Board of Directors Meeting
Thursday, October 18, 2018
7:00 P.M.

Charles F. McGlashan Board Room, 1125 Tamalpais Avenue, San Rafael, CA 94901
Mt. Diablo Room, 2300 Clayton Road, Suite 1150, Concord, CA 94920

Agenda Page 1 of 2

1. Roll Call/Quorum
2. Board Announcements (Discussion)
3. Public Open Time (Discussion)
4. Report from Chief Executive Officer (Discussion)
5. Consent Calendar (Discussion/Action)
   C.1 Approval of 7.19.18 Meeting Minutes
   C.2 Approval of 9.28.18 Meeting Minutes
   C.3 Approved Contracts Update
   C.4 Withdrawal of MCE Policy 005
   C.5 Resolution 2018-10 Amending MCE’s Conflict of Interest Code
   C.6 Third Agreement with Open Energy Efficiency
6. Resolution 2018-08 Authorizing Delegation of Authority by CEO (Discussion/Action)
7. Ordinance 2018-02 Establishing an Alternative Claims Procedure (Discussion/Action)
8. Resolution 2018-09 Delegating the Authority of Setting Compensation, Tenure, Appointment and Conditions of Employment to the Executive Committee and the Chief Executive Officer (Discussion/Action)
9. Resolution 2018-11 Affirming MCE’s Commitment to Complying with the Land Use Authorities of its Member Communities (Discussion/Action)
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Agenda Page 2 of 2  

10. Receive Applicant Analysis and Consider 1. Resolution 2018-12 of the Board of Directors of MCE approving the County of Solano as a Member of MCE; 2. Amendment 13 to the MCE JPA Agreement; and 3. Direction to Submit Amendment No. 6 to the MCE Implementation Plan and Statement of Intent.  

11. Update on Integrated Resource Plan (Discussion)  

12. Board Member & Staff Matters (Discussion)  

13. Adjourn  

Agenda material can be inspected at 1125 Tamalpais Avenue, San Rafael, CA 94901 on the Mission Avenue side of the building and at One Concord Center, 2300 Clayton Road, Concord, CA 94520 at the Clayton Road entrance. The meeting facilities are in accessible locations. If you are a person with a disability and require this document in an alternate format (example: Braille, Large Print, Audiotape, CD-ROM), you may request it by using the contact information below. If you require accommodation (example: ASL Interpreter, reader, note taker) to participate in any MCE program, service or activity, you may request an accommodation by calling (415) 464-6032 (voice) or 711 for the California Relay Service or by e-mail at djackson@mceCleanEnergy.org not less than four work days in advance of the event.
Roll Call: Director Kate Sears called the regular Board meeting to order at 7:01 p.m. by roll call, an established quorum was met.

Present: Denise Athas, City of Novato (San Rafael)
Sloan Bailey, Town of Corte Madera (San Rafael)
Juan Banales, City of Pittsburg (Concord)
Edi Birsan City of Concord (San Rafael)
Tom Butt, City of Richmond (San Rafael)
Barbara Coler, Town of Fairfax (San Rafael)
Federal Glover, County of Contra Costa (Concord)
Ford Greene, Town of San Anselmo (San Rafael)
Kevin Haroff, City of Larkspur (San Rafael)
Sue Higgins, City of Oakley (Concord)
Greg Lyman, City of El Cerrito (San Rafael)
Bob McCaskill, City of Belvedere (San Rafael)
Andrew McCullough, City of San Rafael (San Rafael)
Teresa Onoda, Alt. Town of Moraga (Concord)
Elizabeth Patterson, Alt. City of Benicia (Concord)
Scott Perkins, City of San Ramon (Concord)
Rob Schroder, City of Martinez (Concord)
Kate Sears, Chair, County of Marin (San Rafael)
Robert Storer, Alt. Town of Danville (Concord)
Maureen Toms, City of Pinole (Concord)
Brad Wagenknecht, County of Napa (San Rafael)
Kevin Wilk, Alt. Walnut Creek (Concord)
Ray Withy, City of Sausalito (San Rafael)

Absent: Arturo Cruz, City of San Pablo
Sashi McEntee, City of Mill Valley
P. Rupert Russell, Town of Ross
Don Tatzin, City of Lafayette
Jon Welner, Town of Tiburon

Staff: Lia Anzures, Internal Operations Assistant (San Rafael)
Greg Brehm, Director of Power Resources (San Rafael)
Jesica Brooks, Board Assistant (San Rafael)
John Dalessi, Operations and Development (Concord)
Sarah Estes-Smith, Director of Internal Operations (Concord)
Katie Gaier, Manager of Human Resources (San Rafael)
1. **Board Announcements (Discussion)**

   Dawn Weisz, Chief Executive Officer introduced Vicken Kasarjian, Chief Operating Officer.

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

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

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

   CEO, Dawn Weisz, reported the following:
   - Ms. Weisz reminded meeting participants to state their name before speaking into the mics so that they can be heard in both locations.
   - Ms. Weisz reminded Board members to sign up for a unique opportunity to tour MCE’s newest California wind and solar projects located within the heart of the Southern California Central Valley, both of which are expected to go online in October. The tour day is Tuesday, August 21st and registration will stay open until we hit the maximum of 14 Board members, or until Monday at noon. This will be a full day event from 6:30AM-9:30PM and is open to MCE Board Members and staff only.
   - Ms. Weisz informed Board members that MCE will most likely not hold an August Board meeting but Technical Committee meeting will be held on August 2, 2018 at 8:30AM.
   - Ms. Weisz informed Board members of the annual Board Retreat that will be held from 9AM-4PM on Friday, September 28th at the Richmond Memorial Auditorium.

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

   C.1 Approval of 5.17.18 Meeting Minutes
   C.2 Approved Contracts Update
   C.3 New Staff Position – Finance Analyst
   C.4 New Staff Position – IT Systems Manager
   C.5 Resolution 2018-06 Establishing the Authority Certificate and Trading Authorization for Brokerage Accounts with JP Morgan

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

   **Action:** It was M/S/C (Bailey/Wagenknecht) to approve Consent Calendar. Motion carried by unanimous roll call vote. (Absent: Directors Cruz, McEntee, Russell, Tatzin, and Welner).
5. CPUC Integrated Resource Plan Standard Load Serving Entity Template Submission (Discussion/Action)

Greg Brehm, Director of Power Resources, introduced this item and addressed questions from Board members.

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

Action: It was M/S/C (Bailey/Greene) to approve the CPUC IRP Compliance Filing. Motion carried by unanimous roll call vote. (Absent: Directors Cruz, McEntee, Russell, Tatzin, and Welner).

6. Adjustment to Scope of Work for Technical Committee (Discussion/Action)

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

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

Action: It was M/S/C (Patterson/Lyman) to approve adjustments to the Scope of Work for Technical Committee. Motion carried by unanimous roll call vote. (Absent: Directors Cruz, McEntee, Russell, Tatzin, and Welner).

7. Resolution 2018-07 Establishing the Annual Salary for the Chief Executive Officer (Discussion/Action)

Inder Khalsa, Special Counsel, introduced this item and addressed questions from Board members.

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

Action: It was M/S/C (Butt/Greene) to adopt Resolution 2018-07 Establishing the Annual Salary for the Chief Executive Officer. Motion carried by unanimous roll call vote. (Noes: Director Storer) (Absent: Directors Cruz, McEntee, Russell, Tatzin, and Welner).

8. Energy Efficiency Business Plan Update (Discussion)

Alice Stover, Director of Customer Programs, introduced this item and addressed questions from Board members.

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

Action: No action required.
9. Policy Update on Regulatory and Legislative Items (Discussion)

Shalini Swaroop, Director of Regulatory and Legislative Policy, introduced this 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)

Director Lyman announced City Manager Scott Hanin is retiring at the end of the calendar year. City council named Assistant City Manager Karen Pinkos as his replacement.

Director Butt mentioned the audio was better than the last meeting.

Chair Sears recommended a split projection between PPT and speaker for future meetings, if possible.

11. Adjournment

Chair Sears adjourned the meeting at 8:36 p.m. to the next scheduled Board Meeting on August 16, 2018.

___________________________________________
Kate Sears, Chair

Attest:

___________________________________________
Dawn Weisz, Secretary
MCE
BOARD RETREAT MEETING MINUTES
Friday, September 28, 2018
9:00 A.M.
City of Richmond
Memorial Auditorium
403 Civic Center Drive
Richmond, CA 94804

Call to Order: Chair Kate Sears called the Special Meeting to order at 9:05 a.m.

Present: Denise Athas, City of Novato
Sloan Bailey, Town of Corte Madera
Juan Banales, City of Pittsburg
Edi Birsan, City of Concord
Tom Butt, City of Richmond
Rich Carlston, City of Walnut Creek
Barbara Coler, Town of Fairfax
Ford Greene, Town of San Anselmo
Kevin Haroff, City of Larkspur
Greg Lyman, City of El Cerrito
Bob McCaskill, City of Belvedere
Andrew McCullough, City of San Rafael
Sashi McEntee, City of Mill Valley
Belia Ramos, County of Napa
P. Rupert Russell, Town of Ross
Kate Sears, County of Marin
Don Tatzin, City of Lafayette
Maureen Toms, City of Pinole
Dave Trotter, Town of Moraga
Jon Welner, Town of Tiburon
Ray Withy, City of Sausalito

Absent: Lisa Blackwell, Town of Danville
Arturo Cruz, City of San Pablo
Federal Glover, County of Contra Costa
Sue Higgins, City of Oakley
Scott Perkins, City of San Ramon
Rob Schroder, City of Martinez
Alan Schwartzman, City of Benicia

Staff: Greg Brehm, Director of Power Resources
Swearing in of New Board Member
CEO Weisz conducted the Oath of Office for Juan Banales, City of Pittsburg. Director Banales was welcomed by the Board.

1. Roll Call/Quorum
Roll call was conducted and quorum established.

CEO Weisz announced that a Meet & Greet Informational session was conducted prior to the Board Retreat and thanked Directors Juan Banales, City of Pittsburg, Maureen Toms, City of Pinole, Alternate David Kunhardt, Town of Corte Madera, and MCE’s COO, Vicken Kasarjian, for attending the session.

Chair Sears opened the meeting with a welcome to all and thanked the Board for their service. Director Sears explained that the purpose of the MCE Board Retreat is to provide an opportunity to reflect on the state of MCE.

Appreciation was offered to those Directors who serve on MCE Committees as well those who offered their support on the Legislative front.

2. Public Open Time (Discussion)
There were comments from Members of the Public David McCormick, Ed Mainland and Howdy Dowdey.

3. Strategic Plan Update, Accomplishments and Goals (Discussion)
MCE Staff presented updates for the 2016-2018 Strategic Plan.
Chair Sears opened the public comment period and there were comments from member of the public Ed Mainland.

4. **FY 2017/18 Financial Statement Presentation (Discussion)**
   David McNeil, Manager of Finance, presented this item and addressed questions from the Board.

   Mr. McNeil announced that he would be leaving MCE effective October 2. Chair Sears wished him well.

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

5. **Positioning MCE for the Future (Discussion)**
   CEO, Dawn Weisz and COO, Vicken Kasarjian, presented this item and addressed questions from the Board.

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

6. **Addressing External Challenges and Opportunities (Discussion)**
   CC Song, Senior Policy Analyst and Emily Pappas, Niemela Pappas & Associates, presented this item and addressed questions from the Board.

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

7. **Board Meeting Logistics (Discussion)**
   CEO Weisz presented this item and addressed questions from the Board.

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

8. **CCA Across the State: Challenges and Opportunities (Discussion)**
   Beth Vaughan, California Community Choice Association (CalCCA) Executive Director, presented this item and addressed questions from the Board.

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

9. **Regionalization of the Electric Grid CAISO (Discussion)**
   Mark Rothleder, California Independent System Operator (CAISO) Vice President, Market Quality & Renewable Integration, presented this item and addressed questions from the Board.
Chair Sears opened the public comment period and there were comments from members of the public Ed Mainland and Doug Wilson, Marin Conservation League.

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

11. The Board Chair adjourned the Special Meeting at 3:29 P.M. to the next Regular Board Meeting on October 18, 2018.

____________________________
Kate Sears, Chair

Attest:

____________________________
Dawn Weisz, Secretary
October 18, 2018

TO: MCE Board of Directors

FROM: Bill Pascoe, Power Supply Resources Coordinator

RE: Approved Contracts Update (Agenda Item #04 – C.3)

Dear Board Members:

SUMMARY: This report summarizes agreements entered into by the Chief Executive Officer and if applicable, the Chair of the Technical Committee since the last regular Board meeting in July. This summary is provided to your Board for information purposes only.

Review of Procurement Authorities

In March 2018, your Board adopted Resolution 2018-03 which included the following provisions:

The CEO and Technical Committee Chair, jointly, are hereby authorized, after consultation with the appropriate Committee of the Board of Directors, 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 of Directors all such executed contracts.

The CEO is authorized to approve and execute contracts for Energy Procurement for terms of less than or equal to 12 months, which the CEO shall timely report to the Board of Directors.

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

Summary of Agreements

<table>
<thead>
<tr>
<th>Month</th>
<th>Purpose</th>
<th>Contractor</th>
<th>Maximum Annual Contract Amount</th>
<th>Term of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2018</td>
<td>Sale Resource Adequacy, 2019</td>
<td>California Choice Energy Authority</td>
<td>($125,000)</td>
<td>1 Year</td>
</tr>
<tr>
<td>July 2018</td>
<td>Sale Resource Adequacy, November 2018</td>
<td>Silicon Valley Clean Energy Authority</td>
<td>($5,000)</td>
<td>1 Month</td>
</tr>
<tr>
<td>July 2018</td>
<td>Purchase Renewable Energy, July-December 2018</td>
<td>STX Services B.V.</td>
<td>$50,000</td>
<td>6 Months</td>
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<tr>
<td>July 2018</td>
<td>Sale Resource Adequacy, November 2018</td>
<td>California Choice Energy Authority</td>
<td>($26,000)</td>
<td>1 Month</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
<td>Counterparty</td>
<td>Amount</td>
<td>Duration</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>July 2018</td>
<td>Purchase Resource Adequacy, October &amp; December 2018</td>
<td>Peninsula Clean Energy Authority</td>
<td>$40,000</td>
<td>2 Months</td>
</tr>
<tr>
<td>July 2018</td>
<td>Sale Resource Adequacy, November 2018</td>
<td>Exelon Generation Company, LLC</td>
<td>($30,000)</td>
<td>1 Month</td>
</tr>
<tr>
<td>August 2018</td>
<td>Feed-in Tariff Contract American Canyon Solar A</td>
<td>RP Napa Solar 1, LLC</td>
<td>$310,000</td>
<td>20 Years</td>
</tr>
<tr>
<td>August 2018</td>
<td>Feed-in Tariff Contract American Canyon Solar B</td>
<td>RP Napa Solar 1, LLC</td>
<td>$310,000</td>
<td>20 Years</td>
</tr>
<tr>
<td>August 2018</td>
<td>Feed-in Tariff Contract American Canyon Solar C</td>
<td>RP Napa Solar 1, LLC</td>
<td>$300,000</td>
<td>20 Years</td>
</tr>
<tr>
<td>August 2018</td>
<td>Feed-in Tariff Contract Palm Drive Solar A</td>
<td>RP Napa Solar 2, LLC</td>
<td>$300,000</td>
<td>20 Years</td>
</tr>
<tr>
<td>August 2018</td>
<td>Feed-in Tariff Contract Palm Drive Solar B</td>
<td>RP Napa Solar 2, LLC</td>
<td>$300,000</td>
<td>20 Years</td>
</tr>
<tr>
<td>August 2018</td>
<td>Purchase Resource Adequacy, May-October 2019</td>
<td>Morgan Stanley Capital Group, Inc</td>
<td>$225,000</td>
<td>6 Months</td>
</tr>
<tr>
<td>August 2018</td>
<td>Purchase Resource Adequacy, May-October 2019</td>
<td>Morgan Stanley Capital Group, Inc</td>
<td>$475,000</td>
<td>6 Months</td>
</tr>
<tr>
<td>August 2018</td>
<td>Purchase Resource Adequacy, June-October 2019</td>
<td>Shell Energy North America</td>
<td>$500,000</td>
<td>5 Months</td>
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<tr>
<td>September 2018</td>
<td>Purchase Resource Adequacy, 2019</td>
<td>Calpine</td>
<td>$150,000</td>
<td>1 Year</td>
</tr>
<tr>
<td>September 2018</td>
<td>Purchase Resource Adequacy, 2019</td>
<td>Calpine</td>
<td>$1,100,000</td>
<td>1 Year</td>
</tr>
<tr>
<td>September 2018</td>
<td>Purchase Resource Adequacy, April 2019</td>
<td>Calpine</td>
<td>$10,000</td>
<td>1 Month</td>
</tr>
<tr>
<td>September 2018</td>
<td>Sale Resource Adequacy, April 2019</td>
<td>Calpine</td>
<td>($10,000)</td>
<td>1 Month</td>
</tr>
<tr>
<td>September 2018</td>
<td>Purchase Resource Adequacy, April 2019</td>
<td>Calpine</td>
<td>$1,800,000</td>
<td>1 Year</td>
</tr>
<tr>
<td>September 2018</td>
<td>Sale Resource Adequacy, April 2019</td>
<td>Calpine</td>
<td>($1,500,000)</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

**Fiscal Impact:** Expenses associated with these Agreements that are expected to occur during FY 2018/19 are within the FY 2018/19 Operating Fund Budget. Expenses associated with future years will be incorporated into budget planning as appropriate.

**Recommendation:** Information only. No action required.
October 18, 2018

TO: MCE Board of Directors

FROM: Elizabeth Kelly, General Counsel


B. MCE Policy 015: Energy Risk Management Policy

Dear Board Members:

SUMMARY:


On October 5, 2018, your Executive Committee approved the recommendation to withdraw Policy 005 on consent.

Fiscal Impact: None.

POLICY NO. 005 – RISK MANAGEMENT PROCEDURES AND CONTROLS FOR TRANSACTIONS IN THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR MARKETS

1. Introduction
This policy sets forth the risk management policies related to MEA’s transactions in the California Independent System Operator (CAISO) markets. The CAISO markets in which MEA participates and to which these policies apply include the following:

- Congestion Revenue Rights

2. Risk Exposure and Controls
MEA uses Congestion Revenue Rights (CRRs) for the exclusive purpose of hedging congestion costs associated with serving its customer load. MEA participates in the CAISO CRR allocation process to obtain CRRs that protect against congestion costs that may arise between its contractual energy supply points and its default load aggregation point. CRR positions are limited to the volume of MEA’s anticipated energy schedules for the respective path and time period associated with the CRR. All CRR transactions are executed and managed by MEA’s scheduling coordinator, Shell Energy North America, and confirmation of such transactions are provided to MEA personnel who are independent from the CRR trading function.

a. Credit Risk
Credit risk refers to the potential for non-payment or default by the counterparty to a transaction. MEA’s CRRs are financially settled with the CAISO through MEA’s scheduling coordinator. CRR credit risk is mitigated due to the credit policies and procedures in place at the CAISO and the credit provisions governing MEA’s agreement with its scheduling coordinator.

b. Liquidity Risk
Liquidity risk refers to the potential inability of a party to close out a position at prevailing market prices due to a lack of buyers or sellers for the specific product being liquidated. CRRs can be sold in the CAISO monthly and annual CRR auction markets. CRRs can also be sold bilaterally through the CAISO administered secondary registration system.

c. Market Risk
Market risk refers to potential cost exposure resulting from changes in market prices for the underlying commodity. CRRs have positive value when congestion exists between the source and the sink associated with the CRR path such that locational marginal prices are lower at the source than at the sink. CRRs have negative value when the opposite is true. MEA uses CRRs exclusively to hedge against congestion costs, which are negatively correlated with CRR values, such that the potential adverse financial impacts of changes in CRR values and congestion costs are mitigated.

3. Training

MEA employees, contractors and agents transacting in CAISO markets shall meet all training requirement set forth in the CAISO Tariff or applicable CAISO Operating Agreement.

4. Monitoring and Reporting

a. Monitoring

CRR values shall be monitored at regular intervals, with such intervals selected in consideration of the risk characteristics of MEA’s CRR holdings, but no less frequently than monthly. MEA personnel responsible for monitoring the value of MEA’s CRR holdings shall be independent from those engaged in transacting in the CAISO’s CRR markets.

b. Reporting

CRR values shall be reported on a monthly basis to the MEA Executive Officer and the Controller. Any material change in such CRR values or risks shall be identified and summarized in the aforementioned report.
Policy 015: Energy Risk Management Policy
Energy Risk Management Policy

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Energy Risk Management Policy

1.0 General Provisions

1.1 Background and Purpose of Policy

Marin Clean Energy’s (MCE) mission is to address climate change by reducing energy-related greenhouse gas emissions through the use of renewable energy supply and energy efficiency programs at stable and competitive rates for customers while providing local economic and workforce benefits.

This Energy Risk Management Policy (Policy) has been developed to help ensure that MCE achieves its mission and adheres to policies established by the MCE Board of Directors (Board), power supply and related contract commitments, good utility practice, and all applicable laws and regulations.

This Policy defines MCE’s general energy risk management framework and provides management with the authority to establish processes for monitoring, measuring, reporting, and controlling market and credit risks to which MCE is exposed in its normal course of business.

1.2 Scope of Business and Related Market Risks

MCE provides energy to retail customers in its service territory that entails business activities such as; bilateral purchases and sales of electricity under short, medium and long term contracts; scheduling of load and generation of electricity into California Independent Systems Operator (CAISO) markets; retail marketing of electricity to consumers within its service territory; compliance with voluntary objectives and regulatory requirements as it relates to carbon free and renewable portfolio standard (RPS) compliant energy; participation in CAISO Congestion Revenue Rights (“CRRs”) market; managing the balance of load and generation over short, medium and long term horizons; and compliance with California Public Utilities Commission (CPUC) Resource Adequacy (RA) requirements.

Examples of energy market risks include, but are not limited to, the following:

- Market Price Risk
- Counter party Credit and Performance Risk
- Load and Generation Volumetric Risk
- Operational Risk
- Liquidity Risk
- Regulatory/Legislative Risk

This Policy focuses on the following:

- Risk Management Goals and Principles
- Definitions of Risks
- Internal Control Principles
- Risk Management Business Practices
- Risk Management Governance
This Policy does not address the following types of general business risk, which are treated separately in other official policies, ordinances and regulations of MCE: fire, accident and casualty; health, safety, and workers’ compensation; general liability; and other such typically insurable perils. The term “risk management,” as used herein, is therefore understood to refer solely to market risks as herein defined, and not those other categories of risk.

1.3 Policy Administration

This version of the Energy Risk Management Policy adopted by the MCE Board of Directors the XXth day of XXX, 20XX, will be reviewed and updated as needed every two calendar years by the Technical Committee. This Policy may be amended as needed by MCE’s Technical Committee.

1.4 Policy Distribution

This Policy shall be distributed to all MCE employees and third-party contractors who are engaged in the planning, procurement, sale and scheduling of electricity on MCE’s behalf and/or in other MCE departments providing oversight and support for these activities.

2.0 Risk Management Goals

The goals of energy risk management shall be to:

[1] assist in achieving the business objectives in the Integrated Resource Plan (IRP) and Reserve Policy including retail rate stability and competitiveness and the accumulation of financial reserves;

[2] avoid losses and excessive costs which would materially impact the financial condition of MCE;

[3] establish the parameters for energy procurement and sales activity to obtain the best possible price while ensuring compliance with Board-approved risk limits;

[4] assist in assuring that market activities and transactions are undertaken in compliance with established procurement authorities, applicable laws, regulations and orders; and

[5] encourage the development and maintenance of a corporate culture at MCE in which the proper balance is struck between control and facilitation and in which professionalism, discipline, technical skills and analytical rigor come together to achieve MCE objectives.

3.0 Risk Management Principles

MCE manages its energy resources and transactions for the purpose of providing its customers with low cost renewable, carbon free and other energy while at the same time minimizing risks. Undue exposure to CAISO or bilateral energy market volatility for the purpose of potentially achieving lower costs but at the risk that costs may, in fact, be much higher, will not be accepted. Procurement and hedging strategy will be determined by analytical methods supplemented by experienced judgement. MCE will use that experienced judgement and its analytical tools to assess system cost drivers such as weather, short term energy prices, load variation and operational constraints to manage timing and quantity of purchases and sales of energy and related services, consistent with the limits identified in this policy. When actions are taken that are consistent with this Policy and for the purpose of the combined goal of low costs and optimized risk, those actions are considered to be consistent with the
objectives of this policy. MCE will not engage in transactions, without proper authorization, whose purpose is not tied to managing costs and risks or are outside of the limits identified in this policy.

4.0 Definitions of Market Risks

The term “market risks,” as used here, refers specifically to those categories of risk which relate to MCE’s participation in wholesale and retail markets as Load Serving Entity (LSE) and its interests in long-term contracts. Market risks include market price risk, counterparty credit and performance risk, load and generation volumetric risk, operational risk, liquidity risk, and regulatory and legislative risk. These categories are defined and explained as follows.

4.1 Market Price Risk

Market Price risk is the risk that wholesale trading positions, long-term supply contracts and generation resources may move “out of the money,” that is, become less valuable in comparison with similar positions, contracts or resources obtainable at present prices. These same positions can also be “in the money” if they become more valuable in comparison to similar positions, contracts or resources obtainable at present market prices. This valuation methodology is commonly referred to as “Mark to Market.” If MCE is “out of the money” on a substantial portion of its contracts, it may have to charge higher retail rates. This may erode MCE’s competitive position and market share if other market participants (e.g., Direct Access providers or PG&E) are able to procure power at a lower cost and offer lower retail electricity rates.

A subcomponent of market price risk is market liquidity. Illiquid markets make it more difficult to buy or sell a commodity and can result in higher premiums on purchases or deeper discounts on sales.

Another dimension of market price risk is congestion risk. Congestion risks arise from the difference between the prices MCE pays the CAISO to schedule its load and the prices MCE receives from the CAISO for energy delivered by MCE’s suppliers.

4.2 Counterparty Credit and Performance Risk

Performance and credit risk refers to the inability or unwillingness of a counter party to perform according to its contractual obligations. Failure to perform may arise if an energy supplier fails to deliver energy as agreed. There are four general performance and credit risk scenarios:

[1] counterparties and wholesale suppliers may fail to deliver energy or environmental attributes, requiring MCE to purchase replacement product elsewhere, possibly at a higher cost;

[2] counterparties may fail to take delivery of energy or environmental attributes sold to them, necessitating a quick resale of the product elsewhere, possibly at a lower price;

[3] counterparties may fail to pay for energy or environmental attributes delivered; and

[4] counterparties and suppliers may refuse to extend credit to MCE, possibly resulting in higher collateral posting costs impacting MCE’s cash and bank lines of credit.

An important subcategory of credit risk is concentration risk. When a portfolio of positions and resources is concentrated in one or a very few counterparties, sources, or locations, it becomes more
likely that major losses will be sustained in the event of non-performance by a counterparty or supplier or as a result of price fluctuations at one location.

4.3 Load and Generation Volumetric Risk

Energy deliveries must be planned for based upon forecasted load adjusted for distribution line losses. MCE forecasts load over the long and short term and enters into long and short term fixed price energy contracts to hedge its load consistent with the provisions of its IRP.

Load forecasting risks arise from inaccurate load forecasts and can result in the over or under procurement of energy and/or revenues that deviate from approved budgets. Energy delivery risk occurs if a generator fails to deliver expected or forecast energy. Variations in wind speed and cloud cover can also impact the amount of electricity generated by solar and wind resources, and occasional oversupply of power on the grid can lead to curtailment of energy deliveries or reduce revenue as a result of low or negative prices at energy delivery points. Weather is an important variable that can result in higher or lower electricity usage due to heating and cooling needs.

In the CAISO markets this situation can result in both over supply and undersupply of electricity relative to MCE's load and the over or under scheduling of generation or load into the day ahead market relative to actual energy consumed or delivered in the real time market. Load and generation volumetric risk may result in unanticipated open positions and imbalance energy costs. Imbalance energy costs result from differences in the price or volume of generation or load scheduled into the day ahead market when compared to the price or volume of generation or load occurring in the real time market during that time period.

4.4 Operational Risk

Operational risk consists of the potential for failure to act effectively to plan, execute and control business activities. Operational risk includes the potential for:

[1] organizational structure that is ineffective in addressing risk, i.e., the lack of sufficient authority to make and execute decisions, inadequate supervision, ineffective internal checks and balances, incomplete, inaccurate and untimely forecasts or reporting, failure to separate incompatible functions, etc.;

[2] absence, shortage or loss of key personnel or lack of cross functional training;

[3] lack or failure of facilities, equipment, systems and tools such as computers, software, communications links and data services;

[4] exposure to litigation or sanctions resulting from violating laws and regulations, not meeting contractual obligations, failure to address legal issues and/or receive competent legal advice, not drafting and analyzing contracts effectively, etc.; and

[5] errors or omissions in the conduct of business, including failure to execute transactions, violation of guidelines and directives, etc.
4.5 Liquidity Risk

Liquidity Risk is the risk that MCE will be unable to meet its financial obligations. This can be caused by unexpected financial events and/or inaccurate pro forma calculations, rate analysis, and debt analysis. Some unexpected financial events impacting liquidity could include:

[1] breach of MCE credit covenants or thresholds; MCE has credit covenants included in its banking and several short-term energy contracts. Breach of credit covenants or thresholds could result in the withdrawal of MCE’s line of credit or trigger the requirement to post collateral; and

[2] from time to time MCE may be the subject of legal or other claims arising from the normal course of business. Payment of a claim by MCE could reduce MCE’s liquidity if the cause of loss is not covered by MCE’s insurance policies.

4.6 Regulatory/Legislative Risk

Regulatory risk encompasses market structure and operational risks associated with shifting state and federal regulatory policies, rules, and regulations that could negatively impact MCE. An example is the potential increase of exit fees for customers served by Community Choice Aggregators such as MCE that would result in higher electricity rates for MCE’s customers.

Legislative risk is associated with actions by federal and state legislative bodies, such as any adverse changes or requirements that may infringe on MCE’s autonomy, increase its costs, or otherwise negatively impact MCE’s ability to fulfill its mission.

5.0 Internal Control Principles

Internal controls shall be based on proven principles that meet or exceed the requirements of financial institutions and credit rating agencies and good utility practice. The required controls shall include all customary and usual business practices designed to prevent errors and improprieties, ensure accurate and timely reporting of results of operations and information pertinent to management, and facilitate attainment of business objectives. These controls are currently and shall remain fully integrated into all activities of the business and shall be consistent with stated objectives. There shall be active participation by senior management in risk management processes.

The required controls include the following:

[1] Segregation of duties and functions between front, middle, and back office activities. Generally:

- Front office is responsible for planning (e.g. preparation of the IRP and procurement planning) and procurement (e.g. solicitation management, contract negotiation, structuring and pricing, contract execution) and contract management and compliance;
- Middle office is responsible for controls and reporting (e.g., risk monitoring, risk measurement, risk reporting, procurement compliance, counterparty credit review, approval and monitoring); and
- Back office is responsible for settlements and processing (e.g., verification, validation, reconciliation and analysis of transactions, tracking, processing, and settlements of transactions).
[2] Delegation of authority that is commensurate with responsibility and capability, and relevant training to ensure adequate knowledge to operate in and comply with rules associated with the markets in which they transact (e.g., CAISO). Contract origination, commercial approval, legal review, invoice validation, and transaction auditing shall be performed by separate staff or contractor for any single transaction. No single staff member shall perform all these functions on any transaction.

[3] Defining authorized products and transactions. Generally:

- Authorized transactions are those transactions directly related to the procurement and/or administration of electric energy, reserve capacity, transmission and distribution service, ancillary services, congestion revenue rights (CRRs), renewable energy, renewable energy credits, scheduling activities, tolling agreements, and bilateral purchases of energy products. All transactions must be consistent with this Policy and the board approved IRP.

- Prohibited transactions are those transactions that are not related to serving retail electric load and/or reducing financial exposure. Speculative buying and selling of energy products is prohibited. Speculation is defined as buying energy in excess of forecasted load plus reasonable planning reserves or selling energy or environmental attributes that are not yet owned by MCE. In no event shall speculative transactions be permitted. Any financial derivatives transaction including, but not limited to futures, swaps, options, and swaptions are also prohibited.


[5] Defining proper process for executing power supply contracts. Generally, MCE will ensure power supply contracts are approved by personnel from Procurement/Commercial, Technical, and Credit/Financial prior to execution. Legal review will be required of various forms of agreement. Forms of agreement will be reviewed no less than every six months.


[9] Regular compliance review to ensure that this Policy and related risk management guidelines are adhered to, with specific guidelines for resolving instances of noncompliance.


6.0 Risk Management Business Practices

6.1 Risk Measurement Metrics and Reporting

A vital element of this Policy is the regular identification, measurement and communication of risk. To effectively communicate risk, all risk management activities must be monitored on a frequent basis.
using risk measurement methodologies that quantify the risks associated with MCE’s procurement-related business activities and performance relative to goals.

MCE measures and updates its risks using a variety of tools that model programmatic financial projections, market exposure and risk metrics, as well as through short term budget updates. The following items are measured, monitored, and reported:

1. **Mark-to-Market Valuation** – marking to market is the process of determining the current value of contracted supply. A mark-to-market valuation shall be performed at least on a quarterly basis.

2. **Exposure Reporting** – calculates the notional dollar risk exposure of open portfolio positions at current market prices. The exposure risk calculation shall be performed at least on a quarterly basis.

3. **Open Position Monitoring** – on a monthly basis, MCE shall calculate/monitor its open positions for all energy and capacity products. If energy open positions for the month following the then current month (prompt month) exceed 10% of load, MCE will solicit market prices to close open positions and make a commercial decision to close the position. Open positions for terms beyond the prompt month will be monitored monthly and addressed in accordance with MCE’s Load and Resource Balance Planning Model (Planning Model) and the IRP.

4. **Reserve Requirement Targets** – on no less than an annual basis, MCE staff will monitor MCE’s reserves to ensure that they meet the targeted thresholds.

Consistent with the above, the Middle Office will develop reports and provide feedback to the Risk Oversight Committee.

Risk measurement methodologies shall be re-evaluated on a periodic basis to ensure MCE adjusts its methods to reflect the evolving competitive landscape.

### 6.2 Market Price Risk

MCE manages market price risk using its Load and Resource Balance which defines forecasted load, energy under contract and MCE’s open positions in various energy product types including renewable energy (Product Content Category I, II and III), carbon free energy, system power, and MCE’s procurement targets.

MCE determines the quantity of energy it will contract for in each year using its Planning Model. The Planning Model includes an outline of the delivery term and quantity of energy by product type for which MCE will seek to contract in the upcoming year. The Planning Model informs MCE’s solicitation planning including solicitation timing and strategy, and person or team responsible for the solicitation.

In general MCE will seek to purchase roughly equal portions of long term renewable energy in each year in order to diversify exposure to market conditions and reduce the risk of concentrating purchases in any one year.
For products generally purchased through short and medium-term contracts MCE follows a similar strategy of diversifying contracting over the delivery horizon.

As predominantly a net buyer, MCE manages its market liquidity risk through purchasing at different intervals as described in the Planning Model and maintaining a diverse set of counterparties to transact with.

Congestion risk is managed through the contracting process with a preference for day ahead scheduling and energy delivery at the NP 15 trading hub and through resource assessment and selection. Once energy is procured MCE manages congestion risks through the prudent management of Congestion Revenue Rights (CRRs) consistent with its Congestions Revenue Rights Risk Management Guidelines. CRRs are financial instruments used to hedge against transmission congestion costs encountered in the CAISO day-ahead market. MCE uses a third-party scheduling coordinator to manage its CRR portfolio. MCE uses CRRs to reduce its exposure to congestion and other CAISO charges, and will not use CRRs for speculative purposes.

6.3 Counter Party Credit and Performance Risk

MCE evaluates and monitors the financial strength of service and energy providers consistent with MCE’s Credit Guidelines. Generally, MCE manages its exposure to energy suppliers through a preference for counter parties with Investment Grade Credit ratings as determined by Moody’s or Standard and Poor’s and through the use of security requirements in the form of cash and letters of credit. MCE measures its mark-to-market counter party credit exposure consistent with industry best practices.

6.4 Load and Generation Volumetric Risk

MCE manages energy delivery risks by ensuring that contracts include appropriate contractual penalties for non-delivery, acquiring energy from a geographically and technologically diverse portfolio of generating assets with a range of generation profiles. In order to ensure energy product targets are achieved, MCE uses 80 to 100 percent of the generator’s average annual expected energy for certain variable or as available resources for operating year load and resource planning.

MCE manages load forecasting and related weather risks by contracting with qualified data management and scheduling coordinators who together provide the systems and data necessary to forecast and schedule load using good utility practice.

MCE’s load scheduling strategy, as executed by its scheduling coordinator, is captured in its Load Bidding/Scheduling Guidelines. The strategy ensures that price risk in the day ahead and real time CAISO markets is managed effectively and is consistent with good utility practice.

6.5 Operational Risk

Operational risks are managed through:

- Adherence to this Policy and oversight of procurement activity;
- Conformity to Human Resources Policies and Guidelines;
- Staff resources, expertise and/or training reinforcing a culture of compliance;
- Ongoing and timely internal and external audits; and
• Cross-training amongst staff

6.6 Liquidity Risk

MCE manages liquidity risk through adherence to its loan and power purchase agreement credit covenants, limiting commitments to provide security consistent with its Credit Guidelines, ensuring it has adequate loan facilities, prudent cash and investment management, and adherence to its Reserve Policy. MCE monitors its liquidity (defined as unrestricted cash, investments and unused bank lines of credit) no less than weekly. MCE utilizes scenario and sensitivity analyses while preparing budget, rate, and pro forma analyses in order to identify potential financial outcomes and ensure sufficient liquidity under adverse conditions.

6.7 Regulatory/Legislative Risk

MCE manages its regulatory and legislative risk through active participation in working groups and advocacy coalitions such as the California Community Choice Association. MCE regularly participates in regulatory rulemaking proceedings and legislative affairs to protect MCE’s interests.

7.0 Risk Management Policy Governance

7.1 MCE Board of Directors

The MCE Board or its delegated subcommittee is responsible for adopting this Policy and reviewing it as needed every two calendar years. The Board also approves MCE’s annual budget, contracting authorities and delegate responsibilities for the management of MCE’s operations to its CEO and Staff.

7.2 Technical Committee

The Technical Committee is responsible for approval of substantive changes to this Policy as needed every two calendar years, and for initiating and overseeing a review of the implementation of this Policy as it deems necessary. The Technical Committee is responsible for reviewing and approving the Integrated Resource Plan every year, and energy service and supply contracts consistent with MCE Board Resolutions describing contracting authorities.

7.3 Risk Oversight Committee (ROC)

The ROC shall include the following voting members: Chief Executive Officer (CEO), Chief Operating Officer (COO), General Counsel, and Finance Manager, or their designees in case of their absence. The Director of Power Resources and Technical Procurement Advisor shall be non-voting members of the ROC. The CEO shall act as the chair of the ROC.

The ROC shall meet once per calendar quarter, or as otherwise called to order by the CEO. On at least a quarterly basis the Risk Oversight Committee shall provide a report to the Technical Committee regarding its meetings, deliberations, and any other areas of concern. The Finance Manager shall make reports and seek approval for any substantive changes to this Policy from the Technical Committee.

The ROC shall from time to time adopt and bring current risk management guidelines defining in detail the internal controls, strategies and processes for managing market risks incurred through or attendant upon wholesale trading, retail marketing, long-term contracting, CRR trading and load and generation
scheduling. The ROC shall specify the categories of transactions permitted and set risk limits for wholesale trading. The ROC shall receive and review information and reports regarding risk management, wholesale trading transactions, the administration of supply contracts.

The ROC shall have direct responsibility for enforcing compliance with this Policy. Any gross violations to this Policy, as determined by the Chair of the ROC, shall be reported to the Technical Committee for appropriate action.
October 18, 2018

TO: MCE Board of Directors

FROM: Catalina Murphy, Legal Counsel
      Troy Nordquist, Legal Assistant

RE: Resolution 2018-10 Amending MCE’s Conflict of Interest Code (Agenda Item #05 – C.5)

ATTACHMENTS: A. Resolution 2018-10 Amending MCE’s Conflict of Interest Code
                B. Written Description of Changes
                C. MCE Conflict of Interest Code in Strikeout/Underline Format

Dear Board Members:

SUMMARY:
The Political Reform Act (Government Code Section 81000, et seq.) requires state and local government agencies to adopt and publish conflict of interest codes. The Conflict of Interest Code is intended to identify and disclose foreseeable disqualifying financial conflicts of interest for decision-makers within the agency and therefore provide transparency, as required by the Act. MCE’s Conflict of Interest Code was last updated in January 2017. Pursuant to the Fair Political Practices Commission (“FPPC”), which has the primary responsibility to oversee the administration of the Political Reform Act, this Code must be regularly updated to reflect the current structure of the agency.

The recent growth of the agency requires MCE’s Conflict of Interest Code to be updated to identify the relevant employees who must file Statements of Economic Interests to disclose their potential financial conflicts.

MCE publicly noticed the proposed amendment by distributing the proposed amendment to the employees of the agency and posting a Notice to Amend on MCE’s website. The Notice to Amend established a written comment period in which employees or the public could comment in writing on the proposed amendment. During the forty-five (45) day comment period, no comments were submitted and no requests for a hearing on the proposed amendment were made. The attachments included in this report are the documents that were made available to the public during the written comment period.

Fiscal Impact: None.

Recommendation: Adopt Resolution 2018-10 Amending MCE’s Conflict of Interest Code
RESOLUTION NO. 2018-10

A RESOLUTION OF THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY AMENDING MCE’s CONFLICT OF INTEREST CODE

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.); and

WHEREAS, MCE members include the following communities: MCE members include the following communities: the County of Marin, the County of Contra Costa, the County of Napa, the City of American Canyon, the City of Belvedere, the City of Benicia, the City of Calistoga, the City of Concord, the Town of Corte Madera, the Town of Danville, the City of El Cerrito, the Town of Fairfax, the City of Lafayette, the City of Larkspur, the City of Martinez, the City of Mill Valley, the Town of Moraga, the City of Napa, the City of Novato, the City of Oakley, the City of Pinole, the City of Pittsburg, the City of San Ramon, 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, On March 5 2009, MCE (then, Marin Energy Authority) approved Resolution 2009-02, duly adopting a Conflict of Interest Code as required by the Political Reform Act (Government Code Section 81000, et seq.). MCE last amended its duly adopted Conflict of Interest Code on January 19, 2017, by approving resolution 2017-01; and

WHEREAS, MCE wishes to amend Appendix A and Appendix B of its Conflict of Interest Code, which establishes economic disclosure categories for certain positions in MCE, and will update official employee designations, include added positions that require disclosure, and enumerate the appropriate disclosure categories to all designated positions listed; and

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

A. The amended designated positions and assigned disclosure categories described in Appendix A and Appendix B, are hereby incorporated into the MCE Conflict of Interest Code by reference.

B. All officials and employees required to submit a statement of economic interests pursuant to Appendix A shall file their statements with the Chief Executive Officer or his or her designee. The Chief Executive Officer shall make and retain a copy of all statements filed. All retained statements, original or copied, shall be available for public inspection and reproduction (Government Code Section 81008).

C. MCE hereby directs the General Counsel to coordinate the preparation of a revised Conflict of Interest Code in succeeding even-numbered years in accordance with the requirements of Government Code Sections 87306 and 87306.5. The revised Code should reflect any changes in official employee designations and/or disclosures. If no revisions to the Code are required, MCE shall submit a report to the California Fair
Political Practices Commission no later than October 1st of the same year, stating that amendments to the Code are not required.

**PASSED AND ADOPTED** at a regular meeting of the MCE Board of Directors on this 18th day of October, 2018, by the following vote:

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CHAIR, MCE

Attest:

SECRETARY, MCE
Marin Clean Energy
Appendix A to the Conflict of Interest Code

Designated Positions

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<tr>
<th>Designated Position</th>
<th>Assigned Disclosure Category</th>
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<td>• Chief Operating Officer</td>
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<td>▪ Power Supply Contracts Manager</td>
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<td>o Director of Customer Programs</td>
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<td>▪ Manager of Customer Programs</td>
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<td>o Director of Internal Operations</td>
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<td>▪ Manager of Human Resources</td>
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<td>o Manager of Finance</td>
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<td>• General Counsel</td>
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<td>• Director of Regulatory and Legislative Policy</td>
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<td>o Policy Counsel</td>
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<td>o Senior Policy Analyst</td>
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<td>o Policy Analyst</td>
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<td>• Director of Public Affairs</td>
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<td>o Deputy Director, Account Services</td>
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<td>o Deputy Director, Marketing Communications</td>
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<td>• Consultants/New Positions</td>
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*Definition of Consultant and Note Regarding Disclosure Categories for Consultants/New positions:

This category of designated positions includes consultants who make (not just recommend) governmental decisions, such as whether to approve a rate, rule, or regulation involving electric generation, adopt or grant MCE approval to design, develop, construct, sell, purchase, or acquire facilities that generate electricity, or adopt or grant MCE approval of policies, standards, or guidelines for MCE. Such consultants shall disclose at the same level as the comparable designated position identified elsewhere in the Code.

This category also includes all new/future positions that make or participate in making decisions including positions that perform comparable, the same, or substantially all the same duties for MCE as those that are being performed by an individual holding a designated position in MCE’s Conflict of Interest Code. Such new positions shall disclose at the same level as the comparable designated position identified elsewhere in the Code.

The following positions are NOT covered by the Conflict of Interest Code because they must file under Government Code Section 87200 and, therefore, are listed for informational purposes only:

Members of the Board of Directors
Members of the Board of Directors (Alternates)
Chief Executive Officer

An individual holding one of the above listed positions may contact the Fair Political Practices Commission for assistance or written advice regarding their filing obligations if they believe that their position has been categorized incorrectly. The Fair Political Practices Commission makes the final determination whether a position is covered by Government Code Section 87200.
Disclosure Categories:

**Category 1:** Persons in this category shall disclose:

(a) Investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that provide services, supplies, materials, machinery, or equipment of the type utilized by MCE.

(b) Interests in real property located within the jurisdiction of MCE or within two miles of the boundaries of the jurisdiction of MCE, or within two miles of any land owned or used by MCE.

**Category 2:** Persons in this category shall disclose investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that engage in the design, development, construction, sale, or the acquisition of facilities that generate electricity, including, wind, solar, geothermal, hydroelectric, ocean, garbage, and biomass.

**Category 3:** Persons in this category shall disclose investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that are energy or environmental consultants, research firms, or engineering firms, entities that design, build, manufacture, sell, distribute, or service equipment of the type that is utilized by electric power suppliers, including, wind, solar, geothermal, hydroelectric, ocean, garbage, and biomass, or any entity that is, or within the past 12 months has been, party to an MCE proceeding before any local, state, or regional regulatory or judicial entity.
WRITTEN EXPLANATIONS FOR THE PROPOSED AMENDMENT TO MCE CONFLICT OF INTEREST CODE

Pursuant to the needs of MCE’s business, the additions of new staff and the restructuring of existing staff by re-classifying their position titles were addressed in the proposed amendment to the Conflict of Interest Code. Upon review of existing positions and current disclosure regulations, MCE determined that disclosure categories needed revision and/or new and existing positions should be designated. Below is an explanation of new positions added, title changes to existing positions, existing positions that are now designated, and the applicable disclosure categories for the newly designated positions.

Chief Operating Officer – This is a new position added to the MCE Team. The disclosure categories for this new position were added as 1, 2, and 3.

Power Supply Contracts Manager – This is a newly designated existing position on the MCE Team. This position discloses under categories 1, 2, and 3.

Manager of Customer Programs – This is a newly designated existing position on the MCE Team. This position discloses under category 1.

Manager of Finance – Previously listed as Finance and Project Manager, was reclassified to Manager of Finance. Disclosure categories were updated and this position now discloses under categories 1, 2, and 3.

Manager of Human Resources - This is a newly designated existing position on the MCE Team. This position discloses under category 1.

Director of Regulatory and Legislative Policy – This is a new position added to the MCE Team. This position discloses under categories 1, 2, and 3.

Policy Counsel – Previously listed as Regulatory Counsel, was reclassified to Policy Counsel. Disclosure categories were updated and this position now discloses under categories 1, 2, and 3.

Senior Policy Analyst – Previously listed as Senior Regulatory Analyst, was reclassified to Senior Policy Analyst. Disclosure categories were updated and this position now discloses under categories 1, 2, and 3.

Policy Analyst – Previously listed as Regulatory Analyst II, was reclassified to Policy Analyst. Disclosure categories were updated and this position now discloses under categories 1, 2, and 3.
Deputy Director, Account Services – This is a newly designated existing position on the MCE Team. This position discloses under category 1.

Deputy Director, Community Development – This is a newly designated existing position on the MCE Team. This position discloses under category 1.

Deputy Director, Marketing Communications – This is a newly designated existing position on the MCE Team. This position discloses under category 1.
CONFLICT OF INTEREST CODE
FOR
MARIN CLEAN ENERGY

The Political Reform Act (Government Code Section 81000, et seq.) requires state and local government agencies to adopt and promulgate conflict of interest codes. The Fair Political Practices Commission has adopted a regulation (2 California Code of Regulations Section 18730) that contains the terms of a standard conflict of interest code, which can be incorporated by reference in an agency’s code. After public notice and hearing, the standard code may be amended by the Fair Political Practices Commission to conform to amendments in the Political Reform Act. Therefore, the terms of 2 California Code of Regulations Section 18730 and any amendments to it duly adopted by the Fair Political Practices Commission are hereby incorporated by reference. This regulation and the attached Appendices, designating positions and establishing disclosure categories, shall constitute the Conflict of Interest Code of Marin Clean Energy (MCE).

Individuals holding designated positions shall file their statements of economic interests with the MCE, which will make the statements available for public inspection and reproduction. (Government Code Section 81008.) All statements will be retained by MCE.
### Designated Positions

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<th>Designated Position</th>
<th>Assigned Disclosure Category</th>
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<td>o Director of Power Resources</td>
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<td>▪ Power Supply Contracts Manager</td>
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<td>o Director of Customer Programs</td>
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<td>▪ Manager of Customer Programs</td>
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<td>o Director of Internal Operations</td>
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<td>▪ DirectorManager of Public Affairs</td>
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<td>o Manager of Finance and Project Manager</td>
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<td>• General Counsel</td>
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<td>• Director of Public Affairs</td>
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<td>o Deputy Director, Account Services</td>
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<td>o Deputy Director, Marketing Communications</td>
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<tr>
<td>• Consultants/New Positions</td>
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*Definition of Consultant and Note Regarding Disclosure Categories for Consultants/New positions:

This category of designated positions includes consultants who make (not just recommend) governmental decisions, such as whether to approve a rate, rule, or regulation involving electric generation, adopt or grant MCE approval to design, develop, construct, sell, purchase, or acquire facilities that generate electricity, or adopt or grant MCE approval of policies, standards, or guidelines for MCE. Such consultants shall disclose at the same level as the comparable designated position identified elsewhere in the Code.

This category also includes all new/future positions that make or participate in making decisions including positions that perform comparable, the same, or substantially all the same duties for MCE as those that are being performed by an individual holding a designated position in MCE’s Conflict of Interest Code. Such new positions shall disclose at the same level as the comparable designated position identified elsewhere in the Code.

The following positions are NOT covered by the Conflict of Interest Code because they must file under Government Code Section 87200 and, therefore, are listed for informational purposes only:

Members of the Board of Directors
Members of the Board of Directors (Alternates)
Chief Executive Officer

An individual holding one of the above listed positions may contact the Fair Political Practices Commission for assistance or written advice regarding their filing obligations if they believe that their position has been categorized incorrectly. The Fair Political Practices Commission makes the final determination whether a position is covered by Government Code Section 87200.
Marin Clean Energy
Appendix B to the Conflict of Interest Code

Disclosure Categories:

**Category 1:** Persons in this category shall disclose:

(a) Investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that provide services, supplies, materials, machinery, or equipment of the type utilized by MCE.

(b) Interests in real property located within the jurisdiction of MCE or within two miles of the boundaries of the jurisdiction of MCE, or within two miles of any land owned or used by MCE.

**Category 2:** Persons in this category shall disclose investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that engage in the design, development, construction, sale, or the acquisition of facilities that generate electricity, including wind, solar, geothermal, hydroelectric, ocean, garbage, and biomass.

**Category 3:** Persons in this category shall disclose investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that are energy or environmental consultants, research firms, or engineering firms, entities that design, build, manufacture, sell, distribute, or service equipment of the type that is utilized by electric power suppliers, including wind, solar, geothermal, hydroelectric, ocean, garbage, and biomass, or any entity that is, or within the past 12 months has been, party to an MCE proceeding before any local, state, or regional regulatory or judicial entity.

1. Investments and business positions in business entities, and income, including receipt of loans, gifts, and travel payments, from sources that are involved in marketing, communications, advertisements, public relations, and media relations.
October 18, 2018

TO: MCE Board of Directors

FROM: Elizabeth Kelly, General Counsel

RE: Resolution 2018-08 Authorizing Delegation of Authority by CEO
(Agenda Item #06)

ATTACHMENTS:

A. Proposed Resolution 2018-08 Authorizing Delegation of Procurement, Purchasing and Contracting Authority by the Chief Executive Officer
B. Resolution 2018-03 Rescinding Resolution 2017-02 and Delegating Energy Procurement Authority
C. Resolution 2018-04 Designating the CEO as the Purchasing Agent Pursuant to Government Code 25500 and Delegating Purchasing Agent Authority

Dear Board Members:

SUMMARY: In March 2018, your Board approved Resolution 2018-03 and Resolution 2018-04 delegating purchasing authority for Energy Procurement and contracts with a maximum of $100,000. To ensure efficient purchasing and contracting across MCE your Board may delegate additional Purchasing Agents within the agency. The proposed Resolution 2018-08 would authorize the Chief Executive Officer to delegate procurement, purchasing and contracting authority to responsible Directors or Officers, including the Chief Operating Officer.

Your Executive Committee recommended the adoption of proposed Resolution 2018-08 on October 5, 2018. The Executive Committee recommended including for clarity language stating such authorities shall not be divested. The following language has been included in the resolution:

WHEREAS, the Board of Directors, by this delegation of procurement, purchasing and 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.

FISCAL IMPACT: None.

RECOMMENDATION: Adopt proposed Resolution 2018-08.
RESOLUTION NO. 2018-08

A RESOLUTION OF THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY AUTHORIZING DELEGAISON OF PROCURMENT, PURCHASING AND CONTRACTING AUTHORITY BY THE CHIEF EXECUTIVE OFFICER

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.); and

WHEREAS, MCE members include the following communities: MCE members include the following communities: the County of Marin, the County of Contra Costa, the County of Napa, the City of American Canyon, the City of Belvedere, the City of Benicia, the City of Calistoga, the City of Concord, the Town of Corte Madera, the Town of Danville, the City of El Cerrito, the Town of Fairfax, the City of Lafayette, the City of Larkspur, the City of Martinez, the City of Mill Valley, the Town of Moraga, the City of Napa, the City of Novato, the City of Oakley, the City of Pinole, the City of Pittsburg, the City of San Ramon, 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, from time to time, the Board of Directors and its Committees delegate rights and responsibilities to the Chief Executive Officer (CEO); and

WHEREAS, on March 15, 2018, the Board of Directors adopted Resolution No. 2018-03 providing for certain delegations to the CEO for Energy Procurement; and

WHEREAS, on March 15, 2018, the Board of Directors adopted Resolution No. 2018-05 designating the CEO as the Purchasing Agent for MCE with the authority to make purchases and enter into contracts with a maximum dollar amount of $100,000 or less; and

WHEREAS, due to the large number of purchases and contracts made by MCE, it is appropriate and more efficient to have the CEO delegate certain authorities to an Officer or Director of MCE where such authority falls within the programs or activities administered by such Officer or Director; and

WHEREAS, the Board of Directors, by this delegation of procurement, purchasing and 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.

NOW, THEREFORE, BE IT RESOLVED, by the MCE Board of Directors that the CEO may delegate by written memorandum the CEO’s procurement, purchasing and contracting authority provided by the Board of Directors to any Officer, including the Chief Operating Officer, or any Director for such procurement, purchases and contracts falling within the programs or activities administered by such Director.
PASSED AND ADOPTED at a regular meeting of the MCE Board of Directors on this 18th day of October, 2018, by the following vote:

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CHAIR, MCE

Attest:

SECRETARY, MCE
RESOLUTION NO. 2018-03

A RESOLUTION OF THE BOARD OF DIRECTORS OF
MARIN CLEAN ENERGY RESCINDING RESOLUTION NO. 2017-02 AND
DELEGATING ENERGY PROCUREMENT AUTHORITY

WHEREAS, Resolution No. 2017-02 set forth contracting and procurement authority delegated by the Board of Directors; and

WHEREAS, the Board intends that this Resolution No. 2018-03, together with Resolution No. 2018-04, shall supersede and replace Resolution No. 2017-02; and

WHEREAS, the Board of Directors, by this delegation of energy procurement and 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; and

WHEREAS, the Board of Directors shall retain contracting authority over all contracts required by law to be approved by the Board, including but not limited to any contracts to borrow money or otherwise incur debt.

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

A. Resolution No. 2017-02 is hereby rescinded.

B. For purposes of this Resolution, “Energy Procurement” shall mean all contracting, purchase and sale of 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.

C. The Board of Directors hereby delegates the following contracting authority 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 Technical Committee

The Technical Committee is hereby authorized to approve and direct the Chief Executive Officer (“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; and

c. contracts related to MCE ownership, leasing or development of energy generation projects and assets.
2. Delegation to the Chief Executive Officer and Technical Committee Chair, Jointly

The CEO and Technical Committee Chair, jointly, are hereby authorized, after consultation with the appropriate Committee of the Board of Directors, 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 of Directors all such executed contracts.

3. Delegation to the Chief Executive Officer

The CEO is hereby authorized 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 of Directors; and

b. amendments or addenda to existing Energy Procurement contracts, regardless of the existing contract’s price or total amount, which improve the terms of the contract to MCE’s benefit without increasing the contract’s not-to-exceed maximum dollar amount.

PASSED AND ADOPTED at a regular meeting of the Board of Directors on this 15th day of March, 2018, by the following vote:

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CHAIR, MCE

Attest:

SECRETARY, MCE
RESOLUTION NO. 2018-04

A RESOLUTION OF THE BOARD OF DIRECTORS OF
MARIN CLEAN ENERGY DESIGNATING THE CHIEF EXECUTIVE OFFICER AS THE
PURCHASING AGENT PURSUANT TO GOVERNMENT CODE 25500 AND
DELEGATING PURCHASING AGENT AUTHORITY

WHEREAS, Section 2.6 of the MCE Joint Powers Agreement provides that the power of MCE is subject to the same restrictions upon the manner of exercising power possessed by the County of Marin;

WHEREAS, Government Code Section 25500 et seq. defines the role of a purchasing agent, and authorizes the governing body of a county to employ a purchasing agent to enter into certain transactions; and

WHEREAS, the Board of Directors desires to appoint a purchasing agent for MCE; and

WHEREAS, the Board of Directors, by designating a purchasing agent and delegating certain contracting authority to the designated purchasing agent 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; and

WHEREAS, the Board of Directors shall retain contracting authority over all contracts required by law to be approved by the Board, including but not limited to any contracts to borrow money or otherwise incur debt.

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

A. The Board of Directors hereby designates the Chief Executive Officer as purchasing agent for MCE.

B. This delegation of contracting authority to the purchasing agent shall be subject to any exemptions that may be adopted by the Board of Directors.

C. The Board of Directors hereby delegates the following contracting authority, consistent with an approved Integrated Resource Plan and/or budget, as applicable, including transactions 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 is hereby authorized to approve and direct the purchasing agent to enter into all transactions, including contracts, amendments and addenda; provided that any transaction greater than $100,000 shall also be executed by the Executive Committee Chair.
2. Delegation to the Purchasing Agent:

The purchasing agent is hereby authorized to approve and enter into:

a. transactions for goods, equipment or services with a not-to-exceed maximum dollar amount of $100,000 per vendor for a given scope of work, per fiscal year;

b. 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

c. in the event of an emergency situation, transactions 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 the Chair or Vice Chair of the Executive Committee.

An "emergency situation" for purposes hereof is a sudden, unexpected occurrence that poses an imminent danger to life or property or other material financial loss or to essential public services that calls for immediate action with inadequate time for prior Board of Directors or Executive Committee approval. The purchasing agent shall deliver a report to the Board of Directors at the next regular meeting explaining the necessity for the action, a listing of expenditures made under these emergency powers and any recommended future actions.

3. Exemptions to Limits on Purchasing Agent's Purchasing Authority:

The Board of Directors hereby provides that the following transactions are exempt from the above purchasing and procurement authority limits, provided that such expenditures are consistent with the budget adopted by the Board:

a. Utilities, where there is no reasonable basis for competitive procurement, including but not limited to telephonic communications, electric power, internet/cable, water, solid waste and debris collection (unless in relation to a construction project), and sewage;

b. Tariffed costs and fees, including but not limited to PG&E service fees and CAISO fees and costs, including MCE's Estimated Aggregate Liability (EAL);

c. Notices required by law;

d. Fees and taxes required by law;

e. Payments made pursuant to a duly approved contract;
f. Routine office supplies;

g. Insurance policies consistent with MCE's approved benefits policy;

h. Print services; and

i. Postage costs.

**PASSED AND ADOPTED** at a regular meeting of the MCE Board of Directors on this 15th day of March, 2018, by the following vote:

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CHAIR, MCE

Attest:

SECRETARY, MCE
October 18, 2018

TO: MCE Board of Directors

FROM: Elizabeth Kelly, General Counsel

RE: Ordinance 2018-02 Establishing an Alternative Claims Procedure
   (Agenda Item #07)

   a) Proposing First Reading of Ordinance 2018-02 Establishing an
      Alternative Claims Procedure pursuant to Government Code
      Section 935

ATTACHMENT: Draft Ordinance 2018-02 Establishing an Alternative Claims Procedure
            pursuant to Government Code Section 935

Dear Board Members:

SUMMARY:
Pursuant to California Government Code Section 935, a public entity may prescribe the process
in which certain claims for money or damages may be made against the entity. In order to better
protect MCE in the event of such a claim, MCE staff has developed a claims procedure pursuant
to Government Code Section 935. To utilize this claims procedure, your Board must enact a
Claims Procedure Ordinance as required by Government Code Section 935(a). Specifically, the
Ordinance provides for the perquisites to bringing a suit against the agency, the time of
presentation, the form and the method by which the Board or Executive Committee reviews
claims. No legal action may be maintained by a person who has not complied with the
procedures set forth in this Ordinance.

On October 5, 2018 your Executive Committee recommended Ordinance 2018-02 be introduced
for first reading by title only.

Fiscal Impact: None.

Recommendation: Waive full reading, read by title only, and introduce for first reading
Ordinance 2018-02 of the Board of Directors of Marin Clean Energy Establishing an Alternative
Claims Procedure pursuant to Government Code 935.
ORDINANCE NO. 2018-02

AN ORDINANCE OF THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY
ESTABLISHING AN ALTERNATIVE CLAIMS PROCEDURE PURSUANT TO
GOVERNMENT CODE SECTION 935

WHEREAS, the Government Claims Act (Government Code section 900 et seq.) (hereinafter “Act”) sets forth the general procedure for the presentation of claims as a prerequisite to commencement of actions for money or damages against local public entities; and

WHEREAS, the Act excepts certain claims against local public entities from the presentation procedures of the Act; and

WHEREAS, the Act also specifies that local public entities may adopt a procedure for claims excepted under the Act and which are not governed by any other statutes or regulations; and

WHEREAS, the Board now desires to adopt a procedure to govern the presentation requirements of those excepted claims to establish an alternative claims procedure pursuant to Government Code section 935.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY
DOES ORDAIN AS FOLLOWS:

Section 1. Claims for money or damages.

All claims against Marin Clean Energy, for money or damages, which are excepted by section 905 from Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 within Division 3.6 of Title 1 of the California Government Code and which are not otherwise governed by any other statute or regulation expressly related thereto, shall be governed by the procedure prescribed in this Ordinance, in accordance with Government Code section 935, as it may be amended.

Section 2. Claim prerequisite to suit.

All claims shall be presented as provided in this Ordinance and acted upon by Marin Clean Energy prior to the filing of any legal action on such claims. No such action may be maintained by a person who has not complied with the procedures set forth in this Ordinance.

Section 3. Time of presentation.

The claim must be presented to the Secretary of the Board within the time requirements set forth in Government Code section 911.2. For purposes of determining whether a claim is timely presented, a claim is presented to the Secretary when it is received at the mailing address for the Board.
Section 4. **Form.**

All claims shall be made in writing and verified by the claimant or by his or her guardian, conservator, executor or administrator. No claims may be filed on behalf of a class of persons unless verified by every member of that class as required by this section. In addition, all claims shall contain the information required by Government Code section 910.

Section 5. **Review of claims.**

All claims shall be reviewed and audited by the Secretary for the Board for compliance with this Ordinance and submitted to the Board or the Executive Committee for approval or rejection. The Board or the Executive Committee shall act on a claim in the manner provided in Government Code sections 912.4, within 45 days after the claim has been presented. If a claim is amended, the Board or Executive Committee shall act on the amended claim within 45 days after the amended claim is presented.

Section 6. **Notice and effect.**

This Ordinance shall take effect and be in force thirty (30) days from the date of its passage, and before the expiration of fifteen (15) days after its passage, it or a summary of it, shall be published once, with the names of the members of the Board of Directors voting for and against the same in the Marin Independent Journal, a newspaper of general circulation published in the County of Marin.

PASSED, APPROVED, and ADOPTED by the Board of Directors of Marin Clean Energy, Marin County, State of California, this _____day of __________, 2018, by the following vote:

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CHAIR, MCE

Attest:

SECRETARY, MCE
October 18, 2018

TO: MCE Board of Directors
FROM: Elizabeth Kelly, General Counsel
RE: Resolution 2018-09 Delegating Authority of Setting Compensation, Tenure, Appointment and Conditions of Employment to the Executive Committee and the Chief Executive Officer (Agenda Item #08)
ATTACHMENT: Proposed Resolution 2018-09 Delegating Authority of Setting Compensation, Tenure, Appointment and Conditions of Employment to the Executive Committee and the Chief Executive Officer

Dear Board of Directors:

SUMMARY:
As discussed at the annual Board Retreat on September 28, 2018, MCE has identified opportunities to attract and retain employees, streamline human resources functions, and minimize Board member time spent on Human Resources-related detail.

MCE is aware of an opportunity to more effectively attract and retain employees through improved human resources practices. MCE’s Board of Directors delegated authority to its Executive Committee regarding human resources matters. However, as MCE continues to adapt and grow within the CCA landscape, in an effort to further streamline and improve the efficiency of MCE’s human resources activities, management has prepared Resolution 2018-09. This Resolution delegates authority to the CEO, in consultation with the Executive Committee, to set the number, compensation, tenure, appointment and conditions of employment of MCE employees (other than the CEO), consistent with the Board-approved budget. The Executive Committee would prescribe the compensation, tenure, appointment and conditions of employment of the CEO consistent with the Board-approved budget.

The adoption of the proposed Resolution will help ensure MCE’s agility in hiring and retaining staff that enable the agency to continue to deliver on its mission.

Your Executive Committee recommended the adoption of proposed Resolution 2018-09 on October 5, 2018. The Executive Committee recommended including for clarity language stating such authorities shall not be divested. The following language has been included in the resolution:

WHEREAS, the Board of Directors, by this delegation of authority to prescribe the compensation of all MCE officers and provide for the number, compensation, tenure, appointment and conditions of employment of MCE employees 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.

Fiscal Impacts: None.

Recommendation: Approve Resolution 2018-09 Delegating Authority of Setting Compensation, Tenure, Appointment and Conditions of Employment to the Executive Committee and the Chief Executive Officer.
RESOLUTION NO. 2018-09

A RESOLUTION OF THE BOARD OF DIRECTORS OF MARIN CLEAN ENERGY DELEGATING AUTHORITY OF SETTING COMPENSATION, TENURE, APPOINTMENT AND CONDITIONS OF EMPLOYMENT TO THE EXECUTIVE COMMITTEE AND THE CHIEF EXECUTIVE OFFICER

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.); and

WHEREAS, MCE members include the following communities: MCE members include the following communities: the County of Marin, the County of Contra Costa, the County of Napa, the City of American Canyon, the City of Belvedere, the City of Benicia, the City of Calistoga, the City of Concord, the Town of Corte Madera, the Town of Danville, the City of El Cerrito, the Town of Fairfax, the City of Lafayette, the City of Larkspur, the City of Martinez, the City of Mill Valley, the Town of Moraga, the City of Napa, the City of Novato, the City of Oakley, the City of Pinole, the City of Pittsburg, the City of San Ramon, 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, consistent with Government Code Section 23500, the Board has the authority to prescribe the compensation of all MCE officers and provide for the number, compensation, tenure, appointment and conditions of employment of MCE employees; and

WHEREAS, the Board of Directors, by this delegation of authority to prescribe the compensation of all MCE officers and provide for the number, compensation, tenure, appointment and conditions of employment of MCE employees 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; and

WHEREAS, the Board of Directors seeks to improve and streamline employment matters of MCE through its delegation of authority.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of MCE does hereby resolve, determine, and order as follows:

Section 1. The Board hereby delegates to MCE’s Chief Executive Officer (CEO) or her or his designee, in consultation with the Executive Committee, the authority to prescribe the compensation of all MCE officers, other than the CEO, and provide for the number, compensation, tenure, appointment and conditions of employment of MCE employees, provided that such prescription and provision be consistent with the Board-approved budget.
Section 2. The Board hereby delegates to the Executive Committee the authority to prescribe the compensation of MCE’s CEO and provide for the compensation, tenure, appointment and conditions of employment of the CEO, provided that such prescription and provision be consistent with the Board-approved budget.

PASSED AND ADOPTED at a regular meeting of the MCE Board of Directors on this 18th day of October, 2018, by the following vote:

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CHAIR, MCE

Attest:

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SECRETARY, MCE
October 18, 2018

TO: MCE Board of Directors

FROM: Elizabeth Kelly, General Counsel

RE: Resolution 2018-11 Affirming MCE’s Commitment to Complying with the Land Use Authorities of its Member Communities (Agenda Item #09)

Attachments: A. Draft Resolution 2018-11 – A Resolution of the Board of Directors of Marin Clean Energy Affirming MCE’s Commitment to Complying with the Land Use Authorities of Its Member Communities

B. Email Correspondence Regarding Land Use

Dear Board Members:

In December 2017, Director Trotter delivered an email from Moraga Town Councilmember Korpus regarding the power of eminent domain of MCE. Specifically, Town Councilmember Korpus raised concern that the Joint Powers Agreement of MCE (hereafter, the “JPA”) grants MCE the power of eminent domain.

Upon receipt of Town Councilmember Korpus’s concern from Director Trotter, Staff analyzed the question and placed the matter on the agendas of the Executive Committee Meetings held on February 2, 2018 and March 2, 2018 for discussion. The matter was agendized for the July 6, 2018 meeting of the Executive Committee but was carried over to a future meeting. On October 5, 2018 your Executive Committee discussed MCE’s JPA and its authorities regarding land use, and that Directors Sears and Trotter would evaluate potential Resolution language for consideration by the Board.

The power of eminent domain is one of many powers common to local government agencies and its inclusion in the JPA is simply due to MCE’s structure as a local government agency, not because any interest has ever been expressed by MCE in exercising this power. In addition, protection of local land use rights has been built into the JPA to codify the preeminence of local land use decisions over any actions of the MCE Board. Specifically, unlike various other JPAs, MCE is required to comply with all local zoning and building laws of a member community. MCE JPA Section 2.7 states:

Notwithstanding any other provisions of this Agreement or state law, any facilities, buildings or structures located, constructed or caused to be constructed by the Authority within the territory of the Authority shall comply with the General Plan, zoning and building
laws of the local jurisdiction within which the facilities, buildings or structures are constructed.

With these restrictions in mind, and in light of extensive constitutional, legal, procedural, and timing protections in place regarding eminent domain as further described below, there does not appear to be any change needed to the authorities of MCE pursuant to its JPA.

Background and Legal Analysis

MCE is organized as a Joint Powers Authority in accordance with the Joint Exercise of Powers Act of the State of California. Government Code Section 6500, et seq. Where a member community individually has the power to exercise the power of eminent domain, so may its Joint Powers Authority, as is the case under MCE’s JPA.

In relevant part, MCE’s JPA provides:

2.5 Powers. The Authority shall have all powers common to the Parties and such additional powers accorded to it by law. The Authority is authorized, in its own name, to exercise all powers and do all acts necessary and proper to carry out the provisions of this Agreement and fulfill its purposes, including, but not limited to, each of the following:

[...] 2.5.4 acquire by eminent domain, or otherwise, except as limited under Section 6508 of the Act, and to hold or dispose of any property;

Unlike various other JPAs, MCE is also required to comply with all local zoning and building laws of a member community. MCE JPA Section 2.7 states:

Notwithstanding any other provisions of this Agreement or state law, any facilities, buildings or structures located, constructed or caused to be constructed by the Authority within the territory of the Authority shall comply with the General Plan, zoning and building laws of the local jurisdiction within which the facilities, buildings or structures are constructed.

Furthermore, although MCE has the power of eminent domain, California law and practice provides various protections to private citizens’ property regarding eminent domain. These protections include but are not limited to:

- **Constitutional Protections:**
  The Fifth Amendment of the United States Constitution, made applicable to the states by the Fourteenth Amendment, and California Constitution, article I, section 19 require the protection of private citizens’ property.

- **Legal Limitations:**
  A joint powers authority may only exercise the power of eminent domain when expressly authorized by law. Specifically, "statutory language defining eminent domain powers is strictly construed and any reasonable doubt concerning the existence of the power is resolved against the entity." (Kenneth Mebane Ranches v. Superior Court (1992) 10 Cal.App.4th 276, 282-283.)
In order to exercise the power of eminent domain, pursuant to Code of Civil Procedure ("CCP") Section 1245.230, the governing body of the public entity must make the following findings to adopt a resolution of necessity:

i. the public interest and necessity require the project;
ii. the project is planned and located in the manner that will be most compatible with the greatest public good and the least private injury;
iii. the property described in the resolution is necessary for the project; and
iv. the public entity made the offer required by Government Code Section 7267.2 to the record owner.

- **Procedural Limitations Held by the MCE Board or its Committees:**
  Procedural limitations controlled by the MCE Board or its Committees include:
  
  - Authorization of environmental review by MCE, including CEQA and NEPA;
  - Authorization of appraisal and just compensation authorizations regarding the property (Government Code Section 7267.2);
  - Hearings on the notice of eminent domain proceedings (CCP Section 1245.235);
  - Hearings on the Resolution of Necessity authorizing the acquisition of the property by eminent domain (CCP Section 1245.235); and
  - Adoption of the Resolution of Necessity by 2/3 vote of the Board of Directors (CCP Section 1245.360).

- **Duration of the Eminent Domain Process:**
  The duration of contested eminent domain processes can run from 18 months to 3 years. This timeline consists of:

  Obtaining an order for possession of the property. This will take 6 to 8 months from the time an offer to purchase the property is made to the property owner. An offer to purchase must be based on an appraisal prepared for the public agency. The time for preparing the appraisal needs to be added to the 6- to 8-month estimate. The timing of the appraisal will depend on the complexity of the acquisition and the availability of the appraiser. This could be a 30- to 60-day process. Once an order for possession is obtained from the court, possession can be taken 10 to 30 days after the notice of the court order depending upon whether the property is occupied.

  **Trial estimate.** Assuming that the property owner does not challenge the right of the agency to condemn the property, a trial on valuation will occur 1 to 2 years after the complaint is filed in court. The complaint will be filed concurrently with the motion for an order for possession so there will be an approximately 6- to 8-month period before the complaint is filed. Therefore, from the start of the process (offer of purchase) until the end of trial can be an 18-month to 3-year process.

In light of the extensive constitutional, legal, procedural, and timing protections in place regarding eminent domain, the control of land use planning decisions by each member community and the extensive period of time for comment, review and collaboration with any member community, no changes are necessary to the authorities of MCE pursuant to its Joint Powers Agreement.

Before you is the Draft Resolution discussed between Directors Sears and Trotter for your consideration.
Fiscal Impact: None.

Recommendation: Consider adoption of Resolution 2018-11 – A Resolution of the Board of Directors of Marin Clean Energy Affirming MCE’s Commitment to Complying with the Land Use Authorities of Its Member Communities.
RESOLUTION 2018-11

A RESOLUTION OF THE BOARD OF DIRECTORS OF
MARIN CLEAN ENERGY AFFIRMING MCE’S COMMITMENT TO COMPLYING WITH
THE LAND USE AUTHORITIES OF ITS MEMBER COMMUNITIES

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.); and

WHEREAS, MCE members include the following communities: the County of Marin, the County of Contra Costa, the County of Napa, the City of American Canyon, the City of Belvedere, the City of Benicia, the City of Calistoga, the City of Concord, the Town of Corte Madera, the Town of Danville, the City of El Cerrito, the Town of Fairfax, the City of Lafayette, the City of Larkspur, the City of Martinez, the City of Mill Valley, the Town of Moraga, the City of Napa, the City of Novato, the City of Oakley, the City of Pinole, the City of Pittsburg, the City of San Ramon, 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, MCE is required to comply with all local zoning and building laws of a member community under MCE JPA Section 2.7 which states: “Notwithstanding any other provisions of this Agreement or state law, any facilities, buildings or structures located, constructed or caused to be constructed by the Authority within the territory of MCE shall comply with the General Plan, zoning and building laws of the local jurisdiction within which the facilities, buildings or structures are constructed”; and

WHEREAS, Section 2.5 and Section 2.5.4 of MCE’s Joint Powers Agreement states that MCE shall have all powers common to the Member Communities and such additional powers accorded to it by law and MCE is authorized, in its own name, to exercise all powers and do all acts necessary and proper to carry out the provisions of this Agreement and fulfill its purposes, including, but not limited to, “acquir[ing] by eminent domain, or otherwise, except as limited under Section 6508 of the Act, and to hold or dispose of any property”; and

NOW, THEREFORE, BE IT RESOLVED, by the Board of the MCE Board of Directors, that as a policy matter, MCE shall as a general rule not initiate or exercise its power of eminent domain within the jurisdiction of any MCE member community, without the support and approval of the governing board of that MCE member; and that MCE shall otherwise comply with the land use entitlement and design review approval processes of the local jurisdiction in which any MCE projects or facilities are to be constructed.

PASSED AND ADOPTED at a regular meeting of the MCE Board of Directors on this 18th day of October, 2018, by the following vote:
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CHAIR, MCE

Attest:

SECRETARY, MCE
Good morning, Dawn. As you will recall, Moraga Town Councilmember Kymberleigh Korpus has raised concerns about the eminent domain power of MCE which is referenced in the JPA Agreement. I am forwarding a slightly edited version of her e-mail below on that subject, with a request that MCE staff study the issue and bring it forward to the appropriate MCE committees and/or board for further discussion during the next 12 months. Thank you.

Regards,

Dave Trotter
Mayor, Town of Moraga
(925) 876-1503

I have another concern that I’m hoping you can help me with: As you know, I am deeply concerned that the terms of the Marin Clean Energy Authority Joint Powers Agreement gives MCE the “all powers common to the Parties and such additional powers accorded to it by law,” and authorizes MCE to “exercise all powers and do all acts necessary and proper to carry out the provisions of [the JPA Agreement] and fulfill [MCE’s] purposes.” This grant of powers is deeply concerning to the extent that it includes the authority and power of MCE to exercise in its own name the Town of Moraga’s power to acquire real property in Town by eminent domain.

The JPA Agreement gives this power and authority to MCE in section 2.5.4. This is problematic because: (i) I do not think it served the best interests of the Town or the residents to give another outside agency any decision making power (or influence) on the question of what should or can be built in Moraga, and (ii) as currently drafted, the JPA Agreement doesn’t even give the Moraga Town Council the right to veto any such exercise of the power of eminent domain against its citizens.

During our deliberations earlier this year as we tried to determine whether Moraga should join MCE, MCE strongly stated that it had no intent of exercise the power of eminent domain anywhere – much less in our town. That statement was not very reassuring to me, as organizations, policies, and plans all change over time. I want to make sure we provide adequate protections to our residents on this issue for now, and for the future, and when I expressed my concerns in this regard, the MCE representative
stated that MCE would be willing to consider amending the JPA Agreement to remove this power from its arsenal, because that kind of tactic was not part of its business plan.

Would you be willing to follow up on this and see if you could get the JPA Agreement amended so MCE no longer has the ability to exercise the power of eminent domain to take property from our residents and put it to use in generating renewable energy?

I would really appreciate any headway you can make into this issue.

Kymberleigh

Kymberleigh N. Korpus
Town Councilwoman
kcorpus@moraga.ca.us

Town of Moraga
329 Rheem Blvd.,
Moraga, CA 94556
(925) 388-6555
www.moraga.ca.us
2019 Integrated Resource Plan

November 2018

Approved by MCE Technical Committee on [_________]
MCE 2019 Integrated Resource Plan

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A Note to the Reader: MCE and CPUC Integrated Resource Plans

This document, MCE’s 2019 Integrated Resource Plan (“IRP”), provides an overview of MCE’s resources and resource planning, and summarizes MCE’s programs and policies designed to foster a cleaner energy future. Since 2012, MCE has developed this voluntary and publicly available Integrated Resource Plan to provide transparency into its resource planning objectives.

Proceeding R. 16-02-007 at the California Public Utilities Commission (“CPUC” or “Commission”) required load serving entities (LSEs), including Community Choice Aggregations (CCAs), to submit Integrated Resources Plans using CPUC-developed templates (“CPUC IRP”). MCE complied with this rulemaking and filed an Integrated Resources Plan to the CPUC in August 2018. While this document and the document submitted to the CPUC as a compliance filing both use the title “Integrated Resource Plan”, the tools, models and assumptions used to develop each plan are different.

The IRP submitted to the CPUC uses Commission-approved models and assumptions that do not yet capture the complexity and market realities of managing MCE’s portfolio or resource planning. MCE is working closely with the CPUC to identify areas of alignment and possible improvement. MCE continues to support information sharing with its customers, the public, project developers and regulators.

MCE’s voluntary procurement targets continue to exceed state Renewable Portfolio Standard mandates and have already achieved California’s Greenhouse Gas emission reduction goals. Additionally, MCE continues to advance innovative programs for Electric Vehicles and Energy Efficiency, among others. We encourage readers to continue referencing MCE’s IRP for resource planning and program insights.
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 municipal boundaries of its member communities (collectively, the “service area”), which include:

- Marin County; Belvedere, Corte Madera, Fairfax, Larkspur, Mill Valley, Novato, Ross, San Anselmo, San Rafael, Sausalito, and Tiburon;
- Unincorporated Napa County, American Canyon, Calistoga, Napa, St. Helena, and Yountville;
- Contra Costa County; Unincorporated Contra Costa County, and the cities of Concord, Danville, El Cerrito, Lafayette, Martinez, Moraga, Oakley, Pinole, Pittsburg, Richmond, San Pablo, San Ramon, and Walnut Creek; and
- Benicia.

Figure 1: MCE Service Area, including expansion anticipated in 2018

MCE provides service to more than eighty-five percent of electricity customers within its service area and is the default electric generation provider for any new or relocated customers therein.
As a mission-driven organization, MCE works to reduce greenhouse gas (“GHG”) emissions and to expand access to competitively priced renewable energy and energy efficiency (“EE”) programs for all customers. 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 near-, mid-, and long-term planning horizons. This IRP documents MCE’s resource planning policies and objectives over the upcoming ten-year planning period from 2019 through 2028 (the “Planning Period”).

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

**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 objectives and framework to the public and key stakeholder groups.

In practical terms, the IRP specifies the energy procurement strategy 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 power resources to supply a minimum renewable energy content of 60 percent for its Light Green customers. MCE plans to increase its renewable energy content, subject to product availability and rate-related considerations, to 80 percent for Light Green customers by 2025. MCE has a long-term goal of supplying 100 percent renewable energy to all of its customers.

- MCE continues to provide its customers with voluntary 100 percent renewable energy service options: Deep Green, which is wholly sourced from various renewable energy projects located in California; and Local Sol, which began supplying participating customers with 100 percent locally sourced (i.e., the supplying generating facilities are located entirely within MCE’s service area) solar photovoltaic (“PV”) energy in July 2017.

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\(^1\) Within this IRP, energy procurement refers to the purchase of energy products, including electricity, capacity, energy efficiency, distributed generation, demand response, and energy storage.
➢ MCE’s energy supply portfolio now includes 58 energy contracts with more than thirty-three energy product suppliers. 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 applicable 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 portfolio, including:

- Contracting for all projected, state-mandated Renewable Portfolio Standard (“RPS”) compliance requirements through 2025;
- Addressing open renewable energy positions throughout the Planning Period related to MCE’s voluntary renewable energy targets (which significantly exceed state-mandated procurement requirements);
- Addressing conventional energy requirements per MCE’s adopted planning guidelines via shorter term contractual commitments that are in place through 2020;
- Addressing required reserve capacity (“Resource Adequacy” or “RA”) and flexible capacity procurement obligations, consistent with applicable compliance mandates, via short-, mid-, and long-term contracts per its contracting guidelines;
- Increasing energy purchases from new, California-based renewable energy resources throughout the Planning Period.

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

- Following expansion of its service area in 2018, MCE now serves approximately 28,724 NEM customers; the smaller-scale renewable generating projects that have been installed by such customers represent more than 306,000 kW (306 MW) of installed, behind-the-meter local renewable generating capacity;
- Since 2012, MCE has allocated $345,000 for solar rebates and has provided $111,100 in rebates to help with the installation of 147 solar systems, 126 of which occurred on the homes of low income customers, thanks to MCE’s partnership with GRID Alternatives. The $111,100 in rebates provided 381 kW of new solar generation, 249 kW of which was provided to low income customers. GRID Alternatives estimates that the program participants will save over $2 million on their monthly utility bills over 20 years and eliminate over 4,000 metric tons of GHG emissions over the 25-year lifespan of the installations. Starting in 2018, Net Energy Metering customers can now choose to transfer their excess solar credits to this rebate program, providing more rebates and access to solar for communities that otherwise would not have the option;
- In addition to rooftop generating capacity, MCE is planning to develop or purchase energy from 35 MW of locally constructed (within MCE’s service area), utility-scale
renewable generating capacity by 2021. To this end, MCE has invested staff time and financial resources in various development activities within its service area. For example, Solar One is a 10.5 MW solar PV project in the City of Richmond which achieved commercial operation in December 2017;

- 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) contracts that are available on a first-come, first-served basis for up to 45 MW of qualifying renewable energy projects within MCE’s service area. Specific terms and conditions for the FIT program are available on MCE’s website.

MCE is working toward a long-term goal of offsetting two percent of its annual energy and capacity requirements with EE and distributed energy resource (“DER”) programs. MCE applied to the Commission, and was approved for an increase of the EE budget for MCE-administered programs while also exploring a number of innovative DER strategies aimed at reducing customer costs and associated GHG emissions. Specific to capacity requirements, MCE’s goal is to provide five percent of its annual RA capacity via demand response (“DR”) programs by the end of the Planning Period. MCE plans to explore funding opportunities for DR programs as new programs are rolled out in 2019.

- 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.
II. General Resource Planning Policies

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 by offering competitive electricity rates and customer programs and through investments in infrastructure, energy, and workforce development programs within MCE’s service area.
➢ Help customers reduce energy consumption and electric bills through investment in and administration of enhanced customer EE, 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.
➢ Support supplier diversity as permitted by law.

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

Senate Bill 100

Senate Bill (“SB”) 100, signed by the Governor in September 2018, directs all LSEs to procure 60% of their portfolios from RPS-eligible resources by 2030, and 100% of all retail sales of electricity need to come from zero-carbon resources or eligible renewable resources. As of the 2019 IRP filing, MCE is fully compliant with the 2030 requirement with more than 60% of its portfolio RPS qualified. MCE’s expects to achieve a 100% GHG free portfolio by 2025, 20 years earlier than the SB 100 mandate.

Energy Storage

The California Energy Storage Bill, Assembly 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 (“IOUs”), CCAs, and other 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. Based upon current load forecasts, the decision requires MCE to install 10 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.
On August 1, 2018, the IOUs submitted a consolidated advice letter to the Commission to update the energy storage obligations of Community Choice Aggregators ("CCAs") and Electricity Service Providers ("ESPs"), pursuant to Decision ("D.") 17-04-039 and compliant with Resolution E-4892. D.17-04-039 concluded that each CCA’s 1 percent procurement obligation can be met through the CCA’s share of IOU storage procurement that receives non-bypassable cost recovery treatment.2

In its comments on the consolidated advice letter, MCE’s calculation demonstrated that due to the amount of storage resources that have been granted cost recovery through Non-Bypassable Charges ("NBCs") in all IOU service territories, CCAs’ mandated energy storage procurement target has been reduced to zero. As noted in MCE’s comments, some of the resources have yet to be approved but are expected to receive cost recovery through NBCs. Once those resources are approved, CCAs’ mandated storage procurement target would be reduced to zero percent, and any CCA storage initiatives will be undertaken on a voluntary basis. See the section on Energy Storage for details on MCE’s energy storage procurement plans.

**Renewable Portfolio Standards (RPS) and Senate Bill (SB) 350**

Through 2016, the CPUC has been overseeing implementation of 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 percent 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 percent of their RPS compliance procurement under contracts of 10 years or longer beginning in 2021;
- CCA EE programs will be eligible to count toward statewide EE targets; and
- While maintaining independent governing authority, CCAs will submit CPUC IRPs to the Commission 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.

**Resource Adequacy (RA)**

Resource Adequacy is a CPUC administered program that ensures LSEs provide sufficient resources to the California Independent System Operator to ensure the safe and reliable operation of the grid in real time while ensuring appropriate incentives for the siting and construction of new resources needed for reliability in the future. Decision D.18-06-030 adopted local and flexible capacity obligations for 2019 for LSEs and established a policy supporting a multi-year procurement framework for local resource adequacy. D.18-06-030 expressed the CPUC’s intent to adopt a multi-year local resource adequacy requirement with a three-to-five-year duration, with implementation beginning in the 2020 resource adequacy program year. The requirements for the multi-year procurement framework, including the

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2 D. 17-04-039 at Ordering Paragraph 5 and 6.
potential role for a “central buyer” for certain resource adequacy products, is being considered in Track 2 of the resource adequacy proceeding.

Power Source Disclosure
AB 1110, signed into law in September of 2016, directs the California Energy Commission ("CEC") to adopt a methodology for the calculation of GHG emissions intensity for each electricity product offered by a retail supplier. The CEC has initiated a series of pre-rulemaking activities, such as providing two draft implementation proposals and the opportunity to comment on each proposal, to engage stakeholders. MCE has been an active participant in this proceeding and will continue to engage in dialogue with CEC staff to ensure that adopted regulations: 1) reflect industry best practices for GHG emissions accounting and reporting; 2) provide greater clarity to customers regarding the GHG intensity associated with MCE electricity products; and 3) promote alignment, where possible and appropriate, between AB 1110 and other state renewable energy programs.

MCE Procurement Targets

GHG-Free by 2025
MCE’s mission includes reduction of GHG emissions. With this in mind, MCE will commence the Planning Period with a targeted 81% GHG-free supply portfolio in 2019. The GHG-free proportion of MCE’s resource mix will be comprised of both RPS-eligible renewable energy and additional GHG-free electricity.3 MCE will steadily increase its use of GHG-free energy supply with the goal of achieving a 100 percent GHG-free supply portfolio by 2025, subject to operational practicalities and product availability.

MCE understands that implementation of AB 1110 will further clarify emissions intensity reporting for all generating technologies. MCE will apply pertinent emissions calculation methodologies, once finalized, when performing emissions accounting related to its electric supply portfolio.

3 For purposes of portfolio planning, MCE includes hydro-electric power and the predominantly hydro-electric energy produced by Asset Controlling Suppliers (“ACS”) in its “GHG-free” category. These ACS suppliers’ extremely low portfolio emissions factors are factored into MCE’s emissions rate and can be found on the California Air Resources Board (“CARB”) website at: https://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep-power/acs-power.htm.


5 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.
80 Percent Renewable Energy by 2025

In pursuit of its goal to increase the Light Green product content to 80 percent 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 if resource availability or market conditions preclude cost-effective procurement or if annual load comes in higher or lower than expected, but the primary goal is to achieve an 80 percent Light Green renewable supply no later than 2025.6 MCE’s annual renewable content targets appear in Table 1 below.

Limited Use of Unbundled Renewable Energy Certificates

MCE pursues a diversified renewable energy supply portfolio, which reflects a 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 “Portfolio Content Category 3,” “PCC 3,” or “Bucket 3”) to no more than three percent of its total resource mix. This limitation generally aligns with specifications reflected in California’s RPS program, which impose restricted use of PCC 3 products approximating three percent of annual retail sales during the third Compliance Period, which includes 2017 through 2020. MCE does not expect to contract for PCC 3 RECs in 2019 and beyond because of revised GHG accounting protocols in the implementation of AB 1110. However, MCE may occasionally purchase PCC3 RECs during the Planning Period as it manages its overall renewable energy content in the face of variable load and renewable energy supplies. To maintain progress toward its 80 percent renewable energy target, MCE will substantially focus on the procurement of bundled7 renewable energy supply throughout the Planning Period, as reflected in Table 1.

Table 1: MCE 10-Year Portfolio Mix Targets

<table>
<thead>
<tr>
<th>10 Year Portfolio Mix (%)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCC 1 Renewable</td>
<td>43%</td>
<td>45%</td>
<td>48%</td>
<td>50%</td>
<td>53%</td>
<td>55%</td>
<td>58%</td>
<td>58%</td>
<td>58%</td>
<td>58%</td>
</tr>
<tr>
<td>PCC 2 Renewable</td>
<td>17%</td>
<td>18%</td>
<td>19%</td>
<td>20%</td>
<td>20%</td>
<td>21%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>PCC 3 Renewable</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Large Hydro</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Conventional Energy</td>
<td>19%</td>
<td>16%</td>
<td>13%</td>
<td>10%</td>
<td>6%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total Renewable</td>
<td>60%</td>
<td>63%</td>
<td>67%</td>
<td>70%</td>
<td>75%</td>
<td>76%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Total Carbon Free</td>
<td>81%</td>
<td>84%</td>
<td>88%</td>
<td>90%</td>
<td>91%</td>
<td>96%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Workforce and Supplier Diversity

MCE is committed to supporting the economic health and sustainability of communities in its service area, and seeks opportunities to contract with businesses that are historically underrepresented in utilities’ procurement of energy resources, goods, and services. MCE’s guidelines for diversity in procurement support MCE’s efforts to procure energy resources, goods, and services from historically underrepresented and/or economically disadvantaged businesses and communities as allowed by law.

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6 While MCE increases its Light Green portfolio to 80 percent renewable, Deep Green and Local Sol customers will continue to receive 100 percent renewable energy.

7 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.”
MCE will facilitate and encourage diversity and a sustainable workforce through its support for:

1. Fair compensation in direct hiring, renewable development projects, customer programs, and procurement services;
2. Development of locally generated renewable energy within the MCE service area;
3. Direct use of union members from multiple trades;
4. Quality training, apprenticeship, and pre-apprenticeship programs;
5. Direct use of businesses local to the MCE service area;
6. Development of California based job opportunities;
7. Business and workforce initiatives located in low-income and disadvantaged communities;
9. Direct use of green and sustainable businesses; and
10. Use of direct hiring practices that promote diversity in the workplace.

In line with these workforce priorities, MCE has various requirements for employing local labor, including apprentices, providing prevailing wages, and complying with project labor agreements. In an effort to further MCE’s tracking and reporting of labor practices and General Order 156 diverse suppliers of its energy providers, in 2018 MCE used the Commission’s Clearinghouse to engage certified suppliers. MCE has also added an optional “Supplier Diversity and Labor Practices” questionnaire to its Open Season offer form to request that contractors voluntarily disclose their certification status. In compliance with Proposition 209, MCE explicitly does not give preferential treatment to bidders based on race, sex, color, ethnicity, or national origin. If such information is provided in the optional questionnaire, this information does not impact the Open Season selection process. Additionally, MCE has added workforce and diverse supplier reporting requirements to its form Power Purchase Agreement.

III. Electric Load Forecast

MCE’s long-term load forecast is primarily influenced by the number of customers that MCE expects to serve, and weather. The long-term load forecast for resource planning incorporates the seasonal
electricity consumption patterns of MCE’s projected customer base, including adjustments for load modifying effects of distributed energy resources, energy efficiency and electric vehicles.

Enrolled Customers

As of October 2018, MCE serves approximately 471,000 customer accounts in Marin County, Napa County, unincorporated Contra Costa County, the cities of El Cerrito, Lafayette, Richmond, San Pablo, Concord, Danville, Martinez, Moraga, Oakley, Pinole, Pittsburg, San Ramon, and Walnut Creek, and the city of Benicia in Solano County.

The scope of this IRP is limited to MCE’s Board-approved service area. In accordance with Policy No. 007 New Customer Communities, MCE may include additional communities that request service during the Planning Period. Any specific resource planning impacts related to future inclusion of additional member communities would be addressed by MCE’s Board prior to the completion of such processes and incorporated into future IRPs.

Customer participation rates are expressed as the proportion of customers that are currently served by MCE relative to the number of customers that are eligible to receive service. The difference between current customers and eligible customers represents the subset of customers that have voluntarily determined to opt-out of the MCE program. These customers receive bundled service from Pacific Gas & Electric (“PG&E”), the incumbent IOU in MCE’s service area. The vast majority of customer opt-outs occur within a 120-day period beginning 60 days prior to each customer’s scheduled MCE 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 a minimum of four mailed notices, which explain MCE’s service options and the opt-out process amongst other terms and conditions of service. Some of these notices target unique messages for special customer classes. For example, low-income customers on the energy discount programs such as California Alternate Rates for Energy (“CARE”) or Family Electric Rate Assistance (“FERA”) or Medical Baseline will be informed that their discounts remain with MCE service and that they do not need to reapply. These notices are complemented by a variety of marketing and community outreach efforts to raise awareness of the upcoming change to electric service. Much of this strategy is captured in the Community Outreach Plan written by MCE staff with input from local leaders, community staff, and elected officials. The community outreach strategy often includes tabling events, offering presentations to local groups, contacting high electricity users, placing advertisements in local newspapers and on billboards, and creating a Community Leader Advisory Group to help guide MCE’s outreach strategy to maximize awareness and education about Community Choice. MCE’s outreach strategies particularly emphasize reaching special populations, such as low-income and fixed-income populations, as well as those who speak English as a second language. 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.

8This does not include Direct Access customers operating within the new communities being enrolled.
The customer participation rate associated with MCE’s initial enrollments of Marin County is approximately 77 percent. Customer participation rates have increased in subsequent MCE enrollment phases: 81 percent of customers who were offered service following inclusion of the City of Richmond have continued with MCE; 86 percent in MCE’s subsequent expansion footprint of Benicia, San Pablo, El Cerrito, and unincorporated Napa County; 89 percent involved in the September 2016 inclusion of American Canyon, Calistoga, Lafayette, Napa, St. Helena, Walnut Creek, and Yountville; and 90% involved in the April 2018 inclusion of Concord, Danville, Martinez, Moraga, Oakley, Pinole, Pittsburg, San Ramon, and unincorporated Contra Costa County. This trend reflects the impact of MCE’s outreach efforts, increased awareness of the MCE brand and service advantages, legislation limiting certain IOU marketing tactics against CCAs, and general familiarity with the CCA service model, which continues to expand throughout California. The various phases of MCE’s growth are summarized in Table 2.

Table 2: MCE Expansion Phases

<table>
<thead>
<tr>
<th>MCE Phase</th>
<th>Description</th>
<th>Number of Accounts</th>
<th>Implementation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>MCE Member (municipal) accounts &amp; a subset of residential, commercial and/or industrial accounts, comprising approximately 20 percent of total customer load within MCE’s original Member Agencies.</td>
<td>8,500</td>
<td>May 7, 2010</td>
</tr>
<tr>
<td>Phase 2A</td>
<td>Additional commercial and residential accounts, comprising approximately 20 percent of total customer load within MCE’s original Member Agencies (incremental addition to Phase 1).</td>
<td>6,100</td>
<td>August 2011</td>
</tr>
<tr>
<td>Phase 2B</td>
<td>Remaining accounts within Marin County.</td>
<td>79,000</td>
<td>July 2012</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Residential, commercial, agricultural, and street lighting accounts within the City of Richmond.</td>
<td>35,000</td>
<td>July 2013</td>
</tr>
<tr>
<td>Phase 4A</td>
<td>Residential, commercial, agricultural, and street lighting accounts within the unincorporated areas of Napa County.</td>
<td>14,000</td>
<td>February 2015</td>
</tr>
<tr>
<td>Phase 4B</td>
<td>Residential, commercial, agricultural, and street lighting accounts within the City of San Pablo, the City of Benicia and the City of El Cerrito.</td>
<td>30,000</td>
<td>May 2015</td>
</tr>
<tr>
<td>Phase 5</td>
<td>Residential, commercial, agricultural, and street lighting accounts within the Cities of American Canyon, Calistoga, Lafayette, Napa, St. Helena, Walnut Creek and the Town of Yountville.</td>
<td>83,000</td>
<td>September 2016</td>
</tr>
<tr>
<td>Phase 6</td>
<td>Residential, commercial, agricultural, and street lighting accounts within the Cities of Concord, Danville, Martinez, Moraga, Oakley, Pinole, Pittsburg, San Ramon, and unincorporated Contra Costa County.</td>
<td>216,300</td>
<td>April 2018</td>
</tr>
</tbody>
</table>
Baseline Customer and Consumption Forecast

MCE’s electricity demand forecast starts with a forecast of customers by end-use classification (residential, commercial, etc.). Monthly energy consumption estimates, derived from historical data, are applied to yield a forecast of total energy demand by customer class. Hourly energy consumption estimates, derived from historical data, are used to break down the monthly energy forecast into more granular time-of-use and peak demand values. Certain adjustments are incorporated into 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 DER programs and emerging market factors such as growing electricity demand related to electric vehicle (EV) charging.

Distributed Energy Resources (DERs)

MCE anticipates that DERs will play an increasingly important role in reducing GHG emissions and vehicle (EV) charging, while at the same time optimizing energy procurement and use in its service area. Collectively, EE, Demand Response (DR), rooftop solar, energy storage, EVs, and water-energy conservation can provide multiple revenue opportunities and use DERs to maximize the use of renewable energy and reduce GHG emissions while achieving community benefits such as reduced local GHG emissions, increased workforce opportunities, and customer bill savings.

Reduced local GHG emissions, increased workforce opportunities, and customer bill savings.
MCE considers DER deployment to be an emerging market opportunity, albeit one that presents many challenges to successful implementation. MCE is actively addressing these challenges by developing tools and pilot programs to usher in wider-scale DER deployment not only within its service area but also statewide through adoption by other CCAs forming within California.

MCE’s DER strategies include: development of local energy projects; exploration of market designs; creation of analytical tools to quickly analyze and evaluate the suitability of specific DER solutions; emphasis on DER pilots that reduce MCE’s exposure to wholesale market volatility; and shifting energy use away from peak evening hours when renewable energy production is low and market prices are high.

**Current DER Programs and Projects**

**Building Efficiency Optimization**

The CEC awarded MCE a Local Government Challenge Grant of $1.75 million to pursue an innovative Building Efficiency Optimization ("BEO") pilot. The goal of this project is to facilitate scalability of DERs via a strong, data-driven siting and targeting approach, which will be applied to and validated by three demonstration projects.

The goals for this project are also to i) examine the role that CCAs, as local, independent government agencies, can play in navigating barriers that currently prevent broad and rapid deployment of targeted DERs; and ii) deliver an innovative and replicable CCA program solution that enables targeted DER portfolios to be coordinated, integrated, optimized, and dispatched rapidly across CCA service areas, thereby accelerating state and local climate action and progress toward GHG reduction goals. This solution will be available to use across MCE’s service area by Q3 2020.

**Demand Response (DR)**

MCE continues to analyze both the residential and commercial sectors for DR opportunities while also facilitating third-party DR programs in its service area. In addition, MCE customers are eligible for many of the DR programs administered by PG&E, and MCE receives DR allocations from PG&E administered programs equal to approximately 3 percent of MCE’s peak capacity requirement. Between MCE-implemented programs, those managed by third parties, and PG&E allocations, MCE intends for DR to account for 5 percent of its RA requirements by the end of the Planning Period.

MCE is currently developing limited-scope, pilot DR programs with a particular interest in exploring platforms and opportunities for aggregating and shifting load away from evening peak hours. In order to complement its PG&E DR allocations and MCE’s own programs, MCE is also working to gain a better understanding of third-party DR programs operating within its service area to learn where services are being provided and where gaps exist. Depending on the outcome of these activities, MCE may launch new DR programs and possibly seek funding from other sources for more robust programs in this sector.

**Advanced Energy Rebuild Napa**

In 2018 MCE partnered with the Bay Area Air Quality Management District, Napa County, BayREN, and PG&E, to administer up to $1 million for electrification and solar rebates for single family homes.
affected by the 2017 and 2018 wildfires in Napa County. Homeowners who are starting to rebuild from the devastation can access up to $12,540 in incentives for these electrification measures (including high performance attics and walls, efficient windows, heat pump water and space heaters, smart thermostats, EV charging, solar plus storage). This process braids multiple funding sources through one application process. There will be an additional 20% incentive provided to income-qualified households.

**Electric Vehicles (EVs)**
The electrification of transportation will play an essential role in reducing GHG emissions in our communities. Over the past 18 months, MCE has been piloting and engaging in a number of EV-related initiatives to inform larger program offerings in the future. These initiatives have included DR-enabled charging devices, incentives for electric buses, funding for charging stations, and a strategic planning engagement in partnership with the US EPA to analyze local EV market trends and their impact to MCE’s customer demand.

MCE has identified workplace EV charging as an opportunity to shift demand of the 7,507 EV drivers in its service area to hours of the day when energy is frequently cheaper, cleaner, and when excess renewable generation might otherwise be curtailed. MCE sees this clean, renewable, and abundant fuel, which is typically priced lower than an equivalent amount of gasoline-based fuel, as a key value proposition. MCE is coordinating with PG&E on their EV Charge Network program and managing a stand-alone 3-year EV charging rebate program (MCEv) to actively facilitate the alignment of available funding sources and technical assistance for commercial customers interested in installing and operating charging stations in MCE’s service area. Built into MCEv is also a rebate for income-qualified customers interested in purchasing new or used electric vehicles.

**Energy Efficiency (EE)**
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 two percent. MCE’s 2019 peak demand forecast is approximately 1,048 MW, and annual consumption is expected to be approximately 5,275,000 MWh, two percent of which is 105,500 MWh. Achieving this level of savings will require development of specific programs, anticipated funding, and time to deploy the efficiency measures.

MCE has a statutory right to serve as an independent administrator of ratepayer-funded EE programs. Such funding is derived through collection of the public purpose program charge from all customers, including those served by both CCAs and IOUs; disposition of public purpose program funds is administered by the CPUC. MCE has received CPUC funding approval for EE programs to be administered through 2025 and currently administers programs in the multifamily, commercial, and single family sectors and will be rolling out agriculture, industrial, and a suite of comprehensive single family programs. In addition, MCE layers additional incentives for income qualified, multifamily properties with incentives from the Multifamily Energy Savings Program through the Low-Income Families and Tenants ("LIFT") Program, which includes a fuel switching component that incentivizes

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9 As of September 2016, California Department of Motor Vehicles.
property owners to replace gas space and water heaters with heat pump technology to further benefit our most economically vulnerable community members. The LIFT program is funded through the Energy Savings Assistance Program (ESAP), also administered by the Commission. The first year savings forecasts of MCE-administered EE programs are reflected below in Figure 3.

**Figure 3: MCE 1st Year Energy Efficiency Impacts (GWh)**

(1) Forecast includes ratepayer funded EE programs approved for funding through 2025.

To complement these other efforts and create green-collar career pathways through the construction of renewable projects, installation of energy efficiency, and connect local workforce to our Pittsburg call center, MCE has supported workforce development partners such as the Conservation Corps North Bay, Marin City Community Development Corporation ("MCCDC"), Rising Sun Energy Center, RichmondBUILD, and Future Build. Through the approval of our Energy Efficiency Business Plan, MCE has been able to allocate non-resource dollars to fund workforce development initiatives beyond the Multifamily Energy Savings Direct Install service. MCE is also coordinating closely with PG&E to maximize community benefits and ensure gaps are filled.

**Energy Storage**

In 2018, MCE issued its first standalone energy storage RFO as part of its annual Open Season procurement process. The products sought included behind-the-meter peak demand management systems to serve MCE’s commercial and industrial customers, aggregated community energy storage systems capable of scheduling into the California Independent System Operator ("CAISO") markets, and grid asset systems to shape load and to provide grid services. Other benefits that MCE seeks from its energy storage offers include additional Resource Adequacy, generation shifting to cover MCE’s super peak demand, energy arbitrage savings to MCE, reduced congestion costs, and potentially supplying Ancillary Services and Proxy Demand Response to the CAISO market.
To date, MCE has 1.34 MW of energy storage resources in its service area, including an installation at the College of Marin.

![Energy Storage Installation at College of Marin](image)

**Net Energy Metering (NEM) and Rooftop Solar Rebates**

Through its NEM program, MCE supports customer-sited distributed generation within its service area. MCE’s NEM program offers incentives not typically found in utility programs, including rollover of NEM generation credits from year-to-year (up to a cap of $5,000), as well as the opportunity to receive a cash payment for the retail value of those credits. In 2018, eligible credit balances for cash-out exceeded $1.8 million, with some of the largest beneficiaries including school districts and other public agencies.

MCE’s NEM program currently includes nearly 30,000 customers (approximately 6.3% of all MCE accounts) with aggregate installed renewable generating capacity of approximately 306,000 kW (306 MW). Beyond NEM, MCE incentivizes local rooftop solar development for low income customers through a partnership with California’s Single Family Affordable Solar Housing (“SASH”) program administrator, GRID Alternatives. MCE contributes $900 per solar installation to low-income customers who qualify for GRID Alternative’s service. By leveraging multiple sources of funding, GRID Alternatives installs these systems in disadvantaged communities at little-to-no cost for the customer. From 2012-2018, MCE allocated $345,000 toward this rebate program and has supported the installation of 126 residential solar PV systems on low-income homes, representing 249.71 kW of new, local renewable capacity.

**Community Power Coalition**

To facilitate direct community feedback in the development, progress, and evolution of these customer programs, staff engages MCE’s Community Power Coalition. The Coalition was formed in 2014 to focus on the interests of underrepresented and historically marginalized constituencies through collaborations with our local partners and open dialogue with our communities. As of 2018, this group represents 31 local organizations, which are invited to meet every other month to discuss regulatory and legislative issues, build community awareness of new MCE programs and policies, provide feedback on these programs and other outreach activities, and hear updates on the Community Choice movement.
IV. **Resources**

**Existing Resource Commitments**
MCE currently has approximately sixty 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. MCE’s current portfolio of energy resources is summarized in Table 3, below, with additional detail provided in Appendix B.
Table 3: MCE Portfolio of Energy Resources as of 6/30/2018

<table>
<thead>
<tr>
<th>Project</th>
<th>Counterparty</th>
<th>Technology</th>
<th>Contract Capacity (MW)</th>
<th>Term</th>
<th>Annual Deliveries (GWh)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLU OLED RENEWABLE</td>
<td>Calpine</td>
<td>Geothermal</td>
<td>10</td>
<td>2017-2026</td>
<td>88</td>
<td>Lake Co, Sonoma Co, CA</td>
</tr>
<tr>
<td>Energy 2001 - Lincoln Landfill</td>
<td>Genpower</td>
<td>Landfill Gas</td>
<td>4.8</td>
<td>2013-2024</td>
<td>27</td>
<td>Lincoln, CA</td>
</tr>
<tr>
<td>G2 Hay Road</td>
<td>G2Energy</td>
<td>Landfill Gas</td>
<td>1.6</td>
<td>2013-2024</td>
<td>12</td>
<td>Solano Co, CA</td>
</tr>
<tr>
<td>G2 Ostrom Road</td>
<td>G2Energy</td>
<td>Landfill Gas</td>
<td>1.6</td>
<td>2013-2024</td>
<td>12</td>
<td>Yuba Co, CA</td>
</tr>
<tr>
<td>Redwood Landfill</td>
<td>Waste Management</td>
<td>Landfill Gas</td>
<td>4</td>
<td>2017-2037</td>
<td>30</td>
<td>Novato, CA</td>
</tr>
<tr>
<td>Pardee and Camanche Powerhouses</td>
<td>EBNAUD</td>
<td>RPS-Eligible Hydro</td>
<td>18</td>
<td>2018-2025</td>
<td>70</td>
<td>Mokelumne River, CA</td>
</tr>
<tr>
<td>American Canyon A (FIT)</td>
<td>American Canyon</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2016-2028</td>
<td>2.8</td>
<td>Napa, CA</td>
</tr>
<tr>
<td>American Canyon B (FIT)</td>
<td>American Canyon</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2016-2028</td>
<td>2.8</td>
<td>Napa, CA</td>
</tr>
<tr>
<td>American Canyon C (FIT)</td>
<td>American Canyon</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2016-2028</td>
<td>2.8</td>
<td>Napa, CA</td>
</tr>
<tr>
<td>Antelope Expansion 2</td>
<td>sPower</td>
<td>Solar PV</td>
<td>1.0</td>
<td>2013-2037</td>
<td>300</td>
<td>Mojave Desert, CA</td>
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<tr>
<td>CMSA (FIT)</td>
<td>CMSA</td>
<td>Solar PV</td>
<td>0.75</td>
<td>2019-2028</td>
<td>1.3</td>
<td>San Rafael, CA</td>
</tr>
<tr>
<td>Cooley Quarry (MCE Local Solar) (FIT)</td>
<td>Cooley Quarry</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2017-2036</td>
<td>2.9</td>
<td>Novato, CA</td>
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<tr>
<td>Cost Plus Plaza Larkspur (FIT)</td>
<td>Cost Plus Plaza</td>
<td>Solar PV</td>
<td>0.241</td>
<td>2016-2035</td>
<td>0.5</td>
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<tr>
<td>Cottonwood Solar - City of Coronado</td>
<td>Domin</td>
<td>Solar PV</td>
<td>11</td>
<td>2015-2039</td>
<td>30</td>
<td>Kings Co, CA</td>
</tr>
<tr>
<td>Cottonwood Solar - Goose Lake</td>
<td>Domin</td>
<td>Solar PV</td>
<td>12</td>
<td>2015-2039</td>
<td>32</td>
<td>Kern Co, CA</td>
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<tr>
<td>Cottonwood Solar - Marin Parkport</td>
<td>Domin</td>
<td>Solar PV</td>
<td>1</td>
<td>2016-2039</td>
<td>2</td>
<td>Novato, CA</td>
</tr>
<tr>
<td>Desert Harvest</td>
<td>EDF</td>
<td>Solar PV</td>
<td>80</td>
<td>2020-2039</td>
<td>237-262</td>
<td>Riverside Co, CA</td>
</tr>
<tr>
<td>DRES Quarry (FIT)</td>
<td>DRES Quarry</td>
<td>Solar PV</td>
<td>0.1</td>
<td>2019-2038</td>
<td>0.3</td>
<td>Novato, CA</td>
</tr>
<tr>
<td>ED Products (FIT)</td>
<td>ED Products</td>
<td>Solar PV</td>
<td>0.056</td>
<td>2018-2037</td>
<td>0.1</td>
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<tr>
<td>Freehy Industrial Park Unit #1 (FIT)</td>
<td>Freehy Industrial</td>
<td>Solar PV</td>
<td>0.98</td>
<td>2015-2034</td>
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<td>Richmond, CA</td>
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<tr>
<td>Freehy Industrial Park Unit #2 (FIT)</td>
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<td>0.98</td>
<td>2015-2034</td>
<td>1.8</td>
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</tr>
<tr>
<td>Great Valley</td>
<td>Sempra</td>
<td>Solar PV</td>
<td>100</td>
<td>2018-2032</td>
<td>279-2790</td>
<td>Fresno Co, CA</td>
</tr>
<tr>
<td>Little Bear 3 Solar</td>
<td>First Solar</td>
<td>Solar PV</td>
<td>40</td>
<td>2020-2030</td>
<td>90-100</td>
<td>Fresno Co, CA</td>
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<tr>
<td>Little Bear 3 Solar</td>
<td>First Solar</td>
<td>Solar PV</td>
<td>20</td>
<td>2020-2039</td>
<td>50-55</td>
<td>Fresno Co, CA</td>
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<tr>
<td>Little Bear 4 Solar</td>
<td>First Solar</td>
<td>Solar PV</td>
<td>50</td>
<td>2020-2039</td>
<td>124-137</td>
<td>Fresno Co, CA</td>
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<tr>
<td>Little Bear 5 Solar</td>
<td>First Solar</td>
<td>Solar PV</td>
<td>50</td>
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<td>124-137</td>
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<tr>
<td>Lost Hills</td>
<td>Con Edison</td>
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<td>20</td>
<td>2018-2019</td>
<td>37-50</td>
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<td>Oakley (FIT)</td>
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<td>0.99</td>
<td>2018-2037</td>
<td>1.8</td>
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<tr>
<td>Palm Drive A (FIT)</td>
<td>Palm Drive</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2019-2038</td>
<td>2.8</td>
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<tr>
<td>Palm Drive B (FIT)</td>
<td>Palm Drive</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2019-2038</td>
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<td>Napa, CA</td>
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<tr>
<td>Palm Drive C (FIT)</td>
<td>Palm Drive</td>
<td>Solar PV</td>
<td>0.99</td>
<td>2019-2038</td>
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<tr>
<td>RE Mustang</td>
<td>Recurrent Solar</td>
<td>Solar PV</td>
<td>30</td>
<td>2018-2032</td>
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<td>Fresno Co, CA</td>
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<tr>
<td>San Rafael Airport (FIT)</td>
<td>San Rafael Airport</td>
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<td>0.972</td>
<td>2012-2031</td>
<td>1.4</td>
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<tr>
<td>San Rafael Airport 2 (FIT)</td>
<td>San Rafael Airport</td>
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<td>San Rafael, CA</td>
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<tr>
<td>Silveira Ranch A (FIT)</td>
<td>Silveira Ranch</td>
<td>Solar PV</td>
<td>0.999</td>
<td>2019-2038</td>
<td>2.6</td>
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<tr>
<td>Silveira Ranch B (FIT)</td>
<td>Silveira Ranch</td>
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<td>0.999</td>
<td>2019-2038</td>
<td>2.6</td>
<td>Novato, CA</td>
</tr>
<tr>
<td>Silveira Ranch C (FIT)</td>
<td>Silveira Ranch</td>
<td>Solar PV</td>
<td>0.999</td>
<td>2019-2038</td>
<td>2.6</td>
<td>Novato, CA</td>
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<tr>
<td>MCE Solar One</td>
<td>sPower</td>
<td>Solar PV</td>
<td>10.3</td>
<td>2017-2036</td>
<td>11-21</td>
<td>Richmond, CA</td>
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<tr>
<td>PPL GreenPowerWind</td>
<td>PPL Energy</td>
<td>Wind</td>
<td>18.5</td>
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<td>Harvest Wind</td>
<td>Morgan Stanley</td>
<td>Wind</td>
<td>Variable</td>
<td>2018-2020</td>
<td>76-90</td>
<td>Washington, Oregon</td>
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<tr>
<td>Los Banos Wind</td>
<td>Terra Gen</td>
<td>Wind</td>
<td>121</td>
<td>2020-2031</td>
<td>372</td>
<td>Merced Co, CA</td>
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<tr>
<td>Portfolio</td>
<td>Powerex</td>
<td>Wind</td>
<td>Variable</td>
<td>2018-2020</td>
<td>15-50</td>
<td>British Columbia</td>
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<td>Portfolio</td>
<td>3 Phases</td>
<td>Wind</td>
<td>Variable</td>
<td>2018-2039</td>
<td>150-215</td>
<td>Colorado</td>
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<td>Strauss Wind</td>
<td>BayWa</td>
<td>Wind</td>
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<td>2020-2054</td>
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<td>Lompoc, CA</td>
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<tr>
<td>TGP Energy Management</td>
<td>Terra Gen</td>
<td>Wind</td>
<td>100</td>
<td>2013-2020</td>
<td>300</td>
<td>Tehachapi, CA</td>
</tr>
<tr>
<td>Voyager Wind (FIT)</td>
<td>Terra Gen</td>
<td>Wind</td>
<td>62</td>
<td>2013-2039</td>
<td>138</td>
<td>Mojave, CA</td>
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</tbody>
</table>

**CARBON FREE**

<table>
<thead>
<tr>
<th>Project</th>
<th>Counterparty</th>
<th>Technology</th>
<th>Contract Capacity (MW)</th>
<th>Term</th>
<th>Annual Deliveries (GWh)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPA ACS Portfolio</td>
<td>WAPA/Direct</td>
<td>ACS</td>
<td>Variable</td>
<td>2018-2019</td>
<td>410</td>
<td>Pacific Northwest</td>
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<tr>
<td>Central Valley Project</td>
<td>WAPA</td>
<td>Hydro</td>
<td>Variable</td>
<td>2015-2024</td>
<td>25</td>
<td>California</td>
</tr>
<tr>
<td>Middletown/Ralston Powhouses</td>
<td>Tenasia</td>
<td>Hydro</td>
<td>Variable</td>
<td>2018-2022</td>
<td>300-600</td>
<td>California</td>
</tr>
<tr>
<td>Colgate/Narrows Powhouses</td>
<td>Shell</td>
<td>Hydro</td>
<td>Variable</td>
<td>2019</td>
<td>290</td>
<td>California</td>
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</table>

**CONVENTIONAL**

<table>
<thead>
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<th>Project</th>
<th>Counterparty</th>
<th>Technology</th>
<th>Contract Capacity (MW)</th>
<th>Term</th>
<th>Annual Deliveries (GWh)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>System</td>
<td>Variable</td>
<td>2018-2020</td>
<td>58-3-190</td>
<td>438</td>
<td>California</td>
</tr>
<tr>
<td>Ecola Generation Company</td>
<td>Ecola Generation Company</td>
<td>System</td>
<td>50</td>
<td>2018-2019</td>
<td>438</td>
<td>California</td>
</tr>
<tr>
<td>Direct Energy</td>
<td>Energy America</td>
<td>System</td>
<td>Variable</td>
<td>2018-2020</td>
<td>310 - 484</td>
<td>California</td>
</tr>
<tr>
<td>Direct Energy</td>
<td>Energy America</td>
<td>System</td>
<td>Variable</td>
<td>2018-2020</td>
<td>607</td>
<td>California</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>Morgan Stanley</td>
<td>System</td>
<td>Variable</td>
<td>2019-2020</td>
<td>208-216</td>
<td>California</td>
</tr>
<tr>
<td>Morgan Stanley</td>
<td>Morgan Stanley</td>
<td>System</td>
<td>Variable</td>
<td>2018-2020</td>
<td>189-188</td>
<td>California</td>
</tr>
</tbody>
</table>

**Note:** The above table represents the MCE Portfolio of Energy Resources as of 6/30/2018, including various projects such as geothermal, solar, and wind power with their respective capacities, terms, and delivery locations. The table also categorizes projects under different sections like Carbon Free, Conventional, and others, highlighting the technology used (e.g., geothermal, solar, wind) and their locations.
Current Resource Mix

MCE’s anticipated 2019 resource mix, displayed in Figure 5, will contain approximately 81 percent renewable and carbon free energy - one of the highest renewable carbon free energy contents in California.

Figure 5: MCE 2019 Estimated Resource Mix

10 Percentages may not sum to 100 percent due to rounding. Figures include all supply for the Light Green and Deep Green retail product offerings.
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 clean, reliable, and 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 GHG-free energy content, including subcategories for various renewable energy products, and has also established targets for planning 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 conventional energy sources, such as natural gas generating technologies or system power. System power describes energy purchases from the wholesale market that are not directly associated with specific generators.

Renewable Resources
MCE’s policy is to provide its Light Green customers with energy that is at least 50 percent renewable and expects to meet a 60% Light Green target in 2019; incremental renewable energy quantities will also be procured on behalf of Deep Green program participants to ensure that such customers are provided with 100 percent renewable energy. MCE meets its renewable energy requirements with a combination
of RPS-eligible energy products. As Figure 7 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 percent 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. SB 100 increases the renewable energy purchase requirement at applicable to Load Serving Entities to 60 percent by 2030. Transitions from the previously applicable procurement mandate (33 percent by 2020) will be implemented gradually with “straight line” increases during each year of the compliance regime. To satisfy applicable procurement mandates, LSEs are allowed to purchase a variety of renewable energy products, including power produced by generating resources located within California and elsewhere in Western Electricity Coordinating Council (“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 products produced outside of California (PCC 2), subject to certain quantity limitations; and
iii) unbundled renewable energy certificates from RPS-eligible resources (PCC 3), also subject to quantity limitations.

MCE anticipates a sufficient supply of RPS-eligible renewable resources to meet a 60 percent procurement target during the 2019 calendar year, well in excess of the applicable 31 percent RPS procurement requirement. Thereafter, MCE anticipates utilizing renewable energy supply from existing and future transactions to ensure that its use of renewable energy aligns 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), MCE plans to procure 75 percent of its RPS target from PCC 1 resources. With this target in mind, MCE has substantially focused on long-term power

11 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.
purchase agreements ("PPAs") with new, California-based generating facilities that will produce PCC 1-
eligible renewable energy.\textsuperscript{12}

MCE’s goal throughout the Planning Period is to maintain a “steady-state” procurement cycle of
consistent annual volumes of longer-term renewable energy contracts. To supplement its core
procurement of PCC 1 resources under long-term contracts, MCE engages in short-term contracts for
PCC 1, PCC 2 and, to a lesser degree, PCC 3 renewable energy supplies, if any, to balance and optimize
its portfolio. As shown in Table 4, MCE has secured contracts for renewable energy volumes well in
excess of applicable RPS procurement requirements.

\textbf{Table 4: MCE RPS Compliance Energy Balance, 2019-2028}

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
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<tbody>
<tr>
<td>Retail Sales (GWh)</td>
<td>5,275</td>
<td>5,299</td>
<td>5,349</td>
<td>5,446</td>
<td>5,483</td>
<td>5,526</td>
<td>5,577</td>
<td>5,638</td>
<td>5,701</td>
<td>5,784</td>
</tr>
<tr>
<td>State RPS %</td>
<td>31%</td>
<td>33%</td>
<td>35%</td>
<td>36%</td>
<td>38%</td>
<td>40%</td>
<td>42%</td>
<td>43%</td>
<td>45%</td>
<td>47%</td>
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<tr>
<td>RPS Energy Required (GWh)</td>
<td>1,635</td>
<td>1,749</td>
<td>1,856</td>
<td>1,982</td>
<td>2,089</td>
<td>2,200</td>
<td>2,314</td>
<td>2,435</td>
<td>2,560</td>
<td>2,695</td>
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<tr>
<td>RPS Energy Contracted (GWh)</td>
<td>2,022</td>
<td>1,923</td>
<td>2,552</td>
<td>2,545</td>
<td>2,540</td>
<td>2,505</td>
<td>2,499</td>
<td>2,417</td>
<td>2,323</td>
<td>2,317</td>
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<tr>
<td>Category 1 Required (GWh)</td>
<td>1,226</td>
<td>1,312</td>
<td>1,392</td>
<td>1,487</td>
<td>1,567</td>
<td>1,650</td>
<td>1,736</td>
<td>1,827</td>
<td>1,920</td>
<td>2,022</td>
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<tr>
<td>Category 1 Contracted (GWh)</td>
<td>1,662</td>
<td>1,923</td>
<td>2,552</td>
<td>2,545</td>
<td>2,540</td>
<td>2,505</td>
<td>2,499</td>
<td>2,417</td>
<td>2,323</td>
<td>2,317</td>
</tr>
<tr>
<td>Net Short/(Long)</td>
<td>(436)</td>
<td>(611)</td>
<td>(1,160)</td>
<td>(1,058)</td>
<td>(973)</td>
<td>(855)</td>
<td>(763)</td>
<td>(591)</td>
<td>(403)</td>
<td>(296)</td>
</tr>
</tbody>
</table>

\textbf{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 targeted renewable energy supply
for Light Green customers in 2018 and the 100 percent renewable energy supply for Deep Green
customers. MCE’s Power Content Label ("PCL") is a key customer communication tool that provides
information regarding MCE’s proportionate use of various fuel sources during each year of operation.
The 2017 PCL, which is MCE’s most recent, quantifies MCE’s aggregate renewable energy use: 61
percent renewable for Light Green customers; and 100 percent renewable for Deep Green customers.
In this example, all renewable energy volumes above the 27 percent compliance mandate were fulfilled
through voluntary renewable energy purchases. It should be noted that the 2017 Light Green
renewable content was higher than the 2017 target due to lower than expected load. Deviations from
target due to weather and other unanticipated events are consistent with the normal operation of LSEs
in California.

\textsuperscript{12} Historically, MCE has contracted with PCC 1 resources located within California; however, some resources
located outside of California are eligible for PCC 1, typically through direct interconnection or firm transmission
rights to the CAISO. Whereas MCE has an established preference for in-state resources, it may consider contracting
with out-of-state, PCC 1-qualified resources – to the extent that they offer increased value or other desirable
portfolio attributes – during the Planning Period.
MCE offers a voluntary 100 percent renewable energy option, known as Deep Green service, to all customers. The Deep Green supply portfolio relies 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. Additionally, half of the premium charged to Deep Green customers is allocated to the Local Renewable Energy Reserve Fund. This fund is used to cover the pre-development and other costs of local projects, such as for the MCE Solar One 10.5 MW solar PV project in Richmond, California. As a result, increased participation in Deep Green not only reduces a customer’s electricity-related GHG emissions, but also supports local project development and, by extension, creates economic benefits and associated local “green-collar” jobs within MCE’s service area.

Deep Green usage currently represents approximately 3.2% percent of MCE total retail electricity sales. In 2018, MCE Deep Green sales increased from 107 GWh in 2017 to 160 GWh, as private and public sector commercial customers opted up to Deep Green service to achieve their sustainability goals and meet emissions reduction targets. More than half of MCE member municipalities have enrolled their government accounts in Deep Green service, with 16 of these member municipalities enrolling all of their accounts.
Table 5: MCE Deep Green Participation, as of June 2018

<table>
<thead>
<tr>
<th>Number of Customers</th>
<th>Total MCE</th>
<th>Residential Deep Green</th>
<th>Commercial Deep Green</th>
<th>Total Deep Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total MCE Customers</td>
<td>471,137</td>
<td>6,816</td>
<td>2,389</td>
<td>9,205</td>
</tr>
<tr>
<td>% of total Retail Sales (MWh)</td>
<td>1.45%</td>
<td>0.51%</td>
<td>1.95%</td>
<td></td>
</tr>
<tr>
<td>Total Retail Sales (MWh)</td>
<td>4,766,000</td>
<td>27,000</td>
<td>133,000</td>
<td>160,000</td>
</tr>
<tr>
<td>% of total Retail Sales</td>
<td>0.57%</td>
<td>2.70%</td>
<td>3.32%</td>
<td></td>
</tr>
</tbody>
</table>

Local Sol Service

In 2014, MCE established its voluntary 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 percent local solar generation from projects located within MCE’s service area. Local Sol began serving customers in July 2017, following commercial operation of the supporting local generator at Novato’s Cooley Quarry. Based on customer interest and subject Board approval, MCE may consider expansion of the Local Sol program once the current program capacity is reached.

Table 6: MCE Local Sol Participation, 2018

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Program Capacity (Customer Accounts)</th>
<th>Energy (MWh/year)</th>
<th>Currently Enrolled (Customer Accounts)</th>
<th>Currently Enrolled (MWh/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooley Quarry</td>
<td>~300</td>
<td>2,885</td>
<td>175</td>
<td>874</td>
</tr>
</tbody>
</table>

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 7.

Table 7: MCE Renewable Energy Balance, 2019-2028

<table>
<thead>
<tr>
<th>Light Green Renewable Content Goal (%)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Green Renewable Energy Target (GWh)</td>
<td>3,774</td>
<td>3,774</td>
<td>4,009</td>
<td>4,216</td>
<td>4,519</td>
<td>4,759</td>
<td>5,010</td>
<td>5,062</td>
<td>5,122</td>
<td>5,201</td>
</tr>
<tr>
<td>Deep Green Incremental Renewable Energy Target (GWh)</td>
<td>170</td>
<td>175</td>
<td>180</td>
<td>186</td>
<td>190</td>
<td>195</td>
<td>200</td>
<td>205</td>
<td>210</td>
<td>215</td>
</tr>
<tr>
<td>Contracted Renewable Energy (GWh)</td>
<td>2,119</td>
<td>2,653</td>
<td>2,614</td>
<td>2,608</td>
<td>2,503</td>
<td>2,588</td>
<td>2,542</td>
<td>2,486</td>
<td>2,392</td>
<td>2,386</td>
</tr>
<tr>
<td>Net Short (GWh)</td>
<td>1,628</td>
<td>1,896</td>
<td>1,574</td>
<td>1,863</td>
<td>2,106</td>
<td>2,386</td>
<td>2,649</td>
<td>2,791</td>
<td>2,940</td>
<td>3,029</td>
</tr>
</tbody>
</table>

GHG-Free Resources

MCE has outlined a specific GHG-free procurement goal of 81 percent in 2019, with regular increases each year thereafter until MCE achieves its long-term objective of a 100 percent GHG-free resource mix. MCE acknowledges that achieving a 100 percent GHG-free resource mix will be dependent upon

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13 Total Deep Green participants as of June 2018, the most recent month for which data are available. Sales for the first half of 2018 have been extrapolated through the balance of the year. Percentages indicate portion of total MCE customers and retail sales, respectively.

14 Local Sol service capacity is based on usage of enrolled customers. As of August 2018, 170 customer accounts – of an estimated capacity of 300 – have enrolled.
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 8.

Table 8: MCE GHG-Free Energy Balance, 2019-2028 (GWh)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Energy Requirements</strong></td>
<td>5,592</td>
<td>5,617</td>
<td>5,670</td>
<td>5,773</td>
<td>5,812</td>
<td>5,858</td>
<td>5,912</td>
<td>5,976</td>
<td>6,043</td>
<td>6,131</td>
</tr>
<tr>
<td><strong>GHG-Free Target (%)</strong></td>
<td>81%</td>
<td>84%</td>
<td>88%</td>
<td>91%</td>
<td>94%</td>
<td>97%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>GHG-Free Targeted Volumes</strong></td>
<td>4,543</td>
<td>4,740</td>
<td>4,961</td>
<td>5,232</td>
<td>5,419</td>
<td>5,675</td>
<td>5,912</td>
<td>5,976</td>
<td>6,043</td>
<td>6,131</td>
</tr>
<tr>
<td><strong>GHG-Free Under Contract</strong></td>
<td>3,327</td>
<td>2,727</td>
<td>3,177</td>
<td>3,170</td>
<td>2,565</td>
<td>2,530</td>
<td>2,524</td>
<td>2,442</td>
<td>2,348</td>
<td>2,342</td>
</tr>
<tr>
<td><strong>Renewable Energy Open Position</strong></td>
<td>1,781</td>
<td>2,110</td>
<td>1,721</td>
<td>2,010</td>
<td>2,254</td>
<td>2,535</td>
<td>2,788</td>
<td>2,837</td>
<td>3,091</td>
<td>3,175</td>
</tr>
<tr>
<td><strong>GHG-Free Open Position</strong></td>
<td>(565)</td>
<td>(107)</td>
<td>63</td>
<td>51</td>
<td>630</td>
<td>610</td>
<td>590</td>
<td>597</td>
<td>604</td>
<td>614</td>
</tr>
</tbody>
</table>

**System Energy**

MCE utilizes fixed-price energy contracts to hedge market price exposure associated with its load, which can arise due to open positions in its supply portfolio, intermittent deliveries from variable energy resources (“VERs”), or via energy supply contracts that include market index-based prices. Consistent with its mission to reduce GHG emissions, MCE prioritizes renewable and GHG-free energy resources when evaluating hedge contracts; to the extent that resource economics or market availability dictate, MCE also utilizes fixed-price contracts for unspecified source system energy or specified source natural gas fueled generation to stabilize its retail rates.\(^{15}\) MCE purchases system energy or conventional generation via short- and intermediate-term contracts or via the CAISO markets.

**Capacity Resources**

MCE meets California’s Resource Adequacy program requirements by procuring qualifying capacity sufficient to meet MCE’s projected peak demand plus a 15 percent 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 CAISO. MCE has a need for capacity purchases to meet RA obligations beginning in 2019. RA purchases are generally conducted via short and medium term transactions, consistent with the obligations under California’s RA program. MCE is actively engaged in procurement processes related to open positions for the balance of 2019 and has also addressed portions of its anticipated obligations in future years through multi-year RA contracts. In addition, MCE has long-term capacity rights under several of its PPAs, which will provide a portion of MCE’s local RA needs during the Planning Period.

Table 9: MCE Resource Adequacy Capacity Balance, 2019-2028 (MW)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Peak Demand</strong></td>
<td>1048</td>
<td>1040</td>
<td>1044</td>
<td>1069</td>
<td>1068</td>
<td>1069</td>
<td>1073</td>
<td>1084</td>
<td>1095</td>
<td>1109</td>
</tr>
<tr>
<td><strong>Total RA Contracted (System, Local &amp; Flex)</strong></td>
<td>840</td>
<td>721</td>
<td>650</td>
<td>355</td>
<td>355</td>
<td>199</td>
<td>199</td>
<td>204</td>
<td>204</td>
<td>204</td>
</tr>
<tr>
<td><strong>Net Short/Long</strong></td>
<td>207</td>
<td>319</td>
<td>394</td>
<td>714</td>
<td>713</td>
<td>871</td>
<td>875</td>
<td>880</td>
<td>890</td>
<td>905</td>
</tr>
</tbody>
</table>

**Flexible Capacity**

The CAISO, in collaboration with the CPUC and other local regulatory authorities, must ensure that the electric system has sufficient flexibility, including load-following capabilities, to address unexpected

\(^{15}\) MCE policy prohibits unit-specific purchases from coal or nuclear generation facilities.
system variability. Thus, the CAISO introduced flexible capacity compliance mandates for 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, DR, and energy 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 (MW), 2019

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>313</td>
<td>300</td>
<td>263</td>
<td>256</td>
<td>238</td>
<td>225</td>
<td>200</td>
<td>200</td>
<td>288</td>
<td>288</td>
<td>300</td>
<td>331</td>
</tr>
</tbody>
</table>

Energy Storage

MCE intends to explore additional opportunities for ownership of and contracting with larger storage projects. These may include projects located in MCE’s service area or those strategically located elsewhere in California and projects that are co-located with renewable energy generation or those that are developed independently.
V. **Procurement**

MCE will fill its future open positions via a combination of contracted energy resources and demand-side programs. 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 is targeting development of 35 MW of new renewable resources within its service area by 2021.16 Toward this goal, MCE may consider direct project investment or ownership of 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 sector ownership of renewable assets due to the tax credits that are uniquely available to for profit entities. 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 of resources by MCE. MCE has secured optional buyout provisions in some of its renewable PPAs, which provide a potential path to MCE asset ownership after the tax benefits have been exhausted by the private developer.

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. Direct generation investment may become an increasingly viable option 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.

16 The 35 MW local renewable target is in addition to the 200 MW of distributed generation MCE expects to serve in 2018 via its NEM program.
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 a solar PV installation up to 12 MW. 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. Over a period of three years, MCE completed pre-development activities for the project, and MCE then engaged a developer who financed and built the 10.5 MW installation, aptly named MCE Solar One. MCE views this as a model for future solar development on brownfield sites in its service area. The project is the largest public-private solar installation in the San Francisco Bay Area. MCE Solar One began commercial operation in December 2017, delivering renewable energy to MCE customers from a local renewable resource that would otherwise not have been developed.

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 percent 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.

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. Recent market data suggest that midday 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 MCE’s portfolio during the Planning Period will likely be more heavily weighted toward energy resources – be they dispatchable, shaped during non-solar or ramping periods, or otherwise – that complement competitively priced solar. MCE may also engage in purchases from as-available renewable generation (e.g. wind) to the extent that it is competitively priced or otherwise provides portfolio balance.

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

The projected resource mix during the Planning Period is illustrated in Figure 8.
Feed-In Tariff (FIT)

MCE’s FIT offers a total program capacity of 45 MW on a first-come, first-served basis to renewable resources located in MCE’s service area. The FIT offering allows private developers to finance local renewable energy projects, while catalyzing local job creation associated with the construction, operation, and maintenance of these local projects. By providing attractive, above-market rates, this program incentivizes renewable development in MCE communities where it otherwise would not be built.

MCE’s initial FIT program, which offered 15 MW of capacity to projects sized up to 1 MW is fully subscribed. Starting in 2018, MCE began the second phase of its FIT program, adding an additional 10 MW of capacity and an updated Tariff for projects in MCE’s service area up to 1 MW. Another 20 MW of capacity is available for new FIT Plus projects sized above 1 MW to up to 5 MW, with a new applicable Tariff. All FIT related documents are available on MCE’s FIT website.\(^\text{18}\)

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\(^\text{17}\) Actual resource utilization will depend upon market conditions and resource availability.

\(^\text{18}\) [https://www.mcecleanenergy.org/feed-in-tariff/](https://www.mcecleanenergy.org/feed-in-tariff/)
Table 11: MCE Feed-In Tariff Projects

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Status</th>
<th>Capacity (kW)</th>
<th>Annual Output (MWh)</th>
<th>Commercial Operation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Rafael Airport</td>
<td>Operational</td>
<td>972</td>
<td>1,440</td>
<td>October 2012</td>
</tr>
<tr>
<td>Freethy Industrial Park Unit #1</td>
<td>Operational</td>
<td>998</td>
<td>1,800</td>
<td>October 2016</td>
</tr>
<tr>
<td>Freethy Industrial Park Unit #2</td>
<td>Operational</td>
<td>998</td>
<td>1,800</td>
<td>October 2016</td>
</tr>
<tr>
<td>Cost Plus Plaza</td>
<td>Operational</td>
<td>261</td>
<td>520</td>
<td>September 2016</td>
</tr>
<tr>
<td>Hayworth-Fabien, LLC (Oakley)</td>
<td>Operational</td>
<td>990</td>
<td>1,750</td>
<td>July 2018</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>4,219</td>
<td>7,310</td>
<td></td>
</tr>
</tbody>
</table>

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 Conventional 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 system and specified conventional energy or capacity through fixed price forward contracts 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 manages 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 control and competitiveness. Entering into fixed price forward contracts enables MCE to meet budget and rate-setting objectives by increasing cost certainty. However, it is appropriate to maintain modest flexibility for incorporation of new supply- or demand-side resources and limited exposure to CAISO market prices to ensure optimal resource portfolio diversification. In light of these considerations, the following contracting guidelines for fixed-price energy contracts will be used during the Planning Period.

Table 12: MCE Power Supply Contracting Guidelines

<table>
<thead>
<tr>
<th>Time Horizon</th>
<th>Fixed-Price Energy Contracting Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Year</td>
<td>70% to 100%</td>
</tr>
<tr>
<td>Year 2</td>
<td>60% to 95%</td>
</tr>
<tr>
<td>Year 3 and Beyond</td>
<td>Up to 70%</td>
</tr>
</tbody>
</table>
As MCE contracts for system energy and capacity, these contracting guidelines serve to inform MCE’s hedging targets used to mitigate price and supply risk. 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, consistent with the policies set forth in this plan.

**Figure 9: MCE Contracted Energy Portfolio (GWh) (2019-2028)**

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**Reserve Capacity Purchases**

MCE may engage in purchases or sales of RA capacity from generation resources that qualify to meet RA 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 FIT. 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.

MCE procures energy and Resource Adequacy consistent with its Board approved Energy Risk Management Policy.

**Procurement Authorities**

MCE’s energy procurement throughout the Planning Period will be consistent with the delegation of authorities of the Board, including Resolution 2018-03, and/or any other delegation of authorities or relevant Resolution of the Board.
## Appendix A: Load and Resource Table

### MCE Resource Balance

**November 2018**

<table>
<thead>
<tr>
<th>Energy Requirements (GWh)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Retail Load</td>
<td>5,353</td>
<td>5,562</td>
<td>5,596</td>
<td>5,618</td>
<td>5,646</td>
<td>5,674</td>
<td>5,703</td>
<td>5,731</td>
<td>5,760</td>
<td>5,789</td>
</tr>
<tr>
<td>Distributed Generation</td>
<td>(325)</td>
<td>(374)</td>
<td>(438)</td>
<td>(494)</td>
<td>(544)</td>
<td>(598)</td>
<td>(658)</td>
<td>(724)</td>
<td>(796)</td>
<td>(876)</td>
</tr>
<tr>
<td>Electric Vehicle Load</td>
<td>75</td>
<td>125</td>
<td>210</td>
<td>330</td>
<td>414</td>
<td>489</td>
<td>579</td>
<td>684</td>
<td>799</td>
<td>933</td>
</tr>
<tr>
<td>Total Energy Requirements</td>
<td>5,592</td>
<td>5,617</td>
<td>5,670</td>
<td>5,733</td>
<td>5,812</td>
<td>5,858</td>
<td>5,912</td>
<td>5,976</td>
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### II. Volume Targets

<table>
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<tr>
<th>Light Green Renewable Energy Volume Targets (GWh)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
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<td>991</td>
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<td>Portfolio Content Category 3 (EEC Only)</td>
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<td>161</td>
<td>161</td>
<td>166</td>
<td>167</td>
<td>189</td>
<td>170</td>
<td>173</td>
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<tr>
<td>Total, light Green Renewable Energy Volume Targets</td>
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<td>3,774</td>
<td>4,009</td>
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<td>5,010</td>
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### III. Contracted Resources

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<tr>
<th>Renewable Resources Under Contract (GWh)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<tr>
<td>Total, Renewable Resources Under Contract</td>
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<td>2,551</td>
<td>2,545</td>
<td>2,540</td>
<td>2,505</td>
<td>2,499</td>
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<td>2,323</td>
<td>2,317</td>
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### IV. Open Positions

<table>
<thead>
<tr>
<th>Renewables Open Position (GWh)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
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<td>1,248</td>
<td>1,262</td>
<td>1,282</td>
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<tr>
<td>Portfolio Content Category 3</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Total Renewables Open Position (GWh)</td>
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<td>2,110</td>
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<td>2,535</td>
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<td>2,937</td>
<td>3,091</td>
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### V. Open Market Energies

<table>
<thead>
<tr>
<th>Total Open Market Energies (GWh)</th>
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<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
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<th>2028</th>
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<tr>
<td>Total Market Price Contract Coverage (%)</td>
<td>76%</td>
<td>76%</td>
<td>76%</td>
<td>76%</td>
<td>76%</td>
<td>76%</td>
<td>76%</td>
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### Conventional Hedge Summary

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<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
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<tbody>
<tr>
<td>Conventional Hedge Requirements</td>
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<td>452</td>
<td>266</td>
<td>77</td>
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<td>117</td>
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</tr>
<tr>
<td>Plus Hedge for Short PCC1 Position</td>
<td>162</td>
<td>161</td>
<td>161</td>
<td>166</td>
<td>167</td>
<td>168</td>
<td>170</td>
<td>171</td>
<td>173</td>
<td>176</td>
</tr>
<tr>
<td>Plus Hedge for Short PCC2 Position</td>
<td>528</td>
<td>935</td>
<td>991</td>
<td>1,080</td>
<td>1,116</td>
<td>1,174</td>
<td>1,235</td>
<td>1,248</td>
<td>1,262</td>
<td>1,282</td>
</tr>
<tr>
<td>Plus Hedge for Short Carbon Free Position</td>
<td>160</td>
<td>319</td>
<td>506</td>
<td>515</td>
<td>1,111</td>
<td>1,107</td>
<td>1,105</td>
<td>1,117</td>
<td>1,131</td>
<td>1,149</td>
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### Market Price Contract Coverage

<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Market Price Contract Coverage</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>
Appendix B: Description of Resources as of 6/30/2018

Bundled Renewable Energy Resources

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

MCE receives geothermal energy produced by the Geysers Project in Lake and Sonoma Counties, CA. The Geysers will provide 88,000 MWh of renewable energy annually and associated capacity throughout the ten-year term that expires in 2026.

*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 until 2024. 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.

*G2 Energy LLC/ Hay and Ostrom Road (Landfill Gas): bundled renewable energy and capacity*

MCE has two agreements with G2 Energy LLC, each relating to a unique renewable generating project. 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 baseload renewable energy and associated capacity attributes annually.

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

Located in Novato, CA, the Redwood Landfill power generation facility achieved commercial operation in September 2017. MCE receives approximately 30,000 MWh of renewable energy and associated capacity annually from this the state-of-the-art 4 MW project through 2037.

*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, 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.
American Canyon Solar A, B and C Feed-in Tariff Projects (Solar PV): bundled renewable energy
American Canyon Solar A, B and C are three FIT projects located in Napa County. Each project has a 999 kW capacity with expected annual energy deliveries of approximately 2,759 MWh. The units are expected to come online in Q3 2019.

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 November 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.

Central Marin Sanitation Agency CMSA Feed-In Tariff Project (Bio Gas): bundled renewable energy
This FIT project is located in San Rafael, CA. MCE will purchase excess generation capacity up to 750 kWs from the existing methane gas generator. The volumes will vary depending on fuel load, with expected capacity ranging from 150 kW to a max capacity of 750 kW. This FIT contract has a 10 year term, and is expected to reach commercial operation in Q1 2019 with expected annual energy deliveries of approximately 1,314 MWh.

Cooley Quarry Project – MCE Local Sol (Solar PV): renewable energy
The Cooley Quarry project achieved commercial operation in July 2017 and is delivering local solar energy for MCE customers who have opted into the Local Sol program. The 990 kW project is located in Novato, CA and delivers approximately 2,885 MWh annually over the term of its twenty-year PPA.

Cost Plus Plaza Larkspur Feed-In Tariff Project (Solar PV): bundled renewable energy
This 261 kW roof-mounted FIT project is located in Larkspur, CA and declared commercial operation in September 2016. Energy deliveries are approximately 520 MWh per year during the twenty-year contract term.

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, which provide MCE annually with approximately 64,000 MWh 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. Negotiated as part of the larger Cottonwood Solar contract to provide additional community benefit, this project is especially unique in that it delivers energy locally and provides shaded parking for employees of a non-profit research facility.

AI #11: Update on Draft 2019 Integrated Resource Plan
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 256,000 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 area warrant doing so.

DRES Quarry, LLC Feed-in Tariff Project (Solar PV): bundled renewable energy
This 100 kW addition to the Novato based Cooley Quarry project is expected to achieve commercial operation in Q1 2019. The generating facility will deliver approximately 285 MWhs of solar energy to MCE customers under a twenty-year PPA.

Small World Trading Company Feed-in Tariff Project (Solar PV): bundled renewable energy
Located on the roof of the EO Products facility in San Rafael, this 56kW FIT project is expected to come online in Q4 of 2018 and deliver 112 MWh of solar energy annually.

Freethy Industrial Park Feed-In Tariff Projects #1 and #2 (Solar PV): bundled renewable energy
Both of these co-located FIT projects came online in October 2016. Located in Richmond, CA, the two 998 kW agreements will extend for a twenty-year term. Aggregate energy deliveries from the projects are approximately 3,600 MWh per year during the contract term.

Great Valley Solar 1, LLC (Solar PV): bundled renewable energy and capacity
The Great Valley Solar 1 PPA provides approximately 290,000 MWh of renewable energy and capacity annually from the 100 MW solar project in Fresno County, CA. Great Valley Solar 1 achieved commercial operation in April 2018 and will deliver to MCE for fifteen years.

Little Bear Solar (Solar PV): bundled renewable energy and capacity
Little Bear Solar is a 160 MW aggregation of four solar projects in Fresno County, CA that may come online in September 2020 and annually deliver 430,000 MWh of renewable energy and capacity to MCE over the term of a twenty-year PPA.

CED Lost Hills Solar, LLC (Solar PV): bundled renewable energy
CED Lost Hills Solar provides 50,000 MWh of bundled renewable energy in 2019 from solar resources located in California.

Oakley RV and Boat Storage, Feed-in Tariff Project (Solar PV): bundled renewable energy
Hayworth-Fabien, LLC’s Oakley RV and Boat Storage project achieved commercial operation in July 2018. A unique solar carport structure covering an RV and boat storage facility in the city of Oakley, the 990 kW project delivers 1,750 MWh annually over the term of its twenty-year PPA.
**Palm Drive Solar A, B and C Feed-in Tariff Projects (Solar PV): bundled renewable energy**
Palm Drive Solar A, B and C are three FIT projects located in Napa County with an expected COD of Q3 of 2019. Each project has a 999 kW capacity and is expected to deliver approximately 2,800 MWh annually over its twenty-year PPA.

**RE Mustang LLC (Solar PV): bundled renewable energy and capacity**
RE Mustang is a 30 MW solar facility in Fresno County, CA, construction of which was enabled by its fifteen-year PPA with MCE. MCE receives approximately 86,000 MWh of renewable energy annually and associated capacity from RE Mustang.

**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, which was the largest solar facility ever constructed in Marin County at the time, is located in San Rafael, California and generates approximately 1,440 MWh per year during the contract term.

**San Rafael Airport Feed-In Tariff Project II (Solar PV): bundled renewable energy**
The San Rafael Airport FIT II agreement extends for a twenty-year term from the facility’s projected commercial operation date of Q3 2019. The 972 kW solar PV project is located in San Rafael, California and will generate approximately 2,000 MWh per year during the contract term.

**Silveira Ranch A, B & C Feed-In Tariff Project II (Solar PV): bundled renewable energy**
The Silveira Ranch A, B & C FIT agreements extend for a twenty-year term from the facilities’ projected commercial operation dates of Q4 2019. Each facility is 999 kW and located in Novato, CA. Each facility is projected to generate approximately 2,600 MWh per year during the contract term.

**MCE Solar One (Solar PV): bundled renewable energy**
After completing all pre-development activities in early 2017, MCE turned over the development of MCE Solar One to financier and project owner Sustainable Power Group (sPower). The construction commenced in July and was completed and on-line by the end of December 2017. MCE Solar One generates approximately 22,000 MWh per year. MCE Solar One supported over 82,000 hours of union labor and is expected to generate power for at least 3,400 homes. The labor report for the project documented nearly 83,000 work hours, of which 40 percent was union labor and almost 50 percent included hours worked by local Richmond residents. By partnering with local workforce development partner, RichmondBUILD, MCE was able to support specific training, retooling, and career opportunities for low-income, minority, and disadvantaged community members by providing the skills and experience needed to work in the green-collar economy.

**FPL Green Power Wind, LLC (Wind): bundled renewable energy**
The agreement with NextEra is a five-year PPA with The Green Power Wind Farm. This 15.5 MW project is located in Riverside County, CA. The agreement for this existing facility begins in 2019 and runs through 2023. MCE will receive approximately 45,000 MWh of renewable energy and associated capacity per year.
**Harvest Wind/Morgan Stanley (Wind): bundled renewable energy**
Morgan Stanley will deliver to MCE from 2018-2020 at least 75,000 MWh/year with an option to increase deliveries to 90,000 MWh/year of bundled renewable energy from a portfolio of existing wind resources in Oregon and Washington.

**Los Banos Wind, LLC (Wind): bundled renewable energy and capacity**
Los Banos Wind project is a 125 MW wind facility in Merced County, CA. Los Banos is contracted to 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.

**Powerex (Wind, Biomass): bundled renewable energy**
Powerex will deliver 125,000 MWh to MCE in 2019 from a resource portfolio comprised largely of wind facilities in British Columbia as well as a smaller biomass generator in Washington.

**Powerex (Wind): bundled renewable energy**
Powerex will deliver to MCE 50,000 MWh in 2019 and 25,000 MWh in 2020 of bundled renewable energy from a portfolio of existing wind resources in British Columbia.

**3 Phases Renewables, LLC (Wind): bundled renewable energy**
3 Phases will deliver to MCE between 160,000-215,000 MWh in 2019 of bundled renewable energy from a portfolio of existing wind resources in Colorado.

**Strauss Wind, LLC (Wind): bundled renewable energy and capacity**
MCE entered into a 15-year PPA with Strauss Wind, LLC for a 100 MW wind project located in Santa Barbara County. The project, which is expected to achieve commercial operation in April 2020, is expected to deliver 300,000 MWh of wind produced energy annually.

**TGP Energy Management (Wind): bundled renewable energy**
TGP Energy Management delivers to MCE approximately 65,000 MWh per year of bundled renewable energy from existing wind resources near Tehachapi, CA from 2018-2020.

**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.

**GHG-free Resources**

**Bonneville Power Administration (BPA) ACS Portfolio (Large Hydroelectric ACS): Low-GHG energy**
BPA, a federal power marketing agency, has an ACS portfolio registered by CARB for its low GHG emissions factor. BPA’s power supply comes from a number of energy resources. The vast majority of
the electricity BPA markets is hydropower generated by the 31 federal dams on the Columbia and Snake rivers. BPA’s portfolio does include some emissions, however, and this is due to BPA’s need to firm and shape its supply for its 140 utility and direct-service industrial customers in four states across the Northwest. MCE contracts for BPA’s ACS portfolio through WAPA and Direct Energy, both of which provide transmission capacity for the power, and currently has agreements in place to purchase approximately 410,000 MWh of low-GHG ACS energy in 2019.

**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 in California. These GHG-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 until 2024.

**Morgan Stanley (Large Hydroelectric): GHG-free energy**

Morgan Stanley will deliver to MCE 330,000 MWh in 2019 and 189,000 MWh in 2020 of GHG-free energy from a portfolio of existing large hydro resources in Washington and Idaho.

**Placer County Water Agency/Tenaska/Middlefork and Ralston Powerhouses (“PCWA,” Large Hydroelectric): GHG-free energy**

PCWA owns and operates Middlefork and Ralston Powerhouses on the Middlefork American River. MCE has contracted with PCWA/Tenaska for 300,00 MWh of GHG-free deliveries in 2019 and 600,000 MWh of GHG-free deliveries annually from 2020-2022.

**Yuba County Water Agency/Shell/Colgate and Narrows Powerhouses (“YCWA,” Large Hydroelectric): GHG-free energy**

YCWA manages a modern series of dams and hydropower facilities, generating up to 395 megawatts of GHG-free energy, which is enough to supply more than 300,000 homes throughout California. It owns and operates three separate powerhouses on the Yuba River: the New Colgate Powerhouse, Narrows 2 Powerhouse, and the New Bullards Bar minimum instream flow powerhouse. The Narrows 2 Flow Bypass has received recognition from the National Hydropower Association for benefits to fish-spawning grounds downstream on the Yuba River. MCE has contracted with YCWA for GHG-free deliveries in 2019 that total 250,000 MWh.

**Conventional Energy Resources**

**Shell Energy North America: system energy**

Under the agreement with Shell, MCE will receive approximately 667,000 MWh in 2019 and 739,000 MWh in 2020 of system energy.

**Exelon Generation Company: system energy**

Under the agreement with Exelon, MCE will receive 50 MW of system energy during 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.
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.

Direct Energy/Energy America, LLC: system energy
Under the agreement with Direct, MCE will receive approximately 667,000 MWh of system energy in 2019.

Morgan Stanley: system energy
Under the agreement with Morgan Stanley, MCE will receive approximately 438,000 MWh in 2019 and 189,000 MWh in 2020 of system energy.

Morgan Stanley: system energy
Under the agreement with Morgan Stanley, MCE will receive approximately 216,000 MWh in 2019 and 208,000 MWh in 2020 of system energy.
MCE Integrated Resource Planning: Advancing GHG-Free Procurement Targets

Update | October 18, 2018
Current Renewable & GHG-Free Targets

- MCE’s prior IRP established the following clean energy goals:

<table>
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<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<tr>
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<td>84%</td>
<td>87%</td>
<td>90%</td>
<td>94%</td>
<td>97%</td>
<td>100%</td>
</tr>
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- MCE has consistently surpassed its clean-energy targets
- Ongoing CCA activity in Northern California may contribute to significant increases in PG&E’s GHG-free power supply
- MCE’s clean energy targets have been adjusted to:
  - Expedite delivery of clean energy to MCE customers;
  - Promote differentiation between the MCE and PG&E default service offerings; and
  - Address a changing energy landscape within Northern California
Direct Impacts of CCA Growth

Retail Sales (GWh) vs. Emissions Factor (lbs CO2/MWh) from 2015 to 2020.

- **Aggregated CCA Sales**
  - 405 (2015)
  - 294 (2016)
  - 190 (2017)
  - 142 (2018)
  - 94 (2019)
  - 47 (2020)

- **PG&E Emission Factor (lbs CO2/MWh)**
  - 350 (2015)
  - 200 (2016)
  - 150 (2017)
  - 100 (2018)
  - 50 (2019)
  - 10 (2020)
Changes to GHG-Free Targets

- MCE staff have analyzed the impacts associated with advancing MCE’s GHG-Free targets in the following manner:

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<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current GHG-Free Target</strong></td>
<td>81%</td>
<td>84%</td>
<td>87%</td>
<td>90%</td>
<td>94%</td>
<td>97%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Expedited GHG-Free Target</strong></td>
<td>90%</td>
<td>94%</td>
<td>97%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- Expedited scenario reflects a 100% carbon-free portfolio by 2022 (ahead of prior 2025 target)
- Advancing GHG-Free targets will require adjustments to certain clean energy purchases to mitigate budgetary impacts
- Based on staff’s analysis, the expedited GHG-Free target can be achieved with associated cost reductions
Adapting Clean Energy Procurement

• To achieve the expedited GHG-Free target (100% GHG-Free by 2022), the following adjustments are being made:

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Renewable Target</strong></td>
<td>60%</td>
<td>63%</td>
<td>67%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Amended Renewable Target</strong></td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Current PCC1 Target</strong></td>
<td>43%</td>
<td>45%</td>
<td>48%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Amended PCC1 Target (70% PCC1)</strong></td>
<td>42%</td>
<td>42%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td><strong>Current PCC2 Target</strong></td>
<td>14%</td>
<td>15%</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Amended PCC2 Target (30% PCC2)</strong></td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Current PCC3 Target</strong></td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Amended PCC3 Target</strong></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Additional Carbon-Free Required to Offset Reduced RPS Target (%)</strong></td>
<td>0%</td>
<td>3%</td>
<td>7%</td>
<td>10%</td>
</tr>
</tbody>
</table>

• Overall renewable energy target to remain fixed at 60% through 2022, increasing thereafter to 70% by 2030

• Substitute energy required for Bucket 2 purchases to be sourced from carbon-free supply
Adjusting Planning Volumes

- Portfolio cost savings is achievable by:
  - Levelizing near-term renewable energy purchases (at 60%); and
  - Establishing clean energy targets in consideration of projected retail sales, rather than loss-adjusted sales

- Re-balancing MCE’s clean energy targets would result in a projected **$5 million savings** during the four-year transition period

- Reduction in “excess” procurement is expected to yield an additional **$9.5 million in savings** over four year transition period

- **Total 4-year savings estimated at $14.5 million**
MCE’s draft Integrated Resource Plan is being updated to...

- Increase MCE’s overall GHG-Free supply while holding light-green renewable purchases constant at 60% between 2019-2022, and increasing to 70% by 2030.
- Adjust MCE’s clean energy planning methodology to consider retail sales rather than loss adjusted sales.

MCE’s draft Integrated Resource Plan will be completed...

- For approval by the Technical Committee on November 1, 2018.
- Released to the public as the “MCE 2019 Integrated Resource Plan”.

Questions?
## Appendix: Additional Planning Detail

### Projected Loss Adjusted Sales (MWh)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5,591,500</td>
<td>5,617,202</td>
<td>5,669,922</td>
<td>5,773,040</td>
</tr>
</tbody>
</table>

### Current GHG-Free Target
- 81% in 2019
- 84% in 2020
- 87% in 2021
- 90% in 2022

### Expedited GHG-Free Target
- 90% in 2019
- 94% in 2020
- 97% in 2021
- 100% in 2022

### Marginal GHG Free Procurement Required to Advance Target
- 9% in 2019
- 10% in 2020
- 10% in 2021
- 10% in 2022

### Increase in GHG-Free MWh to Advance Target
- 503,235 in 2019
- 561,720 in 2020
- 566,992 in 2021
- 577,304 in 2022

### Current PCC1 Target
- 43% in 2019
- 45% in 2020
- 48% in 2021
- 50% in 2022

### Amended PCC1 Target (70% PCC1)
- 42% in 2019
- 42% in 2020
- 42% in 2021
- 42% in 2022

### Change in PCC1 to Implement Amended Renewable Target (%)
- -1% in 2019
- -3% in 2020
- -6% in 2021
- -8% in 2022

### Change in PCC1 to Implement Amended Renewable Target (MWh)
- (55,915) in 2019
- (168,516) in 2020
- (340,195) in 2021
- (461,843) in 2022

### Current PCC2 Target
- 14% in 2019
- 15% in 2020
- 16% in 2021
- 17% in 2022

### Amended PCC2 Target (30% PCC2)
- 18% in 2019
- 18% in 2020
- 18% in 2021
- 18% in 2022

### Change in PCC2 to Implement Amended Renewable Target (%)
- 4% in 2019
- 3% in 2020
- 2% in 2021
- 1% in 2022

### Change in PCC2 to Implement Amended Renewable Target (MWh)
- 223,660 in 2019
- 168,516 in 2020
- 113,398 in 2021
- 57,730 in 2022

### Current PCC3 Target
- 3% in 2019
- 3% in 2020
- 3% in 2021
- 3% in 2022

### Amended PCC3 Target (30% PCC3)
- 0% in 2019
- 0% in 2020
- 0% in 2021
- 0% in 2022

### Change in PCC3 to Implement Amended Renewable Target (%)
- -3% in 2019
- -3% in 2020
- -3% in 2021
- -3% in 2022

### Change in PCC3 to Implement Amended Renewable Target (MWh)
- (167,745) in 2019
- (168,516) in 2020
- (170,098) in 2021
- (173,191) in 2022

### Additional Carbon-Free Required to Offset Reduced RPS Target (%)
- 0% in 2019
- 3% in 2020
- 7% in 2021
- 10% in 2022

### Additional Carbon-Free Required to Offset Reduced RPS Target (MWh)
- 168,516 in 2020
- 396,895 in 2021
- 577,304 in 2022
### Savings Calculation Detail

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Change in PCC1 Cost (to rebalance renewable portfolio)</td>
<td>$ (1,006,470)</td>
<td>$ (3,033,289)</td>
<td>$ (6,123,516)</td>
<td>$ (8,313,177)</td>
</tr>
<tr>
<td>Total Change in PCC2 Cost (to rebalance renewable portfolio)</td>
<td>$ 2,012,940</td>
<td>$ 1,516,645</td>
<td>$ 1,020,586</td>
<td>$ 519,574</td>
</tr>
<tr>
<td>Total Change in PCC3 Cost (to rebalance renewable portfolio)</td>
<td>$ (419,363)</td>
<td>$ (421,290)</td>
<td>$ (425,244)</td>
<td>$ (432,978)</td>
</tr>
<tr>
<td>Change in Carbon-Free Cost to Offset Reduced RPS Target</td>
<td>$ -</td>
<td>$ 505,548</td>
<td>$ 1,190,684</td>
<td>$ 1,731,912</td>
</tr>
<tr>
<td>Change in Carbon-Free Cost to Advance GHG Target</td>
<td>$ 1,509,705</td>
<td>$ 1,685,161</td>
<td>$ 1,700,977</td>
<td>$ 1,731,912</td>
</tr>
<tr>
<td><strong>Net Clean Energy Cost Change to Achieve Expedited Carbon-Free Portfolio</strong></td>
<td>$ 2,096,813</td>
<td>$ 252,774</td>
<td>$ (2,636,514)</td>
<td>$ (4,762,758)</td>
</tr>
<tr>
<td>Total PCC1 Savings Related to Loss Coverage ($)</td>
<td>$ (2,392,740)</td>
<td>$ (2,403,739)</td>
<td>$ (2,426,299)</td>
<td>$ (2,470,425)</td>
</tr>
<tr>
<td>Total PCC2 Savings Related to Loss Coverage ($)</td>
<td>$ (512,730)</td>
<td>$ (515,087)</td>
<td>$ (519,921)</td>
<td>$ (529,377)</td>
</tr>
<tr>
<td>Total Carbon-Free Cost Related to Loss Coverage ($)</td>
<td>$ 569,700</td>
<td>$ 572,319</td>
<td>$ 577,690</td>
<td>$ 588,197</td>
</tr>
<tr>
<td><strong>Renewable Contingency Reserve Adjustment</strong></td>
<td>$ (2,335,770)</td>
<td>$ (2,346,507)</td>
<td>$ (2,368,530)</td>
<td>$ (2,411,606)</td>
</tr>
<tr>
<td><strong>Total Projected Savings from Portfolio Rebalancing</strong></td>
<td>$ (238,958)</td>
<td>$ (2,093,733)</td>
<td>$ (5,005,044)</td>
<td>$ (7,174,364)</td>
</tr>
<tr>
<td><strong>Total 4-Year Projected Savings from Portfolio Rebalancing</strong></td>
<td>$ (14,512,097)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
October 18, 2018

TO: MCE Board of Directors

FROM: Shalini Swaroop, Director of Policy

RE: Policy Update on Regulatory and Legislative Items (Non-Agenda Item)

Dear Board Members:

Below is a summary of the key activities at the California Public Utilities Commission (CPUC) impacting Community Choice Aggregation (CCA) and MCE.

I. The CPUC Issues a Final Decision in Track 1 of the Power Charge Indifference Adjustment (PCIA) Proceeding and a Proposed Decision and an Alternate Proposed Decision in Track 2.

Phase 1
On September 20, 2018, the Commission issued a Final Decision in Track 1 of the PCIA proceeding. This decision approved a settlement agreement among MCE, PG&E, the Office of Ratepayer Advocates, the Center for Accessible Technology, the Brightline Institute, and the Utility Reform Network.

This settlement agreement resolved how to eliminate the PCIA exemption for Medical Baseline CCA customers in PG&E’s service territory. Under the settlement agreement, the PCIA exemption for CCA Medical Baseline customers will be eliminated, but will be phased out over a 4-year period starting June 2019. MCE advocated for this phase-out to mitigate rate-shock for MCE’s vulnerable customers that would result from elimination of the PCIA exemption. Importantly, the Commission reached the opposite conclusion for Southern California CCA customers, whereby the PCIA exemption for both CARE and Medical Baseline customer will be eliminated as of January 1, 2019 with no phase-out. The Commission’s different conclusions on the same issue is due in part to MCE’s efforts to settle the issue as opposed to litigating the issue.

Phase 2
The Commission is scheduled to vote on revisions to the current PCIA methodology on October 11, 2018 after 2 prior voting delays. In August, the Commission issued both a Proposed Decision (PD) and Alternate Proposed Decision (APD) in Phase 2 of the PCIA proceeding. On Friday, October 5, the Commission posted revisions to the APD. No substantive changes were adopted in this draft aside from revisions to the cap and collar, which is discussed below. The final decision is expected to be implemented as of January 1, 2019. Below is a summary of the material conclusions of the PD and APD that the Commission may approve on October 11.
The Proposed Decision of Administrative Law Judge Roscow

On August 1, 2018 the assigned Administrative Law Judge ("ALJ") issued a PD in the PCIA proceeding. The PD rejects the Green Allocation Mechanism and Portfolio Monetization Mechanism, which the Joint Utilities proposed to replace the current PCIA methodology. The PD also adopts a number of measures that would reduce the amount and volatility of the PCIA, including exclusion of pre-2002 Legacy Utility Owned Generation ("UOG") costs from the PCIA (such as large hydro-electric and nuclear facilities), retention of the long-standing 10-year cost recovery limit for post-2002 UOG, and adoption of a cap and annual collar for the PCIA to reduce PCIA volatility and increase transparency and predictability.

The PD largely maintains the current PCIA methodology, but would reform how various components of the PCIA are valued and would adopt an annual true-up of the PCIA. The PD’s adopted approach, however, undervalues utility portfolios by failing to account for and capture long-term contracting value embedded in utility portfolios, which will result in an increased PCIA. The PD also refused to adopt CalCCA’s proposal to include in the methodology a way to value greenhouse gas (“GHG”) free energy in the utility portfolios. Inclusion of this GHG-free adder would more accurately reflect the increasing market value of this portfolio attribute and help reduce the PCIA.

The PD acknowledges the need for long-term market reform aimed at redistributing excess utility supply due to CCA growth, but declined to address the issue substantively. To this end, the PD ordered a second phase of the proceeding to examine and adopt ways to reduce utility portfolio costs and redistribute excess resources.

The Alternate Proposed Decision of Commissioner Peterman

On August 14, 2018, the assigned Commissioner to the PCIA proceeding, Commissioner Carla Peterman, issued an Alternate Proposed Decision ("APD"). The APD rejects many of the conclusions in the PD, including the exclusion of legacy UOG costs from the PCIA and retention of the 10-year cost recovery limitation for post-2002 UOG. The APD was largely consistent with the PD relating to portfolio valuation, but rejected the PD’s inclusion of a PCIA cap. Instead, the APD would allow the PCIA to increase by as much as 25% annually, which would add substantially more volatility to the PCIA compared to the PD. The October 5 revised APD, however, modified its position on the cap, whereby a PCIA cap would be implemented starting in 2020 that would limit the annual PCIA increase to .5 cents/kwh. The revised APD would also allow the PCIA to go negative, which would mean CCA customers would be due a credit.

Both the PD and APD adopt portfolio valuation methodologies that would cause the PCIA to increase materially over the coming years. However, the PD’s exclusion of substantial UOG costs and its adoption of a cap and collar would mitigate that impact, resulting in a more balanced and equitable decision overall; the PD comes closer to achieving indifference and incentivizing the utilities to improve their portfolio management to decrease costs for all customers.

MCE on its own behalf, and as a member of CalCCA, has strongly advocated for adoption of the PD. To that end, MCE and CalCCA have engaged in a number of meetings with Commissioners’ offices, filed comments on both the PD and APD, and engaged in stakeholder outreach to educate stakeholders about the CPUC process and implications of the APD and PD.