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SHOPPING FOR AN EDUCATION: THE ADDED VALUE OF POINT-OF-PURCHASE MATERIALS

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Numerous utilities and market transformation organizations across the U.S. have been promoting energy-efficient home appliances (such as clothes washers, dishwashers, refrigerators, and room air conditioners) that meet the specifications of the ENERGY STAR[®] program developed by the Environmental Protection Agency and the Department of Energy. Sales data for national retailers, tracked by D&R International, show that the market penetration of these appliances has generally continued to climb, even as specifications have been tightened. Moreover, studies conducted for individual sponsors have demonstrated the value of local and regional efforts and estimated some of those effects (e.g., Hoefgen, Wilson-Wright & Feldman 2004).

To achieve these gains, utilities and other organizations that conduct energy-efficiency programs have invested in a variety of activities, including promotional advertising, incentive payments, and retailer training. Of particular importance here, they have focused on efforts to increase public awareness of the ENERGY STAR label, a form of branding. This promotional activity has included the creation of commercials for the federal sponsors of the label, but the reach and frequency of those commercials have been limited by the requirement that they be played as public service announcements. Local and regional program sponsors have bought air time for these and other commercials, but are of course constrained by relatively thin budgets. In addition, most local and regional program implementers have worked with retailers wherever possible, and supported qualifying products through extensive placement of point-of-purchase materials, such as banners, savings calculators, brochures, and display advertising.

Investment in both mass media advertising and point-of-purchase promotions may be justified because they reach different audiences, reinforce one another, or both. Mass media advertising of the ENERGY STAR brand is necessary (as are Internet sites and stimulating word-of-mouth endorsements) to the extent that appliance shoppers conduct research on their options prior to entering the store. But these messages may not reach all potential purchasers, particularly those appliance shoppers who do not engage in research before going to the store.¹ For shoppers who enter the retail store with little idea of which models will best provide them the features and benefits they desire, or are unaware of the unique features and benefits of ENERGY STAR-qualifying models ("Educate me" shoppers), point-of-purchase materials are crucial. At the very least, they supplement the efforts of salespersons and stimulate interest that the salespersons can address. Moreover, it is likely that point-of-purchase materials can and do

¹ Tannenbaum (personal communication 2001) first drew our attention to the differences between two groups of customers—shoppers who were already informed about options and those who learned about them at point-of-purchase—based on several focus groups. More recently, Li et al. (2004) have confirmed the presence of the two groups in shopper intercepts.

remind customers who have done earlier research (“*Consumer Reports*” shoppers) about ENERGY STAR and reinforce the relevant messages carried in the mass media. Figure 1 offers a schematic model of the influence of ENERGY STAR promotions.

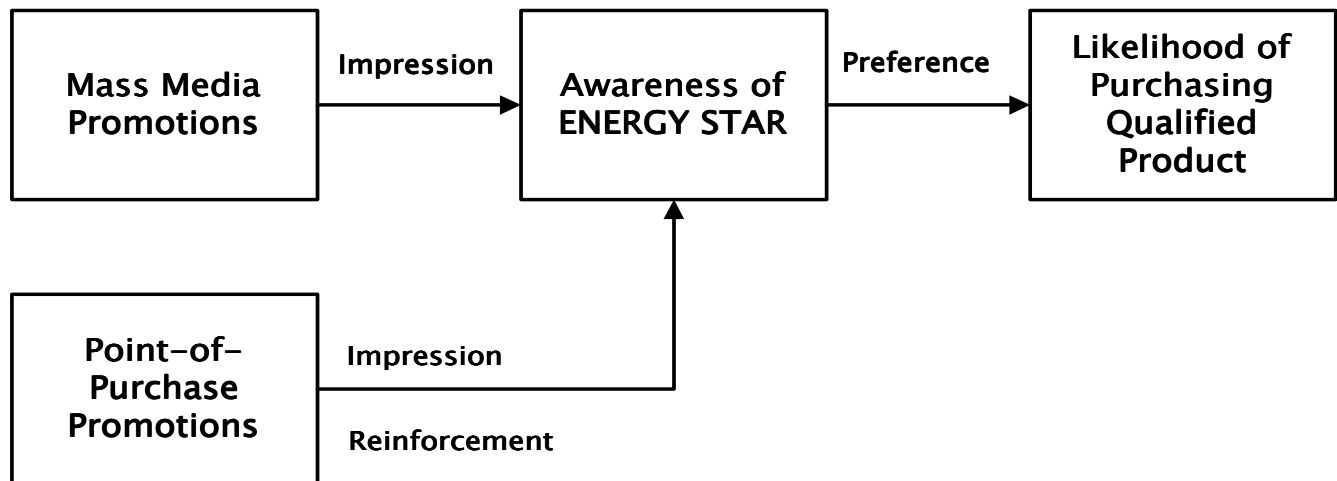


Figure 1. Schematic Model of Influence by ENERGY STAR Promotions

So far as we are aware, no previous studies have tested the validity of this model of influence in the energy efficiency domain. This paper uses national data on awareness of ENERGY STAR to demonstrate that point-of-purchase promotions affect customer awareness of the brand.

Methods

This paper is based on annual national surveys of ENERGY STAR awareness conducted under the auspices of the Consortium for Energy Efficiency (CEE), and funded by a number of its members. In particular, it expands on results from the 2003 survey (U.S. EPA 2004), introducing previously unanalyzed data. In this section, we provide a summary of the data collection, the sample design, and the questions relevant to this paper. More complete information is available in the original survey reports, which can be downloaded from the CEE website (www.cee1.org/eval/).

Data collection. CEE's annual survey has been conducted since 2000. The initial effort was administered by mail in that year and, while valuable, suffered from a relatively low response rate. To help increase response rates and eliminate the problem of gauging awareness of the ENERGY STAR label using a method that allowed respondents to look ahead in the questionnaire to a picture of the label, the survey sponsors changed the modality to WebTV in 2001. (The 2001 survey used a split-half design to allow for comparing awareness under the different administration methods. The 2002 and 2003 surveys were conducted entirely via WebTV.) The interactive format of WebTV ensures that respondents do not see questions in advance, while still providing the opportunity to show the respondent a picture of the ENERGY STAR label at the appropriate time (which is of course not possible in a standard telephone survey).

Knowledge Networks, Inc. administered the WebTV surveys to members of their panel who fit the sample frame. That panel is recruited by telephone from a probabilistic sample frame and is not constrained by access to the Internet. The design not only yields a relatively high response rate, but also allows researchers to assess sample biases and to weight the data as may be required. (See the original ENERGY STAR survey reports for more on these issues.)

Sample. The sampling frame includes all households in the 57 largest Nielsen Designated Market Areas (DMAs), which comprise approximately 70 percent of all U.S. households with television sets. It was stratified by the level of publicity for ENERGY STAR in the DMA: Areas of high publicity had experienced at least two continuous years of ENERGY STAR promotions and publicity from a local or regional sponsor. Areas of low publicity had experienced only the federal ENERGY STAR campaign, with no deliberate, multifaceted local or regional efforts by program sponsors. "Other" publicity areas included any DMAs not fitting either of the previous definitions. Each publicity category was allocated approximately 333 sampling points. Since promotional activities in the "other" publicity areas are not well-defined or consistent, this paper considers only respondents in the high and low publicity areas.

Selected survey questions; respondent biases. This paper focuses on responses to survey questions about recognition and understanding of the ENERGY STAR label and reported sources of that awareness. Of course, these responses present problems of self-report, such as social desirability biases. To mitigate the potential biasing effect of respondents striving to demonstrate their knowledge and impress the interviewer, we report "confirmed awareness" of ENERGY STAR, unless otherwise noted. This measure is based on a systematic review of responses to an open-ended question about the meaning of the ENERGY STAR label, by all those who claimed to recognize it, whether before or after they had seen it ("unaided recognition" or "aided recognition," respectively).

The responses to these questions were analyzed in terms of the location of the respondent's household (in a high publicity area or in a low publicity area) and whether the respondent had shopped for or purchased a household appliance during the twelve months prior to the survey.

Findings

In this section, we begin by showing the overall increase in awareness of the ENERGY STAR label over the course of the national surveys sponsored by CEE and its members. We then show that respondents who have shopped for or purchased appliances in the previous twelve months are, not surprisingly, more likely to cite point-of-purchase materials as a source of information about ENERGY STAR than are those who have not been looking for appliances. Finally, we provide evidence that respondents who have shopped for an appliance or purchased an appliance in the twelve months prior to the survey are more likely to be aware of the ENERGY STAR label and more likely to understand its meaning than are non-shoppers.

As noted earlier, awareness of the ENERGY STAR label has increased over the years covered by the CEE survey, as shown in Figure 2.² Furthermore, there is a clear difference in awareness levels between high publicity areas and low publicity areas.

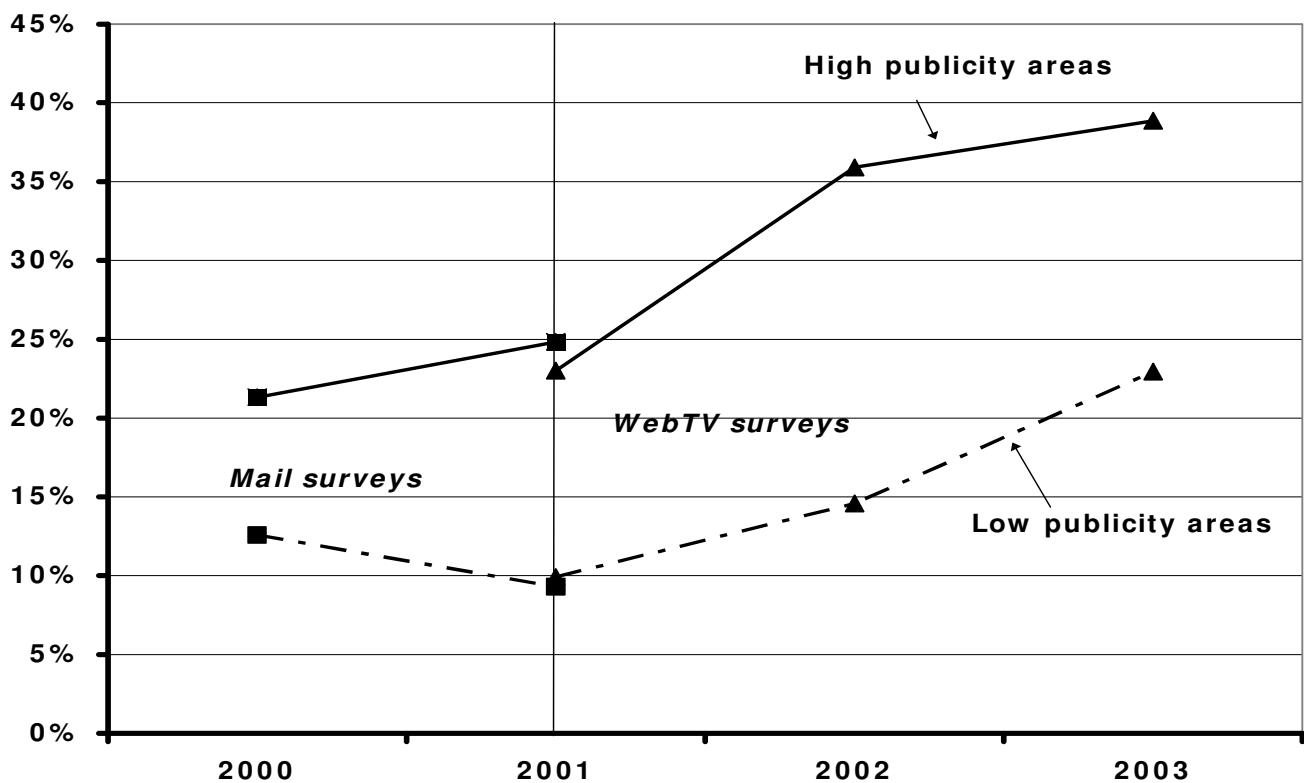


Figure 2. Confirmed awareness of the ENERGY STAR label, by year

However, differences in awareness are not solely a function of residence in a high publicity area or a low publicity area, as might be the case if awareness of ENERGY STAR were strictly attributable to mass media advertising. Table 1 shows that respondents who have shopped for appliances or purchased an appliance in the past year (shoppers/purchasers) differ from those who have not (non-shoppers) in a number of ways. First, shoppers/purchasers are significantly more likely to report recognizing the yellow EnergyGuide label and the ENERGY STAR label. Second, they are significantly more likely to

² The figure also shows that the survey method had no significant effect where comparisons were possible.

show confirmed awareness of the ENERGY STAR label when asked what it means. Third, they are significantly more likely to report having been exposed to the ENERGY STAR label in a variety of media, particularly those associated with point-of-purchase promotions.

Table 1. Awareness and sources of information, as a function of recent appliance shopping/purchasing experience

Characteristic	Shoppers & purchasers (%)	Non-shoppers (%)	Sig. ($p < .05$)
Claim awareness of EnergyGuide label	71.7	52.0	*
Claim awareness of ENERGY STAR label	68.1	35.0	*
Demonstrated awareness of ENERGY STAR label (among respondents who claim awareness)	65.0	51.7	*
Report as source of ENERGY STAR awareness:			
Labels on appliances or electronic equipment	74.3	58.0	*
Displays in stores	49.4	33.3	*
Utility mailing or direct mail insert	30.7	18.8	*
Yellow EnergyGuide label	26.4	14.0	*
TV commercial	25.0	27.1	
Newspaper or magazine advertisement	21.0	12.1	*
Internet	10.8	3.9	*
Salesperson	8.8	4.3	*
Direct mail or circular advertisement	8.6	2.4	*
Newspaper or magazine article	7.4	3.9	
Billboard	3.5	2.9	
Friend, neighbor, relative, or co-worker	3.2	2.4	
Contractor	3.2	1.0	
Radio commercial	2.5	4.3	
TV news feature story	2.2	1.4	
Other	5.8	9.7	

Only two sources of information about ENERGY STAR are cited more frequently by non-shoppers than by respondents who have shopped for or purchased an appliance in the previous twelve months: TV commercials and radio commercials. (Neither difference is statistically significant.) It seems clear that

mass media promotions are relatively less salient to shoppers and purchasers than in-store materials. These patterns may be examined graphically in Figure 3.



Figure 3. Reported sources of awareness for the ENERGY STAR label, as a function of recent appliance shopping/purchasing experience

Differences between shoppers/purchasers and non-shoppers can be seen in two other analyses of the CEE survey data as well. First, we can examine awareness as a joint function of household location and recent appliance shopping/purchase behavior. As Figure 3 has shown, respondents who have shopped for or purchased appliances recently are more likely than others to have been exposed to point-of-purchase materials and salespersons promoting ENERGY STAR qualified products. Moreover, it seems logical that this additional exposure should have been greater in high publicity areas than in low publicity areas, given the participation of local and regional program sponsors. As Figure 4 shows, regardless of whether respondents in high publicity areas have shopped for appliances in the previous twelve months, they are more likely to be aware of ENERGY STAR. Moreover, those who have

shopped for or purchased an appliance in a high publicity area—one where local or regional energy efficiency program sponsors are likely to have worked with retailers—are even more likely to be aware of ENERGY STAR than those who have not done so.³

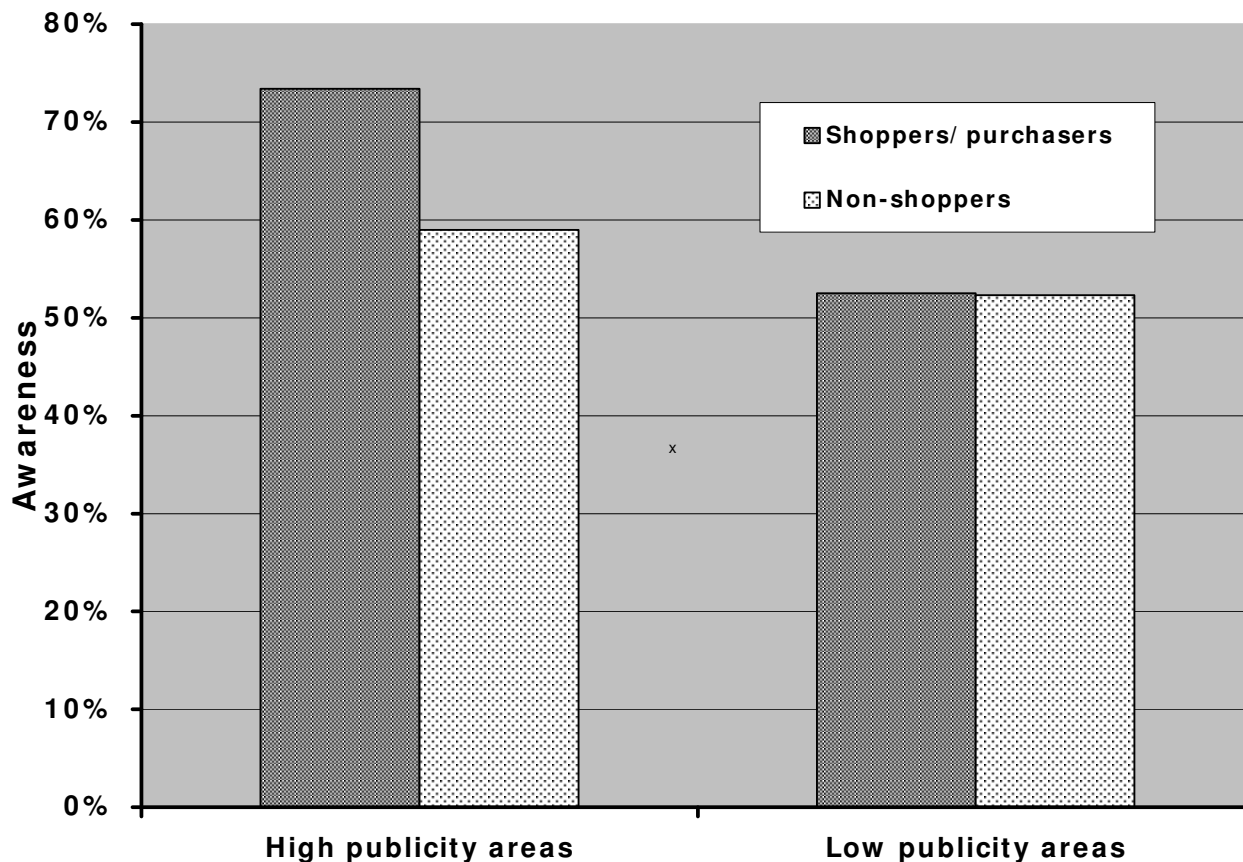


Figure 4. Confirmed awareness of ENERGY STAR, as a function of publicity area and recent appliance shopping/purchasing experience

Second, we can step back and compare shoppers/purchasers against others with respect to the effect of their experience on their understanding of the ENERGY STAR label. Consider the schematic model in Figure 1, which suggests that the shopping experience enlarges the ability of customers to grasp the meaning and value of the label, over and above mass media representations. This predicts not only that a greater percentage of shoppers/purchasers than non-shoppers should claim awareness of ENERGY STAR, but also that a greater percentage of shoppers/purchasers should display confirmed awareness. Figure 5 expands on the data shown in Table 1 to provide additional information in support of this hypothesis. The complete bars show the percentage of shoppers/purchasers and non-shoppers who claim awareness of ENERGY STAR: 68 percent of shoppers/purchasers and 35 percent of non-shoppers. The dark portion of each bar shows the percentage of each group who display confirmed awareness: 40 percent of shoppers/purchasers and 18 percent of non-shoppers. The light portion of each bar thus shows the percentage of each group who claim awareness of ENERGY STAR but were unable to provide a compelling explanation of its meaning. Moreover, the data show that 65 percent of all shoppers/purchasers who claim awareness of the ENERGY STAR label are able to demonstrate their understanding of that label at a high level. (See also Table 1, re “Demonstrated awareness.”) In contrast,

³ Statistically, the proper test is of the interaction between publicity area and appliance shopping/purchasing experience. Conceptually, the difference between the awareness of high publicity area shoppers/purchasers (79 percent) and that of high publicity area non-shoppers (59 percent) seems more striking. In either case, the results are statistically significant ($p < .05$).

only 52 percent of other respondents are able to do so. Thus, in-store promotions and related activities both expose more people to the ENERGY STAR label and provide them with an understanding of the label.

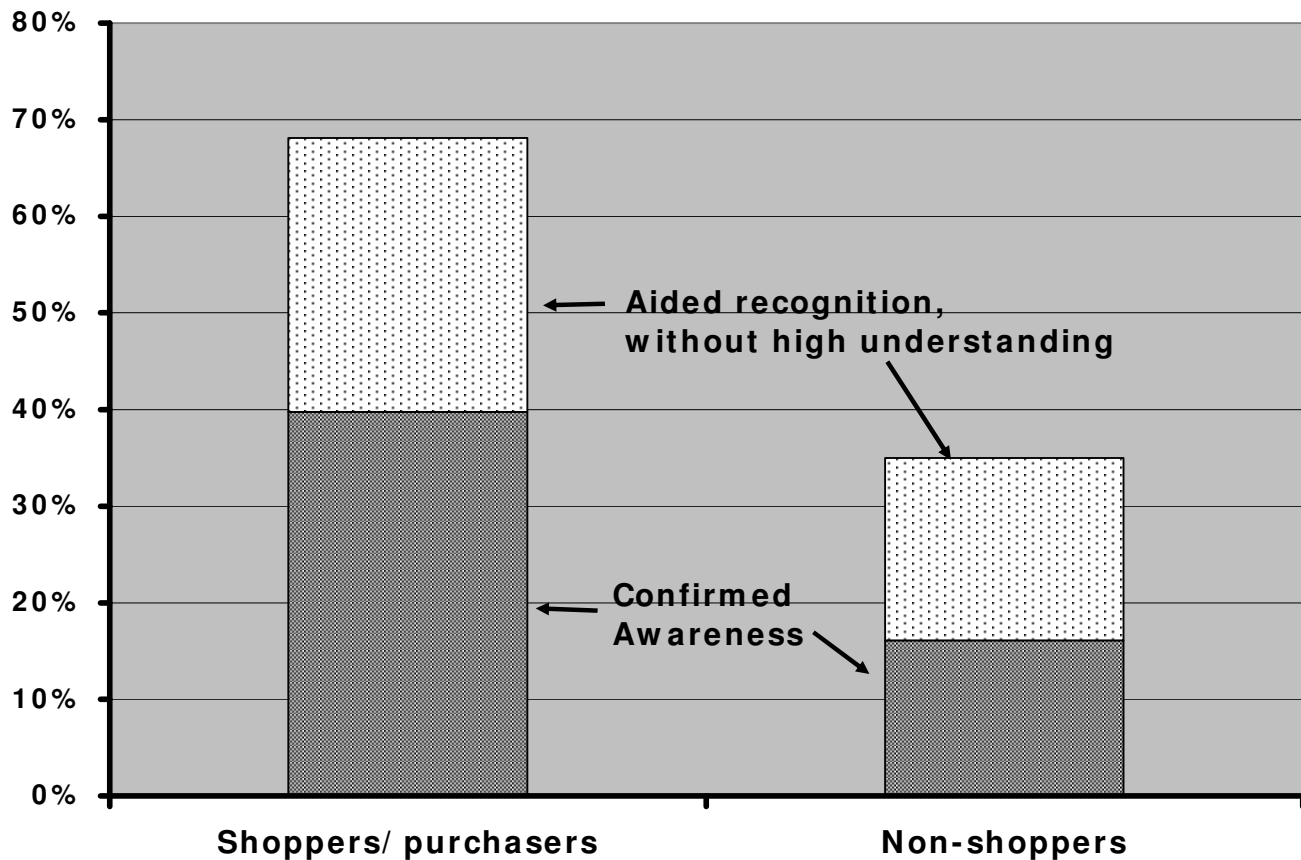


Figure 5. Claimed awareness and confirmed awareness as a function of recent appliance shopping/purchasing experience

Conclusions and Discussion

The authors believe that this paper, which is based on data from the 2003 CEE ENERGY STAR National Awareness Survey, offers the first analysis in the energy-efficiency industry on the value of point-of-purchase promotions. The results confirm the importance of these promotions as a means of informing the public about ENERGY STAR products and their benefits. Furthermore, they show that the effects of in-store materials are additive, over and above the effects of mass media advertising. In short, the results support the relationships described earlier in this paper and illustrated in Figure 1.

The survey results also indicate that respondents who live in those DMAs with active utility or market transformation organization programs embracing the ENERGY STAR brand (“high publicity areas”) are significantly more likely than others to recognize the label and understand its meaning (U.S. EPA 2004). Moreover, when respondents are divided into those who reported having shopped for one or more appliances during the preceding year and those who did not, the shoppers in the high publicity areas are found to be significantly more likely to recognize the label and demonstrate their understanding than are the non-shoppers. These findings are supported by other survey results, such as self-reported sources of information, where shoppers are far more likely to cite in-store displays, labels, and sales associates, while non-shoppers are slightly more likely than shoppers to cite television commercials.

Additional data and analysis are necessary to determine the relative cost-effectiveness of the different modes of promotion and whether they are reaching different audiences. Sponsors of energy-efficiency programs should compare the efficiency of mass media advertising and point-of-purchase materials, at the very least using standard advertising industry measures, such as cost per impression. They should also consider more sophisticated analyses that take into account the readiness of audience members to make relevant purchases.⁴ Furthermore, they should take into account the likelihood that “Educate me” shoppers appear to rely on in-store information when selecting appliances, while “*Consumer Reports*” shoppers rely on prior research. Thus, unless the results of further research show a definitive advantage for one form of promotion or the other, program designers and implementers should plan to continue to use multiple modes of promotion to support participating retailers.

References

- Hoefgen, L., Wilson-Wright, L. & Feldman, S. 2005. “Assessing the effects of utility programs on the market penetration of ENERGY STAR® appliances.” Presentation at the 2005 National Symposium on Market Penetration. Accessed May 17, 2005: <http://www.aceee.org/conf/mt04/wbprnt/Hoefgen-Concl1a.pdf>. Washington, DC: American Council for an Energy-Efficient Economy.
- Li, A., Feldman, S., Hoefgen, L. & Ledyard, T. 2004. “Beyond Clean: Customer Views of Non-Energy Benefits of Clothes Washers.” In *Proceedings of the 15th National Energy Services Conference and Exposition*. Clearwater, Florida, December 6-8. Jupiter, FL: Association of Energy Services Professionals.
- Tannenbaum, B. Personal communication. 2001.
- (U.S. EPA) U.S. Environmental Protection Agency. 2004. *National Awareness of ENERGY STAR® for 2003: Analysis of CEE Household Survey*. Washington: Author.

⁴ The issue is not simple. The overwhelming majority of in-store promotions seem likely to reach people who will probably purchase an appliance in the near future. In contrast, although the reach of mass media commercials is far greater, it is likely that relatively few of those messages are received by people about to purchase an appliance. Nonetheless, mass media promotions have other value, such as demonstrating to manufacturers and retailers the commitment of energy efficiency program sponsors.