



2014 MCE Energy Efficiency Annual Report

Marin Clean Energy
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Introduction

Marin Clean Energy (MCE), a local government agency, was formed in December 2008 as the first community choice aggregator in the State of California and began serving customers in 2010. MCE currently serves approximately 125,000 customers in Marin County, unincorporated Napa County and the cities of Benicia, El Cerrito, Richmond and San Pablo. As a local public agency, MCE is governed by a 17-member Board of Directors comprised of one elected Councilmember or Supervisor from each of our member communities.

Marin Clean Energy's (MCE's) mission states that the organization purpose, among other things, is to promote the development of energy efficiency programs to address climate change by reducing energy related greenhouse gas emissions and securing energy supply, price stability, energy efficiencies and local economic and workforce benefits.

In support of this mission, MCE sought CPUC funding to launch a portfolio of energy efficiency programs for the 2013-2014 program cycle pursuant to California Public Utilities Code section 381.1 (a-f). Decision 14-01-033 confirmed MCE's right to serve as an independent energy efficiency program administrator for its customers and Decision 12-11-015 approved MCE's application to administer programs. MCE's program were designed to augment and not overlap with programs administered by the IOUs and RENs.

MCE's energy efficiency programs are available to all electricity customers within MCE's service territory, regardless of their electricity provider.

Portfolio Overview

In 2013 and 2014, MCE administered four programs: Multifamily, Small Commercial, Single Family and Financing.

Multifamily

Program Description

MCE's Multifamily Program provides cost-effective energy efficiency improvements to occupants and owners of low-income and market rate multifamily buildings in the MCE service area. This program is implemented in partnership with the Association for Energy Affordability (AEA) and the Marin City Community Development Corporation (MCCDC).

The Multifamily program provides rebates averaging 25-60% of project costs plus no-cost energy assessments, energy and water-saving measures for tenant units, and technical assistance to solicit bids and develop a comprehensive scope of work. Rebates are calculated using projected energy savings and are tiered based on payback period.

Properties that participate in the program are also eligible for financing through MCE's on bill repayment program. Each multifamily assessment report displays the summary of financial information, including the monthly cash flow estimates (Attachment B).

MCE coordinates closely with BayREN and PG&E to ensure that there is no double dipping and to share best practices.

Strategies Employed in 2014

- Used a project phasing approach to allow multifamily property owners to implement improvements over time as tenant units turn over.
- Built relationships within the sector through new property referrals from past participants.
- Developed relationship with Marin Builders Association to help raise visibility with contractors
- Partnered with other regional programs to present program offerings through public workshops
 - Workshop in Richmond with BayREN resulted in 3 applications out of 10 attendees
- Communicated program success stories through:
 - Published case studies
 - Testimonial from program participants at workshops

Program Performance and Major Achievements

- Reached 2,304 units with Technical Assistance
- 555 units touched by energy efficiency projects
- Relationship building and marketing efforts resulted in closing out the year with a robust pipeline for 2015
- Successful relationship with local water agencies saved more than 882,242 gallons of water

- Trained 12 workforce entrants or re-entrants¹ in direct install, and provided 550 on the job training hours of local employment for trainees.

Program Improvements for 2015

Some program improvements that are planned for 2015 include:

- Simplified incentive system for more effective marketing and outreach
- Leverage developing contractor and industry partnerships to maximize outreach to properties at major trigger points (i.e. rehabilitation or repair).
- Instituted assessment deposit of no more than \$500 per building, to be repaid at completion of project, to combat attrition and ensure applicants have “skin in the game.”

Small Commercial

Program Description

MCE partners with the Marin Energy Watch, the East Bay Energy Watch and SmartLights to implement a single energy efficiency program for small commercial customers throughout our service territory. The coordination between the small commercial direct install energy efficiency program providers in the region is designed to minimize customer confusion and reduce the overlap in program funding.

The small commercial program offers free energy assessments and rebates on lighting, heating, HVAC, refrigeration, food service, and building envelope upgrades. In addition, the program offers customers pre-negotiated contractor discounts on certain measures, project management assistance and post-project quality assurance. Customers that participate in the program are also eligible for financing through MCE’s on bill repayment program and the relevant information is presented to them in the assessment report.

In 2014, the program’s marketing strategies included contractor referrals, door-to-door outreach campaigns and partnerships with local business groups.

Strategies Employed in 2014

- Outreach Campaign through the San Rafael Chamber of Commerce that resulted in 55 assessments and 20 completed projects
- Communicated program success stories through case studies of projects to promote program offerings
- Partnership with Marin Builders Association to help raise visibility with contractors
- Close coordination with Marin Energy Watch and East Bay Energy Watch programs
- Offered a bonus kicker for properties that installed multiple types of measures (e.g. HVAC, lighting, refrigeration, envelope, etc.)

Program Performance and Major Achievements

- Completed upgrades at 56 small businesses.

¹ Workforce re-entrants are trainees with some construction experience, but who are new to energy efficiency and renewable energy.

- Paid \$111,125 in rebates.

Program Improvements for 2015

- Increased emphasis on accomplishing whole building projects through targeted outreach to medium sized office buildings and other ideal whole building candidates.
- MCE referrals to program to identify high energy intensity businesses that would be ideal candidates for participation in program.
- Increased reliance on contractor network to refer projects to the program at trigger points such as at equipment failure.
- Leverage partnerships with organizations such as the local chamber of commerce's to build on the value of trusted messengers.

Single Family

Program Description

MCE's Single Family Program employs three strategies to educate homeowners on how to save energy in their homes.

My Energy Tool

In 2013 MCE partnered with Planet Ecosystems, Inc. (PEI) to launch an online energy tool ("My Energy Tool"). My Energy Tool helps single-family residential customers to make sense of their energy options by generating energy action plans based on their specified value (e.g., saving money, improving comfort or reducing greenhouse gasses [GHGs]), home characteristics and energy usage. In addition, to providing customers with estimated lifetime savings (in dollars and GHGs) for personalized energy saving measures, My Energy Tool connects customers interested in pursuing projects with local qualified contractors, financing options and rebates.

Home Utility Reports

In order to encourage customers in MCE's service territory to reduce their energy consumption and make use of My Energy Tool to do so, MCE (in collaboration with PEI) began employing "Home Energy Report" style direct mailers in 2013 on a pilot basis. After a successful pilot period, this offering was expanded in 2014. In addition to offering energy saving tips and directing customers to learn more via a link to My Energy Tool, these mailers provide a comparative analysis of customers' energy usage in relation to other customers with similar home characteristics.

HURS mailers have proven to be a critical component of the single family program. In addition to driving traffic to My Energy Tool, receipt of the mailers alone has resulted in significant energy savings.

Schools Program

MCE partnered with Strategic Energy Innovations (SEI) and Planet Ecosystems Inc (PEI) to design and implement a schools program focused on increasing public engagement with MCE's online energy tool (My Energy Tool). The schools program has two goals: to educate students about energy (specifically in regards to efficiency and conservation), and to encourage students and their families to use My Energy Tool to create energy action plans.

The schools program was offered to 3rd-5th grade classes in select Marin and Richmond schools free of charge. Schools that elected to participate were provided with in-class instruction, take home assignments, educational collateral and incentives. SEI developed a curriculum focused on energy use, energy sources, non-renewable and renewable energy, and strategies to save energy. SEI delivered this curriculum in school-wide assemblies which allowed them to reach a large number of students per school served.

In order to nurture teacher support and follow through, SEI made classroom visits after the assembly a requisite of the program. At each participating school, SEI tries to encourage participation by promoting the program in the school newsletter and cultivating relationships with parent champions.

Strategies Employed in 2014

- Based on the success of the initial pilot, the Home Utility Reports (HURs) program was expanded in 2014 and revamped with improved graphics (Attachment A).
- Changed the design of the school program to encourage students to sign up not just their own family, but also their neighbors and friends for the My Energy Tool.
- Used the result of an impact evaluation to revise the list of customers receiving the HUR, removing customers that showed low potential to save and adding customers that showed high potential to save.
- Redesigned the My Energy Tool site to be more user-friendly and added an equipment marketplace functionality where users can evaluate the estimated life cycle cost of different appliances and make purchases.

Program Performance and Major Achievements

- Engaged with 4,385 students, which led to the creation of 556 Action Plans (Table 1.)

Table 1. Schools Program Engagement

Semester	# of Students Served	# Action Plans
Spring 2014	837	0
Fall 2014	2511	275
Total	4385	556

- Generated 799 new Action Plans which brought the total number of Action Plans created to 1,479.
- Added 758 new registered users to the My Energy Tool website bringing the total number of users to 2,146.
- Expanded the number of customers receiving the HUR to over 18,000.

Program Improvements for 2015

- Reviewing marketing campaigns in real time to adjust to the most effective strategies (i.e. which ads result in the most quality traffic to site.)
- Establishing quarterly metrics for tracking Action Plan uptake and quality traffic to site.
- Greater integration of My Energy Tool site and MCE site.
- Improvements to Finance Marketplace to support roll out of PACE programs locally.

- Improving integration with Home Upgrade Advisor program offered through BayREN to encourage quality leads locally.

Financing

Program Description

MCE’s Financing Program is a public/private partnership between commercial banks and MCE to provide a source of funding to residential and commercial property owners to complete energy efficiency projects on their properties. Loans are available to fund energy efficiency projects that are completed either through the MCE commercial and multifamily rebate programs or through the single family Home Upgrade program offered through PG&E.

Third party loans are partially secured with a ratepayer credit enhancement known as a ‘loan loss reserve.’ The loan loss reserve is available to reimburse the bank in the event of a loss incurred through defaulted loans in the program. For the multifamily program, the loss coverage is 15%, meaning the total portfolio of loans is matched with a 15% coverage ratio. In this case, that represents a \$3.65 million commitment of lending which is leveraged with a \$547,500 ratepayer funded loan loss reserve.

Table 2. Multifamily / Commercial Loan Characteristics

Bank Partner	River City Bank
Length of Loan	5-10 years
Interest Rate	5%
Minimum – Maximum Project Size	\$10,000-\$265,000*
Loan Loss Reserve	15%
Security	UCC-1 Fixture Filing

*Larger loans may be considered on a case by case basis.

For the single family program, the loss coverage is tiered based on the FICO of the applicant as shown in the table below.

Table 3. Single Family Loan Characteristics

Bank Partner	First Community Bank
Length of Loan	5 years for \$7,500 or less, 10 years for larger
Interest Rate	6.5%
Minimum – Maximum Project Size	\$2,500 - \$30,000
Loan Loss Reserve	Tiered based on FICO: 640-670 at 15% 671-700 at 10% 700+ at 5%
Security	None

Strategies Employed in 2014

- Tables displaying a summary of the financing options available through MCE included with all energy assessment reports provided to customers (Attachment B).

- \$40,000 marketing campaign to drive participation into single family loan program. Campaign activities included:
 - Print and online marketing
 - Tabling at community events
 - Earned media with local home publications
 - Partnership with Marin Builders Association to help raise visibility with contractors
 - Promotional information on Home Utility Reports which are mailed to approximately 18,000 single family customers in MCE service territory
- Partnered with other regional programs
 - Coordinated referrals with the Home Upgrade Advisor program in BayREN portfolio
 - 51 referrals from Home Upgrade Advisors to the loan program
 - Provided collateral to organizations doing outreach and home visits (Marin County Energy Watch program, Rising Sun Youth Energy Services)

Program Performance and Major Achievements

- First loan on the books!
- Participation continues to be slow. Informal feedback from Home Upgrade Advisor service indicates the interest rate could be a barrier.
- Development and dissemination of high quality marketing assets.

Program Improvements for 2015

- The complexity of existing Single Family Programs (Home Upgrade) could also serve as a barrier. MCE is considering amending the single family program to include single measures.
- Increase the visibility of the financing summary in the assessment reports.
- Ensure program implementers have comfort discussing the value and details of the financing offerings.
- Increase targeted outreach to commercial customers that are likely candidates for the financing program.

Overarching Strategies

In addition to the program level efforts described above, MCE made several changes at a portfolio level in 2014 to improve program performance and make program performance more transparent to stakeholders:

- Streamlined reporting process and increased accuracy of reports while decreasing time spent on reports.
- Developed attractive, accurate monthly report format for public distribution (Attachment C).
- Analyzed marketing strategies and redirected resources to those activities with the most value (i.e. case studies, contractor relationships, agency partnerships).

Energy Savings

MCE's 2014 portfolio savings are shown below (Table 4). Although the Single Family program generates savings through the Home Utility Report Program, these savings are not included in the tables below as the savings attributable to this program will be determined *ex post* through an impact assessment.

Table 4. Electricity and Natural Gas Savings and Demand Reduction

Annual Results	Installed Savings
TOTAL 2014 Energy Savings (GWh) - Annual	0.723
TOTAL 2014 Energy Savings (GWh) – Lifecycle	9.222
TOTAL 2014 Natural Gas Savings (MMth) – Annual	1.341
TOTAL 2014 Natural Gas Savings (MMth) – Lifecycle	17.457
TOTAL 2014 Peak Demand savings (MW)	0.108

Savings by Program and End Use

The bulk of the portfolio's electric savings come from the Commercial Program which installed a high number of lighting and refrigeration measures. All of the portfolio's gas savings come from the Multifamily Program which installed a high number of water heating related measures.

Table 5. Savings by Program

Annual Results	2014 Annual Savings		
	Electric (kWh)	Demand (kW)	Gas (therm)
Multifamily	43,047	.59	4,304
Commercial	680,417	107	-2,963
Total	723,464	108	1,341
<i>Single Family*</i>	<i>903,373</i>	<i>N/A</i>	<i>39,730</i>
Total with Single Family*	1,626,837	108	41,071

*Ex-Ante savings claims reported to the CPUC do not include savings for the Single Family Program which are evaluated on an ex-post basis.

Table 6. Annual Savings by End-Use

2014	GWH	% of Total	MW	% of Total	MMTh	% of Total
Residential	0.031	7.14%	-	0.00%	2.483	248.80%
HVAC	0.000	0.00%	-	0.00%	0.043	4.31%
Lighting	0.009	2.00%	-	0.00%	-0.142	-14.23%
Water Heating	0.001	0.16%	-	0.00%	2.564	256.91%
Other	0.022	4.98%	-	0.00%	0.018	1.80%
Nonresidential	0.408	92.86%	0.064	100.00%	-1.485	-148.80%
Lighting	0.053	12.07%	0.013	20.31%	-	0.00%
Refrigeration	0.014	3.17%	0.002	3.13%	-0.002	-0.20%
Other	0.341	77.61%	0.049	76.56%	-1.483	-148.60%
MCE Annual Portfolio Savings	0.440	100%	0.064	100%	0.998	100%

Environmental Impacts

The avoided emissions data in Table 7 is calculated using the E3 cost-effectiveness calculator, developed by Energy and Environmental Economics, Inc. (E3).

Table 7. Environmental Impacts

Annual Results	Annual tons of CO2 avoided	Lifecycle tons of CO2 avoided	Annual lbs of NOx avoided	Lifecycle lbs of NOx avoided	Annual tons of SOx avoided	Lifecycle tons of SOx avoided	Annual lbs of PM10 avoided	Lifecycle lbs of PM10 avoided
2014 Total	375	4,781	119.00	1,524.00	-	-	48.000	617.00

Expenditures

MCE's 2014 expenses were slightly higher than the annualized program budget. However, given the ramp up period for all of MCE's programs in early 2013, the programs spent less than their total budget over the two year period.

Table 8. Expenditures

Summary of Portfolio Expenditures	2013-14 Adopted Program Budget, Annualized	Cumulative Annual Expenditures, 2014	Percent of Portfolio Budget	Percent of Total Annual Expenditures
Administrative Costs	\$329,041	\$271,685	13.53%	13.11%
Marketing/ Advertising/ Outreach Costs	\$268,468	\$178,334	8.88%	8.61%
Direct Implementation Costs	\$1,410,094	\$1,622,289	80.81%	78.28%
Total Portfolio Expenditures	\$2,007,603	\$2,072,318	103.22%	100.00%

Cost Effectiveness

The cost effectiveness of MCE's programs is outlined in the table below. The Total Resource Cost (TRC) Test weighs the program's net benefits against the cost to the program administrator and its customers. The Program Administrator Cost (PAC) Test measures the benefits and costs to the Program Administrator.

Table 9. Cost Effectiveness

Annual Results	Total Cost to Billpayers (TRC)	Total Savings to Billpayers (TRC)	Net Benefits to Billpayers (TRC)	TRC Ratio	Total Cost to Billpayers (PAC)	PAC Ratio	PAC Cost per kWh Saved (\$/kWh)	PAC Cost per therm Saved (\$/therm)
Multifamily	\$180,134	\$55,609	-\$124,525	.31	\$170,430	.33	\$0.43	\$3.40
Commercial	\$458,294	\$413,926	-\$44,368	.90	\$383,595	1.08	\$0.12	\$0
2014 Total	\$2,006,901	\$469,535	-\$1,537,365	.23	\$1,922,498	.24	\$0.54	\$15.77
<i>Single Family*</i>	\$238,851	\$132,282	-\$106,570	.55	\$238,851	.55	\$.22	\$1.59
2014 Total with Single Family*	\$2,005,563	\$501,440	-\$1,504,123	.25	\$1,917,095	.26	\$0.40	\$3.78

*Portfolio cost effectiveness reported to the CPUC does not include savings for the Single Family Program as they will be evaluation on an ex-post basis.

Attachment A: Sample Home Utility Report

Figure 1. Sample Home Utility Report

Home Utility Report

This report was prepared specifically for your home and will help you:

- Find ways to save money
- Better understand your electricity, gas, and water use

For more information go to:
mceCleanEnergy.com/MyAccount

Service Address: [REDACTED]
 Account Number: [REDACTED]
 Bill Period: 04/01/2014 to 04/30/2014

How does your electricity usage compare?

Last month, your electricity use was 1% higher than comparable nearby homes

*Your house size information was gathered from public sources

Last year your electricity use was 9% lower than comparable homes nearby

One kWh (kilowatt-hour) is equal to ten 100-Watt bulbs burning for one hour.

Comparable Nearby Homes

- The electricity use of 272 other nearby homes of similar square footage (2,134 feet)
- The most efficient 15% of the comparable homes

How much energy could you save?

We estimate that you could **save 1,563 kWh** over the next 1 year if you just take **9** actions.

Turn over to learn how.

We created an energy-saving Action Plan

specifically for your home, based on your energy usage history and standard home profiles.

Go to mceCleanEnergy.com/MyAccount to see your full Action Plan.

THREE OUT OF NINE ENERGY-SAVING ACTIONS YOU CAN DO TODAY:

Install "smart" plug strips to stop vampire loads

Cost: Under \$100

Many electronic devices, such as entertainment and office equipment, consume power even after being turned off. Smart power strips ensure these devices don't consume power when not in use.

Estimated Energy Bill Savings Over 1 Year: \$74
Estimated Net Lifetime Savings: \$329

Replace your light bulbs

Cost: Under \$100

Newer technologies use one fifth to one tenth the electricity of traditional kinds of lighting, and last five to twenty times longer.

Estimated Energy Bill Savings Over 1 Year: \$299
Estimated Net Lifetime Savings: \$1,418*

Only run your clothes washer with full loads

Cost: Free

Using the washing machine with only full (or near full) loads of laundry saves substantial amounts of washing energy, water heating energy and water.

Estimated Energy Bill Savings Over 1 Year: < \$10
Estimated Net Lifetime Savings: < \$100*

Now, take the next steps. It's as **easy** as 1, 2, 3...

1. See the rest of your Action Plan at mceCleanEnergy.com/MyAccount. To log in use your account number: [REDACTED]
2. Update your information and view your revised Home Utility Report
3. Put your Plan into action
 - You'll find contractors, rebates and tax credits on the website
 - You can apply for financing too.
 - Then, monitor your results— watch your home become more energy efficient and your monthly bills go down!

Green Home Loans Can Cover Your Energy Upgrades

LOW-COST LOAN

ENERGY UPGRADES

COMFORT & SAVINGS

We've now made it easier to get past the barrier of the upfront costs of home energy improvements. We're partnering with First Community Bank to offer affordable, competitive green home loans just for MCE customers. You can conveniently repay your loan directly on your PG&E bill— while you watch your monthly utility costs drop!

mceCleanEnergy.com/home-loans

Already done one or more of these actions? Congratulations! Log in online to adjust your Action Plan.

Seasonal Tip

Use dimmers for lighting. They play a useful role in reducing the energy consumed by your lights.

MCE is your local, not-for-profit electricity provider. We provide clean energy and help you reduce your energy use.

This report is provided to help you get the most value from your MCE service. Estimates contained herein, including potential savings, are based on assumptions on your utility service usage, your home's size and occupancy, various costs, rebates and other factors, and may not reflect your actual situation. Note: MCE does not warrant, produce or guarantee the accuracy of information or estimates. Any actual savings will always be less than what is shown. To determine your own savings, visit your Action Plan at mceCleanEnergy.com/MyAccount. If you would like to stop receiving these reports, call 1-800-455-8874. *Net savings is the money saved after immediate and ongoing costs and rebates are accounted for. Lifetime refers to the expected life of related equipment. Printed on recycled paper with water-based inks.

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Attachment B: Financing Reports

Figure 2. Commercial Customer Financing Report

Customer On Bill Repayment Report

<p style="text-align: center;">Business Name Address City, State ZIP</p> <p>Site Contact:</p> <p>Contact, Facilities Engineer Address City, State ZIP email</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Audit Number</td><td>XXXXX</td></tr> <tr><td>Audit Type</td><td>Lighting</td></tr> <tr><td>Rebate Code</td><td>2013-14 CLP Marin</td></tr> <tr><td>Program</td><td>MCE 2013</td></tr> <tr><td>Utility & Rate</td><td>MCE/Com-10</td></tr> <tr><td>Business Type</td><td>OFL</td></tr> <tr><td>Survey Date</td><td>06/03/12</td></tr> <tr><td>Report Date</td><td>07/21/12</td></tr> </table>	Audit Number	XXXXX	Audit Type	Lighting	Rebate Code	2013-14 CLP Marin	Program	MCE 2013	Utility & Rate	MCE/Com-10	Business Type	OFL	Survey Date	06/03/12	Report Date	07/21/12
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Program	MCE 2013																
Utility & Rate	MCE/Com-10																
Business Type	OFL																
Survey Date	06/03/12																
Report Date	07/21/12																

Project Summary - Lighting

Total Install Cost	\$16,197.60	The loan size, length and terms presented here are estimates based on typical OBR loans. The specific loan for your project may vary. The OBR Program is available to MCE utility account holders and legal title holders for commercial and multi-family properties. Each applicant will be individually approved for financing by River City Bank.
Total Rebate	\$5,914.08	
Final Cost	\$10,283.52	
Estimated Savings	\$8,489.05 per year	
Loan Size	\$16,197.60	
Loan Length	\$5,914.08	
Interest	\$5,914.08	
Monthly Payment	\$5,914.08	
Interest Paid Over Loan	\$1,360.24	

Please note that a \$250 fee will be assessed by River City Bank to process your loan.

Program Manager

Contact, Facilities Engineer
Address
City, State ZIP
email

Auditor

Contact, Auditor
Address
City, State ZIP
email

Financing Bank

River City Bank
2485 Natomas Park Drive
Sacramento, CA 95833

Attachment C: Monthly Update

Figure 3. Monthly Update Document

