



ENERGY STAR® RESIDENTIAL APPLIANCES AND LIGHTING PROGRAM

A CASE STUDY PREPARED BY OAK RIDGE NATIONAL LABORATORY AND THE
NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

Recognizing that energy efficiency and a healthy environment go hand in hand, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) decided in 1992 to promote the purchase of energy-efficient products through an innovative labeling program and partnerships with state governments, utilities, and businesses. The ENERGY STAR® labeling program tags products that meet energy efficiency criteria, and as a result, reduce energy use, and lessen the amount of fossil fuel being burned by power plants, and the amount of greenhouse gases and other pollutants emitted into the atmosphere.

Despite the many successes of the national ENERGY STAR® program, recent studies identified a significant gap between consumer recognition and actual demand for ENERGY STAR® products in New York. In fact, an October, 1999 Baseline Study conducted by Aspen Systems Corporation and commissioned by NYSERDA found that about one-third of New Yorkers are aware of the ENERGY STAR® logo, but market shares for ENERGY STAR® products are less than 10% (except for TV and VCR market shares which are about 17% and 22% respectively). The **New York Energy Smart**™ program,

administered by the New York State Energy Research and Development Authority (NYSERDA), has implemented several initiatives to increase consumer demand for ENERGY STAR® products. These include the Residential Appliances and Lighting program and the ENERGY STAR® Public Awareness campaign that work in tandem toward the goal of increasing sales of ENERGY STAR® products for the home.

On the one hand, the ENERGY STAR® Public Awareness campaign raises consumer awareness of the logo through market-wide, multi-media advertising (see sidebar). On the other hand, the Residential Appliances and Lighting program, the focus of this case study, provides information, support, and financial and other incentives to help mid-stream market actors increase their stocking, promotion, and sales of ENERGY STAR® appliances, lighting, and home electronics products. NYSERDA believes that both programs are critical to increasing consumer awareness of the logo and purchases of energy-efficient products.

The premise of the Residential Appliances and Lighting program is that retailers and other mid-stream market actors play a



ENERGY STAR® is a voluntary partnership among the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and state governments, product manufacturers, local utilities, and retailers. Partners help promote efficient products displaying the ENERGY STAR® logo and inform consumers about the benefits of energy efficiency. The ENERGY STAR® logo is used to symbolize and identify energy-efficient products.

critical role in informing consumers of the benefits of ENERGY STAR® products, including the potential for a 15% to 50% energy savings over the product lifetime. The program, which was initiated in August 1999, includes \$3 million in financial incentives to program partners.

PROGRAM OVERVIEW

The Residential Appliances and Lighting program targets mid-stream market actors including retailers, remodelers, manufacturers, and farm cooperatives, and will soon recruit multifamily building owners and modular home builders. Program participants that use the logo, and promote the installation of ENERGY STAR® appliances and lighting, can receive both financial assistance for cooperative advertising and other benefits such as sales staff training, assistance in labeling ENERGY STAR® products, and point-of-purchase

displays. The New York ENERGY STAR® retail partners are listed on the U.S. EPA and U.S. DOE sponsored website (www.energystar.gov), and remodeler partners will be listed on a **New York Energy \$mart**™ sponsored site (www.getenergysmart.org).

The Residential Appliances and Lighting program aims to achieve a 3% increase in market penetration rates of ENERGY STAR® appliances, lighting, and home electronic products over the two-year program (assuming a current penetration rate of 10%, increasing this market share by 3% is about a 30% increase in sales of ENERGY STAR® products). This goal will be achieved by improving the stocking, display, promotion, and labeling of products, and through sales staff training and support. In June 1999, NYSERDA established a recruiting goal of 2,040 appliance, lighting, and home electronics retail

THE ENERGY STAR® PUBLIC AWARENESS CAMPAIGN

NYSERDA contracted with DDB Needham, Inc. to develop a multi-media campaign and awareness program to raise public recognition of the ENERGY STAR® logo. Television, radio, print, mall kiosk and transit ads using the Socket Boy mascot are running in the Designated Market Areas (DMAs) of Albany, Binghamton, Buffalo, and Syracuse. Governor Pataki's supporting public service announcements are broadcast statewide on television and radio. Also, NYSERDA participates in community events to promote energy efficiency awareness and ENERGY STAR®.



The Socket Boy television ad, originally created by the EPA, was customized and expanded to other media by NYSERDA, including nearly 200 transit ads. These bus ads reach a large urban audience at a reasonable cost.

More than 50 mall kiosk ads have been placed to reach consumers at the point of purchase.

stores. This goal required recruiting close to 90 stores per month for 23 months from the beginning of August 1999 to the end of June 2001. Equally important, however, are the qualitative goals of increasing retailer awareness and understanding that: (1) the market for energy-efficient products is real and large; (2) the sale of these products is profitable; and (3) the techniques to increase the sales of ENERGY STAR® products are replicable and fully consistent with industry standards relative to cost and effort.

Program activities and incentives are offered in the utility service areas of Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, and Orange and Rockland Utilities, Inc. These areas have been divided into designated market areas (DMAs) centered around the urban areas of Albany, Binghamton, Buffalo, Syracuse, and the New York Metropolitan Area. Central Hudson, Niagara Mohawk, and Consolidated Edison, as subcontractors, are coordinating with NYSERDA's implementation contractor, Aspen Systems Corporation.

PROGRAM FEATURES

The Residential Appliances and Lighting Program has several unique features that are highlighted below:

Extensive Market Analysis: At the direction of NYSERDA, Aspen Systems Corporation, the program implementation contractor, conducted a baseline study to establish a foundation against which to evaluate progress toward increasing stocking, promotion, sales, and ultimately, the extent of market transformation. The baseline study collected information through a consumer mail survey, in-store measurements, and tabulation of customer inquiry data from the U.S. DOE and the U.S. EPA. Data were collected for the 15

appliances, lighting, and home electronics products targeted by the program. Between August and October 1999, measurements were taken on a set of 19 indicators selected to assess progress toward transforming the market for these products. These indicators were derived from recent literature on market transformation and through consultations with an advisory group of senior-level staff from organizations promoting market transformation and ENERGY STAR® in other regions. Selected key market transformation indicators include:

1. The percent of lighting or appliance products on display that qualify as ENERGY STAR®.
2. The percent of showroom space given to qualifying products.
3. The percent of ENERGY STAR® qualified products on display that are labeled as such.
4. The number of New York ENERGY STAR® partners recruited by the Residential Appliances and Lighting program.
5. The market share of qualifying appliances, lighting, and home electronics products.
6. The percentage of consumers aware of ENERGY STAR®.

Aspen Systems Corporation will conduct a series of follow-up surveys (to its baseline study) to collect information that will allow quantitative estimates of changes over time in market practices of mid-stream market actors, especially as they affect the promotion and sale of qualifying products.

Informational Orientation: Rather than providing rebates to consumers, or other financial incentives for purchasing ENERGY STAR® qualified products, this program focuses directly on increasing

stocking, promotion and sale of ENERGY STAR® products by mid-market actors. NYSERDA program managers view direct consumer rebates as missing the opportunity to inform consumers as to the energy and cost savings associated with more efficient consumer products. Priming the sales force while increasing consumer awareness is viewed as the most viable mechanism for transforming the market over the long-term.

Cooperative Advertising Incentives
<p><u>UPSTATE NEW YORK</u></p> <ul style="list-style-type: none"> • 1st ad – \$200 • 2nd and 3rd ad – \$250 • 4th ad – \$300 • 5th ad – \$350 • Maximum: \$1,350 per wave
<p><u>NEW YORK CITY AND CENTRAL HUDSON VALLEY</u></p> <ul style="list-style-type: none"> • 1st ad – \$400 • 2nd and 3rd ad – \$500 • 4th ad – \$600 • 5th ad – \$700 • Maximum: \$2,700 per wave

Use of Cooperative Advertising: The program provides a graduated system of incentives for cooperative advertising between participating retailers and NYSERDA (see sidebar). The difference in advertising incentives is due to variation in costs between Upstate New York and the New York City area. Participants are also offered the alternative of a one-time incentive toward the purchase of a Yellow Page advertisement. Upstate New York participants can receive a one-time incentive of 25% of the ad cost, up to \$1,000. New York City area participants can receive a one-time incentive of 25% of the ad cost, up to \$2,000. The maximum per firm is \$50,000 over the life of the contract.

During 2000, the incentive program will be expanded to include sales and promotion contests. The contests include cash prizes to retailers for the greatest percentage increase in sales of ENERGY STAR® products or for the greatest percentage increase in floor and or shelf space dedicated to ENERGY STAR® products.

Program Championing: Rather than asking retailers to respond to a NYSERDA Program Opportunity Notice (PON), to participate in the program, the program aggressively recruits participants. Aspen Systems Corporation has assigned seven regional "circuit riders" across the State to promote the program. The circuit riders

contact store owners and arrange visits to explain the benefits of the program. Close working relationships between the circuit riders and retailers are cultivated through monthly visits and training. To date, circuit riders are realizing significant dividends by way of increased retailer participation and manufacturer interest in the program.

Leveraging Resources: The program is actively and creatively leveraging national Energy Star® resources, making effective use of labels, point-of-purchase materials, consumer brochures, banners, videos, training materials, and posters that have been developed. The **New York Energy \$martSM** ENERGY STAR® Public Awareness campaign is also using national advertisements and targeted marketing programs sponsored by the federal government.

NEW YORK PARTNER PERSPECTIVES

As of June 30, 2000, 325 retail outlets (266 different retail partners), 48 contractors and 5 manufacturers are participating in the program. Some retail partners are small stores with only one location, while others are larger chain stores. Each of the five DMAs have retailer representation. The retailers below include a small family-owned business and a larger employee-owned firm. Both have two primary locations. Comments from two participating contractors are also highlighted below.

EARL B. FEIDEN, INC. APPLIANCE & ELECTRONICS

Earl B. Feiden, Inc. Appliance and Electronics, founded in 1926, is a family-owned and operated business with two New York locations, one in Kingston and the other in Latham. The business is currently owned and operated by Mary Feiden and her three brothers.

Like most other program participants, Ms. Feiden and her brothers heard about the Residential Appliances and Lighting

Earl Feiden Appliance and Electronics of Latham, NY is a prominent, long-time Capital District retailer.





Mary Feidan of Earl B. Feiden, Inc. thanks circuit rider Jim O'Harien for his help and notes that: "Now, most customers look at the long-term operational costs of appliances."

retailer partnership opportunity from a circuit rider who visited them and explained the benefits of the ENERGY STAR® program. Ms. Feiden has found the program to be very helpful in promoting energy-efficient products. In addition to the in-store training provided to her staff, the program has helped reduce the costs of large direct mailings. While incentives are relatively small, she notes that "they help the profit margin."

Ms. Feiden believes that her patrons are increasingly aware of life-cycle energy costs as opposed to focusing only on appliance first costs. Moreover, this growing awareness is attributable to the ENERGY STAR® program.

Ms. Feiden has found participation in the program to be a positive experience. In particular, she was pleased to find that the paperwork for the retailer partnership program was neither burdensome nor time-consuming. She noted that "it's no more than any manufacturer would ask for cooperative advertising."

OLUM'S FURNITURE, ELECTRONICS AND APPLIANCES STORES

Olum's is an employee-owned New York company that has been in business for 85 years with two primary locations, one in Binghamton, and the other in Vestal. Keith Solomon, appliance sales manager, has been with the store for five years. He was contacted about six months ago by circuit rider Jeff Riha who explained the benefits of the program, including the

cooperative advertising assistance. Mr. Riha conducted an initial training workshop for the Olum's sales staff and has followed up with monthly sales briefings on ENERGY STAR® news.

Mr. Solomon says the program helps "move" higher-end, high-efficiency products. To date, the cooperative advertising program has provided \$1,350 in incentives at the two stores. Olum's has used these incentives to underwrite part of the cost of the company's extensive newspaper advertising featuring ENERGY STAR® products.

Mr. Solomon underscores the importance of NYSEERDA's dual approach to promoting ENERGY STAR® (i.e., both advertising to consumers and assisting retailers) and notes an increase in customers immediately asking for an ENERGY STAR® appliance or television. He attributes part of this awareness to the television ads paid for by the **New York Energy \$martSM** ENERGY STAR® Public Awareness effort. However, Mr. Solomon notes that the frequency of ads has decreased over the past couple of months and he is concerned that will reduce sales of higher-end, high-efficiency products.

CONTRACTOR PERSPECTIVES

Martin Bakowski, a Buffalo home remodeler, heard about the program through NYSEERDA's Rebuild America Program. It suited him well, as he is a specialist in building energy performance, and he noted that it is not a consumer-based



Keith Solomon, Olum's appliance sales manager, reports that the ad program is helping to move high-end products. Solomon is pictured above with ENERGY STAR® labeled televisions.



Keith Solomon of Olum's Furniture, Electronics, and Appliances Stores demonstrates the features of a front-loaded, ENERGY STAR® washing machine. Regarding NYSERDA's ENERGY STAR® program, he notes that, "It is particularly noticeable on front-loaded washers; business has really taken off. It also helps consumers identify which of the higher-end refrigerators are more energy efficient."

incentive program, that he feels have failed in the past when funds ran out. He believes advertising incentives are generous and helpful to small businesses that continue to sell energy efficiency and reach new customers daily.

Another participating contractor, Glenn Davis Construction Co., Cazenovia, specializes in new construction and remodeling. Mr. Davis is enthusiastic about how the program helps distinguish him. Mr. Davis notes that since there is no licensing for general contractors, programs like ENERGY STAR®, with eligibility and training requirements, "help set me apart from contractors who do inferior work."

EARLY PROGRAM RESULTS

The program has made significant progress toward its goals in each of the following areas:

Recruiting participants into the program. The Residential Appliances and Lighting Program is making progress in recruiting retailers and remodelers into the program. The number of participating stores grew from 42 at the end of September 1999, to 325 as of June 30, 2000. More than 90% of the retailers contacted in 1999 agreed to participate. In addition to the retail partners, circuit riders have recruited 48 contractors into the program. Five manufacturers are also participating. There are now a total of 378 participants, as reflected in Figure 1.

The original goal of recruiting 2,040 retail stores by the end of June 2001 was based on an estimated popu-

lation of 4,000 retailers derived from Standard Industrial Category (SIC)-based lists available from Dun & Bradstreet. A recent review of this information suggests that the estimated retailer population may be too high, and that the actual size is between 1,400 and 1,700 retailers, since many of the listed retailers do not meet eligibility criteria for participation in the program. For example, the SIC-based list included vendors that: 1) service products only; 2) supply rent-to-own appliances; 3) sell reconditioned products; 4) sell only non-eligible electronics such as cameras, vacuum cleaners, and small household appliances; 5) have been or are being recruited by the federal ENERGY STAR® program; and 6) are not located in the covered geographic areas. NYSERDA is currently reviewing program objectives based upon this revised estimate. If the rate of just over 38 recruits per month is sustained over the remaining 12 months of the program (July 2000 through June 2001), 456 additional retailers would be recruited. In total, the program would recruit about half of the 1,400 - 1,700 retailer population by program end if the recruitment rate remains steady. Many contingencies remain to be navigated successfully in order for this program to achieve its recruitment and sales goals. To a large extent, the success of the program rests on the shoulders of the seven full-time-equivalent circuit riders currently traveling throughout the State to sign-up retailers.



Participating contractor Martin Bakowski (left) installed an ENERGY STAR® refrigerator and CFLs in Jerry Wilke's home during a recent remodeling job.

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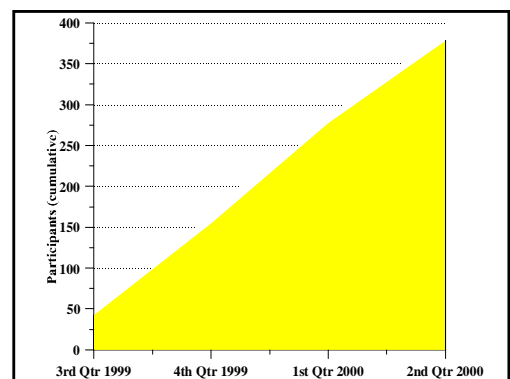


FIGURE 1: Total Program Participants

Developing a comprehensive understanding of the appliances market and measurable performance indicators.

NYSERDA's contractor, Aspen Systems Corporation, has developed a comprehensive set of market baseline indicators against which program progress will be measured. Tracking these indicators involves the collection of in-store measurements on the stocking and display patterns of participating retailers, as well as a consumer mail survey to measure changes in awareness, knowledge and reported purchases of ENERGY STAR® products. Aspen has completed the baseline measurements and one early follow-up round of measurements for both the in-store and consumer data.

Relative to the in-store measurement baseline, the first follow-up showed mixed results in the amount of display space devoted to ENERGY STAR® models and the percentage of displayed models that are ENERGY STAR® compliant. However, between the baseline and follow-up, the percentage of ENERGY STAR® models on display actually labeled as such increased significantly for 11 of 15 products.

The first follow-up consumer mail survey showed only a slight increase in awareness, from 34% to 35.4%. However, the survey also indicated that the market share of ENERGY STAR® models has increased relative to the baseline for every product category promoted except for one lighting fixture model. Achieving a three-percent increase in market penetration rates for ENERGY STAR® appliances (which is now about 10%) is also ambitious and, in effect, constitutes more than a 30% relative increase in sales.

Creating an organizational structure to actively promote the program throughout the State. The circuit rider infrastructure is firmly in place and recruiting and training visits are being made to retailers throughout the State. In a recent survey, six out of ten participating retailers said they would not have joined the program without

the circuit rider's assistance. As of June 30, 2000, 279 training visits had been completed by circuit riders. Circuit riders make an effort to visit each participating retailer about once a month. These visits are important in maintaining continued support and long-term commitment to the program by the retailer and contractor partners.

PROGRAM PERFORMANCE: INITIAL IMPRESSIONS

In addition to the results reported above, early progress is being made toward the following **New York Energy \$martSM** goals that apply to the Residential Appliances and Lighting program:

- Transform the market for energy-efficient products and services, including informing the public about the full range of energy efficiency opportunities;
- Improve the efficiency of electricity use through cost-effective, energy-efficient equipment, products, measures, and services; and
- Foster the energy efficiency industry and provide information encouraging customers to regard energy efficiency as a value-added service, measured in terms of energy savings, increased affordability, improved environmental quality, and other non-energy benefits.

NYSERDA has established an aggressive program to promote awareness of the savings associated with energy-efficient appliances, lighting and home electronics among customers and the general public. Despite the obvious enthusiasm of participating retailers interviewed for this case study, it will be some time before sufficient quantitative data are available to determine whether the program is increasing sales of ENERGY STAR® products beyond the existing 10% market share. The manner in which many retailers track sales data makes it difficult to determine the rate at which the program is accelerating product sales of energy-efficient appliances. Sales

data are available from the national stores, but the smaller independents participating in the program lack the capability to separate out ENERGY STAR® sales figures. As suggested by one appliance retailer, the primary stimulus for purchases of high-efficiency appliances might be coming from the NYSERDA multi-media awareness campaign. However, a direct correlation cannot yet be drawn.

In order to reach as much of the market as possible, and to promote market transformation, NYSERDA has had to be flexible in its approach. Smaller retail chains and independent retailers are very interested in the program. However, securing the national retail stores' participation has required more outreach and some specific tailoring of the program to meet their needs. While national chain retailers are participating in the national ENERGY STAR® program, their affiliated stores are not always aware of the New York program. NYSERDA has elected to meet with local managers of national chain stores to ensure that they are aware of the program and their corporation's top-level commitment to ENERGY STAR®. In addition, the program is working with national chains to integrate training into corporate-wide programs. NYSERDA recognizes that enhanced participation by national chain stores is a crucial prerequisite to market development and transformation.

The rapid turnover of retail staff that is typical in this industry presents a challenge to developing and maintaining a stable reservoir of staff to promote ENERGY STAR® products. NYSERDA and Aspen Systems Corporation are responding to this challenge by working with retail partners to develop a training schedule that is tailored to the staffing turnover patterns of each store.

To date, many appliance manufacturers have expressed a reluctance to participate fully in state and national ENERGY STAR® initiatives. In particular, they have been slow to incorporate ENERGY STAR® labeling into their product lines and advertising. Recently, however, there is evidence that this resistance is declining. NYSERDA's on-going dialogue with appliance manufacturers and involvement in regional discussions appears to be partially responsible for changing attitudes towards the New York program.

Finally, it is important to mention that if the program succeeds in increasing the sales of ENERGY STAR® products, there are added environmental benefits that will accrue. For example, ENERGY STAR® dishwashers and clothes washers generally use less water and the clothes washers, in particular, use less detergent. Moreover, compact fluorescent bulbs last at least ten times longer than incandescent bulbs, thereby reducing the amount of waste entering landfills.

In conclusion, while it is apparent that the program is meeting with some success in building a network of ENERGY STAR® partners and promoting energy-efficient appliances, lighting and home electronics, the ultimate extent of market transformation that will result from the mid-market partnership activities and the public awareness campaign remains uncertain. This question should be answered, at least in part, by the continued follow-up in-store measurements and the comprehensive and random consumer surveys that are to be conducted annually.

For further information about New York Energy \$martSM programs, contact NYSERDA's Communications Department at: (518) 862-1090, ext. 3250; or visit our website: www.nyserda.org

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