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MCE

DRAFT

Single Family Comprehensive Program

Implementation Plan

November 20, 2019

Table of Contents

Program Budget and Savings Information

1. Program and/or Sub-Program Name
MCE Single Family Comprehensive Program

2. Sub-Program ID number
MCE07

3. Sub-Program Budget Table

MCE07: Single Family Comprehensive	2020
Administration	$158,776.78
Marketing, Education, and Outreach	-
Implementation (Direct Install Non-Incentives)	-
Incentives	$394,088.30
Total	$552,865.08

4. Sub-program Net Impacts Table

Total Units				
Projected Net Savings	2020	2021	2022	2023
Treatment Group	69,531	66,054	62,752	59,614
Net kW	407			
Net kWh Reduced	4,072,319	7,585,693	10,809,613	10,269,132
Net Therms Reduced	56,147	82,568	125,503	131,151

5. Sub-Program Cost Effectiveness (TRC)
1.57

6. Sub-Program Cost Effectiveness (PAC)
1.57

7. Type of Sub-Program Implementer (Core, Third Party, or Partnership)
Third Party

8. Market Sector (including multi-family, low income, etc)
Single Family

9. Sub-program Type (Non-resource, Resource Acquisition, Market Transformation)
Behavioral

10. Intervention Strategies (Upstream, Downstream, Midstream, Direct Install, Non-Resource, Finance, etc)
Downstream

Program Implementation Plan Narrative

1. Program Description
As authorized by D. 18-05-041[1], MCE is launching a Single Family Comprehensive Program (SF Program), which offers behavior intervention strategies and energy upgrade recommendations to residential participants with the goal of achieving short-term energy and budget savings[2] that can persist into long-term behaviors. This will be achieved by fostering participant engagement, participant satisfaction and energy education and upgrades through regular and participant-specific touch points in the form of paper or digital Home Energy Reports (HERs) and a web-based education portal.

Program Goals
MCE will provide a downstream program that selects eligible customers and assigns them to a treatment group to receive HERs at regular intervals to encourage energy- and money-saving behavioral changes or to act as a control group for the study. The program's treatment group will receive a series of HERs and, if enrolled in the digital platform, energy budget reports and alerts, as well as access to a web portal where they can learn about additional savings potential.

Customers will be enrolled into the program in compliance with the measurement and verification (M&V) plan filed with the California Public Utilities Commission (CPUC) and all current CPUC behavioral Normalized Metered Energy Consumption (NMEC) program rules

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[1] California Public Utilities Commission Decision D. 18-05-041, Addressing Energy Efficiency Business Plans, Ordering Paragraph 33 at p. 189
[2] The SF Program will initially target electricity consumption behavior changes until MCE can gain access to its participants' historical and current, ongoing natural gas consumption data

and requirements[3]. The program will monitor participant eligibility on an ongoing basis, removing participants who no longer wish to participate or otherwise become ineligible to participate[4].

The MCE Single Family Comprehensive Program goals are to:

- Establish a cost effective esidential behavioral program to educate participants on their energy consumption behavior and motivate participants to save energy over the short- and long-term

- Validate participant savings using meter-based energy savings calculation methods and Randomized Control Trial (RCT) to measure Normalized Metered Energy Consumption (NMEC) savings

2. Program Delivery and Customer Service

MCE's SF Program will use NMEC to measure energy savings and as a basis for payments to the implementer. However, because the program is behavioral in design, MCE will also use an RCT methodology to compare participants in the program to a control group's consumption and savings over time. The NMEC RCT approach applies NMEC savings calculation rules, and complies with behavioral program evaluation best practices by using an RCT.

These two methods are used in conjunction by first selecting non-participants randomly from within the intended treated population, using stratification to ensure equivalency between the two groups and then by calculating NMEC meter-based savings for both participants and non-participants. Then, the difference of differences will be calculated between the two groups to arrive at adjusted gross savings.

Using an NMEC RCT design will allow for two things: prevent capturing and paying for naturally occurring efficiency by comparing the treated and control groups, and prevent selection bias in participant enrollment toward participants who have the highest propensity to save energy even without a behavioral intervention. Moreover, this approach allows specific participant tracking across different programs to avoid double counting of savings.

As a Community Choice Aggregator (CCA) serving Marin, Contra Costa, Napa and Solano Counties, MCE serves several of the same customers as Pacific Gas and Electric (PG&E). Subsequently, there is the risk that customers could inadvertently participate in an MCE program and a similar PG&E program; when this occurs, both program providers claim the savings-this is called double-dipping. To prevent double dipping, MCE and PG&E are actively refining the process of sharing customer information (project addresses and account numbers) on all customers that have received program incentives or rebates on an ongoing, regular basis. In addition to delivery methods designed specifically to address participants' needs through a cost-effective and personalized approach, MCE will provide customer services.

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[3] Per Administrative Law Judges' Ruling Issuing Draft Revised Rulebook for Normalized Metered Energy Consumption and Inviting Comments on Population-Level Rules, Measurement Methods and Calculation Software filed August 29, 2019, final rules for NMEC programs has not yet been finalized.
[4] See Program Delivery and Customer Service, p. 13 for eligibility criteria

Customer satisfaction through interactions that are timely and that provide meaningful information with actionable recommendations is the cornerstone of the SF Program. Participants will have access to modernized digital programs like the web portal and digital HER that have benefits beyond measurable behavioral energy efficiency (EE); they can also contribute to an increase in customer satisfaction and an improved customer experience. Participants will also have access to customer service representatives from MCE via phone or email at all times.

Participants will receive paper or digital HERs as well as a host of additional access to resources and recommendations for energy saving solutions. The following table details each component of the participant experience and associated benefits.

Program Components and Benefits

Component	Description	Benefits
Similar Home Comparison	Performed at whole-home level for similar homes.	Drive energy savings through social benchmarking.
Appliance Itemization	Energy Bill Itemization for customers. The itemization covers electric, gas or dual fuel and solar net metering.	Customers can see where their energy dollars go.
Annual View with Similar Home Comparison	Customers can see their usage over time and how they compare to similar homes on a month-over-month basis.	Customers can see changes over months and across seasons, further driving energy savings through additional social benchmarking.
Personalized Recommendations	Highly personalized recommendations engine driven by energy itemization, home profile, ease of use, savings impact, season, type and ownership of home. This covers electric, gas or dual fuel, and it includes the potential cost savings of each particular action.	Drive energy savings by empowering customers with curated set of actionable recommendations with highest savings impact. Drive interest and adoption of targeted offers.
Digitization (Paper-to-Digital)	Opportunity for customers to opt in to register and receive digital reports throughout the billing period.	Increase customer engagement enabling continuous program improvement.

3. Program Design and Best Practices

The SF Program is designed to drive energy awareness and consumption reduction through a behavioral program design and using NMEC savings calculations. Program objectives will be achieved by providing paper or digital home energy reports that address barriers to action for residential customers through modeling energy use at the home level and providing reports that call out end uses, costs, and recommendations for improvements.

Participant Group

MCE will choose participants for this program consistent with CPUC direction for downstream, meter-based programs serving existing buildings.[5] MCE's Residential SF Comprehensive Program adopts an existing conditions baseline with the following requirements to provide ample historical consumption data:

- Eligible projects must have at least 12 months of baseline energy consumption data in the form of hourly electricity consumption. The baseline period selected involves the 12 months immediately before the implementation of EE measures (Baseline Period Dates)

- Data sufficiency must conform to CalTRACK methods[6]

A detailed list of eligibility criteria for participants is provided in the Data Quality Control section on Qualification Screening and Monitoring later in this document.

Control Group

For behavior-based interventions, a control group will be used for determining savings impacts. Treatment and control participants' consumption data will be analyzed using the CalTRACK methods and executed with the OpenEEmeter software. MCE will consider CPUC guidance provided in the Large Population Level Energy Efficiency Program Design Method Checklist[7] in designing the control group.

MCE will screen and continuously monitor program participants' eligibility for the following:

- Project site must be located in the MCE service area
- Customer must not be a current PG&E HER program participant
- Single family structure with a single meter for each fuel
- Have 12 months of consecutive consumption data for the same account
- Mixed-used sites are eligible if residential space represents at least 50% of conditioned space, and
- Received electric distribution service from MCE or PG&E and natural gas service from PG&E

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[5] California Public Utilities Commission, August 25, 2016. Decision Providing Guidance for Initial Energy Efficiency Rolling Portfolio Business Plan Filings (D.16.08.019) p. 49 Table 1
[6] CalTRACK Methods, see Section 2 on Data Management
http://docs.caltrack.org/en/latest/methods.html
[7] California Public Utilities Commission Rolling Portfolio Guidance Website:
https://www.cpuc.ca.gov/general.aspx?id=6442456320

- No installed solar at least 12 months prior to intervention (MCE will conduct analysis at intake)
- Model fit needs to be < 1.0 CVRMSE (MCE will conduct analysis at intake)
- Not be a current participant in MCE's Single Family Direct Install program
- Must have never opted out to receive communications i.e. HERs, CARE/Low-Income Programs

Once the program ineligible customers are removed from the potential participant pool, approximately 70,000 customers will be chosen to participate using the Randomized Control Test (RCT) methodology; approximately 20,000-30,000 other customers will be chosen to comprise a control group

Scope for Single Family Comprehensive Program

This table illustrates the specifications of the Home Energy Report program, broken out by paper and digital options.

Program Specifications

#	Area	Scope
1	No. of Participants	MCE will generate paper reports for approximately 70,000 treatment group participants. Up to an additional 30,000 control group participants will be identified and compared with the treatment group to determine what percentage reduction in energy consumption would happen absent the program intervention. Control group participants are representative when randomly selected within the same zip codes as treatment participants at a proportional distribution.
2A	Report Frequency (paper)	Each participant will receive six paper reports during the calendar year until they become ineligible or unsubscribe. For partial years the numbers of paper reports will be prorated.
2B	Report Frequency (digital)	Each participant will receive a one time welcome email, two monthly email reports, and two seasonal emails until they become ineligible or unsubscribe.
3	Customer Selection	MCE's program-eligible participants will be used to build a treatment group. Program participants will be chosen in compliance with the M&V Plan and approved CPUC requirements.
4	Report content	HERs can include the following content: • Appliance cost itemization • Education and outreach about complementary programs • Similar home energy consumption comparison • Personalized energy- and cost-saving recommendations

5A	Channel and Delivery	Reports will be mailed to program participants using the home address registered with MCE. The paper report will carry the MCE logo for identification and brand recognition of the program and agency providing the program.
5B	Channel and Delivery (additional resources for digital option)	Consumption summary sent early (e.g., Day 6) in a billing cycle, summarizing what happened in the previous billing cycle, including bill amounts, itemization, and recommendations at whole house and appliance category level; Similar Home Comparison will be sent around Day 12; Seasonal Alerts will be sent biannually
6	Paper to Digital Conversion	Program participants that have provided an email address to MCE will receive digital HERs; participants that have not provided an email to MCE at the start of the program will be enrolled in the paper HER option until they opt-in to the digital option by sharing their email address on the program's web platform
7	Unsubscribing	Program participants will be able to unsubscribe from receiving HERs through the program's website and by contacting MCE's contact center. MCE will provide support directly to participants and will unsubscribe participants using the web portal or support ticket.

Paper HER Option

After determining eligibility for the program, those customers for whom MCE does not have an email address will be enrolled in the program and receive paper Home Energy Reports (HERs) six times a year. The initial HER sent to participants will provide an option to opt out of the program should they choose not to participate.

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1125 Tamalpais Ave
San Rafael, CA 94901

Account Number: 00028317-25

THIS IS NOT A BILL

Your Home Energy Report

6/16/18 - 7/16/18

This report contains insights into your energy usage for past billing cycle(s) including your overall energy efficiency, top energy consuming appliances, and money saving energy tips.

You may also find this information online at:
mcecleanenergy.org

John Smith
123 Main Street
Anycity Anystate 12345-6789

How you compare to similar homes
6/16/18 to 7/16/18

| Efficient | $235 |

| You | $247 |

| Average | $324 |

GREAT

GOOD

FAIR
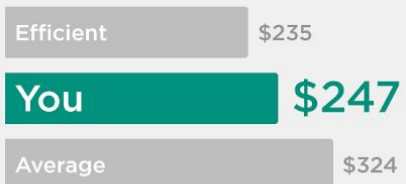
You're being compared to 150 nearby homes of similar housing type, size, and appliances. Efficient homes are the top 20% in this group that use the least energy.

So close! You're just $8 away from being **GREAT!**

Your top appliance costs
6/16/18 to 7/16/18

$122	Cooling	
$43	Pool Pump	Savings Opportunity! ▶
$19	Always On	
$17	Cooking	
$16	Laundry and Cleaning	

Based on your usage, we recommend

Use a variable-speed pool pump

A well-designed variable-speed pool pump can reduce your pool's energy cost by up to 90 percent.

Digital HER Option

After determining eligibility for the program, those customers for whom MCE has an email address will be enrolled in the digital HER program option of the SF Program. Participants that have not yet provided MCE with an email contact address will receive, within each paper HER, a suggestion to enroll in a digital report and energy conservation education platform.

In addition to receiving a digital version of their HER, participants in the program's digital option will receive alerts and notifications that are timed to users' particular billing cycle. These digital touch points will be optimized for relevancy and timing to best suit the participant by providing a clear next best action for the participant, increasing the likelihood of the participant adopting the energy-saving tip or signing up for a promoted program. This facilitates a more interactive and engaging relationship with the participant, leading to higher satisfaction and program participation.

SF Program participants will also have access to a suite of online solutions through a digital platform, which will itemize participants' energy bills and provide personalized energy efficiency recommendations specific to a home.

In addition to listing and prioritizing energy-savings tips, the portal also presents the annual savings potential for each recommendation for all major appliance categories specific to each home. For example, knowing that optimizing AC usage could save $430 per year is far more likely to motivate a consumer than providing standard and generic savings that likely reflect average instead of actual usage.

The portal will include detailed energy usage insight for participants. The energy usage page provides the ability for MCE's participants to view their energy usage breakdown annually or by billing cycles.

Savings for the treatment group will be calculated monthly against a baseline; savings across the treatment group will be compared to the control group to determine net savings to be attributed to the SF Program.

The following table describes the types of alerts and notifications customers will receive under the digital HER program option.
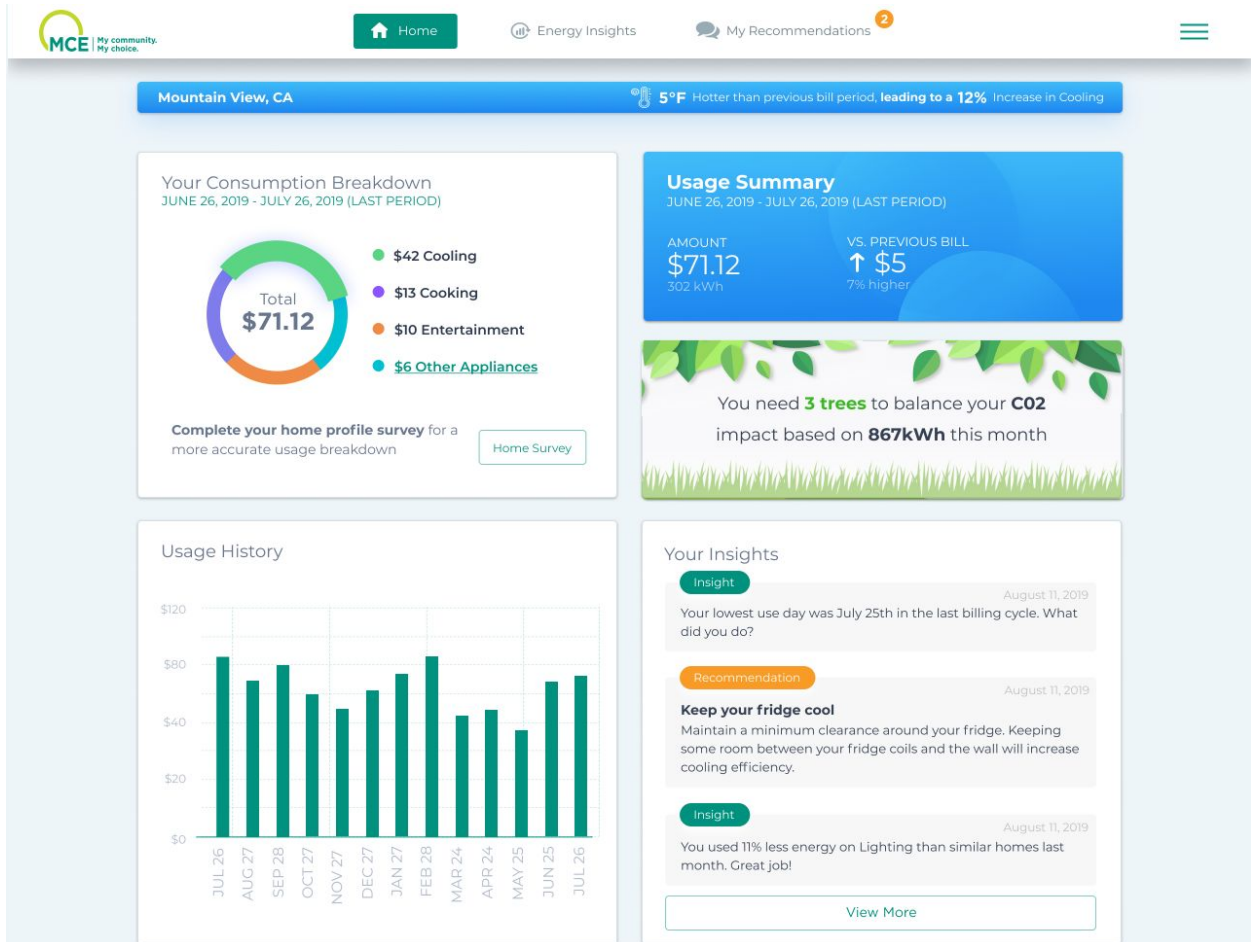
The SF Program focuses on data analysis to itemize energy bills and generate recommendations that target behavioral change and motivate participants to save energy. The primary market barrier for the residential customer sector is lack of information or awareness about end use and how their behavior impacts their energy usage. Proactive delivery of this information to participants via the home energy reports is intended to address this gap, while testing various methods of education delivery, and serve as a cost-effective way to achieve savings. This and other barriers addressed by the SF Program are listed below.

Market Barriers and Solutions

Barrier	Solution
Difficulty providing personalized end use data and recommendations	Regular paper or digital reports that include energy consumption and saving

	potential
Lack of information/awareness of end use consumption	Energy disaggregation tool identifies key energy consumers in the home
Lack of understanding of similar home performance norms	HER compares participant's home to similar[8] homes
Behavior programs to date have not measured actual at-the-meter savings	SF Program uses Normalized Metered Energy Consumption (NMEC) data to measure savings
Many residential customers do not trust program providers	MCE is a trusted non-profit agency
Personalized assessments are expensive and time-consuming	Program tools allow home energy use disaggregation digitally, eliminating the need for and cost of an in-home assessment

MCE will also use a state-of-the-art energy consumption analysis tool and web portal to provide participant education and incentive to make energy saving changes in their homes. By using only energy consumption data, no in-home devices or any additional hardware, the SF program software will detect the presence and estimate the energy usage of 11 different product categories: always on (baseload), heating, cooling, pool pump, water heating, lighting, refrigeration, electric vehicle, cooking, laundry and entertainment. The adoption of this tool can not only increase energy savings, but can also drive targeted demand response programs and achieve more efficient grid optimization. It enables the personalized experience that consumers have come to expect.

There are many established data points and reports in the industry that document the efficacy of behavioral programs. Links to three industry reports are included for reference.

1. *Behavior Change Programs: Status and Impact*, Reuven Sussman and Maxine Chikumbo; October 2016
   https://aceee.org/sites/default/files/publications/researchreports/b1601.pdf
2. *Overview of Residential Energy Feedback and Behavior-based Energy Efficiency*, Prepared by E3 for the Customer Information and Behavior Working Group of the State and Local Energy Efficiency Action Network; February 2011

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[8] The term "similar homes" refers to a group of homes in close proximity to the consumer, with similar usage patterns, appliances, and other metadata. Criteria are:
-Number of homes in the comparison cluster
-Type of customer's home
-Minimum and Maximum sizes of homes in the cluster
-Zip code of the customer's home
-Home heating type

https://www4.eere.energy.gov/seeaction/system/files/documents/participantinformatio n_behavioral_status_summary.pdf

3. *Implementing EPA's Clean Power Plan: A Menu of Options* , Chapter 13. Pursue Behavioral Efficiency Programs
   http://www.4cleanair.org/sites/default/files/Documents/Chapter_13.pdf

Calculation of Claimable Savings

Category	Single Family Comprehensive Program
Applicable Measure Codes:	Behavioral program, no Database of Energy Efficiency Resources (DEER) measure codes apply.
Measure Description:	MCE's SF Program seeks to develop a scalable model for residential interventions that leverages rapidly emerging market actors and products while minimizing administrative and implementation costs. Measure Treatment: The program is designed to offer maximum flexibility for retrofit options and include operational and behavioral interventions. As a result, there is no list of required measures and the list of eligible measures is treated as non-exclusive. Customers with solar PV or who add solar PV while enrolled must provide verifiable production data to calculate energy savings for that site or strict eligibility criteria will be applied that require the aggregator to drop the participant.
Base Case Description:	Base case is existing building conditions. Utility claimable energy savings will be determined using experimental design practices that control for exogenous factors such as naturally occurring savings attributable to building standards and natural adoption.
Base Case Energy Consumption:	Whole building or meter-level hourly and daily electricity (kWh) and gas (Therms) consumption.
Measure Energy Consumption:	Not applicable.
Energy Savings (Base Case – Measure):	Net savings are to be reported as portfolio-level aggregate avoided energy use based on the control group analysis. The size of both the participant group and the control group must be large enough to support the estimation of net savings that are sufficiently precise to meet the enhanced level of rigor for the Gross Energy Impact Protocol as contained in the California Energy Efficiency Evaluation Protocols. Savings claims shall be estimated using one year of post-implementation metered energy consumption.
Costs Common Units:	$ per kWh, or $ per Therm

Base Case Equipment Cost ($/unit):	Not applicable - behavioral program
Measure Equipment Cost ($/unit):	Not applicable - behavioral program
Gross Measure Cost ($/unit)	Not applicable - behavioral program
Measure Incremental Cost ($/unit):	Not applicable
Effective Useful Life (years):	Behavioral program 1 year EUL.
Measure Application Type:	Behavioral
Net-to-Gross Ratios:	Utilize control groups for quantifying impacts from behavioral interventions. (*DEER Resolution: October 12, 2018* *http://docs.cpuc.ca.gov/publisheddocs/published/g000/m232/k459/232459122.pdf*).

4. Evaluation, Measurement and Verification (EM&V)

For the duration of the program, innovative technologies and business models will be deployed that require flexible Measurement and Valuation (M&V); however, to provide continuity across multiple types of interventions and program design updates, CalTRACK savings calculation methods will be used. CalTRACK provides a site-based savings calculation that can be rolled into portfolios of similarly treated buildings. For the initial deployment of the program, a Randomized Control Trial (RCT) M&V approach will be used to determine the treated and control groups and to maximize program participation. MCE will follow the RCT guidelines of the Uniform Methods Project: Residential Behavior Evaluation Protocol[9] by selecting a control group from within the initial targeted participant group. The performance of the treated group will be evaluated relative to contemporaneous changes in consumption amongst a non-treated group of similar participants.

In addition to the program's internal M&V protocols, MCE will comply with any directive regarding third-party evaluation, measurement, and verification (EM&V) plans and fulfill all EM&V activities required by the CPUC. Existing guidance for methods appropriate for behavioral programs is limited to the direction that they are quantified using an experimental

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[9] Chapter 17: Residential Behavior Evaluation Protocol; The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures.
https://www.nrel.gov/docs/fy17osti/68573.pdf

design.[10] A stratified random sample of targeted participants will be selected for a control group. This sample will be representative of geographical and consumption patterns of the treated population and equally likely to be candidates for high energy savings based on the targeting analysis used to select the treated participants. During the program year, we do not expect there to be any significant difference between the exogenous effects on energy use in the treated versus the control group. However, as part of our evaluation of the program, we will perform an analysis of outliers, as well as data regarding the installation of solar panels, electric vehicles, and participation in other programs.

Analysis Procedures

MCE will develop a model for each participating property and for electricity daily consumption. Building energy use will be modeled as base load, heating load, and cooling load-heating and cooling load are assumed to have a linear relationship with heating and cooling demand, as approximated by heating and cooling degrees, beyond particular heating and cooling balance points. The base temperatures selected for counting heating and cooling degrees will be determined for each upgrade project based on the outdoor temperatures which yield the best R-squared in the regression analysis. These site specific models are the foundation for control group analysis. They form the basis of comparison between the groups also known as "difference of differences".

MCE will calculate savings and report them to the CPUC as avoided energy use under reporting period conditions. Baseline period energy will be adjusted to reporting period conditions, using the following International Performance Measurement and Verification Protocol (IPMVP) equation: Avoided Energy Use (or Savings) = Counterfactual Baseline Energy - Reporting Period Energy

Data Quality Control

Data quality procedures will conform to CalTRACK Compliance specifications, as they relate to hourly estimation methods and as published at http://docs.caltrack.org/en/latest/methods.html

Qualification Screening & Monitoring

The program will screen and monitor program participation by using the program's eligibility criteria list.

Eligibility is maintained unless the Service Account ID changes during the performance period, indicating a change in occupancy. Additional eligibility rules may be used for subsequent program years as participants transition into opt-in programs.

To ensure that savings claims are not distorted by exogenous factors, secondary data on factors like solar panel installation and electric vehicle adoption will be collected. Where possible, changes in energy consumption due to vehicle charging will be tracked.

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[10] California Public Utilities Commission,April 21, 2010, D.10-04-029
Determining Evaluation, Measurement and Verification Processes for 2010-2012 Energy Efficiency Portfolios

To further reduce the likelihood that savings claims are distorted by exogenous factors, the top and bottom two percent of site-based savings results will be removed from the aggregation in both the treatment group and the control group.

Detection of Non-Routine Events (NREs)

In the initial implementation of this program design, the occurrence of NREs is expected to be equally distributed across the control and treatment groups. In the EM&V process, this hypothesis will be examined more closely to ensure that NREs are not disproportionately affecting one group more than another.

Force Majeure

In rare instances, a project site may be impacted by an act of God (i.e. fire, flooding, etc.), in which case, an adjustment may be considered.

For purposes of these protocols, gaming is defined as the practice of (a) intentionally inflating the incidence of NREs that are financially favorable to the Ally; or (b) disguising the impact of NREs to resemble expected energy savings. Examples of gaming practices include participant recruitment to focus on participants that expect future reductions in baseline energy consumption; installation of secondary heating sources or power generation fueled by non-metered fuels; and fraudulent reporting to disguise non-routine changes to energy consumption baselines as true energy savings.

Gaming is a version of fraud. Penalties for gaming will be consistent with penalties for other kinds of fraud as specified in the Aggregator contract terms and conditions. The following prohibitions and requirements shall apply:

1. Aggregator shall not systematically target, recruit, or enroll participants who have experienced a non-routine change in baseline consumption within the prior twelve months.

2. Aggregator shall not systematically target, recruit, or enroll participants who expect to experience a decline in energy consumption due to non-routine events within the coming twelve months.

3. Aggregator shall not recommend nor implement any changes to the Participant's facility that would qualify as a Non-Routine Event.

4. Aggregator may request that the M&V Provider make non-routine adjustments to their project portfolio but under no circumstances shall Portfolio Managers make such adjustments themselves.

5. Aggregator shall enroll all projects in their P4P portfolio within 30 days of any claimable energy efficiency interventions.

In the absence of documented fraudulent activity, NREs within the performance period do not in and of themselves constitute a gaming issue. NREs become a cause for concern when the frequency of consumption-reducing NREs becomes so high that their occurrence cannot be

explained by random selection. The threshold for determining gaming concerns shall be determined as follows:

1. For an Aggregator portfolio with n participants, recruited from a universe of N eligible participants, determine the frequency, K, of the Non-Routine event in question within the population N. Assume all participants have an equal probability of experiencing a Non-Routine Event, p = K/N.

2. If the Ally's expected frequency of NREs is np and the actual frequency is k, estimate the probability that k NREs would occur through random selection of n participants from the population of N eligible participants. If that probability is less than 50 percent with 90 percent confidence, then investigate to determine if gaming has occurred. If the probability is less than 10 percent with 90 percent confidence, then gaming is presumed to have occurred unless the Ally can prove otherwise.

Savings Claims Requirements

Monthly savings claims are aggregated at the program level. These will be provided as a rolled up version of the program progress and comport with the definitions of installation date, commitments, expenditures and gross and net first year savings for all fuel types. No changes will be necessary for the timelines for submitting savings claims. Quarterly savings claims are the most detailed savings claims submitted to the CPUC. This behavioral program will provide an aggregated savings claim (not site specific custom or deemed) for a 1 year EUL. MCE will maintain records on the uncertainty criteria for the portfolio of savings claimed. It will be available for inclusion in the quarterly report if NMEC reporting requirements require.

5. Pilots

There are no pilots planned for this program.

6. Additional Information

 No additional information has been added.

Support Documents

## 1. Program Manuals and Program Rules (Bidgely, MCE, Recurve)

2. Program Logic Model

#	Activity	Description	Output
Program Design			
A	Customer Selection	Select potential list of target customers based on pre-defined criteria that will meet of exceed savings goals	Eligible customer accounts
B	Setup Treatment and Control	Randomized assignment to treatment and control	Final list of treatment and control customers
Program Pre Launch			
A	Product Configuration	Configuration of the different components of the solution	Final product configurations
B	Quality Assurance (QA) of Solution	Test functionality of product to ensure it behaves as expected	Solution ready for launch
C	Launch readiness	Setup solution in production; ensure readiness of both implementor and MCE stakeholders to support the solution after go live	Solution ready to be launched to MCE's customers
Program Performance Assessment			
A	Go Live	Launch program	Customers start receiving paper reports (once every two months) and

			email alerts every month
B	Savings Measurement	Calculate the EE savings on a monthly basis post launch using CalTrack methodology	EE Savings (per household and aggregated) are available
C	Review Savings	Review savings numbers and compare with forecasts. If required, take remediation actions to mitigate savings gaps	Enhanced treatment groups / revised forecasts
D	P4P	Pay the implementor for the recognized EE savings	Payment received

3. Process Flow Chart

The diagram outlines the process flow for the program. Participants will be selected at the beginning based on the Qualification Screening & Monitoring criteria and will then be treated with home energy reports. Savings will be measured on a monthly basis using CalTrack.
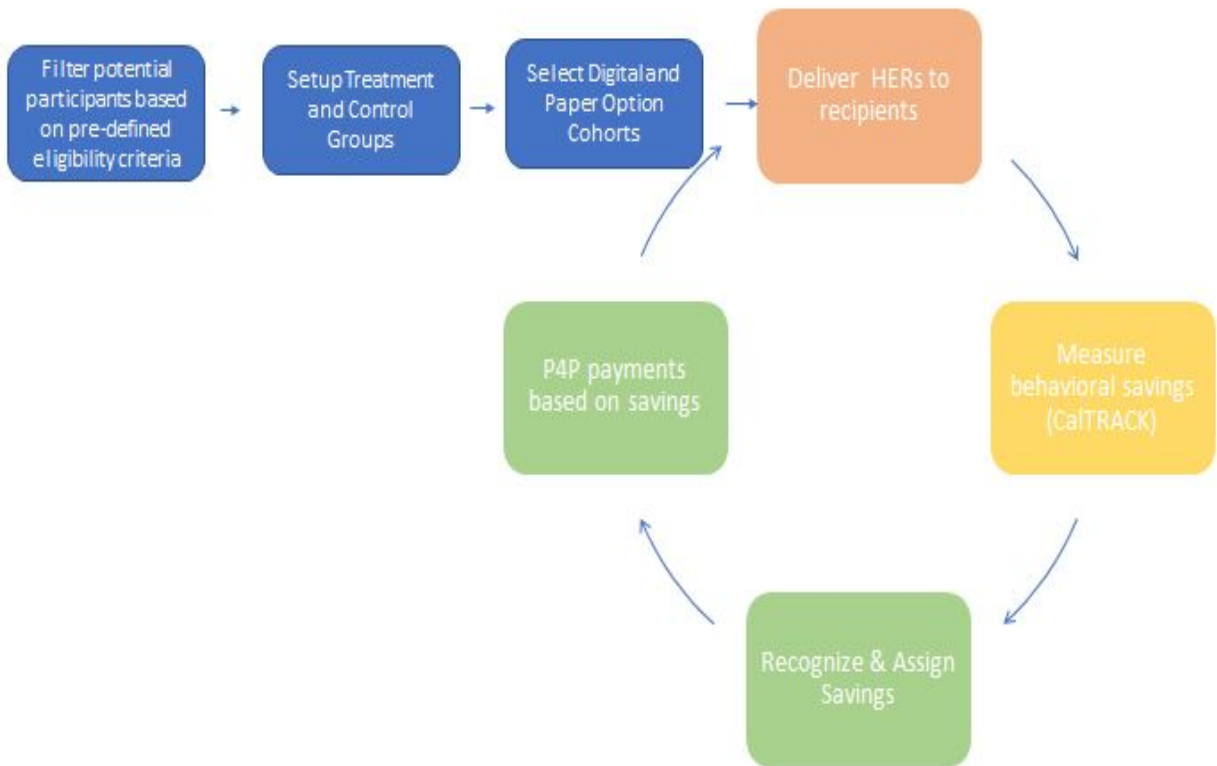
4. Incentive Tables, Workpapers, Software Tools

The following table outlines the software components used for this program.

#	Component	Description
1	Data Analytics Platform	The data analytics platform leverages the consumption and billing metadata to develop key data elements such as appliance itemization, similar home comparison and personalized recommendations used for the reports as well as for the web portal
2	Paper Report Generator	This module constructs the paper reports using the above data
3	Email Alerts Engine	This module is responsible for delivering the email alerts

| 4	Web Engine	This module is responsible for hosting all the web pages relevant to the program including the participant facing portal, the preferences portal as well as the utility console

5. Quantitative Program Targets

The table below provides the number of participants to whom home energy reports will be delivered as well as the targeted electricity and gas savings for the group.

Projected Net Savings	Total Units			
	2020	2021	2022	2023
Treatment Group	69,531	66,054	62,752	59,614
Net kW	407			
Net kWh Reduced	4,072,319	7,585,693	10,809,613	10,269,132
Net Therms Reduced	n/a	82,568	125,503	131,151

6. Diagram of Program

This diagram visually illustrates the program linkages to areas such as: statewide and individual Investor-Owned Utilities (IOU) marketing and outreach, Workforce, Education and Training (WE&T) programs, Emerging Technologies and Codes and Standards, Coordinated approaches across IOUs, and Integrated efforts across Demand Side Management (DSM) measures.
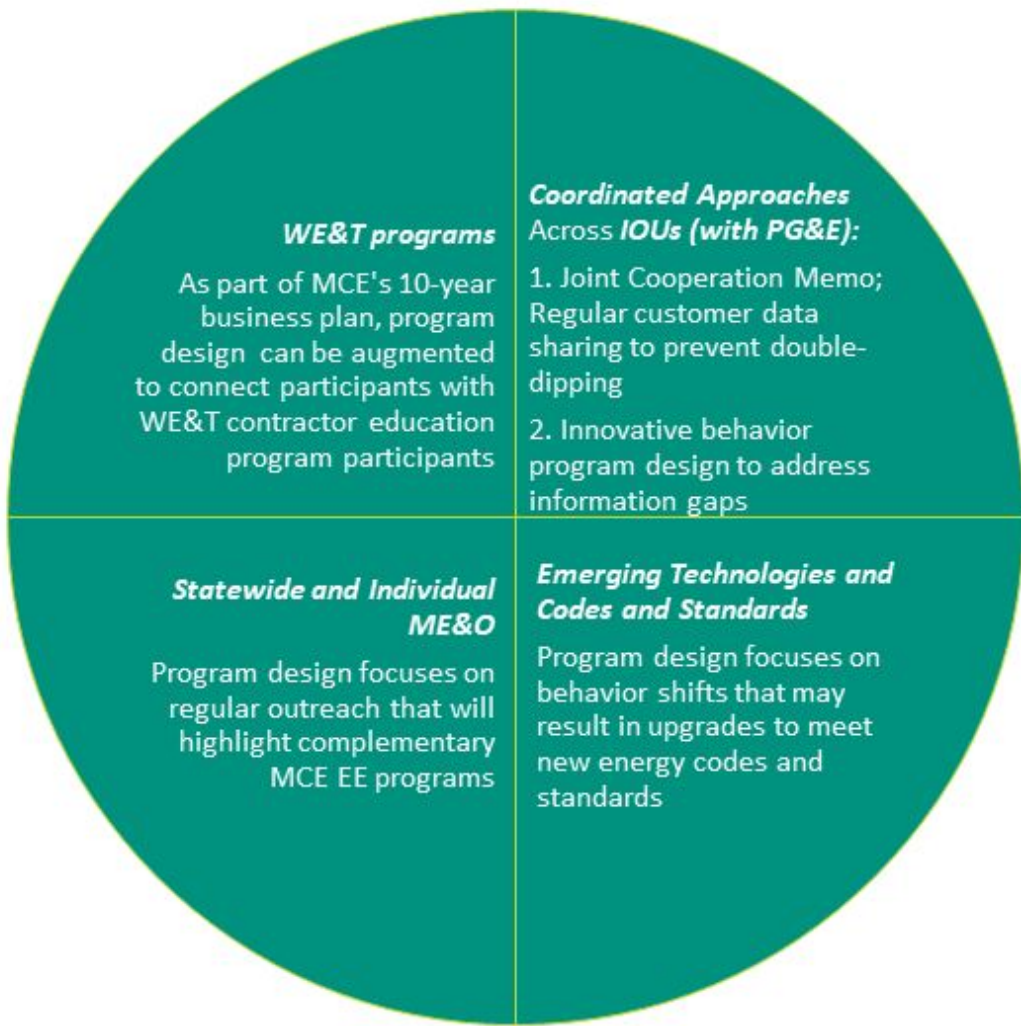
WE&T programs

As part of MCE's 10-year business plan, program design can be augmented to connect participants with WE&T contractor education program participants

Coordinated Approaches Across *IOUs (with PG&E)*:

1. Joint Cooperation Memo; Regular customer data sharing to prevent double-dipping

2. Innovative behavior program design to address information gaps

Statewide and Individual ME&O

Program design focuses on regular outreach that will highlight complementary MCE EE programs

Emerging Technologies and Codes and Standards

Program design focuses on behavior shifts that may result in upgrades to meet new energy codes and standards