



**Marin Energy Authority
Technical Committee Meeting
Monday, September 9, 2013
9:00 A.M.**

Dawn Weisz
Executive Officer

Damon Connolly
Chair
City of San Rafael

Kathrin Sears
Vice Chair
County of Marin

Bob McCaskill
City of Belvedere

Sloan C. Bailey
Town of Corte Madera

Larry Bragman
Town of Fairfax

Len Rifkind
City of Larkspur

Ken Wachtel
City of Mill Valley

Denise Athas
City of Novato

Tom Butt
City of Richmond

Carla Small
Town of Ross

Ford Greene
Town of San Anselmo

Ray Withy
City of Sausalito

Emmett O'Donnell
Town of Tiburon

**MEA Offices, Large Conference Room
781 Lincoln Avenue, Suite 320, San Rafael, CA 94901**

Agenda – Page 1 of 1

- 1. Board Announcements (Discussion)**
- 2. Public Open Time (Discussion)**
- 3. Report from Executive Officer (Discussion)**
- 4. Update on MCE Power Supply Development Projects (Discussion)**
- 5. Local Solar Partnership Plan (Discussion/Action)**
- 6. Draft Policy and Process for Service in New Communities (Discussion/Action)**
- 7. Board Member & Staff Matters (Discussion)**
- 8. Adjourn**

781 Lincoln Avenue
Suite 320
San Rafael, CA 94901

1 (888) 632-3674
mceCleanEnergy.com



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renewable. reliable. affordable.

Renewable Energy Procurement: 2013 Contract Status



September 9, 2013

MEA Renewable Energy Contracts

Complete and currently delivering energy to MCE:

- **GenPower - Energy 2001 – COD Feb 11th , 2013**
- **G2 Energy Hay Road– COD July 2nd , 2013**
- **G2 Energy Ostrom Road– COD Aug 30th , 2013**



GenPower - Energy 2001

Project: Energy 2001

- **Contract Executed: July 6th, 2012**
- **Online Date: October 29th, 2012**
- **Commercial Operation Date: February 11th, 2013**
- **Product: Landfill gas (existing + expansion) baseload energy only**
- **Location: Placer County, 85 miles north east of San Rafael**
- **Contracted Capacity: 4.8 MW - delivering 3.55 MW**
- **Annual Energy: 31,098 MWhs @ 3.55 MW average capacity, 91.5% of expected deliveries— 34,000 MWhs expected under contract**
- **Contract Term: Feb 11, 2013 through Feb 10, 2033 (20 years)**

Seller to provide an audit within sixty (60) days of the anniversary of COD summarizing the output of the Facility during the preceding twelve months.



G2 Energy – Hay Road

Project: Hay Road

- **Contract Executed: December 3rd, 2010**
- **Online Date: June 18th, 2013**
- **Commercial Operation Date: July 2nd, 2013**
- **Product: Landfill gas (new) baseload energy only**
- **Location: Solano County, 45 miles east of San Rafael**
- **Contracted Capacity: 1.6MW - delivering 1.50 MW**
- **Annual Energy: 12,500 MWWhs @ 1.50 MW average capacity**
- **Contract Term: July 2nd, 2013 through July 1st, 2031 (18 years)**



G2 Energy – Ostrom Road

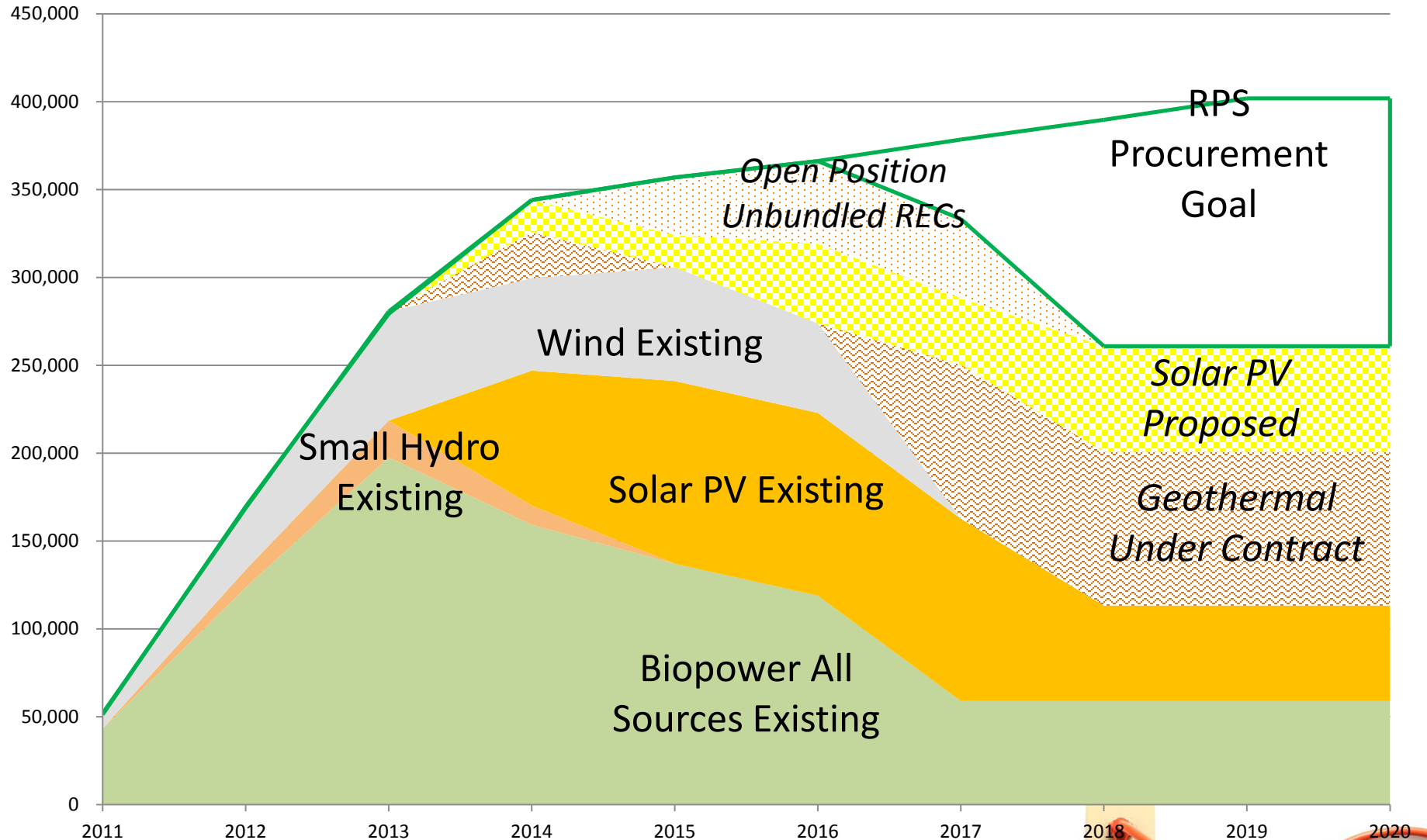
Project: Ostrom Road

- **Contract Executed: December 3rd, 2010**
- **Online Date: August 30th, 2013**
- **Commercial Operation Date: TBD**
- **Product: Landfill gas (existing + expansion) baseload energy only**
- **Location: Yuba County, 100 miles north east of San Rafael**
- **Contracted Capacity: 1.6MW - delivering 1.50 MW**
- **Annual energy: 12,500 MW^hs @ 1.50 MW average capacity**
- **Contract Term: August 30th, 2013 through August 29th, 2031 (18 years)**



Renewable Energy Resource Balance

Marin Energy Authority Projected RPS Qualified Resource Mix 2011 - 2020



MEA Renewable Energy Contracts

Under Contract and in Development:

- **Recurrent Energy Kansas**
- **EDF –RE (enXco) Cottonwood**
 - **Last progress report – July 2013**
 - **Scheduled Construction Start Date: July 2nd, 2014**
 - **Scheduled COD: Jan 29th, 2015**
- **EDF –RE (enXco) 1 MW Marin**
- **Calpine 2 transactions – 2014 and 2017 to 2026**



Recurrent Energy

Project: RE Kansas

- **Contract Executed: August 3rd, 2012 - amended July 2013 accelerating the dates by 12 months if interconnection can be achieved early.**
- **Expected Online Date: Q1, 2015**
- **Commercial Operation Date: March, 2015**
- **Product: Solar, as available energy and capacity**
- **Location: Fresno County, 175 miles south east of San Rafael**
- **Contracted Capacity: 20 MW**
- **Annual energy: 49,640 MWWhs**
- **Contract Term: Q1, 2015 through Dec, 2017 (3 years)**



EDF Renewable Energy

Project: Cottonwood Solar

- **Contract Executed: July 8th, 2011- Extended Mar 25, 2013 (because of delayed PG&E interconnection facilities)**
- **Expected Online Date: January 29th, 2015 (construction start July 2, 2014)**
- **Product: Solar - Energy only**
- **Location: Kings and Kern Counties, 210 miles south east of San Rafael**
- **Contracted Capacity: 30 MW**
- **Annual energy: 84,000 MWhs**
- **Contract Term: Jan, 2015 through Dec, 2040 (25 years)**
- **Interconnections: Multiple executed SGIPs with PG&E**
- **Permitting: Complete**



Calpine Energy Services

Project: Geysers - Short Term

- **Technology: Geothermal (existing)**
- **Location: Sonoma and Lake Counties, 56 miles north of San Rafael**
- **Product: Baseload energy and capacity**
- **Capacity: 2014 3 MW (flexible/scalable)**
- **Annual energy: 2014 26,200 MWhs**
- **Contract Term: Jan 2014- Dec 2014 (1 year)**



Calpine Energy Services

Project: Geysers Long Term

- **Technology: Geothermal (existing)**
- **Location: Sonoma and Lake counties, 56 miles north of San Rafael**
- **Product: Baseload energy and capacity**
- **Capacity: 2017 to 2026 10 MW (flexible/scalable)**
- **Annual energy: 2017 – 2026 87,600 MWhs**
- **Contract Term: Jan 2017- Dec 2026 (10 years)**



MEA Open Season – Near-Term Next Steps

Pre-Open Season RE Resource Balance:

<i>Open Position, RPS Renewables (GWh)</i>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Bucket 1	28	27	(6)	84	150	169	187	187	187
Bucket 2	(1)	(2)	15	49	53	57	60	60	60
Bucket 3	44	47	49	33	35	38	40	40	40
Subtotal, Open Position, Renewables	70	73	58	166	239	263	287	287	287
Open Position, Voluntary RECs	290	290	291	292	268	245	222	223	224

Post-Open Season RE Resource Balance:

<i>Open Position, RPS Renewables (GWh)</i>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Bucket 1	4	2	(22)	(9)	(4)	62	81	99	99	99
Bucket 2	(1)	(1)	(2)	15	49	53	57	60	60	60
Bucket 3	1	44	47	49	33	35	38	40	40	40
Subtotal, Open Position, Renewables	4	44	24	55	78	151	175	199	199	199
Open Position, Voluntary RECs	(3)	290	290	291	292	268	245	222	223	224

Additional short-term procurement will be necessary to:

- Secure Bucket 3 supplies for 2014
- Voluntary unbundled REC volumes to support 50% Light Green content



Questions? Comments?



Group Solar Purchasing Program



September 9, 2013

Summary

- MCE has already exceeded its 2020 goal of 20 MW of distributed generation (DG)
- Currently, DG comprises roughly 10% of MCE's peak load capacity (20 MW/208 MW)
- The installation rate in MCE's service territory over the last five years has been roughly 2.7 MW per year
- If there is continued interest in encouraging DG, MCE could consider administering a solar group purchasing program
- Next steps would include:
 - Finalizing a partnership model
 - Clarifying MCE's administrative role and associated budget
 - Further evaluating program costs and benefits
 - Finalizing a solicitation document

Potential Benefits & Costs of a Group Purchasing Program

Potential Benefits

- Could reduce MCE's resource adequacy requirements
- PV production should flatten load, reducing procurement costs
- Would reduce GHG emissions
- Local job creation
- Improved economics for solar customers
- Would ease solar purchasing process for customers
- Would promote transparent competition
- Potential use of RECS in MCE supply portfolio

Potential Costs/Concerns

- Reduced revenue
- Administrative costs
- Third party costs (eg, technical assistance providers)
- Potential liability
- Could frustrate non-selected solar vendors

For Reference: Existing Solar Purchasing Programs

Year	Name	Customer Sector	# of participants	KW Installed	Average base cost (\$/watt)	Price Reduction (%)
2007	GoSolarMarin	Residential	100	300		
2008	SV-REP (Santa Clara County)	Municipal	9 local govts.	14400		12
2009	Solarize Portland	Residential	130	350		36
2011	SunShares (San Jose)	Residential (city employees)	29	140	4.42	
2011, 2012	Solarize Washington	Residential, Small Commercial	244	1081		
2011	Solarize Mass	Residential, Small Commercial	162	829		
2012	Solarize Mass	Residential, Small Commercial	803	5100	3.91	14
2012	Milwaukee Power Pack	Residential	10	28		
2012	Solarize Connecticut	Residential	300	2300		
2012	Solar@Work (San Francisco)	Small Commercial	5	157	4.25	
2013	SEED (Marin, Napa, Sonoma)	Municipal	14	5072		

Spectrum of Potential Partnership Opportunities

One to One

One to Many

~~Co-branded one to one partnership~~

Multiple partners

Hosted marketplace

Explore, enjoy and protect the planet

HOME LEARN ABOUT SOLAR TESTIMONIALS

GENERATE POSITIVE

FOUNDED 1892

Request a free solar iQuote to see what solar could do for you and your home.

Your Home Address Street Address, City, S

Go Solar with the Sierra Club.
Get a \$750 cash gift card!*

When you go solar with Sungevity and the Sierra Club, Sungevity gives you a \$750 cash gift card and gives another \$750 to support the Sierra Club.

*Offer available to new Sungevity customers only and cannot be combined with other offers or promotions. Cash gift card will be issued by Sungevity once home solar system has been installed and connected to the grid.

“ I'm very happy with my solar panels. The panel installation went flawlessly, and Sungevity does a good job monitoring and servicing the system. In the future I will see a net savings because utility costs will rise faster than my lease amount. I was also happy that Sierra Club got money back from Sungevity. ”

—David S, California

HOW MANY SIERRA CLUB HOMES HAVE GONE SOLAR?

836

Make your home the next house on your block to go solar.

My Energy Tool - My Ener x

myenergytool.mcccleanenergy.com/audit/get-started/segment/0

Energy Usage For New unit

[Get Started](#) [My House](#) [My Climate Control](#) [My Appliances](#) [Solar](#) [Bill Histor](#)

Solar

Interested in solar power?

Yes

Enter information on surfaces for the area that could likely support solar panels; preferably roof or open ground areas. Use the picture of your home below to assist you.

Direction

Which direction does the roof surface generally face? South or West are the most useful directions.

Southeast

Roof Pitch

Select angle of the roof surface.

Moderate - 30 degrees

Roof Shading

Select how much shading covers the area at mid-day.

Little

Ownership Model

Select the ownership model that you are interested in pursuing in order to receive competitive bids from solar vendors.

Lease

Hosted Marketplace Model – Benefits & Concerns

Benefits

- Least liability for MCE
- Relatively simple to design and administer
- Could provide transparent apples to apples comparison of solar bids through a standard process
- Could potentially include neutral, third party solar assessments
- Might lead to price reductions for solar through more direct competition
- Would drive customers to MCE website

Concerns

- Group discount unlikely
- Lack of control over customer experience
- No source of funding (for marketing, technical assistance, etc) unless is charged
- No simple mechanism for REC transfer
- Too many choices for customers
- Little leverage to shape vendor requirements

Multiple Partner Model – Benefits & Concerns

Benefits

- Could provide transparent apples to apples comparison of solar bids through a standard process
- Could potentially include neutral third party solar assessments
- Might drive prices lower through more direct competition
- Would drive customers to MCE website
- Incentive for vendors to perform (eg, Sierra Club “beauty contest”)
- Straightforward pricing discount
- More leverage with vendors = greater ability to set rules in the sandbox

Concerns

- May anger non-selected vendors
- More time intensive/costly to administer (e.g., would require an RFP process)
- Limited volume per vendor = smaller discount than direct partnership
- Actions of vendor/installer reflect on MCE
- May not offer selected vendors sufficient incentive to participate

Marketing & Outreach

Hosted Marketplace

- Customer learns about offering through MCE outreach

Multiple Partners

- Customer learns about solar program through MCE/vendor/community outreach
- Marketing effort/\$ is an element of solar program RFP
- Marketing language could include reference to a “limited time offer,” “tiered group discount” and/or “select vendors”

Solar Assessments & Technical Support

Hosted Marketplace

- Customer creates an account on MCE's MyEnergyTool and enters usage information and property specs
- MyEnergyTool provides estimates for system size and ROIs (across rate schedules)

Multiple Partners

- Support for more direct technical assistance is an element of solar program RFP
- At any point, customer can call MCE 3rd party technical adviser (eg, SolarSmart, Solar Richmond, MCCDC, Solar Action Alliance) to discuss MyEnergyTool assessment and ownership options
- Strong candidates for solar could receive a free 3rd party on-site solar assessment

Selecting a Vendor & Signing a Contract

Hosted Marketplace

- Customer solicits standardized bids for their project from select solar vendors by posting the results of their solar assessment
- Bids include qualitative information about vendors (e.g., the percentage of local labor used)
- Customer selects bid and signs contract (with stipulations for adders)

Multiple Partners

- Bids reflect tiered group purchasing discounts
- Customer receives 3rd party technical assistance to select bid
- Contract includes language whereby vendors will facilitate the transfer of (excess?) RECs to MCE from customer

Permitting & Installation

Hosted Marketplace

- Vendor applies for permit
- Vendor installs solar panels

Multiple Partners

- MCE improves permitting process by leveraging program (i.e. only communities that meet minimum permitting benchmarks/agree to a fast track process will be eligible to participate)
- Job training, local subcontractors are an element of solar program RFP

Hosted Marketplace

- Customer monitors their energy production/consumption if available

Multiple Partners

- Monitoring is done through MyEnergyTool or other required software offering
- MCE displays aggregate system output and \$/environmental benefits in real time

For future consideration

Additional Services could be considered to layer onto group solar purchasing program in the future:

- Battery storage
- Demand response capability
- Electric vehicle support

Questions?



MCE Expansion and Ratepayer Impacts



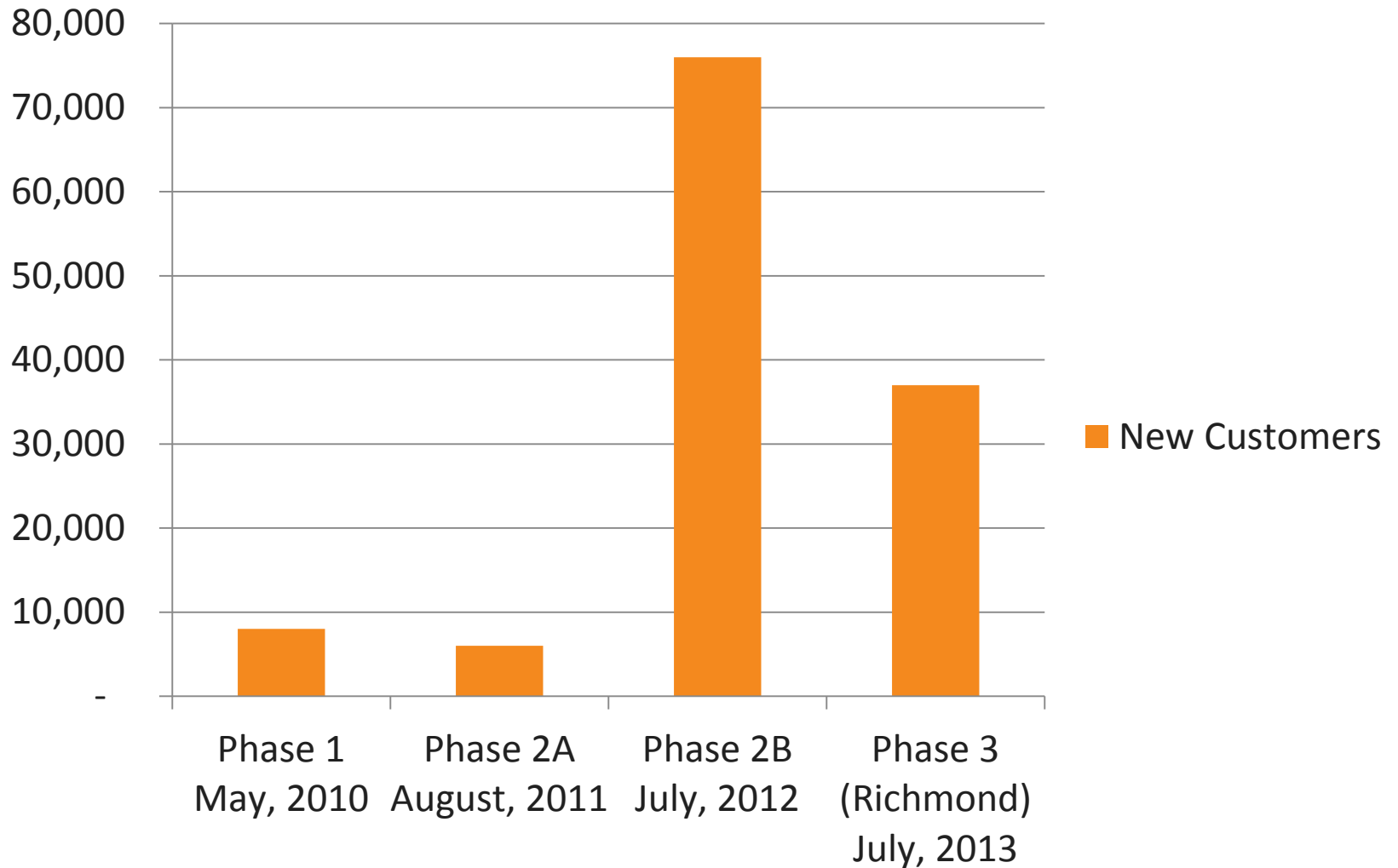
September 9, 2013

Introduction

Agenda Item #6: MCE Expansion and Ratepayer Impact

- Expansion of MCE service to new communities involves several policy issues: political, economic, environmental and strategic.
- Focus of this presentation is on estimating expansion's direct economic benefits to MCE ratepayers from increasing program sales.
- The specific benefits and costs of a contemplated expansion would be determined through a more detailed applicant analysis.

MCE Expansion History



Expansion Experience

- Expansion within the PG&E service territory is operationally straightforward as protocols are well-defined for enrollment of additional customers – expansion to SCE or SDG&E territory would be more challenging.
- Primary workload increases are related to the initial electric procurement, update of Implementation Plan, communications, and customer service (e.g., opt out processing, enrollment and billing).
- Lessons learned from Phase 2B expansion, particularly in communications and opt-out processing, were applied successfully to Richmond.

How Can Expansion Benefit MCE Ratepayers?

- Greater scale efficiencies can reduce MCE program costs and help reduce customer rates.
- Additional electric purchases can reduce average power supply costs if lower cost power is available in the market.
- Growth through expansion offsets customer attrition that might otherwise result in a slow decline.
- Expansion can enhance MEA credit standing as continuing customer/member growth signals health and competitive success.

Estimated MCE Rate Benefits

Source of Rate Benefit	Impact	Est. Rate Impact for +20% Load Growth	Est. Rate Impact for +100% Load Growth
Fixed costs spread over larger sales base	Small rate benefit because these fixed costs represent only about 5% of MEA budget	Approx. 1% reduction	Approx. 3% reduction
Incremental market purchases may reduce average power supply cost	Depends on market at time of expansion; Currently a modest benefit because MEA supply cost is close to market; could be a detriment if market power prices are increasing	Approx. 1% to 2% reduction	Approx. 2% to 5% reduction
Total		2% to 3% reduction	5% to 8% reduction

COR Impacts on Staff Capacity

Addition of 2 FTE specifically to serve Richmond:

(Annual cost: \$93,000)

- Customer Specialist (Ben Choi)
- Communications and Outreach (Elena Velez .5 FTE)
- Communications and Outreach (Ashley Aberi .5 FTE)

Addition 2 FTE to benefit Agency as a whole:

(Annual cost: \$116,000)

- Legal Analyst (Shalini Swaroop)
- Local Project Development (Rafael Silberblatt .5 FTE)
- Energy Efficiency (Rafael Silberblatt .5 FTE)

COR Impact on Indirect Job Creation

Energy Efficiency Programs: multifamily and small commercial: Modest increase in activity (25%)

- Contract jobs (energy audits, retrofits, upgrades)
- Job training programs

Solar installations: Modest increase expected due to new opportunity sites

- FIT-driven solar installations
- Net Energy Metering driven solar installations

COR Impact on Agency Budget FY2012/13

MCE total revenue FY13: \$ 53,000,000

COR- specific costs: \$ 350,000

- Staff positions
- Communications Expenses
- Technical Consultants

COR Impact on Agency Budget FY2013/14

MCE Total Revenue: \$86,900,000

Projected COR customer revenue: \$20,800,000

Less expenses

- Power supply cost \$ 17,200,000
- Billing/data management costs \$ 700,000
- Staff positions \$ 100,000
- Subtotal expenses \$ 18,000,000

Net contribution to fixed costs: \$2,800,000

Rate benefit: $\approx 3\%$

Expansion Process for COR

The expansion to COR took approximately 24 months from initial consideration to service cutover.

1. Expansion criteria established
2. Member application/fee agreement
3. Applicant analysis
4. Board approval
5. Implementation Plan update
6. Electric procurement
7. Communications/outreach
8. Enrollment

Questions?





POLICY NO. 007 – NEW CUSTOMER COMMUNITIES

Whereas MEA's founding mission is to address climate change by using a wide range of renewable energy sources, reducing energy related greenhouse gas emissions and promoting the development of energy efficiency programs; and

Whereas creating opportunities for customer electric service in new communities may allow MEA to further progress towards its founding mission; and

Whereas MEA currently provides a minimum 50% renewable energy supply to all MCE customers (through its default Light Green retail service option), which substantially exceeds similar renewable energy supply percentages provided by California's investor-owned utilities (IOUs); and

Whereas the addition of new communities to MEA's membership will inevitably increase state-wide renewable energy percentages due to MCE's specified minimum renewable energy supply percentage of 50%; and

Whereas the addition of new communities to MEA's membership will also decrease greenhouse gas emissions within the Western United States as a result of minimum renewable energy supply percentages exceeding such percentages provided by California's IOUs.

Therefore, it is MEA's policy to explore and support customer electric service in new communities to further agency goals.

In consideration of the above, MEA will allow access to service in new communities through two channels, affiliate membership or special-consideration membership, as applicable:

Affiliate membership considered if:

1. All applicable membership criteria are satisfied,
2. New community is located in a county that is not more than 30 miles from MCE existing jurisdiction, and
3. Customer base in new community is 40,000 or less.

Special-consideration membership considered if:

1. All applicable membership criteria are satisfied,
2. New community is located in a county that is more than 30 miles from MCE existing jurisdiction, and
3. Customer-base in new community is greater than 40,000.



MCE Affiliate Membership Process

Step 1: Governing body submits letter to MEA from new community jurisdiction, requesting consideration as a member.

Step 2: Staff evaluates request timing to determine if internal resources are available to consider request, and to ensure no impact to core agency functions.

Step 3: Request submitted to MEA Board to authorize initiation of membership analysis.

Step 4: Following MEA Board approval, staff executes contract with governing body of new jurisdiction to fund costs of membership analysis. Staff undertakes and completes analysis.

Step 5: Results of membership analysis presented to governing body of new community and to MEA Board. 1). If all of the affiliate membership criteria below are met, community is automatically authorized to complete affiliate membership process. 2). If all criteria are not met but other compelling criteria are present, Board may consider approval of affiliate membership.

Affiliate Membership Criteria:

- A. Allowing for MCE service in new customer community will result in a projected net rate reduction for existing customer base.**
- B. Offering service in new customer community will accelerate greenhouse gas reductions.**
- C. Including new community in MCE service will increase the amount of renewable energy being used in California's energy market.**
- D. There will be an increase in opportunities to launch and operate MCE energy efficiency activities and programs.**
- E. New opportunities are available to deploy local solar and other distributed renewable generation through the MCE Net Energy Metering Tariff and Feed in Tariff.**
- F. Greater demand for jobs and other economic activity is likely to result from service in the new community.**
- G. The addition of the new community is likely to create a stronger voice for MCE at the State and regulatory level.**

Step 6: Governing body of new jurisdiction approves a resolution requesting membership and a standard ordinance authorizing community choice aggregation service through MCE.

Step 7: MEA Board adopts a resolution authorizing membership of the additional incorporated municipality and submits updated Implementation Plan to CPUC.

ORDINANCE NO. **XXX**

ORDINANCE OF THE CITY/TOWN COUNCIL OF _____ APPROVING THE MARIN
ENERGY AUTHORITY JOINT POWERS AGREEMENT AND AUTHORIZING THE
IMPLEMENTATION OF A COMMUNITY CHOICE AGGREGATION PROGRAM

The City/Town Council of the City/Town of _____ ordains as follows:

SECTION 1. The City/Town of _____ has been exploring options to provide electric services to constituents within its service area with the intent of using a wide range of renewable energy sources, reducing energy related greenhouse gas emissions and promoting the development of energy efficiency programs.

SECTION 2. On September 24, 2002, the Governor signed into law Assembly Bill 117 (Stat. 2002, ch. 838; see California Public Utilities Code section 366.2; hereinafter referred to as the “Act”), which authorizes any California city or county, whose governing body so elects, to combine the electricity load of its residents and businesses in a community-wide electricity aggregation program known as Community Choice Aggregation.

SECTION 3. The Act expressly authorizes participation in a Community Choice Aggregation (CCA) program through a joint powers agency, and on December 19, 2008, the Marin Energy authority (MEA) was established as a joint power authority pursuant to a Joint Powers Agreement, as amended from time to time.

SECTION 4. On February 2, 2010 the California Public Utilities Commission certified the “Implementation Plan” of the MEA, confirming the MEA’s compliance with the requirements of the Act.

SECTION 5. In order to become a member of the MEA, the Act requires the City of _____ to individually adopt an ordinance electing to implement a Community Choice Aggregation program within its jurisdiction by and through its participation in the MEA.

SECTION 6. Based upon all of the above, the City/Town Council elects to implement a Community Choice Aggregation program within the City/Town of _____’s jurisdiction by and through the City/Town of _____’s participation in the Marin Energy Authority. The Mayor is hereby authorized to execute the MEA Joint Powers Agreement.

SECTION 7. This ordinance shall take effect and be in force 30 days after its adoption, and, before the expiration of 30 days after its passage, a summary of this ordinance shall be published once with the names of the members of the Council voting for and against the same in the _____, a newspaper of general circulation published in the _____.

The foregoing ordinance was introduced at a meeting of the City/Town Council of the City/Town of _____ held on **Date**, and adopted at a meeting held on **Date**, by the following vote:

AYES: Councilmember
NOES: Councilmember
ABSENT: Councilmember

/s/ _____
XXX, Mayor

/s/ _____
XXX, City Clerk