AGENDA REPORT

CITY MANAGER'S OFFICE

DATE: October 25, 2011

TO: Mayor McLaughlin and Members of the City Council

FROM: Bill Lindsay, City Manager

SUBJECT: COMMUNITY CHOICE AGGREGATION - MARIN ENERGY AUTHORITY

STATEMENT OF THE ISSUE:

The City Council has directed staff to work with the Marin Energy Authority to evaluate possible membership by the City of Richmond in the Joint Powers Authority and participation in the Marin Clean Energy Community Choice Aggregation Program.

RECOMMENDATION:

RECEIVE a presentation from the Marin Energy Authority and Dalessi Management Consulting concerning the financial impact analysis for the City of Richmond's membership in the Marin Energy Authority and participation in the Marin Clean Energy Community Choice Aggregation Program.

FINANCIAL IMPACT OF RECOMMENDATION:

There are no financial impacts at this time. Future costs as well as risks and benefits of joining the Marin Energy Authority and participating in the Community Choice Aggregation program are outlined in the Discussion section of this staff report.

DISCUSSION:

Marin Energy Authority

The Marin Energy Authority (MEA) is a Joint Powers Authority formed in 2008 that is comprised of the following local governments in Marin County: Belvedere, Fairfax, Mill Valley, San Anselmo, San Rafael, Sausalito, Tiburon, Novato and the County of Marin. MEA operates the Marin Clean Energy (MCE) program, which is a Community Choice

Aggregator (CCA) now serving electric service customers in Marin County. Since the passage of Assembly Bill 117 in 2002, the MEA has formed the only CCA program in California. MEA will incrementally expand to provide electricity to all electric service customers in MEA jurisdiction by the end of 2012.

MEA is an "opt-out" program, which means customers are automatically enrolled in the program unless they specifically choose to continue with PG&E. All electric service customers receive four notifications from MEA prior to being automatically opted in to the MEA program. Electric service customers have the choice to purchase power from the MEA or PG&E. Electric service customers may choose to opt out at anytime and switch to PG&E.

Since PG&E manages the customer service functions of the electric service, PG&E's senior, low-income and disabled programs, as well as tiered pricing structures are still available to the electric service customers. Electric service customers continue to receive a PG&E bill; however the generation charges are returned to MEA by PG&E.

The goal of the Marin Energy Authority is to provide 100 percent renewable energy to all electric service customers by 2020, at competitive rates with PG&E. This goal far exceeds the State's Renewable Portfolio Standard of 33 percent by 2020.

The City of Richmond is considering becoming a member of the Joint Powers Authority Marin Energy Authority and participating in the Marin Clean Energy Community Choice Aggregation Program. Participating in the Marin Energy Authority could provide several economic and environmental benefits to the City including, but not limited to, the following:

- Reducing greenhouse gas emissions resulting from the consumption of electricity by residents and businesses.
- Creating competition between electric service providers, which would presumably lead to more competitive rates and prices for Richmond residents and businesses.
- Greening the City's image and potentially attract more clean-tech businesses to locate in Richmond and thus increase business-related revenues.
- Creating more employment opportunities for Richmond residents and contractors through the CCA power procurement contracts, feed-in tarriffs and more robust local energy programs.

Background

At the May 24, 2011, Richmond City Council Meeting, City Council received a presentation from the MEA Interim Executive Director Dawn Weisz, Fairfax City Councilmember and MEA Board Member Lew Tremaine and Environmental Initiatives staff. City Council adopted a resolution to demonstrate the City's intent to explore Community Choice Aggregation with the Marin Energy Authority, demonstrate the City's

support of clean, local energy and Community Choice Aggregation and authorize the City Manager to request the City's energy consumption data from PG&E.

At the July 7, 2011, Marin Energy Authority Board Meeting, MEA staff provided information about potential impacts and evaluation criteria for applicant cities to the Joint Powers Authority. The Marin Energy Authority Board authorized staff to work with the City of Richmond to develop a Pilot Applicant Impact Analysis Contract to cover associated staff and consultant costs.

MEA Applicant Impact Analysis Contracts

At its July 19, 2011 meeting, the City Council approved the following two contracts necessary to evaluate the potential financial impact of Richmond becoming a member of the Joint Powers Authority - Marin Energy Authority.

1. Dalessi Management Consulting, LLC

   The City Council awarded a contract to Dalessi Management Consulting, LLC for an amount not to exceed $20,000. The services provided by Dalessi Management Consulting, LLC included:

   - Provide the City's load information to the Marin Energy Authority (MEA) and assess the financial impact to MEA of serving the City's load.
   - Analyze the monthly customer electric load data for customers within the City as provided by PG&E.
   - Incorporate estimates of electricity demand associated with the potential second campus of the Lawrence Berkeley National Laboratory (LBNL) if such estimates are available from the City.
   - Create a composite hourly load dataset for the City modeled using statistical class hourly load profile data.
   - Identify resource requirements for baseload energy, peak energy, generation capacity, ancillary services, California Independent System Operator costs, renewable portfolio standards and distribution losses.

2. Marin Energy Authority

   The City Council awarded a contract to the Marin Energy Authority to cover associated costs of MEA staff and/or consultants performing the applicant financial impact analysis. The contract is structured on a time expended basis in an amount not to exceed $20,000. The services provided by MEA included:

   - Review and analyze the economic impact of Richmond becoming a member of the MEA.
   - Provide outreach support and interface with Richmond stakeholders and policy makers.

- Aid in adoption of enabling resolution and ordinance pertaining to Community Choice Aggregation and Joint Powers Authority governance and membership.
- Determine and implement changes to MEA Board composition and voting rights for potential MEA expansion to Richmond.
- Provide technical support to Richmond staff as necessary.
- Assess Richmond's compliance with MEA membership criteria.
- Perform additional duties as requested by the City Manager to pursue Community Choice Aggregation with the Marin Energy Authority.

The economic impact and evaluation of the potential extension of MCE Service to the City of Richmond was completed by Dalessi Management Consulting, LLC in conjunction with the Marin Energy Authority. At the October 6, 2011, Marin Energy Authority Board Meeting, MEA staff reported the findings of this analysis to the Board. Based on this analysis, the Marin Energy Authority Board approved the proposed JPA membership criteria and application package for the City of Richmond to join the MEA.

Summary of Financial Analysis

An overview of the analysis by Dalessi Management Consulting, LLC in conjunction with the Marin Energy Authority is provided below and is the subject of this study session. The entire report is included as Attachment A to this staff report. City staff is not providing a policy recommendation at this time, but will return to a subsequent City Council meeting with a formal staff recommendation.

Analysis Overview

MEA and DMC quantified the additional costs and revenues that are projected to result from potential MEA expansion of service to the City of Richmond to help assess the budgetary impacts and potential MCE ratepayer benefits or costs associated with program expansion. The load and economic analysis was necessary to confirm that the JPA membership criteria would be satisfied:

- Addition of Richmond load is beneficial to existing customer base by increasing contributions to fixed costs and rate stability.
- The expansion results in acceleration of greenhouse gas reductions in California.
- The expansion would allow for increases in the amount of renewable energy being used in California's energy market.

If Richmond were to join MEA, total annual revenues for MEA are estimated to increase by $33 million, and total costs are estimated to increase by $31 million. The analysis indicates that if MEA expanded to Richmond, there would be a modest benefit to existing MCE ratepayers, as the Richmond revenues would be sufficient to cover all additional costs associated with serving the Richmond customers.

Timeline

MEA and DMC estimate that a reasonable timeline allowing for adequate decision-making, electric procurement, incremental staffing, regulatory activities and financing would allow provision of service to Richmond customers in early 2013.

Resource Planning

The City of Richmond customers would have an opportunity to opt out of participating in Community Choice Aggregation. Assuming that 20% Richmond customers opt-out, an additional 35,000 customers would be enrolled in MCE, and an additional 425 gigawatt hours (GWH) per year would be sourced from the MCE energy portfolio. With Richmond enrolled in MCE, an additional 215 GWH annually would be supplied by renewable resources by 2020 (20 megawatts (MW) of baseload resource plus 15 megawatts (MW) of peaking renewable capacity), avoiding over 36 thousand metric tons per year of greenhouse gas emissions. DMC and MEA estimate that there are sufficient renewable energy supplies in the market place that are either existing or in development for MEA to supply the Richmond customers.

Staffing

Extension of service to Richmond is estimated to support hiring of an additional 3 full time positions at MEA, primarily engaged in customer service and procurement activities associated with the larger customer base.

Technical Services

The larger customer base and increased sales volumes would result in increased billing and customer service related costs provided under Noble Energy Solutions agreement and the PG&E service agreement. These billing and data services costs are estimated to increase by $1.2 million annually.

Financing

Expansion would increase working capital requirements due to larger transactional volume. Estimated MEA financing for working capital associated with serving Richmond customers is $2 million (short-term loan or line of credit). There could be a material increase in the CCA bond requirement as a result of enrolling Richmond customers, depending upon the methodology for the CCA bond ultimately adopted by the CPUC.

Ratepayer Impacts

Incremental revenues were projected using MCE rates by schedule (e.g., Res-1, Com-20) applied to projected COR customer monthly usage.

Incremental revenues were projected for the following cost of service elements:

- Peak and off-peak energy
- Renewable energy at MCE renewable energy content
- Generation capacity by month and reliability area
- CAISO grid and scheduling fees
- Customer services for call center, data management
- Staff impacts (assume 3 FTEs)
- Billing and metering fees from PG&E
- Working capital financing
- Reserves at current percentage of revenue

Comparison of Customer Base

If the City of Richmond were to join the Marin Energy Authority, it would result in a 58% expansion of the existing Marin Clean Energy program by energy sales and a 50% increase in the existing number of customers served.

MCE is projected to expand to the cities Novato, Ross and Larkspur in 2012. These electric service customers and usage are not included in Marin's current customers chart below. The addition of these cities is expected to significantly increase MEA's size without Richmond.

A comparison chart is included below:

Potential Customer Base and Retail Sales

	----- Customers -----				----- Sales (GWh) -----		
Customer Classification	MEA	COR	Total		MEA	COR	Total
Residential	61,401	31,386	92,788		402	152	554
Small Commercial	7,236	2,501	9,737		113	53	166
Medium Commercial	519	265	785		94	52	146
Large Commercial	155	97	252		76	65	141
Industrial	7	7	14		41	98	139
Agricultural	151	1	152		5	1	6
Street Lighting	330	230	560		5	4	9
Total	69,801	34,487	104,287		737	426	1,162

MEA and DMC Electricity Load Comparison

A comparison of Marin's and Richmond's electric sales by end use is shown below. A larger percentage of Richmond's electricity is consumed by industrial and large, medium and small commercial users and only 36% of electricity is consumed by residential accounts.

Figure 1. City of Richmond Electric Sales by End Use. (Source: PG&E Load Data)

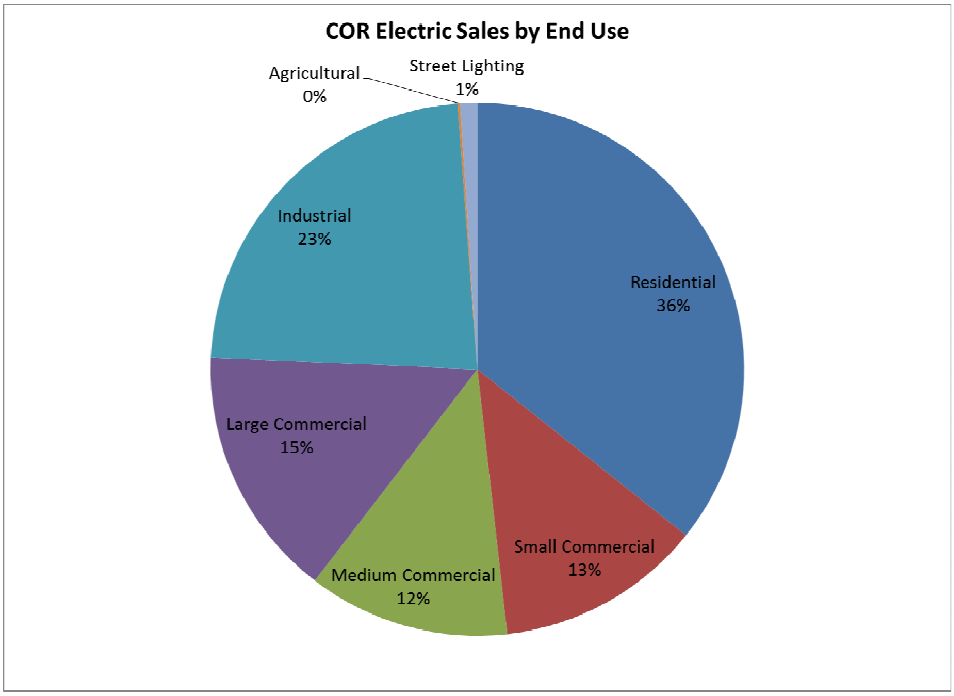
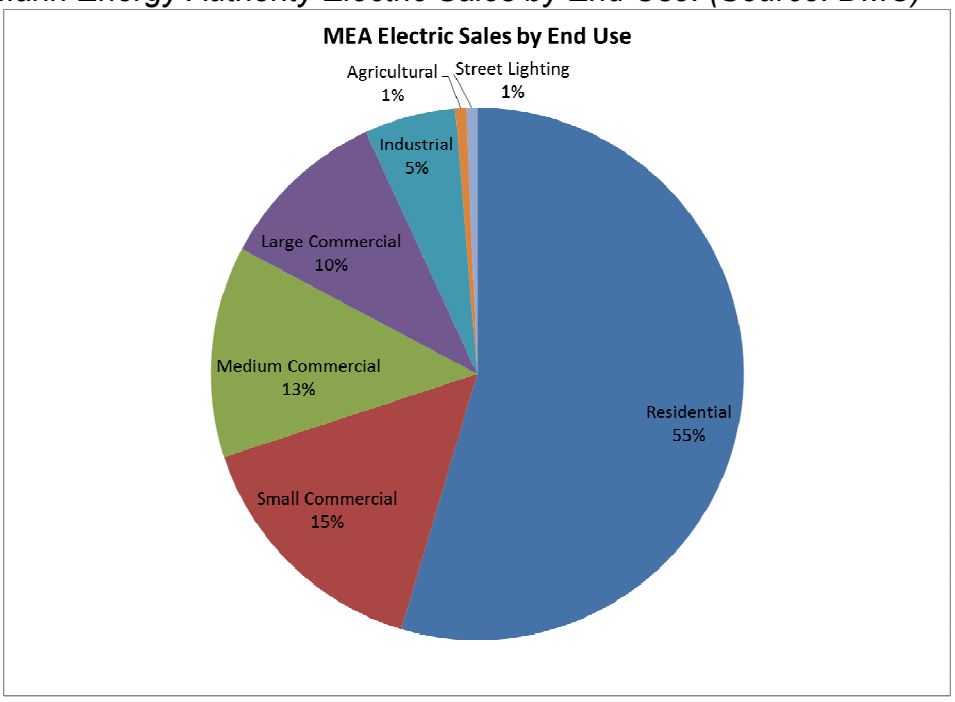


Figure 2. Marin Energy Authority Electric Sales by End Use. (Source: DMC)



Synergy with Existing City Policy

The City Council has made the fight against climate change and increasing local renewable energy a top priority for the City of Richmond. By joining the Marin Energy Authority, the City would expect to increase the renewable energy content of electricity consumed in Richmond and reduce the City's greenhouse gas footprint. Examples of

City Council support of renewable energy and greenhouse gas reduction initiatives include:

• Policy EC3.A Community Choice Aggregation Feasibility Assessment of the Energy Efficiency and Conservation of the Climate Change Element encourages the City to *"Conduct an assessment to determine the fiscal and operational feasibility of partnering in Community Choice Aggregation. Collaborate with neighboring jurisdictions to support local efforts to expand the generation and use of energy from renewable sources while increasing revenue for City. The municipally owned utility should explore purchasing surplus electricity generated by private sources to encourage large warehouse and retail operators to add solar panels to the roofs of their buildings and maximize generation of renewable energy."*

• On May 4, 2010, City Council passed a resolution opposing proposition 16 on the June 16, 2010, ballot, which would have required a two-thirds vote requirement for public electricity providers. City Council stated "the City of Richmond wishes to support citizens' ability to opt for locally controlled public power by forming municipal utility districts or CCAs in Contra Costa County and communities throughout the state."

• On September 17, 2007, Richmond's City Council directed staff to develop a comprehensive policy to lead by example in the fight against global warming. At the same City Council meeting, the City Council passed a resolution committing to the GHG emissions reduction targets established by California's Global Warming Solutions Act, or Assembly Bill 32 (AB 32) which are 2000 levels by CY 2010, 1990 levels by CY 2020, and 80 percent below 1990 levels by CY 2050.

• On September 16, 2008, the Richmond City Council became a signatory to the Urban Environmental Accords which encourages the City to *"Adopt and implement a policy to increase the use of renewable energy to meet ten per cent of the city's peak electric load within seven years."*

• In January 2007, the City of Richmond signed onto the U.S. Mayor's Climate Protection
Agreement committing to reducing GHG emissions to meet or surpass the Kyoto Protocol targets of a seven percent reduction from 1990 levels by 2012.

• Goal HW10 Promote Green and Sustainable of the Health and Wellness Element states that "*The City should promote green and sustainable development and practices to support a healthy local economy, protect the environment and improve quality of life for all residents."*

• Policy EC5.1 Green Businesses and Jobs of the Energy Efficiency and Conservation of the Climate Change Element encourages the City to *"Promote a green economy that can provide new jobs in the emerging green industry. A cluster of green businesses can provide goods and services to support the growing need for clean and sustainable technologies, fuels, vehicles and equipment, while providing jobs and training to*

Richmond residents. The green economy can support Richmond's economic development and environmental protection goals."

DOCUMENTS ATTACHED:

Attachment 1 – MEA Evaluation of the Potential Extension of MCE Service to the City of Richmond

Marin Energy Authority

MARIN CLEAN ENERGY

October 25, 2011

marin clean energy

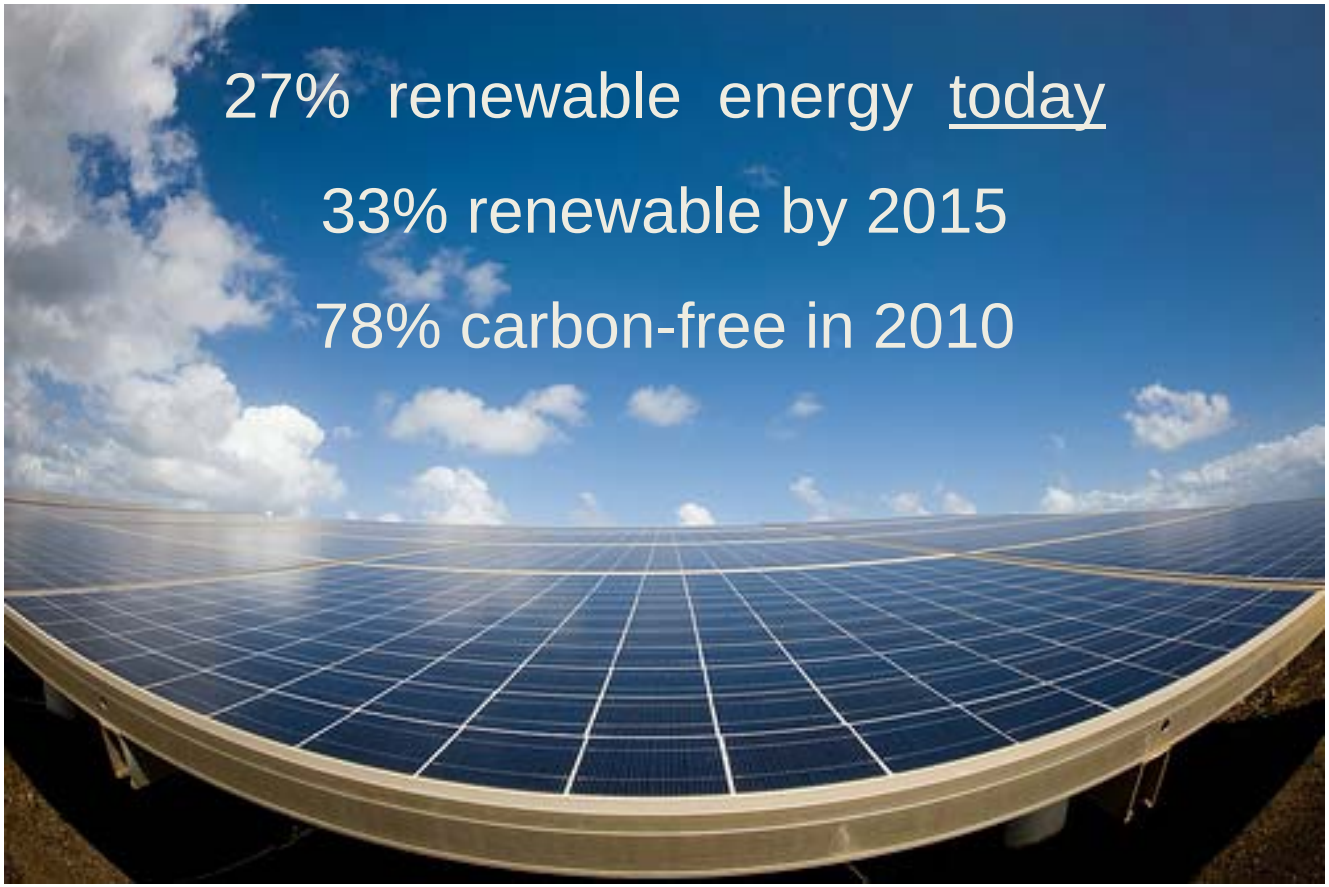
renewable. reliable. affordable.

MCE In a Nut Shell

- Administered by local, not-for-profit, public agency (Marin Energy Authority)
- Cleaner, greener, non-polluting energy
- Partner with PG&E to deliver energy and maintain power lines
- 27-100% renewable power
- Service area currently includes Belvedere, Fairfax, Larkspur, Mill Valley, Novato, Ross, San Anselmo, San Rafael, Sausalito, Tiburon, and the County of Marin

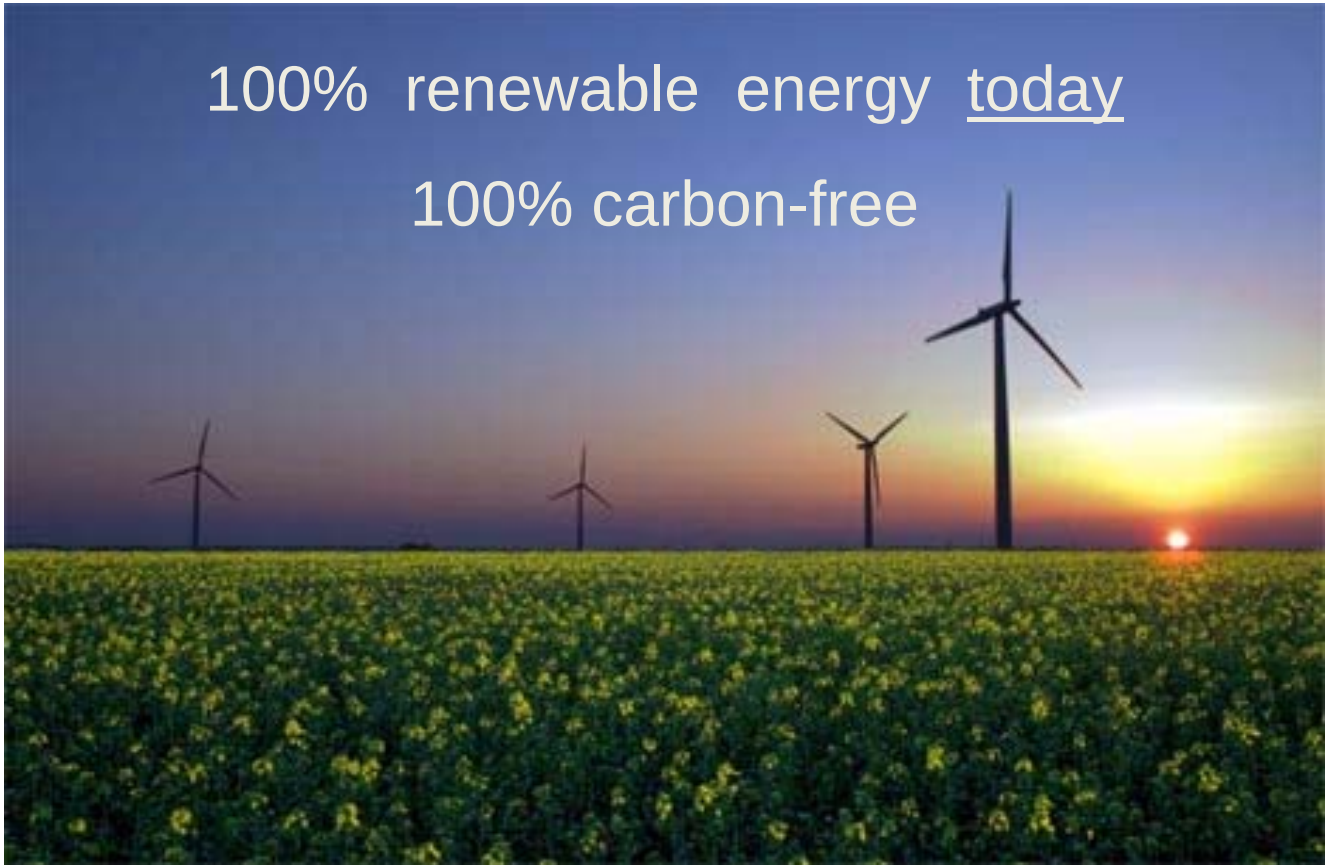
Energy Options

Light Green Power



Energy Options

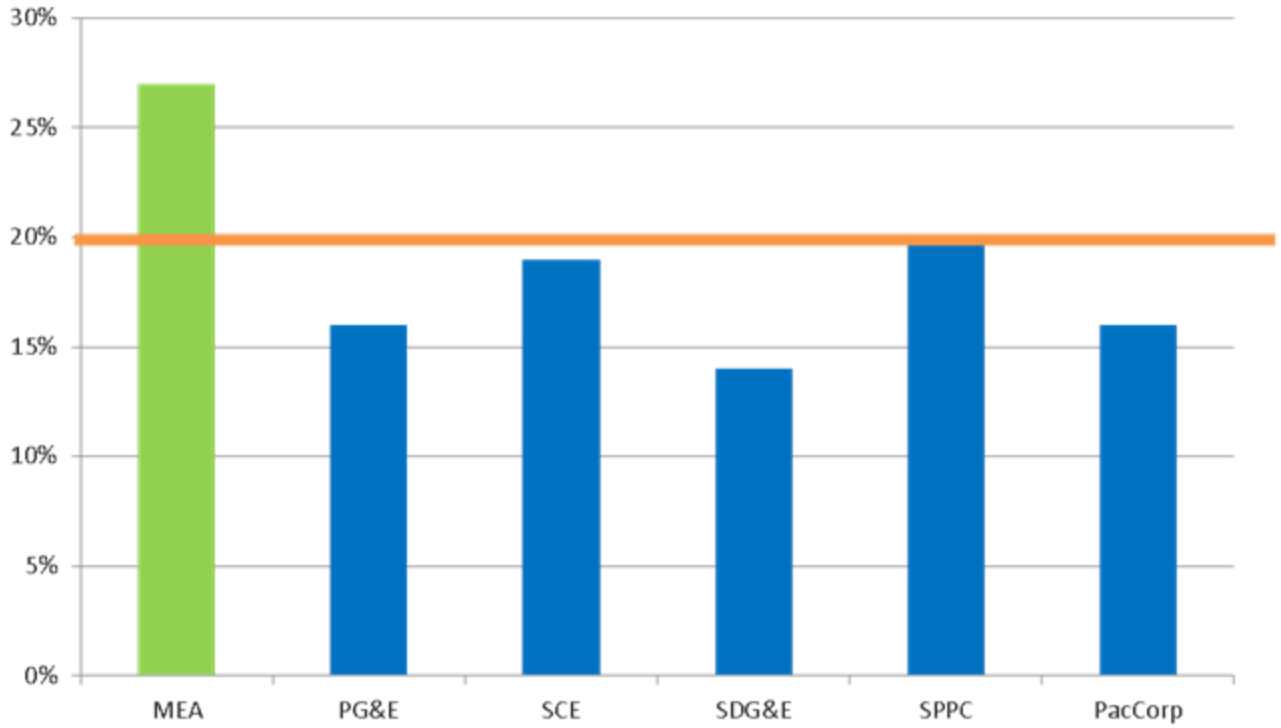
Deep Green Power



CA Renewables Portfolio Standard

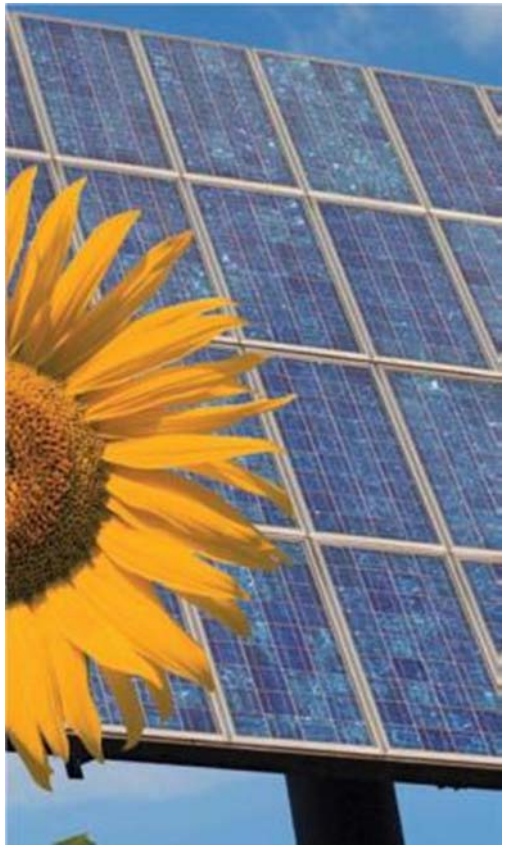
Exceeding State Requirements

Renewables Portfolio Standard / MEA Procurement – 2010



In first reporting, MEA is exceeding the State's Renewable Portfolio Standard by **33%**

Renewable Purchases



New renewable projects in California

- 31 MW of new solar
- 3.2 MW of new biogas

Local Solar Procurement

- 429 MCE customers generating solar power
- 393,886 kWh produced by local producers to-date
- 1 MW of new solar carport shade structures under development

Giving Back

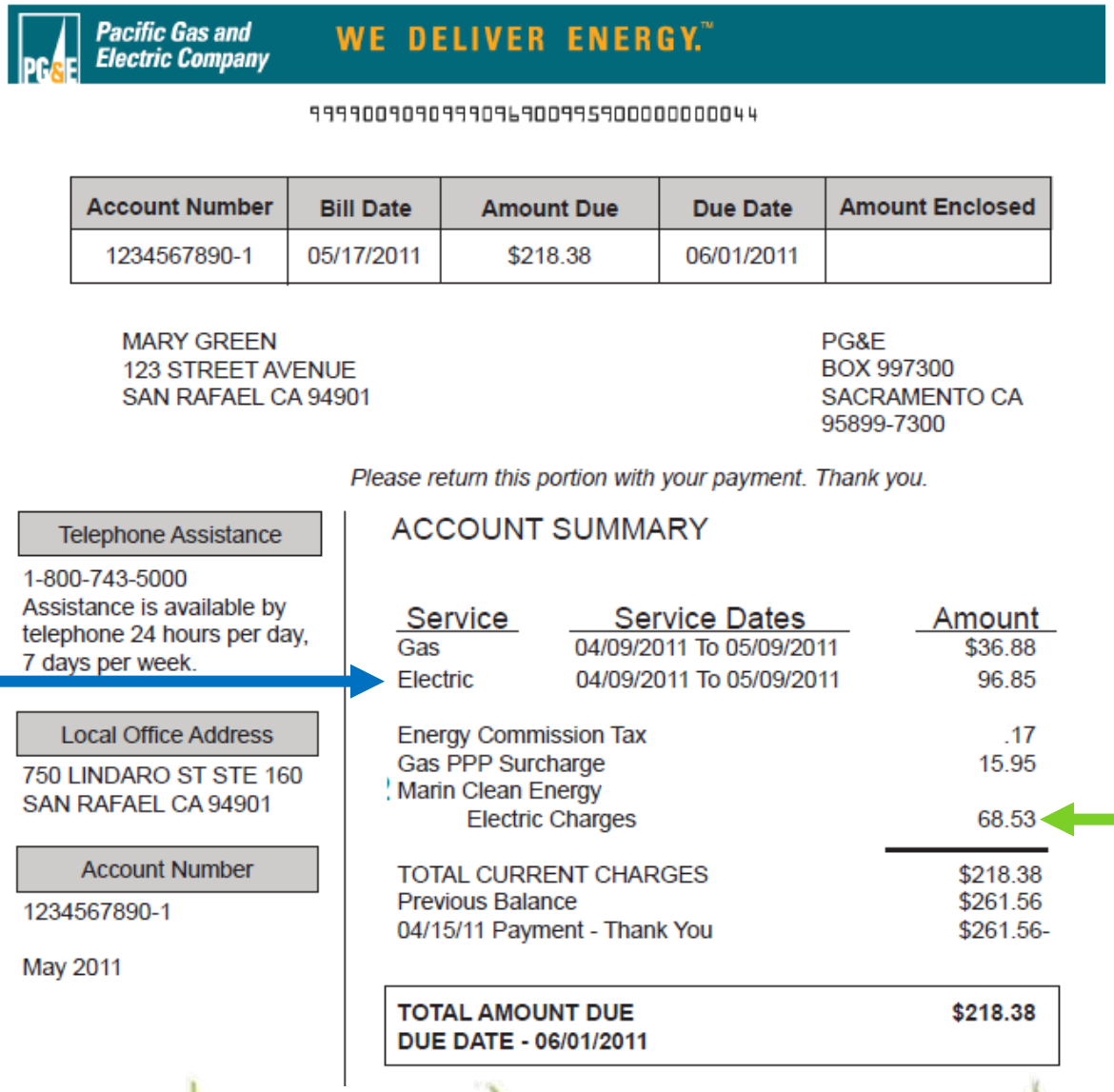
Funding Local Programs:

- $500 energy efficiency rebates to Energy Upgrade CA participants

- 5 electric vehicle charging stations for member cities/towns

- Local renewables
  - Net Energy Metering
  - Feed-In Tariff

Sample Bill – Summary Page



Pacific Gas and Electric Company WE DELIVER ENERGY.™

Account Number	Bill Date	Amount Due	Due Date	Amount Enclosed
1234567890-1	05/17/2011	$218.38	06/01/2011	

MARY GREEN
123 STREET AVENUE
SAN RAFAEL CA 94901

PG&E
BOX 997300
SACRAMENTO CA
95899-7300

Please return this portion with your payment. Thank you.

Telephone Assistance

1-800-743-5000
Assistance is available by telephone 24 hours per day, 7 days per week.

Local Office Address

750 LINDARO ST STE 160
SAN RAFAEL CA 94901

Account Number

1234567890-1

May 2011

ACCOUNT SUMMARY

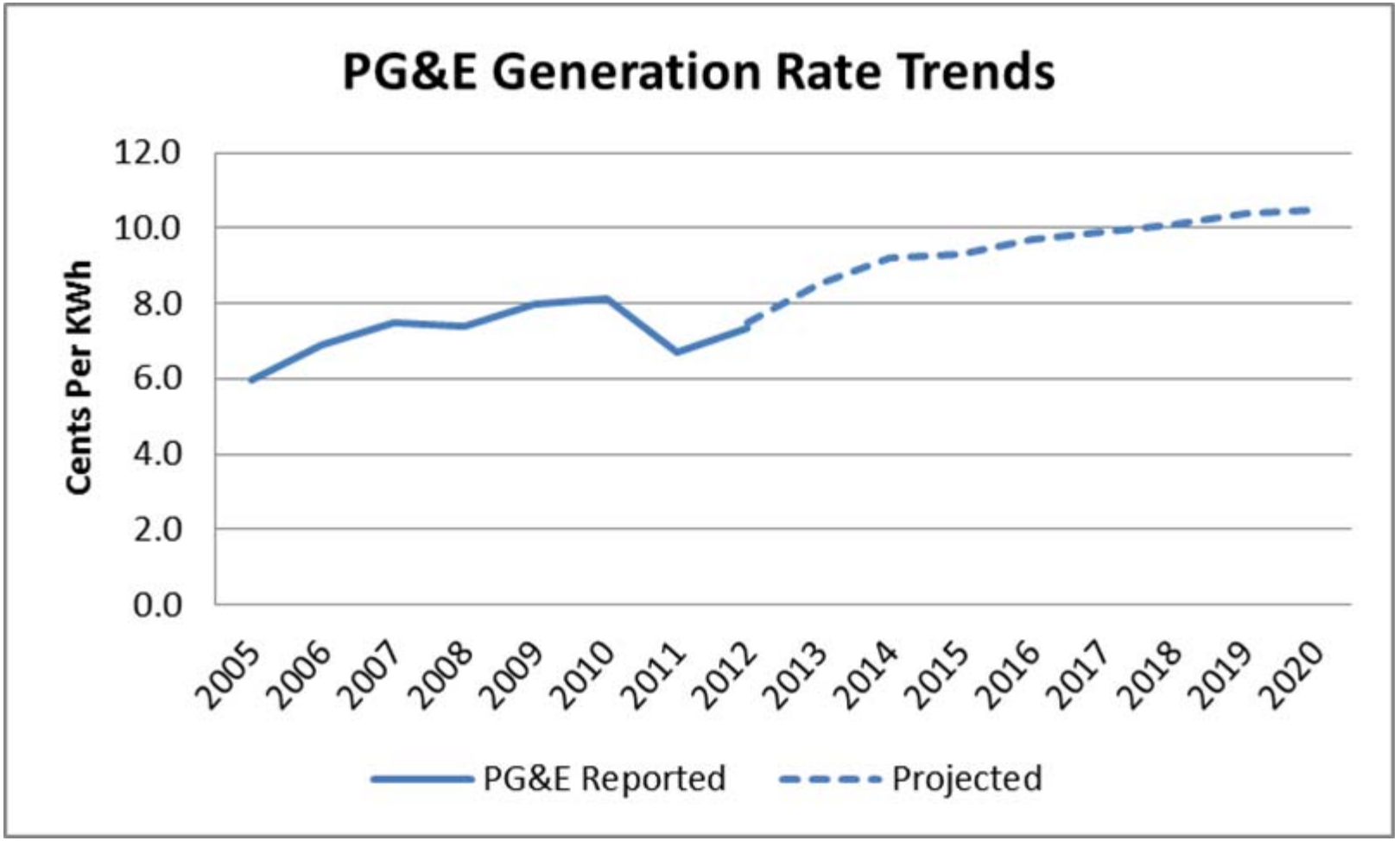
Service	Service Dates	Amount
Gas	04/09/2011 To 05/09/2011	$36.88
Electric	04/09/2011 To 05/09/2011	96.85
Energy Commission Tax		.17
Gas PPP Surcharge		15.95
Marin Clean Energy Electric Charges		68.53
TOTAL CURRENT CHARGES		$218.38
Previous Balance		$261.56
04/15/11 Payment - Thank You		$261.56-

TOTAL AMOUNT DUE $218.38
DUE DATE - 06/01/2011

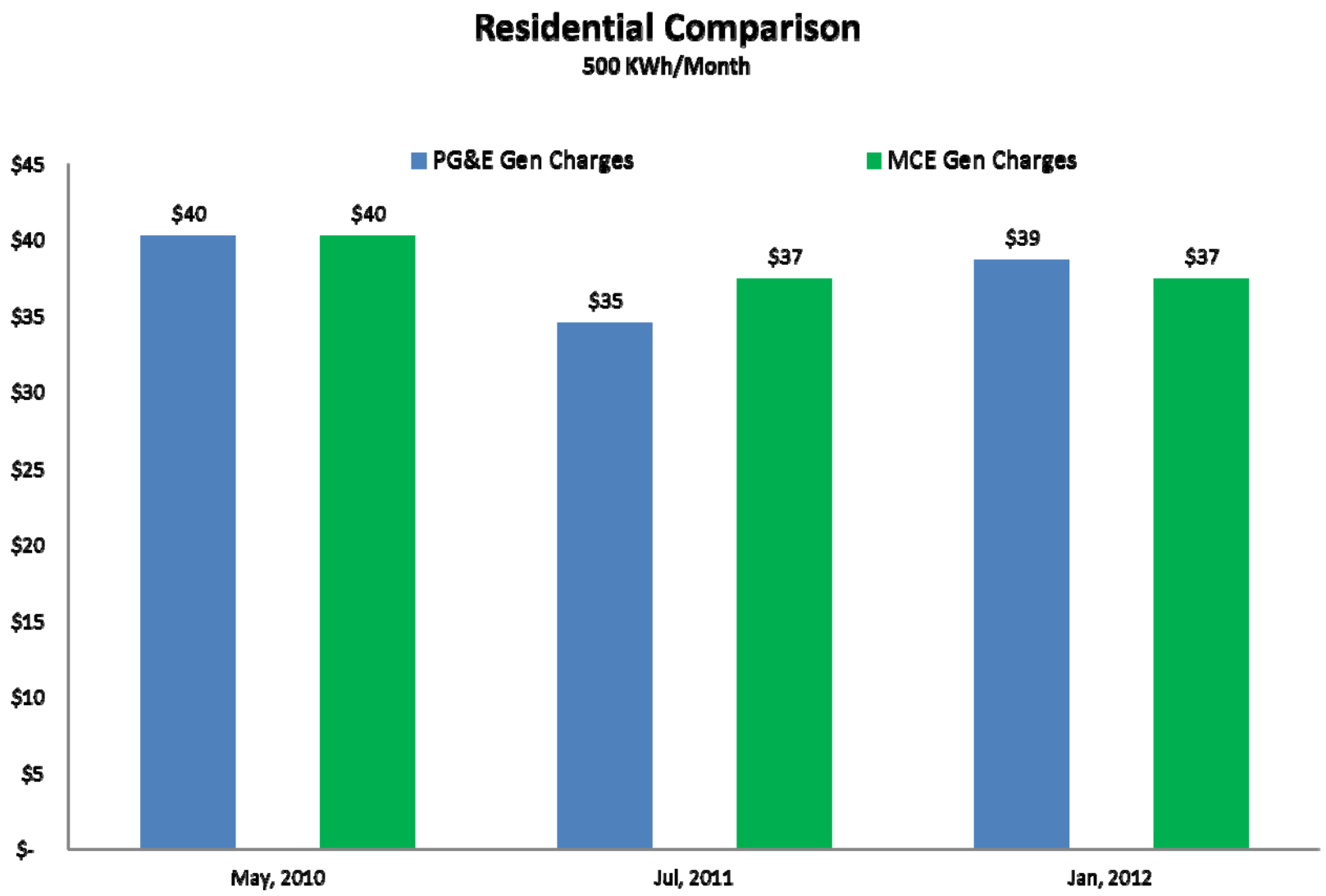
PG&E Transmission and Distribution Charges

MCE Generation Charges

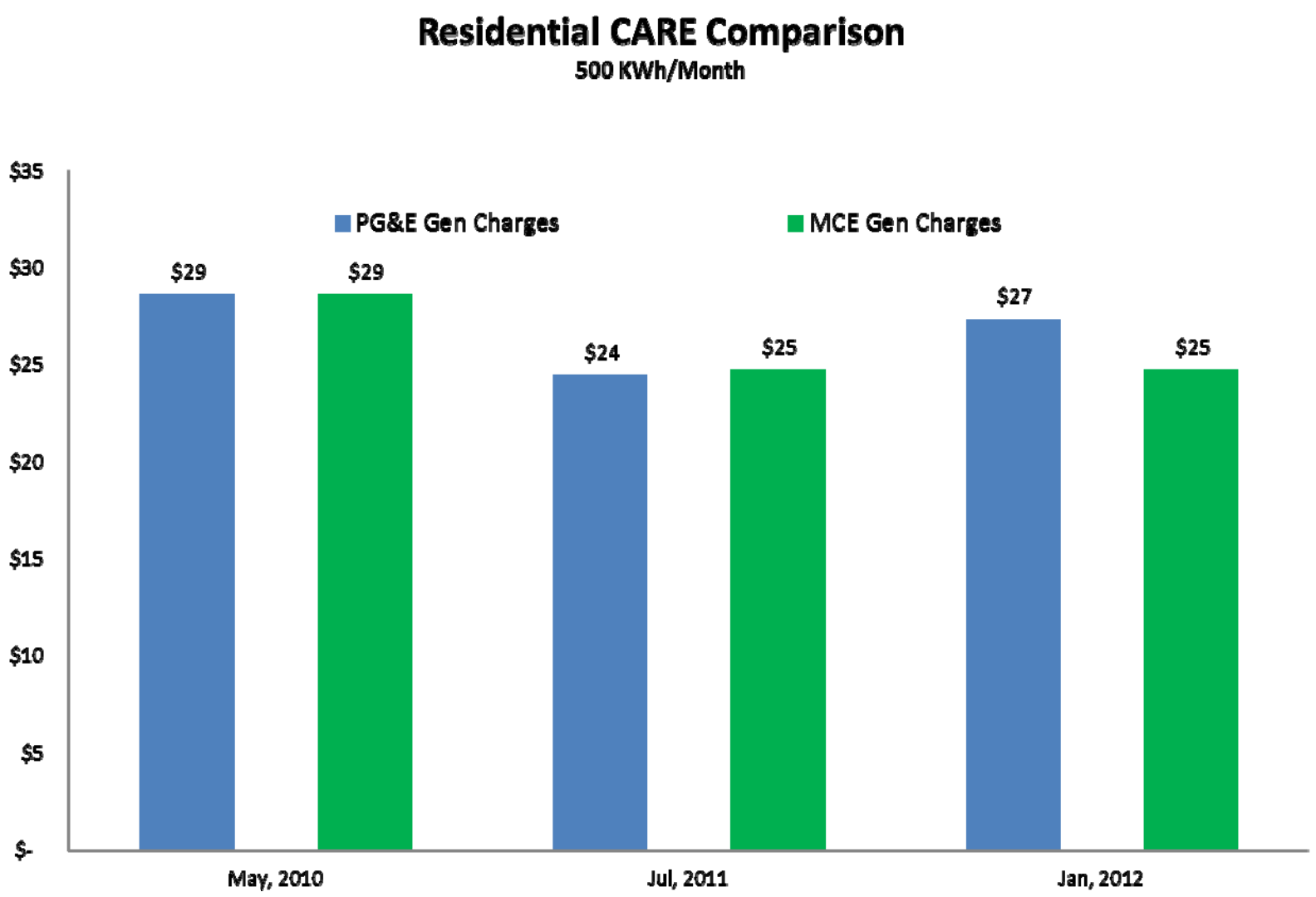
Market Forecasting



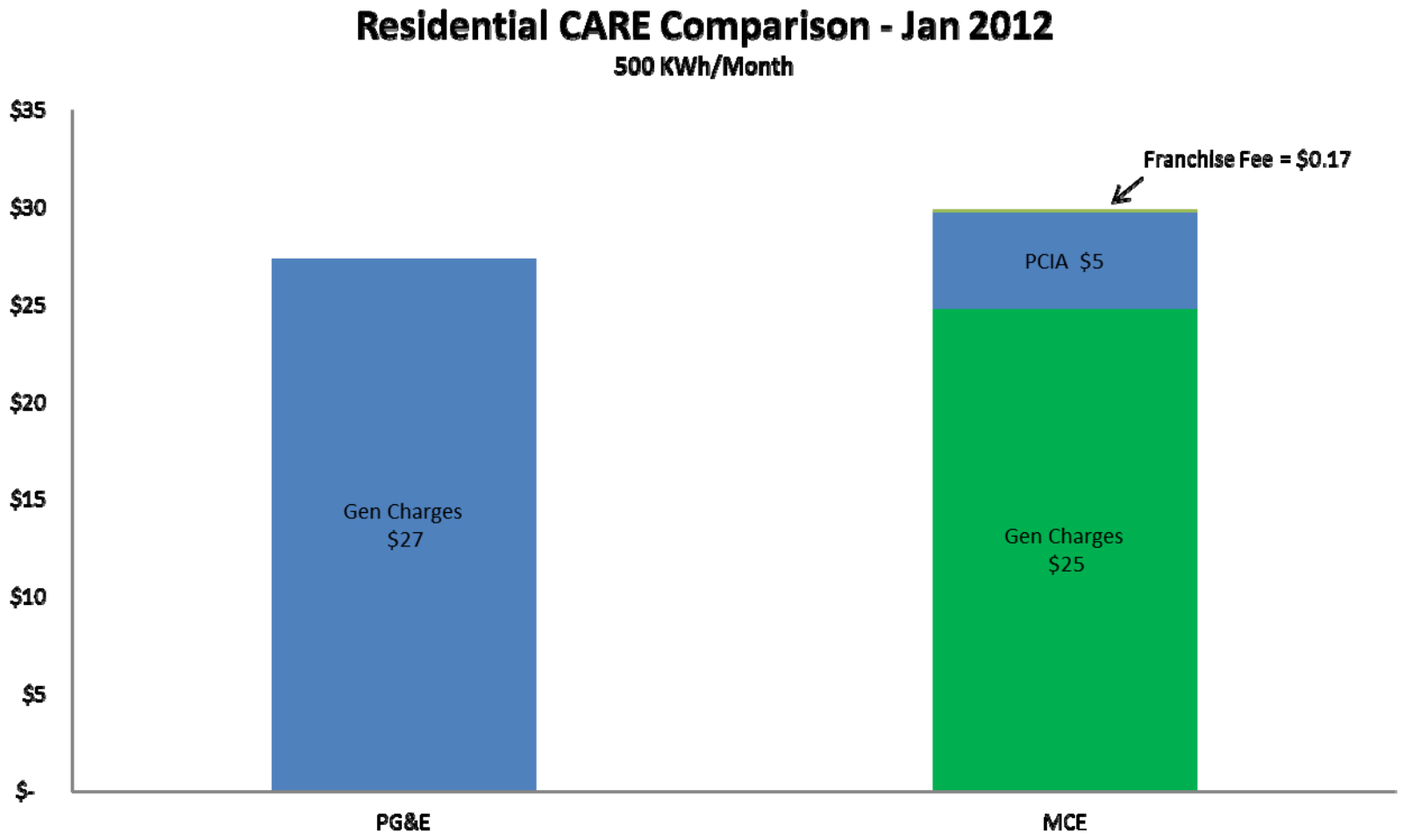
Source: PG&E Tariff Advice Letters to CPUC (http://www.pge.com/nots/rates/tariffs/advice.shtml)


Residential Comparison
500 KWh/Month
PG&E Gen Charges
MCE Gen Charges
$45
$40
$35
$30
$25
$20
$15
$10
$5
$-
$40
$40
$35
$37
$39
$37
May, 2010
Jul, 2011
Jan, 2012

Light Green Rate Comparison

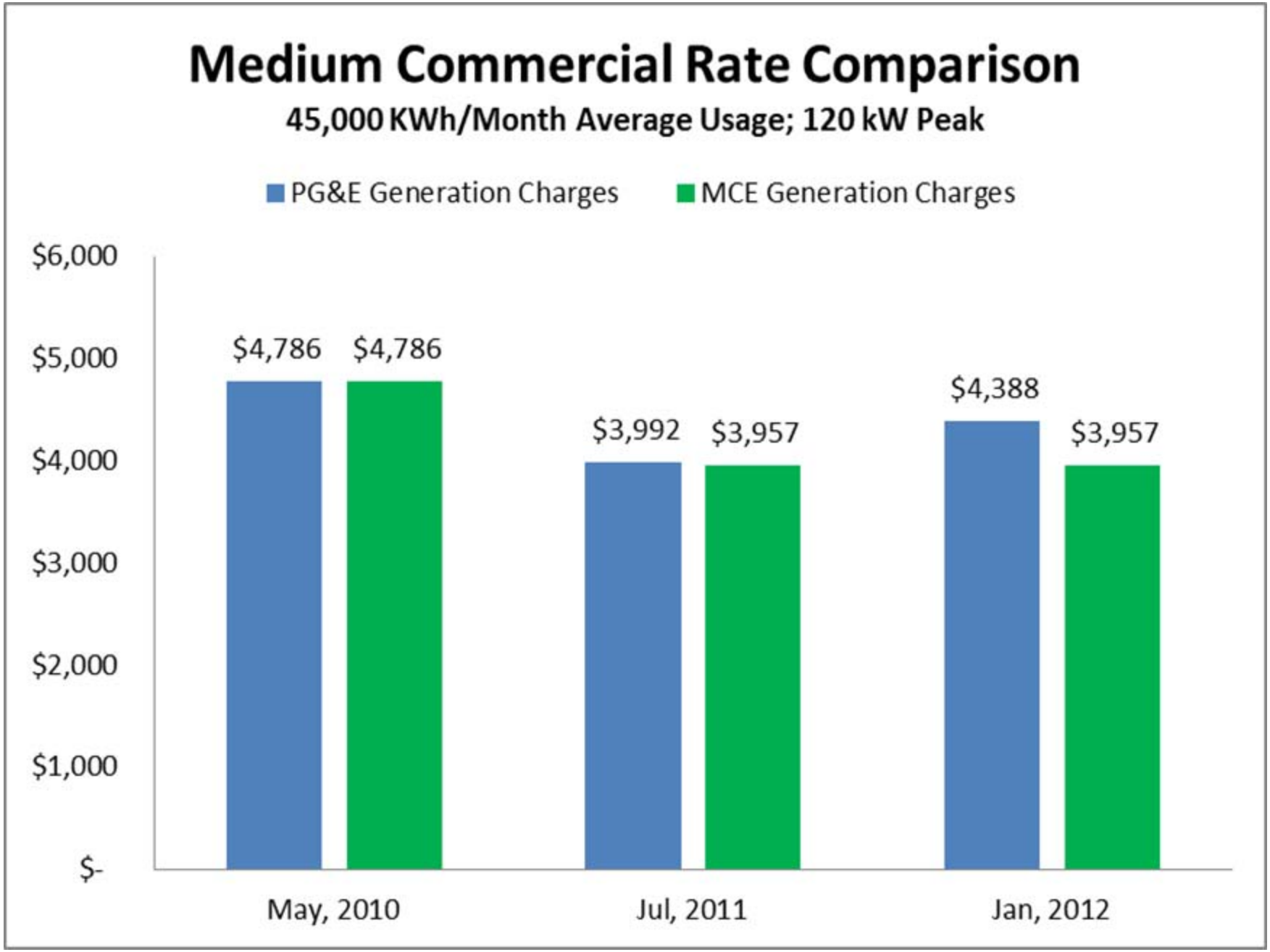

Residential CARE Comparison
500 KWh/Month
$35
$30
$25
$20
$15
$10
$5
$-
PG&E Gen Charges
MCE Gen Charges
$29
$29
$24
$25
$27
$25
May, 2010
Jul, 2011
Jan, 2012

Light Green Rate Comparison

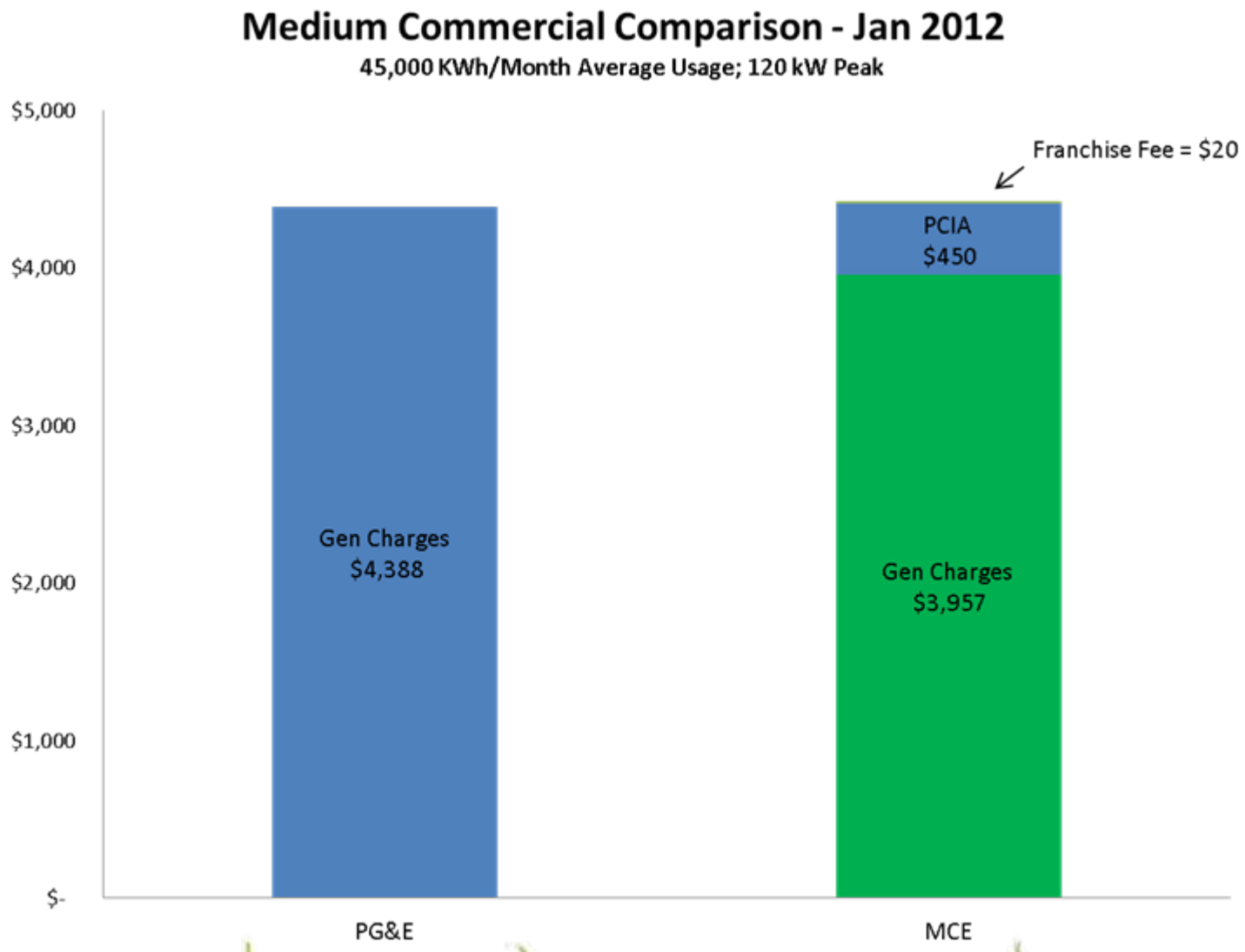


Medium Commercial Rate Comparison

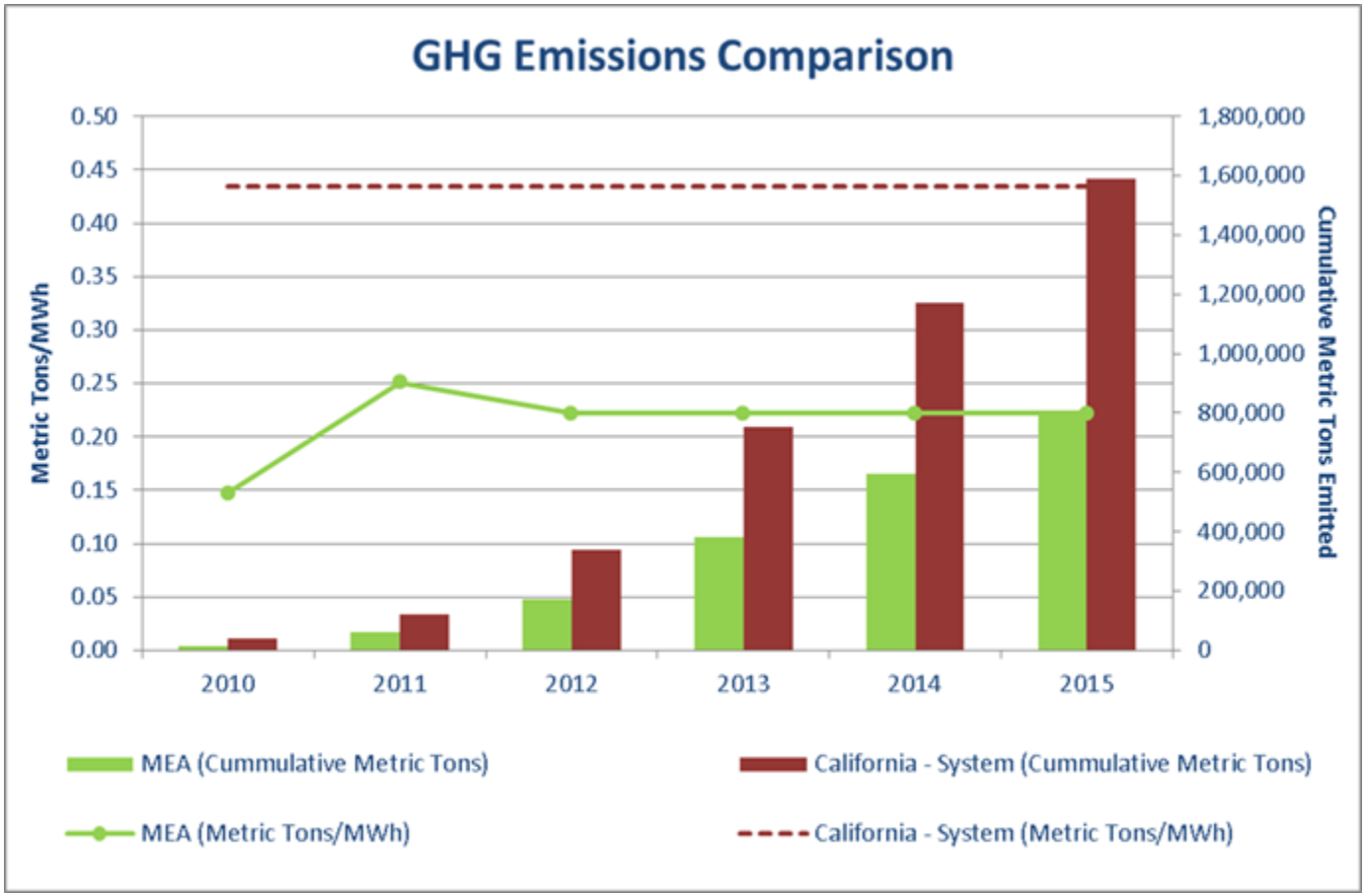
45,000 KWh/Month Average Usage; 120 kW Peak



Light Green Rate Comparison



GHG Emissions Comparison



Customer Participation

•Customers receive 4 notices regarding enrollment spanning a 5-month period

•Customers may sign up for Deep Green
•service at anytime

•Customers may opt out at any time

•Opting out is free during initial 5-month period

•If opting out after the initial 5-month period there is a one time fee of $5 (residential) or $25 (commercial)

Legal Protections

Firewall Exists between Debts & Liabilities of MEA and its Member Agencies:

- Protection is based on JPA structure and is aligned with State Law
- 'No recourse' provision included in Joint Powers Agreement and in MEA Rules and Regulations
- 'No recourse' provision included in contracts for power supply and contracts with vendors

MEA Holds Insurance Coverage

- Coverage provide protection against tort liability claims

Potential Timeline

Phase I: City of Richmond Impact Analysis (August – December 2011)

- ✓ Obtain and analyze customer load data
- ✓ Analyze economic and administrative impact to MEA for serving customers
- ✓ Outreach/interface with stakeholders and policy-makers as resources allow
- ✓ Determine & implement changes to MEA Board composition/voting rights
- ❑ Assess compliance with membership criteria and approve application
- ❑ Aid in adoption of enabling ordinance and resolution

Potential Timeline

Phase II: Planning for Operations (January – September 2012)

- ❑MEA to modify, adopt and submit updated amendment to Implementation Plan
- ❑MEA to identify and secure any necessary short-term financing to support expansion
- ❑MEA to solicit and negotiate agreement(s) for additional resource requirements

Potential Timeline

Phase III: Service to Customers (Begin January 2013, then ongoing)

- ❑Provide noticing and outreach to new customers
- ❑Enroll new customer in service and establish accurate customer accounting and billing processes
- ❑Provide call-center services for all customer inquiries and other ongoing customer communications
- ❑Provide for all required compliance filings to account for new load being served as well as any incremental procurement for new load
- ❑Provide regulatory support at the CPUC

Membership Criteria

All of the following criteria must be met prior to MEA approving membership:

- Addition of Richmond load is beneficial to existing customer base by increasing contributions to fixed costs and rate stability
- The expansion results in acceleration of greenhouse gas reductions in California
- The expansion would allow for increases the amount of renewable energy being used in California's energy market
- City of Richmond is supportive of and endorses MEA's mission & current electricity procurement plans (target for 33% renewable energy content by 2015)
- City of Richmond adopts MEA's sample resolution and ordinance

Membership Criteria

Additional criteria will also be considered by MEA including:

- New opportunities are available to deploy local solar, other distributed renewable generation and/or CHP through MCE's Net Energy Metering Tariff and/or Feed in Tariff
- There is in increase in the ability to launch and operate energy efficiency activities and programs
- Regional benefits are achieved based on Richmond's geographically proximate location
- Greater demand for local jobs and other local economic activity (office rental, office materials, accounting, legal and other vendor services) is likely to result from the expansion
- The City of Richmond has completed a survey or polling to determine market interest in MCE with results that demonstrate market interest is present
- The City of Richmond and MEA have conducted outreach within the community to discuss MCE and received primarily positive feedback from the public

Evaluation of Economic Criteria

Addition of Richmond load is beneficial to existing customer base by increasing contributions to fixed costs and rate stability

The expansion results in acceleration of greenhouse gas reductions in California

The expansion would allow for increases the amount of renewable energy being used in California's energy market

In order for MEA to assess the criteria listed above, DMC conducted an analysis to examine customer load data within the City and performed a cost and resource analysis for MEA to extend service to the City:

- Load analysis to determine resource procurement requirements to serve the City of Richmond.
- Cost analysis to quantify incremental costs and revenues, assess MEA budgetary impacts and quantify potential MCE ratepayer benefits or costs.

Load Analysis

DMC prepared 20-year projections for the City:

- Service accounts (customers) and annual electricity consumption by customer segment;
- Renewable energy requirements necessary to meet the California Renewable Portfolio Standards, by procurement category set forth in SBX1 2;
- Monthly generation capacity requirements necessary to meet the California Resource Adequacy program, by resource type.

DMC modeled hourly load profiles to define:

- Hourly electric demand by customer segment and in aggregate;
- Peak and off-peak electricity needs by month, for wholesale power procurement.

Customer Base and Sales

	----- Customers -----				----- Sales (GWh) -----		
Customer Classification	MEA	COR	Total		MEA	COR	Total
Residential	61,401	31,386	92,788		402	152	554
Small Commercial	7,236	2,501	9,737		113	53	166
Medium Commercial	519	265	785		94	52	146
Large Commercial	155	97	252		76	65	141
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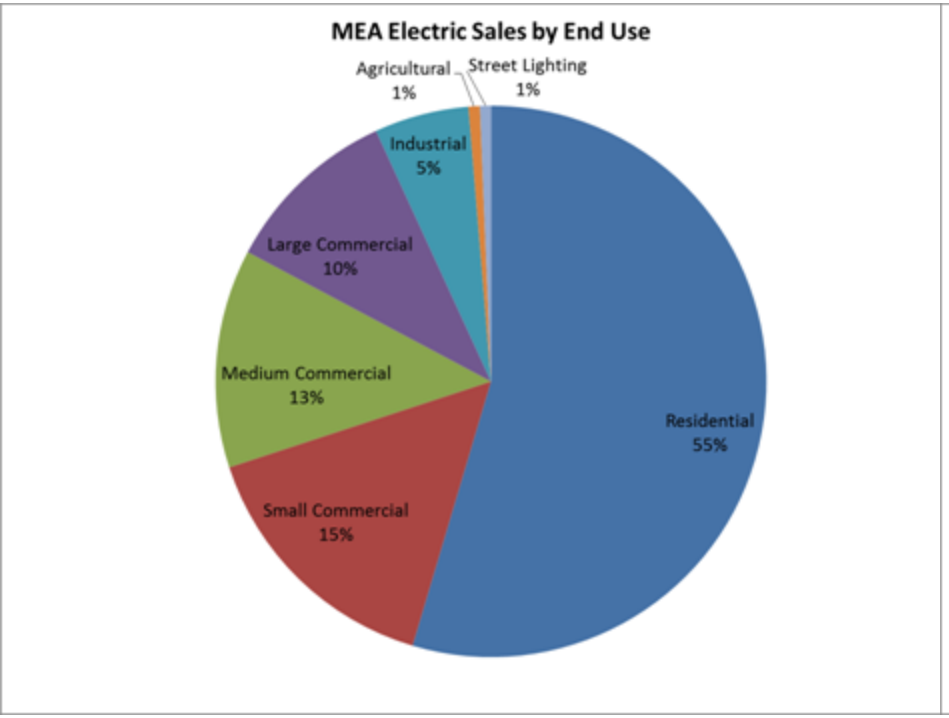
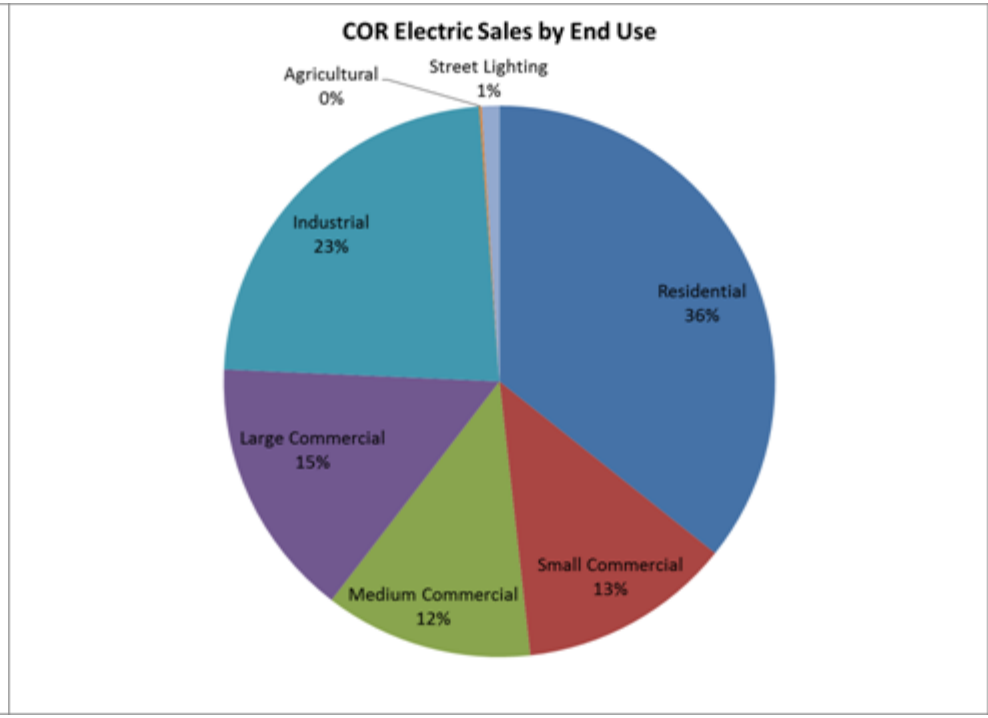
Agricultural	151	1	152		5	1	6
Street Lighting	330	230	560		5	4	9
Total	69,801	34,487	104,287		737	426	1,162

Approximately 35,000 new customers would be projected to enroll in MCE (assuming 20% opt-out of bundled service customers and excluding direct access customers).

MEA would have incremental electricity sales and procurement needs of approximately 425 GWh per year.

Electric Sales by Customer Segment

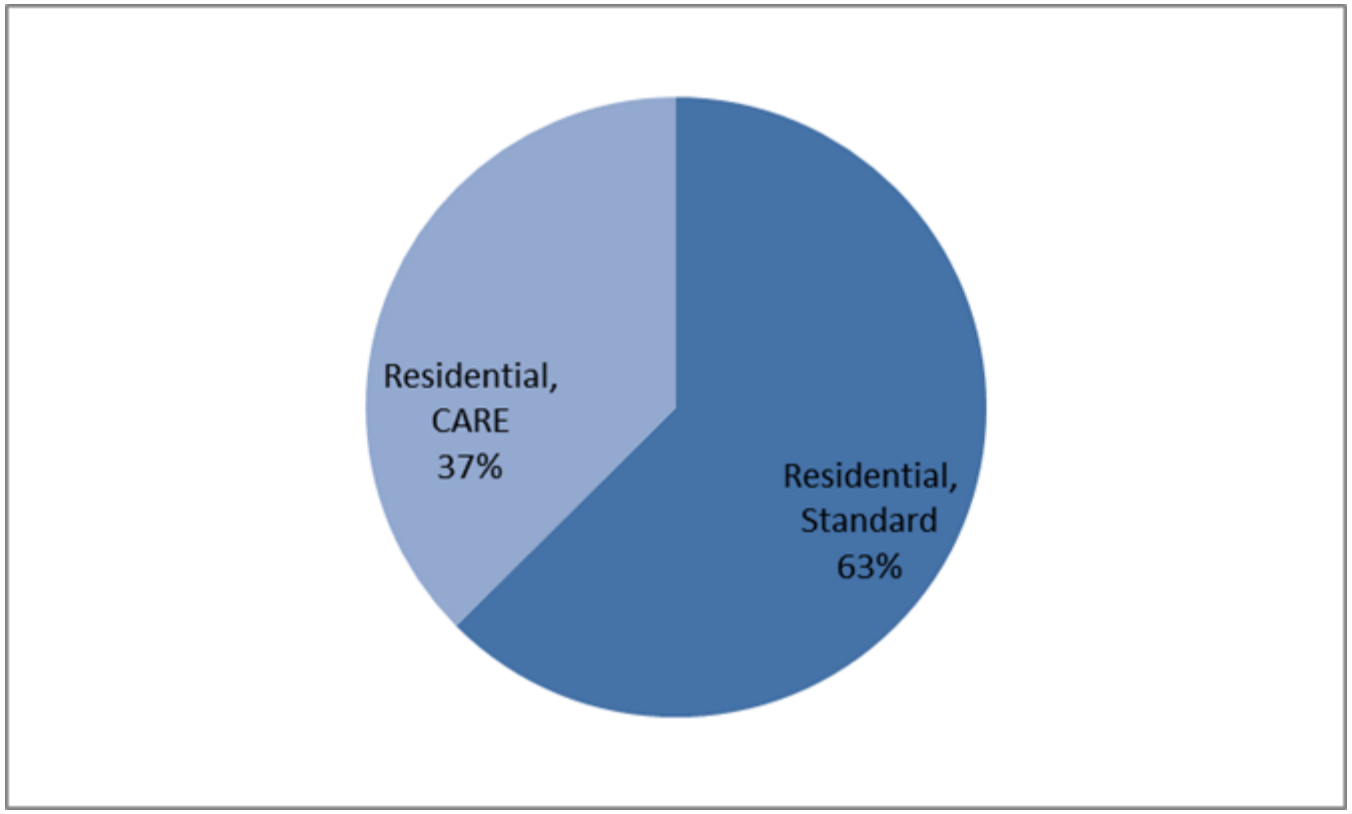




The City of Richmond includes proportionately more large commercial and industrial customers than do the current MEA municipalities. These customers tend to consume electricity relatively evenly throughout the day and year (high load factor), and both rates and cost of service are relatively low.

Retention of these customers was not deemed a critical factor in the economic evaluation as MEA rates essentially just cover the costs of serving these customers.

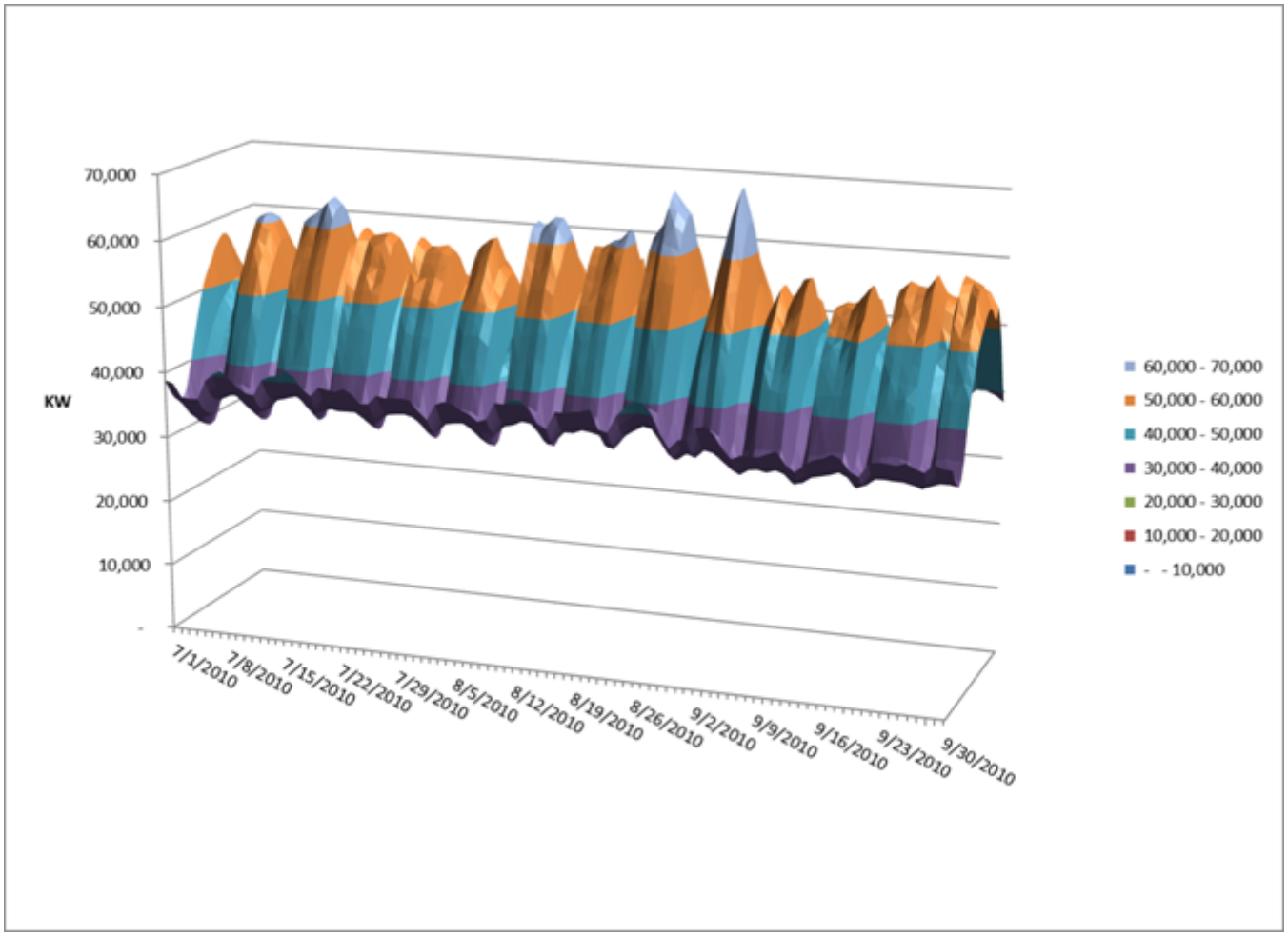
Residential Customer Base, CARE Program



Approximately 37% of residential customers within the City participate in the California Alternate Rates for Energy (CARE) program for qualifying low-income households.

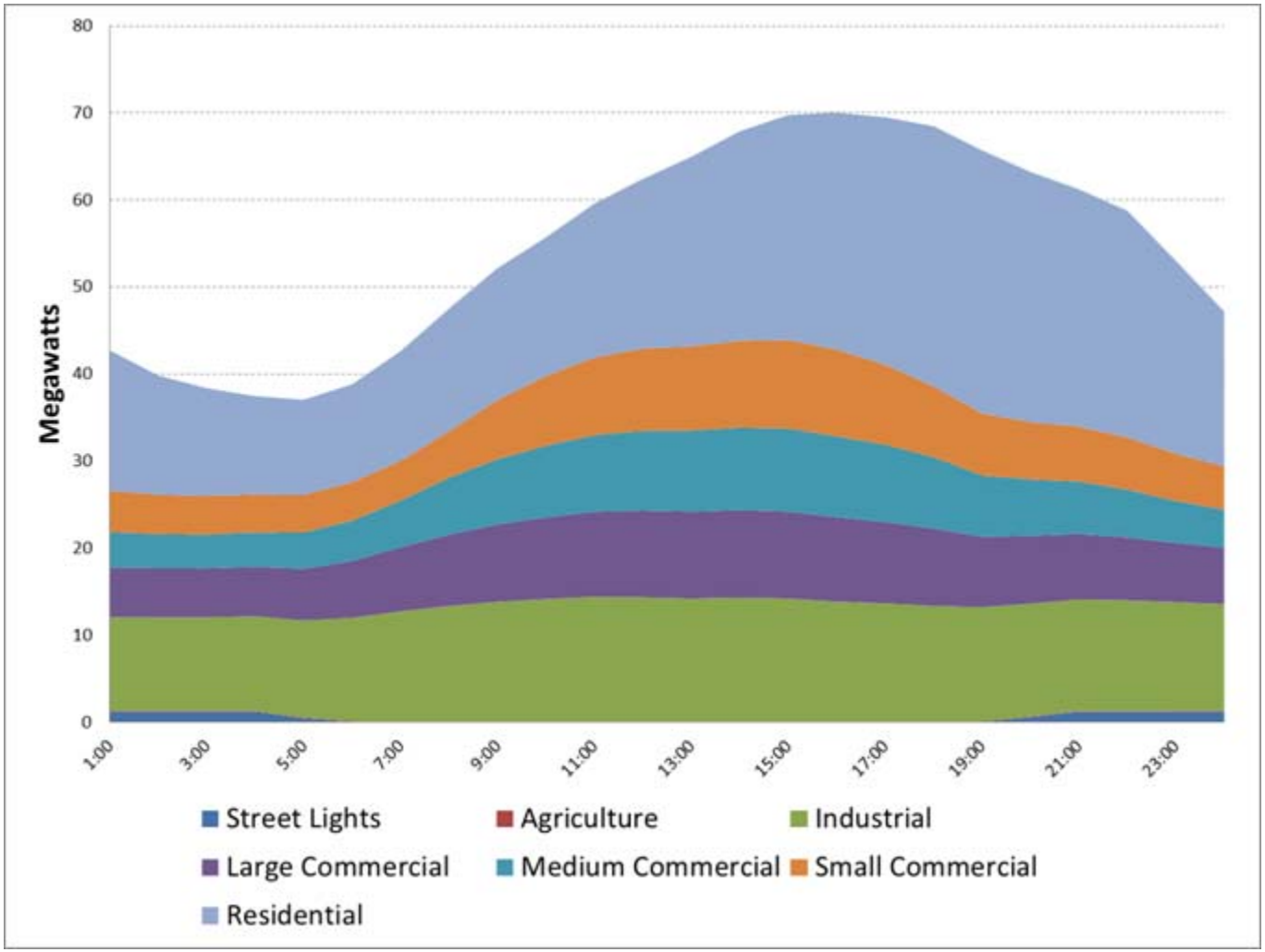
MEA offers discounted rates for participating CARE customers.

City of Richmond Load Profile



Electricity demand would be expected to range between 40 MW and 70 MW throughout the year (Q3 shown above).

City of Richmond Peak Day Load



MEA Economic Analysis

- **Additional Revenues from Energy Sales to City of Richmond Customers**
  - MCE rates by schedule (e.g., Res-1, Com-20) applied to projected monthly electricity usage for Richmond customers
- **Minus Additional Costs from Providing Energy to City of Richmond Customers**
  - Peak and off-peak energy
  - Renewable energy at MCE renewable energy content
  - Generation capacity by month and reliability area
  - CAISO grid and scheduling fees
  - Customer services for call center, data management
  - Staff impacts (assume 3 FTEs)
  - Billing and metering fees from PG&E
  - Working capital financing
  - Reserves at current percentage of revenue
- **Equals Net Impact to MEA from Serving City of Richmond Customers**
  - Analysis indicates expansion to Richmond would modestly benefit existing MCE ratepayers as Richmond revenues would be sufficient to cover additional costs.

MEA Consideration of Richmond Membership

• MEA Board has approved application documents for the City of Richmond to apply for membership.

• The City of Richmond would be offered a seat on the MEA Board

Steps Necessary to Join MEA:

- Complete application documents
- Adopt resolution by majority vote requesting membership
- Adopt Ordinance required by CPUC Code Section 366.2(c)(10)

Opportunity for Richmond's Climate Action Plan

Town of San Anselmo Climate Action Plan, April 2011

Mitigation Measures for Government Operations				
Measure		Cost to Implement	Annual Savings	GHG Reductions (Metric Tons)
3.4.G1	Install Energy Efficiency Upgrades in Town Buildings	$103,405	$6,219	30.9
3.4.G2	Install Solar Energy System at Town Hall	$102,000	$3,170	4.1
3.4.G3	Install Solar Energy System at Corporation Yard	$37,000	$1,153	1.5
3.4.G4	Install Solar Energy System at Isabel Cook Community Center	$601,000	$18,731	24.5
3.4.G5	Upgrade Street Lighting to Energy-efficient Technologies (LED)	$301,931	$17,949	31.7
3.4.G6	Upgrade Traffic Signals to Energy-efficient Technologies (LED)	$7,875	$2,821	0.3
3.4.G7	Purchase Marin Clean Energy Deep Green Electricity for Government Facilities	$4,120 per year	n/a	92.1
	TOTAL			185.1
	% Reduced from 2005 Levels			29.2%

Marin Clean Energy is….

Achieving Goals

- Creating demand for new renewable supply in California & Marin
- Reducing GHG emissions
- Simple, easy opt-out process

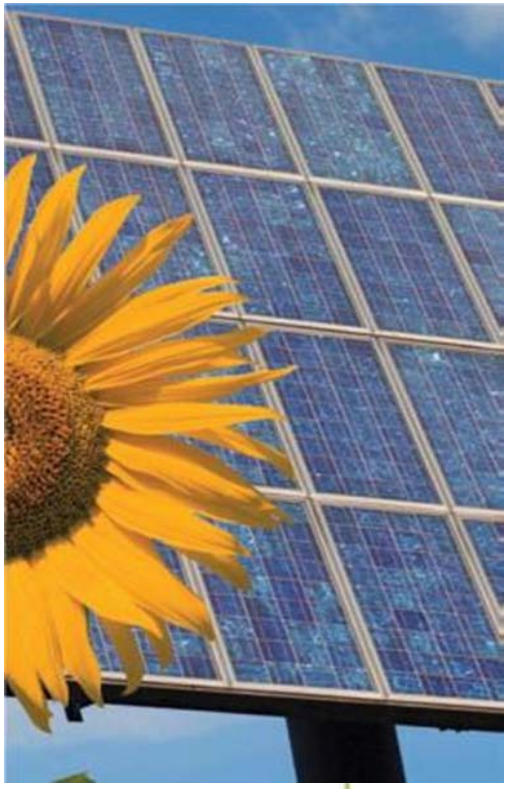
Exceeding Targets

- MCE's 25% renewable choice has grown to 27% renewable, and will grow to 33% by 2015
- MCE is exceeding CA State renewable mandate
- MCE is leading the State in renewable supply

Awards & Recognition

- Environmental Protection Agency
  - MEA ranked #13 on Local Government Largest Green Power Purchasers, 2010
  - Green Power Leadership Club, 2011
- Power Association of Northern California Annual Award, 2010
- California State Legislature Certificate of Recognition, 2010
- Congresswoman Lynn Woolsey Certificate of Recognition, 2010
- Marin Builders Association Leadership Award, 2011

Marin Clean Energy…It's working.



Questions?

Call 888-632-3674
Visit MarinCleanEnergy.com

MEA Evaluation of the Potential Extension of MCE Service to the City of Richmond

October 20, 2011

In support of the Marin Energy Authority's evaluation of the potential benefits and costs of extending the Marin Clean Energy program to the City of Richmond ("COR" or "City"), Dalessi Management Consulting ("DMC") conducted an analysis of the potential COR electric loads, resource requirements, and cost of service associated with providing electrical services to the City.

The analysis used historical electric usage data provided by PG&E for all current electric customers located within the City of Richmond to derive a customer and load forecast, which was used as the basis for the economic assessment. The load forecast and analysis was used to determine the resource procurement requirements to serve the City and to estimate the revenues that MEA would receive as well as the costs that MEA would incur in providing electricity to these Richmond customers.

This analysis was necessary to assess certain of MEA's criteria that have been established for consideration of Richmond's membership in MEA. Specifically, the load and economic analysis was necessary to determine the extent to which the following criteria would be satisfied:

- Addition of Richmond load is beneficial to existing customer base by increasing contributions to fixed costs and rate stability
- The expansion results in acceleration of greenhouse gas reductions in California
- The expansion would allow for increases the amount of renewable energy being used in California's energy market

Load Analysis

Based on the historic load data the City obtained from PG&E, DMC prepared a 20-year forecast of service accounts and annual electricity consumption for each of the major customer segments. These include all customers classified as 1) Residential (e.g., rate schedule E-1, E-7); 2) Small Commercial (rate schedules A-1 and A-6); 3) Medium Commercial (rate schedule A-10); 4) Large Commercial (rate schedule E-19), 5) Industrial (rate schedule E-20); 6) Agricultural and Pumping (e.g., rate schedule AG-1, AG-4), and 7) Street Lighting and Traffic Control (e.g., rate schedules LS-1, TC-1). The load data was processed using PG&E's published class hourly load profiles to derive hourly electricity usage estimates for each customer segment and in aggregate.

A comparison of the MEA customer base with its current membership and with COR included is shown in Table 1.

Table 1: MEA Customers and Sales With and Without COR

Potential Customer Base and Retail Sales							
	----- Customers -----				----- Sales (GWh) -----		
Customer Classification	MEA	COR	Total		MEA	COR	Total
Residential	61,401	31,386	92,788		402	152	554
Small Commercial	7,236	2,501	9,737		113	53	166
Medium Commercial	519	265	785		94	52	146
Large Commercial	155	97	252		76	65	141
Industrial	7	7	14		41	98	139
Agricultural	151	1	152		5	1	6
Street Lighting	330	230	560		5	4	9
Total	69,801	34,487	104,287		737	426	1,162

DMC estimates that approximately 35,000 service accounts would be enrolled in MCE, assuming a 20% opt-out rate for PG&E bundled service customers and excluding all customers currently identified as taking service from non-utility energy service providers through the state's direct access program. This would represent an increase in electricity sales of approximately 426 million kWh annually as compared to the current MEA membership.

Comparison of Figure 1 and Figure 2 illustrates that the customer mix within COR includes relatively more industrial and large commercial customers than does the current MEA membership. While these customers would generally be considered attractive to serve because of the large and predictable electric loads, these customers pay rates that are very near the cost of providing electric service. As a consequence, DMC found that retention of the large industrial customers was not a critical determinant of the economic evaluation. However, from a planning perspective it would be important for MEA to know in advance whether these customers would intend to participate in the program before MEA engages in procurement for the COR customer base.

Figure 1: Energy Use by Customer Segment, Current MEA Membership

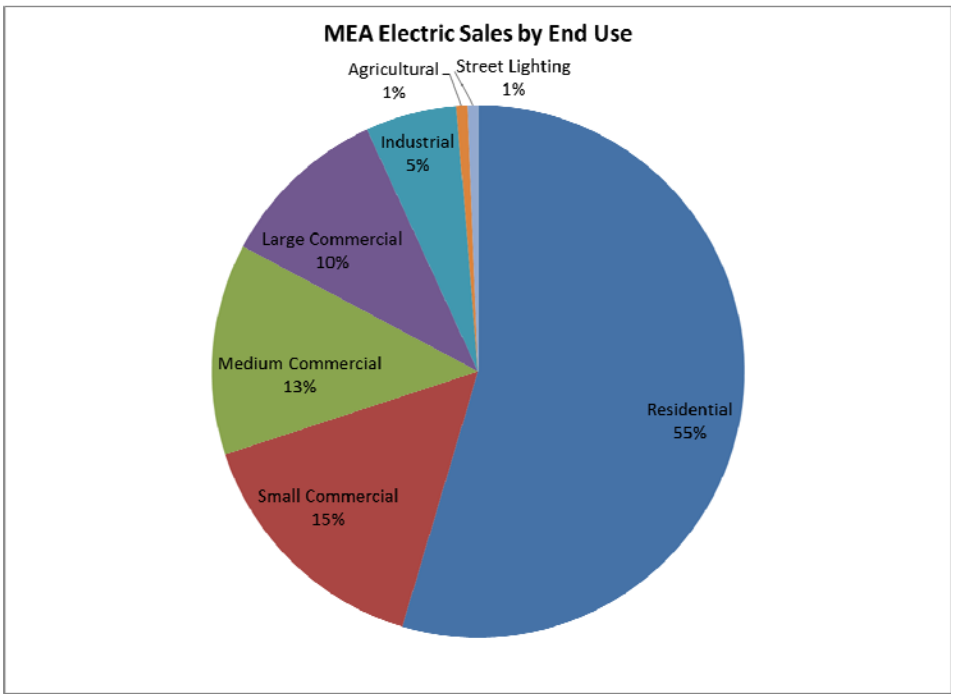
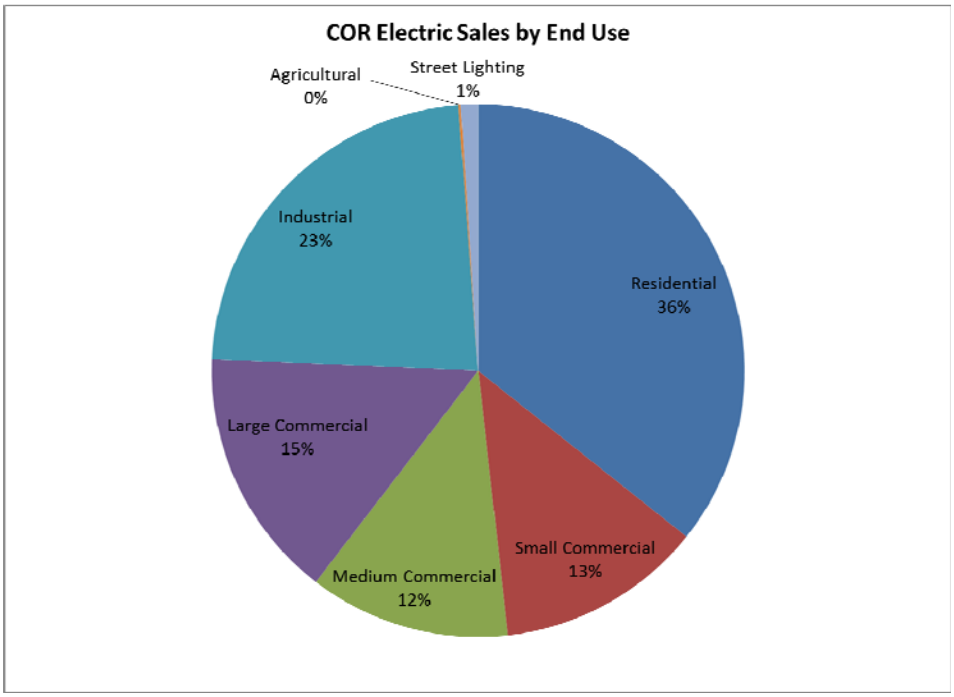


Figure 2: Energy Use by Customer Segment, MEA with COR



Approximately 37% of the COR residential customers participate in the California Alternative Rates for Energy program which provides electric rate discounts to qualifying low income households. MEA offers

discounted rates for customers who participate in the CARE program, and these discounts are funded by other MEA ratepayers through the non-CARE rates.

Resource Requirements

Using the load forecast and hourly load data, DMC quantified the resource requirements that would be needed to serve the COR customers. MEA would need to procure a mix of conventional energy, renewable energy, and generation capacity to supply the aggregate electric demands of these customers.

Renewable energy requirements were calculatedfor COR to ensure compliance with the statewide renewable portfolio standards as well as the more aggressive Marin Clean Energy renewable energy content. The renewable energy requirements were further refined to specify volumes for each of the three procurement categories set forth in the recently enacted Senate Bill X1 2, as each of these renewable procurement categories have different cost characteristics. Assuming MEA achieves its target of 50% renewable energy content by 2020, the total renewable energy associated with serving COR would be approximately 215 million kWh annually. The additional renewable energy is estimated to reduce GHG emissions by approximately 36 thousand metric tons of CO2 per year.

For the remaining conventional energy requirements, DMC quantified the volumes of peak and off-peak energy purchases that would be needed to supply COR's non-renewable energy needs. Purchasing a mix of peak and off-peak energy products in the appropriate quantities would approximately match the aggregate load shape for the COR customers, with any differences between the hourly load and the blocked purchases managed through balancing services provided by the California Independent System Operator.

DMC quantified the monthly generation capacity requirements that would be necessary to comply with the California Resource Adequacy program, which is designed to ensure that all load serving entities maintain sufficient capacity reserves to ensure reliability of the bulk electric system. Capacity volumes were detailed for system resources and for resources located within the applicable local reliability areas. These volumes were specified by month and projected out twenty years.

Timeline

For this analysis it was assumed that Marin Clean Eenrgy service would be offered to COR customers in early 2013, following the planned expansion to Phase 2B in July 2012. This timeline would provide a reasonable amount of time for decision-making by COR and MEA; allow for electric procurement for the incremental load; completion of any incremental staffing activities related to the expansion; completion of all regulatory activities such as revisions to the MEA implementation plan and various regulatory compliance filings; and securing the necessary working capital financingassociated with expansion to COR. An approximate twelve-month lead time between a commitment to join MEA by COR and the enrollment of COR customers would provide sufficient time to complete the necessary activities.

Economic Analysis

In order to determine the economic impact to MEA of extending service to COR, DMC estimated the net revenues that would be expected from serving the new customers, using MEA's financial model populated with the additional load associated with COR customers. Gross revenues were projected using the appropriate Marin Clean Energy rates by schedule (e.g., Res-1, Com-20) applied to projected COR customer monthly usage. Incremental costs were projected for all the following cost elements:

- Peak and off-peak energy
- Renewable energy at MCE renewable energy content
- Generation capacity by month and reliability area
- CAISO grid and scheduling fees
- Customer services for call center, data management
- Staff impacts (assume 3 FTEs)
- Billing and metering fees from PG&E
- Working capital financing (estimated at $2 million)
- Reserves at current percentage of revenue

Based on this analysis, total annual revenues are estimated to increase by $33 million, and total costs are estimated to increase by $31 million. The analysis indicates that expansion to COR would modestly benefit existing MCE ratepayers as the COR revenues would be sufficient to cover all additional costs associated with serving the COR customers.

Risk Assessment of Participation in the Marin Clean Energy Community Choice Aggregation Program

On Behalf of the City of Richmond

MRW & Associates, LLC
1814 Franklin Street, Suite 720
Oakland, CA 94612

October 20, 2011

Contents

Acronyms Used

CARE	California Alternate Rates for Energy
CCA	Community Choice Aggregation
CPUC	California Public Utilities Commission
CRS	Responsibility Surcharge
DMC	Dalessi Management Consultants, LLC
GHG	greenhouse gas
JPA	Joint Powers Authority
kWh	kilowatt-hour
LBNL	Lawrence Berkeley National Laboratory
MCE	Marin Clean Energy
MEA	Marin Energy Authority
MRW	MRW & Associates, LLC
PCIA	Power Charge Indifference Amount
PG&E	Pacific Gas & Electric
RPS	Renewable Portfolio Standard

Executive Summary

The Marin Energy Authority (MEA) is a Joint Powers Authority (JPA) consisting of the County of Marin, City of Belvedere, Town of Fairfax, City of Mill Valley, Town of San Anselmo, City of San Rafael, City of Sausalito, and Town of Tiburon. MEA is considering allowing the City of Richmond to become a member of the JPA and participate in the Marin Clean Energy (MCE) Community Choice Aggregation (CCA) program. MCE provides commodity electric service to citizens and businesses throughout Marin.

Richmond retained MRW & Associates, LLC to examine the risks associated with joining MEA, participating in MCE, and review the load studies that Richmond commissioned as part of its due diligence related to participation in MEA and MCE. MRW's scope of work consists of four tasks:

- Assess potential risks and benefits to City residents and businesses if Richmond joins the MEA, in particular, the rate risk to the community.
- Assess potential risks and benefits to the City itself if it chooses to join the MEA.
- Provide comments on the Dalessi Management Consulting load and resource requirement analysis.
- Provide qualitative comments on any materials MEA provides to Richmond.

Participation in MCE does not come without risks. However, remaining a customer of PG&E also involves risks, although those risks may be less easily identifiable. It is up to the policymakers of Richmond to determine if the benefits associated with participation in MCE justify the risks. If Richmond joins MEA, it would allow its citizens and businesses the opportunity to take commodity electric service from MCE. If a customer does not take the conscious choice to opt out from the program and remain with PG&E for commodity electricity service, then they would, by default, become a customer of MCE. The opt-out requirement effectively means that despite the many opt-out notices that MCE is required to send out, some customers could become MCE customers without necessarily intending to do so. This could be a problem because different stakeholders have different values and risk preferences. For example, one customer might be extremely price-sensitive and would not tolerate higher rates for electric service, while another customer might be willing to pay more for electric service in order to obtain power from renewable energy sources.

According to MCE, participation in MCE can provide the citizens and businesses of Richmond with certain benefits. These include:

- Greater levels of power supply from renewable energy sources than offered by PG&E at competitive costs
- Reduced greenhouse gas emissions as a result of participation in MCE
- Alternative power supply opportunities for MCE customers, including self-generation of renewable energy through MCE-sponsored feed-in tariffs

- Development of local renewable resources to supply power to MCE
- Economic development benefits resulting in more jobs and tax revenues
- Rebates to encourage investments in energy efficiency improvements in homes and businesses
- Greater local control over power supply decisions and rate setting.

Given the scope of work for this assignment, MRW has not attempted to quantify or evaluate the relative magnitude of these benefits.

MRW has identified a wide range of potential risks that the City of Richmond, its residents and businesses (if they do not opt out of service from MCE) would face were it to join MEA. Some of these risks are significant while others are less important. The types of risks fall into several broad categories:

- Procurement Risks: This broad category of risks relates to the ability of MCE to procure power at reasonable costs, to avoid significant under- or over-procurement, and the future success of MCE at renewing power supply agreements.
- Regulatory Risks: These risks consist of uncertainty in regulatory decisions by the California Public Utilities Commission that could adversely affect the costs that customers have to pay to take service from MCE, such as exit fees paid by customers and bonding requirements for MCE.
- MEA Policy Risks: While all JPA members have a voice on the MEA Board, no single city can control policy. Thus, given Richmond's differing demographic, economic, and business composition relative to Marin County, Richmond might find that the interests of its citizens and businesses are not well served by decisions of the MEA Board.
- Customer Cost Risks: These risks consist of the uncertainty in exit fees, whether MCE can continue to "meet or beat" PG&E's costs of service, how MCE will handle adding different tranches of customers in the future, and the uncertainty in costs that are passed through directly from the CCA's power supplier to customers. This also includes the risk that MCE may not be willing, or able, to provide low-income customers rates that will be no higher than PG&E's.
- City-Specific Risks: These risks relate to risks that Richmond might bear simply by becoming a member of MEA, separate and apart from any risks that it might bear as a customer purchasing power from MCE.

The following table summarizes the risks discussed in greater detail in the body of the report. The table categorizes the risks based on the type of risk (e.g., procurement, customer costs), the entity that bears the risk (citizens or the City) as well as the relative importance of the risk in terms of the impact that it might have on customer costs or viability of the CCA.

Description of Risk	Magnitude or Importance of Risk
Procurement Risks	
Volume Risk: Uncertainty in load can cause under- or over-procurement	Medium
Future Price Risk: MCE cannot procure power for incremental customers at competitive costs	High
Expansion of CCA: Can current contract accommodate all new customers?	Medium
Contract Renewal: MCE cannot procure power at competitive prices at end of current agreement	High
Regulatory and Policy Risks	
Adverse CPUC Decisions: Exit Fees and bonding costs may be higher than expected	High
MEA's lack of Low-Income ratepayer policy	Very High
Full details of requirements of new MEA members not set	Low
Richmond's interests may not always align with that of other JPA members	Medium
Customer Cost Risks	
PG&E Exit Fees: Who bears risk of changes in exit fees?	High
Uncertainty in Departing Load Fees: How much must customer pay to exit CCA after opt-out period ends?	Medium
MCE Pricing Commitment: Will MCE meet or beat PG&E rate?	High
MCE Pricing Commitment: Will MCE hold CARE customers harmless?	Very High
City-Specific Risks	
Supplier Guarantees: City must provide guarantees to power suppliers	Medium
New Generation Guarantees: City must provide support to obtain financing for new generation	Low
Loss of Participation Fee: City departs CCA	Low

MRW believes the most significant risk is whether MCE will ultimately be able to provide long-term power supplies at costs that are less than PG&E could provide. Thus, if the City's customers are highly price sensitive, then this risk may be of great concern and would indicate that the City should place a premium on ensuring the its citizens and businesses are fully informed about the opt-out requirements of MCE. The City should also delve deeper into the likely future rates for MCE and PG&E, especially for the City's most price-sensitive customers.

This is particularly true for low-income households who currently take service under the California Alternate Rates for Energy (CARE) program offered by PG&E. MCE does not provide any guarantee that these customers would not be financially harmed by participation in MCE. In other words, customers currently taking service from PG&E under the CARE program could (and, given MCE's current policy and rates, would) experience higher electricity bills with MCE than with PG&E. Under current (2011) rates, a typical CARE household taking service from MCE would pay roughly $100 a year more for electricity than it would taking service from PG&E, although given anticipated rate changes, this value is expected to drop to approximately $30-40 in 2012.

1. Introduction and Background

The Marin Energy Authority (MEA) is a Joint Powers Authority (JPA) consisting of the County of Marin, City of Belvedere, Town of Fairfax, City of Mill Valley, Town of San Anselmo, City of San Rafael, City of Sausalito, and Town of Tiburon.[1] MEA is considering allowing the City of Richmond to become a member of the JPA and participate in the Marin Clean Energy (MCE) Community Choice Aggregation program. MCE provides commodity electric service to citizens and businesses throughout Marin. The City has asked MRW & Associates, LLC (MRW) to provide an assessment of the risks and benefits inherent in joining MCE.

1.1 Background on Marin Clean Energy

MCE is a Community Choice Aggregation (CCA) program. As a CCA program, MCE provides commodity electric service and other energy-related services to its customers. MCE, the first fully functioning CCA in California, has been providing these services to a subset of the customers in its service area since May 2010. MCE plans to offer service to customers by July 2012.

At the present time, MCE offers two electric supply products:

1. The Light Green product, which provides electric service that has a greater penetration of California Certified renewable resources (i.e., 27%) than does the incumbent electric utility, Pacific Gas & Electric (PG&E). MCE contends that this energy supply option is cost-competitive with PG&E's retail rates.

2. The Deep Green product, which provides 100% California Certified renewable resources for a $0.01 per kWh surcharge on top of the charges for the Light Green product.

1.2 Background on Potential MEA Membership for Richmond

MEA is allowing other cities in Marin that are not currently members of MEA to join the Joint Powers Authority. In addition, MEA is considering allowing Richmond to join MEA. If a city chooses to join MEA, then that city's citizens and businesses are automatically enrolled as customers of MCE unless a new customer opts out from participation in MCE.

At its October 3, 2011 Board Retreat, MEA noted criteria that would need to be met for Richmond to join the MEA JPA, as well as a potential timeline. The Board Retreat packet (item 6a) noted that for Richmond to join MEA, all of the following criteria need to be met:

- Addition of load is beneficial to existing customer base by increasing contributions to fixed costs and rate stability
- The expansion results in acceleration of greenhouse gas reductions in California

[1] MRW understands that the Town of Ross and the City of Novato have decided to join MEA.

- The expansion would allow for increases the amount of renewable energy being used in California's energy market
- City of Richmond is supportive of and endorses MEA's mission & current electricity procurement plans (target for 33% renewable energy content by 2015)
- City of Richmond adopts MEA's sample resolution and ordinance

The Board Retreat packet also notes that three or more of the following criteria need to be met:

- New opportunities are available to deploy local solar, other distributed renewable generation and/or CHP through MCE's Net Energy Metering Tariff and/or Feed in Tariff
- There is in increase in the ability to launch and operate energy efficiency activities and programs
- Regional benefits are achieved based on Richmond's geographically proximate location
- Greater demand for local jobs and other local economic activity (office rental, office materials, accounting, legal and other vendor services) is likely to result from the expansion
- The City of Richmond has completed polling to determine market interest in MCE with results that demonstrate market interest is present
- The City of Richmond has conducted substantive outreach (i.e. 3 or more community-based meetings) within the community to discuss MCE and receive positive feedback from the public

Assuming that the above criteria are met, the timeline presented at the MEA Board retreat also suggests that the earliest Richmond could begin service from MCE is 2013.

1.3 Scope of Assignment

The office of Richmond's City Manager approached MRW to conduct an independent third-party analysis of the risks associated for Richmond to join the MEA. The Scope of MRW's analysis includes the following four areas:

- Determine potential risks to City residents and businesses if Richmond joins the MEA, in particular, the rate risk to the community
- Determine potential risks to the City itself if it chooses to join the MEA
- Provide comments on the Dalessi Management Consulting load and resource requirement analysis
- Provide qualitative comments on any materials MEA provides to Richmond

Appendix 2 summarizes MRW's qualifications related to this assignment.

It is important to note that this assessment is not a study of the overall risks and benefits of participation in MCE. Thus, this report does not attempt to evaluate or quantify the possible benefits to various Richmond stakeholders (e.g., residential customers, businesses, municipal accounts) or associated risks of remaining on PG&E service. As such, the assessment must be

viewed as being only one part of the assessment of participation by Richmond in MCE. However, as noted above, MCE has clearly outlined the benefits that it sees associated with participation in a CCA such as MCE.

One additional point must be stressed: If Richmond decides to join MEA, the City is merely providing its citizens and businesses with *the opportunity* to take service from MCE: customers have the ability to opt-out from MCE and to remain customers of PG&E. However, customers must take conscious action to remain with PG&E; if they do nothing, they will become customers of MCE. MCE is required to provide at least four notices (post-cards, flyers, etc.) to all potential MCE customers informing them of this opt-out option. Nonetheless, even with the opt-out notices, it is almost certain that some citizens or businesses would become MCE customers effectively without their knowledge or consent. This could be a problem for Richmond's policymakers if the potential benefits and risks of participation in MCE are not consistent with the risk preferences and other goals of the citizens and businesses that become MCE customers by default.

2. Benefits of Participation in MCE

At the Richmond City Council meeting on July 19, 2011, MEA's Executive Director Dawn Weisz gave a presentation on MCE and the potential benefits to Richmond of becoming a member of the MEA JPA. MCE's website and presentation materials that MEA has circulated at other civic meetings discuss these benefits in detail and present additional ones. This section summarizes those benefits.[2]

Some of the primary benefits potentially offered by MCE to Richmond include:

- ***Greater levels of power supply from renewable energy sources than offered by PG&E at competitive costs***

It is clear that MEA's policy and supply portfolio is designed to, and will likely achieve, greater renewable penetration than is projected to be achieved by PG&E. It may or may not be able to do so at costs equal to or less than PG&E.

- ***Competition between electric service providers will lead to more competitive rates and prices for Richmond residents and businesses***

In theory, competition among suppliers will reduce prices to consumers and offer a wider variety of products in the marketplace. MCE, through its light-green and dark-green products, clearly is providing customers greater choice, but it is uncertain whether it will result in more competitive rates.

- ***Reduced greenhouse gas emissions as a result of participation in MCE***

Again, it is clear that MEA's policy and supply portfolio is designed to, and will likely achieve, a net reduction in greenhouse gas (GHG) emissions associated with electricity supply to its customers. This is because the average GHG emissions from the CCA would be lower than the *marginal* emissions from PG&E (i.e., the actual incremental emissions that PG&E would incur if it were serving that load). However, because PG&E has large amounts of carbon-free generation (large hydroelectric dams and the Diablo Canyon nuclear plant), PG&E's *average* GHG emissions rate might still be lower than the MCE's average emissions, even if the MCE has more qualifying "renewable" generation. Even so, as long as fossil fuel is on PG&E's generation margin, which it will be for the foreseeable future, the MCE policies would result in reduced GHG emissions.

- ***Provision of more robust incentives to businesses and residents to sell power back to MCA and thus stimulate the local economy***

Both PG&E and MCE offer net energy metering and feed-in-tariffs for small renewables generators. However, the current rates paid by MCE to small renewables generators through its

[2] This section is not intended to comprehensively repeat those benefits, or postulate additional ones. Instead, we simply reiterate some of the primary benefits that have been presented by MEA and briefly comment upon them.

feed-in-tariff are greater than that offered by PG&E. To the extent that MCE can maintain this price advantage over PG&E, and do so with lower transaction costs (i.e., fewer "hoops" to jump through), incremental local renewable development should occur, providing local economic stimulus.

- ***Attraction of more green businesses to locate in Richmond and thus increase business-related revenues to the City and create jobs for residents.***

and

- ***Creation of more employment opportunities for Richmond residents and contractors through the CCA power procurement contracts.***

To the extent that MCE has local purchase preferences and green businesses are attracted to MCE's offerings, incremental economic development in Richmond may occur.

- ***Greater local control over power supply decisions and rate setting.***

Given that its policies are set by MEA's Board of Directors, MCE would offer greater control of procurement and rate-making decisions than PG&E. However, Richmond has a different economic and demographic makeup than much or all of the other members of MEA. Since Richmond would only have a single vote on the MEA Board, it might find that the interests of the City and its residents and businesses are not always well served by Board decisions, especially in cases where Richmond's interests to not align with those of the other MEA members.

3. Risks of Participation

This section presents MRW's assessment of the major risks facing customer groups and the City as a result of participation in MCE. It then examines potential risks faced by City residents if the City joins MEA. It concludes by examining potential risks to the City itself if the City were to join MEA.

The following table summarizes the risks discussed in the following sections. The table categorizes the risks based on the type of risk (e.g., volume, procurement, customer costs), the entity that bears the risk (e.g., citizens or the City) as well as the relative importance of the risk in terms of the impact that it might have on customer costs or viability of the CCA.

Description of Risk	Magnitude or Importance of Risk
Procurement Risks	
Volume Risk: Uncertainty in load can cause under- or over-procurement	Medium
Future Price Risk: MCE cannot procure power for incremental customers at competitive costs	High
Expansion of CCA: Can current contract accommodate all new customers?	Medium
Contract Renewal: MCE cannot procure power at competitive prices at end of current agreement	High
Regulatory and Policy Risks	
Adverse CPUC Decisions: Exit Fees and bonding costs may be higher than expected	High
MEA's lack of Low-Income ratepayer policy	Very High
Full details of requirements of new MEA members not set	Low
Richmond's interests may not always align with that of other JPA members	Medium
Customer Cost Risks	
PG&E Exit Fees: Who bears risk of changes in exit fees?	High
Uncertainty in Departing Load Fees: How much must customer pay to exit CCA after opt-out period ends?	Medium
MCE Pricing Commitment: Will MCE meet or beat PG&E rate?	High
MCE Pricing Commitment: Will MCE hold CARE customers harmless?	Very High
City-Specific Risks	
Supplier Guarantees: City must provide guarantees to power suppliers	Medium
New Generation Guarantees: City must provide support to obtain financing for new generation	Low
Loss of Participation Fee: City departs CCA	Low

3.1 Procurement-Related Risks

In late 2009, MRW provided an assessment of risks to Marin County and several cities and towns related to participation in MCE. At that time, MRW identified a number of risks that existed in the agreements and policies of MCE. Since then, MEA has finalized its power supply and service agreements and MCE has begun to deliver power to its customers. This section discusses the status of the major risks that MRW identified before MCE began operation.[3]

3.1.1 Uncertainty in Amount of Power to Procure

MCE had to either specify the quantity of renewable and non-renewable energy and other services that it will receive from the supplier or establish some other mechanism whereby its loads are met. This is a concern because if MCE over-procures, then it will have to resell its excess supplies into the market (at unknown prices) and could face significant costs (or gains) from those sales. On the other hand, if MCE under-procures, then it needs to purchase power in the future at unknown rates, which could be higher (or lower) than the fixed prices to be specified in the Agreement when they were originally signed.

MCE suffered lower opt-outs than expected in its first tranche of customers (i.e., 20 percent opt-outs instead of the 25 percent opt-out rate assumed by MEA). However, to ensure that it had not over-procured energy and other products, it allowed other customers to participate in Phase 1. Such a strategy will not be available for Phase II, since there will not be a set of customers waiting to participate in MCE.[4] On the other hand, the high opt-outs in Phase I can be at least partially attributed to a very aggressive campaign by PG&E to encourage customers to opt-out. PG&E appears to have discontinued that practice, so it is reasonable to expect fewer opt-outs in the next phase. The recently-enacted Senate Bill 790 should also discourage PG&E from taking actions against MCE in the future. Furthermore, MCE has demonstrated that it can provide service to the Phase I customers, which might assuage some concerns by customers in later implementation phases regarding the ability of MCE to perform.

3.1.2 MCE's Current Power Supply Agreement May Not be Able to Accommodate the City's (or Other Cities') Loads

As specified in the renegotiated Confirmation between MCE and its power supplier, the power supplier has an obligation to provide full requirements services to MCE. However, the agreement only specifies a fixed quantity of renewable energy that the power supplier must provide. Thus, there is some uncertainty as to the pricing of power for MCE if it is successful in recruiting the City or other cities or counties (such as Sonoma County). If the current agreement does not provide for adequate renewable supply if new entities join MCE, then MCE will have to

[3] MRW identified more risks in its assessment for Marin County than we present here. We have omitted risks that are either not germane to Richmond or not significant.

[4] MCE currently has 9,000 customers and is in the process of offering service to another 5,000 customers. These are primarily residential customers. MCE expects to deliver to 70,000 customers by the end of 2012. Thus, for the purposes of this report, we assume that customers enrolled in 2012 are considered "Phase II" customers.

negotiate yet another agreement with its power supplier. The pricing for power under such an agreement is unknown.

3.1.3 Term of Power Supply Agreement

The MCE agreement with its power supplier runs through May 2015. After that time, MCE will have to negotiate a new power supply agreement for its entire load (not just incremental load added in Phase II or through new cities joining MCE). The pricing of this power supply is unknown. Thus, there is some uncertainty regarding the ability of MCE to "meet or beat" PG&E's price when it is time to renew the MEA power purchase agreement.[5]

Also, MCE's power supply costs are more sensitive to natural gas prices than is PG&E's generation rate. Even though MCE's current contract specifies fixed prices for the first five years of operation, if natural gas prices increase in the future from their relatively low levels today, then this would make it more difficult for MCE to compete with PG&E when MCE attempts to negotiate its next power supply agreement.

3.2 Regulatory and Policy Risks

This section addresses two areas. First, there are the risks to the CCA and its customers of changes in State policies, in particular the regulatory decisions made at the California Public Utilities Commission (CPUC). Second, there are the risks to the JPA member cities and their residents and businesses associated with MEA policies. We raise this second risk area because while all JPA member cities have a voice on the MEA Board, no single city can control policy. Thus, given Richmond's differing demographic, economic and business composition relative to Marin County, Richmond's needs and policy preferences might not be fully addressed in MEA Board decisions.

3.2.1 Need to Establish a Departing Load Fee

MEA's Business Plan assumes that MCE will construct renewable supply sources starting in 2011, with an expected online date of 2014. To undertake this construction program, MEA would issue debt (as is typically the case for other utilities). This effort would allow MCE to increase its level of renewable resources beyond the level assumed in the Agreements and would form the basis for MCE's renewable portfolio after the end of the initial power supply agreements with MCE's power supplier. The Agreements allow MCE to undertake such a development program. MCE indicated to MRW that it would only undertake such a construction program if it appeared to be cost-effective at the time the decision was being made.

[5] Based on a review of the most recent Confirmation and the Cottonwood Solar PPA, it appears that the pricing in the Cottonwood Solar PPA is higher than the cost of renewable power under MCE's agreement with its power supplier (e.g., in 2015, the price for energy plus renewable attributes for Category 1 attributes is $114.03/MWh ($65.03/MWh for energy and $49/MWh for renewable attributes) while the cost of power from Cottonwood is no less than $121/MWh.

MCE developing its own resources or entering into long-term PPAs has certain consequences:

(1) the power supplier would likely have to liquidate some portion of the resources that it procured for MCE under the Agreements, with MCE customers being responsible for any losses (or benefiting from any gains) resulting from those sales; and

(2) MEA would have fixed debt service obligations to pay for its renewable resources.

If MCE customers choose to leave MCE's service after the end of the opt-out period, then either the departing customers must pay a "Departing Load Fee" to MCE or the electric rates for remaining customers would increase. This Departing Load Fee would be only applicable to customers who did not opt out during the four month opt-out window and then subsequently, at some later date, chose to take electric service from someone other than MCE.[6]

MCE's departing load fee is $5 for residential customers and $25 for commercial customers. However, since MCE has not yet constructed any assets, it is unclear whether the departing load fee will change in the future. This uncertainty regarding MCE's policy regarding exit fees may be resolved soon, since MCE has contracted with Cottonwood Solar for 31 MW of fixed price generation.

3.2.2 CCA Bonding Obligation

MCE must post a bond with the CPUC as part of its registration process. The CCA bond is designed to cover the potential reentry costs if the CCA were to suddenly fail and be forced to return all its customers back to PG&E bundled service. The financial risk associated with this CCA Bond is twofold. First, the magnitude of the bond is uncertain. Currently, there is a proposed settlement regarding the approach for determining the CCA bonding requirement that could result in CCA bond amounts much greater than the current bond requirements.[7] Second, if power prices spike and exceed PG&E's generation rate, then the bonding requirements under the the proposed settlement would increase dramatically.

During normal conditions, the CCA Bond amount will not be a concern. However, during a wholesale market price spike, the CCA Bond could potentially increase to tens of millions of dollars. This is one example of how regulatory change can erode the economic viability of a CCA.

On the other hand, it is important to note that high power prices (that would cause a high bond requirement) would also depress PG&E's exit fee and would also raise PG&E rates, which would in turn likely provide MEA sufficient headroom to handle the higher bonding requirement

[6] Also note that if an MCE customer returns to PG&E service after the end of the opt-out period, that customer would not continue to pay Exit Fees to PG&E; they would only have to pay Departing Load Fees to MCE.

[7] The yet-to-be approved settlement at the CPUC in the CCA Docket (R.03-10-003) proposes a formula that would result in even higher CCA Bond amounts. The parties in the Settlement do not include any active or near-term prospective CCAs (i.e., MEA or San Francisco). Both MEA and San Francisco have vigorously opposed the settlement.

and keep its customers' overall costs competitive with what they would have paid had they remained with PG&E.

3.2.3 Meaning of MCE's Commitment to "Meet or Beat" PG&E Rates

MCE has stated that one of the benefits for customers is "Costs at or below PG&E."[8] In discussions with MRW, MCE has clarified that this condition is based on comparing the ***projected*** overall costs of MCE assuming power supply by a third party over the term of the Agreements against MCE's costs assuming power supply was provided by PG&E at MCE's forecast of PG&E's tariffed generation rate. In other words, the following inequality must occur for MCE to sign the Agreements:

MCE Power Supply Costs + Customer Exit Fees + MCE Overhead $\leq$ PG&E Gen Rate[9]

Of course, all of the above factors are somewhat uncertain, although MCE Power Supply Costs are less uncertain than the other factors.

In recent presentations, MCE has shown that its net commercial rates (MCE rate plus the Exit Fee) are competitive with PG&E's generation rate, but that MCE's net residential rates (MCE's RES-1 plus Exit Fee) are higher than PG&E's residential generation rates.[10]

3.2.4 CARE (Low-Income) Rate Policies

To protect low-income households against escalating electricity bills, the CPUC froze rates for the California Alternate Rates for Energy (CARE) program at July 2001 levels. As general rates have increased with CARE rates remaining frozen, the effective CARE discounts now range from 29 to 30 percent in the lower two residential rate tiers and up to 76 percent in Tier 4. While recent Commission action is moving to adjust its rate design to modestly increase the CARE Tier 3 rates, these customers will continue to receive significant discounts relative to other residential customers.

According to the data provided by PG&E, approximately 37% of the residential customers (14,000) in Richmond are on CARE rates, representing 39% of the residential load and 12% of the city's overall load. This is somewhat higher than the PG&E system average, which shows approximately 25% of its residential customers on CARE rates.

The discounts for CARE customers are taken in both the distribution and generation components. This means that the level of CARE discount in the generation rate will have to be accounted for in setting an equivalent CARE rate for low-income CCA customers.

[8] E.g., MEA presentation, October 2009, p. 12.

[9] MEA Power Supply Costs, Customer Exit Fees, MEA Overheads, and PG&E Gen Rate are all forecasted values in early February 2010.

[10] MCE Presentation to the Novato City Council, September 27, 2011.

MEA does not have a written policy concerning the treatment of CARE customers. Currently, for every CARE rate schedule offered by PG&E, MEA offers a parallel rate. However, MEA does not explicitly set its CARE rates to meet or beat PG&E's generation rates. In email correspondence with MEA, Jamie Tuckey reported that "…the majority of our CARE rates do beat PG&E's. There are 33 different rates provided for the CARE customers across the different tiers and rate schedules. Of those 33, 24 beat PG&E's rates."[11] While technically correct, this response is incomplete. When MCE's tariff is combined with the Exit Fee, CARE customers would be paying more than PG&E generation rate.

This means that under the current *ad hoc* situation, MEA does not guarantee that low-income customers will not be financially harmed by taking MEA service. Additional CARE issues this from the customer perspective are discussed in Section 3.3.3.

3.2.5 Timing and Rates for Customers Taking Service in Later Phases of MCE's Development

MCE initially procured power for its Phase I customers in early 2010. It had planned to obtain power for the remainder of its customers (i.e., the Phase II customers) at a later date. This meant that either prices will differ for Phase I and Phase II customers or Phase I customers will have their rates change at the onset of Phase II. According to MCE, it intends to negotiate a separate Confirmation agreement[12] with its Phase I supplier when MCE is ready to start Phase II.[13] MCE envisions this negotiation to address primarily price but also "may consider slight revisions to the Confirm for Phase II to the extent our better information (about opt outs, operations streamlining, other lessons learned) requires revision."[14] The *pro forma* financial analysis provided to MRW in 2009 shows the Phase II load being served on January 1, 2012, however MCE has said that, depending upon market conditions, it intends to remain flexible as to the start date of Phase II, moving it forward or backward by a year (or more) so as to take best advantage of pricing in the power markets. This phase-in approach has both positive and negative aspects.[15] Since power prices are volatile, it is likely that the prices MCE receives from its supplier for Phase II will differ from its pricing for Phase I. If power prices do differ, MCE will need to decide whether it

[11] Email from Jamie Tuckey (MEA) to Mark Fulmer (MRW), October 10, 2011. Included as Appendix 1.

[12] The Confirmation contains prices, quantities, and other important aspects of the agreement between MEA and its supplier.

[13] MCE renegotiated certain terms and conditions of its agreement with Shell Energy North America, the power supplier for Phase I, in May 2011. According to MCE, this allows MCE to "increase its energy purchases and reduce is average supply costs relative to the initial agreement."

[14] Email communication, Elizabeth Rasmussen to Mark Fulmer November 5, 2009.

[15] The positive aspects include simplifying the initial startup of MCE and negotiating a new agreement based on better understanding of opt-out risk. Negative aspects include possibly re-opening issues that were settled in Phase I, seeing wholesale power prices prior to Phase II that do not allow MCE to proceed (because its rates would not meet or beat PG&E's rates at that time) and having to negotiate with a supplier that has great deal of negotiating leverage.

establishes similar rates for all customers or sets rates for its Phase II customers different than for its Phase I customers.[16]

3.2.6 Full Details of New MEA Member Cities Not Known

While MEA is considering providing Cities such as Richmond an opportunity to join MEA, the exact terms of such participation have yet to be released. MRW notes that "[a] broader discussion has been scheduled for October 3rd, 2011 at the MEA Board retreat to finalize draft 'Criteria for New Members,' finalize the 'Process and Timing' document for interested jurisdictions and to finalize the draft 'Application' for interested jurisdictions."[17]

3.3 Potential Risks Faced by the City's Electric Consumers

As discussed above, there were and continue to be several risks that customers of MCE face. These are discussed below.

3.3.1 MCE May Be Unable to Procure Power for its Incremental Light Green Customers at Prices that Meet or Beat PG&E

In 2010, MCE successfully procured power for its Light Green customers at costs that allow those customers to have total energy bills that are less than they would have paid had they remained PG&E customers. However, at that time, PG&E's rate design for residential customers resulted in high usage customers having very high average electric rates. Thus, MCE was able to target the specific customers in its Phase I efforts that had very high rates. MCE will not be able to use this approach in its Phase II (or with Richmond) because of two factors. First, MCE will have to serve lower-usage customers that were not served in Phase I, and, more importantly, rate design changes in 2011 resulted in a "flattening" of PG&E's generation rate for residential customers, meaning that high usage customers no longer pay higher—sometime much higher—generation rates than low-usage residential customers. (Note that MCE essentially competes against PG&E's generation rate.)

As such, MCE is now projecting that it will not be able to offer net residential rates (MCE generation rate + Exit Fee) lower than PG&E's generation rate in 2012. Thus, MCE is not able to "meet or beat" PG&E prices even for its Light Green product. While it may be the case that MCE's net residential rates may be less than PG&E's generation rates in the future, this is by no means certain.

[16] This is exacerbated by the fact that the exit fees charged to CCA customers by PG&E vary depending upon when the customer begins CCA service. If MCE decides to have similar rates for both Phase I and Phase II customers, then the rates for Phase I customers might increase or decrease relative to the rates those customers saw during Phase I.

[17] Ad Hoc Committee on Expansion Scenarios, Staff Report, September 1, 2011.

3.3.2 Uncertainty in Exit Fees

Assembly Bill 117, which established the Community Choice Aggregation program in California, included a provision that states that the customers that remain with the utility should be "indifferent" to the departure of customers from utility service to CCA service. This has been broadly interpreted by the CPUC to mean that the departure of customers to CCA service cannot cause the rates of the remaining utility "bundled" customers to go up. In order to maintain bundled customer rates, the CPUC has instituted an exit fee, known as the "Power Charge Indifference Amount" or "PCIA" that is charged to all CCA customers. The PCIA is intended to ensure that generation costs incurred by PG&E before a customer transitions to CCA service are not shifted to remaining PG&E bundled service customers.

Even though there is an explicit formula for calculating the PCIA, forecasting the PCIA is difficult, since many of the key inputs to the calculation are not publically available and the results very sensitive to these key assumptions. For PG&E, the PCIA has varied widely; for example, at one time the PCIA was negative.

To further add to the uncertainty in future levels for the PCIA, the CPUC is considering revisions to the PCIA calculation methodology. A Proposed Decision in that proceeding would alter the PCIA formula with the net impact of significantly reducing the PCIA.[18] MCE's current policy is that customers bear the financial risk associated with the level of exit fees they will pay to PG&E. Thus, for a customer taking MCE service to be economically better off (i.e., pay less for electricity), the sum of the MCE charges plus the PCIA must be lower than PG&E's generation rate. As noted above, for 2012, this is not projected to be the case for MCE residential customers

3.3.3 CARE Customer Issues

As mentioned in Section 3.2.4, a significant fraction—almost 40%—of Richmond's residential electric customers take service under a discounted, CARE rate. Current MEA policy does not ensure that these customers will not pay more under MCE than they would had they taken service from PG&E. In fact, given current rates, these customers would indeed pay more.

The table below shows the generation rates offered by PG&E and MCE for a standard residential CARE customer. For both the baseline energy use (first ~250 kWhs per month) and above baseline energy use, MCE's rates for customers taking service under its CARE rates are only slightly higher than PG&E's CARE rates. However, MCE's CARE rate does not include PCIA, a rate element that is applicable only to CCA customers. When adding in the PCIA, the low-income customer taking service from MCE would have rates well above those offered by PG&E, which would result in much higher electric bills for that customer. For example, for a CARE customer using 400 kWh per month (the average for a Richmond CARE customer), the customer's annual electric bill at current rates would be at least $100 more per year than taking service from PG&E.

[18] The current PCIA charge for PG&E for customers who began MCE service in 2011 is 1.92¢/kwh. If the Proposed Decision contemplated at the CPUC is adopted, this value should decrease by 50% or more in 2012.

MRW expects that the PCIA will decrease in 2012. However, even if the PCIA is reduced by 50%, the cost impact to a low-income resident of having to pay MCE's rates plus the PCIA would still be significant.

CARE Rate Compaison (current tariffs), ¢/kWh

	PG&E Schedule EL-1	MEA Schedule RES-1-L	Difference
Baseline Generation Rate	4.270	4.40	+.170
Above Baseline Generation Rate	5.517	5.50	+.017
PCIA (Vintage 2010)	n/a	1.920	+1.920

Issue: Transfer of CARE Customers to MEA Service

There are two issues involved in transferring CARE customers from PG&E to MCE. First, MEA must insure that CARE customers are transferred to the proper tariff—RES-1-L rather than the standard residential tariff, RES-1. This would likely not be an issue, but would need to be monitored closely. Second, and more important, CARE customers would have to be fully informed that unless they proactively opt-out to remain on PG&E service, they would likely experience an effective rate increase, or at least be at risk for one. This would likely prove to be a serious communications challenge for MCE. Standard opt-out information routes—post cards, bill inserts, letters, electronic media, and such may not be sufficient to adequately inform all of Richmond's 14,000 CARE accounts. If a customer is not informed that they are becoming an MCE customer, then they will be receiving a rate increase without making an affirmative decision to accept such a rate increase.

Issue: Other Customers Subsidizing CARE Customers

Even if the full PCIA costs are borne by CARE customers, to the extent that the rate MCE charges CARE customers is less than the cost to provide power to those customers, some subsidization will occur. If MCE ultimately decides to hold CARE customers harmless and ensure that their net MCE rate is no higher than PG&E's CARE rate, then there would be increased need to raise rates for the other MCE customers to make up that revenue difference. A question that would likely be raised would be, how willing are MCE's ratepayers in Marin County to subsidize low-income customers in Richmond? MRW does not know the answer to this question but we believe that it could present a political and public relations challenge for Richmond officials as well as MCE.

3.3.4 Regulatory Changes Adversely Affect MEA Customers

Regulatory changes could make MEA's power costs uncompetitive with PG&E. As discussed elsewhere, the CPUC establishes exit fees that customers of MEA have to pay. There is currently

an effort to revise the approach for determination of exit fees.[19] Such decisions have occurred in the past (e.g., MEA and others advocated strongly in opposition to PG&E's effort to flatten its generation rate, but these efforts proved unsuccessful). Also, as discussed above, the CPUC could adopt bonding requirements that would significantly increase the cost of security bonds for MCE, which would also tend to undermine the ability of MCE to provide electricity to its customers at a rate that meets or beats PG&E's rates.

3.4 City's Potential Financial Obligations to MCE

The City, as a consumer of electricity, faces many of the risks discussed above. However, the City also may face other risks as a participant in MEA. This section discusses those potential risks.

3.4.1 Need for City to Provide Backstop Support to MEA Power Suppliers

When MCE was originally established, it needed to fund its startup activities. However, at that time, it had no customers and no credit rating. Thus, MCE had to borrow funds from third parties.[20]

In addition, before startup, MCE needed to post security with its power supplier. MRW is not aware of the specifics of these security requirements but does not believe that they were onerous, primarily because MCE was not procuring a significant amount of energy in its Phase I procurement. However, for Phase II, MCE will need to procure a much greater amount of energy (especially if it is successful in recruiting new members such as the City). If this occurs, MRW believes that potential power suppliers may require greater levels of security from MCE. This security might include calls by the power suppliers to obtain backstop guarantees from MEA members.[21] While MRW does not have any first-hand knowledge of such requirements, this is certainly an issue that the City should investigate fully with MEA prior to making any sort of commitment to join.

Finally, as discussed above, there is a distinct possibility that the CCA bond that MCE must post with the CPUC could increase significantly. According to MEA and San Francisco (which is attempting to form a CCA), it could take up to three years before a CCA could become sufficiently creditworthy to engage an insurance or finance company to underwrite the CCA

[19] The Administrative Law Judge in the proceeding considering this change has issued a Proposed Decision regarding the proposed change. The Proposed Decision would adopt a compromise position between the positions advocated by proponents of CCA (and Direct Access) and the utilities, albeit more heavily weighted towards the position advocated by the CCA proponents.

[20] MRW understands that MCE has established a bank line of credit and has repaid these loans.

[21] MEA states that it would never sign an agreement that had backstop guarantees without approval of its member agencies. That is precisely the point: a power supplier could refuse to sell power to MCE without the backstop guarantee, which would put MCE into the position of either having to ask its members to supply such a guarantee or have to purchase power at higher prices, thereby making its rates less competitive with PG&E.

bond.[22] If this were the case, then it seems plausible that MEA might come to its member cities and request assistance in posting a portion of the CCA bond.[23]

3.4.2 Lenders Requiring MEA Members to Provide Balance Sheet Guarantees for Generation Assets

During MRW's initial review of the risks associated with participation in MEA, it asked MEA staff about the potential risk of cities needing to (or being forced to) provide balance sheet support to allow construction of generation assets that are owned by MCE or MEA. At that time, MRW received assurances that such balance sheet support from MEA members would not be required. This was reiterated by Executive Director Weisz at the September 27 Novato City Council meeting, where she went on to explain that the JPA structure itself protects the JPA's members from debts incurred by the JPA.

In general, this is a legal issue and is beyond the scope of MRW's assessment. However, MRW notes that the Town of Ross's city attorney, Hadden Roth, investigated Ross's liability should it join MEA. His conclusions were:

> …that the Town's general fund will not be responsible for any financial obligations of MEA unless the Ross Town Council first specifically agrees in writing to assume the liability. This protection is provided under both the JPA agreement and State law.[24]

Therefore, it is MRW's understanding that no liability could be placed on Richmond simply by being a member of the MEA JPA.

3.4.3 Participation Fee

In order to join MEA, it is possible that the City may have to pay a participation fee to cover "any new costs related to adding the new member and any other conditions deemed appropriate by the Board."[25] The magnitude of that fee has yet to be set, although MRW notes that the equivalent fee for Marin County cities and towns was estimated to be $20,000 to $40,000. It is reasonable to assume that any fee requested of Richmond would be of a similar magnitude. Furthermore, if the City pays the fee but is unable (or unwilling to act) in a timely fashion, then it may have to forfeit that fee. As this fee is not likely to be great, this is a low risk.

[22] R.03-10-003, Supplemental Brief Of Marin Energy Authority On Proposed Bond Methodology, February 28, 2011. Page 6.

[23] Even more troubling, San Francisco claims: "even if a CCA's risk of ceasing operations is minimal, the expense of the bond requirement, by itself, could force a CCA out of business."

[24] Minutes to the Special Meeting Of The Ross Town Council, Tuesday, January 12, 2010. http://www.townofross.org/pdf/minutes_council/january-12-2010-special-meeting-adopted-minutes.pdf

[25] Memorandum from Greg Stepanicich to the MEA Chair and Board Members, September 26, 2011. Included as part of item #6c at the Marin energy Authority Mid-Year Retreat Packet, October 3, 2011.

4. Review of Dalessi Load Study

At the July 19, 2011 City Council meeting, Dalessi Management Consultants, LLC (DMC) was authorized to:

- Analyze the monthly customer electric load data for customers within the City as provided by PG&E.
- Incorporate estimates of electricity demand associated with the potential second campus of the Lawrence Berkeley National Laboratory (LBNL) if such estimates are available from the City.
- Create a composite hourly load dataset for the City, using statistical class hourly load profile data.
- Identify resource requirements for baseload energy, peak energy, generation capacity, ancillary services, California Independent System Operator costs, renewable portfolio standards and distribution losses.

MRW reviewed materials generated by DMC, including the workpapers used to analyze the load data, create the composite hourly load of the City (with and without the LBNL campus), and identify baseload energy, peak energy and required generation capacity and renewable portfolio standards. Information concerning California Independent System Operator costs and losses were not provided. In addition, MRW was provided "Summary of MEA's Economic Evaluation of the Potential Extension of MCE Service to the City of Richmond" (Economic Evaluation Summary). The workpapers supporting this economic evaluation were considered proprietary to DMC and MEA and not provided to MRW.

4.1 Comments on the Load Analysis

MRW found that:

- The load analysis method was sound
- The hourly loads derived from the data were reasonable
- Based on the hourly loads, the calculated baseload energy, peak energy and generation capacity needs were reasonable
- The estimates of the renewable energy needed to comply with Renewable Portfolio Standard regulations were reasonable

Our primary criticism with the analysis is with the underlying assumption that 20% of the load in *each customer class* would opt-out of MCE service and remain with PG&E. While the actual opt-out rate is difficult to predict, the composition of the customer base is very important for understanding the shape of the load that is to be served. Residential and small commercial customers tend to have "peakier" loads, as they have relatively high demands during late summer afternoons (driven by air conditioning) and winter evenings (driven by lighting and appliances).

Large commercial and industrial customers tend to have "flatter" loads, as their electricity demand is not as sensitive to weather or daylight hours. "Peakier" loads tend to be more costly to serve than flatter loads.

Because the total composite load is important, the assumptions concerning how each class is likely to participate in the CCA or opt out is likewise important. If Direct Access[26] participation statistics are a reasonable indicator (which we think they are), the industrial, large commercial and to a lesser degree medium commercial customer classes will tend to be more price sensitive and risk averse than other customer classes.

The assumption that 20% of the customers will opt-out from each customer class does not reflect this fact. While the 20% opt-out rate assumption is appropriate, or even conservative, for residential and small commercial customers, it is questionable for larger commercial and industrial customers.

This opt-out question impacts the load that would have to be served by MCE. If fewer large commercial and industrial customers participate in the CCA, the aggregate load served by the CCA would be "peakier," and on an average per-kilowatt-hour basis, a CCA with a customer mix that is dominated by residential and small commercial customers would require higher rates to cover its procurement costs.

When queried about the opt out assumptions, Mr. Dalessi informed MRW that the cost to serve the larger customers was approximately equal to the revenue MCE would receive from them, and that therefore the overall cost-effectiveness results shown in the Economic Evaluation Summary were still valid. As more detailed work papers were not provided (due to MCE confidentiality concerns), MRW cannot verify this, but nonetheless finds the assertion plausible.

4.1 Comments on the Economic Evaluation Summary

In addition to the spreadsheets containing the load analysis, DMC also provided a summary of the economic evaluation it conducted for MEA. The Economic Evaluation Summary outlined the factors taken into account when conducting the analysis, which included the load that would have to be served, estimates of incremental overhead requirements at MCE and incremental financing costs. MRW found the load estimates shown in the summary were consistent with the detailed spreadsheets provided and the other general cost categories identified to be appropriate.

The Economic Evaluation Summary also provided an estimate of "ratepayer impacts." This showed that the revenue that would be received using MCE rates from Richmond customers would equal approximately $33 million per year while the costs to serve those customers would equal approximately $31 million per year, for a net "ratepayer benefit" of $2 million per year.

MRW believes that characterizing the annual $2 million surplus as "ratepayer benefit" is misleading. This value simply says that DMC projects MCE's rates to bring in, on average, $2 million per year more from Richmond customers than its cost to serve those customers. This is

[26] Direct Access is the current program whereby some non-residential customers may elect to receive power from providers other than their host investor-owned utility.

not a ratepayer benefit; instead, this is the benefit to MCE of taking in the residents and businesses of Richmond. Some of this benefit might be passed along to Richmond's customers in the form of lower MCE rates. However, this is not a certainty.

To show an economic benefit to the ratepayers in Richmond, one must compare the aggregate bills the Richmond ratepayers would pay under MCE to that which they would pay under PG&E service. Such an analysis was not provided to MRW.

5. Conclusions

MRW has identified various risks associated with the City's participation in MCE. The most significant risk is whether MCE will ultimately be able to provide long-term power supplies at costs that are less than PG&E generation rates. Thus, if the City's customers are highly price sensitive, then this risk may be of great concern and it might be reasonable for the City to delve deeper into the likely future rates for MCE and PG&E. On the other hand, if the City's residents and businesses are more concerned about the level of renewable resources used to generate their electric supply, then such an assessment is less important.

The price-sensitivity issue is particularly acute for low-income households taking service on CARE rates. MEA does not have a policy in place to ensure such customers will not be harmed by taking MCE service relative to remaining on PG&E service. Given the legislatively-mandated "opt-out" structure of CCA programs in California, MRW believes this should be addressed prior to Richmond committing to MEA membership.

It is beyond the scope of this assessment to either quantitatively assign either potential costs or probability of occurrence to these risks. In addition, this assessment does not identify or attempt to quantify the potential benefits associated with participation in MCE. Richmond's policymakers will need to weigh and balance the potential risks and benefits of participation in MEA given the risk and policy preferences of Richmond's citizens and businesses.

6. Appendix 1: Email Correspondence Concerning MEA CARE Rates

Mark Fulmer

From: Jamie Tuckey [jtuckey@marinenergyauthority.org]
Sent: Monday, October 10, 2011 3:30 PM
To: Mark Fulmer
Cc: Dawn Weisz
Subject: RE: CARE customer policies

Hi Mark,

Our CARE rates are available on our website here:

http://marincleanenergy.com/index.php?option=com_moofaq&view=categories&id=16&Itemid=172

MEA does not currently cover the PCIA charge for any of our customers, including those who are on the CARE schedule. Our CARE rates are not all currently set to meet or beat PG&E's. It depends on which rate schedule and which tier you are comparing, although the majority of our CARE rates do beat PG&E's. There are 33 different rates provided for the CARE customers across the different tiers and rate schedules. Of those 33, 24 beat PG&E's rates.

Please let me know if I can provide you with any other information.

Thanks,
Jamie

Jamie Tuckey
415-464-6024

From: Dawn Weisz [mailto:dweisz@marinenergyauthority.org]
Sent: Monday, October 10, 2011 2:11 PM
To: Mark Fulmer; Jamie Tuckey
Subject: RE: CARE customer policies

Hi Mark,
Jamie can point you to the CARE rates which are shown on our website. Jamie is included here if you have any follow up questions as well.

Thanks,
Dawn

marin energy authority

Dawn Weisz
Executive Officer
Marin Energy Authority
781 Lincoln Ave., Suite 320
San Rafael, CA 94901
415-464-6020
MarinCleanEnergy.com

From: Mark Fulmer [mailto:mef@mrwassoc.com]
Sent: Monday, October 10, 2011 1:11 PM
To: dweisz@marinenergyauthority.org
Subject: CARE customer policies

Dawn,

As I'm sure you've been told, MRW is working with the staff at the City of Richmond evaluating the risks of the City joining MEA.

In support of that effort, can you point me to (if it's on the web) or send me MEA's policies concerning rates for CARE customers? In particular, are MEA/MCE's rate set to meet/beat PG&E's CARE rate (it appears so from the website), and does MEA/MCE cover the PCIA for CARE customers?

Best regards,
Mark

Mark Fulmer
MRW & Associates, LLC
1814 Franklin Street, Suite 720
Oakland CA 94612
(510) 834-1999
mef@mrwassoc.com

7. Appendix 2: MRW's Qualifications

Established in Oakland, California in 1986, MRW early on built a solid reputation for delivering local insights on power and fuel markets in the western United States as well as intervening successfully in legislative and regulatory proceedings on clients' behalf. Today, MRW continues to deliver high-quality market insights, analysis, and client support on a national and international level. The company has undertaken engagements in more than twenty different states, including nearly every state in the western U.S. The company maintains a strong focus on California markets and regulatory structures. The location of the company office in Oakland, California, facilitates our active participation in proceedings at the CPUC, the California Energy Commission, and the CAISO.

MRW's client base includes major financial institutions, private power developers, consumer advocates, power marketers, municipalities, Fortune 500 industrial companies, commercial end-users, natural gas pipelines and storage service providers, regulatory agencies, and other strategic players in the energy sector. MRW's team of professionals include specialists in renewable energy, power market modeling, financial analysis, regulatory processes, utility rate design, legislative analysis, commodity procurement, energy use analysis, contract negotiations, transmission planning and pricing, and strategic planning.

On related CCA matters, in the spring of 2005, Navigant Consulting, pursuant to a California Energy Commission grant, issued a series of CCA feasibility studies for the County of Marin and the cities of Berkeley, Oakland and Emeryville. A similar report was issued for the Kings River Conservation District a few months later. The basic reports were nearly identical, differing only in how the customer and load characteristics of each jurisdiction affected the various data tables. MRW, along with JBS Energy, provided an independent third-party review of these studies on behalf of the studies' recipients. The reviews focused on the reasonableness of the analytical approach and assumptions used by the reports' authors, identifying areas that were either unreasonable or would need updating if a particular jurisdiction were to investigate CCA formation in greater detail. The review also identified key risks that would have to be addressed, including such factors as regulatory risk (i.e., impact of changes to PG&E rate design) and environmental compliance costs. As a result of these third-party assessments, Navigant ultimately made significant changes to the preliminary feasibility studies.

In late 2008, MRW conducted an independent review of the reports and documents associated with Marin County's Community Choice Aggregation efforts. This review focused on the "Marin CCA Business Plan" (April 2008), Bill Marcus's professional peer review of the Plan, PG&E's comments on the Plan, and responses to Marcus' and PG&E's comments. MRW's review concentrated on two main areas: the factors that were most important making a CCA financially viable and the major risk factors that would affect potential participants in the CCA. These included:

- the reasonableness of the power procurement strategy proposed in the Plan;
- the reasonableness of the procured power costs forecast in the Plan;
- hedging and risk management activities proposed in the Plan;
- underlying natural gas and wholesale power price projections;

- the consistency of rate and procurement costs with those underlying gas price projections;
- the reasonableness of the Plan's estimates of the non-bypassable charges including the CCA Cost Responsibility Surcharge (CRS);
- the depth and appropriateness of any sensitivity analysis; and
- the forecasts of utility rates (and rate designs) against which the CCA's rates would compete, including the consistency of assumptions underlying the utility rate projection and the CCA rate projection.

In late 2009, the County and City/Town Managers again retained MRW to review the draft service agreements that MEA was proposing to enter into with Shell Energy North America. This review concentrated on identifying the risks to MEA, the Cities, Towns, and the County that were not sufficiently addressed in the MEA-Shell agreement, and provided suggested changes and amendments to the agreements to mitigate those risks. Many of MRW's suggestions were subsequently incorporated in the final contract.

The primary authors of this assessment are William Monsen and Mark Fulmer.

William A. Monsen, a Principal with MRW & Associates, LLC, has been providing technical and economic analysis for the energy industry for more than 30 years. He is an expert in utility resource planning, retail power procurement, power market evaluations, due diligence for power generation projects, and independent power issues. He has helped municipalities and other end-users understand present and future consumption needs and reduce energy costs through competitive commodity procurement and efficiency improvements.

With respect to CCA matters, Mr. Monsen was the Principal in Charge for detailed peer reviews of the CCA feasibility studies for Marin, Berkeley, Oakland, Emeryville and the Kings River Conservation District. He also led MRW's work in reviewing Marin Energy Authority's business plan and draft service agreements that MEA was proposing to enter into with Shell Energy North America. He also provided professional review on behalf of the City and County of San Francisco of the proposed contracts between the city and a potential (but eventually rejected) supplier for their proposed CCA and was a co-author of the Southern California CCA feasibility study MRW conducted in 2008.

Mr. Monsen holds a Master's degree in Mechanical Engineering from the Solar Energy Laboratory at the University of Wisconsin-Madison and a Bachelor's degree in Engineering Physics from the University of California at Berkeley.

Mark Fulmer is a Principal at MRW & Associates, LLC, with over twenty years of experience in the energy industry. Much of this work has been in the regulatory arena, advising customers, trade groups, municipalities, utilities and state public utility commissions on resource planning, energy efficiency and rate matters. He has submitted testimony before FERC and utility commissions in Arizona, California, Hawaii, Pennsylvania, Rhode Island, as well as supporting testimony in ten other states and Canadian provinces.

With respect to CCA matters, Mr. Fulmer was the lead author of a CCA feasibility assessment in Southern California Edison's service area and contributed to the peer reviews of the CCA feasibility studies for Marin, Berkeley, Oakland, Emeryville and the Kings River Conservation

District. He also served as an expert witness before the California PUC on behalf of the City and County of San Francisco on CCA matters, including the rules under which CCA would operate and the fees that PG&E would be allowed to charge CCAs for the various services the utility would have to provide. Most recently, Mr. Fulmer was one of three witnesses sponsored jointly by the Marin Energy Authority, the City and County of San Francisco, and the Direct Access parties in the CPUC proceeding addressing the correct calculation of the Cost Responsibility Surcharge for departing load (CCA and DA) customers.

Mr. Fulmer holds a Master's Degree in Engineering from Princeton University, where he conducted graduate research at the Center for Energy and Environmental Studies, and a Bachelors' Degree in Engineering from the University of California, Irvine.

Benefits & Risks to Richmond of Participation in Marin Clean Energy CCA

MRW & Associates, LLC.
Oakland, California
(510) 834-1999
mrw@mrwassoc.com

MRW & Associates

About MRW

- MRW has extensive experience in the California energy market and working with the CPUC.
- MRW has substantial experience in the development of CCAs.
  - MRW has conducted detailed peer review studies of CCA Plans.
  - MRW team members have been active in the CCA proceeding at the CPUC.
  - MRW has conducted a feasibility study of municipalities considering CCA formation (Whittier and other Southern California cities).

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Assignment

MRW scope of work consists of 4 main tasks:

- Determine potential risks/benefits to City residents and businesses if Richmond joins MEA
- Determine potential risks to the City itself if it chooses to join MEA
- Provide comments on the Dalessi Management Consulting load and resource requirement analysis
- Provide qualitative comments on any materials MEA provides to Richmond

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Setting the Context

- Participation in MCE does not come without risks.
- Remaining a customer of PG&E also carries risks.
- It is up to the policymakers of Richmond to determine if the potential benefits associated with participation in MCE justify the potential risks faced by customers that would be served by MCE.
- Customers can opt-out from taking service from MCE but it is almost a certainty that some members of the community will not understand the opt-out requirement.

MRW & Associates

Main Benefits According to MCE

- More renewable energy at competitive costs
- Competition will lead to more competitive rates
- Reduced greenhouse gas emissions
- Better incentives to sell power back to MCE and stimulate the local economy
- Greater local control over power supply decisions and rate setting

MRW & Associates

Risks of Status Quo

- Likely less renewable content in delivered power
- Likely greater greenhouse gas emissions
- Maybe lower price received for self-generated power sold back to PG&E
- Fewer options to participate in energy efficiency programs
- Power supply decisions and rate setting made at PG&E and at the Public Utilities Commission
- Maybe higher rates(?)

MRW & Associates

Procurement Risks

Risks	Magnitude of Risk
Volume Risk: Uncertainty in load can cause under- or over-procurement	Medium
Future Price Risk: MCE may not be able to procure power for incremental customers at competitive costs	High
Expansion of CCA: Can current contract accommodate all new customers?	Medium
Contract Renewal: MCE cannot procure power at competitive prices at end of current agreement	High

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Regulatory and Policy Risks

Risks	Magnitude of Risk
Adverse CPUC Decisions: Exit Fees and bonding costs may be higher than expected	High
MEA lacks a Low-Income ratepayer policy	Very High
Full details of requirements of new MEA members not set	Low
Richmond's interests may not always align with that of other JPA members	Medium

MRW & Associates

Customer Cost Risks

Risks	Magnitude of Risk
PG&E Exit Fees: Who bears risk?	High
Uncertainty in Departing Load Fees: How much must customer pay to exit CCA after opt-out period ends?	Medium
MCE Pricing Commitment: Will MCE meet or beat PG&E rate?	High
MCE Pricing Commitment: Will MCE hold CARE customers harmless?	Very High

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City-Specific Risks

Risks	Magnitude of Risk
Supplier Guarantees: City must provide guarantees to power suppliers	Medium
New Generation Guarantees: City must provide support to obtain financing for new generation	Low
Loss of Participation Fee: City departs CCA	Low

MRW & Associates

Dalessi Load Study

- Load analysis method was sound
- Hourly loads derived from the data were reasonable
- Calculated energy and generation capacity needs were reasonable
- Estimates of the renewable energy needed to comply with RPS regulations were reasonable
- Moving forward, opt-out assumptions should be refined

MRW & Associates

Conclusions

- The most significant risk is whether MCE will be able to provide long-term power supplies at costs that are less than PG&E could provide.
- This is particularly true for CARE customers.
- MCE does not currently have a written policy concerning its rate treatment of CARE customers.

Conclusions

- If the City's residents and businesses are highly price sensitive, then this risk may be of great concern. If the City's residents and businesses are more concerned about renewable resources, greenhouse gas reduction, local development and local control, then the price risk is of less concern.
- Customers can opt-out from taking service from MCE but it is almost a certainty that some members of the community will not understand the opt-out requirement.
- Dalessi load study reasonable