

Measuring the Effects of Marketing Campaigns: Lessons and Innovative Methods from California

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Abstract

Prior to the 2006-2008 program cycle, California's Marketing and Outreach (M&O) programs were seen as marketing campaigns for educational purposes, and thus were not subject to the same evaluation efforts as resource acquisition programs. Because the majority of the California Public Utility Commission's (CPUC's) evaluation efforts focused on programs that directly achieve energy savings, marketing campaigns such as *Flex Your Power* had not been evaluated. However, not evaluating these programs also meant that to some extent, California's M&O programs were unaccountable to the CPUC, which funded these efforts. In this paper the authors describe California's recent move towards establishing metrics for these M&O programs so that they can start to define and determine "success." This paper discusses four challenges related to measuring the effects of M&O efforts based on lessons learned in California. The authors highlight five innovative tools that the CPUC is considering for measuring effects, and discuss the applicability of these five methods to M&O programs in other areas of the country.

Introduction

In 2006, the California Public Utilities Commission (CPUC) funded the first CPUC-led independent evaluation of three statewide marketing and outreach (M&O) programs, i.e., *Flex Your Power*, *Reach for the Stars*, and *UTEEM*. This M&O evaluation effort was launched just as the CPUC was finalizing the *California Energy Efficiency Evaluation Protocols* (the Protocols) (TecMarket Works Team 2006), which outline the requirements for programs that seek to change the behavior of consumers, such as M&O programs. The Protocols indicate that starting with the 2006-2008 program cycles, "information, education, marketing, promotion, outreach or other types that may not have specified energy savings goals, but are still expected to provide energy impacts within their target markets" would have to meet the basic level of rigor for California program evaluations, which requires an "evaluation to estimate the program's net changes on the behavior of the participants." While the first evaluation of California's statewide M&O programs was limited in scope, it essentially examined the three M&O programs to better understand if the effects from these programs could be measured using the basic level of rigor described in the Protocols.

The major finding from this initial evaluation effort was that the programs themselves had not defined "success." The goals for these programs were unclear and subject to interpretation.

For all energy efficiency programs in California, the guiding documents are the Program Implementation Plans (PIPs). However, the goals stated in the various PIPs for California's three M&O programs, and approved by the CPUC, were very general and reflected more ideological goals rather than actionable goals with specific objectives. As such, the meaning and content of the program plans were subject to interpretation. The program year (PY) 2004-2005 process evaluation of these efforts (ODC Team 2007) uncovered that the goals and objectives as written in the PIPs were interpreted

differently by some of the program implementers and the CPUC oversight staff because of this lack of specificity. For example, the *Flex Your Power Program* goal was to “motivate Californians to take action to achieve lasting energy savings” (ODC Team 2007). Program managers interpreted this goal, as written and implemented by the *Flex Your Power* program, to be one towards which the program implementers would constantly strive. However, the CPUC expected that specific identifiable and measurable actions would result from the budget allocated to this effort. Unfortunately, the PIPs provided no insight as to the effects that needed to be measured.

Defining success by determining agreed-upon goals and measurable effects (i.e., metrics) is critical in the search for accountability for M&O programs. Going through the process of developing metrics, and then taking a step back to determine if those metrics support program goals, is necessary for documenting the success of a marketing campaign. As with any program, success can be in the eye of the beholder unless the measurements for success are defined. This is particularly true for educational programs, such as marketing and outreach programs, since increasing the knowledge of the target audience is less tangible than providing a rebate for a specified number of refrigerators.

The CPUC has emphasized accountability on the part of the marketing programs given the large combined program expenditures for these types of programs (approximately \$40 million in PY2004-2005 and \$60 million in 2006-2008). For PY2006 and beyond, the CPUC expects M&O programs to document success by demonstrating changes in 1) awareness levels, 2) knowledge, and 3) behaviors or actions taken as a result of changes in awareness or knowledge.

Along with the difficulties caused by having program plans that lacked clear goals and metrics, the 2004-2005 process evaluation also uncovered several other findings relevant to measuring effects from information type programs. The authors describe these “lessons learned” below, followed by some innovative methods currently under consideration in California.

Challenges of Determining Effects for M&O Programs

As the CPUC asks these previously “exempt” M&O programs to begin to document effects, there are specific challenges that will arise. This section documents four specific challenges that are somewhat unique to M&O programs. The authors encourage evaluators to consider these four “lessons learned” in future M&O program evaluation efforts across the country.

Baselines and Controlling for Other Influences

One major finding from the initial evaluation effort is that no CPUC-recognized baseline had been established for these campaigns prior to funding the efforts. Although success generally entails some change over time, there was no true baseline from which change could be measured. In California, establishing a baseline at this point is difficult given that these M&O programs have been running close to five years, and the efforts are ongoing. Identifying what would have happened in the absence of the campaigns is nearly impossible to do through standard methods of only interviewing customers in the areas where the marketing efforts exist. As such, the initial evaluation revealed the need for a baseline, and described why it would be necessary to use suitable comparison groups to provide a clear indicator of the incremental effects of these marketing campaigns.

There is, however, a concern that documenting “effects” attributable to M&O programs will set up competition between M&O programs and Resource Acquisition programs. This concern stems largely from mistaken assumptions that the CPUC requires that M&O programs provide documented energy savings. At this point it appears that for 2006 and beyond, the CPUC is requiring marketing programs to deliver only “indirect effects”—specifically, behavioral effects. M&O programs will not be required to document or calculate energy savings (some of which may be claimed by rebate or other

types of programs) because of the complex issues associated with attribution and the challenge of documenting causal relationships. As such, the marketing programs are not in direct competition with resource acquisition (e.g., rebate) programs to deliver net energy savings. If a rebate participant indicates that statewide marketing efforts aided them in making the decision to participate in the program, it is possible for the statewide marketing campaign to use this “effect” as an indicator of the M&O program’s success, while still allowing the rebate program to claim the actual energy savings. Thus, in effect, partial attribution and double counting of effects (although not energy savings) are permissible. In fact, M&O programs are developed to work in tandem with resource acquisition programs—often times, the M&O effort will work to move customers to participate in resource acquisition efforts. For this reason, any evaluation effort must not attempt to ferret out attribution to an M&O program at the expense of a resource acquisition effort—the two efforts are not intended to be mutually exclusive.

Overlapping Messages and the Need to Distinguish Between Messages

Another finding based on attempts to conduct survey efforts for the three PY2004-2005 M&O campaigns is that it is difficult to distinguish between messages. For example, during the 2004-2005 program cycle, California’s *Flex Your Power* campaigns included numerous marketing messages that reached across the state. Similarly, the *Reach for the Stars* campaign also had a suite of messages targeting rural areas which, therefore, overlapped both in their geographic area and in the demographic targets. While the two campaigns most likely worked together to increase awareness, it was unclear whether they should have been able to be distinguished. In developing metrics specifically for M&O programs, one factor to consider is whether and how to distinguish between the various campaigns when they overlap in the target audience.

Many areas of the country are targeted with overlapping utility-led, local, state and national messages. Research conducted by Opinion Dynamics in the spring of 2007 demonstrates that nationwide, between 61 percent and 72 percent of households in the past three months have seen or heard advertisements promoting energy efficiency, or requesting that they conserve energy. (These data are collected through a national survey conducted by ODC, and are unpublished.) At issue therefore is how, and whether, to distinguish between the M&O program efforts and other unrelated promotional or educational efforts such as the “Go-Green” or emission reduction campaigns created by General Electric, Home Depot, or Wal-Mart. For some, it may be best to attribute effects to particular campaigns, but in cases where consumers cannot distinguish between messages, and where data cannot be collected to capture information on who saw the messages, it may be acceptable to measure overall awareness and overall behavioral changes relative to a comparison area not exposed to the program’s efforts. Again, however, the expected level and approach for assessing attribution is important to establish upfront.

Range of Actions and Difficulties in Measuring Behaviors

ODC’s initial evaluation also uncovered that these M&O programs promoted a range of behaviors and actions, some of which are difficult to track. For example, the three major outcomes that are sought by California’s M&O programs include:

- Outcome 1. Encouraging consumers to purchase energy efficient products ranging from CFLs to Energy Star ceiling fans or appliances,
- Outcome 2. Encouraging consumers to participate in utility and third party resource acquisition programs, and

- Outcome 3. Encouraging consumers to change behavioral practices in their home or business, such as turning off lights or raising the thermostat temperature during the hot summer months.

This third Outcome is more difficult to track than Outcome 1 or 2. Measuring the purchase of a particular piece of equipment, or participation in a resource acquisition program, is much more straightforward than understanding how and when customers use lights—especially when the specific homes that hear the messages are unknown. Moreover, evaluating campaigns that seek to achieve a mix of the three outcomes, similar to California’s M&O efforts, is even more difficult than evaluating a standard campaign for a single product.

Understanding behavior changes is also not as straightforward when it comes to such diverse messages. For example, standard models that look at awareness, knowledge and behaviors are built for a single product or innovation. They don’t capture the depth of the knowledge or actions (e.g., a customer may be aware and have taken actions to use energy efficient CFLs but know nothing about the air conditioning turn-in program also being promoted by the campaign).

Timing of Measurements

It is also clear that the timing of the evaluation effort is crucial for M&O programs. Historically, program evaluation efforts in California and elsewhere have lagged behind the implementation of the programs. This is partly to allow for the programs to be completed, and partly as a result of the complicated process of getting evaluations approved, RFPs written, contractors selected, and methodologies finalized. In fact, the M&O program evaluation team, led by ODC, started the 2004-2005 evaluation in early 2006, after the program was complete and into a new funding cycle.

In the case of M&O programs, this time lag makes evaluation particularly difficult. Not only is consumer recall of messages diminished, but because the educational or marketing efforts tend to be ongoing, it is difficult to distinguish effects that occurred in the prior program year from effects that are occurring as a result of more recent marketing efforts. For example, for the M&O process evaluation ODC conducted a survey of people who called into the toll-free *Reach for the Stars* telephone line; however, many of these people did not recall making such a call—even though there was a list that indicated that they did call. This was due to the time elapsed. As such, this was not a reliable indicator of “success,” but rather the best available information after the fact.

Although not surprising since the implementers of 2004-2005 programs were not required to measure effects, if the administrators and implementers had realized the “effects” that were to be measured (or if the evaluation team were hired at the beginning of the program funding cycle), they would have been more likely to collect the data necessary to document the success of the program. After the fact, however, the initial evaluation was limited to the information available such as standard media tracking associated with “buys” which might or might not be aligned with program goals and metrics. It also means that the data needed for the evaluation efforts was not always available. For future M&O program evaluation efforts, defining the metrics ahead of time will allow the programs (and/or evaluators) to track the relevant data during the program cycle.

From the initial process evaluation, ODC concluded that evaluation efforts should be conducted at the same time as, or as close as possible to, the marketing campaign. Not only will this allow for better “effects” data to be collected, it will also allow the evaluation results to be used to provide mid-course corrections.

Five Innovative Tools for Measuring Effects

Going forward, the CPUC will be requiring all M&O programs to meet the basic level of rigor (as defined in the Protocols) and document success by measuring changes in awareness, knowledge and behaviors. As such, the goals and metrics for M&O programs must be clear. Now that the CPUC and the implementers are working on new goals, they will also have to think about how to measure these effects. Below the authors discuss five tools that could be used for assessing behavioral changes induced by energy efficiency marketing efforts.

Method 1: Nationwide Omnibus Survey

An Omnibus Survey is a nationwide survey of randomly chosen respondents who answer a variety of questions on unstructured subjects. As such, an Omnibus Survey can help monitor, on a monthly basis, the attitudes and behaviors of Americans regarding energy efficiency and other issues. Sample research questions for M&O efforts may include:

- The types of energy efficiency messaging/advertising they have seen in the past month;
- Proclivity to purchase energy efficient equipment when needed;
- Knowledge of climate change issues (perhaps a different question each month);
- Energy efficient actions and behaviors (perhaps using a behavioral energy index).

This approach works well when there are specific questions for a representative number of American households, with no screening criteria. The Omnibus Survey provides an avenue to gather market research information in short order and for a low cost (e.g., ODC currently fields an Omnibus survey of 900 Americans each month for existing clients).

An Omnibus Survey not only allows for multi-state and multi-region comparison groups, but it also allows for these regional trends to be tracked over time. Because identifying what would have happened in the absence of the campaigns would be impossible from only interviewing customers in areas where a marketing effort exists, this approach looks at suitable comparison groups to provide a clear indicator of the incremental effects of a marketing campaign. This approach focuses on incremental differences between regions of the country exposed, and not exposed, to the messaging under evaluation. For example, with the political climate as it is now, more and more private companies are using energy efficiency messages nationwide; however, this approach can determine whether specific campaigns such as *Flex Your Power* is having an incremental effect on Californians compared to other regions.

While the benefit of this method is that it allows an evaluator to control for national influences, the survey would still have to be carefully crafted to attempt to distinguish between local messages. It also relies exclusively on self-reported data to understand both awareness and behavior changes.

Applicability to Other Areas of the Country. This method is regional in nature and could be applicable to any area of the country looking to benchmark their efforts. It is a relatively inexpensive method, but it may not allow for the level of detail desired since the specific modules are short to reduce cost. The questions would need to be carefully crafted.

Method 2: Big Box Retailer Intercepts

The Big Box Retailer Intercept method focuses on understanding trends in the purchase of energy efficient equipment, particularly among customers in the market to purchase household

appliances. This is an appropriate method to employ if the M&O messages target new appliance or ceiling fan purchasers (Outcome 1, described earlier).

This approach uses a panel of stores (e.g., Home Depot, Sears, etc.) where the targeted appliances or end-use measures are sold. While the exact number and distribution of the stores may vary, for the purpose of this discussion this method may assume a selection of approximately 20 stores throughout a region. On one weekend per month (or 24 days per store per year), the evaluation team would place field staff in the stores to conduct a short intercept survey on awareness of marketing efforts, importance of energy efficiency, and the likelihood to purchase Energy Star equipment. As such, this would become a rolling panel to collect information specifically from customers in the market to purchase the end-use measures targeted through the M&O efforts.

The intercept survey would be designed to ask about key attributes, and to see where energy efficiency fits in the list of possible attributes. Through the short survey, this method would collect data on the purchase of (or likelihood of purchasing) Energy Star equipment.

Through the intercept survey, it is also possible to collect names and telephone numbers of the shoppers who fill out the short survey to develop a database of customers in the market who could be called back within a six-month time period to determine whether they purchased an Energy Star appliance or ceiling fan.

Specifically, therefore, this method looks at actual behaviors rather than self-reported behaviors. Like the Omnibus Survey, it is also timely and allows for tracking over time. Moreover, because it is conducted in-person, the survey, although short, could include pictures or slogans from various campaigns to allow the interviewer to distinguish between various messages. However, there may be biases in terms of the sample of stores selected.

Applicability to Other Areas of the Country. This effort could be fielded in any area of the country. Depending on the store, however, it may be difficult to collect data within the store, but overall, this method is quick, easy and effective if big box stores are targeted. Large-scale field efforts such as these should be conducted by firms with experience in this area to minimize costs.

Method 3: Resource Acquisition Program Application Form Redesign

The Resource Acquisition Program Application Form Redesign is, as its name implies, a redesign of all application forms. Through this method, the evaluator would work with program implementers to amend resource acquisition program applications. This method is an appropriate method to employ if the M&O messages encourage customers (residential, commercial, industrial, etc.) to participate in specific resource acquisition programs (Outcome 2, described earlier).

To redesign program applications, the evaluator would craft two to three key questions to add to the current rebate application forms. Sample questions might be about the value of the marketing efforts, such as “Have you seen any marketing or promotional efforts? Which ones?” and “Was your decision to participate influenced by any of the following?”

The evaluators would meet with each of the programs targeted by the M&O programs to initiate the redesign process, finalize the questions, and establish an informational/data link with the implementers in order to retrieve these data and develop quarterly reports on the percentage of participants who saw materials and percent who report that the marketing had some influence.

Specifically, therefore, this method is comprehensive and timely in that it catches participants as they enter all of the resource acquisition programs. It also looks at actual behaviors rather than self-reported behaviors.

Applicability to Other Areas of the Country. This method is applicable to all areas. The effort required depends on the communication channels within the utility or energy efficiency agency.

Method 4: Billing Analysis Targeted Survey

The CPUC is also considering another method, the Billing Analysis Targeted Survey. This is an approach that uses a large-scale billing analysis to separate customers into three bins: homes that have reduced their electricity usage, homes that have a relatively steady usage over the past couple of years, and homes that have increased their electricity usage. This method would then use a telephone survey to interview a representative sample of people in each of the billing analysis groups. Through the survey, customers would be asked why electricity usage had changed in their home, as well as about their familiarity with the relevant marketing campaigns.

Although this method most likely would not distinguish between the various mass media messages, the Billing Analysis Targeted Survey approach would allow the evaluators to understand whether the actions taken by consumers were tied to overall energy-use reductions in the home. It also allows evaluators to understand the effects of the marketing messages in the context of other influences. The most important aspect of this type of study would be to determine if consumers have actually changed behavior because of messaging from any of the M&O programs being evaluated. It is not enough to increase awareness or knowledge of energy efficiency, rather the program messaging must work to cause consumers to take action. This method also allows evaluators to understand whether customers actually have saved energy—not just whether they tell us that they have saved energy.

Applicability to Other Areas of the Country. This approach requires access to past billing data and can be costly, but overall, this method could be used in any area of the country.

Method 5: Cell phone Media Measurement

Finally, the Cellphone Media Measurement method is an innovative method that uses a cellphone-based technology to recognize the advertising messages to which customers are exposed. This is then coupled with a bi-annual survey of panelists that can be used to understand behavioral change.

Developed by Integrated Media Measurement, Inc. (IMMI), this approach focuses on determining the reach, frequency and behavioral changes of the M&O mass media advertisements using a panel of participants (approximately 550 panel members). This integrated media measurement system links media exposure to consumer action (IMMI 2007). Using a digital monitoring system based on open-architecture cell phones, this method tracks media 24/7, including media that other research companies cannot accurately measure:

- Television viewing outside the home
- Time-shifted and on-demand viewing
- Radio
- DVDs/audio CDs
- Theatrical films, live concerts and sporting events
- Cell phone videos and games

The Cellphone Media Measurement approach solves key methodological problems associated with most existing media research. It provides:

- Comprehensive tracking of all media, not just a single source.
- Unobtrusive and totally passive data collection. There's no need for any activity that might alter panel members' behavior, or for special encoding by media providers.
- Cellphone based data collection. This method uses off-the-shelf hardware that research panel members already know how to operate.
- Real-time reports with detailed demographics that get to individual behavior, not just group averages.

It also connects advertising to consumer behavior more directly and more accurately than any other service and answers key questions such as:

- How many people actually see the marketing?
- How effective is the marketing?
- How can I measure new media audiences that are not accurately measured today?

Every six months, an evaluation team would field a battery of questions to these panelists to inquire about awareness of M&O (in context of what is reported by the Cellphone Media Measurement) and changes in behaviors (e.g. Did they recently purchase an appliance and was it Energy Star? Have they adopted any energy efficiency practices in the past?, etc.). Based on the information collected, the survey findings can be segmented to compare customers who heard the M&O messages to those who were not exposed to messaging.

In addition, this method also identifies and examines exposure to non-M&O advertising that has an energy efficiency message, such as advertisements from Lowes or Wal-Mart. Moreover, it is possible to access past records to examine the panelist's exposure to specific M&O messages back to October 2006. In effect, therefore, this provides a way to go back in time to determine advertising reach; it also provides almost immediate feedback on behavior changes caused by the various marketing efforts.

In all, this Cellphone Media Measurement method is the most effective method at distinguishing between mass media messages. It also collects time-sensitive data. Moreover, through the use of similar panels in another area of the country, it could be used to control for other influences. However, the method still relies on self-reported data collected through a survey to understand the behavioral changes made as a result of the media messages.

Applicability to Other Areas of the Country. While cutting edge, IMMI panels currently exist only in limited locations including Denver, Houston, New York, Chicago, and Los Angeles, although additional panels could be created. This method is also costly.

Summary of Methods

Table 1 lays out what each of the methods described above can achieve for M&O program evaluation.

Table 1. Summary of Five Innovative Methods

	Method	Method is able to...			
		Control for Other Influences	Distinguish Between Various Messages	Target Actual Behaviors (Rather Than Reported Behaviors)	Collect Time-sensitive Data
1	National Omnibus Survey	Yes	No*	No	Yes
2	Resource Acquisition Program Application Form Redesign	No	No	Yes	Yes
3	Big Box Retailer Intercepts	No	Yes	Yes	Yes
4	Billing Analysis Targeted Survey	Yes	No*	Yes	No
5	Cellphone Media Measurement	Yes	Yes	No	Yes

*Note that various messages could be distinguished via this method through appropriate survey design.

Conclusions

As this paper has shown, in conducting M&O program evaluations it is important to (1) be clear about the goals of M&O programs, (2) think through the measurable effects (i.e., metrics) prior to implementing the program, and (3) to have an understanding of how these metrics will be measured.

Understanding the effects of information-only programs can help to justify future funding. The five innovative methods discussed above, or other similar methods, can be used to measure M&O program effects. While the final evaluation approach will depend on the goals of the specific M&O program, the best approach may be to use multiple methods to get at all of the aspects necessary for a robust understanding of the impacts of these types of programs.

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