1125 Tamalpais Avenue
San Rafael, CA 94901

1 (888) 632-3674

# Board of Directors Meeting

## Thursday, February 16, 2017
## 7:00 P.M.

## The Charles F. McGlashan Board Room
## 1125 Tamalpais Avenue, San Rafael, CA 94901



1. Swearing In of New Board Members

2. Board Announcements (Discussion)

3. Public Open Time (Discussion)

4. Report from Chief Executive Officer (Discussion)

5. Consent Calendar (Discussion/Action)
   - C.1 1.19.17 Meeting Minutes
   - C.2 Approved Contracts Update
   - C.3 New MCE Staff Position

6. Proposed Budget Amendment for FY2016/17 (Discussion/Action)

7. Proposed Rates for FY2017/18 (Discussion/Action)

8. Proposed Budgets for FY2017/18 (Discussion/Action)

9. Delegation of Authorities and Contracting (Discussion/Action)
   a. Proposed Resolution 2017-02 - A Resolution of the Board of Directors of MCE Delegating Contracting Authorities

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## Agenda Page 2 of 2

**10.** MCE Integrated Resource Plan Update (Discussion)

**11.** Board Member & Staff Matters (Discussion)

**12.** Adjourn

**MCE BOARD MEETING MINUTES**
**Thursday, January 19, 2017**
**7:00 P.M.**
**THE CHARLES F. MCGLASHAN BOARD ROOM**
**1125 TAMALPAIS AVENUE, SAN RAFAEL, CA 94901**

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**Roll Call:** Director Kate Sears called the regular Board meeting to order at 7:02 p.m. An established quorum was met.

**Present**:
Sloan Bailey, Town of Corte Madera
Tom Butt, Vice Chair, City of Richmond
Ford Greene, Town of San Anselmo
Kevin Haroff, City of Larkspur
Peter Lacques, Alternate, Town of Fairfax
Sashi McEntee, City of Mill Valley
Emmett O'Donnell, Town of Tiburon
Elizabeth Patterson, Alternate, City of Benicia
P. Rupert Russell, Town of Ross
Kate Sears, Chair, County of Marin
Don Tatzin, City of Lafayette

**Absent:**
Denise Athas, City of Novato
Genoveva Calloway, City of San Pablo
Greg Lyman, City of El Cerrito
Bob McCaskill, City of Belvedere
Andrew McCullough, City of San Rafael
Brad Wagenknecht, County of Napa
Kevin Wilk, City of Walnut Creek
Ray Withy, City of Sausalito

**Staff:**
Greg Brehm, Director of Power Resources
Meaghan Doran, Energy Efficiency Program Manager
Darlene Jackson, Board Clerk
Elizabeth Kelly, General Counsel
Paul Liotsakis, Customer Programs Manager
Beckie Menten, Director of Customer Programs
Justine Parmelee, Operations Associate
David Potovsky, Power Supply Contracts Manager
Dawn Weisz, Chief Executive Officer

**Swearing In of New Board Member Don Tatzin**
CEO Weisz conducted the Oath of Office with new Board Member Don Tatzin from the City of Lafayette. Director Tatzin was welcomed to the Board.

**1. Board Announcements (Discussion)**

There were none.

**2. Public Open Time (Discussion)**

Members of the Public and students Sarah Loughran and Helene Marsh, from Environmental Forum of Marin Master Class 43 Project addressed the Board regarding their push for Municipal and County use of MCE Deep Green. Handouts were provided.

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

Dawn Weisz, CEO reported on the following:

- Welcomed newest Board Member Don Tatzin, City of Lafayette
- Acknowledged newly appointed Board member Kevin Wilk, City of Walnut Creek who will be sworn in at the February Board meeting
- Contra Costa County has narrowed down their CCA possibilities to no longer consider launching a County-led program, but to just consider MCE or the Alameda County CCA program
- David Potovsky, Power Supply Contracts Manager, provided a brief update on the Feed-in-Tariff program
- Meeting Date Reminders:
    - Ad Hoc Ratesetting Committee met last week and recommended sending the item to Executive Committee.
    - Technical Committee will meet Thursday Feb. 2nd.
    - Executive Committee will meet Friday Feb. 3rd where budget and rate setting will be discussed then brought to the full Board for approval.
    - CalCCA is holding a briefing in Sacramento on January 25-25 for legislative offices.

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

C.1 11.17.16 Meeting Minutes
C.2 Approved Contracts Update
C.3 Resolution 2017-01 Approving MCE's Conflict of Interest Code
C.4 MCE Staff Compensation Study
C.5 Update MCE Board Voting Shares

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

ACTION: It was M/S/C (Butt/Greene) to approve Consent Calendar Items C.1 through C.5. Motion carried by unanimous vote: (Abstain on C.1: Bailey, Lacques and Tatzin) (Absent: Athas, Calloway, Lyman, McCaskill, McCullough, Wagenknecht, Wilk and Withy).

**5. Formation of 2017 Ad Hoc Contracts Committee (Discussion/Action)**

CEO Weisz presented this item and addressed questions from Board members. The following members expressed interest in serving on the 2017 Committee: Directors Bailey, Coler, Greene, Haroff, O'Donnell, and Tatzin.

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

ACTION: It was M/S/C (Greene/Butt) to approve Directors Bailey, Coler, Greene, Haroff, O'Donnell and Tatzin to serve on the 2017 Ad Hoc Contracts Committee. Motion carried by unanimous vote: (Absent: Athas, Calloway, Lyman, McCaskill, McCullough, Wagenknecht, Wilk and Withy).

**6. Resolution 2017-02 Confirming and Updating Delegated Authority for Contracts and Power Procurement (Discussion/Action)**

On Board recommendation, this item was deferred to the February Board meeting.

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

ACTION: This item was deferred to the February Board meeting.

**7. MCE Headquarters Solar and Electric Vehicle Installation (Discussion)**

David Potovsky presented this item and addressed questions from Board members.

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

ACTION: No action required

**8. Customer Programs Update (Discussion)**

Beckie Menten, Director of Customer Programs, presented this discussion item and addressed questions from Board members.

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

ACTION: No action required

**9. Regulatory and Legislative Update (Discussion)**

Beth Kelly, General Counsel, introduced this discussion item and addressed questions from Board members.

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

| ACTION: No action required |
|---|

**10. Board Member & Staff Matters (Discussion)**

There were none.

**11. Adjournment**

The Board of Directors adjourned the meeting at 8:30 p.m. to the next Regular Board Meeting on February 16, 2017.

_____
Kate Sears, Chair

Attest:

_____
Dawn Weisz, Secretary

February 16, 2017

TO: MCE Board of Directors

FROM: Catalina Murphy, Contracts Manager & Legal Assistant

RE: Report on Approved Contracts (Agenda Item #05 – C.2)

Dear Board Members:

**SUMMARY:** This report summarizes agreements entered into by the Chief Executive Officer since the last board meeting in January. This summary is provided to your Board for information purposes only.

## Review of Procurement Authorities

In March 2013 your Board adopted Resolution 2013-04 as follows:

> *The Chief Executive Officer is hereby authorized to enter into and execute contracts for an amount not to exceed $25,000 per contractor per fiscal year, consistent with the Board approved budget, the Joint Powers Agreement, and the Operating Rules and Regulations.*

In November 2015 your Board approved the MCE Integrated Resource Plan stating:

> *Power purchase agreements (energy, capacity, RECs) with terms of 12 months or less may be entered into on MCE's behalf by the CEO.*
>
> *Power purchase agreements (energy, capacity, RECs) with terms of greater than 12 months and less than or equal to 5 years and which are made pursuant to a Board approved resource plan may be entered into on MCE's behalf by the CEO in conjunction with the MCE Board Chair. A committee of the MCE Board will be consulted prior to execution of any medium-term contracts.*

The Chief Executive Officer is required to report all such contracts and agreements to the MCE Board on a regular basis.

At its May 2016 Board Meeting the Board authorized the CEO to enter into contracts related to the development of the MCE Solar One project. Contracts with Goebel Construction for work on the MCE Solar One project are provided below.

Summary of Agreements entered into by the CEO since the last Board Meeting

| Month | Purpose | Contractor | Maximum Annual Contract Amount | Term of Contract |
|---|---|---|---|---|
| January | Amendment increasing contract by $3,981 for additional paving services at MCE Solar One site | Goebel Construction Inc. | $282,323 | 5 Months |
| January | Provide value engineering services for demand side management programs | AutoGrid | $10,000 | 1 year |
| January | Provide and install sound system upgrade to MCE Charles McGlashan Room | Loud & Clear Audio Visual | $7,396 | 3 Months |
| January | Amendment increasing contract by $5,628 for additional grading services at MCE Solar One site | Goebel Construction Inc. | $287,951 | 5 Months |
| January | 33 MW Resource Adequacy for 2017 | SENA | $24,750 | 2 Months |
| January | 14 MW Resource Adequacy for 2017 | SENA | $10,500 | 1 Month |

**Fiscal Impact:** Expenses associated with these Agreements that occur prior to March 31, 2017 are included in the FY2016/17 Operating Fund, Energy Efficiency Program Fund, Local Renewable Energy Development Fund, and Renewable Energy Reserve Fund Budgets. Expenses that will occur beyond March 31, 2017 will be included in future fiscal year budgets.

**Recommendation**: Information only. No action required.

February 16, 2017

TO: MCE Board of Directors

FROM: Katie Gaier, Human Resources Manager

RE: New MCE Staff Position (Agenda Item # 05 – C.3)

ATTACHMENT: Job Description – Senior Community Development Manager

Dear Board Members:

**SUMMARY:**
Due to the recent inclusion of new communities in MCE's service area, the Public Affairs Team has experienced a growth in the number of staff members necessary to provide outreach, marketing, and strategic planning to respond efficiently and effectively to member communities, potential member communities, customers, and potential customers. The growth has resulted in the need for mid-level supervisory positions. To respond to that need, a draft job description has been developed to create a Senior Community Development Manager to supervise Community Development Managers and other staff, as assigned. The proposed salary for the position is $91,927 - $135,206, set internally at 10% above Community Development Manager to account for the supervisory responsibilities and higher level work.

The job description and salary range were presented to the Executive Committee at its February 3, 2017 meeting and are presented to your Board with the Committee's recommendation.

**Fiscal Impact:** The addition of a Senior Community Development Manager will have no impact on the approved FY 2016/17 budget as it will not increase the number of full-time equivalent positions for the Public Affairs Team.

**Recommendation:** Approve the job description and salary range for Senior Community Development Manager.

# Job Description
# Senior Community Development Manager

## Summary

The Senior Community Development Manager works under direction of the Director of Public Affairs and has a wide range of responsibilities for advancing MCE's programs and conducting strategic community outreach and advocacy for the Public Affairs division as well as managing the work of Community Development Managers or other staff, and performing related duties as assigned.

## Class Characteristics

Under direction of the Director of Public Affairs, the Senior Community Development Manager independently interfaces with a wide range of community, stakeholder, and customer groups, conducting strategic outreach and community organizing efforts to advance MCE programs, and leads local government affairs strategy for MCE. The Senior Community Development Manager is responsible for cultivating, developing, and maintaining relationships with key customer and stakeholder groups, and for communicating MCE's central messages consistently to target audiences via professional networking, printed literature, web-based material, electronic correspondence, public presentations, and verbal interactions. The incumbent also participates in community events and performs related work and tasks as needed including local government outreach, and responds to inquiries from customers via email, telephone, and in-person dialogue. The Senior Community Development Manager is also responsible for sales related activities on MCE's behalf through effective communications and physical visits to customer sites. The Senior Community Development Manager supervises and manages the work of Community Development Managers and other staff as assigned.

## Supervisory Responsibilities

This position requires lead worker and supervisory responsibilities.

## Essential Duties and Responsibilities (Illustrative Only)

- Plan, organize, and implement community outreach efforts to enhance marketing of MCE services to the general public, customers, and public agencies.
- Initiate and develop collaborative relationships with community members, local business owners, municipal staff, public officials, and other key stakeholders.
- Expand Deep Green customer participation and Light Green re-enrollments, by emailing, in-site visits, and cold-calling if necessary.

- Emphasize product and service features and benefits, quote costs, and discuss customer terms.
- Build and foster a network of referrals to create new opportunities for customer growth.
- Deliver presentations to various community groups and local representatives.
- Lead local government affairs strategy for member and prospective member jurisdictions.
- Hire, train, and supervise MCE employees.
- Conduct annual performance evaluations.
- Participate in public events to distribute information about MCE and interact with members of the public.
- Cultivate partnerships and mobilize public support for Deep Green co-branding and other promotional opportunities.
- Act as a liaison to local groups, civic institutions, and community-based organizations.
- Respond to customer inquiries.
- As assigned, assist with the implementation of MCE's Strategic Plan.

## Break-down of Time Spent on Various Work Areas

| | |
|---|---|
| Community outreach and organizing | 70% |
| • Deep Green & Re-enrollment | |
| • Public Partnership Development | |
| Responding to customer inquiries | 30% |

## Experience/Education

Education and experience equivalent to a Bachelor's degree in communications, public administration, environmental planning, or a related field and five years of experience in community outreach, or equivalent experience, including one year of supervisory experience. Experience working in a public utility and/or a Community Choice Aggregate program is desirable.

## Knowledge of

- Marin Clean Energy electric service options and customer programs
- The mission and goals of Marin Clean Energy
- Environmental policy, public administration, and energy regulation
- Microsoft Office Suite including Excel, Word, PowerPoint, and Adobe Acrobat
- Diverse communities and cultures
- Principles and practices of supervision in a public agency

## Ability to

- Utilize strong interpersonal and phone etiquette skills, verbal communications, grammatical, and professional business skill sets to promote and explain MCE programs
- Establish and maintain effective working relationships with persons encountered in the performance of duties
- Supervise and manage the work through other employees
- Provide direction and feedback to supervised staff
- Handle multiple projects in an efficient and time-sensitive manner
- Work independently to resolve issues quickly and effectively
- Manage multiple priorities and quickly adapt to changing priorities in a fast-paced, dynamic environment
- Take responsibility for work product
- Coordinate work with community groups
- Work accurately and swiftly under pressure
- Demonstrate patience, tact, courtesy, and flexibility
- Sell MCE products and programs
- Communicate effectively in Spanish is desirable

## Language and Reasoning Skills

- Exercise sound judgment, creative problem solving, and commercial awareness
- Develop high-quality writing, research, and communication work products
- Deliver clear oral and written communication
- Interact professionally and effectively with customers, commercial partners, MCE staff team, and Board of Directors
- Apply strong analytical and problem-solving skills
- Manage projects and time efficiently

## Mathematical Skills

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

## Physical Demands

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. While performing the duties of this job, the employee is frequently required to use hands to finger, handle, or feel and reach with hands and arms. The employee is occasionally required to stand.

The employee must occasionally lift and/or move up to 20 pounds.

## Work Environment

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. The noise level in the office work environment is usually moderate. The incumbent also works in the field at community meetings and other functions.

## ADA Compliance

MCE will make reasonable accommodation of the known physical or mental limitations of a qualified applicant with a disability upon request.

February 16, 2017

TO: MCE Board of Directors

FROM: David McNeil, Finance and Project Manager

RE: Proposed Budget Amendment for FY 2016/17 (Agenda Item #06)

ATTACHMENT: Proposed Amendment to the FY 2016/17 Operating Fund Budget

Dear Board Members:

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**SUMMARY:**

During the normal course of business, MCE Staff monitors actual and expected expenditures to ensure that expenditures do not exceed the limits established by Board approved Budgets. In the past, as MCE nears its March 31 fiscal year end, Staff have proposed adjustments to the Operating Fund Budget to accommodate adjustments needed for specific line items. This year, Staff proposes adjustments to MCE's FY 2016/17 Operating Fund Budget as shown below. There are proposed increases to the Communications, General and administration, and Occupancy budget line items which would be entirely offset by a proposed decrease in the Personnel budget line item.

**Personnel (-$125,000, 2% decrease):** Decreased personnel costs result from a slower rate of hiring than previously anticipated.

**Communications and related services (+35,000, 4% increase):** The proposal to increase the budget for Communications and related services results from higher than expected costs associated with enrolling new communities, most notably membership dues at local community organizations such as chambers of commerce, costs associated with mailers, and other communications material.

**General and administration (+$25,000, 6% increase):** The proposal to increase the budget for General and administration costs results from an increase in contingencies and funding to support greater CCA cooperation.

**Occupancy (+65,000, 19% increase):** The proposal to increase the budget for Occupancy results from increased building wear and tear due to higher staff count, greater activity in the building, and higher costs for the building lease than previously budgeted.

**FISCAL IMPACT**: The proposed increases to the Communications, General and administration, and Occupancy budget line items would be offset by the proposed reduction in the Personnel budget line item. The net impact of the proposed budget amendment on the budgeted FY 2016/17 contribution to the net position is $0.00.

**RECOMMENDATION:** Approve the proposed Amendment to the FY 2016/17 Operating Fund Budget.

# MARIN CLEAN ENERGY
## OPERATING FUND
## PROPOSED Budget Amendment
## Fiscal Year 2016/17

| | FY 2016/17 Budget | Amendment | Amended FY 2016/17 Budget |
|---|---|---|---|
| **ENERGY REVENUE** | | | |
| Revenue - Electricity (net of allowance) | $ 181,351,000 | - | $ 181,351,000 |
| Other Revenue | | | |
| **TOTAL ENERGY REVENUE** | **181,351,000** | - | **181,351,000** |
| **ENERGY EXPENSES** | | | |
| Cost of energy | 159,033,000 | - | 159,033,000 |
| Service fees - PG&E | 1,255,000 | - | 1,255,000 |
| **TOTAL ENERGY EXPENSES** | **160,288,000** | - | **160,288,000** |
| **NET ENERGY REVENUE** | **21,063,000** | - | **21,063,000** |
| **OPERATING EXPENSES** | | | |
| Personnel | 5,376,000 | (125,000) | 5,251,000 |
| Data manager | 3,674,000 | - | 3,674,000 |
| Technical and Scheduling Services | 762,000 | - | 762,000 |
| Legal counsel | 817,000 | - | 817,000 |
| Communications and related services | 951,000 | 35,000 | 986,000 |
| Other services | 469,000 | - | 469,000 |
| General and administration | 418,000 | 25,000 | 443,000 |
| Occupancy | 338,000 | 65,000 | 403,000 |
| Integrated demand side pilot programs | 50,000 | - | 50,000 |
| Marin County green business program | 10,000 | - | 10,000 |
| Low income solar programs | 35,000 | - | 35,000 |
| **TOTAL OPERATING EXPENSES** | **12,900,000** | - | **12,900,000** |
| **OPERATING INCOME** | **8,163,000** | - | **8,163,000** |
| **NONOPERATING REVENUES** | | | |
| Grant income | 75,000 | | 75,000 |
| Interest income | 50,000 | - | 50,000 |
| **TOTAL NONOPERATING REVENUES** | **125,000** | - | **125,000** |
| **NONOPERATING EXPENSES** | | | |
| Interest expense and financing costs | 345,500 | - | 345,500 |
| Depreciation (supplemental) | 100,000 | - | 100,000 |
| **TOTAL NONOPERATING EXPENSES** | **445,500** | | **445,500** |
| | | - | |
| **CHANGE IN NET POSITION** | **7,842,500** | - | **7,842,500** |
| Net position beginning of period | 29,531,000 | - | 29,531,000 |
| Change in net position | 7,842,500 | - | 7,842,500 |
| Net position end of period | 37,373,500 | - | 37,373,500 |
| **CAPITAL EXPENDITURES, INTERFUND TRANSFERS & OTHER** | | | |
| Capital Outlay | 383,000 | | 383,000 |
| Depreciation (supplemental) | (100,000) | - | (100,000) |
| Repayment of Loan Principal | - | - | - |
| Transfer to Renewable Energy Reserve | - | - | - |
| Transfer to Local Renewable Energy Development Fund | 173,000 | - | 173,000 |
| **TOTAL CAPITAL EXPENDITURES, INTERFUND TRANSFERS & OTHER** | 456,000 | - | 456,000 |
| Net increase (decrease) in Operating Fund balance | $ 7,386,500 | $ - | $ 7,386,500 |

February 16, 2017

TO: MCE Board of Directors

FROM: John Dalessi, Pacific Energy Advisors

RE: Proposed Rates for Fiscal Year 2017/18 (Agenda Item #07)

ATTACHMENT: Proposed Rates for FY 2017/18

Dear Board Members:

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**SUMMARY:**
The Marin Clean Energy Community Choice Aggregation Implementation Plan and Statement of Intent ("Implementation Plan") describes the policies and procedures for setting and modifying electric rates for the Marin Clean Energy (MCE) program. As described in the Implementation Plan, the MCE annual ratesetting process is coordinated with the establishment of fiscal year program budgets. MCE rates are typically reviewed on an annual basis during the month of January to determine whether rate changes are warranted in consideration of the next fiscal year's proposed budget, rate competiveness, rate stability, customer understanding, efficiency and equity among customers.

Staff has completed its assessment and, following consultation with an Ad Hoc Committee of the MCE Board and the MCE Executive Committee, recommends that MCE reduce rates by an average of 3.7% beginning April 1, 2017.

Various alternative proposals were considered by staff, in consultation with the MCE Rates Ad Hoc Committee, in arriving at the recommended rate proposal. The alternative scenarios included maintaining current MCE rates as well as the alternative of adjusting MCE rates to achieve customer cost parity with PG&E. The recommended rate proposal was selected as best achieving the goals of making progress towards building adequate financial reserves while maintaining rate competitiveness.

## BACKGROUND – MCE RATESETTING CYCLE, POLICIES AND PROCESS

### Ratesetting Cycle

MCE typically adjusts its rates on an annual basis, and the new rates go into effect on or about April 1. Ratesetting is coordinated with the annual budgeting cycle due to the inherent linkages between the MCE Budget and MCE rates. Rates could be adjusted more frequently, if necessary, to ensure recovery of all MCE program costs, but this is not typical and has not been necessary to date.

Proposed rates are typically presented to your Board in February, based on the proposed upcoming fiscal year budget. This release of the proposed rates initiates a thirty-day public review and comment period. If rate increases are being proposed, the affected MCE customers are provided with notice of said rate increase. Following completion of the thirty-day public review and comment period, final rates are adopted by your Board in March and placed into effect on April 1. Final rates may differ from the initially proposed rates to account for changes resulting from adoption of the final fiscal year budget, consideration of public comments received during the aforementioned review period, and/or other factors that may be considered by your Board.

**Ratesetting Objectives**

MCE has established various objectives that are considered in designing MCE rates. These ratesetting objectives are as follows:

*Revenue sufficiency*: rates must recover all expenses, debt service and other expenditure requirements, and build prudent reserves; i.e., the "revenue requirement".

*Rate competitiveness*: rates must allow MCE to successfully compete in the marketplace to retain and attract customers.

*Rate stability*: rate changes should be minimized to reduce customer bill impacts.

*Customer understanding*: rates should be simple, transparent and easily understood by customers.

*Equity among customers*: rate differences among customers should be justified by differences in usage characteristics and/or cost of service.

*Efficiency*: rates should encourage conservation and efficient use of electricity (e.g., off-peak vehicle charging).

To the extent that the objectives may be in tension with one another, the rate proposal attempts to strike an appropriate balance. For example, a cost-of-service analysis might suggest that a particular rate should be increased, but the increase might be limited in the interest of rate stability and/or rate competitiveness. In accordance with the Implementation Plan, the policy of revenue sufficiency may not be violated; however, the Board may use discretion in how the other ratesetting objectives are reflected in MCE rates.

**Ratesetting Process**

The ratesetting cycle begins with a forecast of MCE electric energy sales for the coming fiscal year. The forecast includes the number of customers that are expected to be enrolled and take service on each of the MCE rate schedules as well as the monthly billing quantities expected under each rate schedule. Depending upon the rate schedule in question, billing quantities can include monthly kWh, kWh during specified time-of-use periods (e.g., on-peak, partial peak, off-peak), maximum monthly kW demand and maximum kW demand during specified time-of-use periods. The forecasted billing quantities are used to derive a forecast of revenues at current (and proposed) MCE rates.

The projected revenue at current rates, termed "present rate revenues", is compared to fiscal year budget items that must be funded through such rates (the "revenue requirement") to determine whether rate adjustments are warranted for purposes of addressing any projected surplus or deficit.

As an interim step in the rate design process, the revenue requirement is first allocated to customer classes. Customers are classified based on end-use and other service characteristics in an attempt to represent groups of customers with relatively similar cost-of-service profiles. MCE has established nine customer classes that include: residential (E-1), small commercial (A-1 and A-6), medium commercial (A-10), large commercial (E-19), industrial (E-20), agricultural (Ag), street lighting (SL) and traffic control (TC) end uses. Revenues are allocated based on a cost of service analysis, assessment of rate competitiveness, and other policy considerations.

Typical end uses within the commercial customer classes are described below:

| Rate Group | Example End Use |
|---|---|
| E-1 | Residential |
| A-1 and A-6 | Small office, small retail |
| A-10 | Bank, restaurant, mixed use retail |
| E-19 | Department store, large office building, grocery store |
| E-20 | Institutional, hospital, college, water treatment facility |
| Ag | Agricultural |
| SL-1 | Street and area lighting |
| TC-1 | Traffic lights |

Rates are designed for the various rate schedules associated with each customer class in order to recover the revenue requirement allocated to that class. There are currently 37 rate schedules under which MCE customers may take service subject to the relevant eligibility criteria. MCE determines rate schedule eligibility by mapping each MCE rate schedule to an equivalent PG&E rate schedule; customers contacting PG&E to change rate schedules (e.g., selection of an optional time-of-use rate or a net energy metering rate) would automatically be placed on a corresponding MCE rate schedule.

## FY 2017/18 PROPOSED RATES

MCE's current rates are projected to yield sufficient revenues to recover the proposed FY 2017/18 expenditures and generate a contribution to reserves of $15.4 million or 7.5% of revenue. Staff recommends reducing MCE rates by an average of 3.7% to yield a projected reserve contribution of $7.9 million, equating to 4% of fiscal year revenues. At these levels, costs for MCE customers, on average, would be slightly below the costs that would be incurred under PG&E service.

### FY 2017/18 Revenue Requirement

For ratesetting purposes, the revenue requirement is the term used to describe the aggregate revenues that rates are designed to collect. The FY 2017/18 revenue requirement is based on the proposed FY 2017/18 Budget for MCE's Operating Fund, inclusive of the targeted 4% contribution to reserves.[1] The proposed revenue

[1] The difference between the revenue requirement used for ratesetting and the budgeted revenue is due to the revenue deficiencies associated with uncollectible customer accounts as well as costs and revenues associated with the net energy metering (NEM) and Deep Green programs.

requirement for FY 2017/18 is $198,042,798 as shown in Table 1. Revenues that would be collected at present rates are estimated to be $205,652,338. The difference of $7,609,799 represents an average rate decrease of approximately 3.7%.

The proposed revenue requirement, including a reconciliation to the proposed FY 2017/18 Budget, is shown in Table 1:

**Table 1: Proposed FY 2017/18 Revenue Requirement**

| ***Revenue Requirement*** | |
|---|---|
| | |
| Proposed FY 2017/18 Operating Fund Budget Revenue | $198,710,759 |
| Uncollectible Account Expenses, NEM and Deep Green Revenue Adjustments | $-667,961 |
| | |
| **Proposed Revenue Requirement** | **$198,042,798** |
| | |
| Present Rate Revenues | $205,652,338 |
| Surplus in Funds | $7,609,799 |
| Average Rate Decrease | 3.7% |

**Revenue Allocation**

The proposed revenue requirement was allocated to rate groups in a manner intended to bring average rates for all customer classes, inclusive of PG&E surcharges (Power Charge Indifference Adjustment or "PCIA" and the Franchise Fee Surcharge or "FFS"), closer to parity with PG&E. The proposed revenue changes by customer class are shown in Table 2:

**Table 2: Proposed Class Revenue Allocation**

| Rate Group | Revenue at Present Rates | Revenue at Proposed Rates[2] | Change in Revenues | % Change |
|---|---|---|---|---|
| E-1 | 86,893,228 | 82,587,247 | (4,305,982) | -5.0% |
| A-1 | 27,235,009 | 26,148,981 | (1,086,027) | -4.0% |
| A-6 | 6,670,002 | 6,552,679 | (117,322) | -1.8% |
| A-10 | 34,065,283 | 33,453,809 | (611,473) | -1.8% |
| E-19 | 31,260,320 | 30,130,398 | (1,129,923) | -3.6% |
| E-20 | 16,664,883 | 16,333,200 | (331,682) | -2.0% |
| Ag | 1,545,244 | 1,540,327 | (4,917) | -0.3% |
| SL | 1,186,881 | 1,170,710 | (16,171) | -1.4% |
| TC | 131,489 | 125,631 | (5,858) | -4.5% |
| **Total** | **205,652,338** | **198,042,983** | **(7,609,355)** | **-3.7%** |

[2] Revenue at proposed rates varies slightly from the revenue requirement due to rounding.

As can be seen from the table, the proposed rate changes are not uniform across the different customer classes served by MCE. The proposed differential rate adjustments were made based on a comparative rate analysis and designed to bring average MCE customer costs for all customer classes below what the costs would be under bundled PG&E rates. The resulting average cost comparisons are shown in Table 3. The cost figures in Table 3 represent total delivered electricity costs, inclusive of generation charges, distribution and other delivery charges, and, for MCE customers, the PCIA and Franchise Fee surcharges.

**Table 3: Proposed Rate Comparative Analysis Summary**

| Rate Group | Total MCE Generation + PG&E Charges[3] | Revenue at Current PG&E Bundled Rates[4] | Total Cost Difference | % Cost Difference |
|---|---|---|---|---|
| E-1 | 242,421,473 | 242,561,188 | (139,715) | -0.1% |
| A-1 | 78,713,387 | 78,758,752 | (45,365) | -0.1% |
| A-6 | 16,719,018 | 16,728,653 | (9,636) | -0.1% |
| A-10 | 84,788,159 | 84,837,025 | (48,866) | -0.1% |
| E-19 | 72,723,083 | 72,764,996 | (41,913) | -0.1% |
| E-20 | 32,393,386 | 32,412,055 | (18,669) | -0.1% |
| Ag | 3,878,830 | 3,881,066 | (2,235) | -0.1% |
| SL | 3,400,173 | 3,402,132 | (1,960) | -0.1% |
| TC | 424,896 | 425,141 | (245) | -0.1% |
| **Total** | **535,462,405** | **535,771,009** | **(308,604)** | **-0.1%** |

**Rate Design**

The individual rate components on each rate schedule were examined in relation to the costs of providing electric service as well as how they compare to the corresponding PG&E rate, after taking PCIA surcharges into consideration. Adjustments were made to better align MCE rate components with those charged by PG&E so that individual customer rate comparisons will be more uniform for all MCE customers. Generally speaking, reductions were made to off-peak energy rates, while increases were made to demand charges and certain on-peak or partial peak energy rates. The reductions in off-peak energy rates were limited where they would otherwise result in rates that are below the cost of wholesale energy. The net effect of the rate design changes is to reduce revenues from each customer class as shown in Table 2; however, the impacts on individual customer bills will vary depending upon specific usage characteristics. A comparison of current and proposed rates is included in Attachment A.

**Termination Fees**

MCE's rates and charges include a Termination Fee applicable to customers departing MCE service after the initial sixty-day post enrollment opt-out period. The Termination Fee is proposed to remain unchanged for FY 2017/18. The Administrative Fee component of the Termination Fee would remain at $5 for residential customers and $25 for non-residential customers. The Cost Recovery Charge component of the Termination Fee, which would apply in the event MCE is unable to recover the costs of supply

[3] Includes MCE charges and PG&E delivery and PCIA/Franchise Fee surcharges.
[4] Includes PG&E generation and delivery charges.

commitments attributable to the customer that is terminating service, would remain at zero.

**Recommendation:** Accept the proposed rates contained in Attachment A, subject to approval of final FY 2017/18 rates in March 2017.

**MARIN CLEAN ENERGY**
**PRESENT AND FY 2017/2018 PROPOSED RATES, EFFECTIVE APRIL 1, 2017**

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| RESIDENTIAL CUSTOMERS | | | | |
| E-1, EL-1, EM, EML, ES, ESL, ESR, ESRL, ET, ETL | **E-1** | | | |
| | ENERGY CHARGE ($/KWH) | All Energy | 0.07200 | 0.06800 |
| E-6, EL-6 | **E-6** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | Summer Peak | 0.18600 | 0.18600 |
| | | Summer Part Peak | 0.07800 | 0.08200 |
| | | Summer Off-Peak | 0.05300 | 0.04300 |
| | | Winter Partial Peak | 0.07300 | 0.06500 |
| | | Winter Off-Peak | 0.05300 | 0.05200 |
| EV-A, EV-B | **EV** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | Summer Peak | 0.17500 | 0.20000 |
| | | Summer Part Peak | 0.07800 | 0.07500 |
| | | Summer Off-Peak | 0.04400 | 0.03000 |
| | | Winter Peak | 0.06300 | 0.05500 |
| | | Winter Partial Peak | 0.04400 | 0.03000 |
| | | Winter Off-Peak | 0.04400 | 0.03000 |
| E-TOU-A, EL-TOU-A | **E-TOU-A** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | Summer Peak | 0.15700 | 0.15300 |
| | | Summer Off-Peak | 0.08200 | 0.07800 |
| | | Winter Peak | 0.07000 | 0.06600 |
| | | Winter Off-Peak | 0.05600 | 0.05200 |
| E-TOU-B, EL-TOU-B | **E-TOU-B** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | Summer Peak | 0.17400 | 0.17800 |
| | | Summer Off-Peak | 0.07200 | 0.07200 |
| | | Winter Peak | 0.07300 | 0.06900 |
| | | Winter Off-Peak | 0.05400 | 0.04900 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| COMMERCIAL, INDUSTRIAL AND GENERAL SERVICE CUSTOMERS | | | | |
| A-1-A | **A-1-A** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | 0.09300 | 0.09200 |
| | | WINTER | 0.06200 | 0.05700 |
| A-1-B | **A-1-B** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.10900 | 0.10800 |
| | | PART-PEAK | 0.10300 | 0.08600 |
| | | OFF-PEAK | 0.08100 | 0.05700 |
| | | WINTER | | |
| | | PART-PEAK | 0.07000 | 0.08400 |
| | | OFF-PEAK | 0.05500 | 0.06300 |
| A-6 | **A-6** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.30200 | 0.34000 |
| | | PART-PEAK | 0.10800 | 0.10200 |
| | | OFF-PEAK | 0.05100 | 0.04500 |
| | | WINTER | | |
| | | PART-PEAK | 0.08400 | 0.07100 |
| | | OFF-PEAK | 0.05100 | 0.05200 |
| A-10-A | **A-10-A** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | 0.08700 | 0.08100 |
| | | WINTER | 0.06200 | 0.05800 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER MAX | 2.80000 | 4.85000 |
| A-10-B | **A-10-B** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.10700 | 0.13500 |
| | | PART-PEAK | 0.08800 | 0.08200 |
| | | OFF-PEAK | 0.07500 | 0.05400 |
| | | WINTER | | |
| | | PART-PEAK | 0.06900 | 0.06500 |
| | | OFF-PEAK | 0.05800 | 0.04900 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER MAX | 2.80000 | 4.85000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| E-19-S, V | **E-19-S** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.10900 | 0.10500 |
| | | PART-PEAK | 0.07500 | 0.06500 |
| | | OFF-PEAK | 0.05200 | 0.04000 |
| | | WINTER | | |
| | | PART-PEAK | 0.07100 | 0.05900 |
| | | OFF-PEAK | 0.05000 | 0.04500 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 8.30000 | 12.60000 |
| | | PART-PEAK | 1.70000 | 3.10000 |
| E-19-P, V | **E-19-P** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.11000 | 0.09700 |
| | | PART-PEAK | 0.07100 | 0.05800 |
| | | OFF-PEAK | 0.05000 | 0.03500 |
| | | WINTER | | |
| | | PART-PEAK | 0.06500 | 0.05300 |
| | | OFF-PEAK | 0.05000 | 0.04000 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 8.10000 | 11.25000 |
| | | PART-PEAK | 1.70000 | 2.75000 |
| E-19-T, V | **E-19-T** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.08400 | 0.06000 |
| | | PART-PEAK | 0.06500 | 0.04800 |
| | | OFF-PEAK | 0.05100 | 0.03400 |
| | | WINTER | | |
| | | PART-PEAK | 0.05700 | 0.05000 |
| | | OFF-PEAK | 0.04900 | 0.03800 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 8.40000 | 12.40000 |
| | | PART-PEAK | 1.80000 | 3.10000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| E-19-R-S, V-R-S | **E-19-R-S** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.20100 | 0.24000 |
| | | PART-PEAK | 0.09300 | 0.09500 |
| | | OFF-PEAK | 0.05200 | 0.03900 |
| | | WINTER | | |
| | | PART-PEAK | 0.07100 | 0.06000 |
| | | OFF-PEAK | 0.05000 | 0.04500 |
| E-19-R-P, V-R-P | **E-19-R-P** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.20500 | 0.23000 |
| | | PART-PEAK | 0.09000 | 0.08800 |
| | | OFF-PEAK | 0.05000 | 0.03400 |
| | | WINTER | | |
| | | PART-PEAK | 0.06500 | 0.05300 |
| | | OFF-PEAK | 0.05000 | 0.04000 |
| E-19-R-T, V-R-T | **E-19-R-T** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.18200 | 0.23000 |
| | | PART-PEAK | 0.08400 | 0.08500 |
| | | OFF-PEAK | 0.05100 | 0.03200 |
| | | WINTER | | |
| | | PART-PEAK | 0.05700 | 0.05000 |
| | | OFF-PEAK | 0.04900 | 0.03800 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| E-20-S | **E-20-S** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.10200 | 0.09500 |
| | | PART-PEAK | 0.07000 | 0.06000 |
| | | OFF-PEAK | 0.04900 | 0.03600 |
| | | WINTER | | |
| | | PART-PEAK | 0.06300 | 0.05500 |
| | | OFF-PEAK | 0.04600 | 0.04100 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 7.70000 | 12.20000 |
| | | PART-PEAK | 1.60000 | 3.00000 |
| E-20-P | **E-20-P** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.10700 | 0.10200 |
| | | PART-PEAK | 0.07100 | 0.06100 |
| | | OFF-PEAK | 0.05000 | 0.03700 |
| | | WINTER | | |
| | | PART-PEAK | 0.06200 | 0.05600 |
| | | OFF-PEAK | 0.04900 | 0.04200 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 8.50000 | 13.40000 |
| | | PART-PEAK | 1.80000 | 3.15000 |
| E-20-T | **E-20-T** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.07600 | 0.06200 |
| | | PART-PEAK | 0.05900 | 0.04900 |
| | | OFF-PEAK | 0.04600 | 0.03400 |
| | | WINTER | | |
| | | PART-PEAK | 0.05700 | 0.05100 |
| | | OFF-PEAK | 0.04500 | 0.03900 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 9.90000 | 15.85000 |
| | | PART-PEAK | 2.10000 | 3.75000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| E-20-R-S | **E-20-R-S** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.18100 | 0.22000 |
| | | PART-PEAK | 0.08600 | 0.09000 |
| | | OFF-PEAK | 0.04900 | 0.03700 |
| | | WINTER | | |
| | | PART-PEAK | 0.06300 | 0.05500 |
| | | OFF-PEAK | 0.04600 | 0.04200 |
| E-20-R-P | **E-20-R-P** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.19500 | 0.24000 |
| | | PART-PEAK | 0.08700 | 0.08900 |
| | | OFF-PEAK | 0.05000 | 0.03700 |
| | | WINTER | | |
| | | PART-PEAK | 0.06200 | 0.05500 |
| | | OFF-PEAK | 0.04900 | 0.04200 |
| E-20-R-T | **E-20-R-T** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.17800 | 0.23000 |
| | | PART-PEAK | 0.07900 | 0.08400 |
| | | OFF-PEAK | 0.04600 | 0.03500 |
| | | WINTER | | |
| | | PART-PEAK | 0.05700 | 0.05100 |
| | | OFF-PEAK | 0.04500 | 0.04000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| AGRICULTURAL CUSTOMERS | | | | |
| AG-1-A | **AG-1-A** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | 0.08500 | 0.07700 |
| | | WINTER | 0.06800 | 0.05800 |
| | CONNECTED LOAD ($/HP) | | | |
| | | SUMMER MAX | 1.10000 | 1.35000 |
| | | WINTER MAX | - | - |
| AG-1-B | **AG-1-B** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | 0.07400 | 0.08000 |
| | | WINTER | 0.05800 | 0.05700 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER MAX | 1.60000 | 2.00000 |
| | | WINTER MAX | - | - |
| AG-RA | **AG-RA** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.19500 | 0.24200 |
| | | OFF-PEAK | 0.04900 | 0.04500 |
| | | WINTER | | |
| | | PART-PEAK | 0.05400 | 0.05200 |
| | | OFF-PEAK | 0.04600 | 0.04200 |
| | CONNECTED LOAD ($/HP) | | | |
| | | SUMMER | 1.1000 | 1.3000 |
| | | WINTER | 0.0000 | 0.0000 |
| AG-RB | **AG-RB** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.20700 | 0.21500 |
| | | OFF-PEAK | 0.05800 | 0.04500 |
| | | WINTER | | |
| | | PART-PEAK | 0.05300 | 0.04100 |
| | | OFF-PEAK | 0.04400 | 0.03500 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | MAX | 1.5000 | 1.9000 |
| | | PEAK | 1.6000 | 2.1500 |
| | | WINTER | 0.0000 | 0.0000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| AG-VA | **AG-VA** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.17700 | 0.21000 |
| | | OFF-PEAK | 0.04900 | 0.04300 |
| | | WINTER | | |
| | | PART-PEAK | 0.05500 | 0.05100 |
| | | OFF-PEAK | 0.04700 | 0.04000 |
| | CONNECTED LOAD ($/HP) | | | |
| | | SUMMER | 1.1000 | 1.3500 |
| | | WINTER | 0.0000 | 0.0000 |
| AG-VB | **AG-VB** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.18100 | 0.18500 |
| | | OFF-PEAK | 0.05500 | 0.04400 |
| | | WINTER | | |
| | | PART-PEAK | 0.05100 | 0.03900 |
| | | OFF-PEAK | 0.04400 | 0.03500 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | MAX | 1.4000 | 1.7500 |
| | | PEAK | 1.7000 | 2.2500 |
| | | WINTER | 0.0000 | 0.0000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| AG-4-A, AG-4-D | **AG-4-A** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.12600 | 0.13700 |
| | | OFF-PEAK | 0.05200 | 0.04600 |
| | | WINTER | | |
| | | PART-PEAK | 0.05500 | 0.05100 |
| | | OFF-PEAK | 0.04600 | 0.04000 |
| | CONNECTED LOAD ($/HP) | | | |
| | | SUMMER | 1.10000 | 1.35000 |
| | | WINTER | - | - |
| AG-4-B, AG-4-E | **AG-4-B** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.09600 | 0.09900 |
| | | OFF-PEAK | 0.05400 | 0.04900 |
| | | WINTER | | |
| | | PART-PEAK | 0.05300 | 0.04600 |
| | | OFF-PEAK | 0.04400 | 0.03900 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | MAX | 1.90000 | 2.35000 |
| | | PEAK | 1.90000 | 2.50000 |
| | | WINTER | - | - |
| AG-4-C, AG-4-F | **AG-4-C** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.10500 | 0.11600 |
| | | PART-PEAK | 0.05900 | 0.05600 |
| | | OFF-PEAK | 0.04200 | 0.03800 |
| | | WINTER | | |
| | | PART-PEAK | 0.04800 | 0.04100 |
| | | OFF-PEAK | 0.04000 | 0.03700 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 4.40000 | 5.90000 |
| | | PART-PEAK | 0.80000 | 1.00000 |
| | | WINTER | 0.00000 | 0.00000 |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| AG-5-A, AG-5-D | **AG-5-A** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.11600 | 0.12600 |
| | | OFF-PEAK | 0.05600 | 0.05100 |
| | | WINTER | | |
| | | PART-PEAK | 0.05800 | 0.05500 |
| | | OFF-PEAK | 0.04900 | 0.04400 |
| | CONNECTED LOAD ($/HP) | | | |
| | | SUMMER | 2.80000 | 3.70000 |
| | | WINTER | - | - |
| AG-5-B, AG-5-E | **AG-5-B** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.11100 | 0.11000 |
| | | OFF-PEAK | 0.03400 | 0.03200 |
| | | WINTER | | |
| | | PART-PEAK | 0.05200 | 0.04500 |
| | | OFF-PEAK | 0.02800 | 0.02800 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | MAX | 3.50000 | 4.45000 |
| | | PEAK | 4.30000 | 5.55000 |
| | | WINTER | - | - |
| AG-5-C, AG-5-F | **AG-5-C** | | | |
| | ENERGY CHARGE ($/KWH) | | | |
| | | SUMMER | | |
| | | PEAK | 0.08900 | 0.09000 |
| | | PART-PEAK | 0.04800 | 0.04500 |
| | | OFF-PEAK | 0.03500 | 0.03200 |
| | | WINTER | | |
| | | PART-PEAK | 0.04200 | 0.03700 |
| | | OFF-PEAK | 0.03200 | 0.03000 |
| | DEMAND CHARGE ($/KW) | | | |
| | | SUMMER | | |
| | | PEAK | 7.90000 | 10.30000 |
| | | PART-PEAK | 1.50000 | 1.90000 |
| | | WINTER | - | - |

| PG&E EQUIVALENT SCHEDULE | MCE RATE SCHEDULE | UNIT/PERIOD | PRESENT RATE | PROPOSED RATE |
|---|---|---|---|---|
| STREET AND OUTDOOR LIGHTING | | | | |
| LS-1, LS-2, LS-3, OL-1 | **SL** | | | |
| | ENERGY CHARGE ($/KWH) | | 0.07600 | 0.07500 |
| TC-1 | **TC-1** | | | |
| | ENERGY CHARGE ($/KWH) | | 0.06700 | 0.06400 |
| DEEP GREEN OPTION | | | | |
| Customers electing the Deep Green service option will pay the applicable rate for the Light Green service option plus the Deep Green Energy Charge. | | | | |
| | ENERGY CHARGE ($/KWH) | | 0.01000 | 0.01000 |
| LOCAL SOL OPTION | | | | |
| For customers taking service under the Local Sol service option, the MCE generation charges of the participating customer's otherwise applicable tariff will be replaced with the following Local Sol Rate: | | | | |
| | ENERGY CHARGE ($/KWH) | | - | 0.14200 |
| Voltage Discount<br>For rate schedules not segregated by service voltage, each component of the standard rate shall be discounted for primary or higher service voltage. | | | 4% | 4% |

February 16, 2017

TO: MCE Board of Directors

FROM: David McNeil, Finance and Project Manager
Michael Maher, Maher Accountancy

RE: Proposed Budgets for FY 2017/18 (Agenda Item #08)

ATTACHMENT: Proposed FY 2017/18 Operating Fund, Energy Efficiency Program Fund, Local Renewable Energy Development Fund, and Renewable Energy Reserve Fund Budgets

Dear Board Members:

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**SUMMARY:**

Before the end of every fiscal year, MCE's Board has the responsibility to set forth Budgets for MCE's Operating Fund, Energy Efficiency Program Fund, Local Renewable Energy Development Fund, and Renewable Energy Reserve Fund for the upcoming fiscal year (FY). These Budgets authorize Staff to collect revenue and spend funds within the limits set forth in each budget line item. The attached preliminary proposed Budgets reflect MCE's anticipated revenue, expenditures, and contingencies for FY 2017/18. FY 2016/17 Budgets and projected results for the FY 2016/17 Operating Fund have been provided for information and comparative purposes. The FY 2016/17 Operating Fund Budget figures presented in the attached document incorporate the proposed amendment to the FY 2016/17 Operating Fund Budget presented to your Board at its February 2017 meeting.

Pursuant to MCE's Implementation Plan, each year proposed annual Budgets are submitted to your Board in February along with proposed rates for the upcoming year. Proposed rates are made available to the public for a thirty-day review period. The proposed annual Budgets and rates return to your Board in March for approval and take effect on April 1, which is the first day of the new fiscal year. Staff requests your Board accept the proposed Budgets in preparation for their final approval in March.

**Operating Fund Budget**

The attached Proposed FY 2017/18 Operating Fund Budget sets forth the following budget line items:

**Revenue – electricity (+$20,361,000, 11% increase):** Budgeted electricity revenues are based on estimates of customer electricity usage and proposed rates. The increase in revenue results from the inclusion of new communities in September 2016. Budgeted revenues incorporate an average decrease in rates of 9% that took effect in September 2016 and an additional proposed average rate decrease of 3.7% that would take effect in April 2017. Electricity revenues also include revenues associated with MCE's Deep Green program and an allowance for uncollectable accounts.

**Other revenue (-$115,000, 92% decrease):** Other revenue includes operating revenue that does not represent sales of electricity and includes such items as grants, insurance claims, and cost recovery. Other revenue frequently relates to unanticipated events that occur during the year.

**Cost of energy (+$21,463,000, 13% increase):** Cost of energy includes expenses associated with purchase of energy products, charges by the California Independent Systems Operator (CAISO) for scheduled load, and services performed by the CAISO. Credits for energy generation scheduled into the CAISO market are netted from the Cost of energy. Increased energy costs reflect the cost of purchasing additional energy products to serve new customers enrolled in September 2016.

**Service fees – PG&E (+$232,000, 18% increase):** Service fees are based on the number of meters served by MCE and per meter rates charged by PG&E and are expected to increase as a result of the inclusion of new communities in September 2016.

**Personnel (+$1,498,000, 29% increase):** Increased budgeted personnel costs result from the full year impact of staff added during FY 2016/17 pursuant to the Board-approved FY 2016/17 Operating Fund Budget, new hires planned for FY 2017/18, the application of Cost of Living Adjustments (COLA) effective January 1st of each year, and performance-based increases to current staff salaries consistent with MCE's Board-approved Employee Handbook.

**Data manager (+$120,000, 3% increase):** Data manager costs are based on the number of meters served by MCE and per meter rates charged by MCE's data manager. Increased data manager costs incorporate the effect of including new communities in September 2016 and reduced rates offered by the data manager which went into effect at that time.

**Technical and scheduling services (+$44,000, 6% increase):** Technical services costs are based on a fixed charge per MWh of electricity usage. Technical services costs are expected to increase as a result of the inclusion of new communities in September 2016 and the scheduled rollout of new services provided by MCE's scheduling coordinator.

**Legal counsel (-$128,000, 16% decrease):** Legal counsel expenses support MCE's contracting and regulatory activities. Legal counsel expenses are expected to decrease as a result of staff performing more contracting work in-house and reduced long term procurement activity anticipated in FY 2017/18.

**Communications and related services (+$147,000, 15% increase):** Communications and related services include the costs associated with print, online, and other advertising, printing and mailing customer notices, events, and sponsorships. Increased costs are expected as a result of the inclusion of new communities in September 2016, which increased the number of customers served by MCE by approximately 50%.

**Other services (+$213,000, 45% increase):** Other services encompass expenses which are not captured in other budget categories, and include accounting, auditing, information technology, and other services. Increased other services result from the growth of the agency and from costs that may be incurred in connection with MCE's recent request for offers for data management and other services.

**General and administration (+$124,000, 28% increase):** General and administration costs include office, data, travel, dues and subscriptions, and other related expenses. Increased costs are associated with support for California Community Choice Association (CalCCA) and the increased number of employees.

**Occupancy (+$122,000, 30% increase):** Occupancy costs include the costs of leasing MCE's office, utilities, and building maintenance. Increased occupancy costs result in part from contracted increases in building lease expenses.

**Local pilot programs (+$165,000, 330% increase):** Local pilot programs support residential demand side management pilot programs offered in MCE's service territory including the My Energy Insight program, Richmond Advanced Energy Communities, and transportation electrification. Increased costs are intended in part to fund new programs launched during FY 2017/18.

**Marin County green business program (no change):** Marin County's green business program is a voluntary partnership among business leaders, government agencies, and non-profit organizations which promotes environmental responsibility, good business practices, and community concern among local businesses. MCE sponsors Marin County's green business program via a $10,000 annual grant.

**Low income solar programs (+$5,000, 14% increase):** Low income solar programs support residential rooftop solar for low income participants. Increased costs are intended to fund increased activity in this area.

**Grant income (+$35,000, 47% increase):** Grants are provided by government and non-government organizations to support activities connected to MCE's mission. FY 2017/18 grant income represents grants provided by the Bay Area Air Quality Management District (BAAQMD) and the Transportation Authority of Marin (TAM) in connection to the construction of a solar carport and electric vehicle charging stations in MCE's parking lot.

**Interest income (+$45,000, 92% increase):** Increased interest income is expected to result from an increase in interest rates and higher balances in savings accounts at River City Bank.

**Interest expense and financing costs (+$136,000, 39% increase):** These costs are associated with renewal fees on MCE's line of credit, the costs associated with obtaining a credit rating, and a contingency that would support the issuance of letters of credit.

**Capital outlay (+$23,000, 6% increase):** Expenditures associated with capital outlay include various leasehold improvements made at MCE's facilities including costs related to the construction of a solar carport and electric vehicle charging stations in MCE's parking lot that are funded by grant income.

## Energy Efficiency Program Fund

The Energy Efficiency Program Fund uses funding authorized by the California Public Utilities Commission (CPUC) to support multifamily, small commercial, single family, and financing sub-programs. The Energy Efficiency Program Fund supports the activities of the Energy Efficiency Program and the Low Income Families and Tenants (LIFT) Pilot Program. Both programs are reimbursable type programs and eligible expenses are reimbursed by the CPUC. Accordingly, the revenue and expenses for these programs offset each other.

### Energy Efficiency Program

Energy efficiency has always been an integral component of the MCE vision. In July 2012, MCE submitted an application for funding under the 2013 -2014 Energy Efficiency Funding Cycle (A. 12-11-007). The application was based on the initial Energy Efficiency Plan, and included the following proposed sub-programs:

1. Multifamily
2. Single family utility demand reduction pilot program
3. Small commercial
4. Four financing pilot programs: On Bill Repayment for single family,[1] multifamily, small commercial, and a standard offer pilot.

This application was approved on November 9, 2012, allocating over $4 million to MCE for the implementation of energy efficiency programs. In November 2014, the CPUC voted to extend the funding at annual levels through 2025, or until the CPUC moves otherwise.

In May 2016, the CPUC authorized an additional $366,090 to support the inclusion of new communities in MCE's service area. MCE is proposing to use these funds to support existing rebate programs and

[1] The on-bill repayment pilot for single family customers was subsequently closed in fall of 2015 after the financial institution withdrew. Funds have since been re-directed to the multifamily energy efficiency program.

will initially target the east bay communities of San Pablo, El Cerrito, and Benicia. The CPUC authorized additional funding to support Evaluation, Monitoring, and Verification (EM&V) for the purposes of conducting studies on the efficacy of CPUC-funded program process and program impacts (i.e. did the lightbulb reduce energy savings as expected). $96,342 is allocated for EM&V in FY 2017/18.

FY 2017/18 Energy Efficiency Program Budget

| **Programs** | **Budget ($)** |
|---|---|
| Single Family | 233,000 |
| Multifamily | 668,000 |
| Small Commercial | 659,000 |
| Financing | 27,000 |
| **Program Subtotal** | **1,586,000** |
| Evaluation Measurement and Verification (EM&V) | 96,000 |
| **Total** | **1,691,000** |

Low Income Families and Tenants (LIFT) Pilot Program

In November 2016, the CPUC authorized MCE to administer $3.5 million in low income program funding over a two-year period in support of its proposed Low Income Families and Tenants (LIFT) Pilot Program (Decision 16-11-022.). This pilot will provide funding to deepen the impact of MCE's multifamily energy efficiency program for income-qualified properties, specifically by providing full cost coverage for improvements that directly benefit tenants (for example, in-unit upgrades and common area measures that provide services to tenants, such as central hot water systems). The pilot also proposes to test the implementation of heat pumps – high efficiency electric heating equipment – which can facilitate switching a building off of carbon-based fuels and enabling deeper greenhouse gas reductions. MCE will also test the ability of working with local community based organizations to engage community members who are not participating in the program due to real or perceived barriers.

The pilot also includes a residential energy education component for single-family residential customers. This program will provide income-qualified customers with access to a mobile phone based energy education platform that will help them identify and act on low or no-cost energy savings opportunities within their homes. To encourage further and sustained improvements, MCE will pilot a Matched Energy Savings Account (MESA), which will match customer bill savings on a dollar per dollar basis. Funds from the MESA will be available to the customer for further investment in their home.

Two Year LIFT Pilot Program Budget

| **Sector** | **Budget ($)** | **Target Savings (KWh)** | **Target Savings (Therms)** | **Target Housing Units** |
|---|---|---|---|---|
| Multifamily | 2,941,283 | 340,863 | 16,302 | 1,482 |
| Single-family | 558,717 | 23,831 | 2,371 | 300 |
| **Total** | **3,500,000** | **357,165** | **26,202** | **1,782** |

The LIFT program is scheduled for launch in April 2017 and would be funded the CPUC's Energy Savings Assistance Programs (ESAP) funds. Of the $3.5 million authorized by the CPUC over a two-year period, Staff proposes to budget revenues and expenditures equal to $1.75 million in FY2017/18.

Proposed revenues and expenditures for the Energy Efficiency Program Fund total $3,441,000, which is equal to an increase of $1,855,000 from the previous year.

## Local Renewable Energy Development Fund

This Local Renewable Energy Development Fund is financed by a transfer from the Operating Fund equal to 50% of the premium for Deep Green service. These resources are used to plan, create, and develop local energy efficient projects. The transfer from the Operating Fund is expected to equal

expenditures from this fund.

**Renewable Energy Reserve Fund**

This Renewable Energy Reserve Fund is intended for the procurement or development of renewable energy not planned for in the Operating Fund. Resources may accumulate from year to year. Proposed expenditures from the Renewable Energy Reserve Fund in FY 2017/18 are intended to fund costs related to the construction of a solar carport and electric vehicle charging stations in MCE's parking lot not funded by grant income.

**FISCAL IMPACT:** The net impact of increasing the Proposed Operating Fund Budget would be an $8,386,000 contribution to MCE's net position during FY 2017/18. The budgeted contribution to the net position is equal to 4% of revenues, consistent with MCE's Rate Setting Guidelines. Budgeted revenues would entirely offset expenditures in the Energy Efficiency Program Fund, Local Renewable Energy Development Fund, and Renewable Energy Reserve Fund, and these funds will not impact MCE's net position.

**RECOMMENDATION:** Accept the FY 2017/18 Operating Fund, Energy Efficiency Program Fund, Local Renewable Energy Development Fund, and Renewable Energy Reserve Fund Budgets, subject to final approval in March 2017.

# MARIN CLEAN ENERGY

## OPERATING FUND

## Proposed Budget

## Fiscal Year 2017/18

| | FY 2016/17 Budget* | FY 2016/17 Projected | Proposed 2017/18 Budget | Variation from Projected ($) | Variation from Projected (%) |
|---|---|---|---|---|---|
| **ENERGY REVENUE** | | | | | |
| Revenue - Electricity (net of allowance) | $ 181,351,000 | 178,350,000 | 198,711,000 | 20,361,000 | 11% |
| Other Revenue | - | 125,000 | 10,000 | (115,000) | -92% |
| **TOTAL ENERGY REVENUE** | **181,351,000** | **178,475,000** | **198,721,000** | **20,246,000** | 11% |
| **ENERGY EXPENSES** | | | | | |
| Cost of energy | 159,033,000 | 152,579,000 | 174,042,000 | 21,463,000 | 13% |
| Service fees - PG&E | 1,255,000 | 1,255,000 | 1,487,000 | 232,000 | 18% |
| **TOTAL ENERGY EXPENSES** | **160,288,000** | **153,834,000** | **175,529,000** | **21,695,000** | 14% |
| **NET ENERGY REVENUE** | **21,063,000** | **24,641,000** | **23,192,000** | **(1,449,000)** | -7% |
| **OPERATING EXPENSES** | | | | | |
| Personnel | 5,251,000 | 4,743,000 | 6,241,000 | 1,498,000 | 29% |
| Data manager | 3,674,000 | 3,674,000 | 3,794,000 | 120,000 | 3% |
| Technical and scheduling services | 762,000 | 762,000 | 806,000 | 44,000 | 6% |
| Legal counsel | 817,000 | 817,000 | 689,000 | (128,000) | -16% |
| Communications and related services | 986,000 | 986,000 | 1,133,000 | 147,000 | 15% |
| Other services | 469,000 | 469,000 | 682,000 | 213,000 | 45% |
| General and administration | 443,000 | 443,000 | 567,000 | 124,000 | 28% |
| Occupancy | 403,000 | 403,000 | 525,000 | 122,000 | 30% |
| Local Pilot Programs | 50,000 | 50,000 | 215,000 | 165,000 | 330% |
| Marin County green business program | 10,000 | 10,000 | 10,000 | - | 0% |
| Low income solar programs | 35,000 | 35,000 | 40,000 | 5,000 | 14% |
| **TOTAL OPERATING EXPENSES** | **12,900,000** | **12,392,000** | **14,702,000** | **2,310,000** | 18% |
| **OPERATING INCOME** | **8,163,000** | **12,249,000** | **8,490,000** | **(3,759,000)** | -46% |
| **NONOPERATING REVENUES** | | | | | |
| Grant income | 75,000 | 75,000 | 110,000 | 35,000 | 47% |
| Interest income | 50,000 | 84,000 | 130,000 | 46,000 | 92% |
| **TOTAL NONOPERATING REVENUES** | **125,000** | **159,000** | **240,000** | **81,000** | 65% |
| **NONOPERATING EXPENSES** | | | | | |
| Interest expense and financing costs | 345,500 | 32,000 | 168,000 | 136,000 | 39% |
| Depreciation (supplemental) | 100,000 | 100,000 | 121,000 | 21,000 | 21% |
| **TOTAL NONOPERATING EXPENSES** | **445,500** | **132,000** | **289,000** | **157,000** | 35% |
| **CHANGE IN NET POSITION** | **7,842,500** | **12,276,000** | **8,441,000** | | 0% |
| Budgeted net position beginning of period | | 29,531,000 | 41,807,000 | | |
| Change in net position | | 12,276,000 | 8,441,000 | | |
| Budgeted net position end of period | | 41,807,000 | 50,248,000 | | |
| **CAPITAL EXPENDITURES, INTERFUND TRANSFERS & OTHER** | | | | | |
| Capital Outlay | 383,000 | 383,000 | 406,000 | 23,000 | 6% |
| Depreciation (supplemental) | (100,000) | (100,000) | (121,000) | (21,000) | 21% |
| Repayment of Loan Principal | - | | - | - | |
| Transfer to Renewable Energy Reserve | - | | - | - | |
| Transfer to Local Renewable Energy Development Fund | 173,000 | 173,000 | 186,000 | 13,000 | 8% |
| **TOTAL CAPITAL EXPENDITURES, INTERFUND TRANSFERS & OTHER** | 456,000 | 456,000 | 471,000 | -<br>15,000 | |
| Budgeted net increase (decrease) in Operating Fund balance | $ 7,386,000 | $ 11,820,000 | $ 7,970,000 | $ 3,850,000 | 52% |

* the FY 2016/17 Budget figures presented here incorporate the proposed amendment to the FY2016/17 Budget proposed to the Board in February 2017

## MARIN CLEAN ENERGY
## ENERGY EFFICIENCY PROGRAM FUND
## Proposed Budget
## Fiscal Year 2017/18

| | 2016/17 Budget | Proposed 2017/18 Budget | Change |
|---|---|---|---|
| **REVENUE AND OTHER SOURCES:** | | | |
| Public purpose energy efficiency program | $ 1,586,000 | 1,691,000 | 105,000 |
| Public purpose Low Income Families and Tenants pilot program | - | 1,750,000 | 1,750,000 |
| **TOTAL REVENUE AND OTHER SOURCES:** | 1,586,000 | 3,441,000 | 1,855,000 |
| | | | |
| **EXPENDITURES AND OTHER USES:** | | | |
| Public purpose energy efficiency program | 1,586,000 | 1,691,000 | 105,000 |
| Public purpose Low Income Families and Tenants pilot program | | 1,750,000 | 1,750,000 |
| **TOTAL EXPENDITURES AND OTHER USES:** | 1,586,000 | 3,441,000 | 1,855,000 |
| Net increase (decrease) in fund balance | - | - | |

## LOCAL RENEWABLE ENERGY DEVELOPMENT FUND
## Proposed Budget
## Fiscal Year 2017/18

| | 2016/17 Budget | Proposed 2017/18 Budget | Change |
|---|---|---|---|
| **REVENUE AND OTHER SOURCES:** | | | |
| Transfer from Operating Fund | $ 173,000 | 186,000 | 13,000 |
| | | | |
| **EXPENDITURES AND OTHER USES:** | | | |
| Capital outlay and other expenditures | 173,000 | 186,000 | 13,000 |
| | | | |
| Net increase (decrease) in fund balance | - | - | - |

## RENEWABLE ENERGY RESERVE FUND
## Proposed Budget
## Fiscal Year 2017/18

| | 2016/17 Budget | Proposed 2017/18 Budget | Change |
|---|---|---|---|
| **REVENUE AND OTHER SOURCES:** | | | |
| Other Proceeds | $ 761,000 | - | $ 761,000 |
| Transfer from Operating Fund | - | - | - |
| | 761,000 | - | 761,000 |
| | | | |
| **EXPENDITURES AND OTHER USES:** | 940,000 | 225,000 | 1,165,000 |
| | | | |
| Net increase (decrease) in fund balance * | $ (179,000) | (225,000) | - |
| Fund Balance Beginning of Period | 1,000,000 | 821,000 | - |
| Fund Balance End of Period | 821,000 | 596,000 | - |

February 16, 2017

TO: MCE Board of Directors

FROM: Elizabeth Kelly, General Counsel

RE: Delegation of Authorities and Contracting (Agenda Item #09)
Resolution 2017-02 Delegating Contracting Authorities

ATTACHMENTS:
A. Proposed Resolution No. 2017-02 Delegating Contracting Authorities
B. Resolution No. 2016-05 Restating and Confirming Authority for Power Procurement and Other Expenditures
C. Resolution No. 2013-04 Authorizing the Executive Officer to Enter into and Execute Contracts
D. MCE Executive Committee Overview and Scope (Redline)
E. MCE Technical Committee Overview and Scope (Redline)

Dear Board Members:

**SUMMARY:** MCE's Joint Powers Agreement authorizes the Board to delegate contracting authority to its Committees and to the CEO. MCE frequently receives requests from vendors, suppliers, lenders and other parties for documentation of the Board's delegated contracting authorities. Delegated contracting authorities were previously set forth in multiple documents, including Resolutions 2013-04 and 2016-05, and the Integrated Resource Plan (IRP). The Scope and Overview documents for Board Committees, as approved by your Board in May 2016, also describe delegated contracting authorities.

The purpose of the Proposed Resolution Delegating Contracting Authorities is to consolidate the full scope of delegated contracting authorities into one clear, comprehensive document that will allow staff to respond efficiently to other parties' requests for this information. The delegated contracting authorities described in the Proposed Resolution are summarized below:

1. Executive Committee is authorized to approve and direct the CEO to execute all contracts, amendments and addenda; provided that any contracts, amendments or addenda with total consideration greater than $25,000 must also be executed by the Executive Committee Chair.

2. Technical Committee is authorized to approve and direct the CEO and Technical Committee Chair to execute contracts for:

    - Energy Procurement (as defined in the Resolution), and related functions
    - Technical matters and demand-side or customer-side offerings
    - Development or purchase of MCE-owned energy generation projects

3. CEO and Technical Committee Chair, jointly, are authorized to approve and execute contracts for Energy Procurement for terms of five years or less after consultation with a Committee of the Board. The CEO must report all such executed contracts to the Board.

4. CEO is authorized to approve and execute:

    - Energy Procurement contracts for terms of 12 months or less
    - Contracts for a not-to-exceed maximum dollar amount of $25,000 per vendor for a given scope of work, per fiscal year
    - Contract amendments or addenda which improve the terms of an existing contract to MCE's benefit, without increasing the not-to-exceed maximum dollar amount
    - Emergency contracts required due to a situation posing imminent threat of damage to property, and/or harm to MCE employees or public health and safety; with not-to-exceed aggregated dollar amounts of $150,000, or $500,000 with prior written consent of three Executive Committee members

The Proposed Resolution rescinds and replaces Resolutions 2013-04 and 2016-05 and fully consolidates the Board's delegated contracting authorities into one document, enabling staff to more efficiently communicate this information as needed during MCE's normal course of business.

Additionally, the Executive and Technical Committee Overview and Scope documents, attached with proposed revisions in redline, have been updated for consistency with the Proposed Resolution.

**Fiscal Impact:** None.

**Recommendations:** Adopt Proposed Resolution 2017-02 Delegating Contracting Authorities; approve updated Executive and Technical Committee Overview and Scope documents.

# PROPOSED RESOLUTION 2017-02

## A RESOLUTION OF THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY DELEGATING CONTRACTING AUTHORITIES

**WHEREAS**, Marin Clean Energy (MCE) is a Joint Powers Authority (JPA) established on December 19, 2008, and organized under the Joint Exercise of Powers Act (Government Code Section 6500 et seq.); and

**WHEREAS**, MCE members include the following communities: the County of Marin, the County of Napa, the City of American Canyon, the City of Belvedere, the City of Benicia, the City of Calistoga, the Town of Corte Madera, the City of El Cerrito, the Town of Fairfax, the City of Lafayette, the City of Larkspur, the City of Mill Valley, the City of Napa, the City of Novato, the City of Richmond, the Town of Ross, the Town of San Anselmo, the City of San Pablo, the City of San Rafael, the City of Sausalito, the City of St. Helena, the Town of Tiburon, the City of Walnut Creek, and the Town of Yountville; and

**WHEREAS**, pursuant to its authority under Sections 4.6 and 4.7 of the Joint Powers Agreement the Board of Directors wishes to delegate authority to its committees and the Chief Executive Officer ("CEO"), for purposes of responding efficiently to requests from contractors, suppliers, lenders or other parties for documentation of such authority for MCE during the normal course of business; and

**WHEREAS**, Resolutions 2013-04 and 2016-05 set forth contracting authorities delegated by the Board of Directors; and

**WHEREAS**, the Board intends that this Resolution 2017-02 shall supersede and replace Resolutions 2013-04 and 2016-05.

**NOW, THEREFORE, BE IT RESOLVED**, by the Board of Directors of MCE:

A. Resolutions 2013-04 and 2016-05 are hereby rescinded and replaced by this Resolution 2017-02.

B. The Board of Directors, by this delegation of contracting authority as described herein, shall not be divested of any such authority, but shall retain and may exercise such authority at such times as it may deem necessary and proper, at its sole discretion.

C. The Board of Directors shall retain authority over all legally required authorities, including, for the avoidance of doubt, authority over contracting for borrowing as described in Government Code Section 536.35.7 or its successor.

D. For purposes of this Resolution, "Energy Procurement" shall mean all contracting for energy and energy-related products for MCE, including but not limited to products related to electricity, capacity, energy efficiency, distributed energy resources, demand response, and storage.

E. The Board of Directors hereby delegates the following contracting authorities consistent with an approved resource plan and/or budget, as applicable, including contracts that are consistent with the current fiscal year's budget but extend beyond the current fiscal year:

**1. Delegation to the Executive Committee**

The Executive Committee has all necessary and proper authority to approve and direct the CEO to execute all contracts, amendments and addenda; provided that any contract, amendment or addenda with total consideration greater than $25,000 shall also be executed by the Executive Committee Chair.

**2. Delegation to the Technical Committee**

The Technical Committee has all necessary and proper authority to approve and direct the CEO and Technical Committee Chair to execute:

a. contracts for Energy Procurement as herein defined;

b. contracts for functions, programs or services related to Energy Procurement, technical matters, and demand-side and customer-side offerings;

c. contracts related to MCE ownership or development of energy generation projects and assets.

**3. Delegation to the Chief Executive Officer and Technical Committee Chair, Jointly**

The CEO and Technical Committee Chair, jointly, shall have all necessary and proper authority, after consultation with a Committee of the Board, to approve and execute contracts for Energy Procurement for terms of less than or equal to five years. The CEO shall timely report to the Board all such executed contracts.

**4. Delegation to the Chief Executive Officer**

The CEO shall have all necessary and proper authority to approve and execute:

a. contracts for Energy Procurement for terms of less than or equal to 12 months, which the CEO shall timely report to the Board;

b. contracts with a not-to-exceed maximum dollar amount of less than or equal to $25,000 per vendor for a given scope of work, per fiscal year;

c. amendments or addenda to existing contracts, regardless of the existing contract's price or total amount, which improves the terms of the contract to MCE's benefit without increasing the contract's not-to-exceed maximum dollar amount; and

d. in the event of an emergency situation contracts with a not-to-exceed maximum dollar amount of:

    i. $150,000 in the aggregate; or

    ii. $500,000 in the aggregate with the prior written consent of three (3) Executive Committee members

    in order to avert or alleviate damage to property, to protect the health, safety and welfare of the community and MCE's employees, or to repair or restore damaged or destroyed property of MCE.

An “emergency situation” for purposes hereof is a situation creating an imminent danger to life or property or other material financial loss that calls for immediate action with inadequate time for prior Board approval. The Chief Executive Officer shall within thirty (30) days of the emergency, deliver a report to the Board of Directors explaining the necessity for the action, a listing of expenditures made under these emergency powers and any recommended future actions.

**PASSED AND ADOPTED** at a regular meeting of the Board of Directors on this 16th day of February 2017, by the following vote:

| | AYES | NOES | ABSTAIN | ABSENT |
|---|---|---|---|---|
| City of American Canyon | | | | |
| City of Belvedere | | | | |
| City of Benicia | | | | |
| City of Calistoga | | | | |
| Town of Corte Madera | | | | |
| City of El Cerrito | | | | |
| Town of Fairfax | | | | |
| City of Lafayette | | | | |
| City of Larkspur | | | | |
| County of Marin | | | | |
| City of Mill Valley | | | | |
| City of Napa | | | | |
| County of Napa | | | | |
| City of Novato | | | | |
| City of Richmond | | | | |
| Town of Ross | | | | |
| Town of San Anselmo | | | | |
| City of San Pablo | | | | |
| City of San Rafael | | | | |
| City of Sausalito | | | | |
| City of St. Helena | | | | |
| Town of Tiburon | | | | |
| City of Walnut Creek | | | | |
| Town of Yountville | | | | |

_____

CHAIR, MCE BOARD

ATTEST:

_____

SECRETARY, MCE BOARD

APPROVED

JUN 16 2016

**RESOLUTION NO. 2016-05**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY MARIN CLEAN ENERGY RESTATING AND CONFIRMING AUTHORITY FOR POWER PROCUREMENT AND OTHER EXPENDITURES**

**WHEREAS**, Marin Clean Energy (MCE) is a joint powers authority established on December 19, 2008, and organized under the Joint Exercise of Powers Act (Government Code Section 6500 et seq.);

**WHEREAS**, MCE members include the following communities: the County of Marin, the County of Napa, the City of American Canyon, the City of Belvedere, the City of Benicia, the City of Calistoga, the Town of Corte Madera, the City of El Cerrito, the Town of Fairfax, the City of Lafayette, the City of Larkspur, the City of Mill Valley, the City of Napa, the City of Novato, the City of Richmond, the Town of Ross, the Town of San Anselmo, the City of San Pablo, the City of San Rafael, the City of Sausalito, the City of St. Helena, the Town of Tiburon, the City of Walnut Creek, and the Town of Yountville;

**WHEREAS**, for purposes of efficiency in responding to requests for documentation of signing authority for MCE during the normal course of business, the MCE Board wishes to establish a consolidated means of confirming the source(s) and scope of MCE's signing authority for power procurement and other expenditures;

**WHEREAS**, in March 2013 the MCE Board adopted Resolution 2013-04 authorizing the Chief Executive Officer (CEO) to enter into and execute contracts for an amount not to exceed $25,000 per contractor per fiscal year, consistent with the Board approved budget, the Joint Powers Agreement, and the Operating Rules and Regulations;

**WHEREAS**, in November 2012 the MCE Board established procurement policies and objectives through adoption of the Integrated Resource Plan (IRP);

**WHEREAS**, pursuant to the IRP, power purchase agreements for energy, capacity and renewable energy credits with terms of 12 months or less may be entered into on MCE's behalf by the CEO;

**WHEREAS**, power purchase agreements for energy, capacity and renewable energy credits with terms of greater than 12 months and less than or equal to 5 years and which are made pursuant to a MCE Board approved resource plan may be entered into on MCE's behalf by the CEO in conjunction with the MCE Board Chair; and

**WHEREAS**, power purchase agreements for energy, capacity and renewable energy credits with terms of greater than five years shall require Board approval prior to execution;

**NOW, THEREFORE, BE IT RESOLVED**, by the Board of Directors of MCE that the MCE Board hereby restates and confirms the authority granted by the Board for power procurement and other expenditures, as summarized herein and currently vested

in the CEO, Board Chair and Board of Directors, pursuant to Resolution 2013-04 and the procurement provisions of the IRP.

**PASSED AND ADOPTED** at a regular meeting of the MCE Board of Directors on this 16th day of June 2016, by the following vote:

| | AYES | NOES | ABSTAIN | ABSENT |
|---|---|---|---|---|
| City of American Canyon | | | | ✓ |
| City of Belvedere | ✓ | | | |
| City of Benicia | ✓ | | | |
| City of Calistoga | | | | ✓ |
| Town of Corte Madera | ✓ | | | |
| City of El Cerrito | ✓ | | | |
| Town of Fairfax | ✓ | | | |
| City of Lafayette | | | | ✓ |
| City of Larkspur | ✓ | | | |
| County of Marin | ✓ | | | |
| City of Mill Valley | ✓ | | | |
| City of Napa | ✓ | | | |
| County of Napa | ✓ | | | |
| City of Novato | ✓ | | | |
| City of Richmond | ✓ | | | |
| Town of Ross | ✓ | | | |
| Town of San Anselmo | ✓ | | | |
| City of San Pablo | | | | ✓ |
| City of San Rafael | | | | ✓ |
| City of Sausalito | | | | ✓ |
| City of St. Helena | | | | ✓ |
| Town of Tiburon | ✓ | | | |
| City of Walnut Creek | ✓ | | | |
| Town of Yountville | | | | ✓ |

Kate Sears
CHAIR, MCE BOARD

ATTEST:
SECRETARY, MCE BOARD

APPROVED
JUN 16 2016
MARIN CLEAN ENERGY

**RESOLUTION NO. 2013- 04**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE MARIN ENERGY AUTHORITY AUTHORIZING THE EXECUTIVE OFFICER TO ENTER INTO AND EXECUTE CONTRACTS**

**WHEREAS**, the Marin Energy Authority ("MEA") is a joint powers authority established on December 19, 2008, and organized under the Joint Exercise of Powers Act (Government Code Section 6500 et seq.); and

**WHEREAS**, MEA members include the following Marin communities: the City of San Rafael, the County of Marin, the City of Larkspur, the City of Belvedere, the Town of Fairfax, the City of Mill Valley, the City of Novato, the Town of Ross, the Town of San Anselmo, the City of Sausalito, the Town of Tiburon, the Town of Corte Madera, the City of Richmond; and

**WHEREAS**, Section 2.5 of the Marin Energy Authority Joint Powers Agreement authorizes the Authority to make and enter into contracts, and to employ staff to administer the Authority; and

**WHEREAS**, on April 10, 2010 the Board issued Resolution No. 2010-05A authorizing the Interim Director to enter into and execute contracts for an amount not to exceed $20,000, consistent with the Board approved budget, the Joint Powers Agreement, and the Operating Rules and Regulations; and

**WHEREAS,** the Board desires to authorize the Executive Officer to enter into and execute contracts for an amount not to exceed $25,000, consistent with the Authority's budget, Joint Powers Agreement, and Operating Rules and Regulations; and

**WHEREAS,** the Board desires to concurrently rescind Resolution No. 2010-05A.

**NOW, THEREFORE, BE IT RESOLVED**, by the Board of Directors of the Marin Energy Authority:

The Executive Officer is hereby authorized to enter into and execute contracts for an amount not to exceed $25,000 per contractor per fiscal year, consistent with the Board approved budget, the Joint Powers Agreement, and the Operating Rules and Regulations. The Executive Officer shall report all contracts executed by the Executive Officer pursuant to the authority granted by this resolution to the Board of Directors at their next regular meeting.

Resolution No. 2010-05A, A Resolution of the Board of Directors of the Marin Energy Authority Authorizing the Interim Director to Enter Into and Execute Contracts, is hereby rescinded.

**PASSED AND ADOPTED** at a regular meeting of the Marin Energy Authority Board of Directors on this 7th day of March, 2013, by the following vote:

| | AYES | NOES | ABSTAIN | ABSENT |
|---|---|---|---|---|
| City of San Rafael | ✓ | | | |
| County of Marin | ✓ | | | |
| City of Larkspur | ✓ | | | |
| City of Mill Valley | | | | ✓ |
| Town of San Anselmo | | | | ✓ |
| Town of Ross | ✓ | | | |
| City of Richmond | ✓ | | | |
| City of Novato | ✓ | | | |
| Town of Corte Madera | ✓ | | | |
| Town of Fairfax | ✓ | | | |
| City of Belvedere | ✓ | | | |
| City of Sausalito | | | | |
| Town of Tiburon | ✓ | | | ✓ |

CHAIR, MARIN ENERGY AUTHORITY BOARD

APPROVED
MAR 07 2013
MARIN
ENERGY AUTHORITY

**MCE Executive Committee Overview and Scope**
**Redline of Proposed Changes**

| | |
|---|---|
| Maximum Membership: | 9 |
| Current Members: | Tom Butt, City of Richmond (Chair)<br>Denise Athas, City of Novato<br>Sloan Bailey, Town of Corte Madera<br>Ford Greene, Town of San Anselmo<br>Kevin Haroff, City of City of Larkspur<br>Bob McCaskill, City of Belvedere<br>Kate Sears, County of Marin<br>Vacant Seat |
| New Members: | MCE strives to assemble an Executive Committee comprised of at least one county representative and one city/town representative from each county in the MCE service area. Available seats on the Executive Committee are therefore first offered to any interested and applicable Board member whose county is not yet represented by one county and one city member. |
| Current meeting date: | First Fridays of each month at 12:00pm |

**Scope**
The scope of the MCE Executive Committee is to explore, discuss and provide direction or approval on general issues related to MCE including legislation, regulatory compliance, strategic planning, outreach and marketing, contracts with vendors, human resources, finance and budgeting, and agenda setting for the regular MCE Board meetings and annual Board retreat.

**Authority of Executive Committee**
- Approval of legislative positions outside of the Board-approved legislative plan
- Approval of contracts with vendors ~~within the Board-approved budget~~
- Approval of new staff positions within the Board-approved budget
- Approval of Ad Hoc Committees that serve a temporary role and function such as the Ad hoc Contracts Committee, Ad hoc Audit Committee and Ad hoc Inclusion Committee
- Approval of Recipient of McGlashan Advocacy Award

- Recommendations to the Board regarding the annual budget and any budget adjustments
- Recommendations to the Board regarding rate setting
- Recommendations to the Board to enter into debt
- Recommendations to the Board regarding adjustments to staff compensation ranges
- Recommendations to the Board regarding Policies (such as Policy 013: Reserve Policy and Policy 014: Investment Policy)

# MCE Technical Committee Overview and Scope

**Redline of Proposed Changes**

| | |
|---|---|
| Maximum Membership: | 9 |
| Current Members: | Kate Sears, County of Marin (Chair)<br>Ford Greene, Town of San Anselmo<br>Kevin Haroff, City of Larkspur<br>Greg Lyman, City of El Cerrito<br>Emmett O'Donnell, City of Tiburon<br>Ray Withy, City of Sausalito<br>Vacant Seat |
| New Members: | MCE strives to assemble a Technical Committee comprised of at least one county representative and one city/town representative from each county in the MCE service area. Available seats on the Technical Committee are therefore first offered to any interested and applicable Board member whose county is not yet represented by one county and one city member. |
| Current meeting date: | First Thursday of each month at 9:00 am |

**Scope**

The scope of the MCE Technical Committee is to explore, discuss and provide direction or approval on issues related to electricity supply, distributed generation, greenhouse gas emissions, energy efficiency, and other topics of a technical nature.

Frequent topics include electricity generation technology and procurement, greenhouse gas accounting and reporting, energy efficiency programs and technology, energy storage technology, net energy metering tariff, local solar rebates, electric vehicle programs and technology, Feed-in Tariff activity and other local development, Light Green, Deep Green and Local Sol power content planning, long term integrated resource planning, regulatory compliance, and other activity related to the energy sector.

**Authority of Technical Committee**

- Review and discuss new technologies and potential application within MCE
- Approval of and changes to MCE's Net Energy Metering Tariff
- Approval of and changes to MCE's Feed in Tariff

- Approval of annual GHG emissions level and related reporting
- Approval of contracts with vendors for technical programs or services, energy efficiency program or services and procurement functions or services ~~within the Board approved budget~~
- Approval of power purchase agreements ~~within Board approved budget~~
- Approval of adjustments to power supply product offerings
- Approval of ~~updates to~~ the Integrated Resource Plan
- ~~Recommendation to Board for approval of contracts with technical vendors outside of Board approved budget.~~
- ~~Recommendation to Board for approval of power purchase agreements outside of Board-approved budget~~

February 16, 2017

TO: MCE Board of Directors

FROM: Byron Vosburg, Power Supply Contracts Manager

RE: MCE 2017 Integrated Resource Plan Update (Agenda Item #10)

ATTACHMENT: MCE 2017 Integrated Resource Plan

Dear Technical Committee:

**BACKGROUND:**

MCE's Integrated Resource Plan ("IRP") is intended to articulate the energy procurement targets adopted by MCE's Board of Directors ("Board") and serves as a guideline to MCE staff regarding day-to-day operations and long-term portfolio planning and procurement activities. Your Board first approved MCE's ten-year resource plan in Chapter 6 ("Load Forecast and Resource Plan") of the Community Choice Aggregation Implementation Plan and Statement of Intent ("Implementation Plan"), dated January 2010. Regular updates to MCE's resource plan have been approved by your Board via subsequent revisions of the Implementation Plan and, since November 2012, annual IRP updates. In May 2016, your Board delegated authority to approve IRP updates to the Technical Committee via approval of the "Technical Committee Overview."

The IRP has four primary purposes:

1. Quantify resource needs over the ten-year Planning Period, which, in the current IRP update, includes calendar years 2017 through 2026;
2. Prioritize resource preferences and articulate relevant energy procurement policies;
3. Provide guidance to the energy procurement processes undertaken by MCE staff; and
4. Communicate MCE's resource planning policies, objectives and planning framework to the public, energy marketers, and key stakeholder groups.

MCE's key resource planning policies, as set forth in the IRP, are as follows:

1. Reduce GHG emissions and other pollutants associated with the electric power sector through increased use of renewable, GHG-free, and low-GHG energy resources.
2. Maintain competitive electric rates and increase control over energy costs through management of a diversified resource portfolio.

3. Benefit the local economy through investments in infrastructure and energy programs within MCE's service territory.
4. Help customers reduce energy consumption and electric bills through investment in and administration of enhanced customer energy efficiency, cost-effective distributed generation, and other demand-side programs.
5. Enhance system reliability through investment in supply- and demand-side resources.
6. Actively monitor and manage operating and market risks to promote MCE's continued financial strength and stability.

The IRP translates these broad policy objectives into more specific planning elements focused on the use of various resource types, taking into consideration MCE's projected customer needs and MCE's existing resource commitments. The IRP identifies:

1. Projected customer demand and energy needs, specifically those for renewable, GHG-free, and conventional energy, over the Planning Period;
2. Estimated deliveries from contracted resources that will fill portions of these energy needs;
3. Subsequent "open positions" that result from the difference between future energy needs and commitments from currently contracted resources; these open positions dictate the timing and magnitude of additional energy procurement that may be required to meet specified resource goals; and
4. To the extent that open positions exist, the IRP describes the procurement methods and guidelines that MCE will utilize to meet them.

MCE's IRP is updated annually, typically in fall – after summer's procurement activities have concluded and in anticipation of the next year's procurement planning. However, MCE's 2016 contracting efforts were more extensive than usual, resulting in deferral of the 2017 planning process until November 2016 through February 2017.

**SUMMARY OF CHANGES:**

MCE's 2015 IRP established significant increases in MCE's procurement targets: increasing renewable energy content for its Light Green service from 50% to 80% by 2025; limiting unbundled renewable energy certificates to no more than 3% of its retail load; and increasing GHG-free energy content from 60% to 95% by 2025.
The 2017 IRP, which was approved at the February Technical Committee meeting and is provided as an attachment to this report, reaffirms and advances progress toward these goals by increasing MCE's GHG-free targets throughout the Planning Period, resetting the 2017 GHG-free portfolio content to 75% and working toward a 100% GHG-free goal in 2025. Procedurally, the 2017 IRP includes:

- Simplified discussion of contracting authorities, referring directly to authorities and Resolutions approved separately by the Board or its delegated Committee; and
- Updated Renewable Energy Contract Guidelines to allow for increased renewable commitments beyond year 5 of the Planning Period.

The IRP summarizes the following progress toward MCE's energy and capacity obligations:

- MCE has contracted for all of its projected Renewable Portfolio Standard ("RPS") requirements through 2026; open renewable positions remain from 2018 through the Planning Period for MCE's voluntary renewable energy targets;
- MCE has addressed its conventional energy requirements per its planning guidelines via contractual commitments that are in place through 2020;
- MCE has addressed its required reserve capacity ("Resource Adequacy" or "RA") and flexible capacity obligations per its contracting guidelines via commitments extending through 2017;
- Due to favorable market conditions, MCE contracted in 2016 for significant volumes of bundled renewable energy; and
- Should market conditions remain favorable, MCE may have the opportunity to increase energy purchases from new, California-based renewable energy resources throughout the Planning Period. This opportunity would yield reduced reliance on renewable energy imports from the Pacific Northwest and other areas throughout the Western Electricity Coordinating Council ("WECC"), which generally encompasses the Western United States.

In addition, the 2017 IRP provides updates on MCE's portfolio of power suppliers and its cultivation of local renewable energy generation, most notably its Net Energy Metering ("NEM"), Feed-in Tariff ("FIT"), and Local Sol programs as well as the development of its own MCE Solar One facility in Richmond, CA:

- As of December 2016, MCE served approximately 9,600 NEM customers; the smaller-scale renewable generating projects that have been installed by such customers represent more than 77,000 kW (77 MW) of local renewable generating capacity.
- In addition to NEM generating capacity, MCE is planning to develop or purchase energy from 25 MW of locally developed solar capacity by 2021. To this end, MCE has invested staff time and financial resources in various development activities within its service territory. For example, MCE Solar One is a 10.5 MW solar photovoltaic (PV) project that is currently under construction in the City of Richmond and expected to commence power production later in 2017. MCE has also begun predevelopment due diligence for two additional development sites that could support as much as 122 MW of additional renewable generating capacity within MCE's service territory.
- MCE continues to administer one of California's most generous FIT programs for locally situated, smaller-scale renewable generating resources that supply wholesale electricity to MCE. This program utilizes a standard offer (i.e. non-negotiable) contract that is available on a first-come, first-served basis to up to 15 MW of qualifying renewable energy projects within MCE's service territory. Specific terms and conditions for the remaining 12 MW of the FIT program capacity are available on MCE's website.

**RECOMMENDATION:** No action required – informational only.


# 2017 Integrated Resource Plan

February 2017

Approved by MCE Technical Committee on 02/02/2017

# MCE 2017 Integrated Resource Plan

## Contents

# I. Introduction

As California's first Community Choice Aggregation ("CCA") program, MCE provides retail electric generation services and complementary energy programs to customers within the political boundaries of its member communities, which include Marin County, Napa County, the cities of El Cerrito, Lafayette, Richmond, San Pablo, and Walnut Creek (all of which are located in Contra Costa County), as well as the city of Benicia (Solano County) (collectively, the "service area"). MCE provides such services to more than eighty percent of electricity customers within its service area and is the default electric generation provider for any new or relocated customers therein.

MCE strives to provide stable and competitive electric rates to its customers, utilizing the cleanest possible sources of electric energy. With these objectives in mind, MCE plans for and secures commitments from a diverse portfolio of generating resources to reliably serve the electric energy requirements of its customers over the near-, mid-, and long-term planning horizons. This Integrated Resource Plan ("IRP") documents MCE's resource planning policies and objectives over the upcoming ten-year planning period from 2017 through 2026 (the "Planning Period").

Every year, MCE staff updates the IRP and submits it for approval to MCE's Board of Directors ("Board") or Technical Committee, which includes a subset of MCE Board members. Such approval is made in consideration of applicable regulatory requirements, MCE policy objectives, energy market conditions, anticipated changes in electricity sales, planned inclusion of new MCE member communities, ongoing procurement activities, and any other considerations that may affect the manner in which MCE carries out its resource planning.

## Purpose

The IRP has four primary purposes:

(1) quantify resource needs over the Planning Period;
(2) prioritize resource preferences and articulate relevant energy procurement[1] policies;
(3) provide guidance to the energy procurement processes undertaken by MCE staff; and
(4) communicate MCE's resource planning policies, objectives and planning framework to the public and key stakeholder groups.

In practical terms, the IRP specifies the energy procurement policies adopted by MCE's Board and serves as a guideline to MCE staff regarding day-to-day energy planning and procurement activities.

## Executive Summary

Highlights of this IRP update include the following:

- MCE will manage a portfolio of energy generation resources to maintain a minimum renewable energy content of 53% for its Light Green service. Over the Planning Period, MCE intends to

[1] Within this IRP, energy procurement means purchases of energy products, including electricity, capacity, energy efficiency, distributed generation, resources, demand response, and energy storage.

increase its renewable content, subject to product availability and rate-related considerations, toward the long-term goal of 100% renewable energy.

- MCE continues to provide its customers with service options for 100% renewable energy: Deep Green, which is wholly sourced from renewable projects located in California; and Local Sol, service under which will begin in early 2017 and be sourced entirely from a solar photovoltaic ("PV") project within MCE's service territory.

- In conjunction with expansion of its service area in September 2016, MCE significantly increased its energy commitments and diversified its energy portfolio during 2016. Specifically, MCE more than doubled the number of contracts in its energy supply portfolio, which now includes over fifty contracts. MCE also increased the number of energy product suppliers from twelve to twenty-nine. Through the Planning Period, MCE anticipates continued diversification of its supply portfolio.

- MCE's existing and planned supply commitments throughout the Planning Period will enable MCE to fulfill key regulatory mandates and voluntary procurement targets related to renewable, greenhouse gas-free ("GHG-free" or "carbon-free"), and conventional (non-renewable) energy. In particular, MCE has taken important steps to ensure delivery of a reliable, environmentally responsible power supply, including:

    - MCE has contracted for all of its projected Renewable Portfolio Standard ("RPS") requirements through 2026; open renewable positions remain from 2018 through the Planning Period for MCE's voluntary renewable energy targets;
    - MCE has addressed its conventional energy requirements per its planning guidelines via contractual commitments that are in place through 2020;
    - MCE has addressed its required reserve capacity ("Resource Adequacy" or "RA") and flexible capacity obligations per its contracting guidelines via commitments extending through 2017;
    - Due to favorable market conditions, MCE contracted in 2016 for significant volumes of bundled renewable energy; and
    - Should market conditions remain favorable, MCE expects to increase energy purchases from new, California-based renewable energy resources throughout the Planning Period. This transition will result in reduced reliance on renewable energy imports from the Pacific Northwest and other areas throughout the Western Electricity Coordinating Council ("WECC"), which generally encompasses the Western United States.

- MCE continues to provide direct support for the development of local renewable energy projects through the ongoing administration of its Feed-In Tariff ("FIT") and Net Energy Metering ("NEM") programs. Notable achievements in this area include the following:

- As of December 2016, MCE served approximately 9,600 NEM customers; the smaller-scale renewable generating projects that have been installed by such customers represent more than 77,000 kW (77 MW) of local renewable generating capacity;[2]
- In addition to NEM generating capacity, MCE is planning to develop or purchase energy from 25 MW of locally developed solar capacity by 2021. To this end, MCE has invested staff time and financial resources in various development activities within its service territory. For example, Solar One is a 10.5 MW solar PV project that is currently under construction in the City of Richmond and expected to commence power production later in 2017. MCE has also begun predevelopment due diligence for two additional development sites that could support as much as 122 MW of additional renewable generating capacity within MCE's service territory.
- MCE continues to administer one of California's most generous FIT programs for locally situated, smaller-scale renewable generating resources that supply wholesale electricity to MCE. This program utilizes a standard offer (i.e. non-negotiable) contract that is available on a first-come, first-served basis to up to 15 MW of qualifying renewable energy projects within MCE's service territory. Specific terms and conditions for the FIT program, of which approximately 12 MW remain available, are available on MCE's website.[3]

- MCE is working toward a long-term goal of offsetting 2% of its annual energy and capacity requirements with energy efficiency ("EE") and distributed generation programs. MCE is applying to the California Public Utilities Commission (CPUC) to significantly increase the EE budget for MCE-administered programs and may adjust its load forecast for the Planning Period based on the outcome of this application process.

- MCE is also working to develop capacity in demand response programs, with a goal by the end of the Planning Period to offsetting MCE's annual capacity requirements by 5%.

- During the Planning Period, MCE will procure requisite energy products through various mechanisms, including public solicitations, standard offer contracts, and bilateral engagements as procurement opportunities present themselves outside of the aforementioned processes.

[2] NEM statistics include customer-sited generation as of October 2016 (includes September 2016 expansion to American Canyon, Calistoga, Napa, St. Helena, Yountville, Walnut Creek, and Lafayette).
[3] https://www.mcecleanenergy.org/feed-in-tariff/

# II. General Resource Planning Principles

MCE policy, established by MCE's founding documents and directed on an ongoing basis by MCE's Board, guides development of this IRP and related procurement activities. MCE's key resource planning policies are as follows:

- Reduce GHG emissions and other pollutants associated with the electric power sector through increased use of renewable, GHG-free, and low-GHG energy resources.
- Maintain competitive electric rates and increase control over energy costs through management of a diversified resource portfolio.
- Benefit the local economy through investments in infrastructure and energy programs within MCE's service territory.
- Help customers reduce energy consumption and electric bills through investment in and administration of enhanced customer energy efficiency, cost-effective distributed generation, and other demand-side programs.
- Enhance system reliability through investment in supply- and demand-side resources.
- Actively monitor and manage operating and market risks to promote MCE's continued financial strength and stability.

The IRP translates these broad policy objectives into a more specific energy procurement strategy, taking into consideration MCE's projected customer needs and existing resource commitments over the Planning Period.

## Regulatory Considerations

**SB 350**

Through 2016, the California Public Utilities Commission has been overseeing implementation of Senate Bill 350 ("SB 350"), which Governor Brown signed in October 2015. Among other GHG-reduction provisions, SB 350 calls for California's RPS targets to increase to 50% by 2030. SB 350 includes certain procedural changes that will also impact MCE. With respect to CCAs, SB 350 requires that:

- CCAs must have at least 65% of their Renewable Portfolio Standard procurement under contracts of 10 years or longer beginning in 2021;
- CCA energy efficiency programs will be eligible to count toward statewide energy efficiency targets;
- while maintaining independent governing authority, CCAs will submit Integrated Resource Plans to the CPUC for certification.

MCE will comply with the applicable planning and procurement requirements reflected in SB 350. Given its existing and planned commitments to long-term renewable energy procurement and EE program

administration, MCE does not anticipate the need for significant modifications to its planning or procurement practices to achieve SB 350 compliance.

## MCE Procurement Targets

### GHG-Free by 2025

Reducing electric utility-sector GHG emissions is one of MCE's charter objectives. With this in mind, MCE will commence the Planning Period with a 75% GHG-free supply portfolio in 2017. The GHG-free proportion of MCE's resource mix will be comprised of both RPS-eligible renewable energy and additional GHG-free electricity. In subsequent years of the Planning Period, MCE will steadily increase its use of GHG-free energy supply with the goal of achieving a 100% GHG-free supply portfolio by 2025, subject to operational practicalities and product availability.

Note that not all renewable energy is GHG-free, as certain generating technologies, particularly those using geothermal and biogas fuel sources, are known to produce carbon dioxide and other GHG during the production of electric power. However, the significant majority of RPS-eligible renewable generating technologies are understood to be carbon neutral, meaning that the net environmental impacts associated with the processes required for electricity production are no worse than the environmental impacts associated with related activities, which would otherwise occur in the absence of power production.[4]

MCE understands that implementation of Assembly Bill 1110, which Governor Brown signed into law on September 26, 2016, will further clarify emissions intensity reporting for all generating technologies. MCE will apply pertinent emissions calculation methodologies, once finalized, when performing future emissions calculations related to its electric supply portfolio.

### 80% Renewable Energy by 2025

In pursuit of its goal to increase the Light Green product content to 80% renewable by 2025, MCE intends to gradually replace the conventional energy resources in its supply portfolio with renewable resources. Actual annual renewable content percentages may differ from projections, which are outlined in Table 1 below, if resource availability or market conditions preclude cost-effective procurement, but the primary goal is to achieve an 80% Light Green renewable supply no later than 2025.[5]

[4] For example, although there are GHG emissions associated with power generated by combustion of methane at capped landfills, such energy is considered to be renewable, and its GHG impacts are less than or – at worst – equal to those of the methane flaring that would occur otherwise.

[5] While MCE increases its Light Green portfolio to 80% renewable, Deep Green and Local Sol customers will continue to receive 100% renewable energy.

**Limited Use of Unbundled Renewable Energy Certificates**

MCE pursues a diversified renewable energy supply portfolio, which reflects broad use of various RPS-eligible fuel sources and products, resource locations, project configurations and other considerations. However, MCE has committed to limit the use of unbundled renewable energy certificates (otherwise known as "Product Content Category 3," "PCC 3," or "Bucket 3") to no more than 3% of its total resource mix. This limitation generally aligns with specifications reflected in California's RPS program, which impose restricted use of PCC3 products approximating 3% of annual retail sales during the third Compliance Period, which includes 2017 through 2020. To maintain progress toward its 80% renewable energy target, MCE has substantially focused on the procurement of bundled[6] renewable energy supply throughout the Planning Period, as reflected in Table 1, below.

**Table 1: MCE 10-Year Portfolio Mix Targets**

| 10 Year Portfolio Mix (%) | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Bucket 1 | 38% | 40% | 43% | 45% | 48% | 50% | 53% | 55% | 58% | 58% |
| Bucket 2 | 13% | 14% | 14% | 15% | 16% | 17% | 17% | 18% | 19% | 19% |
| Bucket 3 | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Large Hydro | 21% | 21% | 21% | 21% | 21% | 20% | 20% | 20% | 20% | 20% |
| Conventional Energy | 25% | 22% | 19% | 16% | 13% | 10% | 6% | 3% | 0% | 0% |

[6] Portfolio Content Category 1 ("PCC 1" or "Bucket 1") and Portfolio Content Category 2 ("PCC 2" or "Bucket 2"), per California RPS compliance regulations and explained in further detail in the "RPS Requirements" subsection of "IV. Resources."

# III. Electric Load Forecast

MCE's long term load forecast is primarily influenced by structural or "macro" variables, which inform the number of customers that MCE expects to serve. These macro variables include current customer count, classifications, energy usage, and expected customer participation rates. Primarily, macro variables drive the load forecast and tend to overshadow the effects of typical "micro" variables related to weather, economic cycles, population growth, and changes in customer consumption patterns. The long-term load forecast incorporates macro variables and the seasonal electricity consumption patterns of MCE's customer base, while most other micro variables are considered in MCE's shorter-term load forecasts.

## Enrolled Customers

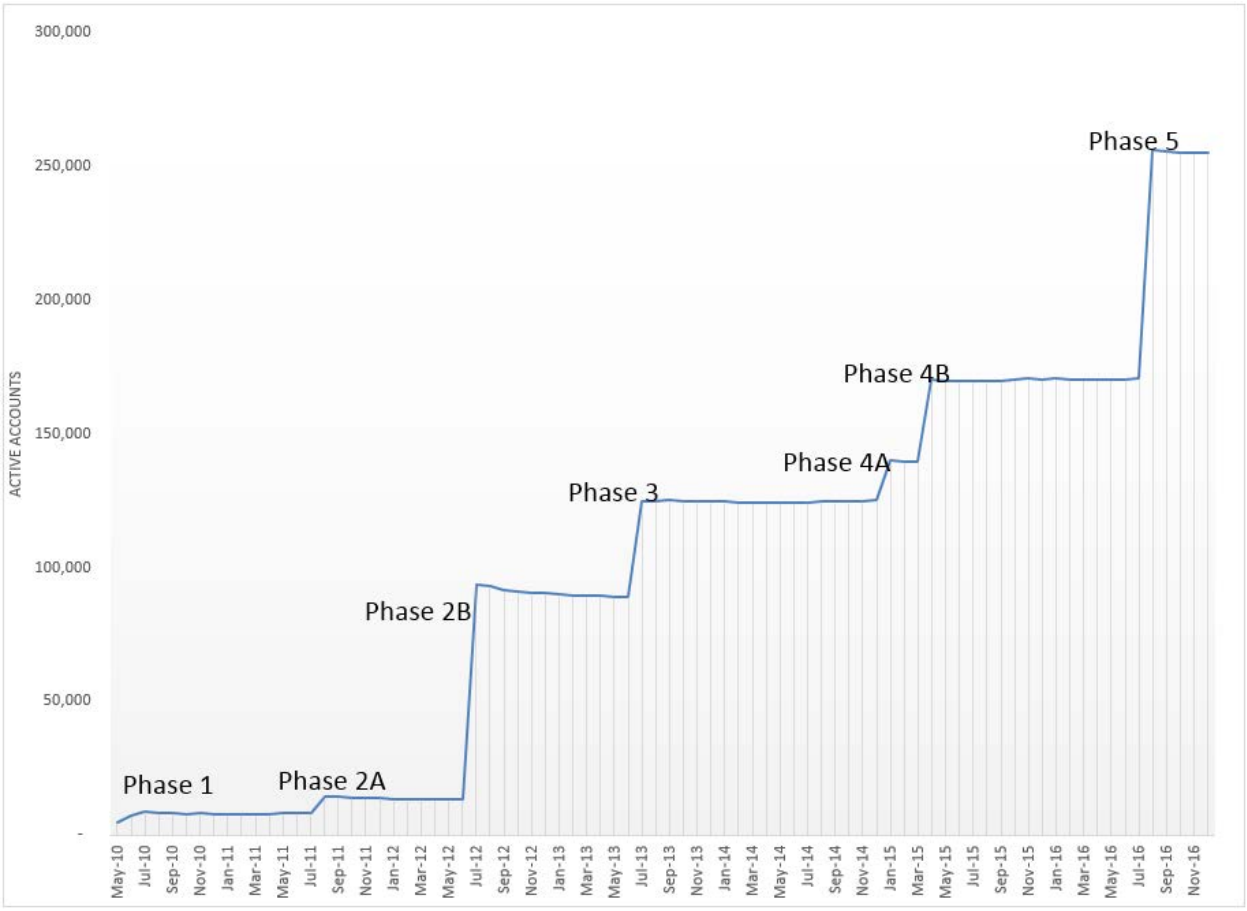
Following the September 2016 inclusion of American Canyon, Calistoga, Lafayette, Napa, St. Helena, Walnut Creek, and Yountville, the number of customer accounts served by MCE increased to approximately 255,000. Subject to related policy, MCE may include additional communities that request service during the Planning Period, however the scope of this IRP is limited only to MCE's current service area. Any specific resource planning impacts related to the inclusion of new member communities in the future would be addressed by MCE's Board prior to the completion of such processes. As part of the evaluative process associated with prospective community inclusion, MCE quantifies, on a projected basis, the expected budgetary and environmental impacts, as well as other key planning considerations (including impacts to electric load and customer counts), that would result from the inclusion of prospective new members. These projections are presented publicly to MCE's Board with opportunity for discussion and public comment.

Customer participation rates are expressed as the proportion of customers that are currently served by MCE relative to the number of customers that were originally offered service. The difference between such numbers reflects the subset of customers that have voluntarily determined to opt-out of the MCE program, retaining bundled service by Pacific Gas & Electric ("PG&E"), the incumbent utility in Northern California. The vast majority of customer opt-outs occur within a 120-day period beginning 60 days prior to each customer's scheduled service commencement and continuing for 60 days thereafter – this period of time is generally referred to as the "enrollment period". During the enrollment period, prospective and enrolled customers receive up to five mailed notices, which explain MCE's service options and the opt-out process amongst other terms and conditions of service. Following the initial enrollment period, MCE's customer base stabilizes, and the impacts of customers voluntarily returning to MCE service (also known as "opting-in") generally offset the effects of customer attrition.

The customer participation rate associated with MCE's initial membership – based on jurisdictional participation as of May 2010 – is approximately 77%. Customer participation rates have increased in subsequent MCE enrollment phases: 81% of customers who were offered service following inclusion of the City of Richmond have continued with MCE; 89% in MCE's subsequent expansion footprint of Benicia, San Pablo, El Cerrito, and unincorporated Napa County; and 91% involved in the aforementioned September 2016 inclusion effort. This trend reflects the impact of MCE's outreach programs, increased awareness of the MCE brand and service advantages, legislation limiting certain

utility marketing tactics against CCAs, and general familiarity with the CCA service model, which continues to expand throughout California.

Figure 1: Active MCE Customers




## Baseline Customer and Consumption Forecast

MCE's electricity demand forecast starts with a forecast of customers by end-use classification (residential, commercial, etc.). Class-typical monthly energy consumption estimates, derived from historical data, are applied to yield a monthly energy forecast by customer class. Hourly class-specific load profiles are then used to break down the monthly energy forecast into more granular time-of-use and peak demand values. Certain adjustments are incorporated in the base forecast to account for factors not reflected in the historical data. MCE also makes explicit adjustments to this forecast to account for the load impacts of its energy efficiency, NEM, and demand response programs.

## Energy Efficiency

As referenced in the MCE Implementation plan, studies indicate that a reasonable long-term goal for EE programs in MCE's service area is to reduce overall annual energy consumption by approximately 2%. MCE's 2017 peak demand forecast is 544 MW, and annual consumption is forecasted to be 2,743,000

MWh, 2% of which is 55,000 MWh. Achieving this level of savings will require development of specific programs, anticipated funding, and time to deploy the efficiency measures.

MCE has received CPUC funding approval for EE programs to be administered through 2025 – such funding is derived through collection of the public goods charge from all customers, including those served by both CCAs and investor-owned utilities; disposition of public goods charge funds is administered by the CPUC. The specific accomplishments of MCE-administered energy efficiency programs are reflected below in Table 2.[7]

**Table 2: MCE Energy Efficiency Annual Impacts**

| | MWh | MW (summer peak) |
|---|---|---|
| **2013** | 414 | 0.035 |
| **2014** | 723 | 0.108 |
| **2015** | 1,337 | 0.340 |

MCE has applied to the CPUC for a much more robust set of programs, building on the steady ramp-up in energy efficiency activities since 2013. MCE has applied to offer energy efficiency programs in each customer sector and is looking at a tenfold increase in funding and associated targets. The application is pending at this time and the targets are reflected in MCE's procurement planning.

### Net Energy Metering Program

Through its NEM program, MCE offers a compelling incentive to promote customer-sited distributed generation within its service area. During periods in which surplus energy production occurs, MCE pays eligible customers for their generation at the respective retail rate plus an additional 1 cent per kWh. MCE's NEM program currently includes more than 9,600 customers, who have collectively installed renewable generating capacity in excess of 77,000 kW (77 MW). During the Planning Period, MCE will periodically evaluate its NEM program to balance long-term distributed generation goals with the impacts of NEM incentives on MCE's electric rates.

### Demand Response Program

MCE administers limited-scope, "pilot" demand response programs, and MCE customers are eligible for many of the demand response programs administered by PG&E. In addition, MCE is developing an Automated Demand Response Pilot Program for EV charging stations and Smart Grid Connected home devices and exploring platforms for aggregating and scheduling load into CAISO. MCE is also analyzing customer segments – residential, small and medium commercial, and large commercial – for DR opportunities while inventorying third party DR programs in the MCE service area to gain a better understanding of services being provided and where gaps exist. Depending on the outcome of these activities, MCE may ramp up its demand response programs or seek funding from the CPUC for more robust programs in this sector.

[7] Savings associated with the MCE's single-family EE program are included here but are subject to confirmation following the *ex post* evaluation from the CPUC. EE impacts included through 2015, the most recent year for which data are available.

Because MCE customers contribute to funding of demand response programs through various PG&E charges, MCE receives capacity credits related to PG&E-administered demand response programs; these allocations marginally reduce MCE's need to procure resource adequacy capacity. Currently, demand response programs provide 2% of MCE's resource adequacy requirements. MCE's goal for the Planning Period is to meet 5% of its total capacity requirements through demand response programs that will be operated directly by MCE or through utility administered programs for which MCE customers are eligible.

# IV. Resources

## Existing Resource Commitments

MCE currently has more than fifty unique power purchase commitments to ensure requisite conventional, renewable, and GHG-free energy supply. MCE's contract portfolio includes a variety of suppliers, term lengths, product types, quantities, generation technologies and resource locations amongst other considerations. MCE's current portfolio of contracts is summarized in Table 3, below, with additional detail provided in Appendix B.

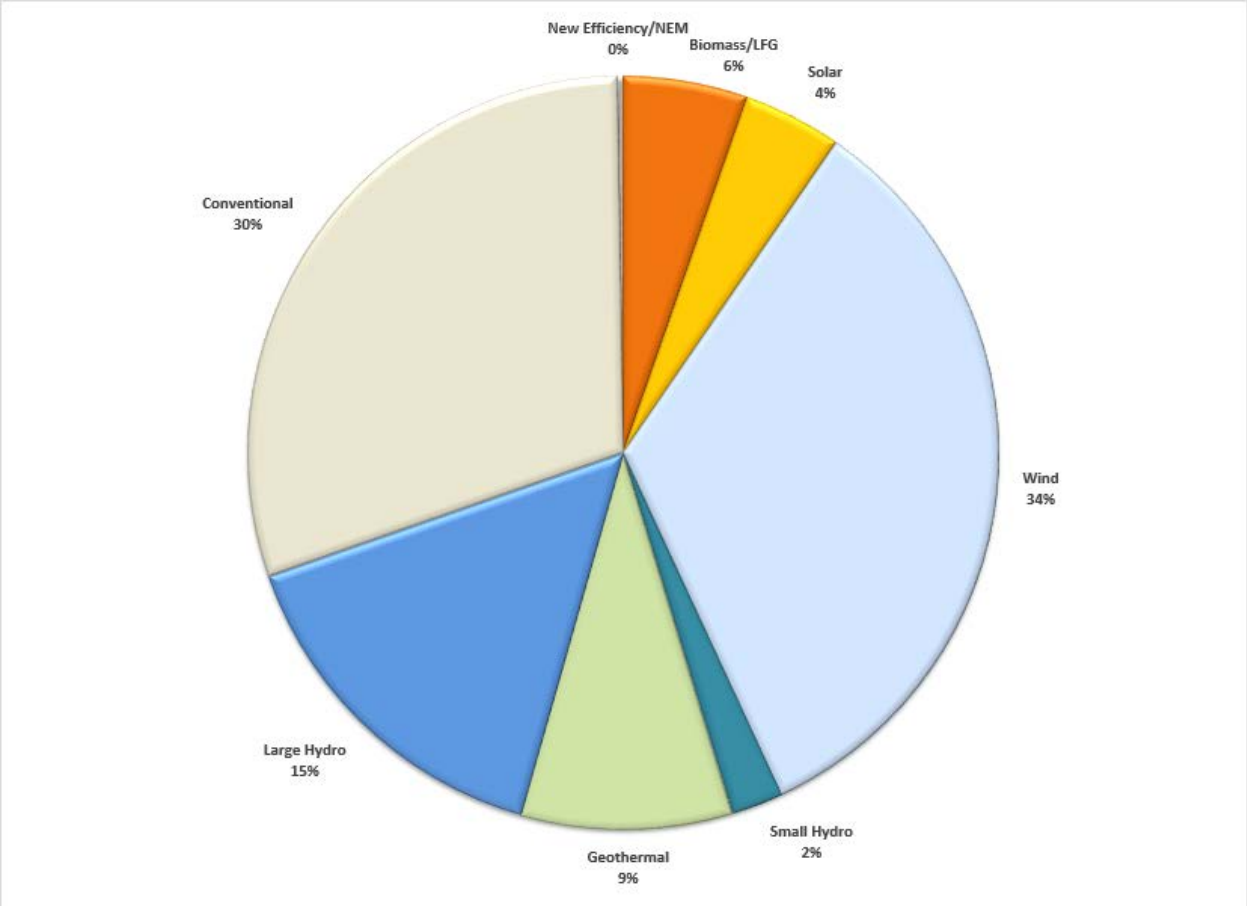
**Table 3: MCE Portfolio of Energy Contracts**

| Project | Counterparty | Technology | Capacity (MW) | Execution Date | Term | Annual Deliveries (GWh) | Location |
|---|---|---|---|---|---|---|---|
| BUNDLED RENEWABLE | | | | | | | |
| SENA | Shell | Renewable | Variable | 2/5/2010 | 2010 - 2016 | 111 | WECC |
| G2 Hay Road | G2Energy | Landfill Gas | 1.6 | 12/3/2010 | 2013 - 2024 | 12 | Solano Co, CA |
| G2 Ostrom Road | G2Energy | Landfill Gas | 1.6 | 12/3/2010 | 2013 - 2024 | 12 | Yuba Co, CA |
| Cottonwood Solar - City of Corcoran | Dominion | Solar PV | 11 | 7/8/2011 | 2015 - 2040 | 30 | Kings Co, CA |
| Cottonwood Solar - Goose Lake | Dominion | Solar PV | 12 | 7/8/2011 | 2015 - 2040 | 32 | Kern Co, CA |
| Cottonwood Solar - Marin Carport | Dominion | Solar PV | 1 | 7/8/2011 | 2015 - 2040 | 2 | Novato, CA |
| San Rafael Airport (FIT) | San Rafael Airport (FIT) | Solar PV | 0.972 | 5/8/2012 | 2012 - 2032 | 2 | San Rafael, CA |
| Energy 2001 - Lincoln Landfill | Genpower | Landfill Gas | 4.8 | 7/6/2012 | 2013 - 2024 | 27 | Lincoln, CA |
| RE Kansas | Dominion | Solar PV | 20 | 8/3/2012 | 2014 - 2017 | 51 | Kings Co, CA |
| Geysers | Calpine | Geothermal | 10 | 7/11/2013 | 2017 - 2026 | 88 | Lake Co, Sonoma Co, CA |
| Rising Tree Wind Farm | EDP | Wind | 99 | 9/4/2014 | 2015 - 2018 | 340 | Kern Co, CA |
| RE Mustang | Recurrent | Solar PV | 30 | 10/3/2014 | 2018 - 2033 | 86 | Fresno Co, CA |
| Redwood Landfill | Waste Management | Landfill Gas | 4 | 11/6/2014 | 2017 - 2037 | 30 | Novato, CA |
| Cost Plus Plaza Larkspur (FIT) | Cost Plus Plaza Larkspur (FIT) | Solar PV | 0.261 | 4/16/2015 | 2016 - 2036 | 0.5 | Larkspur, CA |
| Pardee and Camanche | EBMUD | RPS-Eligible Hydro | 31 | 6/22/2015 | 2016 - 2025 | 70 | Mokelumne River, CA |
| Freethy Industrial Park Unit #1 (FIT) | Freethy Industrial Park Unit #1 | Solar PV | 0.998 | 9/4/2015 | 2015 - 2035 | 2 | Richmond, CA |
| Freethy Industrial Park Unit #2 (FIT) | Freethy Industrial Park Unit #2 | Solar PV | 0.998 | 9/4/2015 | 2015 - 2035 | 2 | Richmond, CA |
| Shiloh 1 | Avangrid | Wind | 25 | 3/1/2016 | 2018 | 75 | Solano Co, CA |
| Portfolio | Portland General Electric | Wind | Variable | 6/17/2016 | 2016 | 120 | Oregon, Washington |
| Portfolio | 3 Phases | Wind, Geothermal | Variable | 6/17/2016 | 2016 - 2017 | 140 - 340 | Colorado, Oregon |
| Henrietta Solar | SunPower | Solar PV | Variable | 7/1/2016 | 2016 | 100 | Kings Co, CA |
| Portfolio | Powerex | Wind, Biomass | Variable | 8/1/2016 | 2017 - 2109 | 75 - 125 | British Colombia, Washington |
| Silicon Valley Power | City of Santa Clara | Renewable | Variable | 8/16/2016 | 2016 | 100 | California |
| Cooley Quarry (MCE Local Sol) | Cooley Quarry (MCE Local Sol) | Solar PV | 0.99 | 8/18/2016 | 2017 - 2037 | 2 | Novato, CA |
| RE Tranquillity 8 Rojo | Recurrent | Solar PV | 100 | 9/15/2016 | 2018 - 2033 | 290 | Fresno Co, CA |
| Little Bear 1 Solar | First Solar | Solar PV | 40 | 9/26/2016 | 2020 - 2041 | 104 | Fresno Co, CA |
| Portfolio | NextERA | Solar PV | Variable | 10/18/2016 | 2017 | 200 | Blythe, CA |
| Antelope Expansion 2 | sPower | Solar PV | 105 | 11/15/2016 | 2018 - 2038 | 300 | Mojave Desert, CA |
| Desert Harvest | EDF | Solar PV | 80 | 11/18/2016 | 2020 - 2041 | 490 | Riverside Co, CA |
| Los Banos Wind | Terra Gen | Wind | 125 | 12/5/2016 | 2020 - 2033 | 372 | Merced Co, CA |
| TGP Energy Management | Terra Gen | Wind | 100 | 12/5/2016 | 2018 - 2020 | 300 | Tehachapi, CA |
| Voyager Wind III | Terra Gen | Wind | 42 | 12/5/2016 | 2018 - 2030 | 128 | Mojave, CA |
| UNBUNDLED RENEWABLE | | | | | | | |
| Portfolio | LA County Sanitation District | Landfill Gas | Variable | 5/25/2016 | 2016 - 2017 | 68 - 90 | Los Angeles Co, CA |
| CARBON FREE | | | | | | | |
| Central Valley Project | WAPA | Hydro | Variable | 10/1/2011 | 2015 - 2024 | 25 | California |
| Portfolio | Shell | Hydro | Variable | 11/14/2014 | 2015 - 2017 | 90 - 230 | Washington |
| CONVENTIONAL | | | | | | | |
| SENA | Shell | System | Variable | 2/5/2010 | 2010 - 2017 | 920-940 | California |
| Exelon Generation Company | Exelon Generation Company | System | 50 | 6/10/2014 | 2018 - 2019 | 438 | California |
| Direct Energy | Energy America | System | Variable | 2/4/2016 | 2018 - 2020 | 310 - 400 | California |
| Morgan Stanley | Morgan Stanley | System | Variable | 5/20/2016 | 2016 - 2020 | 200 - 500 | California |
| MCE DEVELOPMENT | | | | | | | |
| Solar One | MCE | Solar PV | 10.5 | TBD | 2017 - 2036 | 18 | Richmond, CA |

## Current Resource Mix

MCE's 2017 resource mix, displayed in Figure 2 will contain at least 53% renewable energy - one of the highest renewable energy contents in California.

**Figure 2: MCE 2017 Estimated Resource Mix[8]**

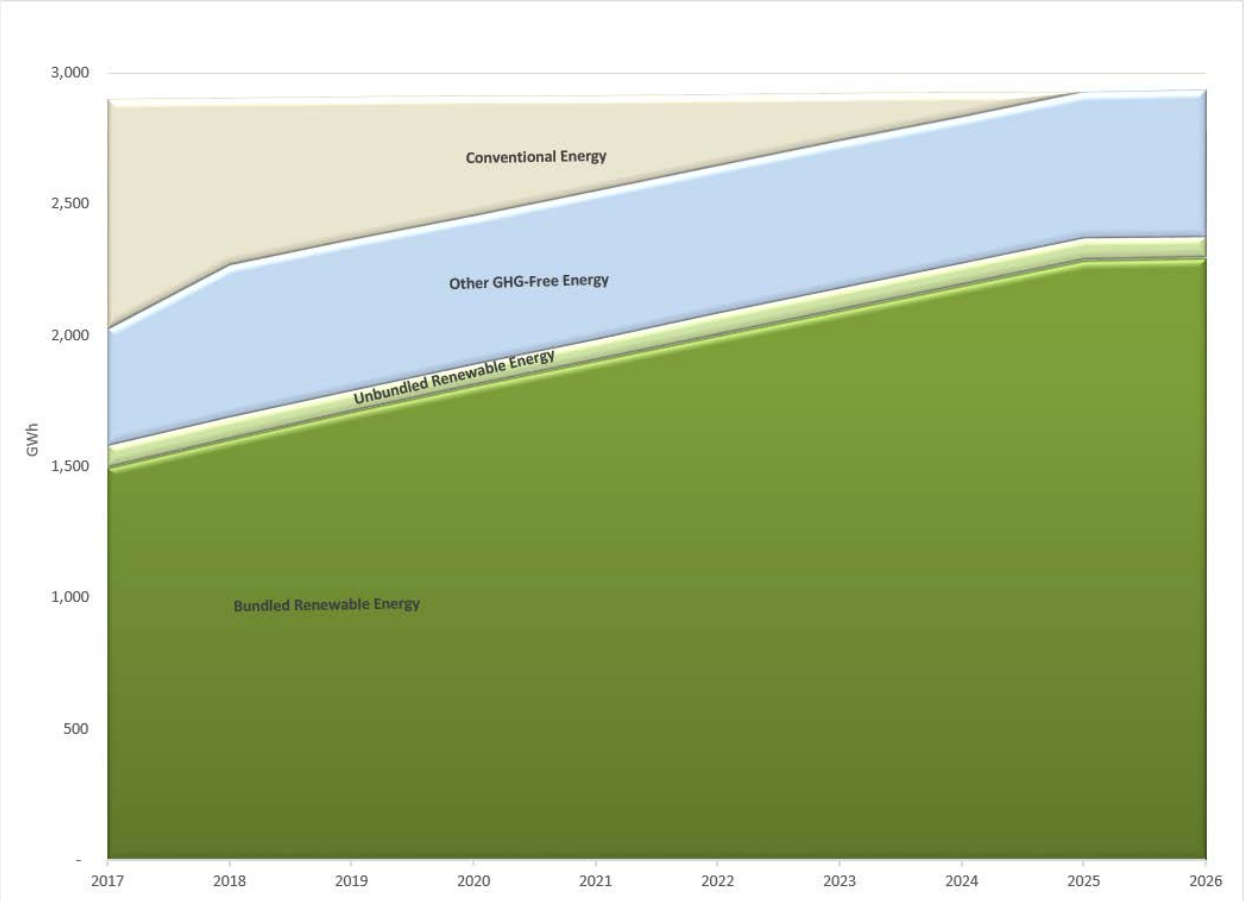



[8] Percentages may not sum to 100% due to rounding.

## Resource Needs

Beyond its current contractual commitments, MCE will procure additional energy products, as necessary, to ensure that the future energy needs of its customers are met in a reliable, cost-effective manner. This section sets forth MCE's planned resource volumes and quantifies the net resource need or "open position" that remains after accounting for production from MCE's existing resource portfolio. MCE has established proportionate procurement targets for overall carbon-free energy content, including subcategories for various renewable energy products, and has also established targets for necessary capacity reserves. To the extent that MCE's energy needs are not fulfilled through the use of GHG-free generating resources, it should be assumed that such supply will be sourced from natural gas generating technologies or system power, which describes "generic" energy purchases from the wholesale market that are not directly associated with specific generators.

**Figure 3: MCE Renewable and Non-renewable Energy Volumes, 2017-2026**




## Renewable Resources

MCE has committed to providing all of its Light Green customers with energy that is at least 53% renewable; incremental renewable energy quantities will also be procured on behalf of Deep Green program participants to ensure that such customers receive 100% renewable energy. MCE meets its

renewable energy requirements with a combination of RPS-eligible energy products.[9] As Figure 3 illustrates, the proportion of MCE's resource mix that is sourced from bundled renewable energy products is expected to significantly increase as MCE transitions toward an 80% renewable energy content.

### RPS Requirements

MCE's renewable power content significantly exceeds the state's minimum RPS requirements and will continue to do so throughout the Planning Period. As dictated by SB 350, the renewable energy purchase requirement that is applicable to all retail electricity sellers has increased to 50% by 2030. Transitions from the previously applicable procurement mandate (33% by 2020) will be implemented gradually with "straight line" increases during each year of the compliance regime. To satisfy applicable procurement mandates, retail sellers, including MCE, will be allowed to purchase a variety of renewable energy products, including power produced by generating resources located within California and elsewhere in WECC. MCE staff remains engaged in RPS-related proceedings to ensure a clear understanding and effective implementation of all applicable procurement requirements.

RPS compliance can be met with procurement from:

i) renewable resources located within or delivering electricity directly to California (PCC 1), subject to minimum procurement requirements;
ii) firmed and shaped renewable energy (PCC 2) products produced outside of California, subject to certain quantity limitations; and
iii) unbundled renewable energy certificates from RPS-eligible resources (PCC 3), also subject to quantity limitations.

MCE has a sufficient supply of RPS-eligible renewable resources to meet a 53% procurement target during the 2017 calendar year, well in excess of the applicable 27% RPS procurement requirement. Thereafter, MCE will utilize renewable energy supply from existing and future transactions to ensure that its use of renewable energy tracks with the planned trajectory reflected in this IRP. Based on targeted renewable energy percentages, MCE intends to significantly outpace California's annual RPS procurement mandates throughout the Planning Period.

### RPS Open Positions

During the third RPS Compliance Period (2017 – 2020), 75% of required RPS procurement must be sourced from PCC 1 resources. With this requirement in mind, MCE has substantially focused on long-term power purchase agreements ("PPAs") with new, California-based generating facilities that will produce PCC 1-eligible renewable energy.

To supplement its core procurement of PCC 1 resources, MCE engages in short term contracts for PCC 2 and, to a lesser degree, PCC 3 renewable energy supplies. As shown in Table 4, MCE has secured

[9] Some of MCE's renewable energy volumes are produced by facilities that are both RPS-eligible and Green-e Energy-eligible, according to eligibility criteria described in the Green-e Energy National Standard: http://www.green-e.org/docs/energy/Green-eEnergyNationalStandard.pdf.

contracts for renewable energy volumes well in excess of applicable RPS procurement requirements through the Planning Period.

**Table 4: MCE RPS Compliance Energy Balance, 2017-2026**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Retail Sales (GWh)** | 2,735 | 2,740 | 2,745 | 2,749 | 2,751 | 2,754 | 2,757 | 2,760 | 2,763 | 2,770 |
| **State RPS %** | 27% | 29% | 31% | 33% | 35% | 36% | 38% | 40% | 42% | 42% |
| **RPS Energy Required (GWh)** | 739 | 795 | 851 | 907 | 955 | 1,003 | 1,051 | 1,098 | 1,147 | 1,150 |
| **RPS Energy Contracted (GWh)** | 1,730 | 1,319 | 1,575 | 1,488 | 1,896 | 1,891 | 1,887 | 1,883 | 1,878 | 1,799 |
| **Net Short/(Long)** | **(992)** | **(524)** | **(724)** | **(581)** | **(941)** | **(888)** | **(836)** | **(785)** | **(732)** | **(649)** |
| | | | | | | | | | | |
| **Category 1 Required (GWh)** | 554 | 596 | 638 | 680 | 716 | 752 | 788 | 824 | 860 | 862 |
| **Category 1 Contracted (GWh)** | 1,245 | 1,244 | 1,450 | 1,488 | 1,896 | 1,891 | 1,887 | 1,883 | 1,878 | 1,799 |
| **Net Short/(Long)** | (692) | (648) | (812) | (808) | (1,180) | (1,139) | (1,099) | (1,059) | (1,018) | (936) |

## Voluntary Renewable Open Positions

Voluntary renewable energy volumes reflect purchases that exceed applicable RPS mandates. With respect to MCE, these voluntary purchases are necessary to meet the minimum 53% renewable energy supply for Light Green customers and the 100% renewable energy supply for Deep Green customers. MCE's Power Content Label ("PCL") is a key customer communication that provides information regarding MCE's proportionate use of various fuel sources during each year of operation. The 2015 PCL, which is MCE's most recent, quantifies MCE's aggregate renewable energy use: 52% renewable for Light Green customers; and 100% renewable for Deep Green customers. In this example, all renewable energy volumes above the 23.3% compliance mandate were fulfilled through voluntary renewable energy purchases.

**Figure 4: MCE 2015 Power Content Label**

**POWER CONTENT LABEL**

| ENERGY RESOURCES | 2015 MCE LIGHT GREEN POWER MIX | 2015 MCE DEEP GREEN POWER MIX | 2015 CA POWER MIX** (for comparison) |
|---|---|---|---|
| **Eligible Renewable** | **52%** | **100%** | **22%** |
| Biomass & biowaste | 5% | 0% | 3% |
| Geothermal | 2% | 0% | 4% |
| Eligible hydroelectric | 4% | 0% | 1% |
| Solar | 5% | 25% | 6% |
| Wind | 36% | 75% | 8% |
| **Coal** | **0%** | **0%** | **6%** |
| **Large Hydroelectric** | **12%** | **0%** | **5%** |
| **Natural Gas** | **12%** | **0%** | **44%** |
| **Nuclear** | **0%** | **0%** | **9%** |
| **Other** | **0%** | **0%** | **0%** |
| **Unspecified sources of power*** | **25%** | **0%** | **14%** |
| **TOTAL** | **100%** | **100%** | **100%** |

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

** Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the previous year.

## Deep Green Service Participation

MCE offers a voluntary 100% renewable energy option, known as Deep Green service, to all customers. Beginning in 2017, the Deep Green supply portfolio will rely exclusively on bundled renewable energy resources produced by California-based generators. Customer participation in Deep Green service

directly impacts the quantity of incremental renewable energy volumes that MCE must procure to ensure that its broader supply portfolio includes sufficient renewable energy volume to support Light Green and Deep Green participation.

As a percentage of MCE's total annual electricity sales, Deep Green participation currently represents approximately 2.6% of MCE sales. MCE anticipates significantly increased Deep Green sales in the 2017-2019 period as private and public sector commercial customers look to achieve 2020 carbon reduction targets. By 2025, MCE's goal is to increase Deep Green electricity sales to 135 GWh, which will constitute about 5% of MCE's projected annual electricity sales.

**Table 5: MCE Deep Green Participation, 2016[10]**

| | Total MCE | Residential Deep Green | Commercial Deep Green | Total Deep Green |
|---|---|---|---|---|
| Number of Customers | 255,238 | 4,034 | 784 | 4,818 |
| | | 1.58% | 0.31% | 1.89% |
| Total Retail Sales (kWh) | 1,878,344,673 | 14,170,890 | 34,177,646 | 48,348,536 |
| | | 0.75% | 1.82% | 2.57% |

### Favorable Renewable Energy Market Conditions

During 2016, MCE filled a large portion of its future PCC1 open position in consideration of favorable renewable energy PPA pricing. In many cases, the pricing for available PCC1 products was on par with comparable prices for conventional energy. MCE understands that a variety of factors have contributed to favorable wholesale renewable energy prices, including extensions of federal and state tax incentives, expansion of manufacturing and supply-related capabilities (which have contributed to reduced hardware costs), historically low interest rates, and general market conditions in which renewable energy supply meaningfully exceeded demand. In consideration of these factors, as well as the realization that increased CCA program implementation within California may contribute to future competition for renewable energy resources (and potentially increased prices), MCE decided to capitalize on current favorable market conditions by securing various long-term supply commitments, which will facilitate its achievement of desired renewable energy procurement targets during the Planning Period.

The remaining open positions related to MCE's future voluntary renewable energy targets for Light Green and Deep Green service options are shown in Table 6.

[10] Total Deep Green participants as of December 2016. Sales for the 12-month period preceding October 1, 2016, the most recent for which data are available.

Table 6: MCE Renewable Energy Balance, 2017-2026

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Light Green Renewable Content Goal % | 53% | 57% | 60% | 63% | 67% | 70% | 73% | 77% | 80% | 80% |
| Light Green Renewable Energy Target (GWh) | 1,506 | 1,589 | 1,677 | 1,766 | 1,859 | 1,952 | 2,046 | 2,139 | 2,235 | 2,241 |
| Deep Green Incremental Renewable Energy Target (GWH) | 75 | 100 | 115 | 125 | 128 | 131 | 133 | 135 | 135 | 135 |
| Contracted Renewable Energy (GWh) | 1,730 | 1,319 | 1,575 | 1,488 | 1,896 | 1,891 | 1,887 | 1,883 | 1,878 | 1,799 |
| **Net Short/(Long)** | **(149)** | **370** | **216** | **403** | **91** | **192** | **292** | **391** | **492** | **578** |

## GHG-Free Resources

Prior to 2016, MCE policy generally specified that MCE's annual attributed portfolio emissions rate, which reflects the proportionate use of GHG-emitting power sources, would be lower than the respective annual emissions rate published by PG&E. In order to increase certainty of MCE's future GHG-free energy content, this IRP specifies a GHG-free procurement goal of 75% in 2017, with regular increases each year thereafter until MCE achieves its long-term objective of a 100% GHG-free resource mix. MCE acknowledges that achieving a 100% GHG-free resource mix will be dependent upon successful resolution of operational practicalities, applicable GHG reporting practices (such as those contemplated in AB 1110) and product availability. To achieve these GHG-free supply goals, MCE will require additional GHG-free energy throughout the Planning Period, as reflected in Table 7.

Table 7: MCE GHG-Free Energy Balance, 2017-2026 (GWh)

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Energy Requirements | 2,899 | 2,904 | 2,910 | 2,913 | 2,916 | 2,920 | 2,923 | 2,926 | 2,929 | 2,936 |
| GHG-Free Target (%) | 75% | 78% | 81% | 84% | 88% | 91% | 94% | 97% | 100% | 100% |
| GHG-Free Targeted Volumes | 2,175 | 2,269 | 2,364 | 2,458 | 2,551 | 2,646 | 2,740 | 2,834 | 2,929 | 2,936 |
| GHG-Free Under Contract | 2,085 | 1,344 | 1,600 | 1,513 | 1,921 | 1,916 | 1,912 | 1,908 | 1,903 | 1,824 |
| Renewable Energy Open Position | - | 370 | 216 | 403 | 91 | 192 | 292 | 391 | 492 | 578 |
| **GHG-Free Open Position** | **89** | **555** | **547** | **542** | **540** | **538** | **536** | **535** | **534** | **535** |

## System Energy

After accounting for renewable and GHG-free energy, the remaining energy supply is comprised of unspecified system energy purchases or specified purchases of conventional generation. MCE policy prohibits unit-specific purchases from coal or nuclear generation facilities; however, within California, conventional generation generally refers to power sources that rely on the combustion of natural gas. MCE utilizes fixed priced contracts for system power to hedge residual market price exposure in its supply portfolio. MCE has short- and medium-term contracts in place to supply approximately 90% of its load at fixed prices through the end of 2017. Any remaining energy balancing will be conducted through the CAISO market via purchases and sales during the operating horizon and via variable-priced supply contracts. MCE's open market volumes for the Planning Period are reflected in Table 8.

Table 8: MCE System Energy Balance, 2017-2026 (GWh)

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Load Requirement** | 2,899 | 2,904 | 2,910 | 2,913 | 2,916 | 2,920 | 2,923 | 2,926 | 2,929 | 2,936 |
| **Existing and Planned Fixed Priced Contracts** | (2,568) | (2,682) | (2,369) | (1,962) | (1,851) | (1,846) | (1,842) | (1,838) | (1,833) | (1,824) |
| **Open Market Volumes** | 331 | 222 | 540 | 951 | 1,065 | 1,074 | 1,081 | 1,087 | 1,096 | 1,113 |

## Capacity Resources

MCE meets California's resource adequacy standards by procuring qualifying capacity sufficient to meet MCE's projected peak demand plus a 15% reserve margin. In addition to this general requirement, MCE must ensure that mandated proportions of such capacity resources are procured from local reliability areas defined by the California Independent System Operator (CAISO). MCE has a need for capacity purchases to meet resource adequacy obligations beginning in 2017. It is noteworthy that resource adequacy purchases are typically conducted via shorter-terms transactions without a great deal of lead time, which mirrors the obligations under California's resource adequacy program. MCE is actively engaged in procurement processes related to open positions for the balance of 2017. In addition, MCE has long-term capacity rights under several of its PPAs, which will provide a portion of MCE's local resource adequacy needs during the Planning Period.

Table 9: MCE Resource Adequacy Capacity Balance, 2017-2026 (MW)

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Load*** | | | | | | | | | | |
| Peak Demand | 575 | 577 | 580 | 582 | 585 | 587 | 590 | 592 | 595 | 598 |
| New DG and Efficiency | (21) | (28) | (36) | (44) | (51) | (59) | (67) | (74) | (82) | (87) |
| Net Peak Demand | 555 | 549 | 544 | 539 | 533 | 528 | 523 | 518 | 513 | 511 |
| ***RA Requirements*** | | | | | | | | | | |
| Greater Bay Area | 100 | 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 92 |
| Other PG&E Area | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 115 |
| System | 224 | 222 | 220 | 218 | 216 | 214 | 212 | 210 | 208 | 207 |
| Flexible | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 99 |
| ***RA Contracted*** | | | | | | | | | | |
| Greater Bay Area | 100 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Other PG&E Area | 123 | 44 | 172 | 172 | 204 | 204 | 204 | 204 | 204 | 204 |
| System | 224 | - | 95 | 95 | 192 | 192 | 192 | 192 | 192 | 192 |
| Flexible | 107 | - | - | - | - | - | - | - | - | - |
| ***Net Short/(Long)*** | | | | | | | | | | |
| Greater Bay Area | - | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | 81 |
| Other PG&E Area | - | 78 | (51) | (52) | (85) | (86) | (87) | (88) | (89) | (89) |
| System | - | 222 | 125 | 123 | 24 | 22 | 20 | 18 | 16 | 15 |
| Flexible | - | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 99 |

## Flexible Capacity

The CAISO, in collaboration with the CPUC and other local regulatory authorities, must ensure that the energy supply has sufficient flexibility, including load-following capabilities, to address unexpected system variability. Thus, the CAISO introduced flexible capacity compliance mandates for load-serving entities ("LSEs") in 2015. Each LSE must demonstrate procurement of 90 percent of its flexible capacity

requirement on its annual RA filing and 100 percent of the specified requirement on its subsequent monthly RA filings. Flexible capacity capabilities of resources such as distributed generation, demand response, and storage should ultimately count toward an LSE's flexible capacity procurement obligation. MCE has successfully satisfied and expects to continue successfully satisfying all flexible capacity mandates.

**Table 10: MCE Flexible Capacity Targets, 2017**

| Results of Energy Commission Review and Adjustment to the 2017 Year-Ahead Load Forecast for MCE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Monthly Flexible Capacity Targets (MW) | | | | | | | | | | | |
| Jan - 17 | Feb - 17 | Mar - 17 | Apr - 17 | May - 17 | Jun - 17 | Jul - 17 | Aug - 17 | Sep - 17 | Oct -17 | Nov - 17 | Dec - 17 |
| 155 | 134 | 140 | 136 | 117 | 107 | 76 | 74 | 86 | 99 | 171 | 174 |

## Energy Storage

The California Energy Storage Bill, AB 2514, was signed into law in September of 2010, and, as a result, the CPUC established energy storage targets for investor owned utilities, CCAs, and LSEs in September 2013. The applicable CPUC decision established an energy storage procurement target for CCAs and electric service providers equal to 1 percent of their forecasted 2020 peak load; this procurement target must also be satisfied by 2020. Based upon current load forecasts, the decision will require MCE to install 6 MW of energy storage no later than 2024. Beginning on January 1, 2016, and every two years thereafter, MCE must file an advice letter demonstrating compliance with this requirement, progress toward meeting this target, and a description of the methodologies for insuring projects are cost-effective.

MCE intends to fulfill its energy storage procurement target by facilitating customer-sited energy storage projects in which customers are able to offset the cost of energy storage projects through transmission and distribution savings stemming from the storage installation and California government incentives that cover site preparation costs and installation. To date, MCE has secured 2.4 MWs (1.6 MWhs) of its target through an installation at the College of Marin in partnership with Tesla Motors, Inc. The installation, which includes five 480 kW batteries, is estimated to provide the College with cost savings of $100,000-$150,000 annually.

# V. Procurement

MCE will fill its future open positions via a combination of contracted energy resources, demand-side programs, and potentially MCE-owned generation projects. This section describes the types of resources MCE may procure and discusses various considerations that may influence MCE's procurement efforts.

MCE has successfully administered a transition away from its initial full requirements supply contract, under which all conventional energy products, reserve capacity, and renewable energy were provided through a single agreement with a single counterparty. Such a structure was instrumental in minimizing administrative and operational complexities at the time of MCE's launch in May 2010. Since that time, MCE has gained experience in the areas of resource planning and procurement, adding staff to support these critical functions. MCE has also developed robust procurement processes to address the majority of its energy, capacity, and renewable energy requirements through relationships with numerous suppliers.

## MCE Generation Development

MCE does not currently own generation assets and has historically utilized long-term PPAs to secure renewable energy supplies at stable costs for its customers. MCE considers asset ownership to offer similar benefits to contracting via long-term PPAs and, therefore, does not have an explicit bias toward either PPAs or asset ownership. MCE examines opportunities for asset ownership – as it does for its contracted resources – on a case-by-case basis, considering such factors as risk allocation, asset location, technology, and, most critically, impact on MCE's customers' rates.

Current federal tax policy generally favors private versus public ownership of renewable assets due to the tax credits that are uniquely available to the private sector. For this reason, MCE's experience has been that PPAs with privately owned renewable generation facilities are typically more cost-effective than development or ownership by MCE. However, MCE has secured optional buyout provisions in some of its renewable PPAs, which provide a path to MCE asset ownership after the tax benefits have been exhausted by the private developer. These options will be independently addressed at the time that they become effective; such evaluations will consider contracting options available otherwise, operational risks, capital commitments, and issues associated with project ownership.

Assessing a generation project's operational risk becomes more important for assets owned by MCE because MCE could be at risk for production shortfalls and for cost over-runs, which are risks typically absorbed by the developer under a PPA structure. With this in mind, MCE is most likely to own small, local solar PV projects as these projects are technologically proven, have relatively low operational and maintenance risks, and provide benefits to the local economy. MCE is targeting development of 25 MW of new solar PV within its service territory during the next ten years[11] and may invest directly in these projects as necessary to ensure development of certain projects that will promote MCE's local development objectives. Direct generation investment will likely become an increasingly viable option

[11] The 10 MW local solar PV target is in addition to the 14 MW of distributed generation installed under the NEM program

during the Planning Period as MCE expects to gain additional operational experience and more robust access to credit markets. As part of this approach, MCE may also consider joint ventures and turnkey development approaches to ensure appropriate allocation of project risks.

### MCE Solar One – Local Solar Development

In September of 2014, MCE entered into an option agreement to lease 60 acres from Chevron Products Company (CPC) at the Richmond oil refinery for the development of 2 to 12 MW of solar PV generation. MCE's status as a California Joint Powers Authority and the public benefit to be derived from this project were key factors in CPC's decision to lease the property to MCE. MCE staff's initial evaluation of this brownfield development site yielded no significant development, permitting, or interconnection concerns. As a result, MCE has completed pre-development activities and engaged a developer with whom it expects to enter into a PPA in early 2017. The Solar One project is expected to begin commercial operations in October 2017, delivering renewable energy to MCE customers from a local renewable resource that would otherwise not have been developed. Once the project is online, MCE expects to evaluate the possibility of purchasing the facility, which MCE views as a test case for future solar development on brownfield sites in its service area.

### Renewable Energy Purchases

MCE uses a portfolio risk management approach in its power purchasing program, seeking low cost supply as well as diversity among technologies, production profiles, project sizes and locations, counterparties, length of contract, and timing of market purchases. These factors are taken into consideration when MCE engages the market.

MCE continually manages its forward load obligations and supply commitments with the objective of balancing cost stability and cost minimization, while leaving some flexibility to take advantage of market opportunities or technological improvements that may arise. MCE monitors its open position separately for each renewable resource category, GHG-free resources, conventional resources, and on a total portfolio basis. MCE maintains portfolio coverage targets of up to 100% in the near-term (0 to 5 years) and leaves a greater portion open in the mid to long term, consistent with generally accepted industry practice.

Typically, MCE fulfills the renewable portion of the portfolio with longer-term contracts, which provide cost stability for the supply portfolio. MCE's guidelines for long term, bundled renewable energy purchases are shown in Table 11.

**Table 11: MCE Renewable Energy Contracting Guidelines**

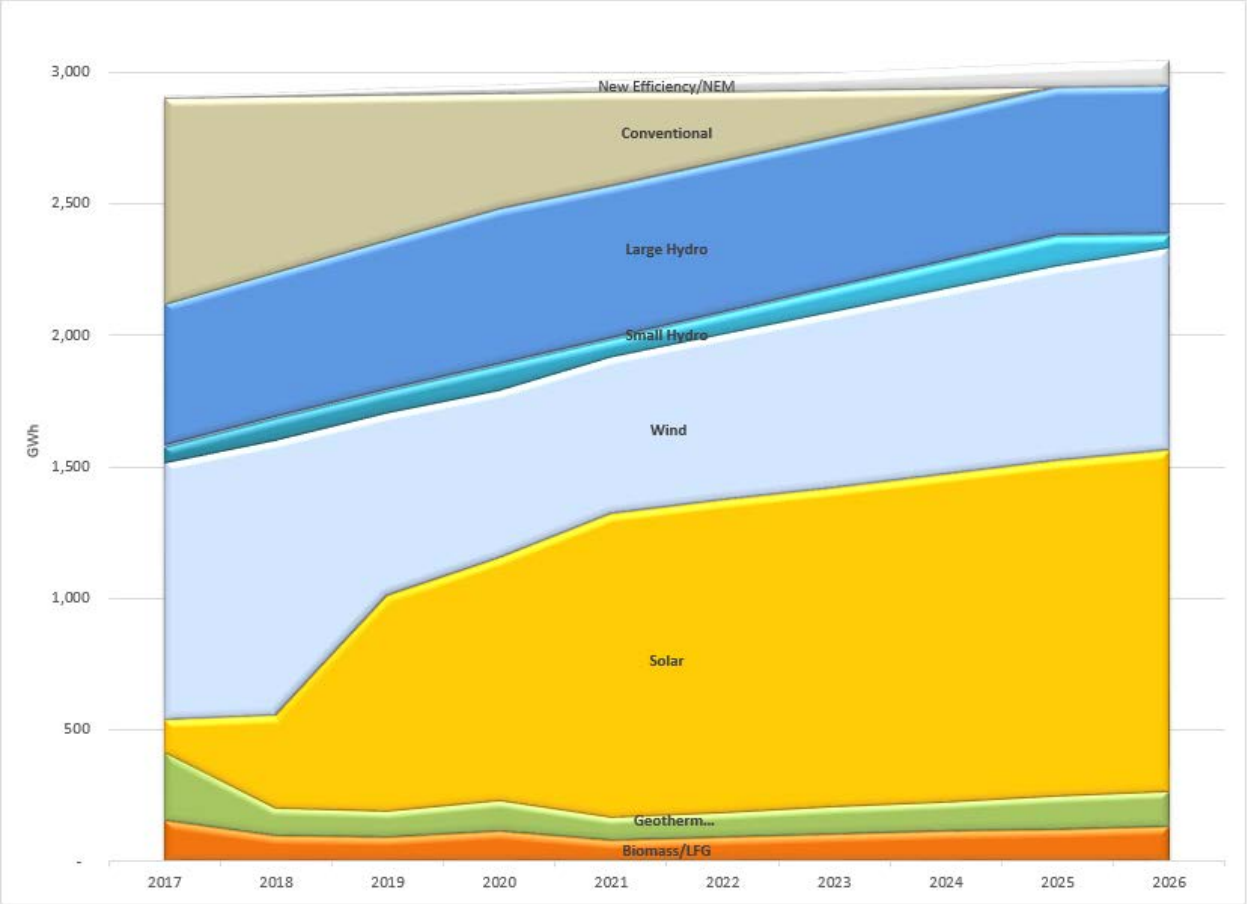
| Time Horizon | Contracting Guidelines (Contracts/Total RE Need) |
|---|---|
| Current Year | 90% to 100% |
| Years 2 – 3 | 80% to 100% |
| Years 4 – 5 | 60% to 100% |
| Beyond Year 5 | 50% to 100% |

MCE has no explicit preference for specific renewable energy technologies. MCE's supply preference is for a mix of renewable energy technologies that will deliver energy in a profile that is generally consistent with its load shape. MCE aims to purchase volumes from baseload (e.g., biomass, landfill gas, renewable fuel cells) and mid-day peaking renewable generation technologies (e.g., solar PV or CSP) in rough proportion to its customers' load profile (75% baseload/25% mid-day peaking), subject to adjustments for market conditions and technology price differentials that exist at the time of purchase. Recent market data suggest that mid-day peak resources are likely to comprise a larger proportion of California's renewable supply portfolio due to the rapid decline in prices for solar PV generation projects and the abundance of such projects in development. Additions to the renewable portfolio during the Planning Period will likely be more heavily weighted toward dispatchable energy production in order to balance the prevalence of competitively priced solar projects. MCE may also engage in purchases from as-available renewable generation (e.g., wind) to the extent that they are competitively priced or otherwise provide portfolio balance.

In regards to generation project location, MCE places the greatest value on locally sited renewable energy projects, particularly those located within 100 miles of MCE's service area. Of next highest preference are projects sited in the North Path 15 region (generally, Northern California) followed by projects in the South Path 15 region (generally, Southern California) and then, finally, out-of-state resources.

The projected resource mix during the Planning Period is illustrated in Figure 5.

Figure 5: MCE Resource Mix, 2017-2026[12]




## Feed-In Tariff

MCE's current FIT program was established as a 2 MW pilot program. The program has since been expanded to 15 MW in aggregate capacity, with 3.2 MW currently under contract. MCE anticipates conducting a review and exploring expansion or refinement of the FIT program once the cap is reached. Table 12 shows all existing and proposed MCE FIT projects and the associated capacity, annual output, and commercial operation date.

Table 12: MCE Feed-In Tariff Projects

| Project Name | Project Status | Capacity (kW) | Annual Output (kWh) | Commercial Operation Date |
|---|---|---|---|---|
| **San Rafael Airport** | Operational | 972 | 1,800 | October 2012 |
| **Freethy Industrial Park Unit #1** | Operational | 998 | 1,800 | October 2016 |
| **Freethy Industrial Park Unit #2** | Operational | 998 | 1,800 | October 2016 |
| **Cost Plus Plaza** | Operational | 261 | 500 | September 2016 |
| **TOTAL** | | **3,229** | **5,900** | |

[12] Actual resource utilization will depend upon market conditions and resource availability.

### Local Sol

In 2014, MCE established its Local Sol service option. An alternative to MCE's Light Green or Deep Green service options, Local Sol's community-based service enables customers to sign up for 100% local solar generation from projects located within MCE's service area. Local Sol service is expected to commence in early 2017, following commercial operation of the supporting local generator.

**Table 13: MCE Local Sol**

| Project Name | Project Status | Capacity (kW) | Annual Output (kWh) | Commercial Operation Date |
|---|---|---|---|---|
| **Cooley Quarry** | Under Construction | 990 | 2,000 | February 2017 |

### GHG-Free Power Purchases

MCE anticipates that its GHG-free energy supplies will be substantially met through short-, medium-, and long-term purchases of GHG-free energy sources, particularly renewable energy and regionally produced hydroelectricity. As previously noted, MCE will not engage in unit-specific purchases from nuclear generators to meet its GHG-free power supply objectives.

### System Resources and Specified Power Purchases

MCE may engage in purchases of unspecified system energy or unit specific purchases from natural gas-fueled generation. Energy products may include peak, off-peak, baseload, and shaped energy. MCE may purchase energy or capacity at fixed prices, indexed prices, or through tolling agreements. Purchases of system energy will typically be for short- and medium-term lengths (< 5 years). Unit-specific and tolling agreements may address MCE's short-, medium- and long-term needs. Natural gas purchases associated with tolling agreements will typically be for short to medium terms.

### Total Supply Obligations

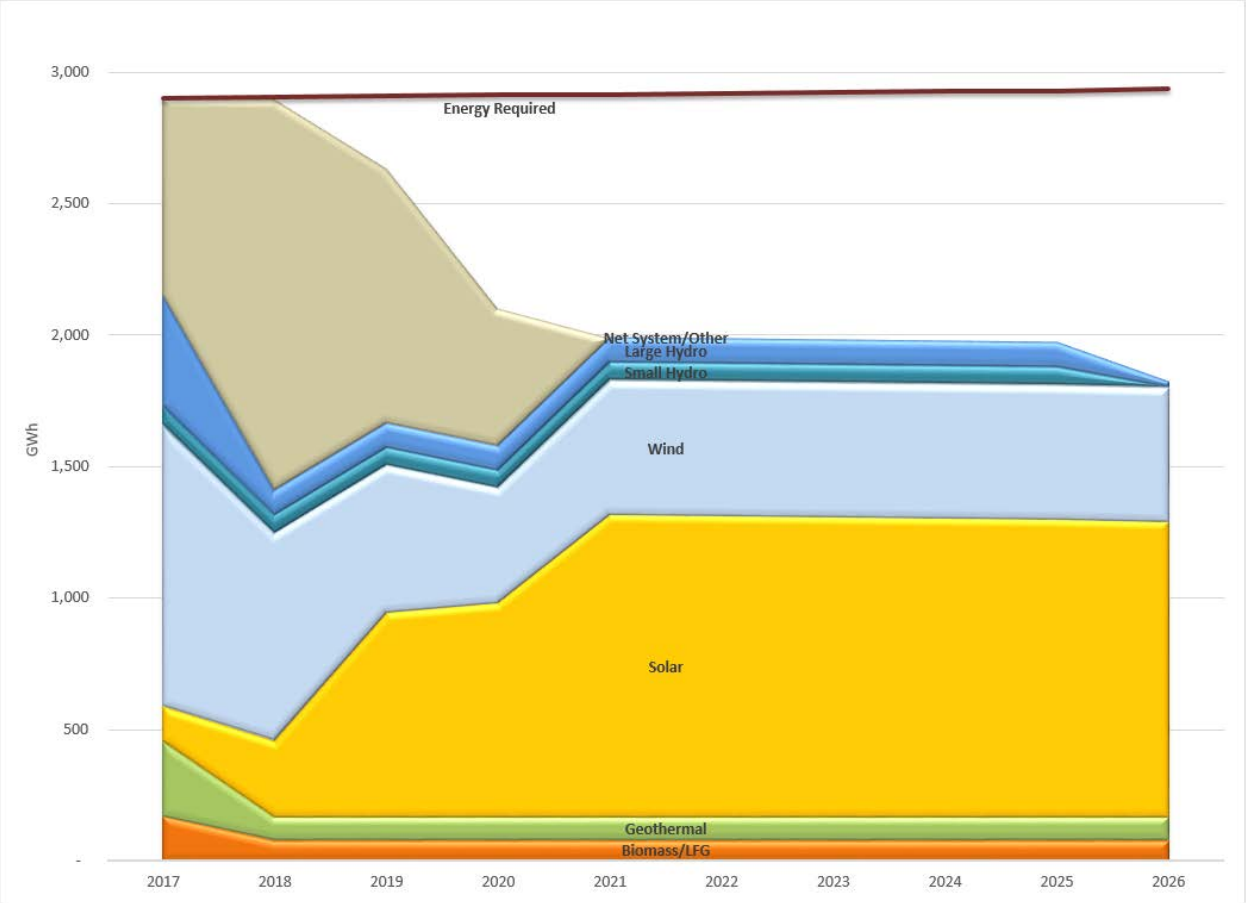
With respect to MCE's total supply and load obligations, MCE will manage exposure to market price risk by executing forward electric supply commitments for its projected energy sales obligations. MCE considers a variety of factors including cost stability and competitiveness. MCE's budgeting and rate-setting processes benefit from increased cost certainty within a given fiscal year and reduction of year-to-year volatility. However, it is appropriate to maintain modest flexibility for incorporation of new supply- or demand-side resources and limited exposure to market pricing, which enables relative cost parity with other retail energy providers. In light of these considerations, the following market price contracting guidelines for all sources of power supply shall be maintained during the Planning Period.

Table 14: MCE Power Supply Contracting Guidelines

| Time Horizon | Contracting Guidelines (Contract Energy/Total Energy Need) |
|---|---|
| Current Year | 80% to 105% |
| Year 2 | 70% to 100% |
| Year 3 | 60% to 95% |
| Year 4 and Beyond | Up to 70% |

As MCE contracts for system energy and capacity, these contracting guidelines not only mitigate forward price risk but also serve as a hedging strategy. Execution of master power purchase and sale agreements with multiple, credit-worthy counterparties has enabled and will continue to enable energy purchases through transaction-specific confirmations whenever appropriate.

Figure 6: MCE Contracted Energy Portfolio (2017-2026)




## Reserve Capacity Purchases

MCE may engage in purchases or sales of resource adequacy capacity from generation resources that qualify to meet resource adequacy requirements in accordance with CPUC and CAISO regulations. Terms may range from one month to ten years. Capacity is also often bundled with energy and renewable attributes under MCE's renewable energy PPAs.

# VI. Procurement Methods and Authorities

In order to effectively plan and manage its portfolio, MCE differentiates contracts by their term length as follows:

- Short-term: up to twelve months;
- Medium-term: longer than twelve months, up to five years;
- Intermediate-term: longer than five years, up to ten years;
- Long-term: longer than ten years.

Based upon the expected contract tenor, MCE may use a variety of methods – including competitive solicitations, standard contract offerings, and bilaterally negotiated agreements – throughout the Planning Period.

## Procurement Methods

For long-, intermediate-, and medium-term purchase commitments, MCE typically uses competitive solicitations, like its annual Open Season solicitation, or standard offer contracts, like its Feed-in Tariff. Through a competitive solicitation, MCE issues a request for offers and concurrently evaluates multiple proposals in the context of market conditions before entering negotiations with those respondents that provide the most compelling offers. Occasionally, MCE will issue ad hoc competitive solicitations or engage in independent bilateral negotiations to meet specific resource needs for which inclusion in an annual solicitation is not appropriate.

With regard to short-term power purchases, MCE may negotiate bilateral agreements directly, especially for unique or urgent transactions that do not lend themselves to inclusion in a competitive solicitation. Alternatively, particularly in markets with sufficient transparency to ensure competitive outcomes, MCE may negotiate short-term transactions via its scheduling coordinator or independent energy brokers or marketers. Such markets may include:

i. system energy at defined CAISO trading hubs for defined (e.g. peak, off-peak, baseload, shaped, or custom) products;
ii. unbundled renewable energy certificates;
iii. short-term RA capacity.

## Procurement Authorities

MCE's energy procurement throughout the Planning Period will be consistent with the delegation of authorities of the Board, including as described in the 2015 Integrated Resources Plan (Procurement Authorities) approved by the Board, Resolution 2013-04, Resolution 2016-05, and/or any subsequent delegation of authorities or relevant Resolution of the Board.

# Appendix A: Load and Resource Table

| | MCE Resource Balance February 2017 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **I. Energy Requirements (GWh)** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** |
| Retail Load | 2,743 | 2,757 | 2,770 | 2,784 | 2,798 | 2,812 | 2,826 | 2,840 | 2,855 | 2,869 |
| New Energy Efficiency | (2) | (5) | (10) | (16) | (24) | (30) | (37) | (44) | (50) | (53) |
| New Distributed Generation | (6) | (12) | (16) | (20) | (24) | (28) | (32) | (36) | (41) | (46) |
| Retail Load (Net of New EE/DG) | 2,735 | 2,740 | 2,745 | 2,749 | 2,751 | 2,754 | 2,757 | 2,760 | 2,763 | 2,770 |
| Distribution Line Losses and Unaccounted For Energy | 164 | 164 | 165 | 165 | 165 | 165 | 165 | 166 | 166 | 166 |
| **Total Energy Requirements** | **2,899** | **2,904** | **2,910** | **2,913** | **2,916** | **2,920** | **2,923** | **2,926** | **2,929** | **2,936** |
| | | | | | | | | | | |
| **Portfolio Paramaters** | | | | | | | | | | |
| Light Green Renewable Energy Content (%) | 53.3% | 56.7% | 60% | 63% | 67% | 70% | 73% | 77% | 80% | 80% |
| Light Green Portfolio Content Category Targets (% of Renewable Energy) | | | | | | | | | | |
| PCC 1 Target | 70% | 71% | 71% | 71% | 72% | 72% | 72% | 72% | 73% | 73% |
| PCC 2 Target | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% |
| PCC 3 Target | 6% | 5% | 5% | 5% | 5% | 4% | 4% | 4% | 4% | 4% |
| Light Green Portfolo Carbon Free Content (% of Energy) | 75% | 78% | 81% | 84% | 88% | 91% | 94% | 97% | 100% | 100% |
| Deep Green Participation % | 3% | 3% | 4% | 4% | 4% | 4% | 5% | 5% | 5% | 5% |
| Overall MCE Renewable Energy Content (Light Green and Deep Green) | 55% | 58% | 62% | 65% | 68% | 71% | 75% | 78% | 81% | 81% |
| | | | | | | | | | | |
| **II. Volume Targets** | | | | | | | | | | |
| **Light Green Renewable Energy Volume Targets (GWh)** | | | | | | | | | | |
| Portfolio Content Category 1 | 1,061 | 1,125 | 1,192 | 1,261 | 1,332 | 1,404 | 1,475 | 1,547 | 1,621 | 1,625 |
| Portfolio Content Category 2 | 361 | 380 | 401 | 421 | 443 | 465 | 487 | 508 | 531 | 532 |
| Portfolio Content Category 3 | 85 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| **Subtotal, Light Green Renewable Energy Volume Targets** | 1,506 | 1,589 | 1,677 | 1,766 | 1,859 | 1,952 | 2,046 | 2,139 | 2,235 | 2,241 |
| | | | | | | | | | | |
| **Deep Green Incremental RE Volume Targets (GWh)** | | | | | | | | | | |
| Portfolio Content Category 1 | 75 | 100 | 115 | 125 | 128 | 131 | 133 | 135 | 135 | 135 |
| **Subtotal, Deep Green Incremental RE Volume Targets** | 75 | 100 | 115 | 125 | 128 | 131 | 133 | 135 | 135 | 135 |
| | | | | | | | | | | |
| **Large Hydro/Carbon Free Energy Volume Targets (GWh)** | 612 | 602 | 594 | 587 | 581 | 575 | 570 | 564 | 559 | 560 |
| | | | | | | | | | | |
| **III. Contracted Resources** | | | | | | | | | | |
| **Renewable Resources Under Contract (GWh)** | | | | | | | | | | |
| Portfolio Content Category 1 | 1,245 | 1,244 | 1,450 | 1,488 | 1,896 | 1,891 | 1,887 | 1,883 | 1,878 | 1,799 |
| Portfolio Content Category 2 | 395 | 75 | 125 | - | - | - | - | - | - | - |
| Portfolio Content Category 3 | 90 | - | - | - | - | - | - | - | - | - |
| **Subtotal, Renewable Resources Under Contract** | 1,730 | 1,319 | 1,575 | 1,488 | 1,896 | 1,891 | 1,887 | 1,883 | 1,878 | 1,799 |
| | | | | | | | | | | |
| **Carbon Free Resources Under Contract (GWh)** | 355 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| | | | | | | | | | | |
| **Conventional Energy Resources Under Contract (GWh)** | 1,682 | 1,484 | 964 | 519 | - | - | - | - | - | - |
| | | | | | | | | | | |
| **Total Contracted Energy (GWh)** | 3,677 | 2,827 | 2,564 | 2,032 | 1,921 | 1,916 | 1,912 | 1,908 | 1,903 | 1,824 |
| Less Variable Price Contracted Energy (GWh) | 1,109 | 145 | 195 | 70 | 70 | 70 | 70 | 70 | 70 | - |
| **Total Fixed Price Contracted Energy (GWh)** | **2,568** | **2,682** | **2,369** | **1,962** | **1,851** | **1,846** | **1,842** | **1,838** | **1,833** | **1,824** |
| | | | | | | | | | | |
| **IV. Open Positions** | | | | | | | | | | |
| **Renewables Open Position (GWh)** | | | | | | | | | | |
| Portfolio Content Category 1 | (110) | (19) | (143) | (102) | (436) | (356) | (279) | (201) | (123) | (39) |
| Portfolio Content Category 2 | (34) | 305 | 276 | 421 | 443 | 465 | 487 | 508 | 531 | 532 |
| Portfolio Content Category 3 | (5) | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 |
| **Total Renewables Open Position (GWh)** | **(149)** | **370** | **216** | **403** | **91** | **192** | **292** | **391** | **492** | **578** |
| | | | | | | | | | | |
| **Large Hydro/Carbon Free Open Position (GWh)** | 257 | 577 | 569 | 562 | 556 | 550 | 545 | 539 | 534 | 535 |
| | | | | | | | | | | |
| **Total Open Energy Volumes (GWh)** | **331** | **222** | **540** | **951** | **1,065** | **1,074** | **1,081** | **1,087** | **1,096** | **1,113** |
| | | | | | | | | | | |
| **Total Market Price Contract Coverage (%)** | **89%** | **92%** | **81%** | **67%** | **63%** | **63%** | **63%** | **63%** | **63%** | **62%** |

# Appendix B: Description of Resources

## Bundled Renewable Energy Resources

### *Shell Energy North America (SENA): energy, bundled renewable energy, GHG-free energy, capacity and scheduling services*

The SENA agreement and associated confirmations require SENA to provide scheduling coordinator services for MCE as well as energy, capacity, and renewable energy; there are three unique transactions under the master agreement that includes specific quantities of the aforementioned energy products). Under the three confirmations, SENA will provide to MCE through 2017: load scheduling services; conventional energy; bundled renewable energy; carbon-free hydroelectric energy, and reserve capacity. Following MCE's launch in May 2010, the SENA agreement provided for all of MCE's resource requirements, but the proportion of energy deliveries from this SENA has diminished as MCE incrementally augments its resource portfolio with a diverse mix of other power suppliers.

### *G2 Energy LLC (Landfill Gas): bundled renewable energy and capacity*

MCE has two agreements with G2 Energy LLC, each relating to a unique renewable generating project in California's Central Valley. The first, G2 Hay Road, extends for twenty years from the July 2013 commercial operation date and supported construction of a new, 1.6 MW landfill gas project located in Solano County, CA. The second, G2 Ostrom Road, facilitated a 1.6-MW expansion of an existing landfill gas facility in Yuba County, CA and extends for an eighteen-year term from the commercial operation date in September 2013. Both facilities provide MCE with an estimated 23,000 MWh of renewable energy and associated capacity attributes annually.

### *Cottonwood Solar LLC (Solar PV): bundled renewable energy and capacity*

Cottonwood Solar began delivering renewable energy to MCE in May 2015 and will do so for a twenty-five-year term. This agreement incorporates generation from three solar facilities, the first two of which provide MCE annually with approximately 64,000 MW of renewable energy and associated capacity:

i. City of Corcoran Solar, located in Kings County, is a 11 MW solar project that commenced commercial operation in May 2015;
ii. Goose Lake Solar, located in Kern County, is a 12 MW generation facility that has also been delivering to MCE since May 2015; and
iii. the Marin Carport solar project, located in Novato, CA is a 1 MW carport-mounted solar project that achieved commercial operation in July 2016. This project is especially unique in that it provides energy directly to one of MCE's large commercial customers while reducing its cost of energy and providing shaded parking for its employees.

### *San Rafael Airport Feed-In Tariff Project (Solar PV): bundled renewable energy*

The San Rafael Airport FIT agreement extends for a twenty-year term, which commenced on the facility's commercial operation date of October 23, 2012. The 972 kW solar PV project is located in San Rafael, California and is projected to generate 1,800 MWh per year during the contract term.

### *Genpower LLC (Landfill Gas): bundled renewable energy and capacity*

Deliveries under the Genpower agreement began in February 2013 and extend for a twenty-year term. Located in Lincoln, CA, these resources include an existing 2.4 MW landfill gas project, which was expanded to 4.8 MW of renewable generating capacity. MCE is currently receiving renewable energy and capacity attributes from both engines at a combined average capacity of 3.55 MW. Annual Energy deliveries are estimated to be 27,000 MWh.

### *RE Kansas, LLC (Solar PV): bundled renewable energy and capacity*

The Kansas agreement, originally a two-year PPA, achieved commercial operation in November 2014 and was subsequently extended for a third year. Kansas Solar is a 20 MW facility in Kings County, CA that delivers an estimated 51,000 MWh of renewable energy and associated capacity to MCE each year. The original PPA with Recurrent Energy was transferred to Dominion Solar Holdings, LLC upon commercial operation.

### *Calpine Energy Services (Geothermal): bundled renewable energy, conventional energy, and capacity*

Under a master agreement and associated confirmation with Calpine, MCE receives geothermal energy produced by the Geysers Project in Lake and Sonoma Counties, CA. Deliveries are expected to begin in January 2017 and total 88,000 MWh of renewable energy and associated capacity throughout the ten-year term. In addition, MCE has contracted with Calpine for conventional energy deliveries from 2015 through 2017.

### *EDP Renewables LLC (Wind): bundled renewable energy*

The EDP agreement is a four-year PPA with Rising Tree Wind Farm, a 99 MW generating project that is located in Kern County, CA and achieved commercial operation in June 2015. MCE will receive approximately 340,000 MWh of renewable energy and associated capacity per year through contract expiration in 2018.

### *RE Mustang LLC (Solar PV): bundled renewable energy and capacity*

RE Mustang is a new, 30 MW solar facility in Fresno County, CA, construction of which was enabled by its fifteen-year PPA with MCE. MCE expects to receive 86,000 MWh of renewable energy and associated capacity from Mustang once the delivery term starts in January 2018.

### *Waste Management – Redwood Landfill (Landfill Gas): bundled renewable energy and capacity*

The Redwood Landfill power generation facility under construction in Novato, CA is expected to achieve commercial operation in February 2017. MCE expects to receive approximately 30,000 MWh of renewable energy and associated capacity annually once the state-of-the-art 4 MW project is online.

### *Cost Plus Plaza Larkspur Feed-In Tariff Project (Solar PV): renewable energy*

This 261 kW roof-mounted FIT project is located in Larkspur, CA and declared commercial operation in September 2016. Energy deliveries are expected to average 500 MWh per year during the twenty-year contract term.

### *East Bay Municipal Utility District – Pardee and Camanche Reservoirs (RPS-Eligible Hydroelectric): bundled renewable energy*

MCE entered into a ten-year PPA with East Bay Municipal Utility District (EBMUD) for renewable energy deliveries from two existing RPS-eligible hydroelectric facilities near the Amador-Calaveras county line on the Mokelumne River. Both hydro power plants, which are owned and managed by EBMUD, are expected to provide 20,000 to 180,000 MWh of RPS-eligible generation per year, depending on annual precipitation; for planning purposes, MCE forecasts 70,000 MWh of annual production.

### *Freethy Industrial Park Feed-In Tariff Projects #1 and #2 (Solar PV): bundled renewable energy*

Two proposed FIT projects are under development in Richmond, CA. Both 998 kW agreements would extend for a twenty-year term with an expected commercial operation date of June 30, 2015. Aggregate energy deliveries from the projects are expected to offset MCE load and are projected to average 3,600 MWh per year during the contract term.

### *Avangrid Renewables, LLC (Wind): bundled renewable energy*

MCE has secured a short-term supply of bundled renewable energy from Avangrid's Shiloh 1 wind facility located in Solano County, CA. From June 2018 through December 2018, 25 MW of this project will deliver to MCE approximately 75,000 MWh.

### *Portland General Electric (Wind): bundled renewable energy*

Per a one-year confirmation, Portland General Electric delivered to MCE during 2016 120,000 MWh of bundled renewable energy from its portfolio of existing wind resources in Oregon and Washington.

### *3 Phases Renewables, LLC (Wind, Geothermal): bundled renewable energy*

MCE has contracted with 3 Phases to fill renewable resource short-term needs via four confirmation transactions. In all, 3 Phases will deliver to MCE 140,000 MWh and 340,000 MWh of bundled renewable energy in 2016 and 2017, respectively, from wind resources in Colorado and Oregon as well as a geothermal facility in Oregon.

### *SunPower (Solar PV): renewable energy*

SunPower's Henrietta Solar Project is located in Kings County, CA and, per a short-term Renewable Energy Purchase and Sale Agreement, delivered 100,000 MWh to MCE during 2016.

### *Powerex (Wind, Biomass): bundled renewable*

Via a trio of confirmation agreements with Powerex, MCE has contracted for bundled renewable energy supply from a resource portfolio comprised largely of wind facilities in British Columbia as well as a smaller biomass generation facility in Washington. In total, Powerex will deliver approximately 115,000 MWh, 75,000 MWh, and 125,000 MWh to MCE during 2017, 2018, and 2019, respectively.

### *Silicon Valley Power (Wind, RPS-Eligible Hydro, Landfill Gas, Geothermal, Solar): bundled renewable energy*

MCE secured a large supply of renewable energy from Silicon Valley Power (SVP) via a one-year confirmation. Per the agreement, SVP will deliver 200,000 MWh during 2017 from its diverse portfolio of wind, small hydro, landfill gas, geothermal, and solar resources located in California.

### *Cooley Quarry Project – MCE Local Sol (Solar PV): renewable energy*

The Cooley Quarry project is expected to achieve commercial operation in February 2017 and to deliver under a twenty-year PPA local solar energy for MCE customers who have opted into the Local Sol program. The 990 kW project is located in Novato, CA and is expected to deliver 2,000 MWh per year.

### *RE Tranquillity 8 Rojo, LLC (Solar PV): bundled renewable energy and capacity*

The Tranquillity PPA entitles MCE to approximately 290,000 MWh of renewable energy and capacity annually from the 100 MW solar project in Fresno County, CA. Tranquillity is expected to be online in September 2018 and deliver to MCE for fifteen years. Moreover, MCE has the option to increase the facility capacity by an additional 60 MW should future resource needs warrant.

### *Little Bear Solar (Solar PV): bundled renewable energy and capacity*

Little Bear Solar is a 40 MW solar project in Fresno County, CA that is expected to be online in September 2020 and annually deliver 104,000 MWh of renewable energy and capacity to MCE over the term of a twenty-year PPA. Should MCE customer base expand significantly before or during 2018, MCE will have the option to expand the Little Bear project by up to an additional 120 MW, which would increase projected renewable energy volumes to more than 400,000 MWh per year.

### *NextERA (Solar PV): bundled renewable energy*

MCE has contracted with NextERA via a master agreement and one-year confirmation for 200,000 MWh of bundled renewable energy to be delivered during 2017 from NextERA's Blythe Solar 110 solar facility near Blythe, CA.

### *Antelope Expansion 2, LLC (Solar PV): bundled renewable energy and capacity*

The Antelope Expansion 2 project will comprise 105 MW of solar capacity in the western Mojave Desert in Southern California. Once online in September of 2018, the Antelope Expansion 2 facility is annually expected to deliver 300,000 MWh of renewable energy and associated capacity over the term of its twenty-year PPA.

### *Desert Harvest, LLC (Solar PV): bundled renewable energy and capacity*

Pursuant to its twenty-year PPA with MCE, Desert Harvest is developing an 80 MW solar facility in Riverside County, CA that is expected to be online in December 2020. Once operational, the project will deliver an estimated 490,000 MWh of renewable energy and associated capacity annually to MCE. In addition, MCE holds an option to expand the PPA and the facility to 150 MW if it determines that market conditions or potential expansion of MCE service territory warrant doing so.

### *Los Banos Wind, LLC (Wind): bundled renewable energy and capacity*

Los Banos Wind project is a 125 MW wind facility currently under development in Merced County, CA. MCE expects Los Banos to achieve commercial operation in December 2020 and deliver annually 372,000 MWh of renewable energy and capacity over the twelve-year term of the PPA. In order to incorporate into its portfolio similar in-state wind deliveries prior to 2020, MCE has contracted with TGP Energy Management, LLC, an affiliate of Los Banos Wind, to deliver approximately 300,000 MWh per year of renewable energy from existing wind resources near Tehachapi, CA beginning in January 2018 and until Los Banos Wind comes online.

### *Voyager Wind III, LLC (Wind): bundled renewable energy and capacity*

The Voyager Wind III project, located near Mojave, CA, will be 42 MW once operational in December 2018. MCE has contracted with Voyager to deliver an estimated 138,000 MWh of renewable energy and associated capacity each year of its twelve-year term.

## Unbundled Renewable Energy Resources

Effective in January 2016, MCE committed to procure no more than 3% of its retail load from unbundled renewable energy resources.

### *Los Angeles County Sanitation District (Landfill Gas): renewable energy certificates*

MCE has contracted via a two-year Purchase and Sale Agreement with Los Angeles County Sanitation District for delivery of 68,000 and 90,000 unbundled renewable energy certificates during 2016 and 2017, respectively. These renewable energy certificates correspond to renewable energy that was generated by the Sanitation District's landfill gas projects.

## Carbon-free Resources

### *U.S. Western Area Power Administration ("WAPA", Large Hydroelectric): GHG-free energy*

Under the WAPA agreement, MCE receives a specified allocation of hydroelectric energy produced by the federally owned Central Valley Project. These carbon-free energy deliveries, which are projected to average 25,000 MWh under typical hydrological conditions, began in January 2015 and will continue for the PPA's ten-year term.

## Conventional Energy Resources

### *Direct Energy/Energy America, LLC: system energy*

The Direct Energy agreement is a three-year energy supply confirmation that will compliment MCE's renewable and intermittent resources from 2018 to 2020 with consistent and competitively priced energy that will offset 310,000 MWh to 484,000 MWh annually that have been previously delivered by other suppliers.

### *Exelon Generation Company: system energy*

Under the agreement with Exelon, MCE will receive 50 MW of system energy during the 2018 and 2019. These deliveries will compliment MCE's intermittent resources and offset approximately 438,000 MWh of the system energy each year that has been previously provided by other suppliers.

### *Morgan Stanley: system energy*

Per two multi-year confirmations, Morgan Stanley will deliver system energy to MCE from 2016 through 2020. These deliveries vary by year but will offset between 200,000 MWh to 500,000 MWh of the system energy that has been provided annually by SENA.

## MCE Renewable Resource Development

### *MCE Solar One (Solar PV): bundled renewable energy*

MCE has leased 60 acres from Chevron Products Company (CPC) at the Richmond oil refinery for the development of 2 to 12 MW of photovoltaic solar generation and has completed all pre-development activities. In early 2017, MCE will turn development over to a general contractor and financier, which are expected to achieve commercial operation in the second half of 2017. Once the project is online, MCE expects it to generate approximately 18,000 MWh per year.

February 16, 2017

TO: MCE Board of Directors

FROM: Jeremy Waen, Regulatory Analyst

RE: Regulatory Update (Non-agenda Item)

**SUMMARY:**

Below is a summary of the key activities at the California Public Utilities Commission (CPUC) for January and February 2017 impacting Community Choice Aggregation (CCA) and MCE. Highlights include:

1. CPUC's CCA *En Banc* Hearing Held on February 1
2. MCE Submits its Energy Efficiency Business Plan Application (A.17-01-017)
3. MCE and CalCCA Present Testimony Regarding PG&E's Diablo Canyon Application (A.16-08-006)
4. CalCCA Protests Joint IOU Application to Allocate Biomass Procurement Costs onto CCA Customers (A.16-11-005)

More detail is set forth below for each of these items.

## 1. CPUC's CCA *En Banc* Hearing Held on February 1

On February 1, the CPUC held an *en banc* hearing on CCA. Over 1,000 attendees participated in the *en banc*. All five of the CPUC Commissioners attended the full-day hearing. The hearing focused on the relationship between the CPUC and CCAs in light of the quickly growing number of CCAs in the state. The Commissioners focused on understanding what CCA is, what areas of jurisdiction the CPUC has over CCAs, and what the CPUC needs to consider in their own planning and implementation processes to include CCA.

The hearing was divided into four panels: (i) a CPUC staff presentation on CCA Statutes, Regulations, and Status; (ii) a panel on Reliability and Supply Issues, in which Dawn Weisz, CEO of MCE, participated; (iii) a panel on Customer-Facing Issues in which Geof Syphers, CEO of Sonoma Clean Power, participated; and (iv) a panel on Looking to the Future in which Barbara Hale, Asst. General Manager of San Francisco Public Power Enterprise, participated. During public comment, numerous publicly elected officials spoke in support of CCA including an aid from Senator Scott Wiener's office.

The Commission has requested for parties to present informal comments in response to the matters raised during this hearing due February 23, and MCE's staff is drafting a response.

**2. <u>MCE Submits its Energy Efficiency Business Plan Application (A.17-01-017)</u>**


On January 17, MCE presented its Energy Efficiency Business Plan to the Commission requesting a ten-year funding authorization with a budget request totaling approximately $100 million. In addition, MCE seeks several policy changes to support successful program delivery. The other program administrators also filed business plans requesting funding and the Commission has consolidated all of the requests into a single proceeding.

**3. <u>MCE and CalCCA Present Testimony Regarding PG&E's Diablo Canyon Application (A.16-08-006)</u>**


On January 27, MCE submitted two sets of testimony to the CPUC on PG&E's proposal regarding the closure of the Diablo Canyon nuclear power plant and its request for additional non-bypassable charges to be levied on customers, including CCA customers.

MCE joined in sponsoring Joint Testimony along with CalCCA and eleven other intervenors.[1] The Joint Testimony addressed (1) foundational issues related to PG&E's procurement needs as Diablo Canyon is retired, and (2) the ratemaking and cost allocation issues raised by PG&E's proposal to allocate significant new costs to other ratepayers, including CCA customers. MCE separately sponsored independent testimony. The MCE Testimony addressed the growth of CCA and the lack of need for PG&E's proposed replacement procurement.

Next steps include rebuttal testimony due on March 17 and evidentiary hearings in mid-April.

[1] The thirteen Joint Intervenors include (1) Alliance for Retail Energy Markets ("AReM"); (2) California Clean DG Coalition ("CCDC"); (3) California Community Choice Association ("CalCCA"); (4) California Large Energy Consumers Association ("CLECA"); (5) City and County of San Francisco; (6) Direct Access Customer Coalition ("DACC"); (7) Energy Producers and Users Coalition ("EPUC"); (8) Energy Users Forum ("EUF"); (9) Marin Clean Energy ("MCE"); (10) Peninsula Clean Energy ("PCE"); (11) Silicon Valley Clean Energy Authority ("SVCE"); (12) Sonoma Clean Power ("SCP"); and (13) South San Joaquin Irrigation District ("SSJID").

**4. <u>CalCCA Protests Joint IOU Application to Allocate Biomass Procurement Costs onto CCA Customers (A.16-11-005)</u>**


On January 6, CalCCA intervened as a formal party and presented a Protest in response to an Application presented jointly by the IOUs to allocate costs associated with their new biomass procurement obligations onto all ratepayers, including CCA customers. This latest round of legislatively-mandated procurement by the IOUs is response to elevated tree mortality rates due to California's recent severe droughts. The next step in this proceeding will be for the Commission to convene a Prehearing Conference.

February 16, 2017

TO: MCE Board of Directors

FROM: Shalini Swaroop, Regulatory and Legislative Counsel

RE: Legislative Executive Staff Report (Non-agenda Item)

**SUMMARY:**

The California state legislature reconvened on January 4, 2017 to consider bills for the 2016-2017 session. MCE has not supported or opposed any bills at this time. Through the California Community Choice Association (CalCCA), MCE has attended joint meetings with legislators and policymakers in Sacramento and in district offices.

On January 26, MCE participated in a Community Choice Aggregation informational session held at the Capitol building. The information session was hosted by CalCCA and was attended by over fifty people, primarily legislative staffers. The presentation was an introduction to the community choice model and a report on results from current CCA programs. Speakers included Dawn Weisz as well as representatives from all six operational CCAs in the state.