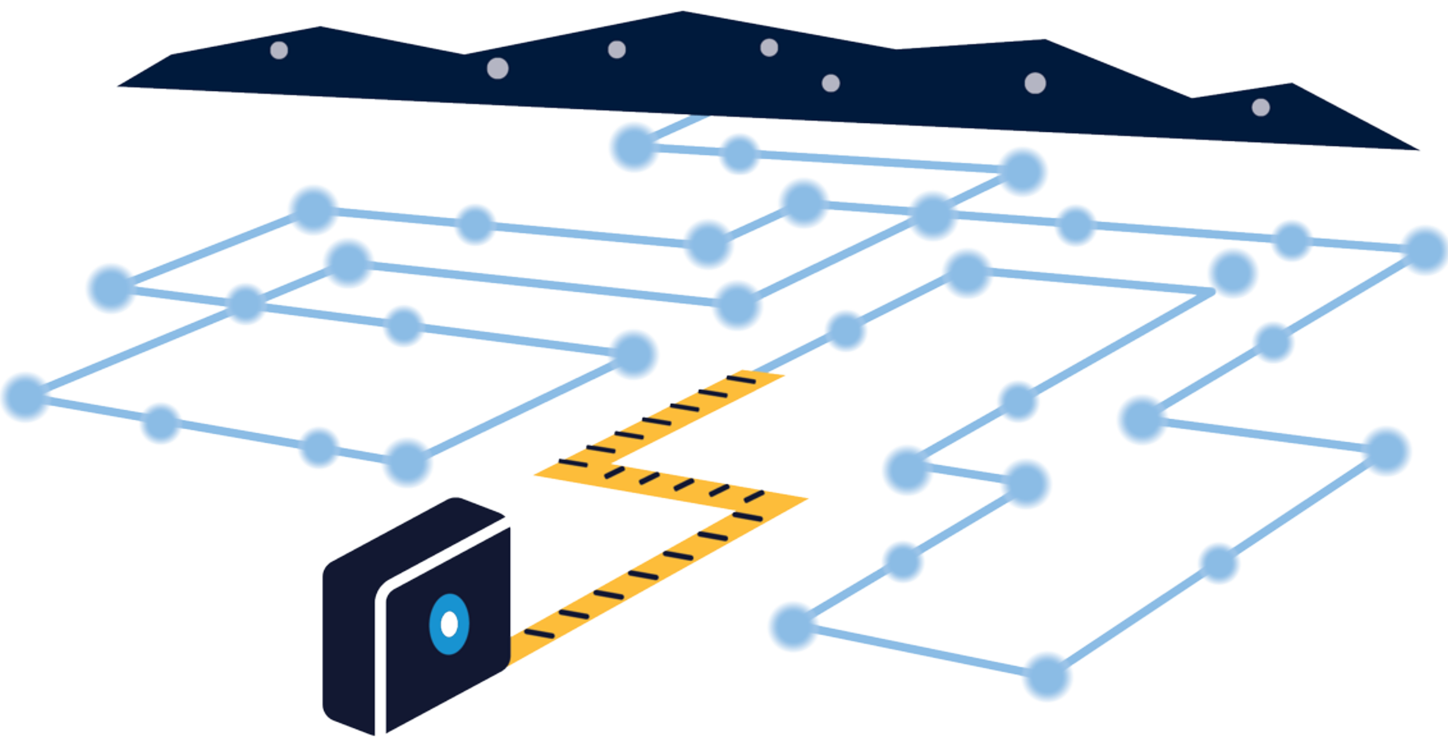
Marketing, Education & Outreach Consensus Project Report

Final Report

CALMAC Study ID: CPU0214



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Definition of Key Terms

Key Terms	Definitions
Behavior change	A measure of a customer's actions or behavior (encompasses self-reported behavior change, experimental designs, and secondary data sources)
Aided awareness	The percentage of potential customers or consumers who recognize or name a given brand with prompting
Attitude and attitude strength	Measures of customer favorability towards a brand or product, attitudes are a measure of how customers feel and attitude strength measures how strongly they feel about it
Brand advocacy	Effort to grow a brand through word-of-mouth marketing
Brand salience	The propensity of customers to associate a brand with the target outcomes promoted by the brand
California ME&O campaigns (ME&O campaigns)	In the context of this study, this term refers collectively to all of the energy conservation campaigns offered by program implementers and the SW implementer in California. This term encompasses both SW (Energy Upgrade California) and PA campaigns
Campaign influence on behavior change	Actions and behaviors that result directly from campaign calls to action, such as attending an event, signing up for an energy efficiency program, etc.
Campaign influence on intentions	Changes in a customer's stated willingness to behave in a certain way that result directly from campaign calls to action, such as attending an event, signing up for an energy efficiency program, etc.
Delphi panel study (Delphi study)	A systematic, multi-round, interactive research methodology administered to a group of experts to elicit the best thinking of the group about a complex issue
Energy savings	Reductions in electricity or natural gas use measured in therms or kWh
Engagement rates	Most commonly used for social media, this refers to the percentage of people who reacted to a post or message among all people who saw the post or message
Familiarity	Knowledge about the brand and the purpose of the brand
Importance	Customers' belief in the importance of a campaign's specified goals or mission
Impressions	An impression is generated each time an advertisement or content is viewed
Intentions	A measure of a customer's stated willingness to behave in a certain way
Knowledge/level of clarity	A measure of how accurately the audience interprets the intended campaign messages and/or call to action
Lead generation	The marketing process of stimulating and capturing customer interest in a program or service
Metric	A measuring system that quantifies a trend, dynamic, characteristic, or result
Perceived norms	Descriptive norms are consumers' perceptions of what others are doing (e.g., "Am I the only person in my neighborhood running my AC all night?") Injunctive norms are what consumers think they should be doing
Persistence	A measure of how well customers are maintaining or sustaining the attitudes they have or change(s) they make
Program Administrator (PA)	An entity that offers customer-funded energy efficiency or demand response programs in California (includes IOUs, RENs, and CCAs)

Key Terms	Definitions
Program enrollment	Annual sign-up rates for programs of interest
Program inquiries	Inbound communications from customers inquiring about PA programs (e.g., calls to call centers, email inquiries, etc.)
Reach	The number of people who are exposed to an advertisement or content; reach provides context about the number of consumers that could be aware of the brand
Self-efficacy	Customers' level of belief in their own ability to make suggested actions or behavior changes
Social diffusion	The process by which knowledge of, participation in, or action/behavior arising from a given belief or movement is distributed within societal groupings
Success criteria	The marker or definition of success for a given metric. Success criteria typically specify a measured quantity and timeframe
Unaided awareness	The percentage of potential customers or consumers who recognize or name a given brand without prompting

1. Executive Summary

This report presents results from the Marketing, Education and Outreach (ME&O) Consensus Project sponsored by the California Public Utilities Commission (CPUC). The State of California has been implementing and evaluating energy efficiency ME&O efforts since 2000. The goal of the Statewide Marketing Education & Outreach (SW ME&O) program is to "motivate consumers to take action on energy efficiency/conservation measures and change their behavior.[1] The program strives to increase consumer awareness and facilitate the ability to act and incorporate technological advances or behavior change, using all available resources to reduce energy and choose clean energy options.[2]" In 2012, the CPUC established Energy Upgrade California (EUC) as the umbrella brand for SW ME&O activities. Concurrent with the state-funded ME&O program, each of the California Investor Owned Utilities (IOUs), as well as Regional Energy Networks (RENs) and Community Choice Aggregators (CCAs) (referred to herein as Program Administrators or PAs) conduct marketing campaigns to encourage consumers to make energy-saving behavior changes.

Despite agreement on the role and importance of these ME&O activities within the state, stakeholders have historically had differing views of what these ME&O campaigns need to achieve (i.e., metrics), what constitutes success (i.e., success criteria), and how they should be measured. As such, the central goals of this study were to: (1) determine whether stakeholders could reach consensus on a core set of metrics and success criteria for assessing the effectiveness of statewide ME&O, and (2) codify agreed-upon metrics and success criteria for use in assessing statewide ME&O effectiveness in the future.

The SW ME&O campaign and ME&O efforts managed by PAs have different but complementary roles. The SW ME&O campaign is designed to increase California energy consumers' awareness and intentions to make energy-efficient behavioral changes, while PA ME&O efforts direct Californians to specific energy efficiency, demand response, and other clean energy programs and assistance. PAs tailor their own ME&O efforts, objectives, and metrics to their local contexts in their respective service areas because they have regulatory performance reporting obligations to fulfill for their individual clean energy programs.

While SW and PA ME&O efforts are distinct and there is value in allowing PAs to tailor their marketing efforts and goals to local contexts, all parties would benefit from having access to a common framework for creating, tracking, and reporting on the performance of ME&O efforts. Utilizing a common framework can greatly improve the ability of all parties to contextualize and measure the performance of individual SW and PA ME&O efforts and understand the collective progress these efforts have made towards fostering clean energy adoption and greenhouse gas reductions.

The findings from this study are based on an in-depth exploration of secondary data and marketing literature, in-depth interviews with key stakeholders and marketing industry experts, and a Delphi Panel Study (Delphi Study) designed to facilitate discussion and build consensus around statewide ME&O performance measurement.

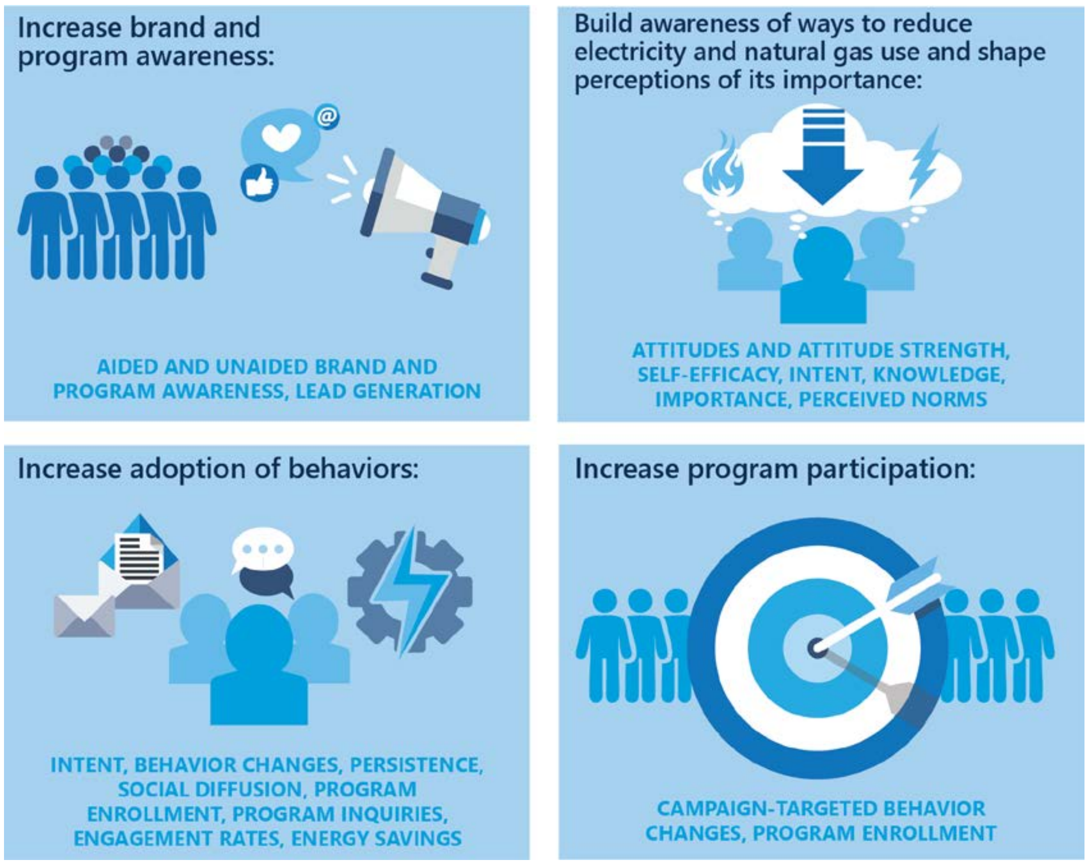
Based on these research activities, the evaluation team presents the following key findings and recommendations:

- **Key Finding: Experts and key stakeholders agree on a core set of metrics for assessing the achievement of prioritized statewide ME&O campaign objectives.** Key ME&O stakeholders identified a set of high-priority and supplemental metrics across six ME&O objectives. Given that individual

[1] We recognize that some disciplines distinguish between actions (one-time events, such as product purchase and updates to the home) and behaviors (habits or regular routines), for brevity sake, we use "behavior" to encompass both these terms.
[2] https://www.cpuc.ca.gov/statewidemeo/

campaign attributes (e.g., budget, location, and timing) drive what is achievable in terms of campaign performance, a core set of success criteria could not be codified. However, stakeholders agree on a set of data sources that can be used to develop success criteria and understand that gathering the data needed to establish historic benchmarks for California-specific campaigns is needed. Further, stakeholders agree that multiple methods and data sources should be used to triangulate results related to campaign outcomes. Figure 1 presents the high priority metrics by objective.

Figure 1. High Priority Metrics to Assess the Effectiveness of SW and PA ME&O Efforts



- Key Recommendation for the SW ME&O Implementer: Moving forward, the SW implementer should track prioritized metrics that can be used to support the evaluation of campaign messaging and content. The prioritized metrics that are relevant for the SW implementer include knowledge and level of clarity, self-efficacy, attitude and attitude strength, importance, and perceived norms. In addition, measuring campaign alignment with consumers' internal, social, and external motivations can also help ensure the campaign is designed in a way that motivates the target audience to take action.
- Key Recommendation for PAs: We recommend PAs begin to track the metrics specified in this Framework for their own internal campaigns where applicable. We recognize that PA campaigns have unique objectives, and there is value in PAs tailoring metrics to their individual campaigns. However, the metrics presented in this framework are widely applicable to most energy conservation campaigns and tracking even a few high priority metrics will help all parties to contextualize and measure the performance of their own ME&O campaigns. PAs should assess the possibility of tracking progress towards these metrics through existing program-specific EM&V

efforts. In the future, the PAs should also explore the possibility of establishing a reporting system to share results about PA campaign performance against metrics between PAs so they can use these results to inform the selection of success criteria. Of note, the PAs should not be responsible for tracking the effectiveness of the SW campaign.

- **Key Conclusion: The importance of measuring campaign attribution for SW ME&O evaluation warrants further discussion.** Some key stakeholders believe that understanding the causal results and impacts of the SW and PA ME&O efforts are critical for making informed decisions about the efficient and effective allocation of campaign budgets. In contrast, others believe that measuring campaign attribution may not be worthwhile due to the cost and methodological challenges associated with this process.
  - **Key Recommendations for the SW ME&O Evaluator and the CPUC:** The CPUC and its evaluation team should determine the best path forward for assessing the impacts of the campaign on outcomes of interest while ensuring cost-effective use of evaluation funds.
- **Key Finding: Stakeholders should come to agreement on the SW campaign's lead generation role.** There is a difference of opinion among key stakeholders regarding the role of the SW campaign in generating leads for PA programs. Some stakeholders view lead generation to PA programs as a key outcome of SW marketing efforts. In contrast, others believe the SW campaign is not intended to actively channel customers to programs, but this may happen naturally when customers visit the SW campaign website. Stakeholders also had some confusion about the status of the SW campaign's lead generation tracking system at the time of the Delphi Study, although this system is now fully operational.
  - **Key Recommendation for the CPUC, PAs, and the SW implementer:** The PAs, CPUC, and the SW implementer should work together to reach agreement on the role of the SW ME&O campaign in generating leads to PA programs.
  - **Key Recommendation for the SW implementer:** The SW implementer should continue to provide monthly updates on the number of referrals to PA websites.
- **Key Finding: Further discussion is needed on targeting and measuring reductions in energy use.** While some stakeholders identified reducing electricity and natural gas use among the target population as a desired objective for the SW ME&O campaign during the Delphi Study, it has not been codified as a formal objective.
  - **Key Recommendation for all parties:** All parties involved with setting the direction of the SW campaign should work to come to agreement on whether achieving measurable reductions in electricity and natural gas use should be a campaign objective. If this becomes a priority for the SW ME&O campaign, changes in the campaign design and evaluation strategies will be needed.
- **Key Finding: The role of SW ME&O evaluation is not addressed in current guidance documents.** A fundamental premise in California energy policy is that resource and non-resource programs need to be independently evaluated by a third-party. Currently, this means that the SW ME&O evaluator is duplicating some of the research that the SW ME&O implementer is conducting. While this isn't the most cost-effective or efficient approach to measurement, it is essential to ensure an independent evaluation that meets the evaluation standards set forth by the CPUC.
  - **Key Recommendations for the CPUC:** The CPUC should consider more formally implementing a clearer division of research responsibilities between the SW ME&O implementer and evaluator. Because the SW ME&O implementer is responsible for assessing and optimizing campaign messaging and content, the SW ME&O implementer should conduct research before the launch of new campaign messaging and content to inform campaign development.

The role of the SW ME&O evaluator is to provide an independent, third-party assessment of SW ME&O campaign performance. As such, the SW ME&O evaluator should be responsible for conducting evaluation research to assess campaign performance at regular intervals after new campaign content, and messaging has been in the field long enough to have demonstrated an impact. The implementer should also use key insights from the evaluator's research efforts to inform the campaign strategy.

For more information, please contact:

Hannah Howard
Managing Director/Vice President
510-214-0183 tel
hhoward@opiniondynamics.com

2. Background

In 2012, the CPUC established Energy Upgrade California (EUC) as the umbrella brand for SW ME&O activities to get Californians engaged and actively thinking about their electricity and natural gas use in the context of the state's energy goals. The marketing firm, DDB, has designed and managed the EUC campaign since 2017. Separate from these statewide ME&O efforts, each of the California Investor Owned Utilities (IOUs), as well as Regional Energy Networks (RENs) and Community Choice Aggregators (CCAs) (referred to herein as Program Administrators), conduct marketing campaigns that direct Californians to specific programs and assistance designed to lower the barriers to making energy-saving action and behavior changes. We recognize that some disciplines distinguish between actions (one-time events, such as product purchase and updates to the home) and behaviors (habits or regular routines), for brevity sake, we use "behavior" to encompass both these terms.

SW and PA ME&O messaging are often mutually reinforcing. For example, if PA campaigns promote program rebates for smart thermostats, SW ME&O campaign messaging can direct customers to these programs and provide tips about how to use thermostats in an energy-efficient manner. Collaboration on these issues occurs within monthly and quarterly SW ME&O stakeholder meetings, as well as via ad hoc calls and information sharing. During these meetings, the SW implementer provides opportunities for PA representatives to provide feedback on SW ME&O campaign messaging and content to ensure that it aligns with PA program offerings. We provide detailed descriptions of the policy landscape, campaign direction, and evaluation process for both efforts in the sections that follow.

While the SW and PA ME&O efforts are and will remain separate, this study provides a framework that can be used by all parties as applicable and feasible to support consistency in the measurement of ME&O efforts.

SW ME&O Background

The overarching goal of the current SW campaign, EUC, as articulated by the CPUC is for Californians to become "engaged partners in the state's energy efficiency, demand-side management, and clean energy efforts by becoming fully informed of the importance of energy efficiency and their opportunities to act. [Further], SW ME&O should serve as a lead generator for PA programs and drive consumers to directly make behavior changes to reduce or manage electricity and natural gas use in other ways." SW campaign efforts strive to meet this goal by providing customers with a reason to care about energy efficiency and changing their behavior, and information about how they can change their behavior.

In 2017, the SW campaign implementer, with stakeholder input, developed a Five-year ME&O Strategic Roadmap (ME&O Roadmap) that defines how DDB, the PAs, the CPUC, the CEC, and other stakeholder groups should coordinate to implement the SW ME&O Campaign. Concurrently, the SW implementer develops Joint Consumer Action Plans (JCAPs) that specify plans for the campaign on an annual basis. The ME&O Roadmap and annual JCAPs feature documentation of the SW implementer's overarching vision, a strategic marketing plan, the marketing approach, and a set of campaign metrics and success that should be tracked to measure progress for the SW campaign.

The ME&O Roadmap calls for stakeholders to follow the Responsible, Accountable, Supportive, Consulted, and Informed (RASCI) model, which specifies roles and responsibilities for SW campaign execution, including administration and implementation. Table 1 provides a summary of the RASCI model roles and parties for SW ME&O, which we discuss in detail below.

Table 1. SW ME&O RASCI Model

Role	Entity	Description of Role
Responsible	SW Implementer	The one charged with delivering a successful outcome; leads, coordinates, implements.
Accountable	Commission and CEC	The ultimate authority who assigns and approves the deliverables.
Supportive	PAs (IOUs, CCAs, RENs)	Those who provide resources or play a supporting role in implementation or outcome and deems its success.
Consulted	Consumer advocate groups and other key stakeholders	Those whose opinions are sought for input and/or with whom there is two-way communication.
Informed	Public	Those kept up to date, often only upon completion, and with whom there is just one-way communication through the proceeding service list.

- **SW Implementer:** The SW implementer is responsible for overall campaign execution. Throughout the campaign implementation process, the implementer is responsible for consulting with the Accountable, Supportive, and Consulted parties to solicit feedback on the campaign development and implementation. The SW implementer also develops an overall marketing strategy with campaign objectives and performance metrics, which are outlined in the ME&O Roadmap and JCAPs. As part of ongoing campaign optimization, the SW implementer also conducts research and tracks campaign performance in accordance with these plans. Currently, the SW implementer is tracking diagnostic media metrics, and campaign effectiveness metrics focused on the marketing objectives of awareness and intent. In addition, the SW implementer runs a brand tracking survey every six months to: (1) understand the reach and response to the EE campaign; (2) understand how awareness and familiarity with SW and other KPIs change; (3) Determine if energy management awareness/behavior changes; and, (4) understand how segment sizes change. Finally, the SW implementer conducts focus groups and in-depth interviews periodically to understand customer interest, motivations, and barriers to managing their electricity and natural gas use to inform messaging and collateral development.
- **CPUC**: The CPUC is accountable for establishing the roles and responsibilities for SW ME&O administration, providing program oversight and guidance, as well as ensuring that the SW implementer and the PAs coordinate their marketing efforts. The CPUC also approves performance metrics and provides oversight and guidance for the evaluation of SW ME&O.
- **PAs:** PAs support the SW campaign by providing feedback on SW ME&O efforts and assisting the SW implementer with customer engagement efforts.
- **Consumer Advocate Groups and Other Key Stakeholders:** As consulted parties, consumer advocate groups and other key stakeholders provide general expertise and guidance to the SW implementer.

PA ME&O Background

Overall, the key objective of PA ME&O efforts[3] is to increase participation in Energy Efficiency (EE), Demand Response (DR), and other clean energy programs that provide customers with incentives and technical support to help them adopt energy-efficient behaviors and reduce their electricity and natural gas use.

[3] Although marketing involves more than just promotion, in this case and throughout this report, when we refer to PA ME&O efforts, the focus is strictly on promotional campaigns and not the other facets of program marketing (such as determining incentive levels, developing vendor networks, etc.

In contrast to SW ME&O, which is administered as a stand-alone program, PA ME&O efforts are embedded within their existing energy efficiency, demand response, and other clean energy customer programs and designed to help these programs reach their goals. Based on program goals, the PAs develop ME&O budget proposals to align with the required regulatory approach. Because these are regionally focused efforts, the PAs conduct ME&O within their territories to deliver specific messages targeted toward their customers or constituents. Notably, objectives for the PA ME&O activities vary by individual campaign, program, or effort.

Overarching guidance for the implementation of ME&O efforts for PA programs is provided in the Rolling Portfolio Program Proceeding. CPUC legislation also requires each PA to evaluate their ratepayer-funded programs. These evaluations vary in scope and do not always include an assessment of ME&O effectiveness.

Performance Metrics and Success Criteria

For both SW and PA ME&O efforts, there is a need to demonstrate whether ME&O activities have been successful in contributing to stated goals and associated objectives. To do so, PAs, the CPUC, evaluators, and other stakeholders look to metrics and success criteria for their respective efforts, which are defined as follows:

- **Metric:** Indicator of campaign performance in achieving its objectives (also known as Key Performance Indicators (KPIs)). For example, program enrollment is a metric frequently used by campaigns designed to increase participation in EE and DR programs.
- **Success Criteria:** The standard used to determine an activity or campaign is successful. For example, the success criteria for the program enrollment metric mentioned above would be the desired percentage increase in program participation (e.g., a 2% increase per year).

Within the context of metrics and success criteria, a past evaluation of California's ME&O efforts revealed that the SW ME&O implementer and PAs used a wide range of strategies to measure the performance of their marketing efforts. In particular, there were differences in the types of metrics and success criteria used to assess effectiveness, and in some cases, the degree to which metrics and success criteria were established at all.[4] While the evaluation emphasized the value of allowing the PAs to tailor marketing efforts and goals to their own local contexts and acknowledged that not all marketing goals require quantitative measurement, the evaluation also found there were opportunities to standardize metrics and the process of tracking and reporting on these metrics in a way that would increase the ability of the CPUC and PAs to measure success.

Study Approach

Opinion Dynamics drew upon multiple sources in conducting the Consensus Project and developing the associated Evaluation Framework, including engaging marketing experts with an expertise in managing, implementing, or measuring the success of ME&O campaigns focused on promoting behavior change for energy conservation or other public good-related topics. These experts came from within and outside the energy industry. We also reviewed case studies of energy conservation campaigns and other social marketing campaigns both inside and outside of California, and academic literature about best practices for implementing and measuring the success of social marketing campaigns.

We began by conducting a Landscape Analysis to document marketing industry best practices for measuring the success of energy conservation campaigns. We followed this with a Delphi Study of marketing experts to

[4] Opinion Dynamics. (2016). 2013–2015 California Statewide Marketing, Education, and Outreach Program: Cross-Cutting Process Study. Retrieved from: http://www.calmac.org/publications/PY2013-2015_MEO_Cross-Cutting_Process_Evaluation_Report_FINAL_2016-11-11.pdf

identify and reach a consensus on metrics and success criteria that should be used to measure the performance of California ME&O campaigns. We utilized data from both these efforts to inform the development of this framework.

For detailed information on the methodology used for this study, see Appendix A.

3. Evaluation Framework

There are fundamental differences between California's SW campaign and brand, EUC, and the ME&O efforts of individual PAs throughout the state. The role of the SW campaign is to generate market awareness and motivation for energy management products, services, and behaviors to transform the structure of the market. The goal of PA marketing campaigns is to market specific opportunities—typically through energy efficiency, demand response, or other ratepayer-funded clean energy programs—for consumers to act on this awareness and motivation and move along their journey of adopting new energy-saving behaviors. These distinctions between SW and PA campaigns have important ramifications for evaluation, particularly as it relates to their ability to generate direct vs. indirect effects.

Table 2 presents a comparison of the key differences between SW and PA campaigns. As discussed throughout the following sections, the characteristics of each inform campaign design and planning, and evaluation. Overall, PA campaigns lend themselves to the direct measurement of key outcomes, whereas assessment of the SW campaign requires a preponderance of evidence approach.

Table 2. Key Differences between PA and SW ME&O Campaigns

	PA ME&O Efforts	SW ME&O Campaign
Scale	Targeted audiences within service territory	Entire CA market
Target	PA customers	All CA consumers
Goal	Near-term savings	Structural changes in the market leading to long term savings
Approach	Save energy through customer participation	Save energy through mobilizing the market
Scope of Effort	Usually from a single campaign(s)	Umbrella campaign to drive overall awareness and intent
Amount of PA's control	PAs can control the pace, scale, geographic location, and can identify participants in general.	The SW campaign, PA campaigns, and other marketing efforts may promote the same target outcomes. If, how, where, and when customers adopt target outcomes is beyond the PAs and the SW implementer's control.

3.1 Strategic Campaign Design and Planning

ME&O campaign leads for the SW implementer and the PAs should follow well-established steps for developing strategic marketing plans that specify how to measure the success of their respective campaigns. This order of operations includes defining overarching objectives, operational objectives, metrics, and success criteria. Table 3 presents definitions and examples of each of these terms.

Table 3. Key Components of Campaign Design and Planning

Term	Definition	Example
Overarching Objectives	How will the world be different as a result of this campaign?	Contribute to energy savings goals
Operational Objectives	The outcomes a campaign seeks in the target audience. Note that a campaign may have multiple operational objectives that align with a marketing campaign's strategy. For example, in a market where the target audience is not familiar with a product, or what value the product has to offer, a campaign may have objectives of (1) making the target audience aware of a product; (2) influencing their attitudes and beliefs about that product; and, (3) getting the target audience to purchase the product.	▪ Build awareness of Energy Savings Assistance Program among target audiences ▪ Build belief that the Energy Savings Assistance Program offers value among target audiences ▪ Increase participation in the Energy Savings Assistance Program among target audiences
Metric	A measuring system that quantifies a trend, dynamic, or characteristic.	Unaided awareness
Success Criteria	The marker or definition of success for a given metric. Success criteria typically include a quantity and specify a timeframe for measurement.	An annual increase in unaided awareness of 2%

The recommended first step in developing a campaign is for stakeholders within a given PA or for the SW campaign, across organizations to come to agreement about the definition and interpretation of campaign objectives. This includes identifying: (1) large overarching objectives which serve as "rallying cries," or "all-encompassing ideas," and expressions of "how the world will be different after the campaign" and (2) operational objectives that help lead to the achievement of overarching objectives. Throughout this process, stakeholders should work to come to agreement on both the selection and interpretation of objectives, as dissention between stakeholders can occur if stakeholders have different interpretations of the objectives or if campaign activities start to deviate from agreed upon objectives.

Once stakeholders agree upon and articulate overarching campaign objectives, the next step is to work backwards to select operational objectives, metrics, and success criteria that will effectively provide information about how well the overarching objectives are being met. Iteration throughout the marketing plan development process can help ensure that objectives, metrics, and success criteria align.

3.2 Establishing Objectives, Metrics, and Success Criteria

In alignment with best practices for developing strategic marketing plans, the evaluation team synthesized results from the Landscape Analysis and Delphi Study to identify a set of recommended objectives, metrics, and success criteria that are most appropriate for measuring the success of the SW and PA ME&O efforts. The following sections include descriptions of the rationale for the selection of each objective, metric, and success criteria, and key considerations for using the selected metrics and success criteria to measure campaign success.

3.2.1 Campaign Objectives for Tracking ME&O Performance

The stakeholders and marketing experts who participated in the Delphi Study prioritized ME&O campaign objectives based on their perceived importance to what current SW and PA campaigns are trying to achieve (Table 4). The purpose of this exercise was to identify which objectives to include in this Framework. It is important to note that the relative importance of each objective will vary both between the SW and PA campaigns and across individual PA campaigns.

Table 4. Prioritized ME&O Campaign Objectives

Campaign Objective	Relevant Campaign(s)	Average Rank
Increase participation in PA programs	Both SW and PA campaigns	4.6
Build awareness about ways to reduce electricity and natural gas use and shape perceptions about the importance of reducing energy usage	Both SW and PA campaigns	4.6
Increase adoption of energy efficient behaviors (Example: Turning off lights, unplugging appliances when not in use)	Both SW and PA campaigns	4.4
Increase awareness of PA programs	Both SW and PA campaigns	4.3
Reduce customers' electricity and natural gas use, compared to pre-campaign energy usage	Both SW and PA campaigns	4.2
Increase awareness of the SW brand	SW campaign	3.3

Note: Average rank is the mean ranking that Delphi Study participants assigned to each objective on a 1-5 scale, where 1 = not at all important and 5 = extremely important.

As shown in Table 4, most of the campaign objectives are relevant to the SW and PA campaigns given their complementary roles with the exception of increasing awareness of the SW brand, which is not a goal of the PA campaigns and therefore the PAs should not be responsible for measuring progress towards this objective. Further, participants ranked almost all objectives as moderately or very important to measure. Although increasing awareness of the SW brand has been a long-standing objective of the SW campaign, Delphi Study participants ranked it lowest on the list of prioritized objectives given that a campaign could feasibly achieve high levels of brand awareness without achieving its target outcomes, such as increased program participation. Delphi Study participants also identified designing and executing the campaign in a way that aligns with customers' emotional motivations as a campaign priority, and considerations for tracking progress towards this objective are included in Section 3.3.4.

3.2.2 Campaign Metrics

Table 5 provides the recommended metrics for measuring progress towards each campaign objective and is divided into "high priority metrics" and "supplemental metrics." The key metrics include measures of campaign outputs, outcomes, and impacts. High priority metrics are critically important for measuring progress toward each objective. While the supplemental metrics provide additional insight, they are not essential for measuring progress towards core objectives.

The process of selecting metrics and classifying them into "high priority" and "supplemental" was informed by both the Delphi Study and the Landscape Analysis results. Throughout both studies, experts and stakeholders frequently recommended that campaigns should select metrics that measure campaign progress towards objectives in the most direct way possible. To illustrate, if a campaign has an operational objective to increase the adoption of energy-saving behaviors, then measuring changes in the adoption of these behavior changes in the target audience would be a direct measurement of this objective. Digital media engagements such as a post on social media would be indirect indicators of progress towards the behavior change objective, as these metrics could signify intent to make a future campaign-targeted behavior change. Still, they do not demonstrate actual behavior changes. Following this logic, high priority metrics measure campaign objectives directly, and supplemental metrics are indirect indicators of campaign objectives.

We elaborate on each of the metrics following Table 5 and provide definitions in the Key Terms section at the front of the report.

Table 5. Recommended Metrics for Prioritized Campaign Objectives

High Priority Metrics	Supplemental Metrics
Objective: Increase participation in PA programs	
▪ PA program-targeted behavior changes ▪ Program enrollment	▪ Program inquiries and engagement rates
Objective: Build awareness about ways to reduce electricity and natural gas use and shape perceptions about the importance of reducing energy usage	
▪ Knowledge/level of clarity ▪ Attitude and Attitude Strength ▪ Self-efficacy ▪ Perceived Norms ▪ Importance ▪ Intent	
Objective: Increase adoption of energy-efficient behaviors	
▪ Behavior changes ▪ Intent	▪ Persistence of behavior changes ▪ Social diffusion
Objective: Increase awareness of PA programs	
▪ Aided awareness ▪ Unaided awareness	▪ Familiarity ▪ Reach ▪ Impressions ▪ Share of customers that became aware of PA programs through the SW campaign
Objective: Increase awareness of the SW brand	
▪ Aided awareness ▪ Unaided awareness ▪ Brand salience	▪ Familiarity ▪ Reach ▪ Impressions ▪ Conversion rate from the SW website/lead generation ▪ Brand sentiment/favorability/net promoter score

Metrics for Assessing Increased Participation in PA Programs

Changes in PA clean energy program-targeted behaviors are the best metrics for assessing how SW and PA ME&O efforts contribute to increased participation in PA programs. Data on program enrollment, and program inquiries and engagements, can also provide indications that customers are engaging with these programs.

High Priority Metrics

- **PA program-targeted behavior changes:** The target outcomes of PA programs are typically to encourage customer adoption of specific behaviors, such as purchasing a rebated product, or changing the thermostat setting to higher temperature on hot days. As such, measurements of program-targeted behaviors are the best metrics for measuring program participation as they are direct measures of the outcomes associated with this objective. Target outcomes vary by program, so specific behavior change metrics should be tailored to individual programs.

- **Program enrollment:** Program enrollment is the first step in a customer's journey to making a program-targeted behavior change. The definition of program enrollment will vary greatly by program format. For example, program enrollment may comprise filling out a form at the Point of Sale for a midstream HVAC program, or it may comprise signing up for a program online.

Supplemental Metrics

- **Program inquiries and engagement rates:** Similar to the metric of intent, program inquiries, and engagement rates are useful metrics that provide some indication that the campaign is generating interest among the target audience. Program inquiries and engagement rates are not direct measures of program participation, and this should be considered when interpreting results for these metrics.

Metrics for Assessing Awareness of Ways to Reduce Electricity and Natural Gas Use, and Perceptions of the Importance of Reducing Electricity and Natural Gas Use

The metrics we recommend to assess this objective measure are precursors to behavior change, which is advantageous because they provide context around target audience barriers to, and motivations for, changing their energy-related behavior. However, these metrics are not always predictors of behavior change. Previous research has demonstrated there is often a gap between customer knowledge, attitudes, and perceptions, and making behavior changes, especially if making the behavior change requires an investment of time, money, or resources (Hanssens & Pauwels, 2016).

High Priority Metrics

- **Knowledge/level of clarity**: Knowledge and clarity are standard indicators of how well customers comprehend campaign messages. These metrics are also relevant for the campaign development process as pre-testing campaign content performance using these metrics can help ensure the target audience comprehends key messages and calls to action before campaign collateral hits the market. It is important to be cognizant of the "illusion of understanding" or the common social tendency for respondents to report they understand a concept when they don't fully comprehend the intended meaning of the campaign messaging. Employing test questions to confirm customer knowledge of key campaign messages is one evaluation strategy that can help address this issue.
- **Attitude and attitude strength:** Attitudes are measures of customers' favorability towards a brand or product (e.g., campaign content or messaging). Broadly speaking, these metrics provide context around how customers are responding to the campaign, which can be used to improve the campaign content and strategy. Measures of attitude strength indicate customer likelihood of engaging in behaviors that align with their attitudes. Attitude strength can be assessed by asking respondents follow-up questions about how certain they are about their attitudes or about the importance of their held attitudes.
- **Self-efficacy:** Self-efficacy refers to customers' level of belief in their own ability to make suggested behavior changes. Measures of self-efficacy can be used to identify customers' perceived barriers to making behavior changes. This metric is particularly relevant for energy conservation campaigns because these campaigns frequently promote behaviors that help to address large global challenges, such as climate change and carbon emissions. The scale and persistence of these global challenges heighten the potential that customers may perceive these challenges to be too large or existential for customers to make a tangible impact on an individual level.

- **Perceived norms:** Perceived norms are another indicator of future behavior change because these metrics are frequent predictors of intention and behavior change. Perceived norms encompass both descriptive norms (measures of what others are doing) and injunctive norms (measures of what consumers think they should be doing). There is a precedent for leveraging social norms to encourage energy conservation, such as through home energy reports.
- **Importance:** Customers that have strong knowledge of energy-saving behaviors they can take and the economic and environmental benefits associated with energy conservation may still decide not to make changes if they don't consider these benefits important. Measures of importance provide insight around the reason for gaps between awareness and behavior change.
- **Intent:** Measures of intent are useful proxy variables for measuring behavior changes. Self-report measures of intent can be prone to social desirability bias, however, so asking follow-up questions about respondents' level of confidence in their answers can ensure more accurate measurements of this metric.

To the extent possible, we recommend narrowing the unit of measurement for these metrics to focus on customer perceptions of the specific energy reduction strategies a campaign promotes. To illustrate, this would mean measuring customer attitudes towards installing a smart thermostat instead of measuring customer attitudes towards energy conservation. Previous studies have found that customer perceptions of general energy conservation generally remain positive and static over time, whereas customer perceptions of individual energy reduction strategies are more likely to show variability. As such, detecting changes in customer perceptions of energy reduction strategies over time is likely to be easier, and thus a better measurement approach than tracking customer attitudes towards general energy conservation.

Metrics for Assessing Increased Adoption of Energy Efficient Behaviors and Reductions in Customers' Electricity and Natural Gas Use

Reducing customers' electricity and natural gas use, and increasing adoption of energy-efficient behaviors, are inherently interrelated objectives as behavior changes are outcomes and reductions in electricity and natural gas use are impacts that result from these outcomes. In the context of California's capacity-constrained grid environment, the relationship between adoption of behavior changes and reductions in electricity and natural gas use is not straightforward. Myriad factors including, time, location, and energy savings potential determine the energy savings impact associated with customer adoption of energy-efficient behaviors. Considerations for targeting and measuring reductions in customers' electricity and natural gas use are discussed in more detail in Section 3.3.4.

The most appropriate metrics for tracking these objectives are direct measures of campaign-targeted behavior changes. Measures of intent to change behavior are useful proxy measures for behavior changes, especially in situations where direct measurements are not feasible. Measures of persistence and social diffusion provide additional insight about the depth of penetration of these behaviors in the target audience.

High Priority Metrics

- **Behavior changes:** This metric is critical for assessing ME&O performance, given that behavior changes are a target outcome for both SW and PA ME&O efforts.
- **Intent:** As previously discussed, measures of intent are useful proxy variables for measuring behavior changes as they can be used to infer likely behavior change and in the absence of the ability to measure actual behavior change directly.

Supplemental Metrics

Additional metrics that can help measure the uptake of specific behavior changes include:

- **Persistence of behavior changes:** If ME&O efforts succeed in encouraging customers to live an energy-conscious lifestyle, then the target audience should maintain ME&O-targeted behaviors without continual prompting. The SW campaign and some PA campaigns play an ongoing role in encouraging customers to maintain these behaviors by providing ongoing reminders or "nudges." As such, measures of persistence are important because they help provide insight around ME&O effectiveness in motivating customers to maintain these ongoing behaviors. This metric is not relevant for specific 'one-time' behaviors such as purchasing a new energy-efficient appliance. That being said, this metric could be applied to measure whether customers consider energy efficiency when purchasing products that consume energy.
- **Social diffusion:** Social diffusion originates from Roger's Diffusion of Innovation theory, which posits that adoption of new technologies and other behaviors moves along a continuum, and the steps in the continuum are defined by the segments of consumers that adopt the technology or behavior. According to this theory, as a technology or target behavior moves further along the continuum, adopters become more likely to share the technology or behavior with others, known as social diffusion. Social diffusion in the context of California ME&O means that consumers begin taking SW ME&O campaign or PA program-targeted behaviors, and then they motivate others to do the same. Measures of social diffusion are beneficial because they account for the marketing cost efficiencies that occur when consumers promote the spread of target outcomes through word-of-mouth.

Metrics for Assessing Increased Awareness of the SW Brand and Increased Awareness of PA Programs

The appropriate metrics for measuring increased awareness of PA energy efficiency, demand response, and other clean energy programs are very similar to the recommended metrics for assessing increased awareness of the SW campaign and we present recommendations for metrics to measure progress towards both objectives together. Unaided awareness, aided awareness, and brand salience are the top priority metrics for measuring SW campaign and PA program awareness. Other metrics, such as website lead generation, familiarity, reach, impressions, and brand advocacy can provide additional insight to support the measurement of these metrics.

High Priority Metrics

- **Unaided awareness**: Unaided awareness should be the top priority metric or the gold standard metric for measuring brand awareness as it is the best way to know that a brand is really penetrating the audience. An additional benefit of this metric is that it minimizes the opportunity for respondents to claim false brand awareness. Unaided awareness is usually small, especially early on, for brands in market segments with many similar brands with competing calls to action. As such, unaided awareness may be a high bar for newer campaigns focused on lowering energy consumption among consumers.
- **Aided awareness:** For campaigns that are newer to the market, the target audience may recognize campaign elements, but have a harder time recalling them off the top of their head. As such, tracking both aided and unaided awareness can help provide a more holistic picture of overall brand awareness for newer campaigns.
- **Brand salience:** For marketing campaigns aimed at motivating consumers to buy a product, brand salience is a measure of the propensity for consumers to notice or think about the brand in buying

situations (Sharp, 2008). In the context of the SW ME&O campaign, we adapt this definition to mean the propensity of customers to associate the brand with the target outcomes promoted by the campaign. As customers may associate an array of different branding cues with target outcomes, we recommend measuring customer aided and unaided awareness of SW ME&O campaign elements beyond just the name, slogan, and logo. This may include assessing whether customers associate brand elements such as the orange branding color palette with energy conservation topics. Assessing awareness of these elements can help to provide a more holistic measurement of brand awareness as customers may have an easier time remembering these elements in comparison to the specific words "Energy Upgrade California."

Supplemental Metrics

- **Website lead generation:** As the EUC website is the SW campaign's main channel for directing customers to PA programs, website lead generation is an important metric for understanding the effectiveness of the SW campaign in raising awareness of PA programs. The SW campaign's primary mode of channeling customers to PA programs is through the website. As such, the online lead generation tracking system that measures customer traffic from the EUC website to PA program websites is an important tool for quantitively measuring lead generation. Where possible, PAs can also help support lead generation performance tracking by asking program participants where they learned about the program and reporting out the share of participants that learned about the program through the SW campaign.
- **Familiarity:** Familiarity provides some additional insight into the depth of customers' brand awareness because it shows if a customer has some additional knowledge about a brand and the purpose behind it, beyond just having a basic awareness of it.
- **Brand advocacy:** Brand advocacy also provides additional insight about the depth of customers' brand awareness and engagement. This metric aligns well with the mission of the SW campaign, because one of the stated campaign objectives is to "to build advocacy," and the campaign employs strategies such as influencer marketing and communal messaging to achieve this objective.
- **Reach and impressions:** Reach and impressions can help provide more insight around brand awareness results. To illustrate, if a campaign is struggling to reach the target audience, looking at reach and impression metrics could help to explain these results. It is important to recognize that reach and impressions are not direct measures of campaign awareness. As such, the results for these metrics should be interpreted with caution because a campaign could conceivably achieve success criteria for these metrics without making progress towards increasing SW campaign or PA program awareness. In addition, as impressions are a cumulative measurement, it is important to consider the duration of measurement when interpreting impressions results.

3.2.3 Success Criteria

Establishing success criteria or quantitative definitions of success for each metric is an essential step in the development of a strategic marketing plan as they enable the tracking of campaign performance against goals over time.

Given that individual campaign attributes (e.g., budget, location, and timing) drive what is achievable in terms of campaign performance, it is not possible to outline one set of success criteria that can be used in all SW and PA ME&O efforts. Instead, this Framework outlines a range of data sources and strategies that can be used to set criteria by which to judge campaign performance. Table 6 illustrates the data sources appropriate for setting success criteria for each of the prioritized ME&O objectives and additional detail on each data source is provided following the table. Overall, the most support exists for using the historical performance of SW and PA campaigns in establishing campaign success criteria, which is further reason for SW and PA campaigns to begin tracking these items.

Table 6. Relevant Data Sources for Establishing Success Criteria

Prioritized Objective	Historical Performance of the Campaign	Historical Performance of Similar Campaigns	Marketing Industry Standards	ROI and Cost Effectiveness Measures
Increase awareness of the SW brand				
Increase awareness of PA programs				
Build awareness about ways to reduce electricity and natural gas use and shape perceptions about the importance of reducing energy usage				
Increase adoption of energy-efficient behaviors (Example: Turning off lights, unplugging appliances when not in use)				
Increase participation in PA programs				

Historic Campaign Performance Data

Historic Performance of SW and PA Campaigns

Data on the past performance of SW and PA ME&O campaigns is the most relevant data source to use in establishing campaign success criteria for key metrics.

In terms of the SW campaign, there is ample historical data available based on the several California SW energy conservation brands that have been the market over the past two decades. Further, the evaluation team has and continues to conduct SW campaign performance tracking surveys on regular intervals dating back to when the campaign launched in 2013. Key metrics collected through these surveys include aided and unaided awareness, attitudes, and behavior changes. As significant effort has gone into establishing the SW brand, historical comparisons for the SW campaign should start with when the EUC name and brand first entered the market in 2013.

Using historical data to establish success criteria for PA ME&O efforts will likely be more challenging. Past research from the 2013-2014 evaluation cycle found that, in some cases, the PAs did not identify or document metrics for their ME&O campaigns, and nearly two-thirds of ME&O data from the PAs did not include success criteria. In addition, during the Delphi Study, some PAs commented that they typically prioritize collecting participation data over collecting data on “upper funnel metrics” such as awareness, reach, and impressions. Given that PAs may not have measured and tracked the metrics outlined in this report in the past, internal measurement of campaign performance against appropriate metrics should begin as soon as possible so that data can be used to set success criteria in the future.

Historic Performance of Similar Campaigns

When available, data on the historic performance of similar ME&O campaigns can be used to set success criteria. However, California's ME&O campaigns have a number of unique features such as scale, budget, objectives, and local environment that make identifying an appropriate case for comparison challenging. With that said, in the absence of other data to support the development of success criteria, the performance of other ME&O campaigns is worth considering.

Campaigns worthy of consideration include the following:

- California Campaigns:
  - Energy campaigns (e.g., Flex Your Power)
  - Non-energy efforts (e.g., Covered California, California Dairy Board)
- Non-California Campaigns:
  - Mass Save
  - Energy STAR
  - Energize Connecticut

In addition, we recommend that California PAs establish an open reporting system to share results about campaign performance against metrics so that all PAs can use these results to inform the selection of success criteria.

Marketing Industry Standards

To the extent they are available, marketing standards used for comparison should be derived from market segments with similar target outcomes to SW and PA campaigns. This may pose some limitations for using market industry standards to benchmark campaign success as very little marketing industry benchmarking data exists for industries related to energy conservation and management, especially with regards to attitudinal and behavioral metrics.

Digital media represents one area where marketing industry standards may be useful for benchmarking. The rise of digital media metric tracking systems in recent years has helped to generate a reliable set of benchmarks for these channels. We recommend that campaigns refer to marketing industry standards to set success criteria for digital medial metrics. Online resources such as Wordstream, RivalIQ, and eMarketer, typically publish average quarterly performance updates for digital metric benchmarks and these resources can serve as helpful references for setting success criteria.

Cost-Effectiveness Measures

Cost-effectiveness measures include quantifying campaign outcomes relative to the campaign budget, as well as the output measures (reach, frequency) used to increase that outcome. Possible cost-effectiveness data points include year-over-year changes in program enrollment/penetration rates, year-over-year changes in attrition (i.e., people dropping out of the program), and year-over-year changes in customer acquisition costs. An additional benefit of using cost-effectiveness measures for benchmarking is that these analytical tools implicitly account for social diffusion because they track how campaign efforts become more cost-effective as campaigns gain traction and influence customers to promote behavior changes through word-of-mouth.

We recommend assessing campaign cost-effectiveness for individual campaign tactics where possible, as this can help to inform the overarching campaign strategy and optimal the optimal selection of campaign outreach strategies.

3.3 Approach to Evaluation

In practice, a variety of evaluation approaches can be employed to measure the set of metrics and success criteria outlined in the previous sections. As such, in the following sections, we recommend an overarching approach for the evaluation of ME&O campaigns and we provide guidance to support informed decision-making about which evaluation research designs and methods to employ in given contexts.

3.3.1 Overarching Evaluation Approach

The overarching goal of ME&O evaluation is to help ensure accountability by providing evidence that ratepayer funds are being well spent. The audience for ME&O evaluations consists of the CPUC, PAs, and stakeholders, as well as implementers who are responsible for the design and execution of effective campaigns. In demonstrating accountability, there is a role for the evaluation of both ongoing processes such as campaign design and execution (formative evaluation) and the overall effect of a campaign (summative evaluation).

Given that it is not always possible to directly measure consumer exposure to ME&O, the evaluation of these efforts must rely on data from multiple sources and data of different types (e.g., quantitative and qualitative) to provide a full view of the campaign's effects. This preponderance of evidence approach looks for indicators across the market that suggest ME&O is having an impact on its intended outcomes as opposed to relying on a single data source or metric. Similarly, given the nature of ME&O campaigns, there is no perfect method for evaluating effectiveness. Instead, regulators, stakeholders, and evaluators must balance the strengths and weaknesses of various research designs and approaches to create a strategy that provides the necessary level of confidence in results within existing parameters (e.g., time, budget).

Within the following sections, we outline the key characteristics and tradeoffs associated with the available research design, and data collection and analysis methods for evaluating ME&O campaigns. Overall, decision-making around evaluation design should reflect the following:

- Use of theory-based evaluation
- Measurement of multiple, complementary metrics
- Measurement of campaign influence on outcomes of interest (to the extent possible)
- Smaller, more frequent studies and research activities
- Preponderance of evidence approach to determining the overall effectiveness

3.3.2 Research Design

The choice of research design involves making tradeoffs between the benefits and limitations associated with each approach. Fundamental questions relate to the ability of the research design to provide the type of evidence needed for the evaluation (i.e., the validity of the research design), as well as the feasibility of implementing the research design given the budget, timeline, data and other requirements of the evaluation.

Internal and external validity are concepts that describe how research findings can be used to make determinations about the effectiveness of ME&O activities. These concepts are defined as follows and highlighted in Table 7 where we outline each type of research design by the level of rigor (high to low) and summarize its key features:

- Internal validity: Internal validity refers to the ability of evaluators to conclude that a campaign or ME&O activity has caused measured results (i.e., the ability to isolate causal effects)
- External validity: External validity refers to the ability of evaluators to generalize the results from their study to different groups, contexts, circumstances, time-periods, or to the overall population if the study involves a sample

Table 7. Research Design Considerations

Research Design	Description	Key Features
Experimental	Experimental designs are considered the most rigorous and include a randomly assigned treatment and control group. This design allows researchers to control for bias and establish causality between the intervention and outcomes of interest. Experimental designs often have extremely high levels of internal validity, but often at the cost of lower external validity. While true experimental designs in the form of Randomized Controlled Trails (RCTs) are not generally feasible in the context of ME&O given the campaign design and time in the market, simulated experiments are possible and provide key insights into the effect of certain campaign messaging or creative on the target population.	▪ Can infer causality ▪ Lower generalizability ▪ Costly and challenging to implement in CA context
Quasi-Experimental	Quasi-experimental designs include a non-randomly assigned treatment and comparison group. Given that the comparison group is not randomly assigned, this design cannot control for extraneous factors or potential bias. Further, identifying an appropriate comparison group can be challenging.	▪ Less able to infer causality
Cross-Sectional Designs	Cross-sectional research designs are the most basic and do not include known treatment and control groups. Instead, data is collected from a cross-section of the target population. Comparisons are made between groups or over time. Evaluators can attempt to infer causality by comparing groups with different levels of campaign exposure. Alternatively, we can attempt to link changes over time on key variables to changes in campaign exposure or messaging. While unable to establish causality, this approach can be helpful in measuring changes in awareness, knowledge, attitudes, and intent. These results can then be considered within the context of other data sources collected as part of the evaluation.	▪ Less able to infer causality ▪ Lower cost ▪ Ease of implementation

As described in the table above, there are generally limited applications for experimental design within the context of California's ME&O efforts, particularly at the SW level. As such, evaluators may wish to use multiple research designs to gather the evidence needed to demonstrate campaign effectiveness. Where possible, drawing on results from multiple research designs can help to bolster the findings and ensure buy-in from key stakeholders.

3.3.3 Data Collection and Analysis Methods

Evaluators can make use of many different methodological tools to assess the effectiveness of ratepayer-funded ME&O campaigns. Because the data to support using experimental designs to evaluate ME&O campaigns are rarely available, evaluators generally rely on quasi-experimental and cross-sectional research, using multiple methods if needed to provide a full view of the campaign's effects. We can then use the preponderance of evidence across all methods to evaluate ME&O effectiveness.

Table 8 provides further discussion about how a range of data collection and analysis methods can be applied to optimize design, improve execution, and demonstrate effects in the ME&O context.

Table 8. Application of Data Collection and Analysis Methods to ME&O

Data Collection/ Analytical Approach	Application within ME&O
AB Testing	AB testing or pre/post-testing can be used to gather early feedback campaign channels, content, and messaging to inform the optimization of these tactics.
Usability Testing	Usability testing is a diagnostic method that can be used to identify potential issues and improvements in campaign channels that include user interfaces, such as a campaign website.
Focus Groups	Focus groups provide opportunities to test messaging and creative with a small sample of representatives from the target audience. This approach gives deep insights into the customer experience as well as explore themes within the group setting to understand both rational and emotional responses to creative concepts.
Journey Mapping	Customer journey mapping is the process of visually representing every experience a customer has with the program. It helps to tell the story of a customer's experience with a utility from first learning about a program through the end of the engagement.
Segmentation	Segmentation involves grouping consumers by similar characteristics. From a campaign development perspective, segmentation results can be used to inform targeted campaign strategies that appeal to specific sub-groups. Segmentation can be used in evaluations to understand how the campaign is reaching sub-groups of interest, such as non-English speakers or consumers that reside in disadvantaged communities.
Diary Studies	Diary studies allow consumers to participate in daily or weekly online diaries. This method can capture contextual nuances of user behaviors and experiences to provide context on how campaign topics fits into customers' everyday lives.
Social Listening	Social listening involves monitoring customer reactions to online content to gather information about customer sentiment towards campaign collateral to inform campaign design. This approach can also be used to identify customer knowledge, attitudes, and perceptions towards key campaign messages
Ethnography	Ethnographic research involves observing and interviewing members of the target audience location where they are interacting with the campaign collateral or associated products and services. In the context of ME&O this type of research can be particularly useful for understanding customers' attitudes and behaviors towards campaign messaging topics.
Observation	Direct observation can provide insights about how the target audience responds to campaign collateral and channels in an unbiased way, this method does not require the audience to recall or interpret their experience with the campaign.
Correlations of Proxies for Campaign Exposure and Campaign Outcomes	These analyses are useful for understanding the relationship between proxies of campaign exposure, such as awareness, knowledge, and campaign outcomes of interest like attitudes, intentions, and behavior change.

Data Collection/ Analytical Approach	Application within ME&O
Latent Class Discrete Choice (LCDC)	LCDC is a statistical method that simultaneously finds customer preference patterns and identifies customer segments based on variations in these preference patterns using data about past customer choices or survey responses. This method can be used to determine the optimal mix of communication variables for a campaign or a specific piece of creative.
Tracking Surveys/ Longitudinal Studies	Longitudinal studies are research efforts that follow the same respondents over time to understand campaign effectiveness. This type of method can be used to track campaign progress over time to inform campaign implementation and evaluation objectives concurrently.
Structural Equation Modeling	Structural equation modeling is a tool that can be used to assess the relative impact of ME&O efforts on campaign outcomes (increases in knowledge, program participation, behavior changes, etc.)

3.3.4 Key Considerations

Within the context of evaluation, there are a number of key factors that must be taken into consideration during decision-making about appropriate evaluation research designs and methods.

Attribution

Understanding the impact of a ME&O campaign on consumer behavior is complex. In the case of the SW campaign, the situation is particularly nuanced because electricity and natural gas use is impacted by a wide range of exogenous factors that influence behavior. In addition, many other market players, including the IOUs, RENs, and CCAs have their own ongoing ME&O campaigns, which are aimed at influencing the same types of behavior change. As such, it is important to recognize that it will be difficult for evaluators to detect the incremental impact of any single campaign in this environment. Furthermore, attempting to control for all of these external campaign and exogenous factors in a regression analysis would likely be a very methodologically challenging and expensive undertaking.

Both Delphi Study participants and marketing experts interviewed as part of this study were split on the importance of attributing campaign outcomes of interest, specifically behavior changes, to ME&O efforts. Half believe that identifying the causal impacts of ME&O campaigns is critical for making informed decisions about the efficient and effective allocation of the campaign budget. The other half suggested measuring campaign attribution may not be worthwhile due to the cost and methodological challenges associated with this process.

From an evaluation perspective, the ability to attribute certain outcomes to specific ME&O campaigns depends on first, whether evaluators can measure exposure and second, whether evaluators can measure the impact of that exposure. Within the context of California's ME&O efforts, there are ME&O tactics that, by their nature, enable this type of measurement and others that do not. For example, it is easier to identify individuals who are exposed to digital tactics by using various tools and analytic platforms (e.g., tracking pixels, Google analytics, etc.) while it is not generally possible to know which specific consumers have been exposed to television-based advertising. However, measuring exposure to the campaign is only the first challenge. Evaluators then need to be able to measure the impact of that exposure and isolate the campaign's impact from all other factors, which is equally, if not more, challenging.

The level of confidence evaluators have in attribution estimates is also part of this equation. As articulated by industry experts, there is a very real tradeoff here in terms of the level of confidence desired and the budget available to conduct the research.

Targeting and Measuring Reductions in Customers' Electricity and Natural Gas Use

While some stakeholders identified reducing electricity and natural gas use among the target population as a desired objective for the SW ME&O campaign during the Delphi Study, others felt that measuring other campaign outcomes (e.g., behavior change) is sufficient. If the CPUC, IOUs, RENs, and other stakeholders determine reductions in electricity and natural gas use should be a formal objective of SW ME&O campaign, a full-scale change in campaign design and evaluation will be needed.

In California, the achievement of electricity and natural gas use reductions is inherently tied to the types of behaviors that ME&O campaigns choose to promote. The large influx of renewable energy in the middle of the day combined with other grid infrastructure constraints means that the benefits associated with energy conservation behavior changes are dependent on time and location. If key parties agree that achieving electricity and natural gas use reductions is a SW campaign objective worth pursuing, we recommend that stakeholders select behaviors to promote through SW ME&O efforts based on their energy savings potential. We specifically recommend using three criteria to identify target behaviors:

- What is the present energy reduction (or greenhouse gas reduction) impact of the energy efficiency behaviors that are under consideration?
- What is the current level of adoption of these behaviors among the target audience?
- What is the likelihood that the target audience will adopt the new behaviors that are not currently part of their habits?

Quantifying the electric and natural gas reduction impacts of these behavior changes requires obtaining customer billing data and using an experimental design to identify differences in customers' energy consumption before and after campaign exposure, and in comparison, to a control group without campaign exposure.

The evaluation team identified multiple limitations to employing this type of measurement approach in the CA ME&O context. As discussed in Table 2, given the SW Campaign design and time in market, using experimental designs to measure ME&O effectiveness may not be feasible. Furthermore, this approach would require merging customer billing data from each of the PAs with data with information about customer exposure to the SW campaign and other attitudinal and behavior change variables from a third-party research organization (e.g., Milward Brown). PA customer data privacy requirements may pose limitations to merging these data streams together in a timely and cost-effective manner.

Campaign Alignment with Consumers' Emotional Motivations

Stakeholders identified measuring campaign alignment with consumers' emotional motivations as a priority metric for tracking the success of the SW campaign. The selection of this objective reflects a growing trend of using behavioral economics and psychological research to inform optimal customer engagement strategies across multiple channels, including marketing campaigns, behavioral energy efficiency programs, and social media platforms. A Harvard Business Review study[5] concluded that assessing customers' emotional motivators provides a key indication of how customers will engage with a brand that outperforms other metrics like brand awareness or customer satisfaction.

[5] Magids, S., Zorfas, A., & Leemon, D. (2015) The New Science of Customer Emotions. Harvard Business Review. https://hbr.org/2015/11/the-new-science-of-customer-emotions

This metric could be useful for developing and pre-testing campaign content and collateral and evaluating campaign performance over time. We recommend taking the following approach to assess campaign alignment with customers' emotional motivations:

- Identify customers' emotional motivations for managing their energy use before rolling out new campaign content
- Design content and messaging to capture these motivators
- Conduct pre- and post-testing to measure customers' perceptions of campaign content, messaging, and goals and gauge campaign alignment and connection with customers' motivators
- Work to close gaps between customers' motivators and motivators leveraged in campaign content, messaging, and overall campaign strategy

Customer journey mapping and segmentation are additional strategies that can support the measurement of this objective as they can help illuminate common emotional motivators to manage energy among sub-groups to inform messaging strategies.

4. Key Conclusions and Implications

The key findings from this study have important implications for how the CPUC, PAs, SW implementer, and SW evaluator assess ME&O campaign performance.

- **Key Conclusion:** There are a core set of ME&O campaign metrics that experts and stakeholders agree can be used to demonstrate the effectiveness of both SW and PA ME&O efforts. Given that individual campaign attributes (e.g., budget, location, and timing) drive what is achievable in terms of campaign performance, a core set of success criteria could not be codified. However, stakeholders agree on a set of data sources that can be used to develop success criteria and understand that gathering the data needed to establish historic benchmarks for California-specific campaigns is needed. Further, stakeholders agree that multiple methods and data sources should be used to triangulate results related to campaign outcomes.
  - **Key Recommendations for the SW Implementer**: Moving forward, the SW implementer should track prioritized metrics that can be used to support the formative evaluation of campaign messaging and content. The prioritized metrics that are relevant for formative research include knowledge and level of clarity, self-efficacy, attitude and attitude strength, importance, and perceived norms. In addition, measuring campaign alignment with customers' emotional motivations can also help ensure the campaign is designed in a way that motivates target audiences to take action.
  - **Key Recommendations for PAs:** Past evaluations have found inconsistencies in the types of metrics and success criteria each PA uses to track campaign performance, and in some cases, the degree to which metrics and success criteria were established at all. Despite this reality, experts and stakeholders identified historical performance of PA campaigns as the most relevant data source to use in establishing campaign success criteria. As such, to the extent possible, we recommend PAs begin to track the metrics specified in this Framework for their own internal campaigns where applicable. We recognize that PA campaigns have unique objectives and that there is value in the PA's tailoring metrics to their individual campaigns. However, the metrics presented in this framework are widely applicable to most energy conservation campaigns and tracking even a few high priority metrics will help all parties to contextualize and measure the performance of their own ME&O campaigns. PAs should assess the possibility of tracking progress towards these metrics through existing program-specific EM&V efforts. In the future, the PAs should also explore the possibility of establishing a reporting system to share results about PA campaign performance against metrics between PAs so they can use these results to inform the selection of success criteria. Of note, the PAs should not be responsible for tracking the effectiveness of the SW campaign.

Despite areas of consensus, stakeholders were not able to come to agreement on several open questions that will have potentially significant ramifications on both the design of ME&O campaigns and the methods deployed to determine their effectiveness:

- **Key Conclusion:** The importance of measuring campaign attribution for ME&O evaluation warrants further discussion. Delphi participants were split on the importance of attributing campaign outcomes of interest, specifically behavior changes, to ratepayer-funded SW and PA ME&O efforts. Some believe understanding the causal impacts of ME&O campaigns is critical for making informed decisions about the efficient and effective allocation of the campaign budget. In contrast, others believe that measuring campaign attribution may not be worthwhile due to the cost and methodological challenges associated with this process.

- **Key Recommendations for the SW Evaluator and the CPUC:** The CPUC and the evaluation team should work together to determine the best path forward for assessing the impacts of the SW campaign on outcomes of interest while ensuring cost-effective use of evaluation funds.

- **Key Conclusion**: Stakeholders should come to agreement on the SW campaign's lead generation role. Some Delphi participants view lead generation for PA programs as a key outcome of SW marketing efforts, while others believe the SW campaign is not intended to actively channel customers to PA programs, but that this may happen naturally when customers visit the SW campaign website. Stakeholders also had some confusion about status of the SW campaign's lead generation tracking system at the time of the Delphi Study, but this system is now fully operational.
  - **Key Recommendations for the CPUC, PAs, and the SW implementer:** The PAs, CPUC, and the SW implementer should work together to reach agreement on the role of the SW campaign in generating leads to PA programs. The role of the SW campaign in lead generation should also be codified in the JCAP.
  - **Key Recommendations for the SW implementer:** The SW implementer should continue to provide monthly updates on the number of referrals to PA websites.

- **Key Conclusion**: Further discussion is needed on targeting and measuring reductions in energy use. While some Delphi participants identified reducing electricity and natural gas use among the target population as a desired objective for the SW ME&O campaign, others felt that measuring other campaign outcomes (e.g., behavior change) is sufficient.
  - **Key Recommendations for all parties:** All parties involved with setting the direction of the SW campaign including the CPUC, PAs, and the SW implementer should work to come to agreement on whether achieving measurable reductions in electricity and natural gas use among the target population is a desired objective for the SW campaign. These parties should also come to a common understanding of the implications of pursuing this objective. If this becomes a priority for the SW campaign, a full-scale change in campaign design and evaluation will be needed. As part of discussions related to feasibility, the SW implementer should consult with the SW evaluator to determine the best strategy for designing the campaign to target reductions in electricity and natural gas use in a measurable way.

Finally, through the process of establishing this Framework, we identified a clear area for process improvement and coordination. Addressing these opportunities for improvement can help ensure efficient use of ME&O funds.

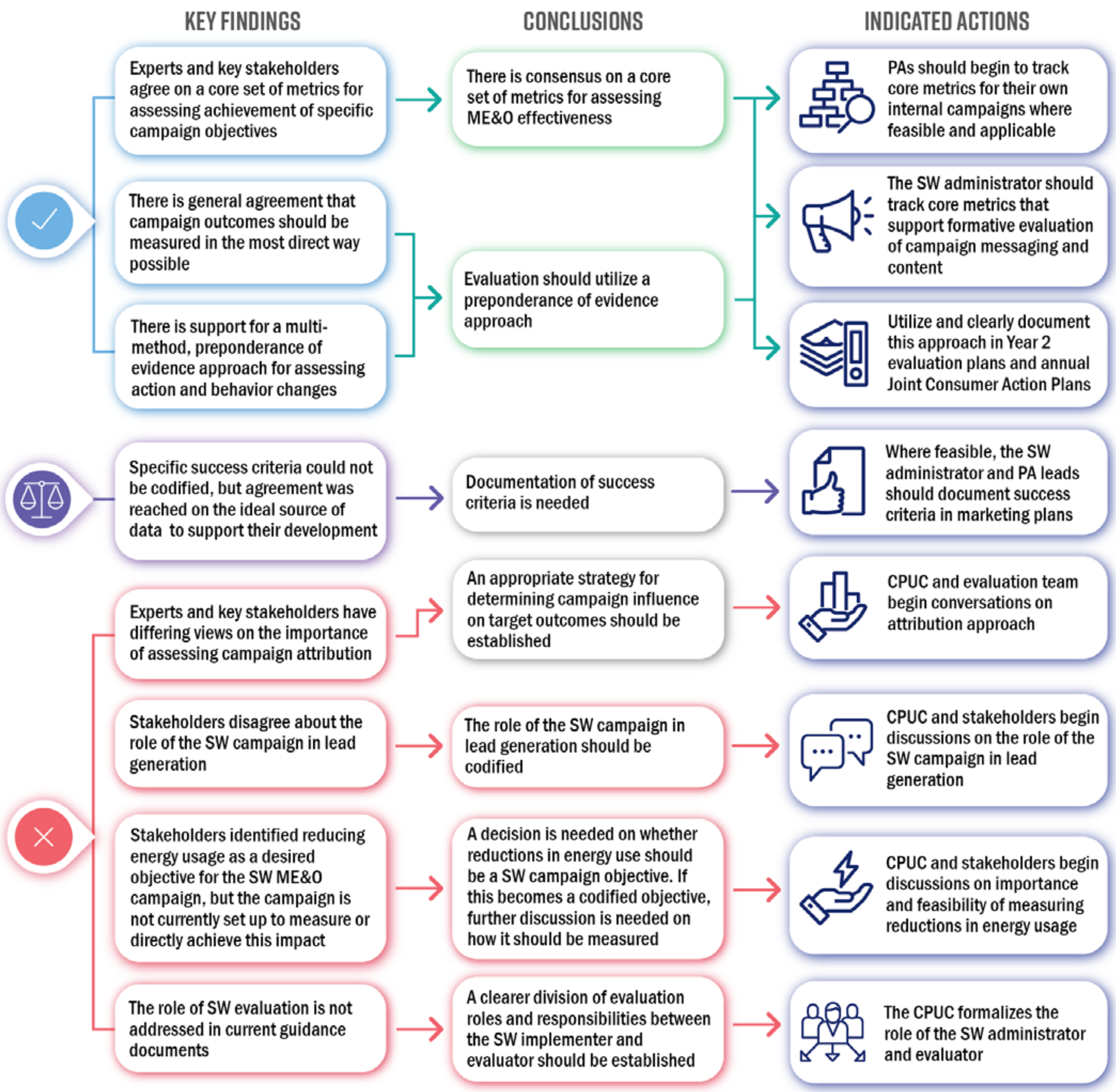
- **Key Conclusion:** At present, distinct roles and responsibilities have not been laid out for the SW implementer and the evaluation team related to SW ME&O data collection and performance assessment. A fundamental premise in California energy policy is that resource and non-resource programs need to be independently evaluated by a third-party. Currently, this means that the SW evaluator is duplicating some of the research that the SW implementer is already conducting, which doesn't represent the most cost-effective or efficient approach to measurement, but with this current structure, this is essential to ensure an independent evaluation that meets the evaluation standards set forth by the CPUC. This creates challenges as the SW evaluator likely will choose different sampling approaches and utilize different question wording to assess some of the same metrics leading to potentially different results than those collected by the SW implementer.

- **Key Recommendations for the CPUC:** The CPUC should consider more formally delineating the research responsibilities of the SW evaluator and the SW ME&O Administrator. As the SW implementer is responsible for assessing and optimizing campaign messaging and content, the role for the SW implementer in the evaluation should be to conduct formative evaluation research before the launch of new campaign messaging and content to inform campaign development. The role of the SW evaluator is to provide an independent, third-party assessment of SW ME&O campaign performance. As such, the SW evaluator should be responsible for measuring high priority, and supplemental campaign metrics that support the measurement of summative campaign performance at regular intervals after new campaign content and messaging has been in-market for long enough to detect an effect. Evaluators should prioritize measuring and reporting the high priority metrics specified in this Framework. If budgets allow, evaluators should also consider tracking supplemental metrics. While the evaluator should be responsible for measuring summative campaign performance, the implementer should use key insights from summative research efforts to inform the campaign strategy.

  The SW implementer currently tracks many summative evaluation metrics, including behavior changes, and these metrics are formally codified in the current JCAP. As such, this division of responsibilities would involve a notable shift in research focus for the SW implementer from formative and summative research to purely formative research. The timing of this transition is important as it may make sense to begin to put this plan in motion but not complete the transition until the SW implementation contract is rebid. Another consideration is that it will be essential to have a risk mitigation plan in place in the event that there is a gap in the SW evaluation contracts, as there was in 2018

We summarize the key findings, conclusions, and recommended actions in Figure 2 below.

Figure 2. ME&O Consensus Project Key Findings, Conclusions, and Recommended Actions



Appendix A. Detailed Research Methods

The objectives of the Consensus Project were to (1) establish benchmarks related to ME&O metrics and success criteria in the energy efficiency industry, and (2) create a framework for the evaluation of ME&O efforts moving forward. To achieve these objectives, we sought to answer the following research questions:

- What metrics and success criteria are appropriate for the evaluation of ME&O effectiveness at the SW and program administrator levels?
- Can stakeholders reach consensus on a core set of metrics and success criteria for the assessment of ME&O effectiveness?
  - If so, which metrics and success criteria can be codified? What framework or guidance can be provided?
  - How should the State of California approach the evaluation of ME&O going forward?

Landscape Analysis

The Landscape Analysis consisted of two components: (1) a secondary data and literature review, and (2) in-depth interviews with key stakeholders and experts.

Opinion Dynamics conducted a secondary data and literature review to codify metrics and benchmarks used to measure the success of marketing campaigns across multiple industries. We also completed a review of 27 resources spanning California ME&O sources (past ME&O evaluation reports, IOU, CCA and REN business plans and SW ME&O plans), evaluations, and documentation from other social marketing campaigns nationwide, and industry, and academic literature.

The sources included fell into two main categories:

- Case studies of energy conservation campaigns and other social marketing campaigns both inside and outside of California; and,
- Academic literature about best practices for social marketing campaigns and measuring the success of these campaigns.

We began by gathering reports featuring case studies of social marketing campaigns with well-documented methodology and metrics to support measuring campaign success. We used NVIVO qualitative analysis software to identify the metrics commonly used across each of these campaigns. Subsequently, we cross-referenced the list of commonly used metrics against marketing industry handbooks to develop definitions for each of these metrics.

In parallel, we reviewed academic literature from the Journal of Marketing, the Journal of Marketing Research, the International Journal of Research in Marketing, the Journal of Advertising Research, Social Marketing Quarterly, Journal of Social Issues, the Journal of Public Policy and Marketing, and the American Journal of Evaluation to identify experts within the marketing and social marketing fields for in-depth interviews, and to identify considerations related to individual metrics and the evaluation of marketing campaigns.

Opinion Dynamics completed in-depth interviews with eight marketing industry experts focused on promoting behavior change for energy conservation or other social good topics. The purpose of these interviews was to learn more about how campaign practitioners and academics measure the success of marketing campaigns and identify best practices and lessons learned that could be applied to energy conservation campaigns in California. We offered an incentive of $100 to all individuals who completed an interview.

We identified an initial group of interviewees through the literature review efforts. These interviewees authored key papers about measuring the success of behavior change campaigns or played strategic advisory roles for several of the campaigns included in the literature review. We used a snowball sample technique to identify additional experts to include in the sample. The evaluation team conducted a systematic thematic data analysis of the interview transcripts using the qualitative analysis software NVIVO to identify and analyze consistent themes that appeared across interviews.

Delphi Study

The evaluation team conducted a Delphi Study to help California ME&O stakeholders explore and, where possible, come to a consensus on metrics and benchmarking strategies that should be used to track the success of energy conservation ME&O across the state of California.

The Delphi Method is a systematic, multi-round, interactive research methodology administered to a group of experts to elicit the best thinking of the group about a complex issue. Delphi studies have been used widely across many different contents, including social marketing,[6] to reach consensus on particular issues among a group of experts. Based on our extensive experience with ME&O in California, we selected an online Delphi method to address key research questions because it allowed us to protect participants' identity within the group, leverage experts from across the country, moderate and guide the feedback and discussion process to revise, refine, and redirect questions based on initial responses, and maximize the benefits of group wisdom while minimizing the obstructive dynamics that can accompany face-to-face interactions.

The Delphi Study included a facilitated panel discussion comprised of two groups of participants:

- Marketing experts: This group is comprised of six marketing experts from academia, non-profits, and private marketing firms with specific expertise in customer behavior and measuring the success of energy conservation communication strategies
- ME&O stakeholders: This group is comprised of representatives from the IOUs and RENs, and one representative from DDB

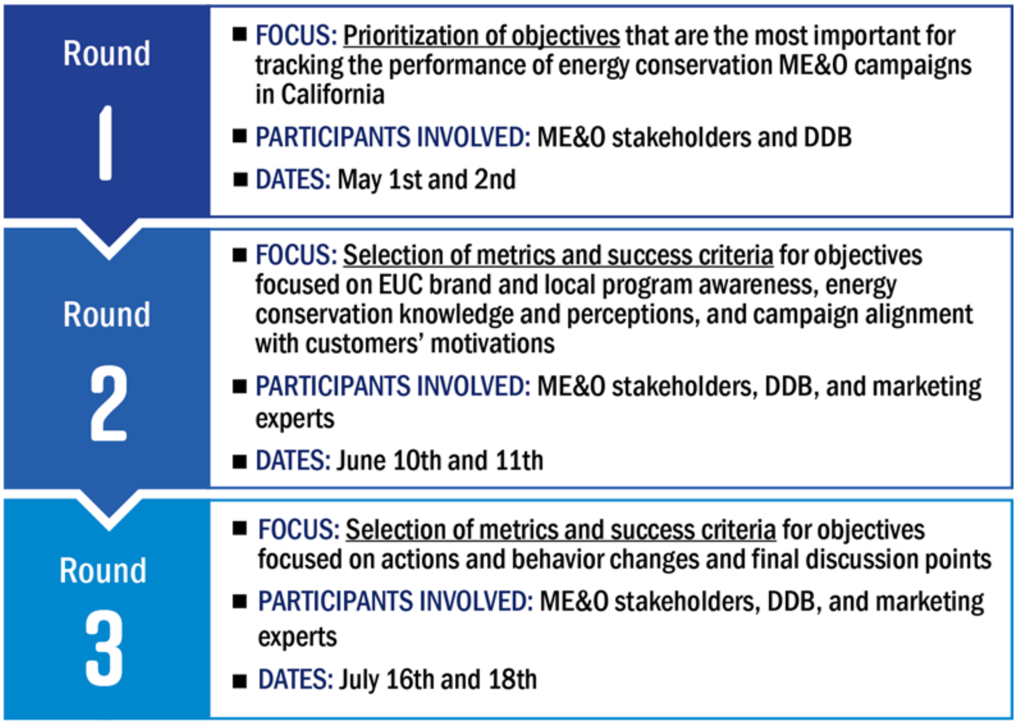
We identified an initial group of marketing experts for potential participation in the Delphi Study through literature review and in-depth interview efforts. These experts authored key papers about measuring the success of behavior change campaigns or played strategic advisory roles for several of the campaigns included in the literature review. We used this information to select a group of experts with diverse backgrounds and views to participate in the Delphi Study. In addition, we recruited experts with specific expertise in customer behavior and measuring the success of energy conservation communication strategies through our own knowledge and network to experts in this field. In order to encourage participation in the study and reduce the risk of declining participation throughout the study, we provided marketing experts with a $600 check upon completion of the Study.

In keeping with the suggested Delphi Study format from the literature, the Opinion Dynamics Team conducted a three-round Delphi Study. Based on suggestions from the Landscape Analysis, we began by asking participants to identify what they believe California ME&O is trying to achieve and prioritizing these objectives for further discussion. In the subsequent rounds of the Delphi, we used these prioritized objectives to work

[6] Borden, S.D, Shaw, G., and Coles T. Consensus Building in Social Marketing Campaigns Through the Delphi Method. *Social Marketing Quarterly*, 23(4), 354-367.

towards consensus on a set of metrics and associated success criteria that can be used to measure campaign performance moving forward. Figure 3 provides further details about each session of the Delphi Study.

Figure 3. Delphi Study Session Details



Each day of the session, participants responded to a set of questions posted on an online discussion board and participated in ongoing follow-up discussion throughout the day. Each morning of the session, the moderator analyzed the responses to the initial questions and identified topics with consensus where almost all participants gave similar responses, and topics with a lack of consensus, where participants provided conflicting responses. For areas of consensus, the moderator categorized results into:

- "High priority metrics" which participants feel are critically important for measuring progress towards the objectives, and
- "Supplemental metrics" which participants feel provide additional insight but are also less essential for measuring progress towards the objectives

Mid-way through each session, the moderator asked participants to review an initial summary of results with areas of consensus, lack of consensus, high priority metrics and supplemental metrics and we asked participants to respond to this summary by providing an explanation for why their opinion supported or differed from the consensus opinion.

Appendix B. Research Instruments

Campaign Expert Guide.pdf

Appendix C. Recommendations

Study ID	Study Type	Study Title	CPUC Study Manager
Group B ME&O Sector	Process Evaluation	California Marketing Education and Outreach Evaluation Consensus Project Report	Erik Johnson

Rec #	Program or Database	Summary of Findings	Additional Supporting Information	Best Practice/Recommendations	Recommendation Recipient	Affected Workpaper or DEER
1	SW ME&O	Experts and key stakeholders agree on a core set of metrics for assessing the achievement of prioritized statewide ME&O campaign objectives.	Detailed conclusions and implications are presented in Section 4, page 25.	The SW implementer should track core metrics that support the formative evaluation of campaign messaging and content PAs should begin to track core metrics for their own internal campaigns where applicable.	DDB and all PAs	N/A
2	SW ME&O	Experts and key stakeholders have differing views on the importance of assessing campaign attribution.	Detailed conclusions and implications are presented in Section 4, pages 25-26	The CPUC and its evaluation team should begin conversations on the attribution approach.	CPUC	N/A
3	SW ME&O	Stakeholders disagree about the role of the SW campaign in lead generation.	Detailed conclusions and implications are presented in Section 4, page 26.	The PAs, CPUC, and the SW implementer should begin discussions on the role of the SW campaign in lead generation. The SW implementer should continue to provide monthly updates on the number of referrals to PA websites.	CPUC, DDB, and all PAs	N/A
4	SW ME&O	Further discussion is needed on targeting and measuring reductions in energy use.	Detailed conclusions and implications are presented in Section 4, page 26.	The CPUC and stakeholders should begin discussions on the importance and feasibility of measuring reductions in energy usage.	CPUC, DDB, and all PAs	N/A
5	SW ME&O	The role of SW ME&O evaluation is not addressed in current guidance documents.	Detailed conclusions and implications are presented in Section 4, pages 26-27.	The CPUC should more formally delineate the research responsibilities of the SW ME&O implementer and evaluator.	CPUC	N/A

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For more information, please contact:

Hannah Howard
Managing Director/Vice President

510-214-0183 tel
hhoward@opiniondynamics.com

1 Kaiser Plaza
Suite 445
Oakland, CA 94612