We Should Pay More Attention to How We Operationalize Program Interventions

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ABSTRACT

Evaluators devote considerable attention and effort to assessing the impacts of energy efficiency programs and, often, the implementation process and communication efforts that accompany those programs. However, they seldom delve into the process by which programs are taken from the conceptual stage to implementation. Accordingly, little systematic analysis of the operationalization process and few lessons learned are available to program designers.

To illustrate the problem, this paper offers some examples of market transformation programs for which the portfolio logic—the set of intervention activities—was considered strategically as well as examples of less strategic approaches that appear to embody "follow the leader" or "business as usual" thinking. It also suggests several criteria by which components of a portfolio strategy might be selected, such as whether the focus is on long-term or immediate savings, sponsors' ability and willingness to incur substantial direct costs, and interest in working with and leveraging the contributions of other market actors.

The initial maturation of many programs makes it appropriate to address these issues now. For example, as some energy-efficient products begin to achieve high levels of market penetration, it is time to review the benefits and costs of continuing rebate-centered programs and to consider what transition strategies may be most effective. The paper concludes by recommending that policymakers and designers document more fully the decision-making and factors that influence how program designs are operationalized, and that evaluators review and analyze this aspect of programs more regularly, to provide additional guidance for enhancing program effectiveness.

Background and Purpose

Over much of the past three decades, a number of dedicated and talented advocates have designed and implemented a variety of effective energy efficiency programs. These programs have stressed education of consumers and sales associates, development and tightening of codes and standards, encouragement of technological improvements, avoidance of lost opportunities, and the leveraging of market forces. The tools employed have included the use of financial incentives, design competitions, targeted procurements, and direct installation, as well as education and support of code upgrades and enforcement. Market sectors targeted have ranged from large industrial users, through small businesses, to hard-to-reach residential customers (such as non-English speakers), in addition to the obvious candidates such as office complexes, universities, and middle-class homeowners.

[1] The comments and recommendations in this paper are the sole responsibility of the authors and do not necessarily reflect the positions of the organizations with which they are affiliated or those of any of their clients or sponsors.

Nonetheless, some programs fail to meet our expectations and targets for effectiveness and cost efficiency. Some of these failures are surely the price of working on innovative projects: The absence of failures would suggest an unwillingness to take risks and to push the envelope. Other failures reflect the fact that customers have not responded as economically rational decision makers: Energy efficiency is not the only value in a world of competing priorities, needs, and wants—despite the assumptions made by those of us who spend our working lives on energy-related concerns. But another source of failures may be more avoidable: As an industry, we may pay less attention to examining and reviewing our deployment strategies than we should.

In the experience of the authors, considerable attention and effort are devoted to evaluating the impacts of energy efficiency programs and, often, the implementation process and communication efforts that accompany those programs. During policy and budget reviews, regulators and administrators regularly require assessments and reports on these issues, as do internal managers. However, evaluators seldom delve deeply into program operationalization—the process by which programs are taken from concept to implementation. Accordingly, little systematic analysis and few documented lessons learned are available to program designers.

This is not to suggest that those who develop program concepts and approaches operate in a vacuum. In most programs of which we are aware, program designers exert considerable effort to assess the technical potential, economic potential, and market potential of suggested energy efficiency initiatives, using the best information available to them, often commissioning targeted studies to gather the most up-to-date market assessments possible. Moreover, they regularly consider the relative benefits and costs of recommended initiatives, as well as overall cost efficiency and equity issues.

This paper advocates for more strategic analysis of the program intervention options, including retrospective evaluation of the process by which the program targets are translated into the implementation strategy. What appears to happen most often is that program staff members take their lead from and replicate program activities that have been effective in other states or service territories, with relatively little attention to issues of transferability over time and space. Moreover, since the program design was not grounded in decisions about meeting criteria relating to market conditions specific to a time and place, that design may continue beyond the point at which it would be prudent and cost efficient to change strategies. After discussing examples in the industrial sector (motors) and in the residential sector (appliance and lighting rebates), we argue that more strategic thinking about the process and decision criteria is needed during program design and that more evaluation of the process will contribute to our understanding and, ultimately, to increased program effectiveness.

Program Logic is Multifaceted

In the discussion of program design, Sebold et al. (2001, Section 4) differentiated among four different aspects of "program logic," as follows:

a. The logic of the market intervention, including the rationale for intervening rather than trusting to the natural evolution of the market and the expected effects of the intervention
b. The logic of the portfolio of intervention activities, including the mix of strategies that would be needed or most effective in achieving greater energy efficiency
c. The logic of the intervention design, including the specific activities to be conducted and the market effects to be achieved

d. The logic of transition, specifying the conditions under which the intervention would be modified or curtailed

Where policymakers and program designers have laid out their program logic—or where evaluators have imputed the logic of energy efficiency activities—it seems fair to say that considerable attention has been paid to the first and the third of these aspects, (a) the reasons for the intervention and the result(s) to be expected, as well as (c) the activities to be conducted in pursuit of those objectives. In contrast, relatively few efforts have been made, either prospectively or retrospectively, to explicate (b) the choices of approaches included in the intervention portfolio or (d) when and how the relevant approaches might change over time or in different service territories or regions.

An example of a carefully developed approach may be seen in the way in which the clothes washer market was addressed over more than a decade in the Pacific Northwest.[2] Utilities and public agencies first encouraged manufacturers to conduct research and development for models that would reduce energy and water use, in order to lower the burden on resources in the region. As part of this effort, the sponsors supported early deployment activities through rebates and comprehensive testing of the products, as well as consumer attitudes and satisfaction. At the same time, they developed a support network across the nation and helped encourage other organizations to join in supporting the effort through promotional activities and financial incentives. In addition, the sponsors worked for a tightening of the standards that set the floor for energy efficiency of these appliances, in concert with the consortium they helped to form. As manufacturers developed and marketed qualifying models, thereby increasing the market share for resource-efficient options, the utilities and public agencies in the Northwest (now organized under the Northwest Energy Efficiency Alliance, NEEA) gradually reduced the financial incentives to consumers, while continuing to promote the new models and educate retailers on their benefits, both energy-related and non-energy related (e.g., water savings). Throughout the deployment period, NEEA has tracked market share in the region and evaluated other indicators of the success of the strategy. Moreover, NEEA's members have considered quite carefully the composition of the portfolio: when and how to make the transition from reliance on one set of program strategies to another.

In contrast, we often see program approaches that appear to be driven by either "business as usual" considerations or an unexamined "follow the leader" attitude. For example, consider programs intended to increase the market penetration of motors designated by the National Electrical Manufacturers Association as NEMA-premium efficiency models. In recent years, evaluators have regularly reported that the difficulties in increasing motor efficiencies derive from poor integration of motors into the larger systems in which they are used, oversizing, poor rewinds of larger motors, dealers' reticence to stock NEMA-premium motors, and the cost premium associated with efficient smaller motors.[3] Some activities and programs target these

[2]A variety of organizations other than those in the Northwest have also been instrumental in helping to increase the energy efficiency of the U.S. clothes washer market. At the national level, these include the Electric Power Research Institute, the ENERGY STAR® program, and the Consortium for Energy Efficiency (CEE), as well as key manufacturers and retailers. In addition, other regional and state market transformation organizations and many energy and water utilities have played their part. Nonetheless, the leading historical role of the Northwest utilities and the Northwest Energy Efficiency Alliance is well attested. (See, e.g., Shel Feldman Management Consulting, Research Into Action & XENERGY 2001.)

[3] The simple payback for NEMA-premium motors is such that many users are happy to purchase them without any subsidies. As might be expected, this differs by the sophistication of the market segment in question.

concerns. For example, the Industrial Technologies Program of the U.S. Department of Energy offers software, developed at Washington State University, to identify inefficient or oversized motors and compute the energy and demand savings associated with selection of replacement models that are more energy efficient (DOE 2004). Also, the Consortium for Energy Efficiency (CEE), a national nonprofit public benefits corporation is leading a program, Motor Decisions Matter, to promote the attention of senior corporate managers to the energy and non-energy benefits (e.g., reduced down-time) of proactive motor management (Consortium for Energy Efficiency 2002). Several programs now address the rewind market and some programs have attempted to encourage dealer stocking of NEMA-premium models. However, other programs continue to offer customer rebates (either per unit or per horsepower) as a one-size fits all approach. This latter group of programs appears wedded to a strategy design that is not attuned to the relevant market and does not include any transition planning. Given high awareness of the benefits of NEMA-premium motors among sophisticated buyers and limited knowledge in other market segments, these programs run the risk of incurring high free ridership without demonstrable gains in market penetration. Either evaluations of these programs are failing to address the issue of how the portfolio is structured or their recommendations are being ignored.

In one example, program designers attempted to encourage motor dealers to stock and promote NEMA premium efficiency motors using an approach relatively novel to the energy-efficiency world, but were forced to return to the standard customer rebate strategy by "business as usual" pressures and external events. The suggested addition to the portfolio of interventions was based on findings emphasizing the need to encourage stocking of NEMA premium efficiency motors and that relatively few customers initially asked for such motors, particularly in the lower horsepower ranges. The designers reasoned that the program funds should therefore be targeted toward providing incentives to motor dealers, rather than customers, and that those incentives should be designed like other such efforts to motivate retailers—pegged to a gradually increasing set of quotas. The initial results of this approach were encouraging: increased dealer participation, acceptance of the increasing quotas, greater dealer promotion of qualifying motors, and increasing sales of those motors. Nonetheless, the sponsors abandoned this element of the portfolio in the face of desires to continue providing incentives directly to commercial and industrial customers as well as the sense of urgency fostered by the California energy crisis.

Are Appliance Rebate Programs Dinosaurs?

It may be the case that a similar "business as usual" dynamic is affecting some programs intended to increase the market penetration of energy-efficient appliances. The portfolio strategy of most market transformation programs that address appliances bears some resemblance to the approach taken with respect to clothes washers that was described earlier. Specific activities include a mix of the following, ordered from early to late in the production/distribution chain:

- Ongoing discussions with manufacturers, to encourage additional technological progress
- Support for higher qualifying specifications and standards
- Advertising via both direct mail and broadcast media
- Training and other support for retailers
- Point-of-sale promotional material

- Offering rebates to purchasers of qualifying appliances, which rebates may be
  - Bundled with rebates from manufacturers or retailers, to reduce direct costs while still gaining the attention of consumers
  - Time-limited, to increase salience and motivation to act

These activities are intended as complementary to one another, each with specific objectives. The broad outlines were articulated in an undocumented presentation by Milhone in the mid-1990s. He pointed out that market interventions can be designed as a *suite of activities* that, together, increase energy efficiency throughout the market by changing the distribution and sales levels of available products, as shown in Figures 1a and 1b. As described by Milhone, the programs change the mix of products from one where their distribution, relative to energy efficiency, is that of the bell-shaped, normal curve (Figure 1a) to one that is positively skewed—where the left (lower efficiency) end of the distribution is cut off and a long tail reaches toward higher levels of energy efficiency (Figure 1b).

Figure 1a. Normal Distribution of Products with Respect to Energy Efficiency

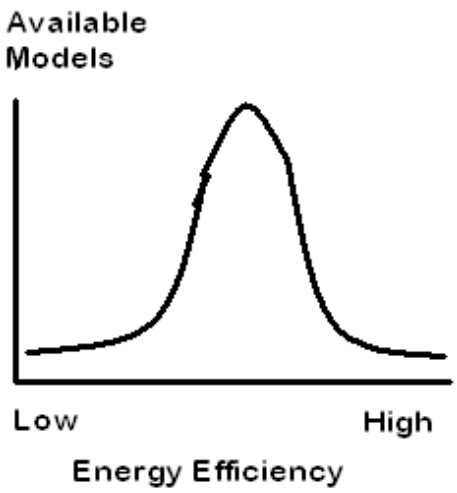
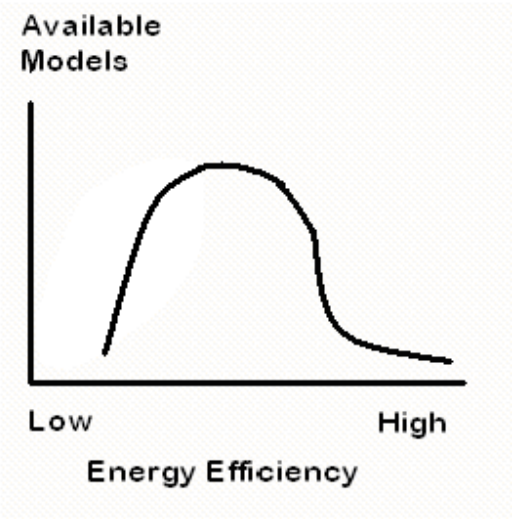


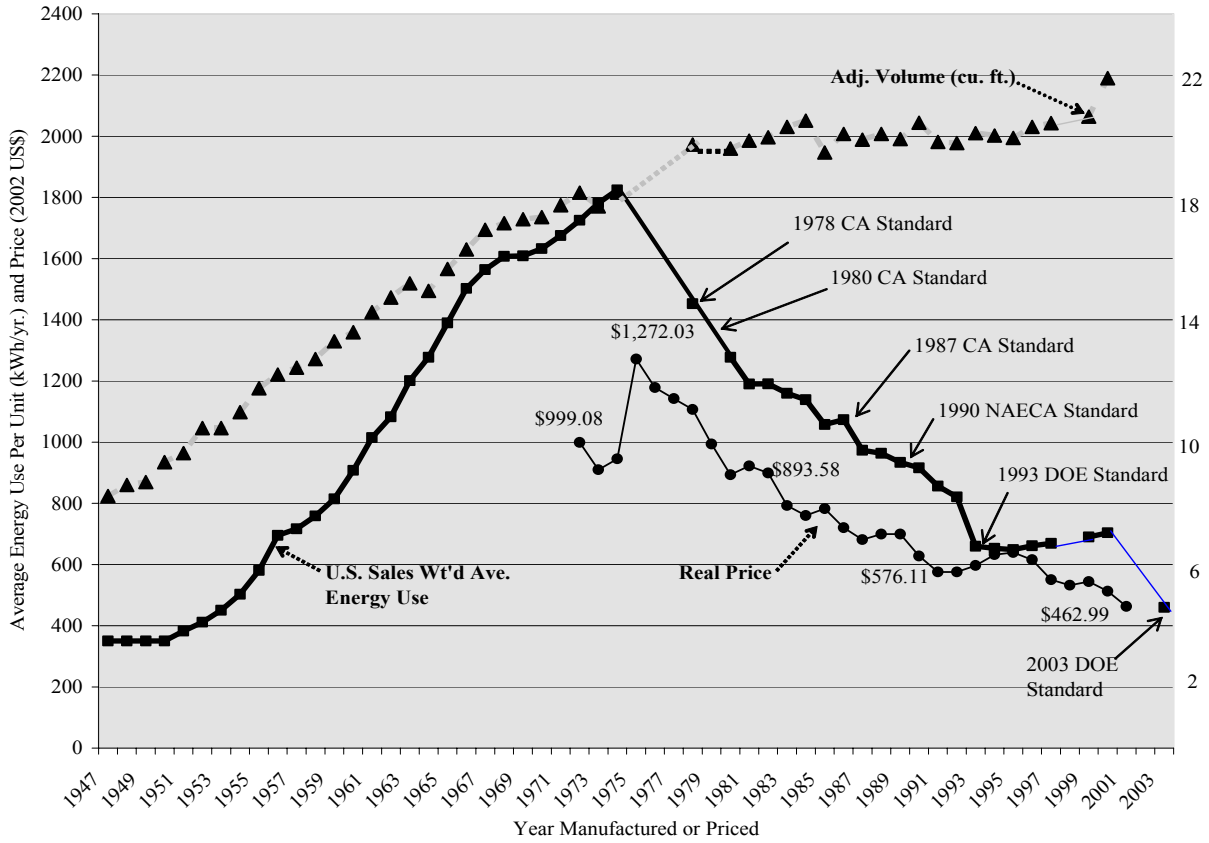
Figure 1b. Positively Skewed Distribution of Products with Respect to Energy Efficiency



To eliminate the least energy-efficient appliances in the domestic sector, for example, efficiency advocates work with codes and standards organizations to gradually tighten standards, raising the floor of what is produced, sold, and installed. Geller & Goldstein (1998) provide a graphic example that clearly demonstrates this effect. As shown in Figure 2,[4] the U.S. sales-weighted average energy use by refrigerators has ramped down dramatically as a function of changes in standards, even as the average volume has increased and the inclusion of options such as ice makers has become more prevalent. Moreover, manufacturers have been able to meet the changes in standards successfully while lowering the average real price to the consumer using such practices as offshore assembly of components.

[4] This is an updated version of the figure originally published in Geller & Goldstein (1998), showing that that the U.S. sales-weighted average energy use and real price have continued to decline.

Figure 2. Sales-Weighted Average U.S. Refrigerator Energy Use, Adjusted Volume, and Real Price, by Year [a]



Source: Goldstein 2004, with permission.

[a] Solid arrows indicate dates at which indicated standards took effect.

To provide incentives to the manufacturing sector and encourage technological leadership, programs contribute to research, development, and deployment efforts. And to increase the market share of existing, more efficient appliances, programs work with manufacturers, retailers, and other market actors by offering promotional assistance, targeted consumer incentives, sales training, and related mechanisms, particularly through the ENERGY STAR® program. Thus, over time, the combination of activities work together to cut off the lower end of the assumed bell-shaped distribution, shift the upper end of the distribution to the right, and increase the proportion of the area in the center of the curve.

Accordingly, the activities just described were intended to address the market barriers and other concerns that were present when the programs began. Table 1 suggests the relationships between the relevant barriers/concerns and these activities. It is appropriate for policymakers and program implementers to revisit the relevant concerns/barriers on a regular basis and to review which are still present and which may no longer be operative, and to ask what new concerns may require attention.

Table 1. Sample Appliance Program Activities as Solutions to Market Barriers and Concerns

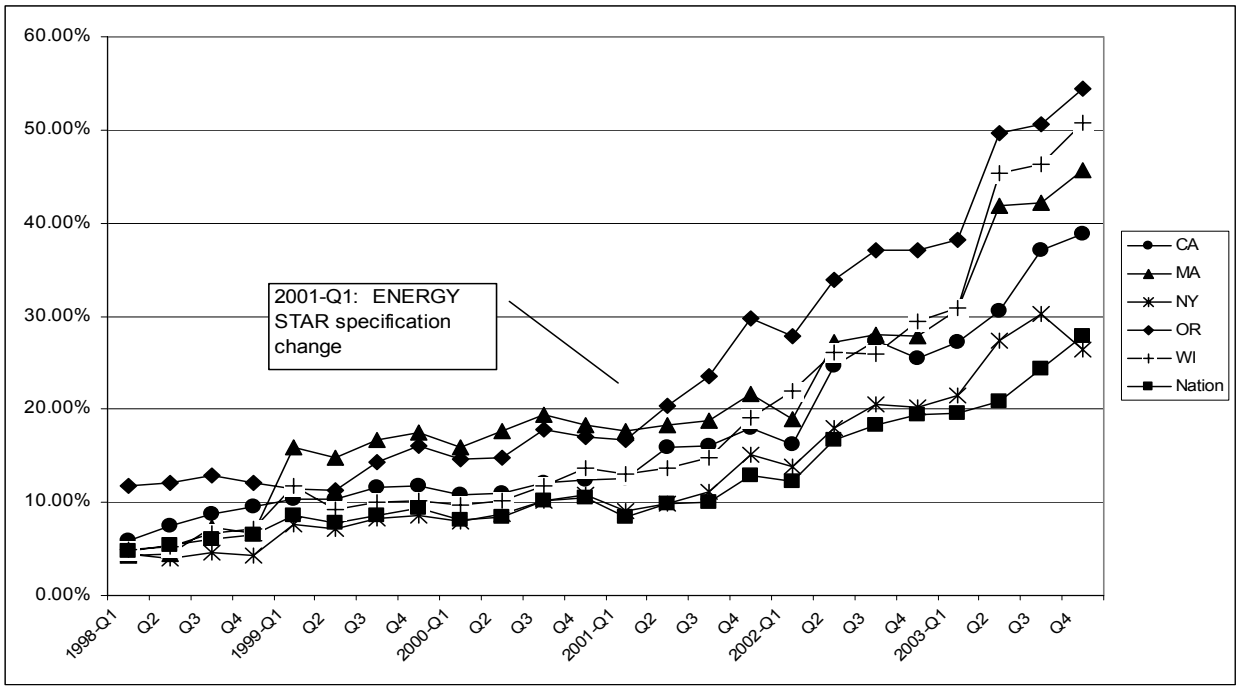
Market Barrier/Concern	Sample Activities
Limited availability of qualifying models; limited improvements in model efficiency	Encourage technological progress through design competitions, targeted procurements, and buydowns
Limited improvements in model efficiency	Tighten qualifying specifications and standards
Low public awareness of need for, availability of, and benefits of qualifying models	Promote qualifying products through public media and direct mail
Limited support of qualifying models by retail staff; low recognition of benefits to consumers and their retail suppliers	Train retail staff; provide related support
Limited awareness of qualifying models, ability to identify those models, and salience of those models in buying process	Provide and distribute sales promotional materials; label appliances (i.e. ENERGY STAR and EnergyGuide)
Low value given qualifying models and their benefits, particularly with faced with a first-cost premium	Provide rebates

Before proceeding, it is important to recognize that the appliance programs conducted by utilities and market transformation organizations across the country have been highly successful with regard to increasing the market penetration of qualifying appliances. As an example, Figure 3 shows the increase in market penetration of ENERGY STAR qualified clothes washers in states with active programs, compared with the U.S. as a whole, from 1998 through 2003.[5]

These data indicate that at least some energy-efficient appliances are achieving high levels of market penetration in those areas where programs are active. Moreover, a Delphi panel with representation from the manufacturing sector, Massachusetts program staff, non-utility parties, and national experts in energy efficiency programs (NMR et al. 2004) found that the increased market share in that state is believed to be sustainable, even if the current Massachusetts ENERGY STAR Appliance program were discontinued. Other data indicate that manufacturers are continuing to develop, produce, and market new qualifying models (cf. the new top-loading versions of the Maytag Neptune clothes washer introduced this year, for example) and that they have accepted and are preparing for a tightening of standards and specifications in 2007. In addition, evaluations in active regions have found that, at this time, retail sales associates tend to be aware of ENERGY STAR models and to promote them and that a majority of residential customers in those regions are aware of the ENERGY STAR brand and its meaning (e.g., Consortium for Energy Efficiency 2004; NMR et al. 2004).

[5] These data should be regarded as indicative of program effectiveness, but not as definitive levels of market penetration. Only some national retailers are represented. The retailers providing reports are not the same in every year (although they have been in recent years) and—as noted in the figure—the specifications for qualifying models have changed. Moreover, the trend line for the nation is biased upward, since the sales in the selected states were not removed. Finally, not all of the selected states have been active since 1998.

Figure 3. Market Penetration of ENERGY STAR Qualifying Clothes Washers in U.S. and States with Active Appliance Efficiency Programs, 1998-2003



Source: Data, D&R International; Figure from Nexus Market Research with permission.

For these reasons, it seems appropriate to ask whether the current program design should be continued. Of particular concern, are rebates still a necessary component of appliance efficiency programs, given their costs?

The Cost of Rebates Can Be Steep

When considering the costs of rebate programs, it is important to recognize that more is at stake than the direct outlay of cash to consumers. Other costs include expenditures for administration of the rebate program, which include the processing of customer applications (whether submitted directly or through the retailer)[6] as well as the design, printing, and distribution of forms. Not trivially, these costs may also include erecting and enforcing mechanisms to limit sales volumes and verify customer eligibility. If unchecked, for example, the availability of rebates for some products such as compact fluorescent lamps (CFLs) could induce such distortions as bulk purchases by some entrepreneurs who then offer the lamps for resale in other jurisdictions. Although such concerns are less problematic for more costly items such as domestic appliances, they are not altogether absent and do require attention.

In addition to these direct costs, which are not broken out in evaluation reports, program designers and policymakers must note other issues. For example, although manufacturers and retailers may benefit from rebate programs, they may also be concerned about the stability of those programs (e.g., changes in rebate levels and participation criteria, likelihood of

[6] For example, the Wisconsin Focus on Energy program currently pays more than $3.00 for the processing of each mail-in CFL rebate and $0.75 for each in-store rebate record (Van de Grift 2004).

continuation, etc.). Moreover, the long-term effects of rebates on perceptions of the value of energy-efficient appliances should be considered. In those programs that focus on resource acquisition, how can we minimize free ridership and maximize the benefit-cost ratio while continuing to offer financial incentives for products that have already achieved a solid footing in their markets? In those programs that seek to "transform" appliance markets, can we expect that customers will value energy efficiency as one of their key decision criteria when selecting a model, or will they continue to base their purchases on first costs and on other such features? In other words, programs must consider the implicit message about product value that is communicated when rebates become an expected part of the sales effort. The present experience of automobile manufacturers—the apparent necessity to offer steep discounts, rebates, and no/low interest financing, which maintain sales volumes but erode profits—may serve as a cautionary tale in this regard.

When Should Rebate Programs Be Discontinued?

When the concept of market "transformation" was first trumpeted, a number of writers raised the question of how to determine when that magic state had been reached. Most discussions focused on the level of market penetration as the relevant indicator and debated whether the appropriate trigger for discontinuing a program should be something close to the market potential, a majority of annual sales, or a level that was more modest but would reflect energy-efficient models being competitive with standard options as candidates for consumer choice. This debate was largely put aside, both because it appeared that high levels of market penetration were not yet in sight and because the concept of an "exit strategy" appeared self-defeating when additional technical potential and market potential would remain, beyond the models then in the market.

It is time to re-visit the issue, not as one of an "exit strategy," but as one of a "transition strategy." High levels of penetration based on rebates do not necessarily indicate that it is time to leave the market (although that is an option to be considered). They do mean, however, that it is appropriate to review the strategy and goals of the program and how progress can best be continued under the new market conditions.

Some program designers and implementers in the active service territories and regions have taken high levels of market penetration as an occasion to reduce rebate amounts, thereby decreasing the incentives for free ridership and relying more on word-of-mouth promotion and other ordinary market forces to stimulate sales of energy-efficient appliances. In addition, both they and others have placed increasing reliance on branding (specifically, ENERGY STAR)[7] and associated media promotion to maintain or increase penetration. In another example, Massachusetts utilities have revisited the use of buydown strategies to promote sales of CFLs as a means of going beyond consumer rebates to attract the attention of retailers and buyers.[8]

Most creatively, some program designers have recognized that the growth of market penetration for energy-efficient appliances means increased profits for participating

[7] Individual programs have developed region-specific campaigns for individual products (e.g., TumbleWash, in New England and parts of New York) and program components (e.g., Focus on Energy, in Wisconsin), with varying degrees of success. ENERGY STAR is the broadest relevant branding effort; stretching across the nation, lasting over years, and encompassing a varied family of products.

[8] Massachusetts utilities had considered this approach earlier, but rejected it out of concerns about sales tracking, gaming, and the need to restrict sales to customers residing in their service territories. The maturation of statewide programs, development of tracking plans, and observed successes in other programs helped mitigate those concerns.

manufacturers and retailers. Accordingly, as the planners reasoned, these other beneficiaries should be willing to share more of the burden of financial incentives, promotional efforts, and training activities. (See Reed et al. 2002.) Additional ways of ensuring a soft landing are needed.

These examples of changes in the use of rebate-based strategies demonstrate that program planners recognize the challenges posed by changes in the market, just as they are sensitive to the nature of the market when first rolling out a program. Moreover, changes in strategy are not confined to rebate programs and high levels of market penetration. Planners regularly modify programs that are not achieving targeted levels of success or targeted constituencies even more often than those that are effective. What is missing, however, is systematic documentation of these discussions and decisions. Far too often, only unacknowledged differences between one annual plan and the next can be found. When asked, program planners are able to describe their reasoning and the decision factors involved, but—in their focus on moving forward—they tend to have little patience for documenting these considerations.

Some Criteria for Selecting the Portfolio of Intervention Activities

An initial step in the appropriate direction may be to explicate the criteria by which the components of a portfolio strategy are selected. In the limited space remaining, a few candidates are suggested in an effort to spark further discussion.

One crucial criterion for selecting among program activities is the degree to which they focus on short-term or longer-term effects. Rebates, buydowns, and direct install activities produce short-term effects, while training and changing codes and standards are examples of activities with longer-term effects. The emphasis on one group of strategies or the other will be strongly determined by the needs of the region, of course. But it will also reflect the state of the particular market and the long-term objectives of the program sponsors, keeping in mind opportunities and triggers for making the transition from one set of strategies to the other.

A second criterion is the ability and willingness of the program sponsors to incur large direct costs in support of the program. Rebates may be very effective in gaining the attention of manufacturers and retailers, as well as that of consumers. They may thus increase the willingness of those market actors to consider increased production, distribution, and promotion of qualifying products, just as they may increase consumer consideration of purchasing those products. However, those costs may increase as market penetration grows and strategic shifts may be required if the sponsors are seeking long-term changes as well as the immediate acquisition of energy savings.

A third criterion is whether to make an effort to "raise the floor" for energy efficiency (e.g., based on California's Title 24 building code or the Congressionally mandated National Appliance Energy Conservation Act [NAECA]). Locking in energy savings through such action offers long-term benefits, but does require considerable lead-time. Moreover, it is likely to involve the participation of advocacy organizations as well as program administrators, and thus to incur risks of raising opposition among some trade groups and their allies.

A fourth criterion relates to cooperating with and leveraging the interests of other market actors, such as manufacturers, retailers, and builders in the promotion and sale of energy-efficient products and services. For example, design competitions, training activities, and targeted procurement activities can be designed to leverage the interests of other market actors and to enlist their cooperation in design, production, and promotion of energy-efficient options. Particularly important in decisions relating to this criterion are an understanding of the relevant

market, including key features and benefits of the products or services involved, such as the presence or absence of substantial non-energy benefits; the technological and economic impediments to increased energy efficiency, and the strengths and weaknesses of competitors. In addition, it is important to know the number and mix of manufacturers in the relevant market and to understand their key dimensions of cooperation and competition, as well as the channels of communication they use. Similarly, it is important to know and understand the retail channels for the products and services at issue and the organizational structures and selling propositions on which they rest.

Toward Systematic Evaluation of the Operationalization Process

In essence, these criteria come down to asking how the selected set of intervention activities fits both the energy-efficient products whose market penetration we intend to improve, the objectives of the sponsors, and the resources available. In doing so, it is appropriate to document the issues, the answers, and the decision process. As with most such efforts, this is likely to help improve the initial decisions, to clarify subsequent process evaluation, and to provide guidance for subsequent reviews and enhancements of the portfolio strategy.

The objective of this paper has been to offer a brief overview of the value of examining the factors that guide the operationalization of energy efficiency programs, thereby increasing systematic attention to these decisions. In closing, we offer the following suggestions to program designers and to evaluators, in the hope that the suggested steps will support more systematic attention to these issues and that, in turn, this will lead to even more productive and cost-efficient programs.

First, program designers should document the options that were considered during the developmental phase of the program, as well as the factors that guided the decision(s) that led to the design that was implemented. It is difficult to examine the efficacy of the decision(s) or the wisdom of the choice(s) made without a sense of the options that were considered or the reason(s) that a particular direction was selected. Indeed, the effort to document the perceived options and the decision factors is likely to clarify the decision process at the time, as well as retrospectively.

Second, evaluators should press for an understanding of the decision process to help guide strategy reviews of the program at issue as well as future program efforts. Review and analysis of the program operationalization is likely to help clarify the underlying assumptions and to focus attention on what factors should be tracked when determining whether to continue or to shift the strategy involved.

These recommendations are not intended either to move toward "paralysis by analysis." The authors take it as axiomatic that the objective of program staff is to develop the most effective and cost-efficient strategy possible with the resources available, and to deploy it as rapidly as possible. Their objective is not to search endlessly for evidence that supports the direction chosen or to analyze to the third decimal point the comparative value of different options. But it is in everyone's interest to document the decisions that are made, just as program staff members document the administrative procedures and accomplishments of the program itself—not to be scored, but to provide an opportunity for developing lessons learned.

Neither are these recommendations intended to suggest that reports by evaluators should supplant the judgment of policymakers and program designers. Just as the theory on which a program is built must be that of the policymakers and designers, so too must the

operationalization of that theory. Evaluators can provide reviews of the decision process that may assist in future program planning, but they are not the ones responsible for fielding those programs as effectively and expeditiously as possible. What is recommended is that program staff and evaluators cooperate to record and scrutinize operationalization decisions so that they may be as successful as possible.

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