that 100% of respondents with labor-related jobs pay prevailing wage. 77% of respondents have initiatives in place to promote diversity, and 45% of respondents support or use apprenticeship programs.

In January 2018, MCE, the Greenlining Institute, and the California Community Choice Association (CalCCA) jointly convened a CCA Supplier Diversity Symposium. The symposium hosted dignitaries such as Senator Nancy Skinner, former Senator Ricardo Lara, Commissioner Rechtschaffen, former Commissioner Peterman, program administrators, and participants who have benefited from these workforce development opportunities supported by MCE.

As recently as March 7, 2019, MCE held a “Certify & Amplify” workshop at its Concord office. MCE hosted 50 business owners and CPUC supplier diversity staff to explain the certification process for the clearinghouse and to provide more information about the GO 156 program.

In addition to top-down supplier diversity efforts, MCE also supports bottom-up workforce development efforts. MCE Solar One is a 10.5 MW solar project located at the Chevron refinery in Richmond. The project was built with a 50 percent local hire requirement in a diverse
community with high unemployment rates and many underserved and marginalized communities. Local non-profit partner RichmondBUILD trained multiple cohorts of students to work on the project. MCE invested time and funds in training over a two year period before breaking ground on the project in order to ensure access to the jobs by a wide range of local residents. The project also hired union workers from the United Brotherhood of Carpenters and Joiners of America (UBC) and Laborers Union (Local 152); International Brotherhood of Electrical Workers (IBEW) (Local 302); IBEW (Local 1245); Laborers Union (Local 324); Operating Engineers (Local 3) and Steamfitters (Local 342).

In Contra Costa County, MCE has partnered with nonprofit partner, Rising Sun Energy Center, to train local youth to provide no-cost energy savings and water assessments in the Cities of Richmond, El Cerrito, and San Pablo. MCE has also worked with nonprofit partner RichmondBUILD to train students with construction, numeracy, and literacy skills, later connecting them with related jobs for large scale solar installation and an LED streetlight retrofit project in Richmond. In Pittsburg (ranking 85-95% percentile in CalEnviroScreen 3.0), MCE helped coordinate the presence of a new call center, then partnered with Future Build East County and Calpine to train students on call center basics, call handling, energy data and more. Graduates were offered positions at the new call center. Finally, MCE has recently been approved for an additional $2.24 million for workforce development activities for 2019 through 2025.

In Marin County, MCE has partnered with the Marin City Community Development Corporation (MCCDC) since 2012 to train at least 62 disadvantaged community members and connect them to solar installation and energy efficiency jobs.

MCE is proud to demonstrate its robust support for diversity efforts through all aspects of the workforce and applauds Senator Bradford’s leadership on this issue.

Sincerely,

Shalini Swaroop
General Counsel, MCE
March 21, 2019

The Honorable Senator Dodd
State Capitol, Room 4032
Sacramento, CA 95814

Re: SB 167 (Dodd)—Support

Dear Senator Dodd,

On behalf of MCE Clean Energy, I write in support of SB 167, which would require wildfire response protocols to include impacts on critical first responders, customers enrolled in the California Alternative Rates for Energy (CARE) program, and medical baseline customers.

The importance of including protocols for these vulnerable individuals cannot be understated because for many, it could be a matter of life or death. MCE serves customers who depend upon safe and reliable electricity to power their life-support equipment. By including protocols that account for the safety of these individuals during wildfire events, this bill shares our values of providing customers with safe and reliable electricity to those who need it, without jeopardizing the safety of other customers.

This bill also takes into account protocols for keeping first responders safe during potential wildfire events. These events can create numerous hazards to critical first responders, so it is imperative to establish protocols such as preemptively deenergizing powerlines in high-risk areas that could prove to be life-threatening during rescue and recovery operations.

MCE appreciates the opportunity to weigh in on this piece of legislation and urges your support. If you have any questions, feel free to contact me at (415) 464-6040.

Sincerely,

Shalini Swaroop
General Counsel, MCE