Draft Implementation Plan Workshop
MCE Single Family Comprehensive Program (SF Program)
Welcome & Introductions
MCE SF Program Development
MCE SF Program Overview
MCE SF Program Implementation Plan Content
Support Resources
Q&A
This workshop is intended to elicit feedback on MCE’s DRAFT Implementation Plan for its Single Family Comprehensive Program.

Feedback received may directly inform the program design. Input may be provided today or via email through Friday, November 29, 2019 to jgreen@mceCleanEnergy.org.
Welcome & Introductions
Jennifer Green - MCE  
Michelle Nochisaki - MCE  
Qua Vallery - MCE  
Alice Havenar-Daughton - MCE  
Carmen Best - Recurve  
Colin Gibbs - Bidgely  

Program Team
OUR MISSION

Address climate change by reducing greenhouse gas emissions

Renewable Energy
Stable, Competitive Rates
Local Economic & Workforce Benefits
Energy Efficiency
Program Development Timeline

- **5.31.18:** MCE EE Business Plan Approved
- **10.18.18:** Contract signed with Recurve for M&V
- **3.25.2019:** RFP Released for SF Program
- **6.25.2019:** Evaluation interviews completed
- **9.20.2019:** MCE 2020 AGAL submitted
- **10.13.2019:** Contract signed with Bidgely for implementation services
- **12.13.19:** Implementation plan due to CPUC
MCE will launch the Single Family Comprehensive Program which offers behavior intervention strategies and energy upgrade recommendations to residential participants with the goal of achieving short-term energy and budget savings that can persist into long-term behaviors.
MCE SF Program Overview
## Program Overview

### Single Family Comprehensive Program Identifiers

<table>
<thead>
<tr>
<th>Program ID</th>
<th>Sector</th>
<th>Implementer Type</th>
<th>Program Type</th>
<th>Intervention Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCE07</td>
<td>Residential</td>
<td>Third Party</td>
<td>Behavioral</td>
<td>Downstream</td>
</tr>
</tbody>
</table>
## First Year Budget

### MCE07 - Residential

<table>
<thead>
<tr>
<th>Category</th>
<th>2020*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin</td>
<td>$158,776.78</td>
</tr>
<tr>
<td>Marketing and Outreach</td>
<td>n/a</td>
</tr>
<tr>
<td>Direct Implementation - Non-Incentive (DINI)</td>
<td>n/a</td>
</tr>
<tr>
<td>Incentives</td>
<td>$394,088.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$552,865.08</strong></td>
</tr>
</tbody>
</table>

* 2021-2023 program year budgets will be finalized in the Annual Budget Advice Letter
### 3 Year Projected Net Impacts

<table>
<thead>
<tr>
<th>Total Units</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Net Savings</td>
<td>Treatment Group</td>
<td>69,531</td>
<td>66,054</td>
<td>62,752</td>
</tr>
<tr>
<td></td>
<td>Net kW</td>
<td>407</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net kWh Reduced</td>
<td>4,072,319</td>
<td>7,585,693</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net Therms Reduced</td>
<td>56,147</td>
<td>82,568</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>125,503</td>
<td>131,151</td>
</tr>
</tbody>
</table>
### Forecasted Cost Effectiveness

<table>
<thead>
<tr>
<th>Program</th>
<th>2019 TRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCE07-Residential</td>
<td>1.57</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program</th>
<th>2019 PAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCE07-Residential</td>
<td>1.57</td>
</tr>
</tbody>
</table>
The Program will coordinate with Pacific Gas and Electric Company to ensure double dipping risks are mitigated, to minimize potential customer confusion, and ensure customers are receiving maximum benefit.
## Market Barriers

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty providing personalized end use data and recommendations</td>
<td>Regular paper or digital reports that include energy consumption and saving potential</td>
</tr>
<tr>
<td>Lack of information/awareness of end use consumption</td>
<td>Energy disaggregation tool identifies key energy consumers in the home</td>
</tr>
<tr>
<td>Lack of understanding of similar home performance norms</td>
<td>HER compares participant’s home to similar homes</td>
</tr>
<tr>
<td>Behavior programs to date have not measured actual at-the-meter savings</td>
<td>SF Program uses Normalized Metered Energy Consumption (NMEC) data to measure savings</td>
</tr>
<tr>
<td>Many residential customers do not trust program providers</td>
<td>MCE is a trusted non-profit agency</td>
</tr>
<tr>
<td>Personalized assessments are expensive and time-consuming</td>
<td>Program tools allow home energy use disaggregation digitally, eliminating the need for and cost of an in-home assessment</td>
</tr>
</tbody>
</table>
Recap of MCE’s Business Plan: Single Family Sector

• Core Activities: Provide consuming customers with information about how they use energy and advice for how to reduce consumption

• Key Innovations: Online portal provides a one-stop-shop to understand energy usage, identify upgrade opportunities, search available rebates and licensed contractors, and perform cost comparisons of energy efficiency appliances
“Additionally, there is a need in the residential sector for customers to better understand how they use energy in their home. Advanced metering technology provides highly detailed and real-time information about energy usage. Programs can couple this information with social science theories on behavior modifications to try to influence customers’ energy usage habits.”
Implementation Plan Summary

• Program Objective and Goals
• Program Components and Description
• EM&V
• References
MCE is launching the 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** that can persist into **long-term behaviors**.

- Establish a cost effective residential behavioral program to educate participants on their energy consumption behavior
- Motivate participants to save energy over the short- and long-term
- Validate participant savings using CalTRACK method
  - Randomized Control Trial (RCT)
Program Logic

Program Design
- Customer selection
- Setup treatment and control
- Product configuration
- Quality assurance of solution
- Launch readiness

Program Performance Assessment
- Launch program
- Savings measurement
- Review savings
- Pay for Performance
MCE will provide paper or digital Home Energy Reports (HERs) to an eligible pool with the following eligibility requirements:

- Not be a current participant in PG&E’s Home Energy Report program
- Project site must be located in the MCE service area
- Single family structure with a single meter for each fuel
- Mixed-used sites are eligible if residential space represents at least 50% of conditioned space
- Have 12 months of consecutive consumption data for the same account
- Received electric distribution service from MCE or PG&E and natural gas service from PG&E
- No installed solar at least 12 months prior to intervention
- 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
No. of Customers
- 70,000-80,000 treatment group
- 20,000-30,000 control group

Customer Selection
- Must meet eligibility requirements

Report Content
- Appliance cost itemization
- E&O about complementary programs
- Similar home consumption comparison
- Energy- and cost-savings recommendations

Channel and Delivery
- Paper OR
- Digital
Program Reports

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient</td>
<td>$235</td>
</tr>
<tr>
<td><strong>You</strong></td>
<td><strong>$247</strong></td>
</tr>
<tr>
<td>Average</td>
<td>$324</td>
</tr>
</tbody>
</table>

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.

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.

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$122</td>
<td>Cooling</td>
</tr>
<tr>
<td>$43</td>
<td>Pool Pump</td>
</tr>
<tr>
<td>$19</td>
<td>Always On</td>
</tr>
<tr>
<td>$17</td>
<td>Cooking</td>
</tr>
<tr>
<td>$16</td>
<td>Laundry and Cleaning</td>
</tr>
</tbody>
</table>
## Program Description

<table>
<thead>
<tr>
<th>Output</th>
<th>Paper Option</th>
<th>Digital Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Energy Report</td>
<td>X</td>
<td>x</td>
</tr>
<tr>
<td>Monthly Summary Itemization</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Seasonal Alerts</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Access to web portal</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Web Portal
Web Portal
Program Participants
• Eligibility criteria
• Randomized Control Trial
• Normalized Metered Energy Consumption

Savings Calculations
• Evaluate consumption changes contemporaneously for treatment and control groups
• Use treatment group consumption reduction as basis for payment to implementer
• Savings claims will be based on RCT results

Regulatory Directives
• Compliance with any directive regarding third-party evaluation, measurement, and verification (EM&V) plans and fulfill all EM&V activities required by the CPUC
RCT and NMEC

**Randomized Control Trial**
Program first selects non-participants randomly from within the intended treated population, using stratification to ensure equivalency between the two groups.

**Normalized Metered Energy Consumption**
- Program will follow the guidelines set by the *Draft Rulebook for Custom Program and Projects Based on Normalized Metered Energy Consumption (NMEC)*.
- Program rules will be update as guidelines for the implementation of NMEC projects and program evolves.
- Program will calculate NMEC savings for both participants and non-participants to arrive at a difference of differences net savings claim.
Reference / Document Locations

Draft Implementation Plan:
https://www.mcecleanenergy.org/regulatorydocuments/#ee_program

https://www.nrel.gov/docs/fy17osti/68573.pdf

Draft Rulebook for Custom Program and Projects Based on Normalized Metered Energy Consumption (NMEC):
https://www.cpuc.ca.gov/General.aspx?id=6442456320
## Timeline and Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation Plan Workshop</td>
<td>11/20/19</td>
</tr>
<tr>
<td>Comments/Feedback Period</td>
<td>11/20/19-11/29/19</td>
</tr>
<tr>
<td>Incorporation of Comments and Feedback</td>
<td>11/29/19-12/13/19</td>
</tr>
<tr>
<td>Implementation Plan Upload</td>
<td>12/13/19</td>
</tr>
<tr>
<td>Select Program Participants</td>
<td>1/20-3/20 (Estimated)</td>
</tr>
<tr>
<td>Launch Program</td>
<td>3/20 (Estimated)</td>
</tr>
<tr>
<td>CPUC Reporting</td>
<td>Monthly and Quarterly</td>
</tr>
</tbody>
</table>
Questions