

NEW YORK ENERGY \$SMARTSM PRODUCTS PROGRAM
MARKET CHARACTERIZATION AND ASSESSMENT EVALUATION

Final Report

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Notice

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Abstract

This report presents research findings from the market characterization and market assessment (MCA) evaluation of the **New York Energy \$martSM** Products (NYE\$P) Program. Results were derived from surveys of participating retailers and manufacturers, retailers in other areas not promoting ENERGY STAR® or other high-efficiency products, and end-use customers. Secondary data from the U.S. Census Bureau, the Association of Home Appliance Manufacturers, D&R International, and other sources were also used in this evaluation. The market characterization findings include information on the market eligible to participate in the NYE\$P Program as well as Program accomplishments to date. The market assessment findings include information regarding key market indicators, such as customer awareness and knowledge, measure availability, market penetration, consumer demand, and incremental cost. This evaluation also assesses the net energy savings due to the NYE\$P Program after accounting for freeridership and spillover or market effects.

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Executive Summary

Evaluation Objectives

This report presents the results of the Market Characterization and Market Assessment (MCA) evaluation of the **New York Energy \$martSM** Products (NYE\$P) Program. The evaluation work, performed by The Cadmus Group as part of the MCA Evaluation Team (MCA team) consisting of Navigant Consulting, Inc., The Cadmus Group, NMR Group, Inc. and GDS Associates, was designed to achieve the following objectives:

1. Establish defensible estimates of product sales and corresponding energy savings that can be attributed to the NYE\$P Program.
2. Develop a comprehensive understanding of product markets, including the market for consumer electronics.
3. Track changes in markets over time with a specific focus on market indicators that are likely to be impacted by the NYE\$P Program (e.g., increased ENERGY STAR sales and market share).

Program Description

The **New York Energy \$martSM** Products Initiative (the Program), established in 1999, seeks to increase sales of residential energy-efficient appliances, lighting and home electronics products. This initiative works on both the supply and demand sides of the market. Its goals are: 1) to increase the supply of products through partnerships with retailers, manufacturers and distributors, and 2) to create demand for high-efficiency and ENERGY STAR products through consumer awareness and understanding of the ENERGY STAR label.

The Program works on the supply side with retailers and manufacturers and on the demand side by marketing to consumers. Program activities include incentives for cooperative advertising and special promotions, as well as marketing campaigns on both the supply and demand sides of the appliance and lighting markets. Other activities include the development and distribution of special point-of-purchase (POP) materials, inclusion on the GetEnergySmart.org website, development of educational materials, coordination with retailers to obtain donations of ENERGY STAR appliances and lighting in support of the Program's outreach at trade shows, home shows, and county and State fairs, as well as training sessions for retail sales staff and managers.

Any manufacturer that makes a qualified ENERGY STAR product for sale in the **New York Energy \$martSM** Program area may participate. Retailers who wish to participate must stock, prominently display, and sell at least four ENERGY STAR models of a qualifying product. Manufacturers and retailers must sign a partnership agreement to participate and receive incentives. They must also promote their products

within the **New York Energy \$martSM** Program area and agree to provide accurate sales data during each month of the partnership agreement.

Lockheed Martin (LM) is the implementation contractor for this program. LM collects, manages, and reports much of the data used to assess Program progress— including data covering retailers' monthly sales, on-site surveys of retail managers, mystery shopping, and stocking, display, and pricing practices.

The Program has the potential to achieve substantial energy savings for customers while also lowering energy costs and reducing the negative environmental impacts of energy use.

Key progress metrics developed by NYSERDA include:

- Number of participating retailers
- Market share and sales of ENERGY STAR products
- Electricity savings resulting from the Program
- Peak demand reduction resulting from the Program

Program Participation to Date

At the end of 2009, the NYESP Program had 1,103 participating partners, representing 344 active retail store fronts and 759 active lighting storefront partners.¹² The majority of the storefronts (79 percent) were independent retailers, while 21 percent were part of a chain. The Program also offered 423 full retailer training sessions with a total of 3,185 participants. In 2009, the NYESP Program paid 2,923 incentives worth \$3,698,190 to participating retailers and manufacturers. Cumulatively, from the time of its inception in 1999 to the end of 2009, the Program paid 21,660 incentives worth over \$15.8 million.

Market Characterization - Findings

Market characterization provides background information useful in defining programs, delivery concepts, target markets, and the potential for a program (see Section 3). The following are selected findings from the market characterization effort:

- The results of a comprehensive distribution channel analysis highlight the increasing importance – and dominance – of five retailers. More than half of the combined telephone survey respondent purchases for every product category came from the top five retailers; the dominance of these

¹ NYESP Program Quarterly Report, 4th Quarter 2009.

² Lockheed Martin **New York Energy \$martSM** Products Program 2009 Participant Practice Report, July 2010.

- retailers was most pronounced in the clothes washers category, for which 69 percent of purchases came from the top five retailers.
- Individual households (owners and renters) selected and purchased the vast majority (more than 83 percent, down from 90 percent in 2007) of all products studied. Landlords were the second most active purchasers but were far behind the owners or tenants, purchasing 23 percent of the refrigerators, five percent of the clothes washers, 14 percent of the dishwashers, seven percent of the room AC units, and five percent of the light fixtures. Contractors made up two percent of the purchasers, while builders, others, and unknowns made up the last three percent.
 - Survey respondents said they usually collected product information in the stores (50 percent for all products), but the Internet was also an important source of information (26 percent for all products). Nearly all purchases – 91 percent of refrigerators, 90 percent of clothes washers, 80 percent of dishwashers, 94 percent of room AC units, and 87 percent of lighting fixtures – were made in-person at the retail store. Internet purchases were five percent of all purchases, while telephone purchases were two percent. Catalog, other, and unknown purchase sources make up the final four percent. This is very similar to the percentages seen in the 2007 Evaluation.
 - Market share was estimated for all products through the Residential End-Use Customer Telephone Survey, sales data from the national ENERGY STAR partners, and sales data from NYSERDA ENERGY STAR partners. Market shares for all of the appliances show a general upward trend since 2001 with a slight dip in 2007 followed by a rebound through 2009. For 2009 the highest NYSERDA area market share was obtained by dishwashers (75 percent), followed by clothes washers (56 percent), room air conditioners (49 percent), and refrigerators (47 percent).
 - Despite concern that the 2010 ARRA Appliance Rebate Program would cause customers to delay purchases from 2009 to 2010 in order to qualify for a rebate, the net change to sales in fourth quarter 2009 associated with the rebate program was zero percent, or no impact overall, according to retail respondents.

Market Assessment - Findings

Market assessment tracks changes in markets over time with a specific focus on market indicators that might be influenced by the NYESP Program (see Section 4). The following are selected findings from the market assessment effort:

- Promotional activities appear to be effective, as 63 percent of survey respondents reported that they had seen or heard an advertisement or information about ENERGY STAR in the last year.
- As reported through surveys, appliance sales floors in both NYSERDA partner retailers and in non-Program comparison areas are made up of over 50 percent ENERGY STAR models (as high as 79 percent for dishwashers); however, ENERGY STAR stocking of lighting fixtures is lower. The ENERGY STAR stocking trend among NYSERDA retailers is increasing steadily over time,

with 2010 ENERGY STAR appliance stocking levels of ENERGY STAR higher than the previous survey.

- One notable change in customer perception noted in the most recent Consortium for Energy Efficiency (CEE) survey is that consumers do not necessarily equate ENERGY STAR with quality.
- Manufacturers report that NYSERDA-sponsored buy-downs have increased sales by as much as 20 to 30 percent. Partner retailers indicated NYSERDA-sponsored cooperative advertising results in average sales lift ranging from 19 percent for dishwashers to 45 percent for lighting fixtures.
- Market share analysis indicates that the ENERGY STAR market share of most appliances has increased since 2007 and significantly increased since 2001. Retailer surveys confirm the trend, indicating that consumer demand for ENERGY STAR products is increasing—both inside and outside NYSERDA territory. Market shares in NYSERDA territory continue to be higher than shares in non-Program areas.
- According to both the 2010 residential survey and the CEE survey, consumer awareness and understanding of the ENERGY STAR label is increasing for NYSERDA customers. End-users recognize that the ENERGY STAR means energy savings as evidenced by their unaided responses to this question on the CEE survey
- Survey results in 2010 showed a marked increase (47 percent versus 34 and 36 percent in 2007 and 2003) in customers who were influenced to purchase ENERGY STAR by their prior purchases. Another survey question looked at willingness to recommend ENERGY STAR products to a friend, and 74 percent of the respondents said they would definitely (54 percent) or probably (20 percent) recommend ENERGY STAR labeled products. This is a statistically significant increase in recommendation likelihood from the 2007 Evaluation, yet 16 percent in 2010 versus three percent in 2007 indicated a significant increase in the likelihood that they would *not* recommend ENERGY STAR products to a friend, indicating a small portion of unsatisfied customers.
- A significant share of NYSERDA partner retailers recognize the profitability of promoting ENERGY STAR, as the majority said they would continue to stock (83 percent) and advertise (58 percent) ENERGY STAR products even without NYSERDA's assistance. The majority agreed, however, that without NYSERDA's Program, ENERGY STAR sales would likely decrease.
- Consumer advertising appears to be reaching the intended audience, as 63 percent of respondents reported that they had seen or heard an advertisement or information about the ENERGY STAR label in the last year. TV was the most commonly cited medium through which people became aware of the ENERGY STAR label. Although 98 percent of retailers reportedly train salespeople about energy efficiency, the majority of consumers do not recollect active promotion of ENERGY

STAR products by salespeople. In the best case, 57 percent of refrigerator purchases recall a salesperson bringing up energy efficiency, and at worst case 75 percent of room air conditioning customers reported that ENERGY STAR was not discussed at all.

Estimated Net Savings

Savings from product sales and installations were derived by first estimating the market share for ENERGY STAR products through estimates of total market size and sales of ENERGY STAR products. Next, portions of the market share were allocated to exogenous, non-NYESP Program effects, including the impact of the national Environmental Protection Agency/Department of Energy ENERGY STAR Program, naturally occurring adoption (including the impact of higher energy prices and interest generated by programs in neighboring states), and the impacts of other NYSERDA residential programs. The remaining market share, after netting out these other effects, was considered attributable to the NYESP Program.

The results from this study are combined with those from the previous MCA analysis, which focused on Program impacts prior to 2008, to yield combined estimates of savings since Program inception. Estimated net savings are summarized in Table ES-1.

Table ES-1. Installed Savings from NYESP Program Inception through Year End 2009

Years	Electricity Savings (MWh)	Peak Demand Savings (MW)	Gas Savings (MMBtu)
Inception through 2007	615,469	121.9	280,298
2007 Lighting	35,966	2.5	-
2008	91,106	13.3	86,943
2009	27,475	8.2	60,553
Cumulative	770,016	145.9	427,794

Recommendations

- The MCA team recommends NYSERDA emphasize to retail partners the importance of salespeople recommending ENERGY STAR when discussing appliance options with consumers. Survey results indicated that nearly all purchases were conducted in-person at the retail store. Although 98 percent of retailers reportedly train salespeople about energy efficiency, the majority of consumers do not recollect active promotion of ENERGY STAR products by salespeople.
- The MCA team recommends NYSERDA promote the benefits of the Program to a wider array and volume of lighting sellers in New York. NYESP Program participation is high throughout the territory for all appliances in the study. More than half of appliance products sold in the territory are sold by partner stores. Lighting fixture sellers, however, are not participating nearly as much.

Only about nine percent of fixtures sold in the NYSERDA territory are sold at NYESP Program partner stores, while national partners make up 73 percent.

- While the incremental price for ENERGY STAR products could take a while to come down as demand continues to increase, the MCA team recommends that the Program target some of its marketing efforts on conveying the message that ENERGY STAR rated products save money in the long run. Store inventory data show higher prices for ENERGY STAR products versus non-ENERGY STAR products, which may be an adoption barrier to many potential customers. However, survey data from the current MCA research as well as the national CEE study indicate that consumer awareness and understanding of the ENERGY STAR label is continuing to increase, which should help mitigate the price barrier.
- Another issue that the MCA team recommends addressing is the small but increasing minority of customers who definitely would not purchase ENERGY STAR again and definitely would not recommend ENERGY STAR. A follow-up study to understand the concerns of this group could lead to more effective target marketing to dispel some of the perceptions that prevent the adoption of ENERGY STAR products.
- The MCA team recommends NYSERDA consider how it might provide television advertising on behalf of these smaller retailers as survey data show that TV commercials are the most effective means of advertising to create awareness of ENERGY STAR. Since NYSERDA partners tend to consist of small, non-chain stores with limited budgets, this price of TV advertisement is a barrier.

Overall, the NYESP Program has been highly effective in raising awareness and the adoption of ENERGY STAR products in New York. A majority of consumers are aware of the ENERGY STAR label, and participating stores believe that the Program has been a contributor to this awareness. The MCA team believes that the potential for growth in the ENERGY STAR market is real and that the Program can influence this growth in New York.

1. *Introduction*

The New York State Energy Research and Development Authority (NYSERDA) is a public benefit corporation established in 1975. It administers system benefits charge (SBC) funds paid by customers of Central Hudson Gas and Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, National Grid, Orange and Rockland Utilities, and Rochester Gas & Electric Corporation.³ These funds pay for the **New York Energy \$martSM** Program under an agreement with the New York State Public Service Commission (PSC). NYSERDA also oversees and coordinates evaluation of the effort on behalf of the SBC advisory group that, pursuant to PSC order, is the independent evaluator of the Program. NYSERDA began operating the **New York Energy \$martSM** Program in July 1998. The New York ENERGY STAR Products Program (NYE\$P) is one of many programs funded through the **New York Energy \$martSM** Program.

In September 2009, NYSERDA initiated a study, with a team under the direction of Navigant Consulting, to conduct a Market Characterization and Assessment (MCA) evaluation of the 2009 **New York Energy \$martSM** Program. This report documents the 2009 MCA study for the NYE\$P Program. While much of the surveying and analysis took place in 2010, the research and analysis was conducted with consumers, retailers, and manufacturers regarding sales and purchases occurring in the 2009 calendar year. The results are used to calculate estimated sales attributed to the Program for 2008 and 2009. The NYE\$P Program received its last full MCA evaluation in 2007, covering the Program through 2005. The 2007 study conducted by the MCA team focused only on lighting aspects of the Program and an update of ENERGY STAR market shares computed from secondary research. There was also an update finalized in early 2009 that updated appliance savings estimates through 2007. As an addition to the 2008 and 2009 program year evaluations, NYSERDA requested an update for year 2007, which included lighting measures installed through the NYE\$P Program that were not previously captured by other MCA evaluations. The core MCA team, which consists of staff from Navigant Consulting, GDS Associates, and Cadmus, worked closely with NYSERDA staff to conduct the data collection, analysis, and reporting activities contained in this report.

³ This report uses the following acronyms as substitutes for full utility names: CHG&E – Central Hudson Gas and Electric, Inc.; Con Edison – Consolidated Edison Company of New York, Inc.; National Grid – National Grid; NYSEG – New York State Electric and Gas Corporation; O&R – Orange and Rockland Utilities, Inc.; and RG&E – Rochester Gas and Electric Corporation.

1.1 Program Description

The **New York Energy \$martSM** Products Initiative (the Program), established in 1999, seeks to increase sales of residential energy-efficient appliances, lighting and home electronics products. This initiative works on both the supply and demand sides of the market. Its goals are: 1) to increase the supply of products through partnerships with retailers, manufacturers and distributors, and 2) to create demand for high-efficiency and ENERGY STAR products through consumer awareness and understanding of the ENERGY STAR label.

The Program area is defined as New York electricity distribution customers of CHG&E, Con Edison., NYSEG, Niagara Mohawk – a National Grid Company, O&R., and RG&E. The Program works on the supply side with retailers and manufacturers and on the demand side by marketing to consumers. The Program's overall goal is to increase awareness and understanding of the ENERGY STAR logo. Program activities include incentives for cooperative advertising and special promotions, as well as marketing campaigns on both the supply and demand sides of the appliance and lighting markets. Other activities include the development and distribution of special point-of-purchase (POP) materials; inclusion in the GetEnergySmart.org Website; development of educational materials, coordination with retailers to obtain donations of ENERGY STAR appliances and lighting in support of the Program's outreach at trade shows, home shows, and county and State fairs, as well as training sessions for retail sales staff and managers.

To support these activities, the Program draws on a 13-year budget of \$148.9 million for the Market and Community Support Program, which also includes funding for marketing of the Home Performance Program, the Multifamily Building Performance Program, the summer and winter tips campaigns, and leveraged campaigns such as "Change a Light, Change the World," as well as marketing assistance to mid-stream partners; the GetEnergySmart.org website and Workforce Development. Any manufacturer that makes a qualified ENERGY STAR product for sale in the **New York Energy \$martSM** Program area may participate. Retailers who wish to participate must stock, prominently display, and sell at least four ENERGY STAR models of a qualifying product. Manufacturers and retailers must sign a partnership agreement to participate and receive incentives. They must also promote their products within the **New York Energy \$martSM** Program area and agree to provide accurate sales data during each month of the partnership agreement.

Lockheed Martin (LM) is the implementation contractor for this program. LM collects, manages, and reports much of the data used to assess Program progress— including data covering retailers' monthly sales, on-site surveys of retail managers, mystery shopping, and stocking, display, and pricing practices.

The Program has the potential to achieve substantial energy savings for customers while also lowering energy costs and reducing the negative environmental impacts of energy use.

Key progress metrics developed by NYSERDA include:

- Number of participating retailers
- Market share and sales of ENERGY STAR products
- Electricity savings resulting from the Program
- Peak demand reduction resulting from the Program

The MCA team, along with NYSERDA staff, developed additional Program progress indicators – including near- and longer-term indicators of market progress, performance, and a variety of “hard to measure” success indicators – as part of this project. These indicators, which are discussed in greater detail in the Program Logic and Researchable Issues Section in this report, measure and assess Program progress across specified time periods and are based on Program logic. The MCA team assessed the indicators via interviews with relevant market actor groups, as well as other evaluation activities.

1.2 Target Audience

The primary target audience for the NYESP Program is the 6.1 million households in the **New York Energy \$martSM** area. The Program seeks to reach them by partnering with retailers and manufacturers of qualified appliance and lighting fixtures (CFLs were part of this Program in 2008 but not 2009). Other Program stakeholders include the retailers and manufacturer partners who are brought into the Program in partnership with NYSERDA.

1.3 Program Participation to Date

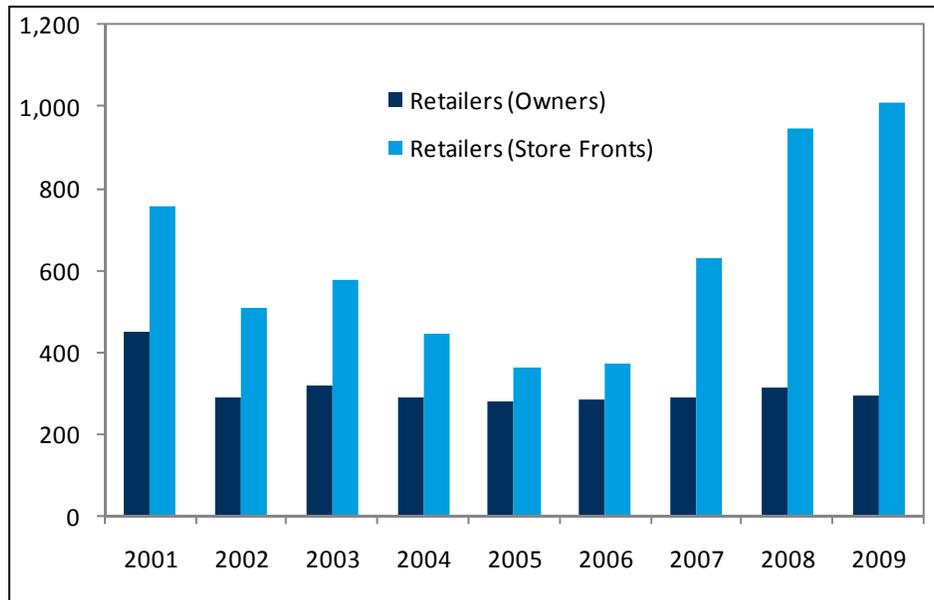
At the end of 2009, the NYESP Program had 1,103 participating partners, representing 344 active retail store fronts and 759 active lighting storefront partners.⁴⁵ The majority of the storefronts (79 percent) were independent retailers, while 21 percent were part of a chain. The Program also offered 519 full retailer training sessions, with a total of 3,185 participants. In 2009, the NYESP Program paid 2,923 incentives worth \$3,698,190 to participating retailers and manufacturers.

As shown in Figure 1, levels of participation have changed over time based on products supported, incentives offered, and Program needs. The count of retail owners includes retail chain owners rather than each individual store.

⁴ NYESP Program Quarterly Report, 4th Quarter 2009.

⁵ Lockheed Martin New York Energy \$martSM Products program 2009 Participant Practice Report, July 2010.

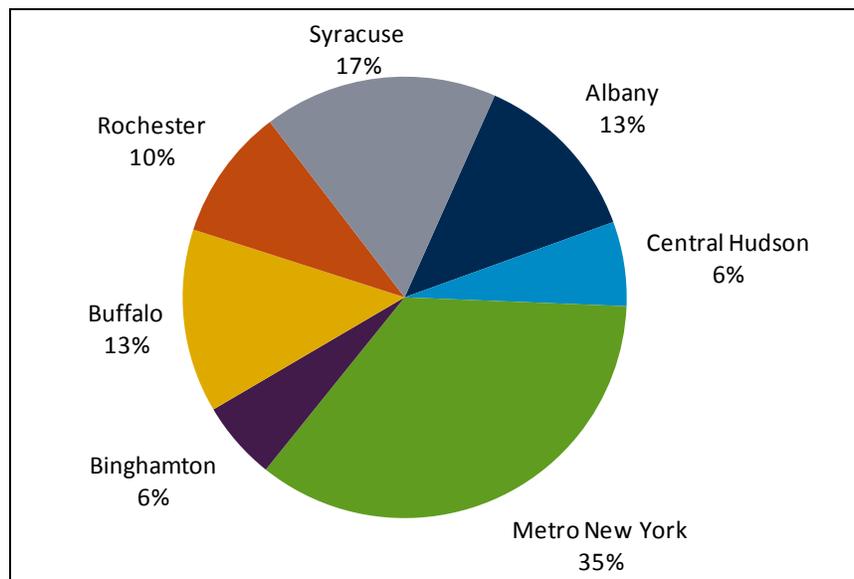
Figure 1. Number of Active Retail Partners by Year



Source: NYSERDA NYE\$P 4th Quarter Reports 2006-2009

The number of active retail partners at the end of 2009 was highest in the New York City metropolitan area (representing 35 percent of all NYSERDA retailers), followed by Syracuse (17 percent) and Buffalo (13 percent), but the retailers represent a variety of metropolitan areas throughout New York (Figure 2).

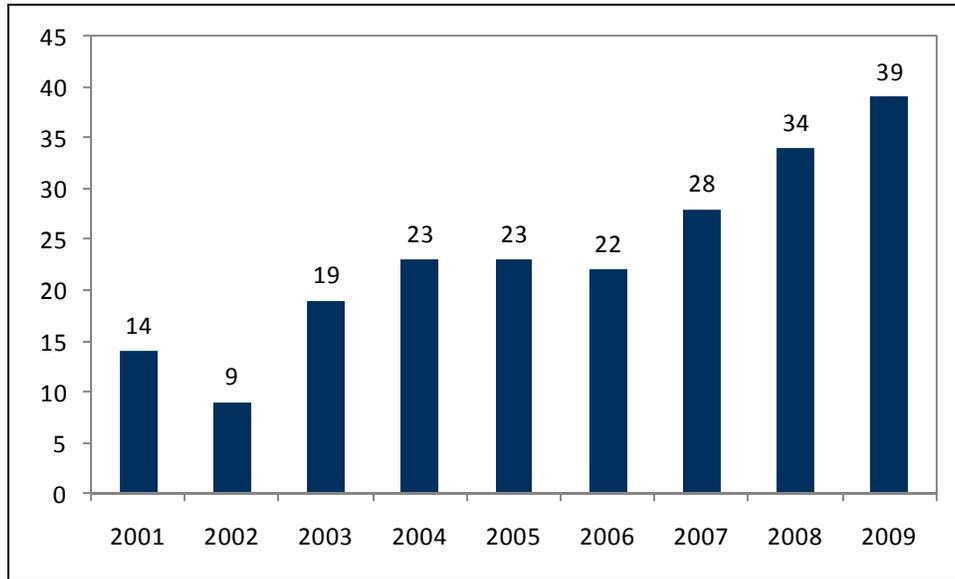
Figure 2. Active Retail Partners by Designated Market Area (DMA) Fourth Quarter 2009



Source: NYSERDA NYE\$P 4th Quarter 2009 Report

In addition to the retail partners, the Program also works directly with manufacturer partners. The Program enrolled 14 manufacturer partners in the first year (2001). Manufacturer enrollment dropped to nine in 2002, then steadily increased beginning in 2003, with 39 enrolled as of the end of 2009 (Figure 3).

Figure 3. Number of Manufacturer Partners by Year



Source: NYSERDA NYE\$P 4th Quarter Reports 2006-2009

The Program has aggressively pursued partner incentives and co-funding as a means of achieving energy savings. As of the end of 2009, the NYE\$P Program had paid out 21,660 marketing incentives worth more than \$15 million (Table 1). These incentives, however, were matched more than two-fold by the retailers and manufacturers, who spent an estimated \$38.6 million in co-funding. In other words, for every dollar the Program spent on incentives, the participating retailers and manufacturers spent approximately 2.5 dollars on marketing. Retailer cooperative advertising made up the highest proportion of incentives, representing more than 71 percent of all incentive dollars spent. In total, Program implementers estimate that the cooperative advertising component has achieved 89,677 gross rating points and 2.1 billion ad impressions since the Program was launched in 2001.⁶

⁶ Gross rating points are defined as the percentage of the target audience reached by an advertisement multiplied by the frequency they see it in a given campaign, and impressions are the number of times an advertisement is viewed.

Table 1. Total Incentive Dollars Awarded and Estimated Co-Funding through 2009

Funding Source	Retailers Co-Op Advertising	Retailer Special Promotions	Retailer Market Share	Manufacturer Special Promotions	Manufacturer Co-Op Advertising	Total
NYSERDA Incentive	\$8,938,324	\$2,086,664	\$2,367,791	\$2,295,874	\$159,914	\$15,848,567
Estimated Co-Funding	\$27,662,981	\$4,885,651	NA	\$5,397,183	\$682,011	\$38,627,826
Total	\$36,601,305	\$6,972,315	\$2,367,791	\$7,693,057	\$841,925	\$54,476,393

Source: NYESPA NYE\$P 4th Quarter 2009 Report

1.4 Evaluation Goals

The MCA team’s primary goal is to provide data and information to inform Program decision-making. The **New York Energy \$martSM** Programs constitute an investment of SBC funds, and the MCA work effort is designed to ascertain the return from these investments and how these returns can be enhanced.

Market Characterization (MC) describes energy markets and provides background information to help define programs, delivery concepts, target markets, and potential for different types of programs. Market Assessment (MA) tracks changes in markets with a specific focus on market indicators that might be affected by the Program in question; as such, this effort can be used to track Program progress. In addition to MC and MA, the MCA team also estimated net impacts attributable to the Program, which may be useful in assessing Program accomplishments and as input into Program decisions regarding further investment, exit strategies, and other policy and funding decisions.

This report examines each of the above items in the context of the NYE\$P Program. It includes a characterization of the market eligible to participate in the NYE\$P Program, an assessment of the NYE\$P Program’s progress based on a number of indicators, and finally an assignment of attribution of the energy savings and peak demand reduction attributable to the NYE\$P Program.

1.5 Research Approach

The research approach used by the MCA team to conduct the evaluation of the NYE\$P Program consisted of the following activities:

- Telephone meetings with NYE\$P Program staff
- Review of the NYE\$P Program tracking database and quarterly reports
- Review of numerous secondary data sources, including reports prepared for NYSERDA and for other programs similar to the NYE\$P Program
- Primary data collection via surveys and interviews with the following market actor groups:

- Residential end-use customers
- Participating retail stores
- Participating retail corporations
- Nonparticipating retail corporations
- Retail stores in comparison areas
- Participating manufacturers

This comprehensive approach examined a variety of primary and secondary data sources to generate information on a number of topics, including the size of the residential market for qualifying appliances and lighting equipment; the type and quantity of efficiency measures installed as a result of the Program; changes in awareness and understanding of energy efficiency; and the estimated influence and attribution of energy savings to the NYE\$P Program.

1.6 Program Logic and Researchable Issues

The ultimate goal of the NYE\$P Program is to transform the market to produce substantial improvement in the overall energy efficiency of area homes through changes in product purchase patterns. Progress toward this end can be divided into short-term, intermediate, and long-term goals. Short-term goals include increasing availability of information on and demand for ENERGY STAR and high- efficiency products, increasing availability and product range of high-efficiency products, and increasing purchases from residents and contractors. Intermediate-term goals include increasing demand for ENERGY STAR and high-efficiency products without NYSERDA's assistance; realized energy savings, peak demand reduction, and related energy bill reductions; and improved environmental and health benefits. These benefits would lead to the long-term outcome of achieving a market that values ENERGY STAR and high-efficiency equipment, continuing to ensure that the availability and sale of high-efficiency products remain strong.

Based on an assessment of the Program logic model, shown in Figure 4⁷, a number of researchable issues have been identified and are noted below. Some of these have been investigated and continue to be investigated through NYSERDA evaluation activities.

- Are the advertising campaigns, outreach efforts, and promotional materials effective? How effective? How well do they work together to increase consumer awareness, knowledge, intent and ability to act on those intentions? What is their impact on sales of ENERGY STAR and high-efficiency products?

⁷ GDS Associates, Inc. *Program Theory and Logic Model Activities for the New York Energy SmartSM ENERGY STAR Products and ENERGY STAR Marketing Programs*, Prepared for NYSERDA, February 2010

- Is the supply-side market development moving forward as anticipated? Is the Program contributing to increased availability and product ranges of ENERGY STAR and high-efficiency products? Is quality supply available to meet demand? Is the Program resulting in increased ENERGY STAR and high-efficiency product sales?
- Are participating retailers, manufacturers, distributors and contractors pleased with the functioning of and growth in the market for ENERGY STAR and high-efficiency products?
- Are NYSERDA-sponsored buy-downs and other supplier incentive programs contributing to increased ENERGY STAR and high-efficiency product sales?
- Are promotional activities leading to increase in demand for ENERGY STAR and high-efficiency products by end-use customers?
- Does ENERGY STAR product advertising raise awareness for all residential ENERGY STAR products and services?
- Do these advertising efforts increase knowledge and induce greater purchases of ENERGY STAR products than otherwise would have occurred, both within and outside of the Program?
- Are the ENERGY STAR and high-efficiency products meeting consumer expectations? Is there confirmation of their purchasing decisions? Does this support their continued and growing interest in the ENERGY STAR label and high efficiency as product criteria?
- Are the feedback mechanisms in the market positive and supportive of growth in demand? Of growth in supply?
- Are retailers and manufacturers recognizing profitability of promoting ENERGY STAR and high-efficiency products without NYSERDA supply and midmarket assistance?
- Are end-users recognizing savings from using ENERGY STAR and high-efficiency products, and would demand be strong without NYSERDA supply and midmarket assistance?
- What are the future implications for ENERGY STAR and high-efficiency products?
- How much continued consumer advertising is needed to maintain a sustainable market for ENERGY STAR and high-efficiency products?

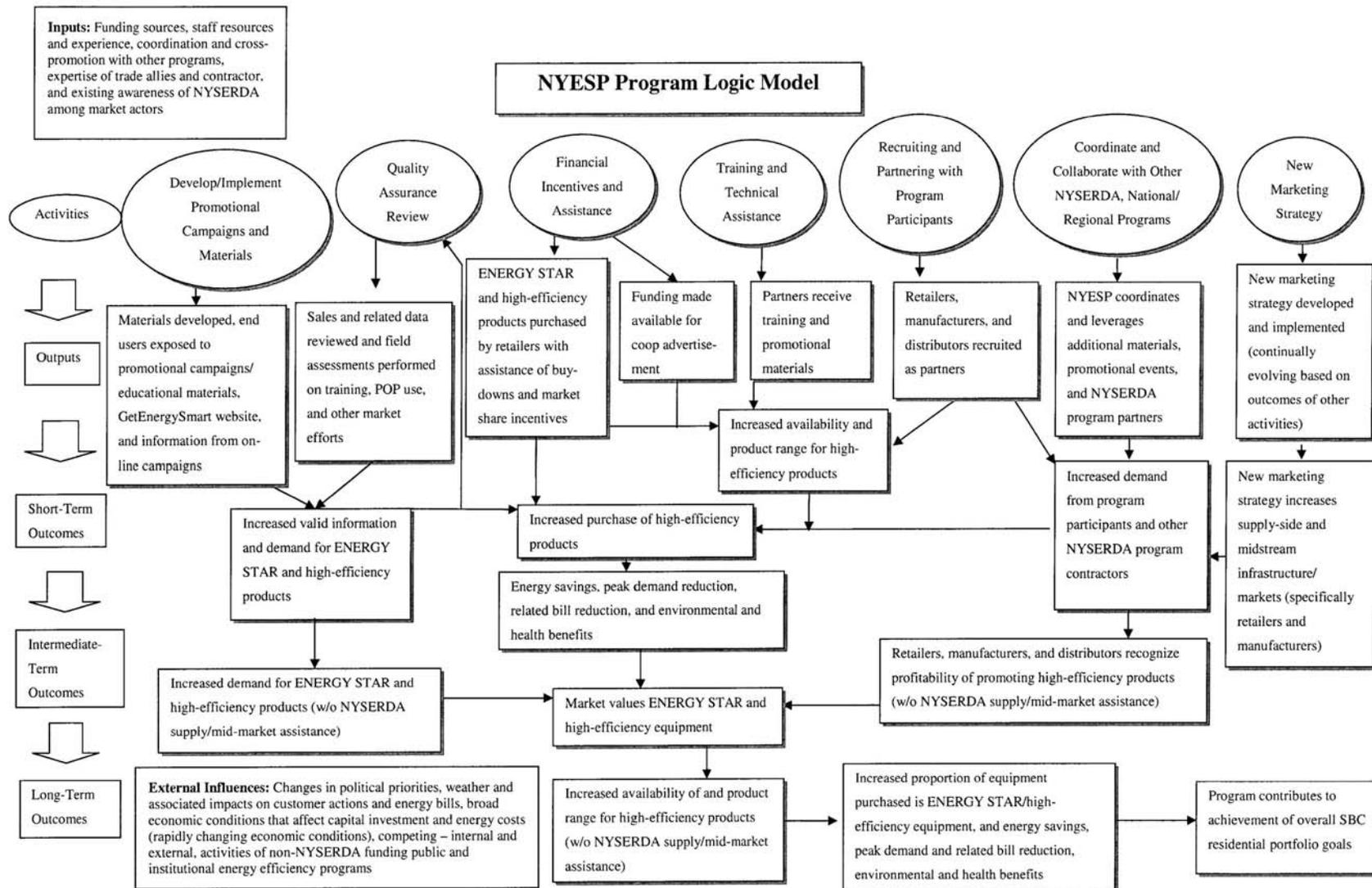
Evaluation research addressing these questions helps to validate the reasonableness of the Program theory and informs NYSERDA Program staff of Program progress and potential areas for Program refinement. This MCA evaluation will show qualitative and quantitative results throughout the report answering applicable questions. Some questions will be answered through a separate process evaluation.

1.7 Report Format

This report is organized in the following manner:

- Section 2 discusses the primary and secondary data sources used to evaluate the NYESP Program, sample selection, and data collection implementation processes.
- Section 3 presents findings regarding the basic characteristics of the appliance and lighting market and discusses Program accomplishments and market penetration.
- Section 4 examines the key market assessment indicators and researchable issues developed for the NYESP Program, including changes over time.
- Section 5 discusses the attribution analysis and the energy savings and peak demand reduction resulting from the NYESP Program.
- Section 6 presents overall findings and recommendations derived from the MCA evaluation.
- Appendix A is a detailed summary of research into the Home Electronics market.
- Appendix B is a detailed analysis of research performed by CEE regarding the ENERGY STAR brand.
- Appendix C contains copies of all survey instruments.

Figure 4. Logic Model for ENERGY STAR Products Program and Marketing Campaign for Appliances Retail Products



Source: GDS Associates, Inc. Program Theory and Logic Model Activities for the New York Energy SmartSM ENERGY STAR Products and ENERGY STAR Marketing Programs. Prepared for NYSERDA. February 2010.

2. Primary and Secondary Data Sources and Methods

This section discusses the primary and secondary data sources and methods used by the MCA team to evaluate the NYE\$P Program.

As discussed in greater detail in the remainder of this section, the primary and secondary data sources were used in a comprehensive research approach that consisted of the following activities:

- Review of Program offering solicitations
- Review of NYE\$P Program monthly and quarterly reports
- Analysis of the sales data for national partner retailers available from D&R International, Ltd.
- Comparison of results with the previous 2007 MCA NYE\$P Program evaluation
- Primary data collection via surveys with the following market actor groups:
 - Residential end-use customers
 - Participating retail store fronts
 - Participating corporate retailers
 - Participating manufacturers
 - Retailers from Washington, D.C., Houston, and Ohio

2.1 Secondary Data Sources

Evaluation Design

The MCA team used the results of earlier research efforts to help formulate plans for this evaluation effort and to help describe longitudinal findings including changes in market size, awareness, and use of energy services. Particularly, the team used the current Program logic model dated February 2010 (Figure 4) for planning these efforts.

Sales Data

For calculations of market penetration, the MCA team relied heavily on national partner sales data and state-level NYSERDA partner sales data. National data are collected by D&R International, Ltd. from ENERGY STAR national retail partners and includes data on sales of ENERGY STAR qualifying units by state. Reported appliances include clothes washers, dishwashers, freezers, refrigerators, room air conditioners, and starting in 2009, water heaters. The data represent approximately 60 percent of the retail market for appliances. In accordance with agreements with retailer partners, ENERGY STAR does not disclose details about the specific sources of the data. The retail partners that submitted sales data to the

ENERGY STAR program for a certain year may differ from those that submitted sales data for previous years; therefore, caution should be taken when making direct comparisons from year to year.⁸

NYSERDA partner data is collected by Lockheed Martin, the Program implementer. As required by NYSERDA partner agreements, partner retailers and manufacturers provide monthly sales data on ENERGY STAR and total product sales to NYSERDA for analysis. Lockheed Martin also performs additional research regarding shelf stocking and pricing practices as well as performing sales associate training. Excerpts of this research are used to support and explain primary research performed by the MCA team.

Total appliance shipments by state, compiled by the Association of Home Appliance Manufacturers, are used to estimate overall market size for each appliance.

CEE Survey

In recent years, the Consortium for Energy Efficiency (CEE) has conducted an annual survey of households across the nation. In 2001, 2004, 2006, 2008, and 2010, NYSERDA elected to fund an over-sample within the **New York Energy \$martSM** service area. This provided an opportunity to collect time series data for the NYSERDA area and to draw comparisons to the national results. In addition to awareness and understanding, the study also asks about recent appliance purchases. The national sample contained 1,413 respondents and the NYSERDA territory included 300 respondents, each of which are recruited to represent certain Census benchmarks for age, gender, race/ethnicity and education status. Weights are used to stratify the sample responses across the territories. These data are used throughout this report to compare MCA survey results with national and NYSERDA area results. Appendix B contains detailed analysis of this survey data.

2.2 Primary Data Collection

The MCA team used market actor surveys to generate information regarding a number of topics related to the NYESP Program, including consumer and retailer awareness and knowledge of the ENERGY STAR label, accessibility of energy efficiency measures, perceived value of ENERGY STAR products, market share, pricing and incremental cost of ENERGY STAR products, and the estimated influence of the ENERGY STAR label on purchase behavior.

The MCA surveys contained questions that helped to define the market and measure Program progress indicators. These indicators, discussed in greater detail in Section 4, are based on the Program logic and are designed to measure and assess Program progress across specified periods. The final survey instruments,

⁸ [ENERGY STAR Resources for Appliance Manufacturers and Retailers](#) website.

which were reviewed by NYSERDA staff throughout the development process to ensure that the questions targeted the concepts most relevant to the NYESP Program, are presented in Appendix C of this report.

Overview of Market Actor Survey Efforts

The MCA team relied upon multiple survey efforts to enable triangulation of results based upon responses received from all relevant actors, as summarized in Table 2. Each survey effort is discussed in detail following the tables.

Table 2. Market Actor Survey Efforts for the NYESP Program

Market Actor	Population Size ²	Survey Method	Number of Surveys Complete, Goal	Number of Surveys Complete, Actual	Percent of Goal Achieved	Confidence/Precision
Residential end-use customers (appliances)	6.1 million households ⁴	Phone	200 per product + 100 non-purchasers	201-209 per product, 109 nonpurchasers	100%+	90/5.8 per product
Residential end-use customers (electronics)	6.1 million households	Phone	400	408	102%	90/4
Residential end-use customers (home electronics site visits 2009)	6.1 million households	Onsite	303	303	100%	90/4
Residential end-use customers (home electronics site visits 2010)	6.1 million households	Onsite	296	296	100%	90/4
Participating retailers	979	Phone	72	72	100%	90/10
Participating manufacturers	39	Phone	5	5	100%	NA
Participating corporate retailers	13	Phone	10	8	80%	NA
Comparison area survey	NA	Phone	150 per area	162 Ohio 33 D.C. 77 Houston	108% Ohio 22% D.C. ⁹ 51% Houston	NA
In-store retailer partners	344 appliances 759 lighting ¹⁰	Onsite	52 52	52 52	100% 100%	90/12.5 90/13

Table 3 summarizes the types of information collected as part of the MCA evaluation of the NYESP Program. Each survey effort is discussed in detail following the tables.

⁹ Several challenges discussed in comparison area survey description below prevented the MCA Team from achieving its completion goals in Washington, D.C., and Houston.

¹⁰ Includes stores selling only CFLs.

Table 3. Data Collection Efforts by Topic Area

Topic Area	Residential End-Use Customers (Appliances)	Participating Retailer Phone Survey	Participating Manufacturers Phone Survey	Corporate Retailer Survey	CEE Survey*	Partner In-Store Retailer Survey*	D&R/ Lockheed Martin Market Share*
Consumer awareness	X	X		X	X		
Retailer awareness	X	X		X		X	
Perceived value	X	X	X				
Accessibility of EE measures	X	X	X	X		X	
Pricing/Incremental cost		X	X	X		X	
Market share	X						X
Program impacts	X	X	X	X			X

* Secondary research.

Residential End-Use Customer Telephone Survey

The survey of end-use customers was conducted via telephone.¹¹ It was conducted as a random-digit-dial (RDD) survey of households in the **New York Energy \$martSM** Program area from May 20 through July 5, 2010. The primary goal of the survey was to assess attitudes and behavior related to the purchase process for several products tracked by the Program, including refrigerators, dishwashers, clothes washers, room air conditioners, and light fixtures. A quota of 200 completed purchaser surveys was set for each product category.

Standard survey protocol for such surveys was used in the administration of this effort, with a minimum of 15 attempts made at various times of the day and the week, as necessary, to contact each primary respondent in the sample. All primary data collected through this survey effort were entered into a software system and provided to the MCA team in text format. Software from the SAS Institute was used to analyze the data.

As shown in Table 4, surveys were conducted with 848 purchasers of appliances/lighting fixtures (85 percent of the goal of 1,000 completes)¹² and 109 non-purchasers (109 percent of the goal of 100 completes). The number of purchasers for each measure type, is also presented in the table, and the goal of at least 200 completes per measure was met.

¹¹ The survey was managed by APPRISE Incorporated. Interviews were conducted by Braun Research, Incorporated.

¹² Since some respondents purchased more than one appliance/fixture type, fewer than 1,000 individual resident respondents were needed to achieve the desired confidence and precision by appliance type.

Table 4. MCA Residential End-Use Customer Telephone Survey Sample Sizes by Product

Quota Group	Proposed Completes	Actual Completes	Percent of Goal Achieved	Confidence/Precision
Appliance/Fixture Purchasers	1,000	848	85%*	90/3
Refrigerators	200	201	101%	90/6
Clothes Washers	200	203	102%	90/6
Dishwashers	200	200	100%	90/6
Room Air Conditioners	200	203	102%	90/6
Light Fixtures	200	209	105%	90/6
Appliance/Fixture Nonpurchasers	100	109	109%	90/8

* Since some individuals purchased more than one appliance and were surveyed on each appliance purchased therefore individual appliance completion goals were met without requiring the total survey completion of 1,000 to be met.

The call disposition for the MCA residential end-user survey is presented in Table 5, and provides the contact, cooperation, and overall response rates. The response rate estimates the fraction of all eligible respondents in the sample that were ultimately interviewed. The contact rate is the percentage of the working numbers where an interview request was made. The cooperation rate is the percentage of contact numbers where consent for an interview was not refused.¹³ The contact rate for the study was 79.1 percent, the cooperation rate was 75.9 percent, and the overall response rate was 56.9 percent.

¹³ These disposition codes and rate formula are consistent with the standards of the American Association for Public Opinion Research (AAPOR).

Table 5. Sample Disposition for ENERGY STAR Products End-Use Customer Survey

Metric		Number	Percent
TOTAL SAMPLE USED		15,253	100%
Excluded Sample	Not working/unusable number	6,747	44.2%
Not Contacted	Respondent never available	0	0.0%
	Answering machine	801	5.3%
	Call back/left 800#	657	4.3%
Unknown Eligibility	No answer/busy	799	5.2%
	Records not yet called/screen not complete	0	0.0%
Excluded household	Not eligible/not qualified	326	2.1%
	Over quota	395	2.6%
Refused/ Break-off	Refused	1,252	8.2%
	Break-off	80	0.5%
COMPLETED INTERVIEW		4,196	27.5%
Purchasers		848	5.6%
Non-Purchasers		109	0.7%
Failed Screeners		3,239	21.2%
Contact rate ¹⁴ $(5,528 \div 6,986 = 0.791)$			79.1%
Cooperation rate ¹⁵ $(4,196 \div 5,528 = 0.759)$			75.9%
Response rate ¹⁶ $(4,196 \div (6,986 + (0.4833 \times 799)) = 0.569)$			56.9%

The survey data were weighted to compensate for the sample design and for patterns of non-response that might bias results. The demographic characteristics of all respondents (purchasers, non-purchasers, and failed screeners¹⁷) were used to determine proper weights for the purchaser and non-purchaser responses to bring them into alignment with known population parameters for the State of New York.

The data set used for weighting included all purchaser completes (200 per appliance), non-purchaser completes (n=100), and failed screeners (n=3,239). All completes and failed screeners were weighted to population distributions from the American Community Survey (2006-2008). The data were weighted by homeownership, head of household age, and head of household education for NYESP territory.

¹⁴ Contact rate = Completes + refusals + break-offs / Completes + refusals + break-offs + not contacted.

¹⁵ Cooperation rate = Completes / Completes + refusals + break-offs.

¹⁶ Response rate = Completes / Completes + refusals + break-offs + not contacted + (e*(unknown eligibility)). For this study, e = 0.4833.

¹⁷ Field screeners are non-purchasers not selected for the non-purchaser full interview but for whom demographic information was collected for weighting purposes only.

Respondents with missing data on all of the weighted variables were assigned a weight equal to the average weight for all respondents. Weights were then trimmed so that no individual respondent had too much or too little impact on weighted data.

In-Store Retail Manager Survey

The 2009 survey was the twelfth in the series of in-store surveys (started in 1999) conducted by Lockheed Martin to measure the performance of the retailers participating in the Program. These interviews took place during August and September of 2009 for appliances, and March and April of 2009 for lighting products. A total of 104 stores across major product categories were surveyed: 52 appliance stores and 52 lighting stores.

In this Program year, the sampling stratification was revised from simple random sampling to stratification by national chains, small chains, and single location stores. During 2009, 73 percent of the lighting store partners sold CFLs but did not sell lighting fixtures or ceiling fans. As such, allocating the sample proportionally (73 percent CFLs to 37 percent fixtures) would have resulted in too few stores selling lighting fixtures and ceiling fans to obtain statistically significant results for these products. A two-fold stratification design was therefore used for the lighting survey. The first stratum consisted of stores that sold only CFLs; those that sold other covered products were assigned to a second stratum. The second step allocated the stores in these strata to substrata by store type.

A random sample of active lighting and appliance retailers across the State was selected and given to the Product Field Representatives who conducted the surveys. The appliance and lighting surveys were timed to occur during the months of anticipated maximum sales volume for each major product category. Surveyors used ENERGY STAR model numbers recorded in personal digital assistants (PDAs) to identify qualifying models observed in showrooms.

Participating Retailer Telephone Survey

While the In-Store Retail Manager Survey interviewed 52 each of appliance and lighting stores to assess their performance, the MCA team completed 72 surveys with individual retail stores to explore self-reported changes in consumer awareness, ENERGY STAR product availability, and pricing due to the Program. The survey sample was identified from retail stores who were listed as participating in the NYESP Program as of August 2009. Retailers were stratified into either “high volume” or “rest of sample” according to the number of total appliance or lighting sales made during the year. Of the 72 surveyed, 11 of the 18 lighting retailers and 10 of the 54 appliance retailers were high volume sellers when sales of all

appliances were combined.¹⁸ Of the remaining survey respondents, seven lighting and 44 appliance retailers were sampled from the “rest of sample” stratum. The survey explored self-reported changes in consumer awareness, ENERGY STAR product availability, and pricing due to the Program. Opinion America (a subcontractor to APPRISE Incorporated) conducted the interviews using a computer-assisted telephone interview (CATI) survey instrument. Table 6 shows the survey sample disposition for this Participating Retailer Telephone Survey.

Table 6. Participating Retailer Survey Disposition

		Number	Percent
TOTAL SAMPLE USED		357	100%
Excluded Sample	Not working/unusable number	16	4.5%
Not Contacted	Respondent never available	0	0.0%
	Answering machine	19	5.3%
	Call back/left 800#	74	20.7%
Unknown Eligibility	No answer/busy	14	3.9%
	Records not yet called/screen not complete	76	21.3%
Excluded business	Not eligible/not qualified	27	7.6%
	Over quota	0	0.0%
Refused/ Break-off	Refused	16	4.5%
	Break-off	43	12.0%
COMPLETED INTERVIEW		72	20.2%
Contact rate ¹⁹ (131÷224 = 0.585)			58.5%
Cooperation rate ²⁰ (72÷131 = 0.550)			55.0%
Response rate ²¹ (72÷(224 + (0.8390×90)) = 0.240)			24.0%

Participating Corporate Retailer Telephone Survey

In May and June 2010, the MCA team completed eight surveys with corporate representatives of retail chains who were listed as participating in the NYE\$P Program as of August 2009. Although not intended to

¹⁸ High volume sellers were identified as the top 70 combined appliance product sellers. For corporate retail chains, the total sales were divided equally among individual store fronts.

¹⁹ Contact rate= Completes + refusals + break-offs/Completes + refusals + break-offs + not contacted.

²⁰ Cooperation rate = Completes/Completes + refusals + break-offs.

²¹ Response rate = Completes/Completes + refusals + break-offs + not contacted + (e*(unknown eligibility)). For this study, e = 0.8390.

be a statistical sample, these interviews were meant to provide insights about the influence of NYSERDA Program efforts on sales of ENERGY STAR products in other areas of the United States. The interviews explored retailer changes in awareness, product availability, pricing, and marketing efforts that may have resulted from retailers’ experiences in New York.

Table 7 shows the survey sample disposition for these Participating Corporate Retailer Telephone Interviews. Of the 13 participating corporate retailers, the MCA Team wished complete 10 interviews. Initial contact was made by sending an e-mail to explain the purpose of the interview and a letter from NYSERDA endorsing the effort was included. Several additional calls and emails followed until the survey closed with eight completes for an overall response rate of 61.5 percent.

Table 7. Participating Corporate Retailer Survey Disposition

	Corporate Retailers
Total Sample	13
Goal for Number of Completes	10
Completes	8
Response Rate	61.5%

Comparison Area Retailer Survey

The MCA team completed 272 surveys with appliance and lighting retailers across three regions outside the **New York Energy \$martSM** Program area. These regions were determined to be socially and economically comparable to NYSERDA’s area (with Houston and Washington, D.C., representing New York City and Ohio representing the remainder of New York), with the exception that ENERGY STAR products are not currently promoted in these locations. Of the 272 surveys, 162 were conducted at lighting or appliance retailers in Ohio, 77 in Houston, Texas, and 33 in Washington, D.C. The comparison area retailers received a survey similar to that administered to participating retailers for the purpose of assessing awareness, availability, and pricing of ENERGY STAR products in the local region. Retailers were also asked their opinions regarding ARRA impacts on sales that occurred in late 2009. The sample was purchased from the American Business Information (ABI) database.²² The sample frame was developed by identifying the Standard Industrial Classification (SIC) codes associated with the NYESP Partner Retailers and using those SIC codes as the basis for the sample frame for each of the geographic areas. This procedure was used in an attempt to identify a sample frame of retailers in each comparison area that corresponded as closely as possible with the ESP Partner Retailers. The following SIC codes were used to create the initial ABI sample frame (these codes encompass appliance and lighting fixture retail stores): 5311, 5651, 5712, 5719,

²² The ABI provides business and consumer marketing information products and data processing services in the United States and Canada.

5722, 5731, and 5734. During fielding, an eligibility problem occurred. A large number of companies within the area and with the specified SIC codes did not qualify to participate in the study because they did not sell any of the four appliance types or light fixtures. Consequently, the APPRISE survey manager conducted an initial screen of all three comparison samples to increase sample efficiency during data collection. First, the survey manager prioritized the records that qualified for the study based on the company's name, brief phone calls, and website lookups. Then, the prioritized samples were sent to the phone center for dialing. Another challenge occurred during fielding when store managers at the larger chain stores such as Home Depot, Lowe's, Best Buy, and Sears referred interviewers to corporate offices, stating that their corporate policy forbade participation in any store level survey, especially if they had to disclose stocking and sales information. As a result, fielding in Houston and Ohio temporarily halted for close to one month (from 9/14 to 10/11) to resolve the issue. APPRISE reached out to NYSERDA requesting that Lockheed Martin, NYSERDA's data collection contractor, obtain a corporate retailer letter from corporate affiliates that would give permission for store managers in the three comparison areas to participate in the survey. Of the main corporate chains, only Sears provided permission for district managers to participate in the survey. Eventually, a list of Sears's stores in each of the three areas was released for the call center to contact eight Sears stores in Houston, 36 Sears stores in Ohio, and four stores in Washington, D.C.

A third challenge was gaining cooperation from store managers who have no connection to NYSERDA or the ESP Program. To encourage participation, \$25 incentives were offered starting in the middle of the fielding period. While the incentives were offered to all respondents, only 76 respondents ultimately accepted the offer. As a result of these challenges, APPRISE was unable to meet the completion goals for all areas.

The survey was managed by APPRISE Incorporated. Interviews were conducted by Opinion America Group between July 13, 2010, and December 1, 2010. Table 8 shows the sample distribution for the survey.

Table 8. Comparison Retailer Survey Sample Distribution

		Ohio		Houston		Washington, D.C.	
		Number	Percent	Number	Percent	Number	Percent
TOTAL SAMPLE USED		1,080	100%	1,080	100%	208	100.00%
Excluded Sample	Not working/unusable number	44	4.10%	90	17.0%	17	8.20%
Not Contacted	Respondent never available	112	10.40%	28	10.40%	8	3.80%
	Answering machine	6	0.60%	0	0.0%	2	1.00%
	Call back/left 800 #	7	0.60%	15	2.8%	2	1.00%
Unknown Eligibility	No answer/busy	0	0.00%	1	0.2%	0	0.00%
	Records not called/Screen not Complete	3	0.30%	1	0.2%	2	1.00%
Excluded business	Not eligible/not qualified	563	52.10%	283	53.4%	128	61.50%
	Over quota	115	10.60%	0	0.0%		
Refused/ Break-off	Refused	65	6.00%	30	5.7%	8	3.80%
	Not Completed (Suspends)	3	0.30%	5	1.0%	8	3.80%
COMPLETED INTERVIEW		162	15.00%	77	14.5%	33	15.90%
Contact rate (230÷355 = 0.648)			64.80%		72.3%		80.30%
Cooperation rate (162÷230 = 0.704)			70.40%		68.8%		67.30%
Response rate (162÷(355+(0.3296×3)) = 0.455)			45.50%		49.5%		53.60%

Participating Manufacturer Survey

In May and June 2010, the MCA team interviewed five manufacturers: two producing appliances and three producing lighting fixtures. Although not intended to be a statistical sample, the surveys were meant to provide anecdotal insights from this market actor group. Questions were designed to assess the influence of the Program on business practices, changes in the market and perceived sustainability of Program impacts.

Table 9 shows the interview sample disposition for the Participating Manufacturer Telephone Interviews. Of the ten manufacturers that were a part of the original sample, the MCA Team planned to complete five interviews. Initial contact was made by sending an e-mail to explain the purpose of the interview and a letter from NYSERDA endorsing the effort was included. Several additional calls and emails were initiated until all five interviews were completed.

Table 9. Participating Manufacturer Interview Disposition

	Corporate Retailers
Total Sample	10
Goal for Number of Completes	5
Completes	5
Response Rate	50%

Residential End Use Customer Telephone Survey - Electronics

The Home Electronics telephone survey was conducted August 11 through August 29, 2010, through a dual-frame random digital dial (RDD) landline and cell phone study, and included 408 total respondents (308 RDD landline respondents and 100 cell phone respondents). Both samples were provided by Survey Sampling International LLC (SSI) according to Princeton Survey Research Associates International (PSRAI) specifications.²³ The survey was managed by APPRISE Incorporated, and interviews were conducted by PSRAI working with their data collection facility, Princeton Data Source (PDS).

Respondents were interviewed about their energy usage habits and the electronic devices in their homes. The purpose of the survey was to gather high-level data on electronics saturations, attitudes towards energy efficiency, and household electronics purchasing decisions. The survey responses were weighted based on region (upstate versus downstate), number of adults in household, number of children, gender, education, race, and household phone use. Table 10 shows the sample disposition for RDD landlines and cell phones.

²³ PSRAI specifications defined the upstate and downstate areas and the number of cell phone and land line samples needed.

Table 10. Residential Electronics Survey Sample Disposition

		Land Line		Cell Phone	
		Number	Percent	Number	Percent
TOTAL SAMPLE USED		5,883	100.00%	1,991	100.00%
Excluded Sample	Not working/unusable number	3,550	60.40%	783	39.30%
Not Contacted	Respondent never available	6	0.10%	192	9.70%
	Answering machine	276	4.70%	309	15.50%
	Call back/left 800#	305	5.20%	0	0.00%
Unknown Eligibility	No answer/busy	603	10.20%	40	2.00%
	Records not yet called/screen not complete	0	0.00%	0	0.00%
Excluded household	Not eligible/not qualified	96	1.60%	76	3.80%
	Over quota	0	0.00%	0	0.00%
Refused/ Break-off	Refused	734	12.50%	489	24.60%
	Break-off	5	0.10%	2	0.10%
COMPLETED INTERVIEWS		308	5.20%	100	5.00%
Contact rate (1047÷1634 = 0.641)			64.10%		54.10%
Cooperation rate (308÷1047 = 0.294)			29.40%		16.90%
Response rate (308÷(1634 + (0.3095×603)) = 0.169)			16.90%		9.00%

The weighting of the survey data was meant to compensate for the dual frame sample design and for patterns of non-response that might bias results. The weighting was accomplished in a three-stage process.

The first stage adjusted for different probabilities of selection associated with the number of adults in the household with a cell phone and for the presence of a landline phone in the household. This stage of weighting also adjusted for the dual frame design (the overlapping landline and cell phone sample frames) and for the relative size of each sample.

The second stage weighted sample demographics to population parameters. The demographic characteristics of the combined landline and cell phone survey respondents were weighted to bring them into alignment with known population parameters for the State of New York. The population parameters were developed using New York State population distributions from the Census Bureau’s Population Estimates program and the Annual Social and Economic Supplement (ASEC 2009). The data were

weighted by region (upstate/downstate New York),²⁴ number of adults in the household, number of children in the household, gender of the head of household, highest education level in the household, race/ethnicity of head of household, and household telephone use.

In a final step, extreme weights (at both ends of the distribution) were adjusted or ‘trimmed’ to prevent individual interviews from having too much influence on the final results. Appendix A contains a detailed analysis of this survey.

Home Electronics Site Visits

In early 2009 and 2010, site visits were performed in NYSERDA area homes to assess electronics saturations. In 2009, 303 homes were visited and in 2010, 300 visits occurred.²⁵ Households were initially recruited on the telephone as part of a CFL Expansion Program Random Digit Dial Telephone Survey. Technicians recorded information about home television, audio, and computer devices, such as make and model, hours of use, and use of auxiliary components. The data were weighted by home ownership, household member age, head of household education, and household size to match the population distributions in the U.S. Census Bureau’s *American Community Survey*. Appendix A contains a detailed analysis of the Home Electronics Site Visits. Table 11 and Table 12 show the sample disposition for the recruitment of home electronic site visits in both 2009 and 2010.

Table 11. 2009 Home Electronics Site Visit Disposition

	New York State		New York City	
	Number	Percent	Number	Percent
Total Sample Used	270	100.00%	141	100.00%
Completed Site Visits	203	75.19%	100	70.92%
Response Rate		75.19%		70.92%

²⁴ Upstate New York includes all of New York State except the five boroughs of New York City, Westchester, Nassau, and Suffolk counties. Downstate New York includes only the five boroughs of New York City and Westchester.

²⁵ While 300 site visits were completed, only 296 homes contained electronic equipment.

Table 12. 2010 Home Electronics Site Visit Disposition

	New York State		New York City	
	Number	Percent	Number	Percent
TOTAL SAMPLE USED	544	100.00%	274	100.00%
Revisit Cases	203	37.32%	100	36.50%
New Cases	341	62.68%	174	63.50%
COMPLETED SITE VISITS	200	36.76%	100	36.50%
Revisit Cases	132	66.00%	65	65.00%
New Cases	68	34.00%	35	35.00%
RESPONSE RATE		36.76%		36.5%

3. Market Characterization

This section presents the basic characteristics of the market eligible to participate in the NYESP Program and discusses Program accomplishments to date. First, the market characterization approach used by the MCA team is discussed, followed by the market size (**New York Energy \$martSM** regional annual sales) and product distribution channels. The final section estimates ENERGY STAR market share. The characterization effort includes a temporal component that enables changes in market penetration to be identified and examined over time.

3.1 Market Characterization Approach

The market characterization component of the MCA evaluation describes energy markets and provides background information to help define programs, delivery concepts, target markets, and the potential for different types of programs. In terms of the NYESP Program, the market characterization component provides information on key progress indicators by:

- Collecting and compiling descriptive data on the market eligible to participate in the NYESP Program in terms of the size of the market
- Estimating market penetration for a number of key products
- Providing information needed to identify current market practices, behaviors, and perceptions of market barriers and opportunities
- Developing the underpinnings required to identify additional Program intervention opportunities

The MCA team worked with NYSERDA staff to develop the market characterization parameters used in the evaluation of the NYESP Program. These parameters follow the same approach used by the MCA team in the 2007 evaluation²⁶. In particular, the MCA team:

- Participated in meetings with Program staff and other NYSERDA evaluation contractors to discuss potential characterization parameters and other Program indicators
- Reviewed previous NYESP Program evaluation reports and survey efforts to identify characterization parameters that have previously been tracked by NYSERDA.
- Reviewed Program evaluation reports and survey efforts conducted by other entities to identify additional innovative characterization parameters currently being used within the industry

²⁶ Summit Blue Consulting, LLC, "[New York Energy \\$martSM Products Program](#) - Market Characterization, Market Assessment and Causality Evaluation," 2007 New York Energy \$martSM Evaluation Contractor Reports.

- Investigated proprietary and publicly available data sets to determine the types of characterization data available for analysis

The findings from the market characterization analysis are discussed below.

3.2 Market Characteristics

The MCA team used both secondary data and estimation techniques to assess the size and specific attributes of the statewide market for energy-efficient appliances and lighting fixtures.

Market Size

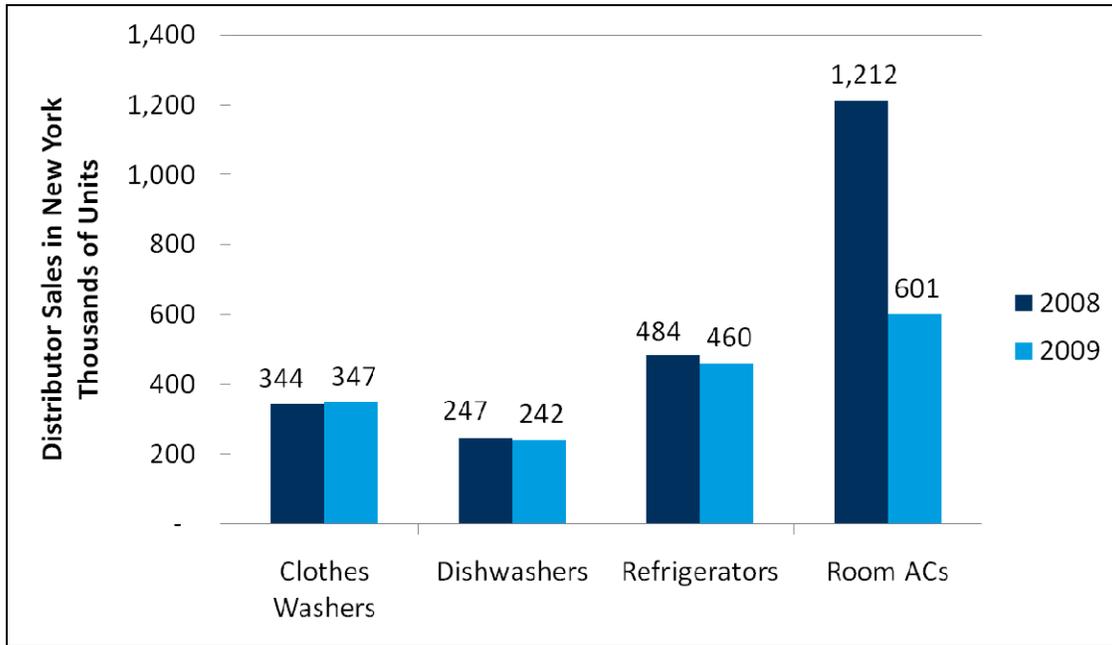
One critical component for estimating market share is an understanding of the total market size: how many ENERGY STAR and non-ENERGY STAR units are sold annually in the **New York Energy \$martSM** region for each of the product categories? One technique to estimate market size is to rely on shipment data from the Association of Home Appliance Manufacturers (AHAM), which publishes data on annual product shipments by state for major appliances (refrigerators, clothes washers, and dishwashers and room air conditioners).

As concluded in the 2007 MCA evaluation, shipment data can serve as a proxy for sales, with the assumption that the number of products shipped in state but sold in neighboring states equals the number of products that are shipped to neighboring states but sold in the state of interest. In the 2007 evaluation, the MCA team compared purchase incidence determined from the 2004 Consortium for Energy Efficiency (CEE) web survey New York oversample to AHAM shipment data.²⁷ Based on the data and comparisons of shipments in neighboring states, the MCA team determined that AHAM shipments could be used to estimate the total number of units sold in New York for this evaluation as well, by adjusting for the percentage of New York residents who are also in NYSERDA territory.

²⁷ CEE conducts a Web-based survey every year to track ENERGY STAR awareness and understanding. The study included a New York oversample in 2004, 2006, 2008 and 2010 in order to achieve a statistically representative sample for the **New York Energy \$martSM** region. In addition to questions about awareness and understanding, the study asked about recent appliance purchases, thus providing an estimate of purchase incidence. Appendix B highlights key findings from this study.

As shown in Figure 5, AHAM shipments were almost the same from 2008 to 2009 for most appliances, with the exception of room air conditioner shipments, which were reduced by half. While the summer 2008 season in New York was a couple of degrees hotter on average than summer 2009, the difference in weather does not explain the huge difference in room air conditioner sales. One possible explanation is the economic recession.

Figure 5. Comparison of AHAM Shipments 2008 vs. 2009



Source: Association of Home Appliance Manufacturers 2008 and 2009 shipment data

Product Distribution Channels

The NYESP Program targets products that are sold at a variety of retail store types. Understanding the volume of product sold through each of the distribution channels is critical for directing Program resources to the right retailers and for ensuring that the proper mix and type of retailers are participating in the Program.

In order to investigate distribution channels, the MCA team asked each end-use customer respondent who had purchased a product where the product had been purchased and the type of store. The store types in the survey are as follows (with examples of typical stores):

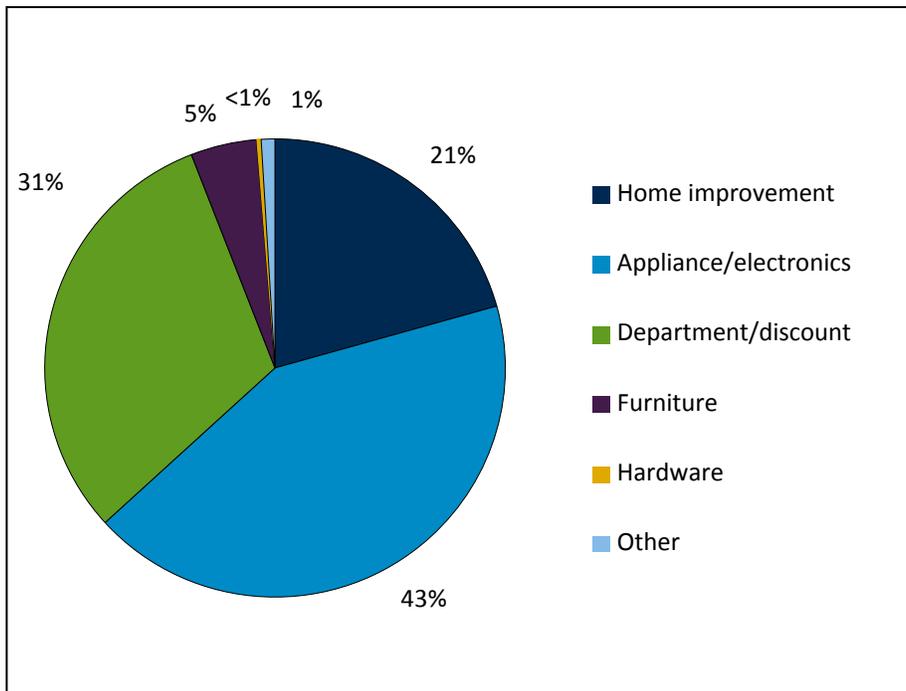
- Appliance/electronics store (e.g., PC Richard, Best Buy, Orville’s Appliances, Rosa’s)
- Department store or discount department store (e.g., Wal-Mart, Sears, Target, Costco)
- Drug store (e.g., CVS, Rite Aid, Walgreens)
- Furniture or home furnishings store (e.g., Bed Bath & Beyond, IKEA, Gracious Homes)
- Grocery store (e.g., Wegmans, Price Chopper, Tops, Shoprite, P&C, Pathmark)
- Hardware store (e.g., Ace, True Value, Aubuchon’s)

- Home improvement store (e.g., Lowe’s, Home Depot)
- Lighting specialty store (e.g., Maynard’s, Rainbow Lighting, Lamps Plus)
- Other type of store (e.g., Home Shopping Network, Rent-a-Center, online retailers)

In general, the four appliance groups had similar trends in distribution channels, with over 90 percent of sales coming from three store types. Appliance/electronic stores were the number one distribution channel for refrigerators (43 percent), clothes washers (39 percent), and room ACs (36 percent). Home improvement stores were the top sales channel for dishwashers (35 percent). This home improvement category was dominated by two stores, Lowe’s and Home Depot.

For refrigerators (Figure 6), the top selling sales channel was appliance and electronics stores. The second largest sales channel was department and discount stores (31 percent). Home improvement stores were third. The final six percent of refrigerators were sold at other types of stores (furniture, hardware, and unclassified other).

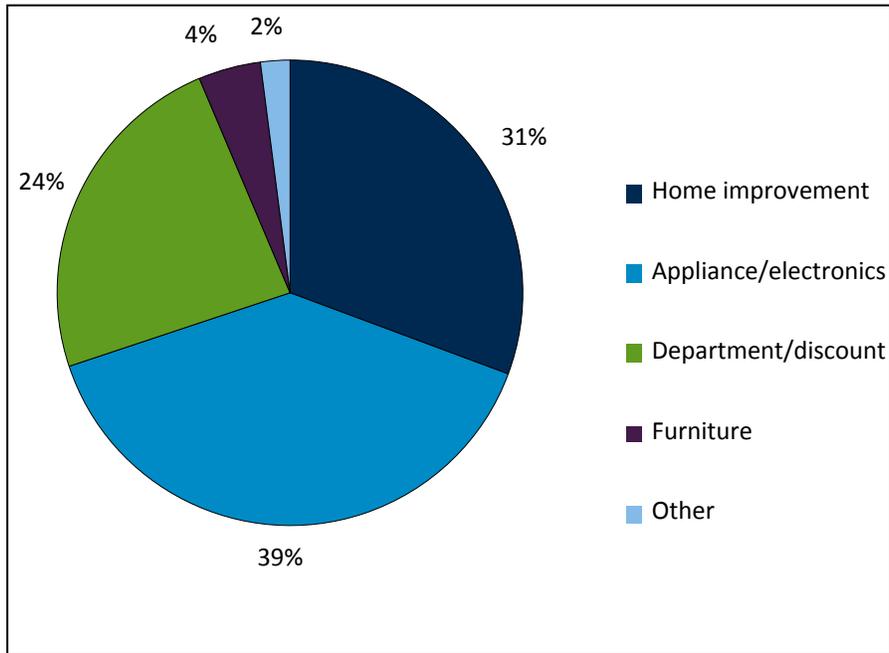
Figure 6. Distribution Channels for Refrigerators (n=168)



Source: MCA 2010 Residential End-Use Customer Telephone Survey

Like refrigerators, clothes washers’ largest sales channel was appliance and electronics stores (Figure 7). Unlike refrigerators, the second largest sales channel is home improvement stores (31 percent), while department and discount stores were third (24 percent). Roughly six percent of washers were sold at furniture stores and other unclassified stores.

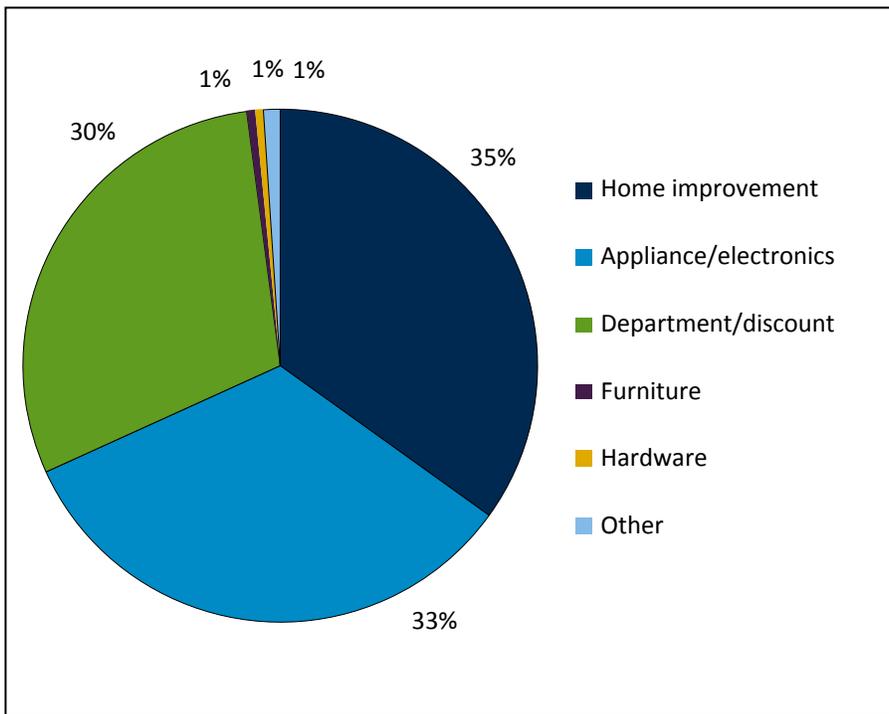
Figure 7. Distribution Channels for Clothes Washers (n=192)



Source: MCA 2010 Residential End-Use Customer Telephone Survey

As shown in Figure 8, dishwashers were split almost evenly among the top three sales channels: 35 percent at home improvement, 33 percent at appliance stores, and 30 percent at department stores. The remaining two percent were sold at furniture, hardware, and other unclassified sales channels.

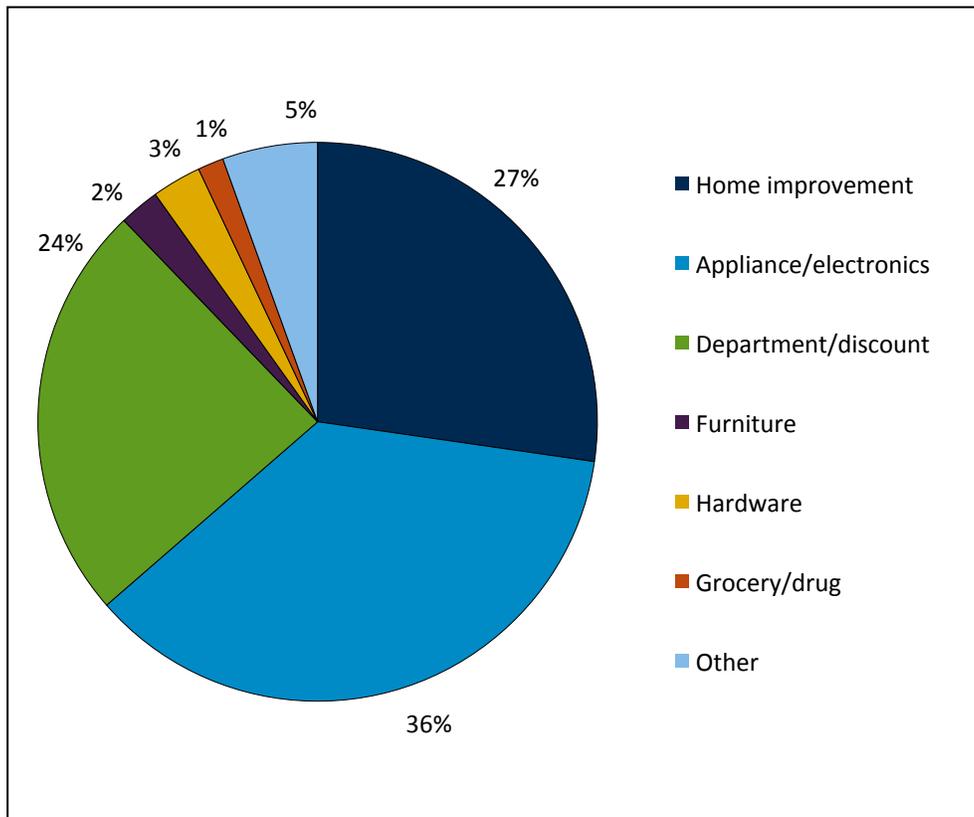
Figure 8. Distribution Channels for Dishwashers (n=172)



Source: MCA 2010 Residential End-Use Customer Telephone Survey. (Percentages do not add up due to rounding).

Room air conditioners (Figure 9) showed similarities with other appliances by sharing the same large sales channels: appliance and electronics (36 percent), home improvement (27 percent), and department and discount (24 percent). Unlike other appliances, room air conditioners showed a larger percent of sales from other sales channels: hardware stores (three percent), furniture stores (two percent), and grocery and drug stores (two percent). An additional percentage was sold at uncategorized store types (six percent) that included catalog, contractor, and classified ad purchases. Room air conditioners’ smaller size and portability relative to other large appliances makes it easier for these typically small sales channels to carry them.

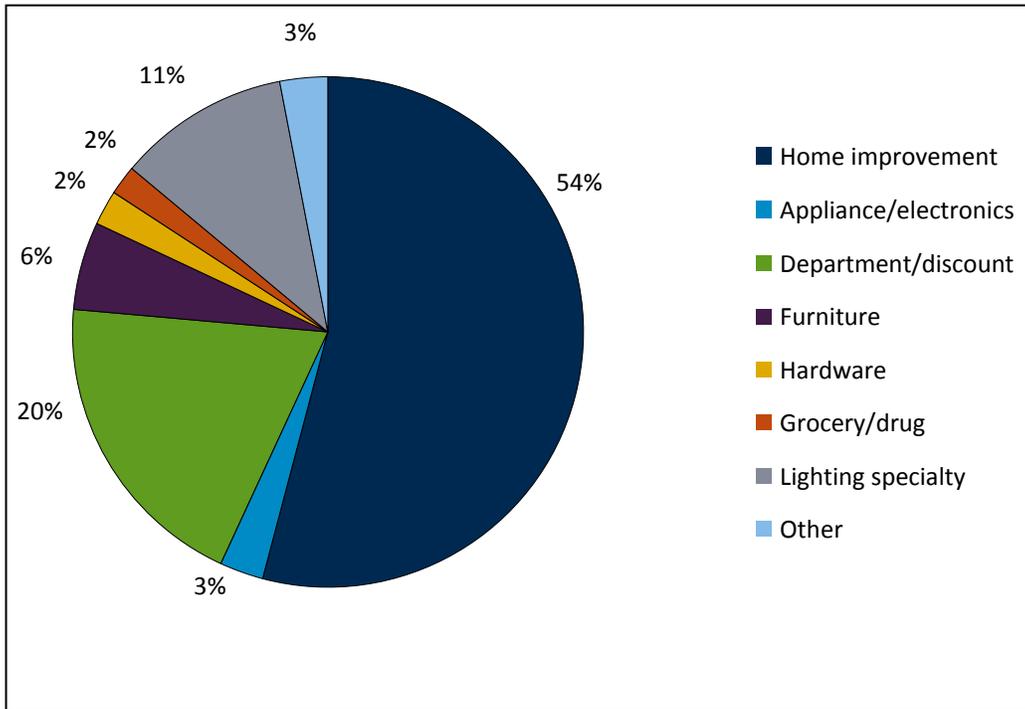
Figure 9. Distribution Channels for Room Air Conditioners (n=185)



Source: MCA 2010 Residential End-Use Customer Telephone Survey

As shown in Figure 10, lighting fixtures have a distinctly different distribution from appliances. For example, lighting fixtures are predominately sold at home improvement stores (54 percent), with Lowe’s being the most frequently-reported store. Department and discount stores accounted for only 20 percent of sales and specialty lighting stores only 11 percent. A small amount of fixtures was sold at furniture stores (six percent), appliance stores (three percent), and hardware stores (two percent). The remaining five percent were sold at grocery/drug stores and uncategorized stores.

Figure 10. Distribution Channels for Lighting Fixtures



Source: MCA 2010 Residential End-Use Customer Telephone Survey

The results from this distribution channel analysis highlight the increasing importance – and dominance – of the large chain retailers. For example, 25 percent of the refrigerators, 29 percent of the clothes washers, and 26 percent of dishwashers purchased by respondents were bought at Sears. PC Richard was the top seller of room ACs (20 percent of market share) according to the survey, and 37 percent of the lighting fixtures purchased by respondents were purchased at Home Depot (Table 13). In fact, more than half of the combined respondent purchases for every product category came from the top five retailers in NYSERDA territory shown in the table. In the clothes washers category 69 percent came from the top five retailers. Three of the top five retailers are NYSERDA partners, and all five are national ENERGY STAR partners.

Table 13. Market Share for Top Five Retailers

Store	Partner Status	Refrigerators (n=168)	Clothes Washers (n=192)	Dishwashers (n=172)	Room AC (n=185)	Lighting Fixtures (n=188)	Total
Sears	National + NYSERDA	25%	29%	26%	13%	3%	19%
Home Depot	National	10%	11%	9%	16%	37%	17%
Lowe's	National	12%	16%	23%	11%	19%	16%
PC Richard	National + NYSERDA	12%	9%	4%	20%	0%	9%
Best Buy	National + NYSERDA	4%	4%	5%	3%	1%	3%
Total		62%	69%	67%	64%	59%	64%

Source: MCA 2010 Residential End-Use Customer Telephone Survey

Purchasing Decisions

The MCA Residential End-Use Customer Telephone Survey also examined the decision-making process for the selection of new appliances and lighting, exploring who purchased the products, what type of research the customer conducted, and the method of purchase. In terms of the purchaser, the study found that survey respondents purchased the vast majority (83 percent) of all products studied (Table 14).²⁸ Landlords were the second most active purchasers, based on survey responses, but were far behind the owners or tenants, purchasing 11 percent of all products studied.

Table 14. Purchaser of Product

Purchaser	Refrigerator (n=201)	Clothes Washer (n=203)	Dishwasher (n=200)	Room AC (n=203)	Light Fixtures (n=209)	Total All Products
Respondent or household member	71%	89%	78%	90%	88%	83%
Landlord	23%	5%	14%	7%	5%	11%
Contractor	1%	1%	4%	1%	5%	2%
Builder	1%	1%	0%	2%	1%	1%
Other	3%	3%	2%	0%	0%	2%
Don't know	0%	0%	3%	0%	1%	1%
Total	100%	100%	100%	100%	100%	100%

Source: MCA 2010 Residential End-Use Customer Telephone Survey. (Note: may not sum to 100% due to rounding).

Across all products, respondents reported that the most important purchase features were energy efficiency and size of the product (both physical size and cooling capacity for RAC units). Price also played an

²⁸ The survey introduction clearly invited respondents to participate even if others had purchased the products, asking “have you actually purchased any of these brand new products, or has someone – such as a contractor or landlord – purchased them for your use in the home where you are now?”

important role in the consumers’ decision on what model to purchase. Brand name and special features were lesser considerations.

Regarding features specific to individual products, the most mentioned special features customers looked for when purchasing refrigerators were an icemaker and water dispenser as well as a freezer at the bottom and French doors on top. For clothes washers, the most mentioned special feature was the unit being a front loader. Quieter operation was the most mentioned special feature for dishwashers, while BTU rating and presence of a remote control were the top special features for a room AC. The most important of all features for light fixtures was the style or appearance (Table 15).

Table 15. Important Features in Selecting a Model

Features from Survey	Refrigerator (n=169)	Clothes Washer (n=195)	Dishwasher (n=172)	Room AC (n=194)	Light Fixtures (n=192)	Total All Products
Quality, good brand name	16%	18%	37%	14%	13%	19%
Size, needed something to fit space	38%	33%	25%	---	10%	32%
Size, cooling capacity	---	---	---	50%	---	NA
Price	19%	21%	35%	35%	23%	27%
Cost to operate	5%	9%	5%	7%	4%	6%
Energy efficiency	38%	50%	38%	37%	18%	36%
Only item in stock	0%	0%	1%	0%	0%	0%
Special features	34%	20%	20%	15%	2%	17%
Other	3%	10%	9%	7%	1%	6%
Water efficiency	---	20%	---	---	---	NA
Style or appearance	---	---	---	---	51%	NA
Light output	---	---	---	---	12%	NA
Type of bulb (halogen, incandescent, CFL)	---	---	---	---	4%	NA
Appropriate type (floor, wall-mounted, etc.)	---	---	---	---	3%	NA
Special switch (3-way, dimmer)	---	---	---	---	3%	NA

Source: MCA 2010 Residential End-Use Customer Telephone Survey

More than 50 percent of respondents across all appliances reported having researched product information in the stores (either before their purchase or at the point of sale). The Internet was also an important source of information for 26 percent of respondents (Table 16). For respondents using the Internet, retailer sites were the most commonly visited sites for all appliance types (44 percent) with consumer sites such as Consumer Reports trailing at 25 percent across all appliance types (Table 17).

Table 16. Where Consumers Collected Product Information

	Refrigerator (n=169)	Clothes Washer (n=172)	Dishwasher (n=172)	Room AC (n=194)	Total All Products
Newspaper circulars/ retailer catalogs	8%	6%	11%	15%	10%
Internet	30%	30%	31%	15%	26%
Called retailers	1%	2%	5%	2%	3%
Visited stores	50%	46%	49%	51%	50%
Consumer Reports	10%	11%	12%	6%	9%
Other	8%	6%	11%	15%	3%

Source: MCA 2010 Residential End-Use Customer Telephone Survey

Table 17. Types of Internet Sites Visited

	Refrigerator (n=49)	Clothes Washer (n=56)	Dishwasher (n=53)	Room AC (n=31)	Total All Products
Retail store sites	42%	44%	56%	29%	44%
Consumer sites (e.g., Consumer Reports)	10%	32%	27%	29%	25%
EnergyStar.gov	0%	4%	0%	0%	1%
getenergysmart.org or nyserda.org	2%	0%	0%	0%	1%
Other government sites	0%	3%	1%	0%	1%
Manufacturer sites	13%	17%	12%	11%	14%
Utility/electric company sites	0%	0%	0%	3%	0%
Search engines	10%	8%	6%	11%	8%
Other	10%	0%	0%	0%	2%

Source: MCA 2010 Residential End-Use Customer Telephone Survey

In terms of the method of purchase, nearly all purchases – 89 percent overall – were made in person at the retail store (Table 18). A small number of purchases were conducted over the telephone, Internet, or through a catalog. These results do not show a significant difference from the 2005 survey results collected for the 2007 evaluation.

Table 18. Method of Purchase

	Refrigerator (n=169)	Clothes Washer (n=195)	Dishwasher (n=172)	Room AC (n=194)	Light Fixtures (n=192)	Total All Products
Retail store	91%	90%	80%	94%	87%	89%
Telephone	1%	3%	5%	1%	1%	2%
Internet	5%	3%	12%	1%	7%	5%
Catalog	1%	0%	2%	0%	4%	1%
Other	1%	3%	1%	3%	2%	2%
Don't know	1%	1%	0%	0%	0%	1%

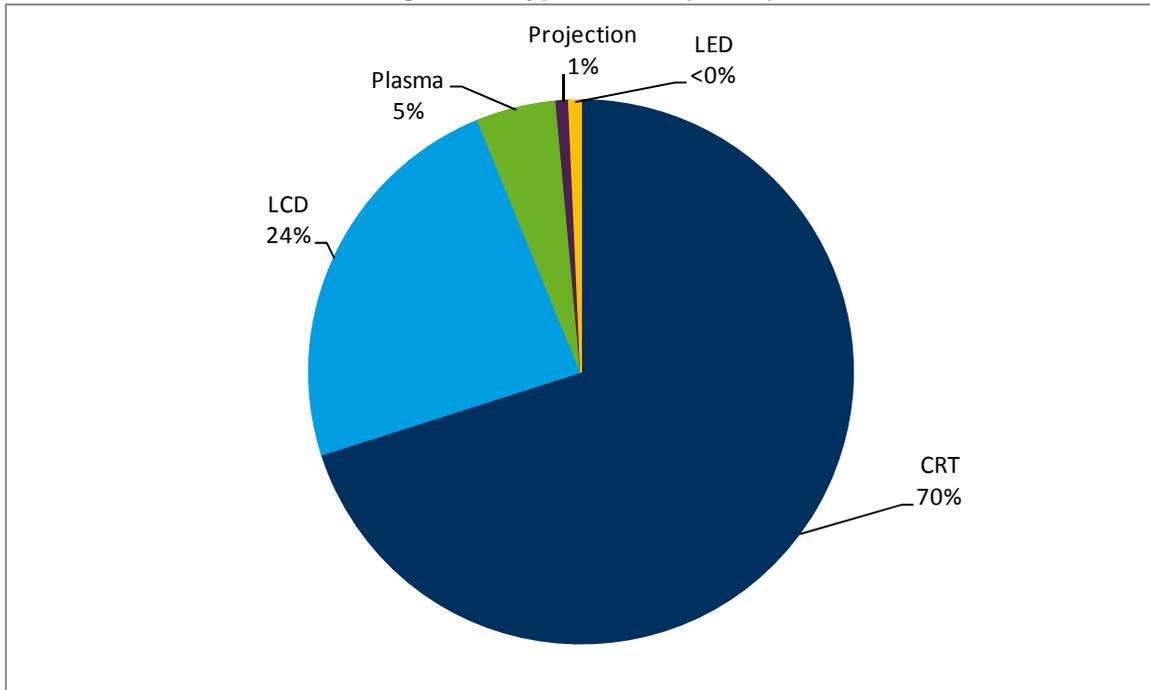
Source: MCA 2010 Residential End-Use Customer Telephone Survey

Home Electronics

This section contains highlights from the Home Electronics research. Home Electronics research was conducted only of residential customers and not retailers. The full analysis is contained in Appendix A.

NYSERDA territory residents own, on average, about two TVs per home, with an average number of liquid crystal displays (LCDs) increasing from 0.4 in 2009 to 0.6 in 2010 -- indicating that approximately 900,000 new LCD TVs were purchased between 2009 and 2010, replacing the traditional cathode ray tubes (CRTs). CRTs were the most common type of TVs in NYSERDA households: of all TVs observed, 70 percent were CRTs. The next most common types of TVs were LCDs at 24 percent, followed by plasma TVs at five percent (Figure 11).

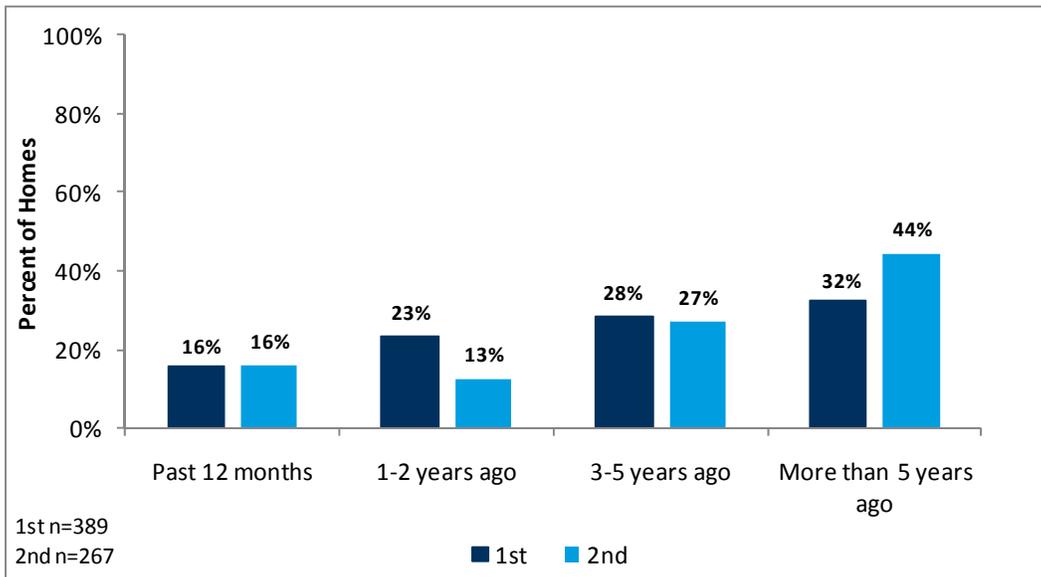
Figure 11. Types of TVs (n=296)



Source: 2010 Home Electronics Site Visits

Customers reportedly watched an average of 4.3 hours of TV per day. Most TVs were located in bedrooms or living rooms. The majority of TVs were not ENERGY STAR rated (76 percent), primarily due to the fact that most TVs were CRTs and 90 percent of CRTs found were not ENERGY STAR rated. On the other hand, 58 percent of newer TV types, such as LCD and plasma, were found to be ENERGY STAR rated; however, these newer TV types make up the minority of TVs in the sample. Figure 12 illustrates purchase timing for the first and second most-used household TVs.

Figure 12. When TV Was Purchased



Source: 2010 Home Electronics Telephone Survey

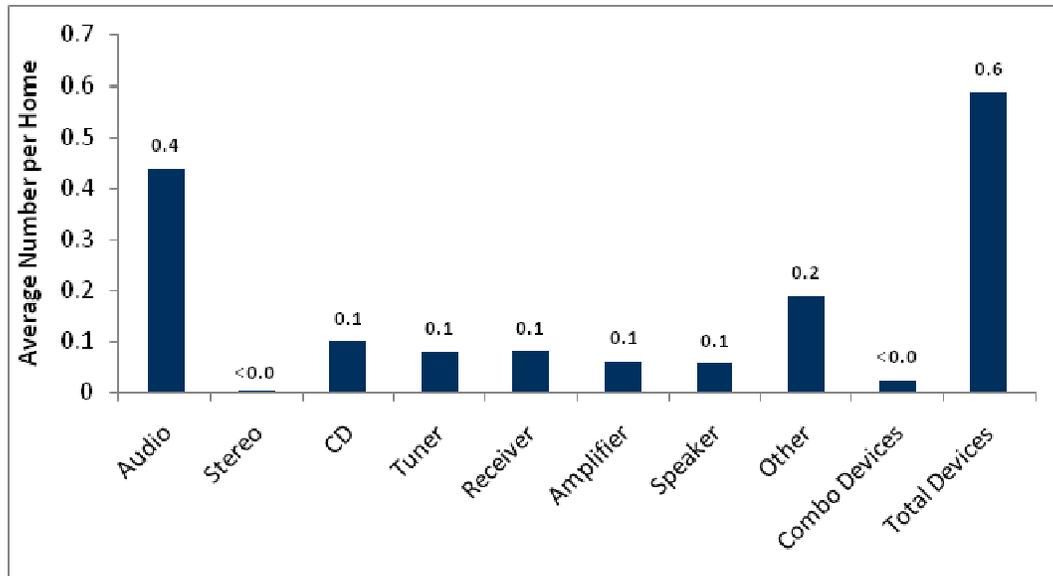
Audio devices were recorded as either stand-alone or component systems. A stand-alone device is a self-contained system that may have a radio, tape deck, CD player, or speakers. A stand-alone device works on its own but may have extra devices attached to it, such as additional speakers. A component system has no core device and is made up of several auxiliary devices working together, such as a radio receiver with separate speakers and a CD player. A smaller boom box, which only includes a radio, tape player, CD player, or iPod dock with speakers, was not counted or recorded. Both component and stand-alone systems could have auxiliary units.

Nearly 60 percent of all audio systems owned by residents in the NYSERDA territory were stand-alone. The percentage of homes with audio devices was lower than the percentage with TVs.²⁹ Again, most devices were located in living rooms and bedrooms, and the majority of devices were not ENERGY STAR rated (91 percent). The average amount of time respondents spent listening to audio devices was 1.5 hours per day.

²⁹ It should be noted that for both 2009 and 2010, an audio device next to a computer or a TV was recorded as an auxiliary device of the computer or TV, even if they were not attached, and was not recorded in the audio data set. Subsequently, the number of audio devices recorded in the audio section of this report represents only independent audio systems as audio devices connected to a TV or computer were not separately counted.

The average number of audio devices among all respondents was 0.4 per respondent and the average number of auxiliary devices was 0.6 per respondent (Figure 13).

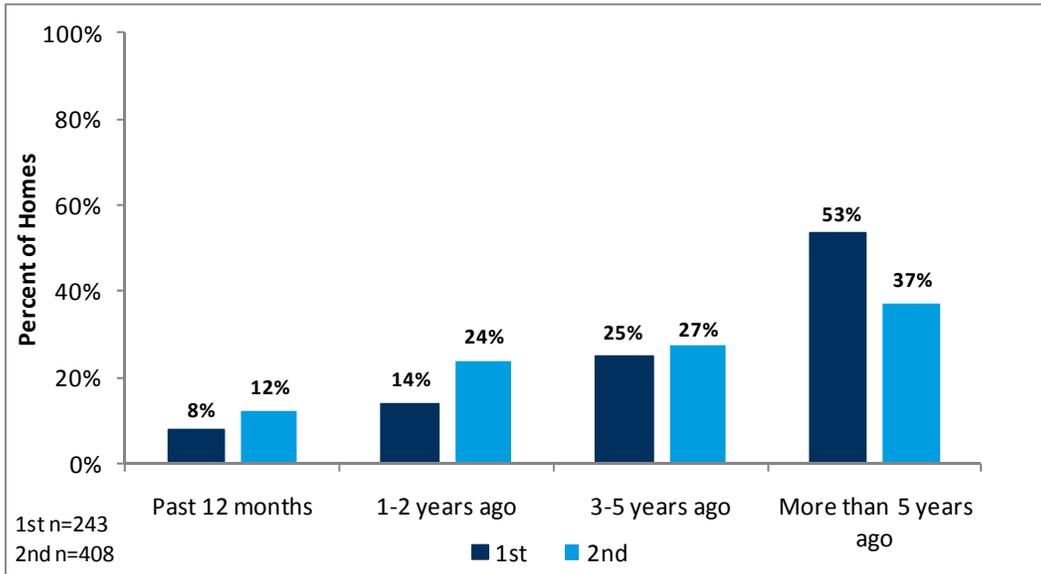
Figure 13. Average Number of Audio Devices and Their Auxiliary Devices per Home, 2010 (n=296)



Source: 2010 Home Electronics Site Visits

Approximately 63 percent of homes in the NYSERDA territory did not have separate audio devices. However, of that 63 percent, 22 percent of those homes had an audio device next to either a TV or computer.³⁰ The next most common circumstance was for a home to have one audio device (30 percent).³¹ Figure 14 shows the periods when the home’s first and second most-used audio devices were purchased.

Figure 14. When Audio Device Was Purchased



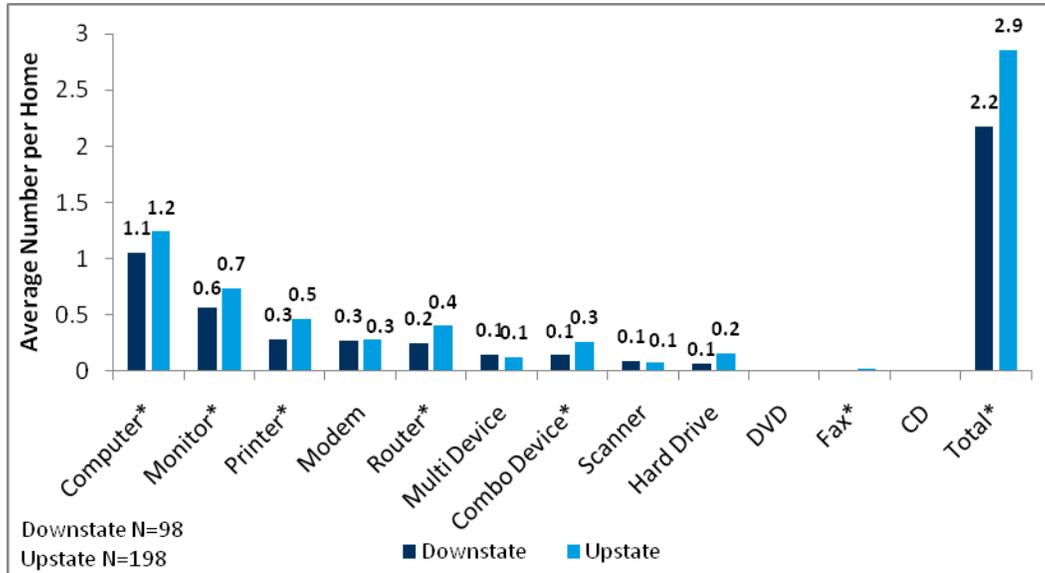
Source: 2010 Home Electronics Telephone Survey

³⁰ Recall that audio devices were only counted as audio devices if they were *not* next to a TV or computer. Otherwise, they were counted as an auxiliary device in the respective TV or computer category.

³¹ Note again that small boom boxes, iPods and iPod docks were not recorded as audio devices.

Figure 15 shows average number of customers in downstate and upstate New York owning computers and auxiliary devices.³² Downstate customers averaged 1.1 computers per home, and upstate customers averaged 1.2 computers per home. On average, downstate customers had 2.2 devices attached to their computers, and upstate customers had 2.9 (Figure 15). Computers were in use an average of 5.1 hours per day in 2010, an increase compared to 3.4 hours per day in 2009. This may reflect increased computer usage associated with social networking and other popular Internet entertainment.

Figure 15. Average Number of Computers and Their Auxiliary Devices per Home, 2010



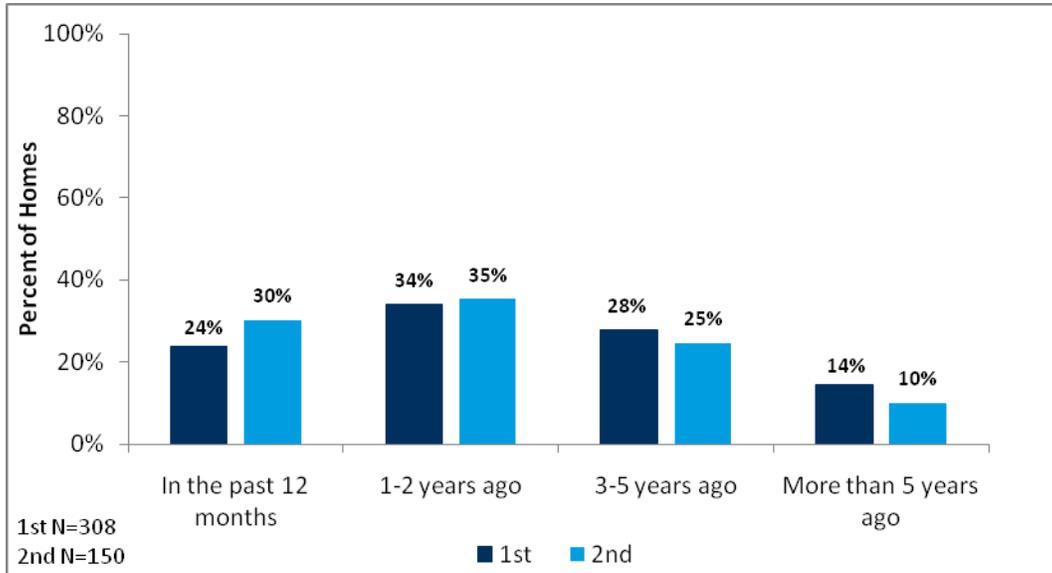
Source: 2010 Home Electronics Site Visits

* The difference between downstate and upstate is statistically significant at the 90 percent confidence level.

³² Downstate refers to the five boroughs of New York City and Westchester County. Upstate refers to the rest of New York except Nassau and Suffolk counties, which are not part of NYSERDA territory.

The home electronics research also sought to determine when products were purchased and how much was spent on different products to help understand the potential for ENERGY STAR and energy efficiency in the electronics market. Figure 16 shows the purchase history of computers and computer accessories for NYSERDA residents. Fifty-eight percent of households purchased their most commonly used computer within the last two years, and 65 percent purchased their second most commonly used computer within the last two years, indicating that computer turnover is high.

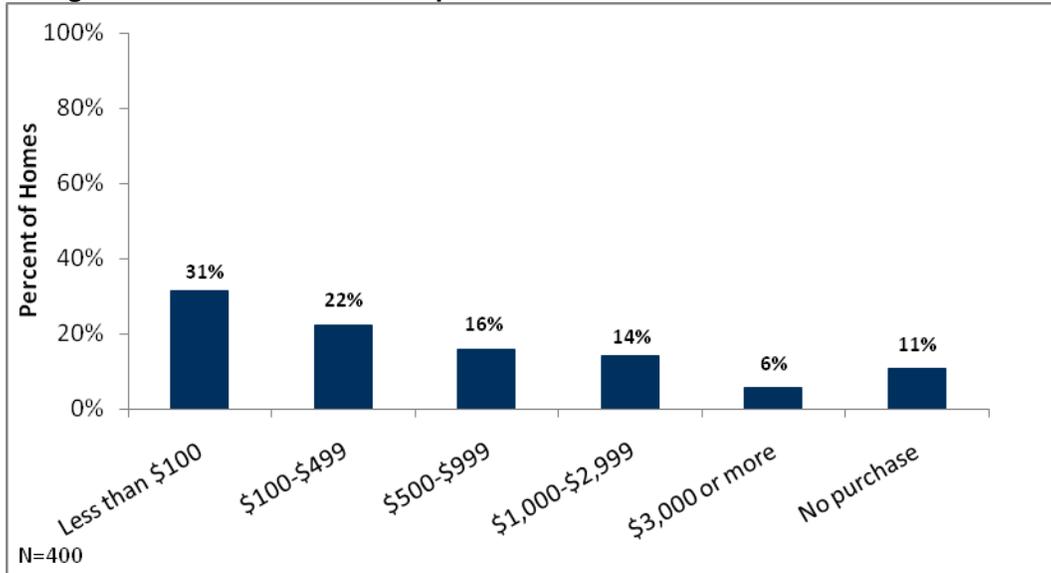
Figure 16. When Computer Was Purchased



Source: 2010 Home Electronics Saturation Analysis

Survey participants were asked to estimate the amount spent on all electronic devices³³ in the past year. Approximately 53 percent of respondents spent less than \$500 (Figure 17).

Figure 17. Estimated Amount Spent on All Electronic Devices in the Past Year



Source: 2010 Home Electronics Saturation Analysis

3.3 ENERGY STAR Market Share

One of the most critical indicators of Program success is increasing market share for ENERGY STAR products. Note that the Program promotes ENERGY STAR as well as other highly efficient products; our analysis focuses on ENERGY STAR, however. As in previous years, the MCA team relied on a combination of both primary and secondary data sources to estimate market share. The methodology for determining the 2008 and 2009 ENERGY STAR market share, as well as our findings, are presented in the following text.

Market Share Methodology

The MCA team relied primarily on three data sources to estimate market share for ENERGY STAR products in the New York Energy \$martSM region:

- **EPA National Partner Sales Data Collected by D&R International.** D&R collects sales data from national ENERGY STAR partners, combines all partner data (removing retailer names), and publishes the data on the Internet in publicly available datasets. These data are extremely valuable

³³ This question asked generally about all electronics and therefore may include smaller devices such as iPods.

in detail, providing ENERGY STAR market share for four appliance types (refrigerators, clothes washers, dishwashers, and room ACs) by state, region, and calendar quarter. The primary caveat to using these data, however, is that the compliance rate for retailers providing sales data fluctuates, as the delivery of sales data is requested but not required to remain in the national Program. Therefore, the data provide useful comparisons for market share based on a sample of national partners within a given year, but multiyear comparisons can be misleading if the number and mix of retailers changes dramatically. For use in this MCA study, D&R International provided total market share data (rather than individual store data) for two categories: 1) national ENERGY STAR partners with stores outside of the NYSERDA territory removed, but NYSERDA partners included and 2) national ENERGY STAR partners excluding stores outside NYSERDA territory and excluding NYSERDA partners.

- ***NYSERDA Partner Sales Data Collected by Lockheed Martin.*** Lockheed Martin collects monthly sales data from NYESP Program retail partners. The reporting of sales data, including the number of ENERGY STAR and non-ENERGY STAR units sold, by month, is a requirement for partners in the Program, and compliance is typically above 90 percent for active retailers.³⁴ Data are collected for all relevant products, including appliances and lighting. To allow the analysis of NYSERDA-only partners and NYSERDA partners that are also national partners (also called NYSERDA & national partners, or dual partners), the MCA team split the retailers by partnership status.
- ***The MCA Residential End-Use Customer Telephone Survey.*** As part of the residential end-use customer random digit dial survey, the MCA team targeted at least 200 respondents per product who had purchased a new refrigerator, clothes washer, dishwasher, room AC, or light fixture in the last 12 months. Respondents were asked to provide detailed information about where purchases were made, as well as about the energy efficiency of the product. In order to validate the self-reported purchases of ENERGY STAR products, the MCA team asked respondents to provide the make and model number for the appliance (excluding light fixtures).

All available data from these three sources were utilized in assessing market share for each product, with specific adjustments and weighting techniques varying by product, as described in the following text.

ENERGY STAR Market Share of Appliances

For the first step in determining ENERGY STAR market share, the MCA team broke out each appliance's sales by type of store based on partner status. All appliances were bought at one type of store: a NYESP Program partner store, a national ENERGY STAR partner store, a store that is both an NYESP and national partner, or a store that is not a partner with either national ENERGY STAR or NYESP. The percent of a

³⁴ Lockheed Martin reports compliance in program monthly and quarterly reports.

certain appliance bought at each store type was determined based on the self-reported name of the store from the 2010 MCA residential end-use customer telephone survey. These are shown in the “Product Market Share” column in Table 19 and Table 20. The 2010 telephone survey results were applied to both 2008 and 2009 market share attribution.

The ENERGY STAR market penetration for each product market share can then be applied to each of these store types based on the best available data for that store type. The market penetration comes from one of these sources depending on store partner status.

- Non-partner store allocations rely on self-reported and model number verified³⁵ ENERGY STAR market penetration from the 2010 MCA residential end-user telephone survey.
- NYSERDA Partner and dual partner store allocations rely on NYESP Program partner sales data from Lockheed Martin.
- National partner store allocations rely on ENERGY STAR Program partner sales data from D&R International.

The market share of ENERGY STAR for each store type is shown in the “ES Market Penetration” column in Table 19 and Table 20.³⁶ The 2008 and 2009 market penetration was based on the sales data from those years, with the exception of non-partner stores, which relied on the 2010 MCA residential end-user telephone survey.

The two columns for each appliance answer these questions:

- ***Market share by partnership status:*** What percent of all units sold, according to the end-use customer survey data, come from national partners, NYSERDA partners, and non-partners?
- ***ENERGY STAR market share within the partnership groups:*** What percent of the units sold by national partners, NYSERDA partners, and non-partners are ENERGY STAR qualified? Do partners sell a higher percentage of ENERGY STAR models than non-partners do?

³⁵ Customers were asked to read their model numbers from their appliance. The MCA team later verified if the model was ENERGY STAR or not. Because of the low number of verifiable responses, this was only used in a few warranted cases.

³⁶ Market share by distribution channel was also investigated to ensure that the distributions were consistent with the earlier findings. In addition, the percent of ENERGY STAR units per distribution channel was calculated, but small sample sizes lead to high error bands around these estimates, so results are presented as trends.

Table 19. Summary of 2009 ENERGY STAR Major Appliance Market Share

Retailer Partner Status	Refrigerators		Clothes Washers		Dishwashers		Room ACs	
	Product Market Share	ES Market Penetration						
Non-Partner	15%	56%	16%	67%	14%	100%	15%	57%
NYSERDA Partner Only	20%	57%	14%	61%	16%	82%	6%	91%
National Partner Only	24%	39%	28%	46%	34%	67%	38%	32%
NYSERDA & National Partner	41%	43%	43%	57%	36%	70%	41%	56%
Sum of Share & Weighted Penetration	100%	47%	100%	56%	100%	75%	100%	49%

Table 20. Summary of 2008 ENERGY STAR Major Appliance Market Share

Retailer Partner Status	Refrigerators		Clothes Washers		Dishwashers		Room ACs	
	Product Market Share	ES Market Penetration						
Non-Partner	15%	56%	16%	67%	14%	88%	15%	57%
NYSERDA Partner Only	20%	51%	14%	56%	16%	91%	6%	86%
National Partner Only	24%	31%	28%	24%	34%	70%	38%	45%
NYSERDA & National Partner	41%	39%	43%	52%	36%	78%	41%	53%
Sum of Share & Weighted Penetration	100%	42%	100%	47%	100%	79%	100%	53%

Notes for Table 19 and Table 20:

1. Product market share refers to the percentage of units sold through the retailer based on partnership status (e.g., 15 percent of all refrigerators are sold through non-partners in 2009)
2. ES market penetration refers to the percentage of units within the partnership stratum that are ENERGY STAR qualified (e.g., 39 percent of the refrigerators sold by national partners in New York State are ENERGY STAR qualified in 2009).
3. Partner status was determined by matching the store name in the NYSERDA partner list and national partner list. Non-partners are found in neither. NYSERDA & national partners are found in both.

Sources for Table 19 and Table 20:

1. Product market shares: 2010 MCA Residential End-Use Customer Telephone Survey (percent of all sales by store partner status)
2. ES market penetration for non-partners: 2010 MCA Residential End-Use Customer Telephone Survey
3. ES market penetration for NYSERDA partners and NYSERDA & national partners: Lockheed Martin (percent of partner sales ENERGY STAR qualified)
4. ES market penetration for national partners: D&R International (percent of national partner sales ENERGY STAR qualified)

The following graphs (Figure 18 through Figure 21) discuss and show ENERGY STAR market share trends from 2001 to 2009. As shown, ENERGY STAR market share for NYSERDA partner stores rose for all appliances from 2001 to 2005. After 2005, each appliance’s market share varies from one another.

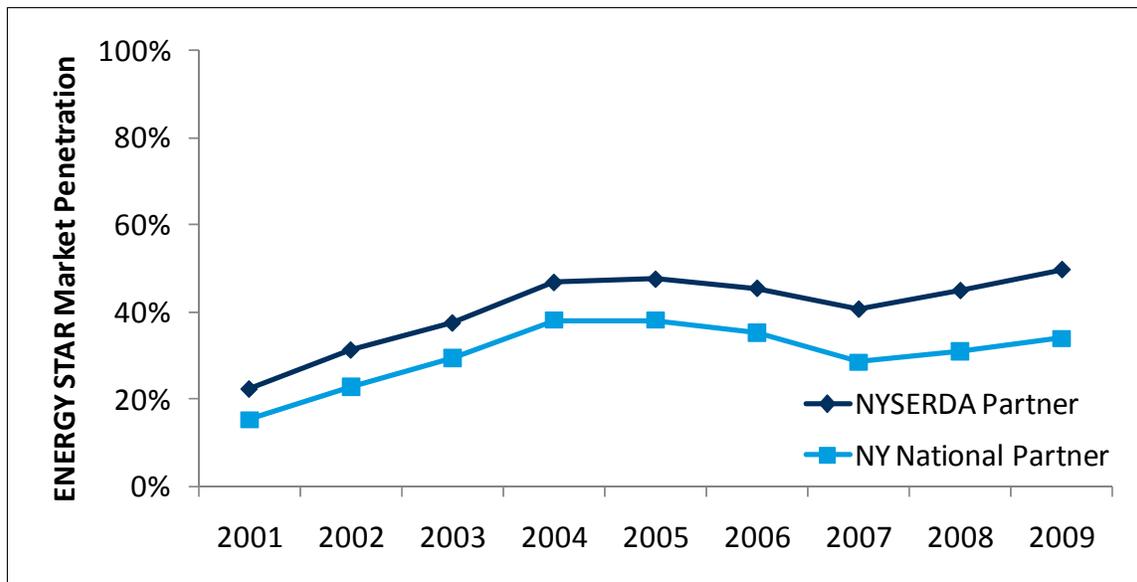
Variations in appliances and from year to year occur for numerous reasons including: changes in other

NYSERDA and non-NYSERDA Programs that affect energy efficient appliance sales; changes in requirements for ENERGY STAR qualification that may affect product availability, features, and price; changes to state or federal regulations that affect efficiency and other product requirements; changes in number and type of partner stores; changes in number and type of stores that report sales data (accurately or at all); and macroeconomic changes that affect consumers. Unfortunately, the analysis could not pinpoint the degree of influence of each possible reason for changes in each year.

The national partner series in the graphs shows ENERGY STAR market share for national partners in all of New York and does not have the NYSERDA partners removed. As stated in the data by D&R International, the irregular reporting of national partners makes the market share percentages unreliable for assessing individual year to year changes; however, the overall trend provides insight into the impact of ENERGY STAR marketing.

Refrigerator ENERGY STAR market share decreased in 2006 and 2007, but has been on the rise since. According to the NYE\$P update finalized in 2009, NYSERDA program staff believe the decrease may have been due to the addition of several new big box store Program partners; staff noted that it often takes time for Partners to adjust their purchasing and sales patterns in response to program interventions.

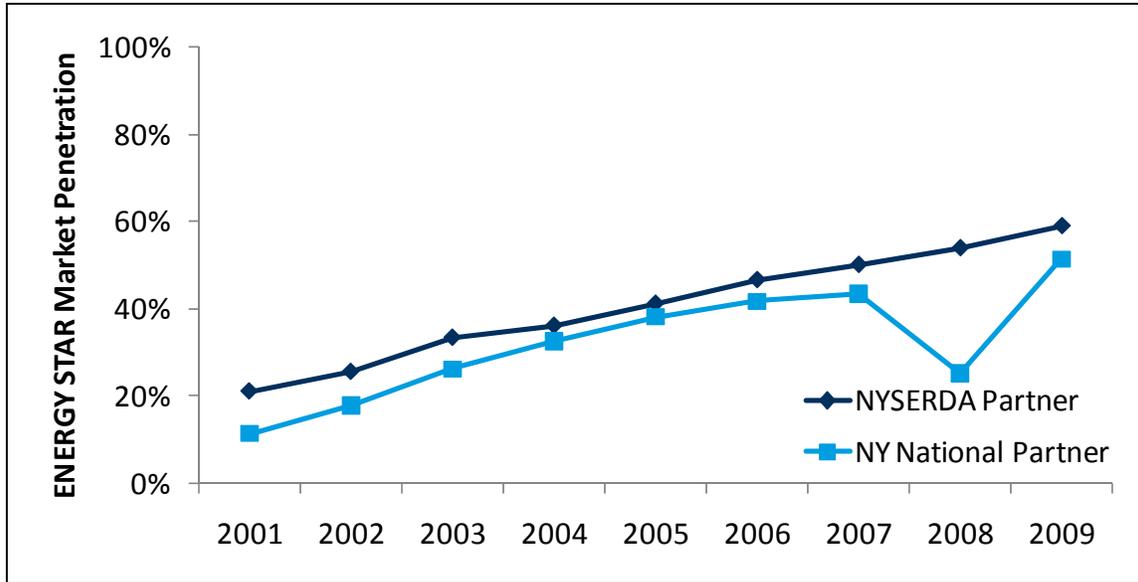
Figure 18. Market Penetration of ENERGY STAR Refrigerators by Year and Partnership



Source: Lockheed Martin NYSERDA partner and D&R national partner sales data

Clothes washer ENERGY STAR market share for NYESP Program partners has increased every year in the study period. So has national partner penetration, except for a large dip in 2008. The dip is of unknown origin but suspected to be due to reporting inconsistencies.

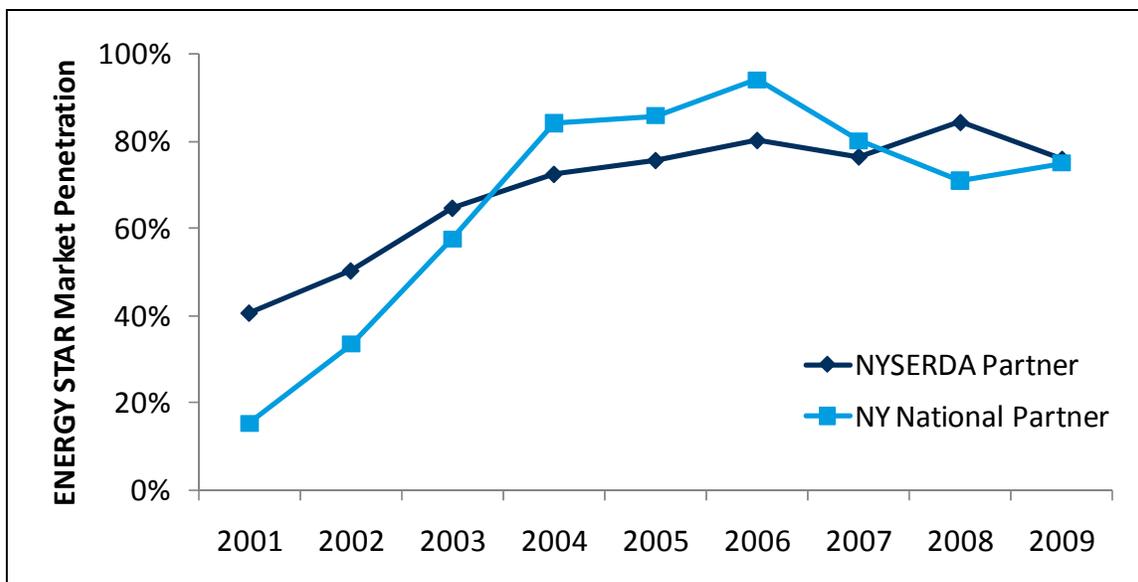
Figure 19. Market Penetration of ENERGY STAR Clothes Washers by Year and Partnership



Source: Lockheed Martin NYSERDA partner and D&R national partner sales data

Dishwasher ENERGY STAR market share dipped in 2007 and 2009, but has increased every other year. Again, this may be due to a change in the mix of Program partners.

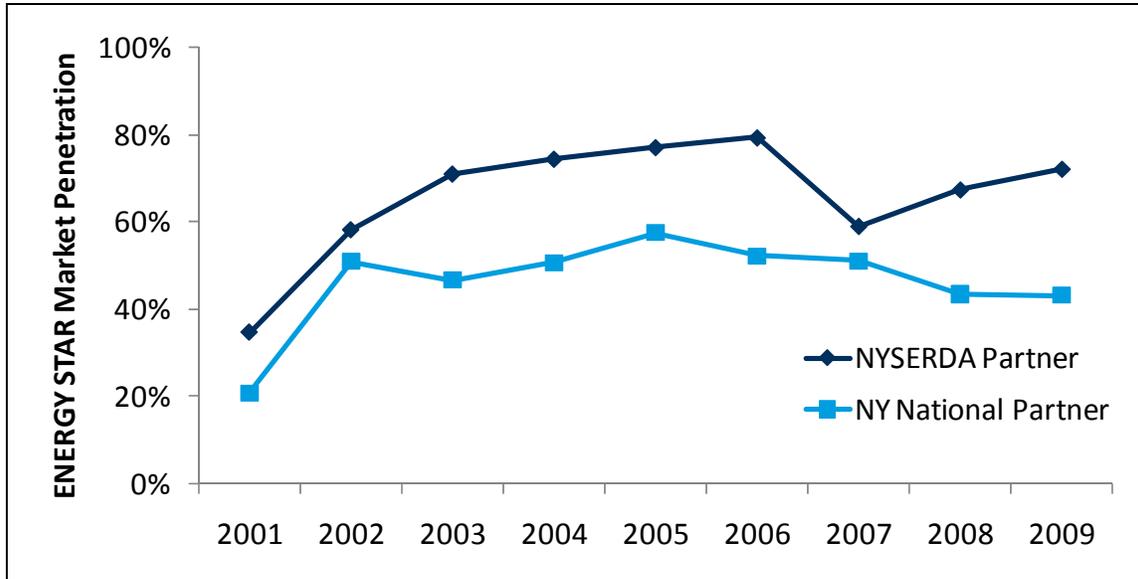
Figure 20. Market Penetration of ENERGY STAR Dishwashers by Year and Partnership



Source: Lockheed Martin NYSERDA partner and D&R national partner sales data

Room AC ENERGY STAR market share decreased in 2007, like most other appliances, but has increased every other year. As suggested above, this decrease is likely due to the changing mix of Program partners.

Figure 21. Market Penetration of ENERGY STAR Room ACs by Year and Partnership



Source: Lockheed Martin NYSERDA partner and D&R national partner sales data

Lighting Fixtures

The EPA does not collect sales data from national partners for any lighting measures, so the MCA team relied instead on a combination of the NYSERDA partner data and the residential end-user telephone survey to estimate total sales and ENERGY STAR market shares. In addition, due to small sample sizes, the various types of lighting fixtures are combined in the analysis for both the NYSERDA partner data and the survey data. The store types were determined using the store name reported by the purchaser in the 2010 MCA residential end-use customer telephone survey. The self-reported store name was categorized into store type by looking up the store’s partner status from the NYE\$P Program partner list and national ENERGY STAR Program partner list. These results from the 2010 MCA residential end-use customer telephone survey are used for both the 2008 and 2009 product market share. Market penetration for non-partner and national partner for 2008 and 2009 are also based on results from this same survey. NYE\$P Program partner and dual partner ENERGY STAR market penetration are based on sales data from Lockheed Martin from their corresponding years.

As demonstrated in Table 21 and Table 22, NYSERDA partners represented a very small percentage of ENERGY STAR lighting fixtures (five percent) sold in New York. The market penetration for ENERGY STAR fixtures for NYSERDA partners (23 percent), national partners (23 percent) and dual partners (20 percent), however, was much higher than for non-partners (12 percent). Figure 22 shows that ENERGY STAR light fixture market share has fluctuated since 2001, and has been on an upswing since 2006.

Table 21. Summary of 2009 ENERGY STAR Lighting Fixtures Market Share

Retailer Status	Product Market Share	ENERGY STAR Market Penetration
Non-Partner	23%	12%
NYSERDA Partner Only	5%	23%
National Partner Only	69%	23%
NYSERDA & National Partner	4%	20%
Total	100%	21%

Table 22. Summary of 2008 ENERGY STAR Lighting Fixtures Market Share

Retailer Status	Product Market Share	ENERGY STAR Market Penetration
Non-Partner	23%	12%
NYSERDA Partner Only	5%	21%
National Partner Only	69%	23%
NYSERDA & National Partner	4%	18%
Total	100%	20%

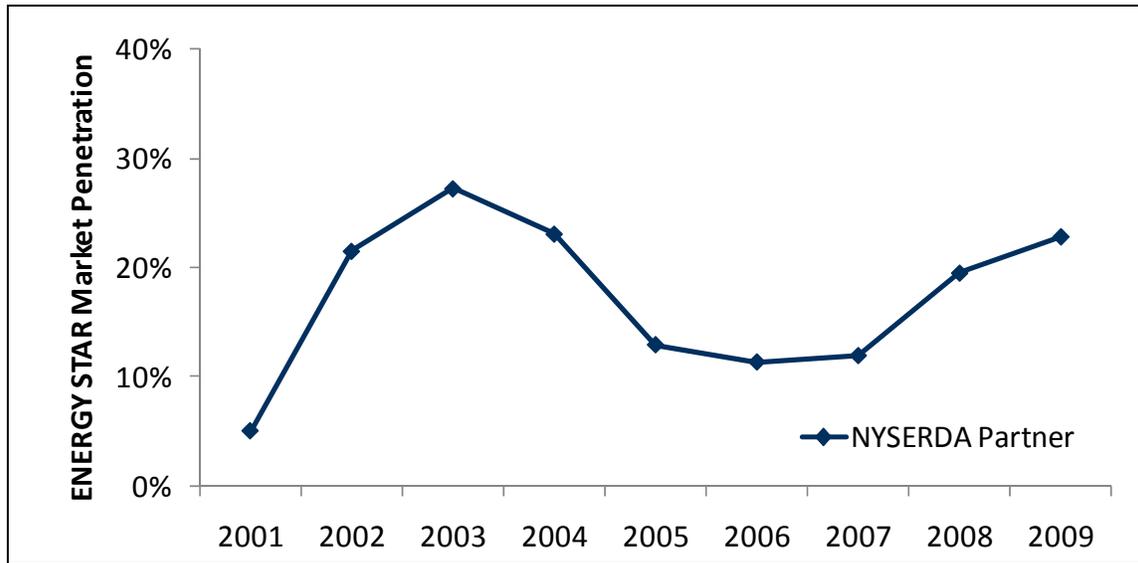
Notes:

1. Product market share refers to the percentage of units sold through the retailer based on partnership status (e.g., according to 2010 telephone survey respondents, 69 percent of all ES fixtures are bought at national partner stores).
2. ES market penetration refers to the percentage of units within the partnership stratum that are ENERGY STAR qualified (e.g., 23 percent of the bulbs sold by national partners in New York State are ENERGY STAR qualified for 2009).
3. Partner status was determined by matching the store name in the NYSERDA partner list and national partner list. Non-partners were found in neither. NYSERDA & national partners were found in both.

Sources:

1. Product market share: 2010 MCA Residential End-Use Customer Telephone Survey
2. ES market penetration for NYSERDA partners and NYSERDA + national partners: Lockheed Martin (percent of partner sales ENERGY STAR qualified)
3. ES market penetration for national partners and non-partners: Residential End-Use Customer Telephone Survey

Figure 22. Market Penetration of ENERGY STAR Light Fixtures by Year



Source: Lockheed Martin NYSERDA partner sales data

Other Measures

In addition to the appliances and lighting measures discussed above, the NYE\$P Program works to increase market share of the following ENERGY STAR products:

- Air cleaners
- Dehumidifiers
- Freezers
- Through-the-wall room air conditioners
- Ceiling fans

While the market share for these measures is collected from the NYSERDA partners, no additional data were available from either the national partners or the residential end-user survey for comparison and analysis. Since the focus of this report is on the five major ENERGY STAR products: refrigerators, clothes washers, dishwashers, room ACs, and lighting fixtures; the other measures are not discussed in detail in this paper. Attribution for these measures was based on interpolated data from the five major products where appropriate and the NYSERDA partner sales data for each of the other measures. The percent of these measures sold at NYSERDA partner stores that are ENERGY STAR are shown in Table 23. Attribution analysis can be found in the Findings section of this report.

Table 23. NYSERDA Partner Store ENERGY STAR Market Penetration for Other Measures

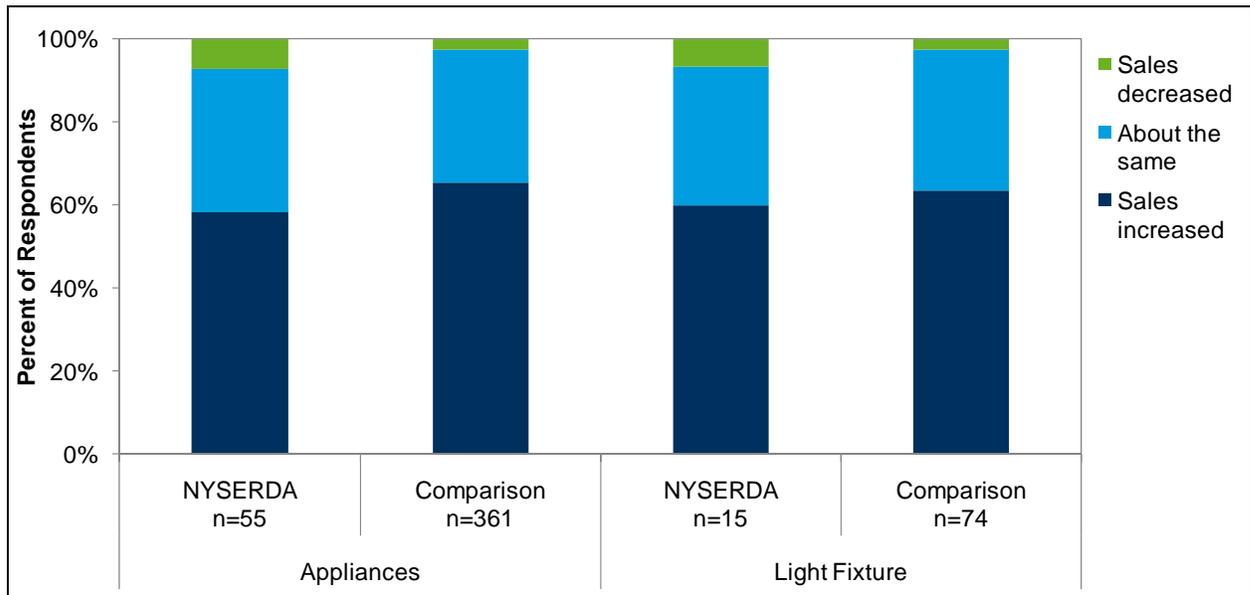
Product	2008 Market Penetration	2009 Market Penetration
Air cleaners	87%	77%
Dehumidifiers	75%	38%
Freezers	14%	36%
Through-the-Wall AC	73%	84%
Ceiling Fans without Lights	39%	50%
Ceiling Fans with Lights	41%	32%

Source: Lockheed Martin NYSERDA partner sales data

Retailer-Reported Demand Changes

Retailers at NYESP Program partner stores and in the comparison area (Houston, Ohio, and Washington, D.C.) were asked to estimate whether their ENERGY STAR product sales increased, decreased, or stayed the same between 2009 and 2010. Figure 23 shows the results broken out by appliance type and territory. According to the respondents, on average there was an increase in ENERGY STAR product sales for all appliances and fixtures in the time period.

Figure 23. Retailer Response to Consumer Demand Changes During 2010



Source: 2010 MCA Participating Retailer and Comparison Area Retailer Surveys

The same question was asked for the period from January 2010 until the time of the survey (summer/fall 2010) to find out if NYSERDA retailers noticed an impact from ARRA rebates offered in early 2010. Interestingly, the proportions of NYSERDA retailers noticing increases, decreases, and no change stayed very similar, as shown in Table 24 for partner retailers and Table 25 for comparison area retailers. Government incentives in 2010 were reported to be the biggest reason for increased sales, on average, for

all appliances. Growing awareness of and demand for environmentally friendly products was the second most-cited reason for sales increases. Changes in sales for room air conditioners were predominantly affected by seasonal changes over the period. The few responses addressing why sales may have decreased are not shown in the tables but included reasons such as seasonal changes, the economy, changing business practices related to those products, and some non-specific or unknown reasons. When it came to the economy, some retailers indicated that recovery was helping drive product sales, while some indicated a lingering slump that continues to hurt sales. Comparison area responses for the question were similar to partner responses.

Table 24. Partner Retailer Reasons for Reported Sales Increase During 2010

Reason for Increase	Clothes Washer n=13	Dishwasher n=8	Refrigerator n=12	Room AC n=3	Light Fixture n=7
Customer demand has increased from government incentives such as ARRA or tax incentives	62%	75%	67%	0%	29%
Growing awareness and demand for more environmentally friendly products	15%	0%	8%	33%	29%
More promotion	8%	13%	17%	0%	14%
Economy	8%	13%	8%	0%	29%
Growing product's business	0%	0%	0%	0%	0%
Other	8%	0%	0%	67%	0%

Source: 2010 MCA Participating Retailer Survey

Table 25. Comparison Retailer Reasons for Reported Sales Increase During 2010

Reason for Increase	Clothes Washer n=70	Dishwasher n=49	Refrigerator n=71	Room AC n=38	Light Fixture n=41
Customer demand has increased from government incentives such as ARRA or tax incentives	71%	57%	55%	13%	41%
Growing awareness and demand for more environmentally friendly products	10%	8%	14%	18%	27%
More promotion	3%	4%	8%	13%	15%
Economy	0%	2%	0%	0%	2%
Growing product's business	4%	6%	7%	0%	5%
Other	11%	22%	15%	55%	10%

Source: 2010 MCA Comparison Area Retailer Survey

With so many retailers reporting an increase from government incentives in 2010, the MCA team evaluated whether these incentives had any effect on 2009 sales. In the NYSERDA territory, retailers and customers knew that appliance purchases would become eligible for ARRA-funded appliance rebates starting in 2010. Known as New York’s Great Appliance Swap Out Rebate Program, the program provided varying rebates

for refrigerators, clothes washers, dishwashers, and freezers, depending on single or multiple appliance purchase and whether the replaced appliance was being recycled. In the 2010 MCA participating retailer survey, 65 percent of retailers reported promoting the upcoming program during fourth quarter 2009 through either advertising or direct salesperson communication. Retailers were then asked, whether customer awareness that rebates would be available for the same purchase in a few months affected sales for fourth quarter 2009.

Out of 72 retailers, 46 percent indicated there was no effect on 2009 sales associated with the anticipated Rebate Program, or a zero percent change in sales. A smaller portion (29 percent) of respondents indicated a sales decrease that equated to an average of a 22 percent drop in sales. Counter-intuitively, 22 percent of respondents reported a 2009 sales increase in anticipation of the program, equating to an average of a 28 percent increase in sales. Three percent said they did not know the effect of the program on 2009 sales. When all these responses were combined, the cumulative change to sales in fourth quarter 2009 due to the 2010 ARRA Appliance Rebate Program was zero percent, or no impact overall, according to retail respondents.

Corporate- and Manufacturer-Reported Demand Changes

Participating corporate retailers and manufacturers were asked whether total sales (ENERGY STAR and non-ENERGY STAR) and sales for just ENERGY STAR in New York for the calendar year 2009 increased, decreased, or stayed the same compared to 2008. Table 26 shows the results of that question.³⁷ For the most part, corporate retailers believe sales have increased for all appliances and lighting fixtures during this time period. The majority of corporate retailers stated that if the NYSERDA ENERGY STAR promotional incentives had not been available, their sales would have been lower. Manufacturers, on the other hand, believe sales have decreased overall for appliances and increased for lighting fixtures. Lighting manufacturers all reported that the NYSERDA promotional incentives had a strong, positive effect on sales due to both monetary assistance for promotions and the buy down.³⁸ This seeming contradiction may be due to the fact that only one manufacturer responded to this question for appliances. As mentioned earlier, the AHAM shipment estimates for most appliances were slightly higher between 2008 and 2009, providing support for the conclusion that sales increased, with the exception of the shipment estimate for room air conditioners, which dropped dramatically. Of the four corporate retailers who estimated changes in total room air conditioner sales, from 2008 to 2009, three reported increases and one reported no change.

³⁷ Due to the limited number of interviews, Table 26 is not broken out by appliance type.

³⁸ The one appliance manufacturer felt that he did not know enough about the direct effects of the program to accurately report on the program's affect on sales.

Table 26. Corporate Retailer and Manufacturer Response to Appliance and Light Fixture Sales Changes from 2008 to 2009

Response	Corporate Retailer Response*		Manufacturer Responses*	
	Change in Total Sales (5/8 Responded)	Change in ENERGY STAR Sales (6/8 Responded)	Change in Total Sales (4/5 Responded)	Change in ENERGY STAR Sales (4/5 Responded)
Increased	13	11	3	3
Decreased	0	1	3	3
Same	4	2	0	0

* The number of responses may include more than one response per corporate retailer or manufacturer, as they were asked this question for each appliance.

Corporate retailers were also asked whether sales of ENERGY STAR products in New York are generally higher, lower or about the same compared to other regions. One respondent reported that all appliances had higher sales proportions in New York than in other regions, while another respondent believed all appliances had lower sales proportions in New York than other regions. Table 27 illustrates these responses for all appliance types.

Table 27. Corporate Response to Appliance and Light Fixture Sales Proportions in New York vs. Other Regions

Sales Proportions New York v. Other	Number of Respondents (4/8 Responded)
Higher	7
Lower	4
Same	0

4. Market Assessment

This section examines key Program and market assessment indicators developed for the NYESP Program and discusses how these indicators have changed over time.

In the discussion that follows, the indicators are organized into four broad groupings drawn from previous NYSERDA work efforts and progress made by the MCA team:

- Market actor awareness and knowledge
- Perceived value of energy efficiency measures
- Accessibility of energy efficiency measures
- Pricing and incremental cost

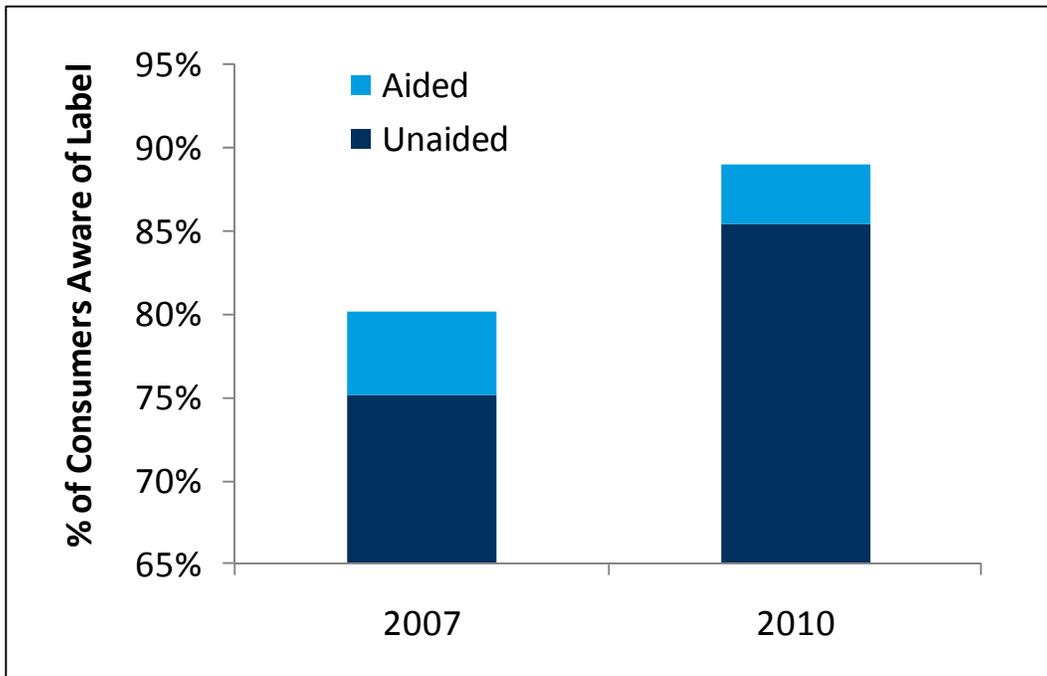
This section concludes with a discussion of how select Program and market assessment indicators relate back to key researchable issues identified in the Program theory and logic model developed by the MCA team.

4.1 Awareness and Knowledge

One of the most important goals of the NYESP Program is to raise awareness and understanding of the ENERGY STAR label among both “downstream” (residential end-use customers) and “upstream” (retailers) market actors. As discussed earlier, the Program has invested significant resources in advertising, point-of-purchase (POP) displays, and retailer training. To determine how well the program raised awareness, the MCA team used information gathered in the MCA Residential End-Use Customer Telephone Survey, the CEE Survey, the Corporate Retailer Survey, and the Participating Retailer Survey.

In the MCA Residential End-Use Customer Telephone Survey, customers were asked if they had either seen or heard of the ENERGY STAR label. The question was first asked unaided, without a description of the label. If the respondent was unaware of the label, he or she was then aided with a detailed description of the label. In the 2007 Residential End-Use Survey, 75 percent of respondents were aware of the label unaided, and 80 percent were aware with aided description. In the 2010 survey, 80 percent of respondents were aware of the label unaided, and 89 percent were aware with aided description (Figure 24). This is a statistically significant increase in overall consumer awareness of the ENERGY STAR label from 2007 to 2010, indicating that awareness in the NYSERDA region is likely still being bolstered by label promotion.

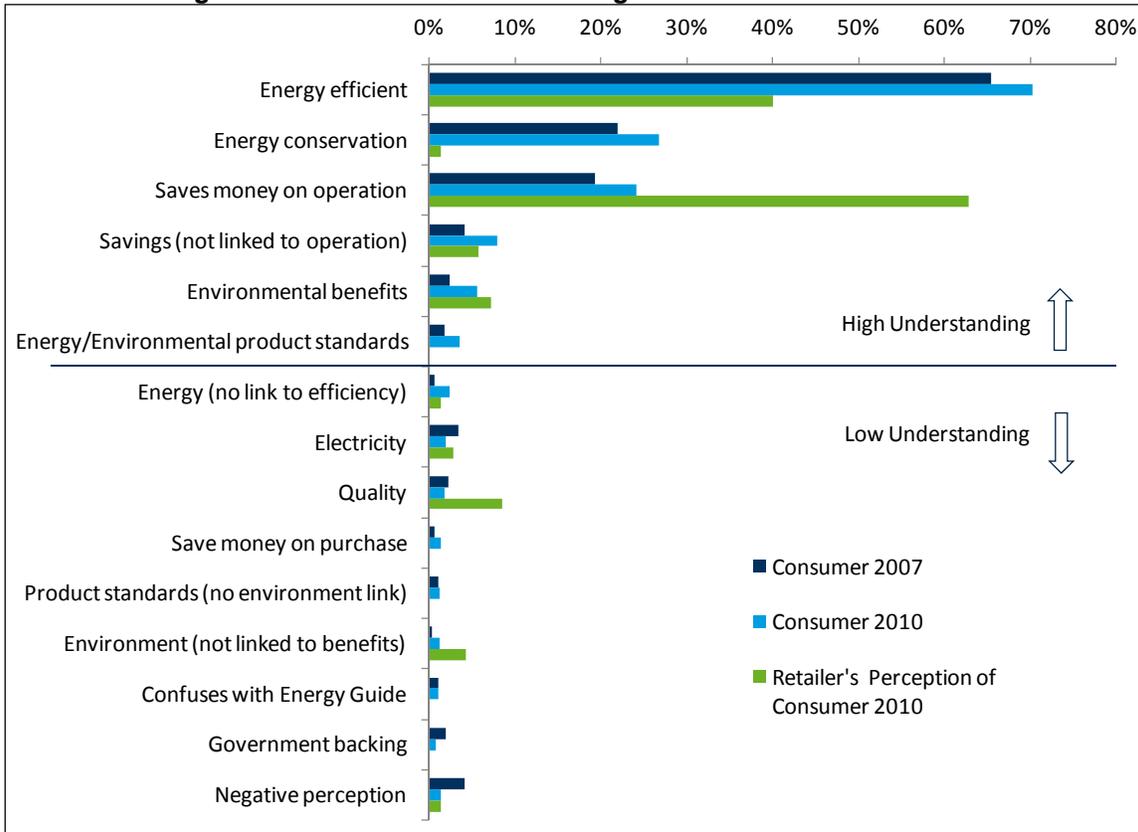
Figure 24. Consumer Awareness of ENERGY STAR Label



Source: MCA Residential End-Use Customer Telephone Survey 2007 (n=894) and 2010 (n=948)

Not only has awareness increased, but so has understanding of the ENERGY STAR label: the percentage of customers displaying a higher understanding of the ENERGY STAR label increased in the current residential end-use customer telephone survey over that documented in the 2007 evaluation. As shown in Figure 25, there was also a slight decrease in the percentage of respondents who mentioned inappropriate (i.e., low understanding) associations with ENERGY STAR in 2010. Though these changes in understanding over time look promising, most of them are not statistically significant for this sample. Little to no increase in this metric could indicate a saturation of understanding by consumers or a need for diversified educational materials that target new audiences. A promising finding is that negative perceptions of the ENERGY STAR label did drop significantly. This is encouraging in light of the recent “negative” press regarding the ENERGY STAR qualification processes.

Figure 25. Consumer Understanding of the ENERGY STAR Label



Source: MCA Residential End-Use Customer Telephone Survey 2007 (n=717) and 2010 (n=822), Participating Retailer Telephone Survey 2010 (n=72)

During the Participant Retailer Survey, respondents were asked to identify consumers’ level of understanding of the ENERGY STAR label. The responses were tracked in the same categories as those in the consumer survey. Most retailers responded that consumers think of saving money on operation. However, this response was not reported nearly as frequently by consumers. Retailers also reported much lower understanding by consumers that ENERGY STAR rated products are energy-efficient or save energy. While energy savings and monetary savings are similar responses, it seems from the retailers’ point of view that customers are more concerned about the monetary savings than the energy savings. Figure 25 above illustrates these differences.

A slightly different question was asked of consumers in the CEE online survey in 2010. The CEE survey provided a list of statements and asked if the respondent agreed or disagreed to varying levels (strongly or somewhat). Table 28 shows the level of agreement aggregated to agree, disagree, or neither. It includes both national and NYSERDA area consumers, with indicators of any significant differences in the populations noted. Consumers agreed the least with the statement that ENERGY STAR products are no different from other products. They agreed the most with the statement that if they see the ENERGY STAR label, they know they are getting a more energy-efficient product. These responses make sense and show a general understanding of what the label signifies. Most consumer ambivalence came from the statement

that when they buy an ENERGY STAR product, they can always be sure it is high quality. This shows that while consumers understand that an ENERGY STAR rated product will provide energy savings, they do not necessarily relate ENERGY STAR ratings with high quality products.

Table 28. Percent of Consumers in Agreement with Selected ENERGY STAR Issues

Survey Statement	Agree	Disagree	Neither Agree Nor Disagree
If I see the ENERGY STAR label, I know I'm getting a more energy-efficient product.	66%	7%	27%
Buying ENERGY STAR-labeled products makes me feel like I'm helping to protect the environment for future generations	58%	10%	32%
It seems like most products have the ENERGY STAR label these days.*	47%	13%	40%
Buying ENERGY STAR-labeled products makes me feel like I'm contributing to society.**	46%	13%	41%
ENERGY STAR-labeled products provide me with more benefits than products without the ENERGY STAR label.	46%	8%	46%
ENERGY STAR-labeled products offer better value than products without the label.*	36%	13%	51%
When I buy a product with the ENERGY STAR label, I can always be sure it's high quality.	30%	18%	52%
I consider myself loyal to ENERGY STAR-labeled products.	28%	23%	48%
If I cannot find the kind of product I am looking for with an ENERGY STAR label, I will shop elsewhere rather than buy a product that does not qualify for the label.	20%	31%	48%
I don't trust that ENERGY STAR-labeled products save the energy they're supposed to.	16%	46%	38%
I don't believe ENERGY STAR-labeled products save me money in the long run.	12%	52%	36%
Buying ENERGY STAR-labeled products makes me feel like I'm spending extra money for nothing.	12%	48%	40%
ENERGY STAR-labeled products are no different from other products.	9%	56%	35%

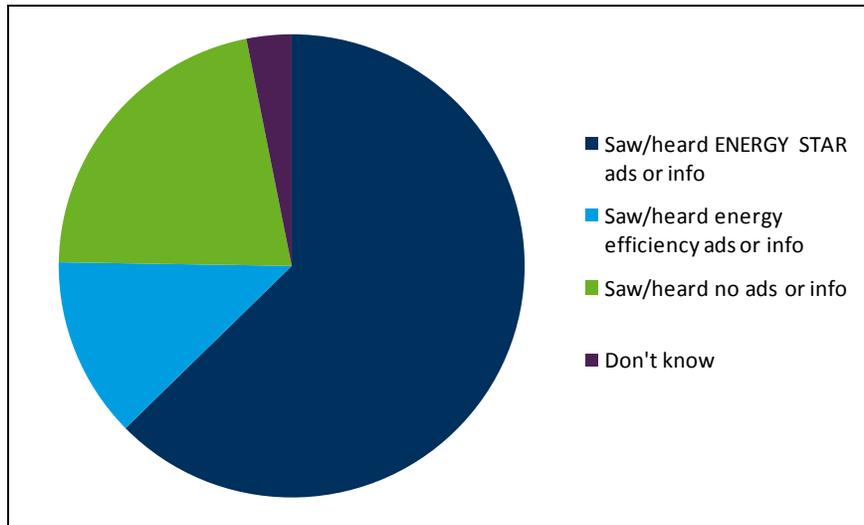
Source: CEE Web Survey 2010

* NYSERDA area respondents were significantly more likely to disagree with this statement than national respondents.

** NYSERDA area respondents were significantly less likely to neither agree nor disagree with this statement than national respondents.

The aggressive cooperative advertising campaign supported by money from the NYESP Program also appears to be reaching consumers. For example, 63 percent of respondents reported that they had seen or heard an advertisement or information about ENERGY STAR in the last year. An additional 13 percent had seen or heard an advertisement or info about energy efficiency in the last year, but did not mention ENERGY STAR specifically (Figure 26). While this was a slight increase from the 2007 survey, it was not statistically significant.

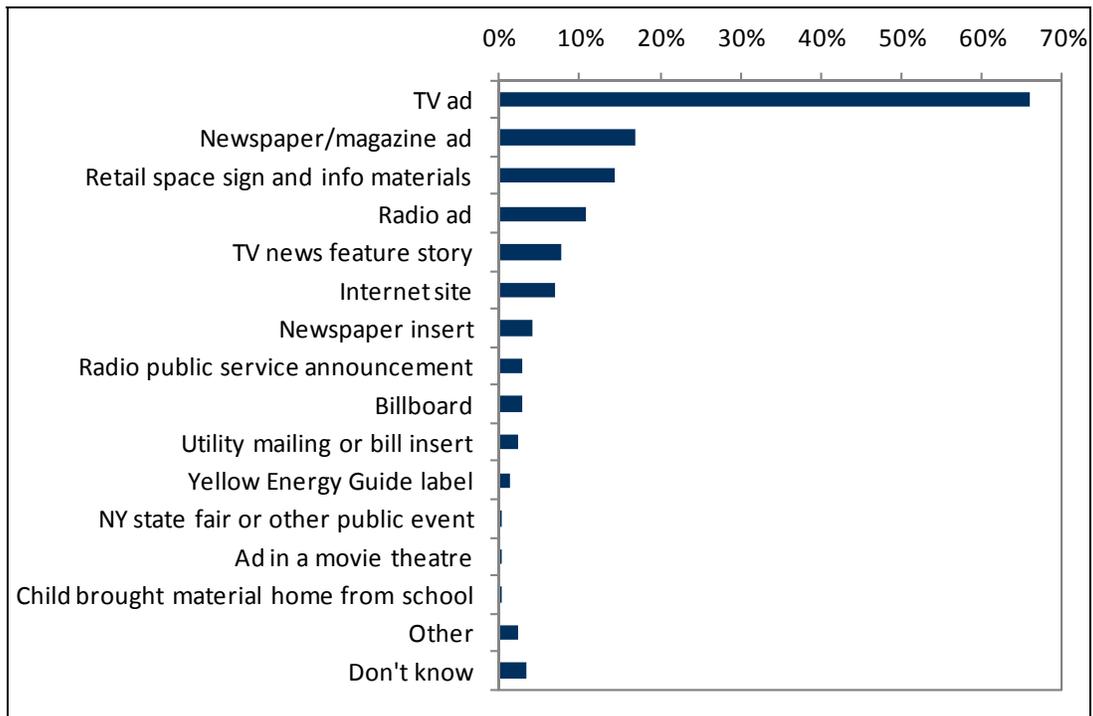
Figure 26. Awareness of ENERGY STAR or Energy-Efficiency Advertisement in Last Year



Source: MCA 2010 Residential End-Use Customer Telephone Survey (n=851)

The most common medium by far for advertising awareness was television (66 percent of respondents, Figure 27). The top advertising media after television were newspaper and magazine ads, signs and materials at retail locations, and radio ads. These findings are very similar to 2007 Evaluation findings, with the notable exceptions of Internet sites rising from two percent to seven percent and utility mailings and inserts rising from two percent to five percent.

Figure 27. Where Consumers Saw Information or Ads about the ENERGY STAR Label



Source: MCA 2010 Residential End-Use Customer Telephone Survey (n=640 respondents)

Respondents who had searched for product information on the Internet were also asked if the sites they searched displayed the ENERGY STAR logo for products. This aided recall indicated that the ENERGY STAR logo is almost ubiquitous on the web, as 73 percent of respondents reported that all (41 percent) or some (32 percent) of the sites they visited displayed the ENERGY STAR logo (Table 29). The logo was most commonly seen on the Internet by those respondents searching for a new dishwasher (84 percent). While this is a slight increase from the 2007 Evaluation, it was not statistically significant.

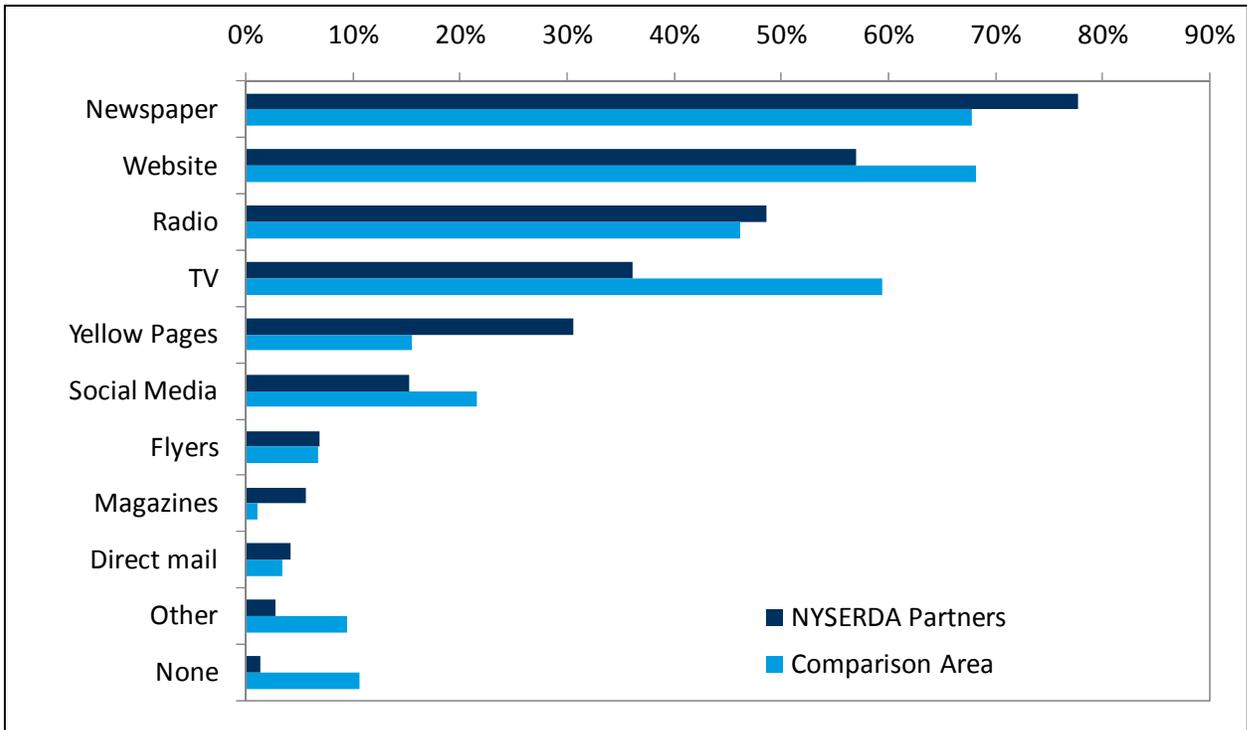
Table 29. Internet Sites Visited that Displayed the ENERGY STAR Logo on Products

	Refrigerator	Clothes Washer	Dishwasher	Room AC	Overall
Yes, all sites visited	31%	41%	44%	52%	41%
Yes, some of the sites	33%	28%	40%	23%	32%
No, none of the sites	5%	8%	5%	0%	5%
Don't know	32%	23%	11%	25%	22%

Source: MCA 2010 Residential End-Use Customer Telephone Survey (n=181)

Surveyed retailers were asked where they advertise their ENERGY STAR products. The results from NYSERDA partner retailers and comparison area retailers are shown in Figure 28. While consumers overwhelmingly reported TV advertisements as the number one source of information about ENERGY STAR, it was the fourth most frequently used form of media for NYSERDA partners and the third most frequently used medium for comparison area retailers for advertising. Less than 20 percent of customers reported hearing about ENERGY STAR in newspaper or magazine ads, while more than 80 percent of NYSERDA retailers and 70 percent of comparison retailers reported using them for advertising. Less than 10 percent of residential customers reported seeing ENERGY STAR information on a website (the sixth most popular medium), while this was the second most popular medium for retailers.

Figure 28. Media Used by Retailers to Advertise ENERGY STAR Products



Source: 2010 MCA Participating Retailer and Comparison Area Retailer Surveys (NYSEERDA n=72 and Comparison n=264)

It should be noted that the consumer survey asked respondents to list the media in which they saw ENERGY STAR without providing a selection to choose from. This approach often garnered only one or two responses; in such cases, TV was usually the only response. In the retailer survey, respondents were given the list and asked if each applied, a survey tactic that usually produces more than one or two responses.

The findings in the figure above have implications for selection of advertising media for NYSEERDA’s education and outreach activities. However, cost is a consideration. It may be economically impractical for most small retail partners to purchase television advertising time. Reaching out to customers through advertisements in local newspaper, radio, and retail stores is more practical and is shown to still be effective.

Corporate retailers were asked what they believe is the current level of awareness of the ENERGY STAR label among consumers in New York. Overall, respondents believed consumers are well aware, with five respondents answering that the level of awareness is 75 percent or greater, and one respondent answering between 50 and 74 percent. Corporate retailers were then asked what they believe is New York consumers’ current level of understanding of the meaning of the ENERGY STAR label. Ratings were slightly lower for this question, with only three respondents answering 75 percent or greater, one answering between 50 and 74 percent, and two respondents answering that the level of understanding is only between 24 and 49

percent among consumers in New York. The remaining corporate retailers did not respond to this question. Table 30 shows these findings.

Table 30. Corporate Retailers’ Opinion on Consumer Awareness and Understanding of ENERGYSTAR Label

Reported Percent of Consumers with Awareness or Understanding	Awareness (6/8 Respondents)	Understanding (6/8 Respondents)
75% or greater	5	3
50-74%	1	1
24-49%	--	2
0-24%	--	--

Corporate retailers were then asked how they thought this awareness level compares to other regions of the country. Six respondents answered the question; three said awareness is greater in New York than other regions, and the remaining three believed awareness is higher in other regions. Respondents were asked to explain why they believe awareness was greater or less in New York than other regions. The corporate retailers who believe awareness is higher in New York responded that there is more “push for ENERGY STAR” in New York, that there is more promotion of ENERGY STAR in New York, and where “organizations promote ENERGY STAR, awareness is much higher.” The respondents who believe awareness is higher in other regions said that “other parts of the country have had ENERGY STAR rebates for years” and “[New York consumers] don't care about energy.”

Corporate retailers and manufacturer respondents were both asked about their promotion practices. They were asked if they promote non-ENERGY STAR products differently than ENERGY STAR products. Three corporate respondents claimed to promote non-ENERGY STAR products the same way they promote ENERGY STAR products, and three claimed to promote the products differently. One corporate retail respondent said, “We prefer to promote energy-efficient products than non-ENERGY STAR products. We use the same promotion avenues but just promote non-ENERGY STAR less.” Another corporate retailer respondent said, “We always recognize that it is ENERGY STAR. We list it as such, label them on the sales floor, and discuss their benefits.”

All manufacturers claim to promote ENERGY STAR products differently than non-ENERGY STAR. One manufacturer said, “In big cities, people demand ENERGY STAR products differently than more rural areas. On the radio, we only promote ENERGY STAR products. For TV, it depends on the consumer market. Three-quarters of products on TV are ENERGY STAR products. ENERGY STAR products are the main target.”

All corporate and manufacturer respondents were then asked how the promotion of ENERGY STAR products varies in and outside of New York. They were given the following options to choose from for

each product they sell: a) We only promote these ENERGY STAR products in New York; b) We only promote these ENERGY STAR products in New York and in other areas where utility incentives are offered; c) We apply the same promotional practices we use in New York in all areas where we sell; and d) We apply the same promotional practices we use in New York in some other areas we sell. Very few respondents answered this question, and responses were equal across all options. The findings are in Table 31.

Table 31. Corporate Retailer and Manufacturer Promotional Practices for Appliances and Light Fixtures in New York versus Outside New York

Interview Type	NY Only	NY + Incentives	NY & Others	All Areas
Corporate Retailer	2	0	1	0
Manufacturer	0	2	1	2

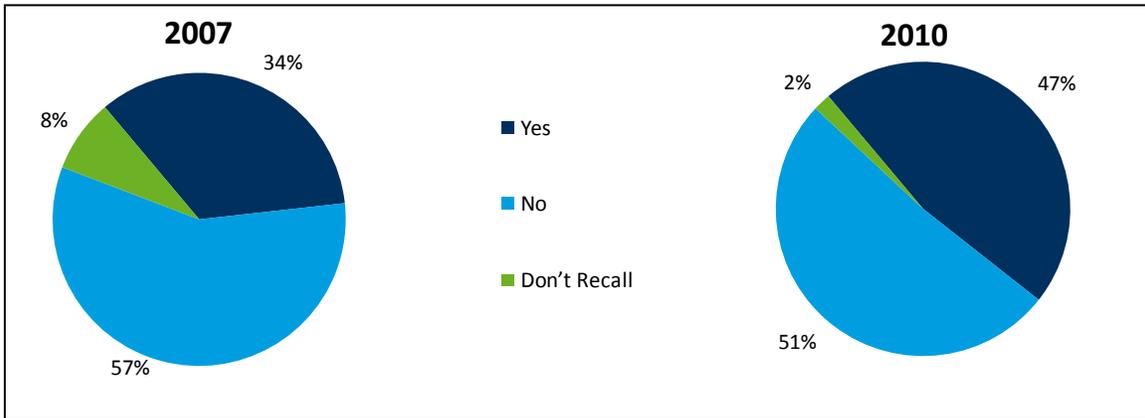
Finally, an important component of efforts to increase awareness involves targeting the upstream market actors—the retailers—who must be knowledgeable about ENERGY STAR in order to effectively communicate its benefits and sell energy-efficient products to consumers. According to the Lockheed Martin in-store manager survey, nearly all participating retailers (98 percent) are now including energy efficiency as part of their product and sales training efforts, up from only 60 percent in 1999 when the Program began.

4.2 Perceived Value

Another important goal of the NYESP Program is to increase the perceived value of products that have the ENERGY STAR label. Perceived value is assessed by a number of different metrics, including examining repeat purchases of ENERGY STAR products, willingness to recommend ENERGY STAR products, changes in consumer demand for ENERGY STAR products, and the commitment to the Program by participating retailers.

In terms of prior experience with ENERGY STAR products, 47 percent of the customers that reported purchasing a product with the ENERGY STAR label in 2009 stated that prior experience with ENERGY STAR products influenced their decision to purchase another energy-efficient product (Figure 29). This shows a significant increase in perceived value compared to the 2007 Evaluation, which showed that only 34 percent had previous experience with ENERGY STAR products, and the 2003 MCA study, which found 36 percent did.

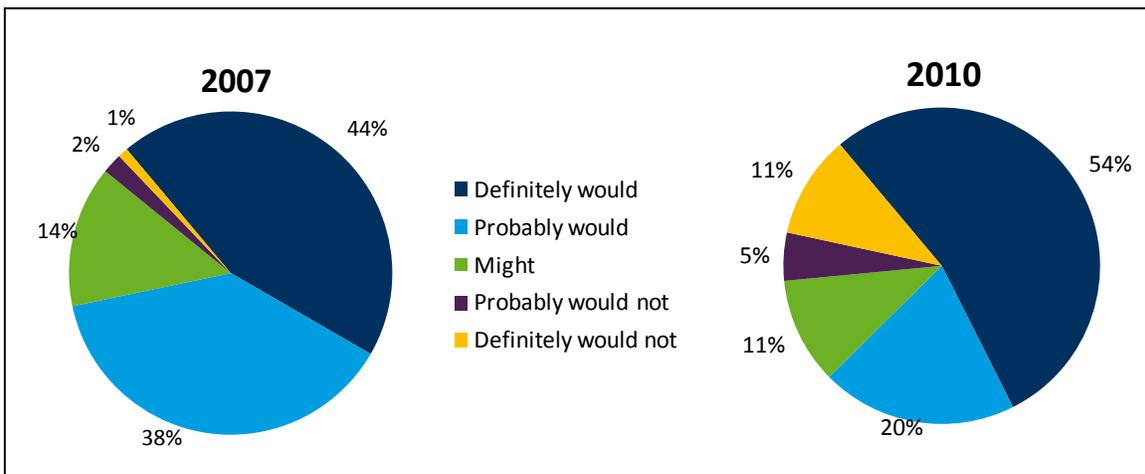
Figure 29. Customers Reporting That a Previous ENERGY STAR Purchase Influenced Their Recent ENERGY STAR Purchase



Source: MCA Residential End-Use Customer Telephone Survey 2007 (n=487) and 2010 (n=518)

In addition, 74 percent of respondents who purchased an ENERGY STAR product said they would definitely (54 percent) or probably (20 percent) purchase an ENERGY STAR labeled product in the future. These frequencies indicate a continuation of the trend noted above - consumers have a high probability of repeat purchases of ENERGY STAR products based on prior direct experience with such products (Figure 30).

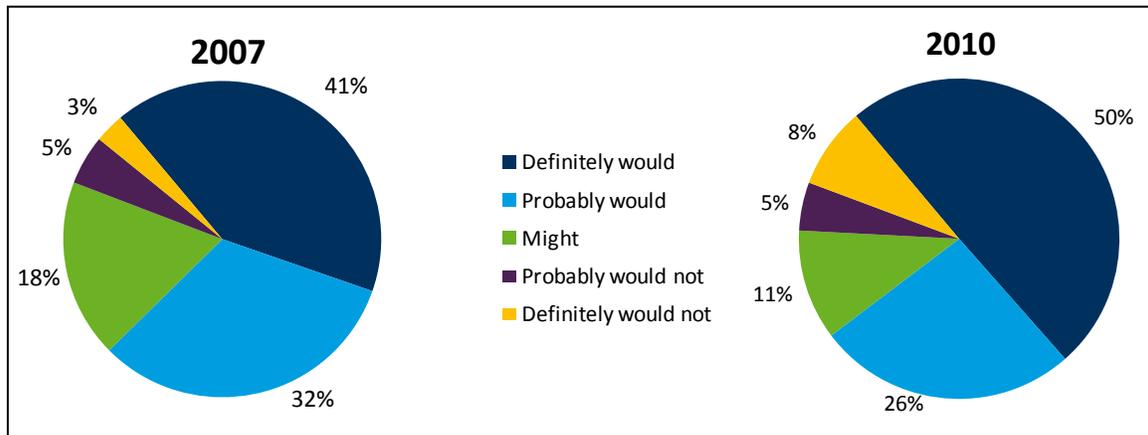
Figure 30. Likelihood of Future ENERGY STAR Purchase



Source: MCA Residential End-Use Customer Survey 2007 (n= 487) and 2010 (n= 519)

Consumer satisfaction can also be measured by willingness to recommend ENERGY STAR products to a friend, and 76 percent of the respondents said they would definitely (50 percent) or probably (26 percent) recommend ENERGY STAR labeled products (Figure 31). This is a significant increase from the 2007 Evaluation, but there was also a significant increase in the likelihood to not recommend. The survey did not follow up as to the reasons consumers would not recommend these products. Consumers who might or might not were the only category to decrease significantly.

Figure 31. Consumers' Likelihood of Recommending ENERGY STAR Products



Source: MCA Residential End-Use Customer Telephone Survey 2007 (n=487) and 2010 (n=846)

Despite the increase in customers who definitely would not purchase ENERGY STAR again and definitely would not recommend ENERGY STAR, there was still a large increase in users who based their most recent purchase on positive previous experience with ENERGY STAR products. It appears that while most ENERGY STAR purchases have a positive influence on future purchases, there is a growing backlash from customers who are not satisfied with their purchases. This could be due to recent negative press about the ENERGY STAR label. NYSERDA and other program administrators should monitor this trend closely to determine which factors are contributing to the growing backlash and what steps can be taken to lessen the influence of those factors.

The respondents to the residential end-use customer telephone survey also indicated that seeing the ENERGY STAR label was an influential factor in their purchase decisions. For example, 56 percent of the respondents who reported purchasing an ENERGY STAR refrigerator said the ENERGY STAR label was extremely (23 percent) or very (33 percent) influential in their purchase decisions (Table 32). Similarly, over half of the clothes washer and room AC purchasers said the label was extremely or very influential. Fewer than half (around 40 percent) of dishwasher and light fixture purchasers said the same thing, implying that other factors are driving the decision-making process for those product types. While similar to the previous question about prior ENERGY STAR product experience, this question gave respondents a chance to rate the label influence for specific products, regardless of previous product experience.

Table 32. Influence of the ENERGY STAR Label on Purchase Decision

	Refrigerator (n=117)	Clothes Washer (n=161)	Dishwasher (n=125)	Room AC (n=122)	Light Fixture (n=53)
Extremely influential	23%	21%	7%	14%	12%
Very influential	33%	33%	32%	39%	26%
Somewhat influential	24%	28%	32%	21%	37%
Slightly influential	7%	9%	16%	12%	6%
Not at all influential	13%	7%	13%	12%	18%
Don't know	0%	2%	1%	2%	1%

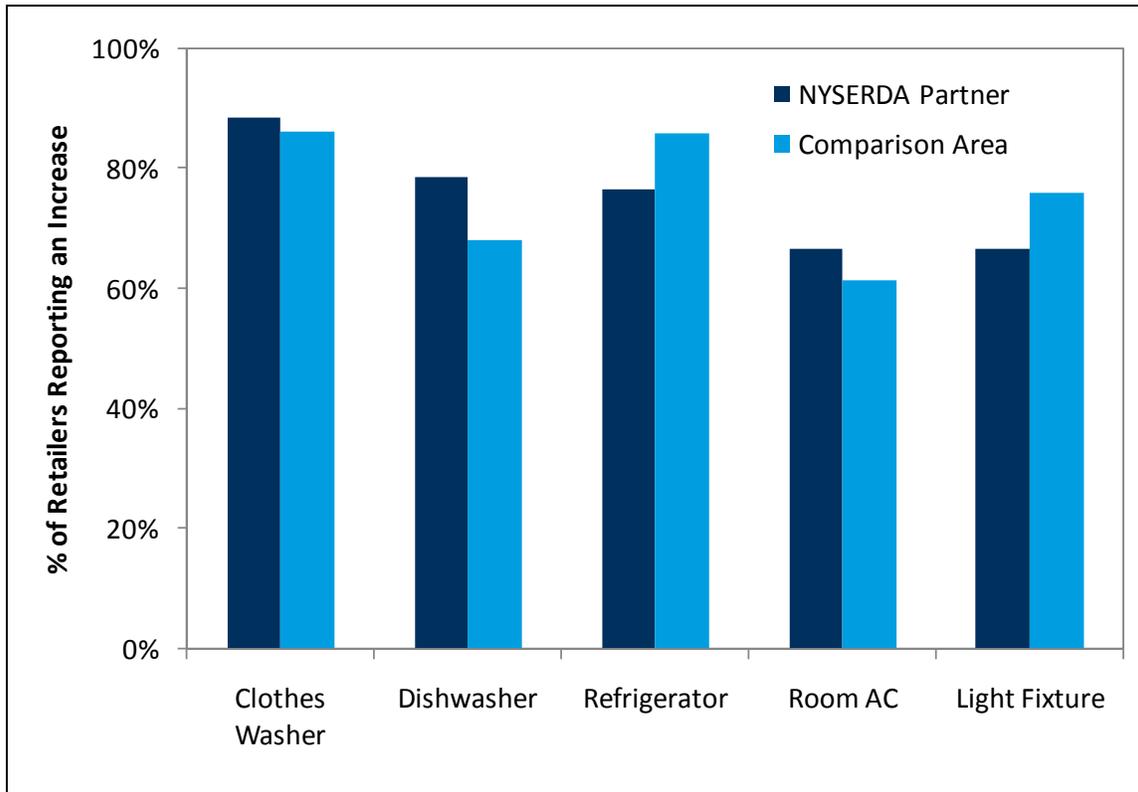
Source: MCA 2010 Residential End-Use Customer Telephone Survey

When asked why they purchased an ENERGY STAR model, respondents who were not influenced by the ENERGY STAR label typically made their product choice based on other product attributes, such as size, color, and features. Respondents who did not purchase an ENERGY STAR model but were aware of the ENERGY STAR label typically said that they simply did not consider any ENERGY STAR models or more often were discouraged by the higher prices or lack of other features they wanted. In the case of clothes washers, unsuitable styles or looks of ENERGY STAR models also deterred customers. Of those who did buy ENERGY STAR models, few mentioned that ENERGY STAR connotes quality or that the ENERGY STAR model had better overall quality³⁹: only nine percent of the refrigerator purchasers, seven percent of the clothes washer and dishwasher purchasers, five percent of the room AC purchasers, and 13 percent of the light fixture purchasers mentioned quality as a reason for purchase.

Another important measure of perceived value is consumer demand: increasing consumer demand is an indication that end users see additional value in ENERGY STAR products. Retailers were asked if they perceived consumer demand to be increasing or decreasing during the last few years. The majority of these respondents – many of whom had been in the Program for a number of years – said that consumer demand was increasing. For example, 88 percent of those selling clothes washers and 67 percent of those selling light fixtures stated that consumer demand for ENERGY STAR products has increased significantly or somewhat during the last few years (Figure 32). NYSERDA partners reported a slightly lower increase in demand for refrigerators and light fixtures than comparison area retailers. However, they reported slightly higher increases for all other appliances.

³⁹ Although ENERGY STAR is not a quality seal of approval, one of the objectives of ENERGY STAR is to identify energy-efficient products that offer savings on energy bills without sacrificing performance, features, and comfort.

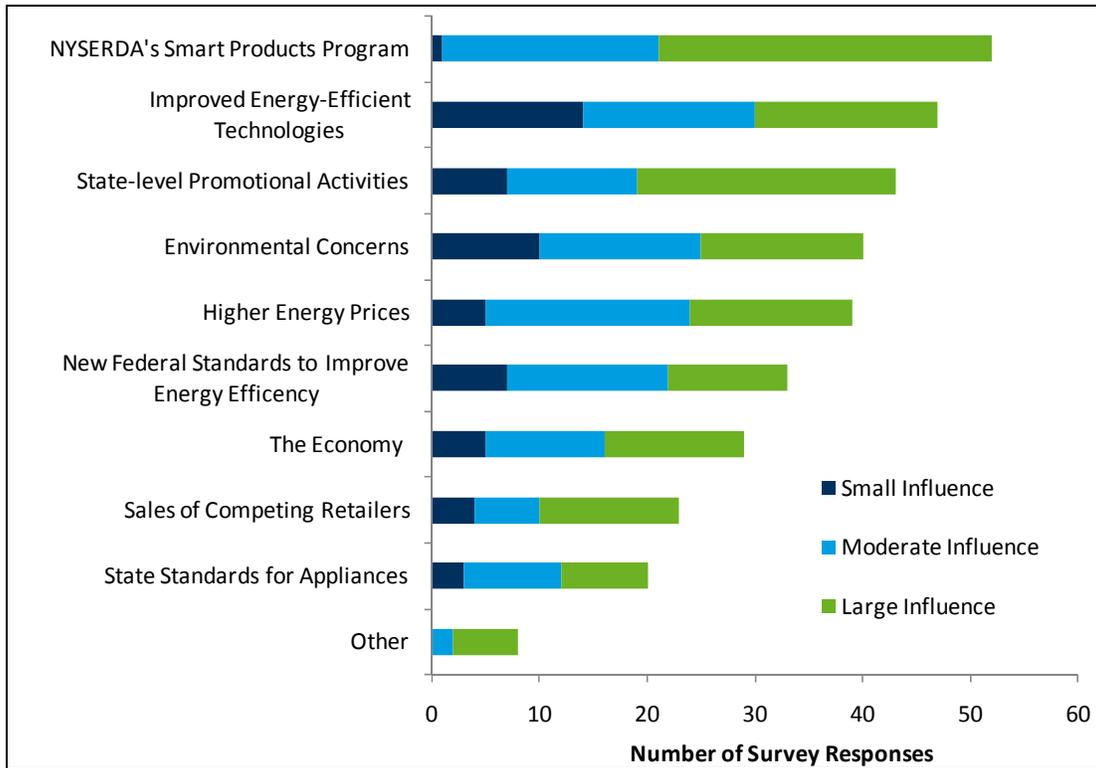
Figure 32. Retailers' Perceived Change in Consumer Demand for ENERGY STAR Products



Source: MCA 2010 Participating Retailer and Comparison Area Retailer Surveys, (NYSERDA n=72 and Comparison n=445, where n represents the total number of responses and not the number of retailers surveyed; i.e., a respondent can have multiple responses across each appliance).

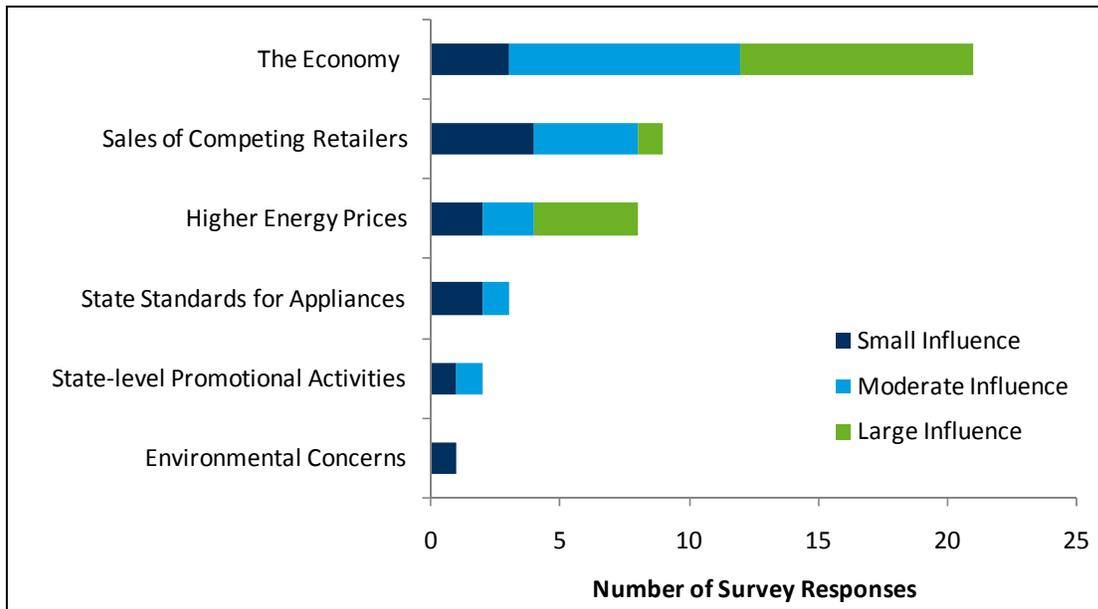
Figure 33 and Figure 34 show retailers' perceptions of reasons for increasing and decreasing consumer demand for ENERGY STAR products over the past few years. The top reasons given for decreasing ENERGY STAR demand were the economy, sales of competing retailers, and higher energy prices. These reasons were also cited as causes for increasing demand, which could be due to opposite responses to the outside factor. For instance, a response to higher energy prices might be an investment in energy savings equipment, or due to reduced cash flow purchasing cheaper appliances. When asked to provide reasons for the general increase in demand, the most common responses, other than the NYE\$P Program, were new or improved energy-efficient technologies (44 percent), environmental concerns (38 percent), and higher energy prices (37 percent) (Figure 33). Besides the external influences, direct ENERGY STAR programs including the NYE\$P Program and state-level promotional activities were credited by the participating retailers with driving the increased consumer demand: 49 percent of respondents who noted increased demand believed that the NYE\$P Program was somewhat or very important; and 41 percent said the same about state-level promotions (though it was not specified in the survey where or what these state-level promotions are). As shown in ENERGY STAR Market Share Section 3.3, the ARRA Rebate Program that began in 2010 had no net effect on 2009 appliance sales. The attribution to the Program was similar across all appliances and lighting fixtures.

Figure 33. Reasons for Increased Consumer Demand for Products in the NYE\$P Program



Source: MCA 2010 Participating Retailer Survey (n=106, multiple responses accepted – see note below Figure 34)

Figure 34. Reason for Decreased Consumer Demand for ENERGY STAR Products



Source: NYSERDA Retailer Survey (n=33). Note that for both figures above, n represents the total number of respondents across appliances and not the number of retailers surveyed, i.e., one respondent can have multiple responses for each appliance.

Corporate retailers were asked their opinion of factors that may limit consumer demand for ENERGY STAR products. Price was the overwhelming factor, and one respondent mentioned lack of education as a barrier to consumer demand. They were then asked if they believe there has been recent progress to reduce these barriers. One respondent said “Our company offers financing offers - interest free to make them more affordable.”⁴⁰

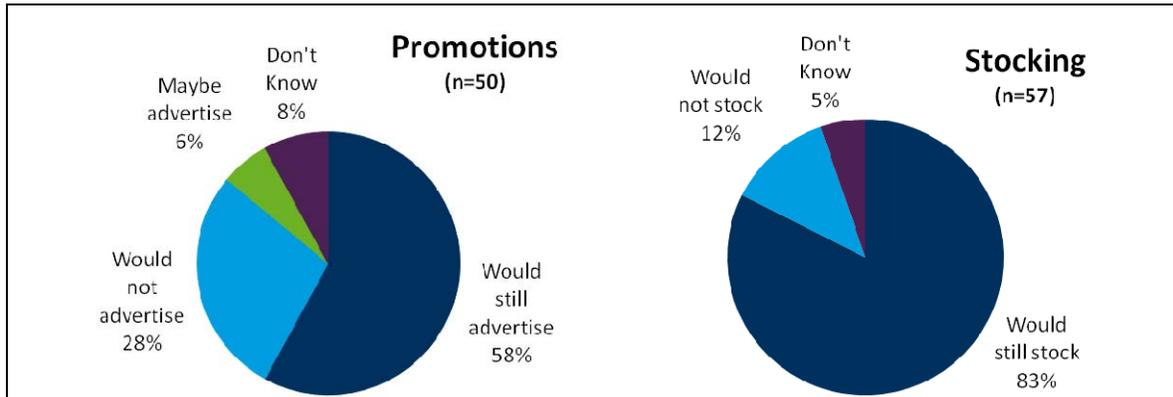
Corporate retailers were also asked what they think needs to happen to overcome these consumers’ barriers to purchasing ENERGY STAR products. One corporate retailer said that there needs to be more education and a cost decrease for all ENERGY STAR appliances. Another respondent suggested that there is a need to “do more to show customers what they will save over time, especially with energy prices increasing.” All corporate respondents agreed, however, that despite these barriers, consumer demand for ENERGY STAR products has increased over the past year.

Corporate retailers were asked to rate how important the NYESP Program has been in helping to bring about this increase in consumer demand (this was on a scale of 1 to 5, where 5 means very important and 1 means not at all important). Six respondents rated the Program a 4 or 5, one rated it a 3, and one rated it a 2. The respondent who rated the Program a 2 sells only room air conditioners, so his rating was based only on the Program as it relates to that product category.

A number of responses to questions in the MCA survey instruments demonstrated the influence of the NYESP Program on the products market. For example, 34 percent of participating appliance retailers said they would not or might not promote ENERGY STAR appliances without the NYESP Program (Figure 35), and 62 percent of the lighting retailers said they would not have done so without the Program (Figure 36). Also notable, 12 to 13 percent of appliance and lighting retailers reported that they would not even stock ENERGY STAR without the support of the NYESP Program.

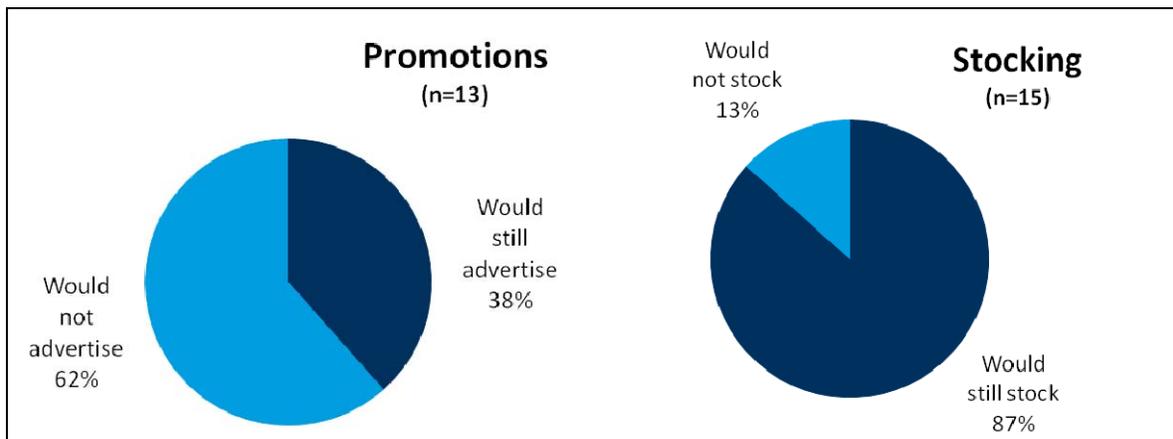
⁴⁰ The financing offers did not distinguish between ENERGY STAR and non-ENERGY STAR products, however financing might allow a customer to pay for the incremental cost premium of ENERGY STAR products.

Figure 35. Percent of Retailers That Would Continue Promotion or Stocking of ENERGY STAR Appliances without the NYESP Program



Source: MCA 2010 Participating Retailer Survey

Figure 36. Percent of Retailers That Would Continue Promotion or Stocking of ENERGY STAR Lighting Fixtures without the NYESP Program



Source: MCA 2010 Participating Retailer Survey

Manufacturers and corporate retailers were also asked directly about the Program’s impact on the proportion of ENERGY STAR products they sell. Manufacturers were asked to rate the likelihood of sales decreasing should NYSERDA end its ENERGY STAR promotional incentives. One of the two appliance manufacturers rated it 10, meaning it was highly likely sales would decrease (the other appliance manufacturer did not respond). The three lighting manufacturers offered ratings of 7, 9, and 10, respectively – meaning it was somewhat to highly likely that sales of ENERGY STAR products would decrease without the NYESP Program.

Four of five manufacturers responded to the survey question “Has the NYESP Program had a positive effect, no effect, or negative effect on the proportion of ENERGY STAR sales in New York?” All of them indicated the Program has had a positive effect.

The eight corporate retailers were all asked to estimate the impact of the NYE\$P Program on appliance sales. Two retailers felt sales would be no different, while the remaining six felt sales would be lower without the Program. Only three were able to quantify the difference: – “15 percent” said one corporate retailer regarding room air conditioners, “10 to 20 percent” reported one about dishwashers and refrigerators, and “two to three percent” was reported for all four appliances by the third.

The Participating Retailer Survey asked, for each appliance type, if sales had increased due to the Program and by what percentage. Each retailer’s response was weighted by the 2009 reported quantity of ENERGY STAR sales for that product; i.e. large retailers reporting a boost were assumed to experience a larger boost overall when compared to a small retailer claiming the same boost. On average, retailers estimated a 32 percent boost in sales due to the NYE\$P Program. Lighting fixtures had the highest increase in sales at 45 percent, explainable by the typically low level of consumer awareness of these products and small incremental cost when compared to non-ENERGY STAR fixtures. In this case, retailers reported that a little advertising goes a long way. Alternatively, a saturated market such as dishwashers is expected to receive a lower sales bump from further advertisement. Table 33 shows the results of the analysis for each product.

Table 33. Partner Retailer Self-Reported Sales Boost from NYE\$P Program

ES Product	Clothes Washer	Dishwasher	Refrigerator	Room Air Conditioner	Lighting Fixture	All Products
Retailer-Reported Attribution	34%	19%	19%	21%	45%	32%

Source: MCA 2010 Participating Retailer Survey. Responses weighted by Lockheed Martin Partner Sales Data.

4.3 Accessibility/Availability of Energy-Efficiency Measures

In addition to raising awareness and increasing the perceived value of ENERGY STAR products, the NYE\$P Program also seeks to increase the accessibility of ENERGY STAR labeled products. In previous reports, data collected by Lockheed Martin regarding stocking and labeling practices among participating retailers were used to present findings. For this evaluation, the MCA team is supplementing this information by reporting on telephone survey data collected from Program participating retailers as well as retailers in regions without state-sponsored ENERGY STAR promotions (comparison areas). In addition, consumer perceptions of the salesperson’s recommendations are presented.

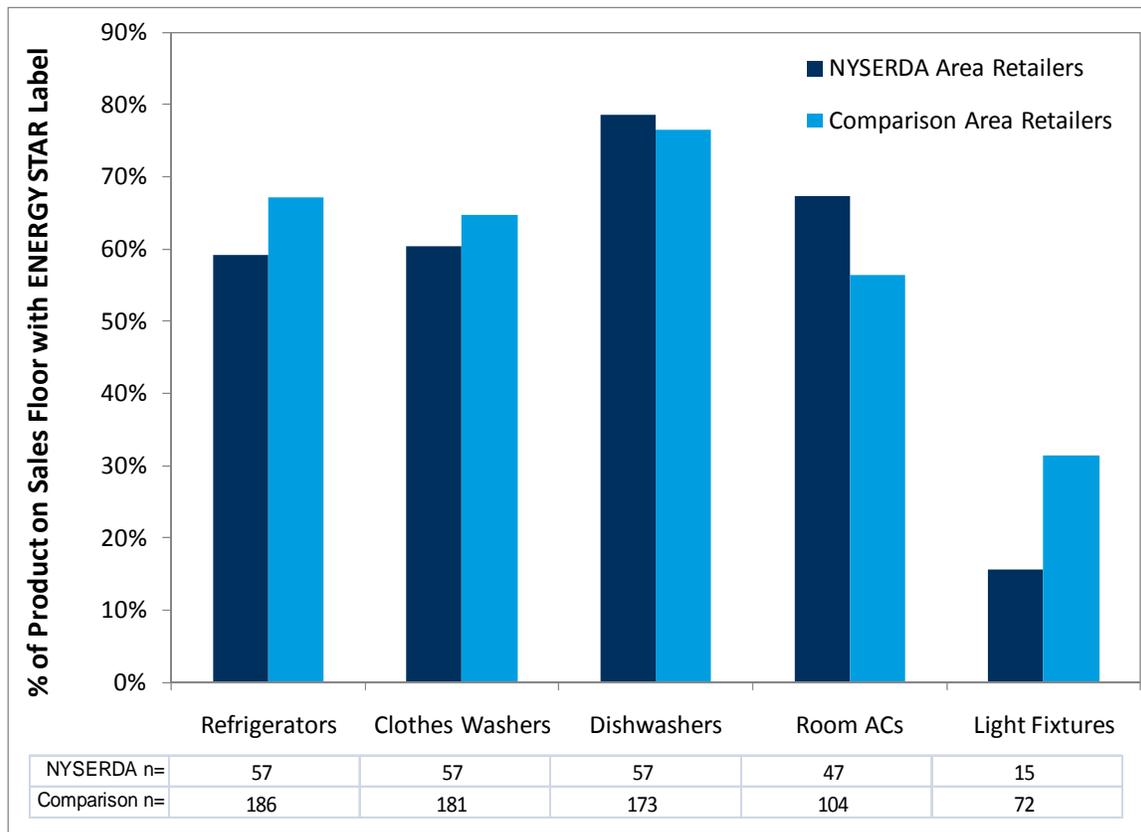
Product Display

According to responses from the 2010 MCA retailer phone survey, the average NYSERDA-partnered appliance store display is more than half ENERGY STAR products (Figure 37). Only 16 percent of the lighting fixtures on display at the average NYSERDA-partnered lighting store are ENERGY STAR fixtures. Dishwashers have the highest ENERGY STAR share of display space in stores (79 percent). Between dishwashers and lighting fixtures are room ACs at 67 percent, clothes washers at 60 percent, and

refrigerators at 59 percent ENERGY STAR. Comparison area retailers show similar stocking levels for appliances with no statistically significant difference. Unlike appliances, lighting fixtures do show significant differences between NYSERDA partners and comparison area retailers. Comparison area stores reported a higher average of ENERGY STAR lighting fixtures on display, 31 percent, almost double that of NYSERDA partner stores. This is likely due to the higher number of large corporate stores in the comparison areas that tend to follow corporate stocking practices.

A comparison of these self-reported findings with the in-store findings can be found later in this section under Onsite Display Survey.

Figure 37. Self-reported Percent of Displayed Models in Stores That Are ENERGY STAR Qualified

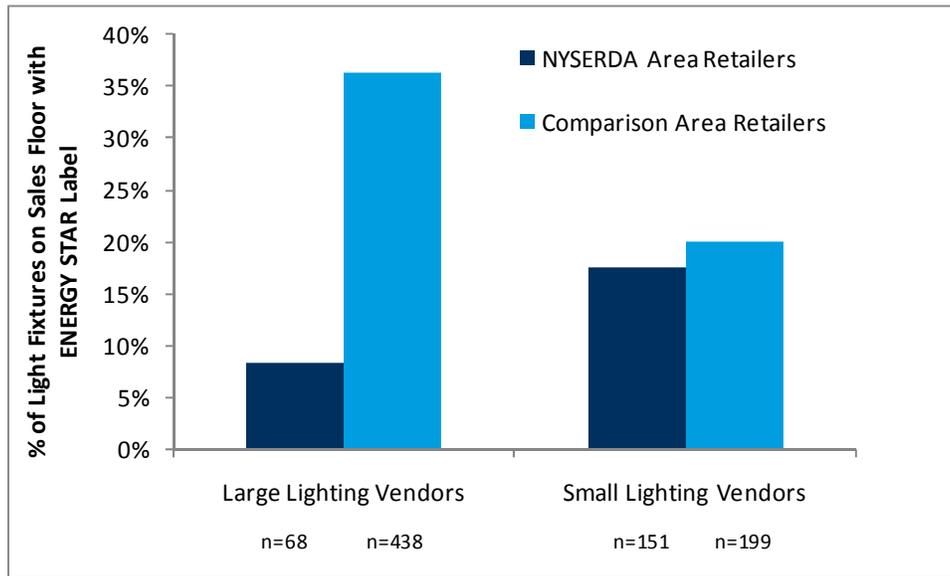


Source: MCA 2010 Participating and Comparison Area Retailer Surveys

In looking more closely at lighting fixture display trends (Figure 38), one can see that the disparity in stocking trends comes from large vendors. Large vendors were defined as retail respondents who classified themselves as mass merchandisers, wholesalers, department stores, and large home improvement stores. Small vendors were defined as those who identified as hardware stores, specialty lighting stores, and small businesses. Self-reported number of employees was considered in the case of a few ambiguous store types. The large vendors in the comparison areas consist almost entirely of Home Depot and Lowe’s. These two large vendors sell the vast majority of lighting fixtures in the areas studied so they are heavily weighted in

this case. NYSERDA retail partners, especially lighting partners, tend to be smaller stores with smaller volume than the big box home improvement stores. Compared to small vendors in the comparison areas, small NYSERDA partners are reporting about the same ENERGY STAR sales floor presentation.

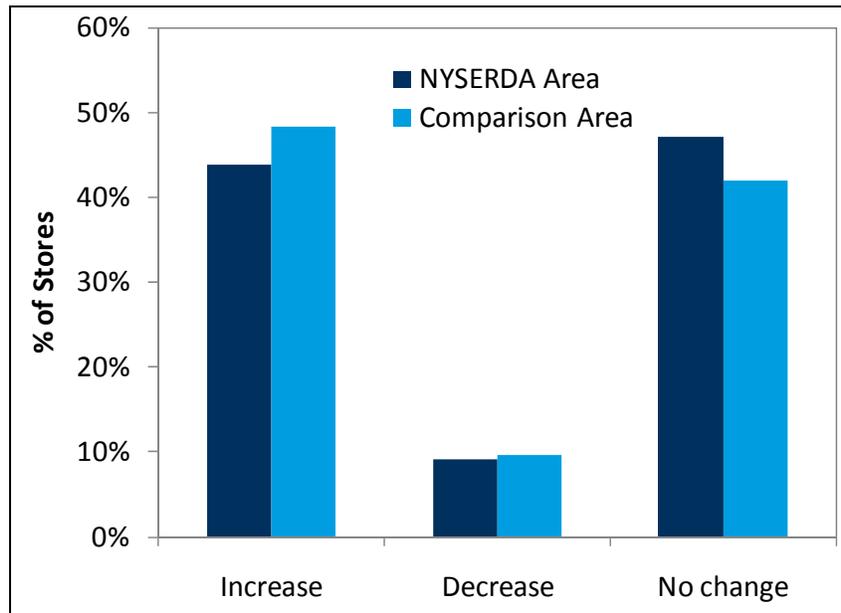
Figure 38. Self-reported Percent of Displayed Lighting Fixture Models in Stores That Are ENERGY STAR Qualified by Vendor Size



Source: MCA 2010 Participating and Comparison Area Retailer Surveys

Managers at the participating and comparison area retail stores were also surveyed regarding the changes in the amount of floor space dedicated to ENERGY STAR products. A fairly high percentage (44 percent) of participating retailers reported increasing their stock of ENERGY STAR products in the last year (summer 2008 to summer 2009 for room ACs and January 2009 to January 2010 for all other products). Only nine percent of respondents said they had decreased the floor space devoted to ENERGY STAR models, while 47 percent said there had been no change. The comparison area retail managers reported similar changes, with 48 percent reporting an increase, 10 percent a decrease, and 42 percent reporting no change (Figure 39). The difference between NYSERDA and comparison area retailers is not statistically significant. Retailers were not asked the reason for the change.

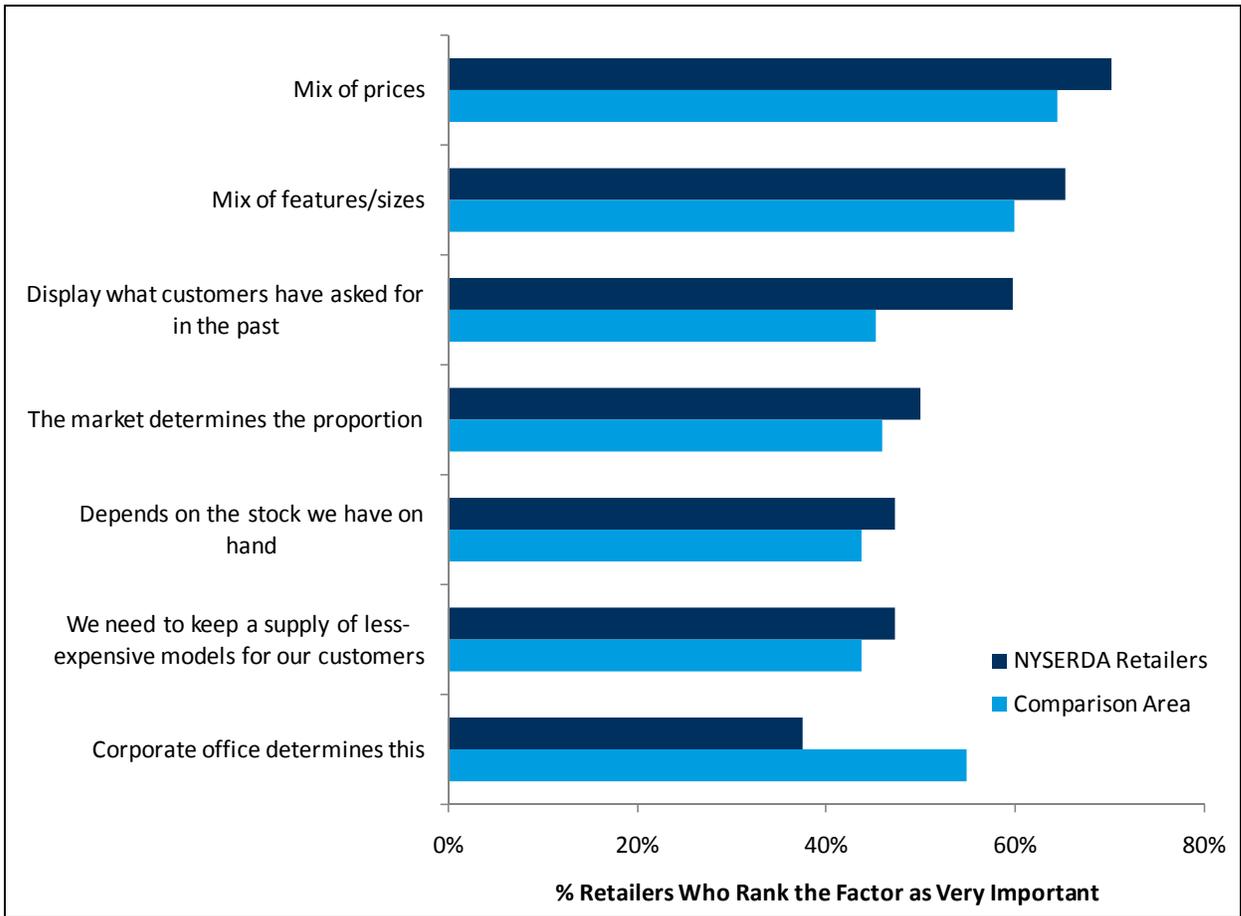
Figure 39. Percent of Stores Changing Display Space of ENERGY STAR Products in the Last Year



Source: MCA 2010 Participating and Comparison Area Retailer Surveys

In the MCA Retailer Survey, each participant was given a list of factors that could influence how products are displayed on the sales floor. They were told to rank each one from “not at all important” to “very important” and were also asked which was the MOST important. Seventy percent of NYSERDA retailers ranked having a mix of prices as very important (Figure 40). The majority of respondents also ranked mix of features and sizes, previous customer input, and the overall market as very important. Less than half ranked the quantity in stock and displaying less-expensive models as very important. The lowest-ranked response was that a corporate office determines the display (38 percent). Interestingly, this response was ranked highly by comparison area retailers (55 percent). Displaying products that customers have asked for in the past ranked very important for more NYSERDA partners (60 percent) than for comparison area retailers (45 percent) in determining what to display. These two differences in determining product display reinforce the idea that most NYSERDA partners are smaller businesses relying on face-to-face customer interactions and listening to what their customers want, while the comparison areas include more corporately owned chain stores and rely on corporate input for decision making.

Figure 40. Factors Determining Product Display



Source: MCA 2010 Participating and Comparison Area Retailer Surveys (NYSERDA n=72 and Comparison n=272)

Corporate retailers were also asked about their stocking patterns. Respondents were asked to describe how they decide which products and models they choose to stock in different stores across the country. One respondent said, “The assortment is nationally driven. We look at what our customers are buying. Then we put more of the products on display which are selling well.” Another respondent said that availability is a factor in stocking decisions. He explained, “We limit selection based on whether or not we can stock from the local warehouse. Sometimes demand is important. Stocking is usually an effort to bring in new product, but ENERGY STAR is not our first focus.”

Respondents were then asked to rate how much influence the NYESP Program had on the mix of models for each appliance type they stock in stores outside of New York on a scale from 0-10, where 0 is “no influence” and 10 is “significant influence”. The average rating for clothes washers, dishwashers, and refrigerators was 2.5. Only one corporate retailer gave a score for lighting fixtures (2 out of 10). This respondent claimed that they stock ENERGY STAR lighting fixtures in another state because of the success of the Program in New York. Room air conditioners received an average score of 5.6, with one respondent giving a score of 10 and another a 7. The respondent who scored the Program influence a 10 for

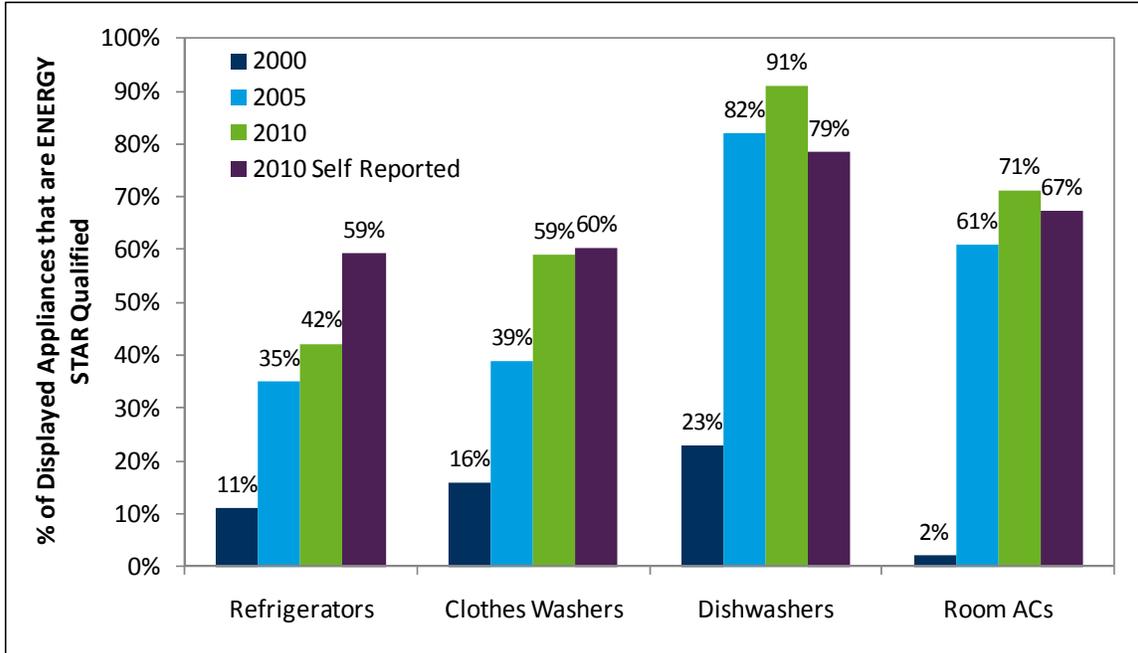
room ACs explained, “We saw that they (ENERGY STAR room ACs) were very popular so now we stock 100 percent of them. NYSERDA is a contributor of shifting the market.”

Onsite Display Survey

Lockheed Martin visits NYSERDA partner stores on an annual basis to evaluate in-store practices. The following figures show observed ENERGY STAR appliances and lighting fixtures as a percentage of all appliances. Because the Lockheed Martin survey is recurring, trends over time can be plotted. As shown in Figure 41, the percent of ENERGY STAR products on display has increased greatly for all appliances since 2000. The same is true for lighting fixtures, shown in Figure 42, with the exception of suspended lighting and outdoor fixtures.

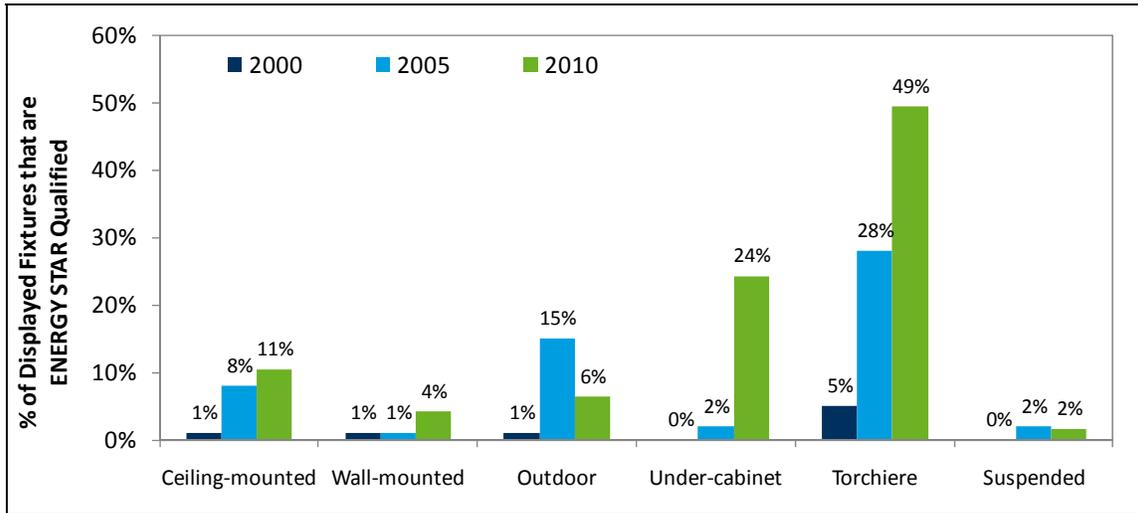
For comparison, the self-reported NYSERDA partner store results (also seen in Figure 37) were added to the chart. All percentages fall within the margin of error for the two studies except refrigerators. The percent of ENERGY STAR refrigerators on display in the self-reported retailer survey was significantly higher than what was found in the onsite survey. While it is possible that the difference in timing between the two surveys could explain the difference, it seems likely that retailers have an artificially high perception of how many refrigerator models on the sales floor are ENERGY STAR qualified.

Figure 41. Percent of Displayed Appliance Models in Stores That Are ENERGY STAR Qualified



Source: Lockheed Martin Partner Retailers Showroom Survey and MCA 2010 Participating Retailer Surveys

Figure 42. Average Percentage of Displayed Lighting Models That Are ENERGY STAR Qualified



Source: Lockheed Martin Partner Retailers Showroom Survey 2010

Manufacturer Interviews

Manufacturers were interviewed about their practices and product offerings. Respondents were asked to describe the difference in the number of ENERGY STAR models they manufactured in January 2009 compared to January 2010 in New York and in areas outside New York. Two of the four lighting fixture manufacturer respondents who answered the question claimed that the number of models they made had not changed in New York from 2009 to 2010 and that they produced the same number of models in New York as in areas outside New York. The third manufacturer said that sales of lighting fixtures had increased slightly in New York from 2009 to 2010.⁴¹ The remaining manufacturer, however, which manufactures only clothes washers, dishwashers, and refrigerators, claimed that it manufactured fewer appliances in January 2010 than it did in January 2009. Below is a summary of the models manufactured by year and area for the four manufacturers responding to this question.

⁴¹ One lighting manufacturer was unwilling to supply such information.

Table 34. Number of Models Manufactured by Year and by Area

	NY		Outside NY
	Jan-09	Jan-10	Jan-10
Lighting Fixtures	141	146	146
Clothes Washers	15	11	11
Dishwashers	68	62	62
Refrigerators	17	7	7

Manufacturers were then asked to describe how they decide which products and models they choose to market to different retailers across the country. Consumer demand was the overriding criterion mentioned. One respondent said:

“The first criterion is to meet the needs of the market. That means some models are acceptable for NY and some models are more acceptable for other areas. Second, we try to provide models that are not expensive. We market to our potential buyers who we think will buy these products. Needs for local markets and price point are the two criteria.”

Respondents were then asked to rate how much influence the NYESP Program had on the mix of model types they supply to retailers outside of New York on a scale from 0-10, where 0 is “no influence” and 10 is “significant influence”. Only two respondents gave a rating other than 0 for the appliances they supply. One respondent gave the influence on lighting fixtures an 8 and the other gave the influence of the Program on room air conditioners a 9. This respondent explained, “The Program has helped increase our sales, and awareness among the New York area. People from outside New York may have visited New York and have heard about it.”

Manufacturers were asked to estimate the percentage of annual product sales that are ENERGY STAR for areas in New York and outside New York. Only one respondent was able to answer for all appliance types. This manufacturer claimed to only sell ENERGY STAR appliances, causing the average ENERGY STAR sales in their area to be 100 percent, which is not typical. One different manufacturer of room air conditioners and three different lighting fixtures manufacturers responded. Below is a breakdown of the responses by area:

Table 35. Manufacturers’ Self-reported Average Percentage of ENERGY STAR Sales

Product	New York	Outside of New York
Clothes Washers (n=1)	100%	100%
Dishwashers (n=1)	100%	100%
Refrigerators (n=1)	100%	100%
Room Air Conditioners (n=1)	80%	80%
Lighting Fixtures (n=3)	72%	62%

Respondents were asked to rate, on a scale of 0 to 10, where 0 equals not at all for any customers and 10 means very well for all customers, how well they believe the current mix of ENERGY STAR products they manufacture meets the needs of all customers looking to purchase the appliance type. The average overall score for all appliances was 8 out of 10, which shows a confidence in the ability to meet consumers’ needs. One respondent who rated his or her company’s current offerings a 5 explained, “We want to bring awareness of our other ENERGY STAR products to New York even though new models may not be acceptable right away.”

Salesperson Promotion

Customers reported that salespersons continue to promote ENERGY STAR and its benefits: 57 percent of the end-use customers that were aware of ENERGY STAR and purchased a refrigerator reported that the salesperson brought up ENERGY STAR without being asked, and an additional 15 percent said it came up during discussion with the salesperson (Table 36). Energy efficiency was also commonly discussed: 38 percent of the refrigerator purchasers, 34 percent of the clothes washer purchasers, and 34 percent of the dishwasher purchasers said the salesperson brought up the product’s efficiency level during the sales discussion. Consumers who purchased their appliances at a Program partner store were more likely to have a salesperson bring up ENERGY STAR than those who purchased at non-partner stores. The least frequent mention of ENERGY STAR and energy efficiency was associated with room ACs: 75 percent of customers reported that ENERGY STAR was not discussed at all in regards to such products.

While the percent of salespeople bringing up energy use and ENERGY STAR is higher than reported in the 2007 Evaluation, the difference is not statistically significant. Similar trends were seen in 2007, with energy use being the most infrequently discussed during room air conditioner purchases.

Table 36. Salesperson Discussion Regarding Energy Efficiency and ENERGY STAR

	Refrigerator	Clothes Washer	Dishwasher	Room AC
Discussion with Retailers Regarding <u>Energy Use</u> and Operating Cost	n=75	n=75	n=79	n=78
Salesperson brought up energy use	38%	34%	34%	15%
Salesperson discussed energy use after I mentioned it	8%	9%	13%	7%
Discussion on energy use came from both sales-person and I	2%	9%	10%	7%
Not discussed	52%	49%	43%	71%
Discussion with retailers regarding the <u>ENERGY STAR</u> label	n=60	n=64	n=75	n=71
Salesperson brought up ENERGY STAR	57%	47%	37%	21%
Salesperson discussed ES after I mentioned it	12%	7%	12%	4%
Discussion of ENERGY STAR label came from both salesperson and me	3%	13%	17%	1%
Not discussed	28%	33%	34%	75%

Source: MCA 2010 Residential End-Use Customer Telephone Survey. (Respondents who were not familiar with the ENERGY STAR label were not asked the second question here, thus the Ns are lower than they are for the first.)

4.4 Pricing and Incremental Cost

One goal of the NYE\$P Program is to reduce the incremental cost of ENERGY STAR products compared to standard efficiency products. As ENERGY STAR models become more plentiful, or market share increases, and as economies of scale in production improve, a reduction in the price premium associated with ENERGY STAR will likely result.⁴²

A simple comparison of average prices for ENERGY STAR and non-ENERGY STAR appliances and fixture models was conducted, examining the dollar and percentage differences (Table 37 and 37 and Figures 43-46). Staff from Lockheed Martin collected the information during site visits to participating retailer establishments.

⁴² The reduction in the price premium, however, may be offset by periodic changes in ENERGY STAR standards.

Appliance results: From 2004 through 2009, dishwashers have shown an overall decrease in their average ENERGY STAR cost premium while the cost premium for refrigerators seems to be on the rise. From 2007 to 2009, the cost premium for clothes washers has remained steady. Since the analysis only looked at simple price averages, it is not possible to determine the actual ENERGY STAR premium associated with each product. Differences are also due to variations in features between ENERGY STAR and non-ENERGY STAR units and small sample sizes of the ENERGY STAR products compared. When reviewing the data in general it is apparent that for refrigerators, dishwashers, clothes washers, and room air conditioners, ENERGY STAR products usually have more expensive non-energy related features than non-ENERGY STAR products have. For example, ENERGY STAR refrigerators were about 20 percent larger than non-ENERGY STAR refrigerators. ENERGY STAR dishwashers included 17 percent more additional options (such as stainless steel, extra noise insulation) than the non-ENERGY STAR dishwashers.

Lighting results: According to average price comparisons, the cost premium for ENERGY STAR ceiling fixtures has decreased since 2004. Data show that the average cost for ENERGY STAR suspended fixtures and ENERGY STAR exterior fixtures is lower than non-ENERGY STAR suspended and exterior fixtures. Again, without accounting for variations in product features, it is not possible to know whether these price differences reflect true ENERGY STAR price differentials or unobservable differences in features between ENERGY STAR and non-ENERGY STAR products.

Table 37. Simple Average Price Difference between ENERGY STAR and Non-ENERGY STAR Appliances

Appliances	2004		2005		2006		2007		2008		2009	
	Mean \$	Percent	Mean \$	Percent								
Refrigerators	\$465	62%	\$413	44%	\$473	45%	\$653	82%	\$467	28%	\$637	39%
Dishwashers	\$174	47%	\$159	37%	\$178	43%	\$102	20%	\$86	14%	\$108	16%
Clothes washers	\$410	89%	\$471	106%	\$384	89%	\$461	95%	\$462	48%	\$442	45%
Room/TTW AC	\$44	18%	\$37	15%	\$56	20%	\$51	18%	\$38	12%	\$59	16%
Dehumidifiers	\$21	13%	\$26	15%	\$3	2%	(\$7)	-4%	(\$1)	-1%	(\$240)*	-121%
Freezers	\$257	79%	\$102	24%	\$198	54%	\$139	29%	\$1,471	78%	\$196	33%
Ceiling fans (w/o lights)	(\$19)	32%	\$10	30%	\$27	13%	(\$73)	-54%	N/A	N/A	(\$47)**	-32%

Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers and MCA team calculations

* Dehumidifiers only included seven non-ENERGY STAR products and no features data (other than price) was collected. Ceiling fans only included nine ENERGY STAR products out of 53 surveyed.

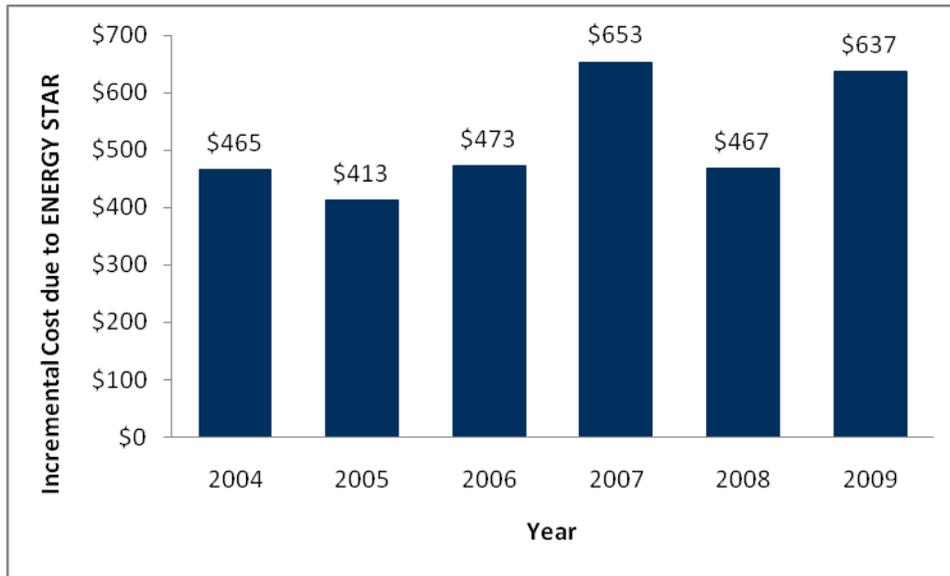
Table 38. Simple Average Price Difference between ENERGY STAR and Non-ENERGY STAR Lighting Equipment

Lighting Equipment	2004		2005		2006		2007		2008		2009	
	Mean \$	Percent										
Ceiling fixtures	\$23	85%	\$10	24%	\$10	20%	16	39%	N/A	N/A	\$4	6%
Suspended fixtures	\$45	25%	\$74	45%	(\$91)	-21%	\$179	85%	N/A	N/A	(\$29)*	-10%
Recessed features	\$65	334%	\$21	82%	(\$23)	-100%	N/A	N/A	N/A	N/A	N/A	N/A
Exterior fixtures	\$3	9%	(\$9)	-16%	(\$33)	-40%	(\$10)	-23%	N/A	N/A	(\$19)*	-34%

Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers and MCA team calculations

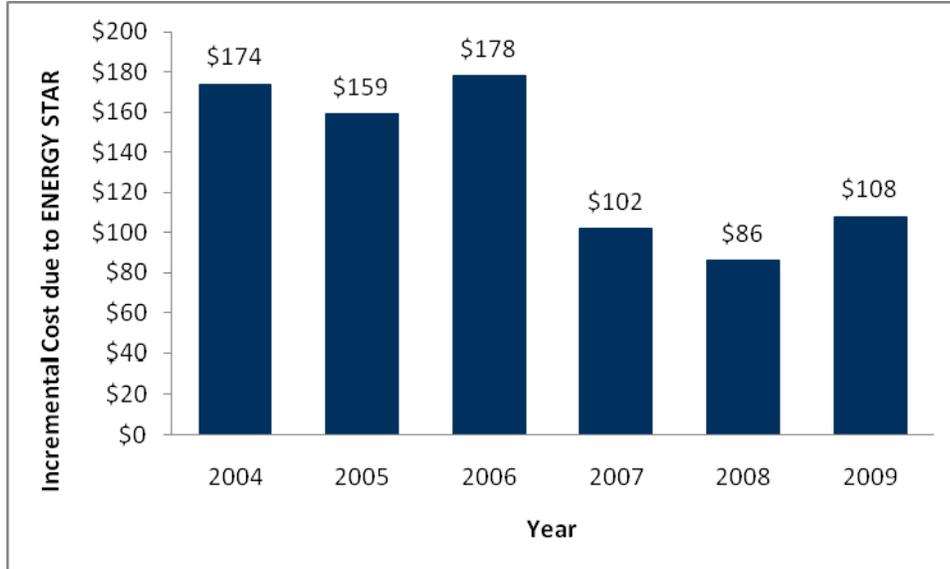
* Sample sizes for lighting fixtures have very few ENERGY STAR data points. For 2009, the ENERGY STAR data consisted of only 6 suspended fixtures, 24 exterior fixtures, and 29 ceiling fixtures while non-ENERGY STAR data included 100 suspended, 182 exterior, and 161 ceiling lights. Therefore, ENERGY STAR and non ENERGY star products may not have comparable features.

Figure 43. Average Difference between ENERGY STAR and Non-ENERGY STAR Refrigerator Prices (2004-2009)



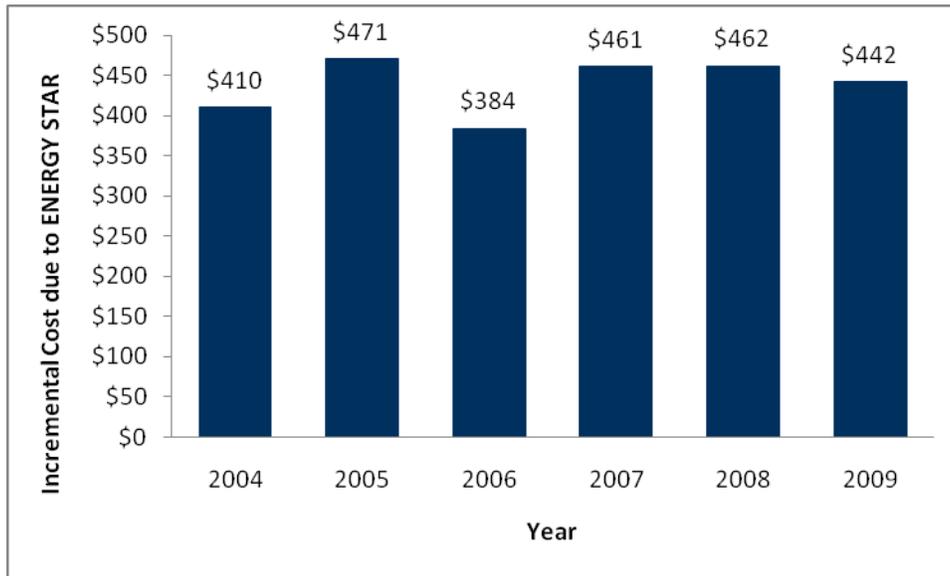
Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers and MCA team calculations

Figure 44. Average Difference in Price between ENERGY STAR and Non-ENERGY STAR Dishwashers (2004-2009)



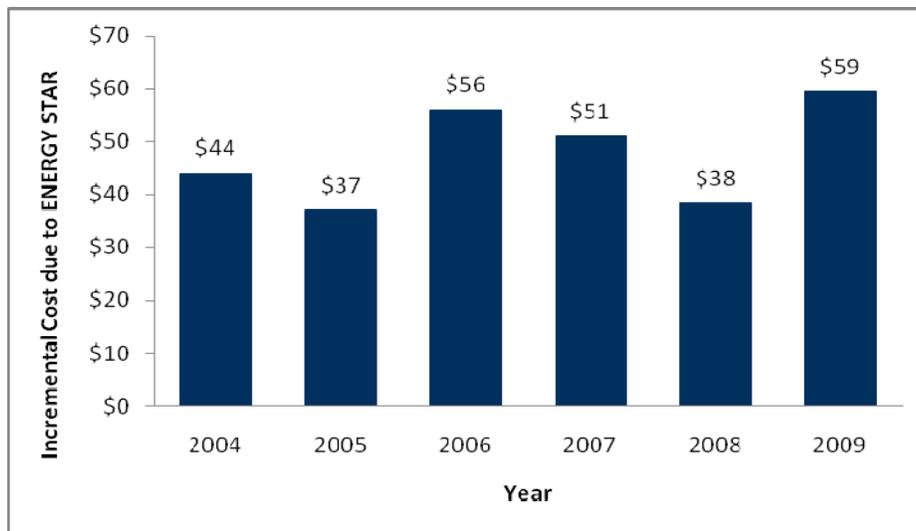
Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers and MCA team calculations

Figure 45. Average Difference in Price between ENERGY STAR and Non-ENERGY STAR Clothes Washers (2004-2009)



Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers and MCA team calculations

Figure 46. Average Difference between ENERGY STAR and Non-ENERGY STAR Air Conditioners (2004-2009)



Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers and MCA team calculations

Manufacturers were asked how the incremental cost of ENERGY STAR products has changed in the last few years compared to non-ENERGY STAR. Four respondents said the cost has decreased somewhat, and one claimed that the price has stayed the same. The primary reason given for the cost decrease was an increase in consumer demand, which leads to fixed costs spread among more units. Respondents were

asked to rate how important the NYESP Program was in bringing about the decrease in incremental cost on a scale of 1 to 5, where 5 means “very important” and 1 means “not at all important.” One respondent was unable to answer due to lack of familiarity with the Program’s effect on pricing. The remaining four rated the influence an average of 4.25, with two rating it a 5. One manufacturer explained, “[the] Program made expensive fixtures cheaper and more affordable for us, which makes them cheaper for the consumer.”

Both NYSERDA partners and comparison area retailers were asked if the ENERGY STAR products in their stores were priced higher, lower, or about the same as similar, non-ENERGY STAR products. The results are shown in Figure 47. In general, ENERGY STAR clothes washers and refrigerators are priced higher than their non-ENERGY STAR counterparts. Dishwashers were split about 50/50 split between retailers who priced ENERGY STAR products higher and those who priced them about the same. Roughly, two-thirds of NYSERDA partners reported higher priced ENERGY STAR room ACs, while only approximately one-third of comparison area retailers reported the same prices. However, this is not a statistically significant difference. Lighting fixtures, though the survey sample was small for NYSERDA partners, show the same trend as the comparison area: a significant portion of retailers reported that ENERGY STAR lighting fixtures were cheaper than non-ENERGY STAR fixtures.

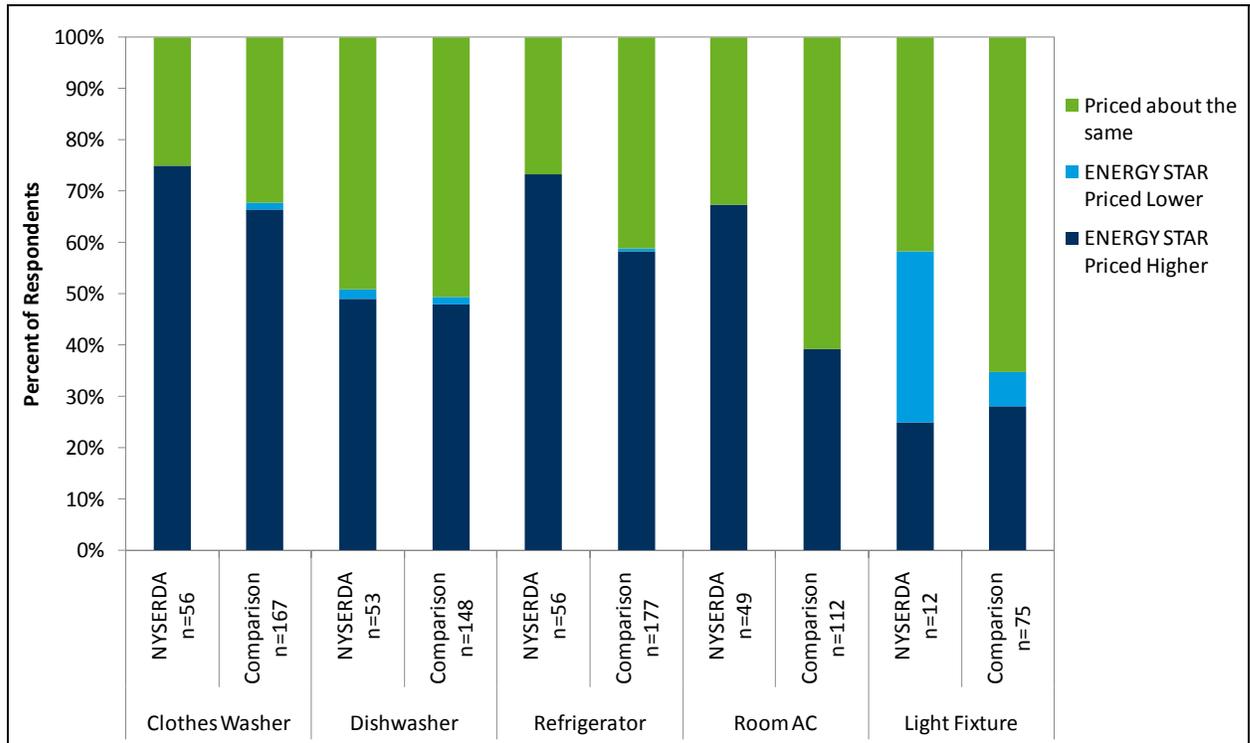
Retailers were asked how they determine the retail price for each of the products in the study that they sell. Results for clothes washers, dishwashers, refrigerators, and room air conditioners were aggregated into one appliance category. Light fixtures are most often sold at different retailers, and thus had a different trend. As seen in Table 39, most retailers mark up their products by a pre-determined percentage. NYSERDA partner stores are more likely than the comparison area stores to use manufacturer pricing recommendations. Conversely, comparison area stores are more likely to use corporate office guidance to determine retail prices. As discussed earlier, this is most likely because most NYSERDA partner retailers are smaller businesses, while many of the comparison area retailers are large corporate-owned chains such as Home Depot and Lowe’s. Specific responses to “Other” were that pricing is based on customer needs, and that pricing was based on whether the customer was residential or commercial.

Table 39. Retailer Self-reported Method of Determining Product Price

Method of Determining Price	Appliances		Lighting Fixtures	
	NYSERDA n=223	Comparison Area n=655	NYSERDA n=15	Comparison Area n=83
Marked up by a percentage	32%	19%	40%	6%
Manufacturer pricing	26%	8%	7%	0%
Priced to compete with other retailers	15%	2%	7%	6%
Corporate office decides	13%	31%	7%	19%
Keystone pricing (double the wholesale price)	1%	6%	13%	14%
Other	6%	3%	20%	7%
Don't know	0%	2%	0%	5%

Source: MCA 2010 Participating and Comparison Area Retailer Survey. (Multiple answers accepted for different appliances from same retailer.)

Figure 47. Percent of Retailers That Price ENERGY STAR Products Higher, Lower, or the Same as Non-ENERGY STAR Products



Source: MCA 2010 Participating and Comparison Area Retailer Survey

As a follow up, retailers were asked by what percentage the ENERGY STAR products are priced higher or lower than non-ENERGY STAR products in their stores. The average of those survey results are presented in Table 40. The column “Average ES Price Premium” reports the average percent price premium between ENERGY STAR and non-ENERGY STAR appliances for those who report ENERGY STAR products are priced higher than non-ENERGY STAR (see Figure 47). The column “Average ES Price Discount” reports

the average percent lower prices reported by retailers saying ENERGY STAR products are lower-priced, also in Figure 47. “NA” in the table indicates that no one reported a discount for that product.

Table 40. Retailer Self-reported Percent Difference in Price Between ENERGY STAR and Non-ENERGY STAR

Appliance	Region	Average ES Price Premium	Average ES Price Discount
Clothes washer	NYSERDA	23%	NA
	Comparison	23%	15%
Dishwasher	NYSERDA	24%	5%
	Comparison	19%	10%
Refrigerator	NYSERDA	19%	NA
	Comparison	19%	15%
Room AC	NYSERDA	18%	NA
	Comparison	19%	NA
Lighting fixture	NYSERDA	18%	15%
	Comparison	22%	38%
Appliances	NYSERDA	21%	5%
	Comparison	20%	13%

Source: Data from 2009 Lockheed Martin In-Store Survey of Participating Retailers

Corporate retailers were also asked about their pricing practices. Corporate respondents were asked if they use keystone pricing, where the retail price is set at twice the wholesale price. They were asked if they use this approach for all, some, or none of the products they sell through the Program. All respondents claimed to not use keystone pricing for any of the products they sell through the Program; one respondent explained keystone pricing is not competitive. They were then asked to rate how much influence the NYESP Program had on the pricing of the ENERGY STAR products in stores outside of New York on a scale of 0 to 10, where zero is “no influence” and 10 is “significant influence”. All respondents rated NYESP influence a 0 except one, who rated the influence a 1.

Manufacturers were asked how their participation in the buy-downs from NYSERDA affected their sales of products in New York. If sales had increased, they were asked to estimate what percentage of the increase was due to participating in the buy-downs. Two respondents did not know, and the remaining three manufacturers responded only for lighting fixtures, with all three claiming that sales had increased. One manufacturer claimed sales increased by 20 percent and another by 30 percent. The remaining respondent did not give an estimate.

Manufacturers were then asked if, since January 1, 2009, they had offered their own price discounts or rebates to retailers or consumers on the products they supply through the Program.

Only four manufacturers responded, with three saying yes and one no. One “yes” respondent sold clothes washers, dishwashers, and refrigerators, and did not specify for which of these it offers discounts. The remaining three answered “yes” for lighting fixtures. The respondent who claimed to not offer discounts was asked why not. The respondent replied, “We are a manufacturer; price point is already very low and competitive, [there is] no reason and we cannot afford to do so.” The remaining two respondents claimed to offer their own price discounts or rebates on lighting fixtures. Discounts ranged from \$2 to \$15, which is relatively small compared to the average ENERGY STAR price premium of \$59, and they are offered “all over the country” including Ohio, Texas, and Washington, D.C. One respondent claimed to offer more discounts on desk lamps than any other type of fixture, and the other respondent said discounts on all energy-saving products (CFLs, hydrogen bulbs, and LEDs) are offered.

Manufacturers were asked to rate how much influence the NYESP Program had on their pricing of the ENERGY STAR products they supply to retailers outside of New York on a scale of 0 to 10, where zero equals “no influence” and 10 equals “significant influence.” All respondents rated NYESP influence on products they supply a “0” except one, who rated the influence a “6” on lighting fixtures. This manufacturer explained that, “By participating in their program, we have a price point that is lower than the regular price. That influences buying decisions. NYSERDA has helped to reduce the price of ENERGY STAR products.” This manufacturer benefitted from NYSERDA’s buydown incentives.

4.5 Summary of Findings Related to Key Researchable Issues

As stated in Section 1.6, the MCA team formulated a number of key researchable issues associated with the NYESP Program as part of the Program’s logic modeling activities. Issues applicable to this MCA evaluation and relevant findings are summarized below.

- Are the advertising campaigns, outreach efforts, and promotional materials effective? How effective? How well do they work together to increase consumer awareness, knowledge, intent, and ability to act on those intentions? What is their impact on sales of ENERGY STAR and high-efficiency products?

Findings. The residential MCA survey indicated that 63 percent of respondents reported that they had seen or heard an advertisement or information about ENERGY STAR in the last year. An additional 13 percent had seen or heard an advertisement or information about energy efficiency in the last year, but did not mention ENERGY STAR specifically. While the increase from the 2007 Evaluation was not statistically significant, consumer awareness of the ENERGY STAR label and its meaning, as well as market share, has increased over time.

- Is the supply-side market development moving forward as anticipated? Is the Program contributing to increased availability and product ranges of ENERGY STAR and high-efficiency products? Is quality supply available to meet demand? Is the Program resulting in increased ENERGY STAR and high-efficiency product sales?

Findings. With the exception of lighting fixtures, ENERGY STAR models of surveyed appliances make up more than 50 percent of products stocked by retailers, and, according to Lockheed Martin's annual shelf stocking surveys, the amount has increased steadily over time. One notable change in customer perception, based on CEE survey results, is that a small but growing percentage of consumers do not necessarily equate ENERGY STAR with quality. The Program is resulting in increased ENERGY STAR and high-efficiency product sales.

- Are NYSERDA-sponsored buy-downs and other supplier incentive programs contributing to increased ENERGY STAR and high-efficiency product sales?

Findings. Of the five interviewed manufacturers, three participated in buy-downs and all reported increased sales as a result. Only two of the five gave estimates of the increase, reporting 20 and 30 percent gains. Partner retailers were asked in general about their estimated sales lift from the cooperative advertising incentives – the estimates ranged from 19 percent for dishwashers to 45 percent for lighting fixtures.

- Are promotional activities leading to an increase in demand for ENERGY STAR and high-efficiency products by end-use customers?

Findings. As discussed in the previous researchable issue and finding, both manufacturers and retailers attribute increased ENERGY STAR sales to NYSERDA's program. Since a significant portion of NYSERDA's efforts are promotional, the MCA team concludes that NYSERDA's ongoing promotional activities are leading to increased demand.

- Does ENERGY STAR product advertising raise awareness for all residential ENERGY STAR products and services?

Findings. The MCA evaluation assesses overall consumer awareness through the residential survey as well as the CEE survey. According to studies, consumer awareness and understanding of the ENERGY STAR label is increasing. Increases are significant in some areas such as logo recognition, but some insignificant increases in areas such as the association with saving energy could indicate a saturation of awareness in these fields. While three quarters of consumers report seeing or hearing ENERGY STAR and energy efficiency information in advertisements, there has not been a significant increase since the 2007 MCA study.

- Do these advertising efforts increase knowledge and induce greater purchases of ENERGY STAR products than otherwise would have occurred, both within and outside of the Program?

Findings. As measured by the ENERGY STAR market share of NYSERDA partners and non-partners in New York, non-partner ENERGY STAR shares are as high as or higher than NYSERDA partners'. This may indicate a spillover effect from the Program. Compared to non-Program areas outside of New York, ENERGY STAR purchases are greater in New York. Additionally, as reported by retailers and manufacturers, their program participation has resulted in greater ENERGY STAR sales.

- Are the ENERGY STAR and high-efficiency products meeting consumer expectations? Is there confirmation of their purchasing decisions? Does this support their continued and growing interest in the ENERGY STAR label and high-efficiency as product criteria?

Findings. The MCA research looked at whether consumers purchasing ENERGY STAR products had been influenced by prior experience with ENERGY STAR products. The 2010 survey results showed a marked increase in those reporting in the affirmative; 47 percent of the customers reported being influenced by their prior experience with ENERGY STAR products compared to 2007 and 2003, where only 34 and 36 percent, respectively, reported being influenced by previous purchases. Another assessment looked at customers' willingness to recommend ENERGY STAR products to a friend, and the majority of the respondents said they would definitely (54 percent) or probably (20 percent) recommend ENERGY STAR labeled products. This is an increase in recommendation likelihood from the 2007 evaluation; however, a significant 16 percent of 2010 respondents indicated they were likely to *not* recommend such products to a friend, compared to three percent of respondents who said the same in 2007. This indicates a minor but growing portion of customers who were not satisfied with their purchases.

- What level of market infrastructure support is needed to maintain a sustainable market for ENERGY STAR and high-efficiency products?

Findings. While ENERGY STAR dishwasher stocking practices reaching 79 percent and market shares over 90 percent indicate saturation, it appears there is still room for continued support of other ENERGY STAR products in the Program. Other ENERGY STAR products (clothes washers, refrigerators, and room air conditioners) are still showing year-over-year increases in the amount of display space dedicated to ENERGY STAR, with lighting fixtures still the lowest at about 16 percent. An encouraging sign is the increase in ENERGY STAR stocking in the comparison area retailers, with the reason noted as "*responding to increased consumer demand.*" Whether caused by Program spillover or natural market occurrences, this indicates the beginning of a shift to consumer-driven demand for ENERGY STAR products. While some products appear to already have a sustainable market, others do not. The MCA team concludes that the current level of support is still necessary to maintain a sustainable market for most products. Since lighting fixtures lag behind the other products, some additional support could be helpful.

- Are retailers and manufacturers recognizing profitability of promoting ENERGY STAR and high-efficiency products without NYSERDA supply and midmarket assistance?

Findings. A significant share of NYSERDA partner retailers do recognize the profitability of promoting ENERGY STAR, as the majority said they would continue to stock (83 percent) and advertise (58 percent) ENERGY STAR products even without NYSERDA's assistance. The majority agreed, however, that without NYSERDA's Program, ENERGY STAR sales would likely decrease.

- Are end-users recognizing savings from using ENERGY STAR and high-efficiency products and would demand be strong without NYSERDA supply and midmarket assistance?

Findings. Our research indicates that end-users do recognize the energy savings associated with ENERGY STAR certification as evidenced by their unaided responses to the questions of "What does the ENERGY STAR label mean?" listing energy savings and operation cost savings as top answers. Based on retailer responses, the MCA team believes that demand for ENERGY STAR products would slow without NYSERDA assistance.

- How much continued consumer advertising is needed to maintain a sustainable market for ENERGY STAR and high-efficiency products?

Findings. Consumer advertising appears to be reaching the intended audience, as 63 percent of respondents reported that they had seen or heard an advertisement or information about the ENERGY STAR label in the last year. TV was the most commonly cited medium through which people became aware of the ENERGY STAR label.

Although 98 percent of retailers reportedly train salespeople about energy efficiency, the majority of consumers do not recollect active promotion of ENERGY STAR products by salespeople. In the best case, 57 percent of refrigerator purchasers recall a salesperson bringing up energy efficiency, and at worst case, 75 percent of room air conditioning customers reported that ENERGY STAR was not discussed at all.

The MCA team concludes that NYSERDA should continue to pursue both broad advertising and in-store promotions for ENERGY STAR.

5. Attribution of Energy Savings and Peak Demand Reduction

Attribution evaluation attempts to determine the impacts that result from Program activities. To derive this net impact estimate, the MCA team examined savings from direct purchases of ENERGY STAR products.

Savings from product sales and installation were derived by first estimating the market share for ENERGY STAR products through estimates of total market size and sales of ENERGY STAR products, as described above in Section 3. Next, portions of the market share were allocated to extraneous, non-NYE\$P Program effects, including the national ENERGY STAR Program, naturally occurring adoption (including the impact of higher energy prices and interest generated by neighboring states), and the impacts of other NYSERDA residential programs. As discussed in ENERGY STAR Market Share Section 3.3, the net impacts of the 2010 ARRA Rebate Program on 2009 sales were negligible. The remaining market share, after these effects, was considered attributable to the NYE\$P Program.

The MCA team combined the results from this study with those from the previous MCA analyses, the first including purchases through 2005 (discussed in the 2007 Evaluation) and the update including purchases through 2007 (discussed in the 2009 Update), to yield cumulative annual estimates of savings since Program inception.

5.1 Attribution of Program Savings – Method Used

Derivation and Definition of Market Effects

Estimating the impacts due to market transformation programs is an inherently difficult task, particularly with programs, such as the NYE\$P Program, that do not offer direct incentives to consumers. Evaluations across the country have taken myriad approaches, including the use of regression models, interstate comparisons, and the simple adoption of EPA national partner sales data as a full proxy for market share and Program impacts.⁴³

Prior to 2007, the MCA NYE\$P attribution analyses followed an approach similar to the MCA evaluations for the other NYSERDA programs, combining qualitative and quantitative information from market actors and deriving a net-to-gross ratio. Inputs into the net-to-gross ratio included estimates of freeridership (the number of customers that would have purchased ENERGY STAR products in absence of the Program) and spillover (market effects that influence non-Program area households to purchase ENERGY STAR products). These values were then applied to the gross Program estimates of savings, which were generated

⁴³ Dimetrosky, Scott, David Mattingly, and Susan Pascoe, “A Comparison of the Practices Used to Track ENERGY STAR Market Share,” ACEEE 2006 Summer Study.

based on the number of ENERGY STAR qualifying units sold by retailer partners and consumer-reported purchases.

The 2010 MCA evaluation, however, adopts an alternative approach to estimating Program impacts. This alternative methodology, presented in the next section, is considered more appropriate for a number of reasons, including:

The Program has matured and is likely impacting the broad market, outside of the NYSERDA retailer partners. The NYE\$P Program has been in existence for over ten years and is likely impacting the broader market for ENERGY STAR products, beyond the narrow list of retailer partners. As presented in Table 19, NYSERDA retailer partners only represented 47 percent to 61 percent (NYSERDA Partner share plus NYSERDA and National partner share) of all units sold during the study period for the major target appliances. However, given the aggressive use of cooperative advertising and the resulting high exposure to and awareness of the ENERGY STAR label, it is reasonable to expect that sales of ENERGY STAR products are higher in all retailer channels (including national partners and non-partners) in New York as a result of the NYE\$P Program.

Attribution varies greatly by product type. Due to limitations in survey length, the MCA evaluations typically estimate a single net-to-gross ratio for all measures in a program. However, there have been dramatic changes throughout the United States in market share for some ENERGY STAR products in the last few years, indicating that attribution will vary greatly by product type. For example, ENERGY STAR dishwashers now make up the majority of all available dishwasher units, so Program attribution would likely be more limited, but direct incentive programs (such as those previously offered through the Keep Cool Program for room air conditioners) would be expected to have more dramatic impacts on market share.

The Program is “invisible” to the end-use customer. Unlike other programs, end-use customers do not consider themselves participants in the Program because they do not receive an incentive. In fact, most end-use customers would probably not even be aware that the Program exists. So asking customers about what they would have done in absence of the Program is not feasible.

Estimating Market Effects

The current MCA evaluation implemented a four-step approach to estimate energy and demand savings attributable to the NYE\$P Program. Each of these steps is described in more detail in the following text.

Estimating ENERGY STAR market share and number of ENERGY STAR units sold. As described in the Market Share section of this report, ENERGY STAR market share was estimated by combining sales data provided by ENERGY STAR national partners and NYSERDA partners with data collected by the MCA end-use customer survey. The total market size was estimated based on AHAM shipments for refrigerators, clothes washers, dishwashers, and room air conditioners. For the remaining appliances and lighting fixtures, the total market size was extrapolated based on the product market share for NYSERDA partners

and the total number of units sold per measure from NYSERDA partner sales data.⁴⁴ The estimated market share for each product was then multiplied by the number of estimated products sold, to derive the total number of ENERGY STAR products sold in the **New York Energy \$martSM** region.

Deducting units that were credited to the New York ENERGY STAR Labeled Homes or the Home Performance with ENERGY STAR programs. In an effort to avoid the double-counting of ENERGY STAR product sales attributable to NYSERDA programs, any appliances that received incentives through these other residential programs were deducted from the unit count that would be credited to the NYE\$P Program.⁴⁵

Estimating the baseline of ENERGY STAR units that would have been sold due to the influence of the national ENERGY STAR Program natural market adoption, and other exogenous factors. For this step, the MCA team relied on sales data provided by the national ENERGY STAR partners to D&R International. The MCA team used sales and ENERGY STAR market share data from Ohio, Washington D.C., and Houston weighted in proportion to the New York population: Washington D.C. and Houston were averaged and then applied proportionally to NYSERDA's downstate population; Ohio was weighted proportionally for the upstate population. The weighted average (based on number of units sold per state) national partner market share was then calculated for each of the four appliances where data were available: refrigerators, clothes washers, dishwashers, and room air conditioners. ENERGY STAR market share for non-partners was then assumed to be the same as the ratio of national partners to non-partners for New York. Products attributed to other ENERGY STAR programs, such as the Home Performance Program, were then subtracted from the estimated sales numbers.

The weighted average ENERGY STAR market share for national partners and non-partners was assumed to be the baseline market share of ENERGY STAR products that would have occurred in New York in the absence of the NYE\$P Program.

For lighting measures, adequate comparison data were unavailable. Given the lack of reliable comparison data, the MCA team only credited the NYE\$P Program with those ENERGY STAR fixtures reported as sold by retailer partner stores times the appropriate Net-to-Gross value as deemed by the New York Technical Manual and a recent lighting study⁴⁶.

⁴⁴ NYSERDA market share is estimated based on the results of the consumer surveys.

⁴⁵ While this approach does not attempt to assess the reciprocal nature of multiple market transformation programs (i.e., the NYE\$P program may have led to participation in these other residential programs), these other programs offer an incentive-based approach with direct counts of units installed.

⁴⁶ NMR Group. 2010. *Results of the Multistate CFL Modeling Effort: Final*. Submitted to NYSERDA. March 2010.

Multiplying the attributable units sold by the expected kWh and kW savings per unit. The total ENERGY STAR units sold in the **New York Energy \$martSM** region, after removing those that were credited to other NYSERDA residential programs, influenced by efficiency programs from other sponsors, or considered to be the baseline due to naturally occurring adoption, are the remaining units that can be credited to the influence of the NYESP Program. These units are then multiplied by the deemed savings⁴⁷ (kWh and kW) per measure to estimate total Program savings.

Findings

Table 41 presents the number of ENERGY STAR units, by appliance type, credited to the NYESP Program for 2009. Table 42 presents the results for 2008. The 2008 results apply the same methodology as the 2009 attribution, but use actual 2008 sales data. For example, the baseline calculation uses the same comparison areas and population weights as in 2009, but uses 2008 shipments as the unit sales basis. As discussed above, for the appliances, adjustments are made for units included in the New York ENERGY STAR Labeled Homes and Home Performance with ENERGY STAR programs as well as an assumed baseline of units that would have sold in absence of the NYESP Program. The last column presents the ratio of total ENERGY STAR units credited to the NYESP Program divided by the number of ENERGY STAR units sold by NYSERDA retailer partners. The lowest ratio, for dishwashers (0.34), reflects the high market penetration of ENERGY STAR dishwashers throughout the United States. The highest ratio is for room ACs (1.12). Lighting measures, as discussed earlier, are all fixed to ratios of 1.0 since NYSERDA is only credited with the sales of the NYESP retailer partners.

Table 43 presents the number of ENERGY STAR units credited to the NYESP Program for 2007 lighting. The 2007 results use the number of reported ENERGY STAR units sold by partner stores. The 2007 NTG ratios were calculated as the average of the values used in the NYESP MCA Evaluations from the straddling years, 2006 and 2008. The quantity of net units attributed to the program was multiplied by the per-unit energy savings to calculate net savings. The net units equal the reported units multiplied by the Effective 2007 NTG ratio.

Table 44, Table 45 and Table 46 present the total energy and demand savings estimates for 2007 (lighting only), 2008, and 2009. Table 47 shows cumulative results to date.

⁴⁷ Deemed savings estimates are provided by NYSERDA.

Table 41. 2009 ENERGY STAR Sales Attributable to the NYESP Program

	A	B	C	D	E	F	G	H
	Total No. Units Sold in NYSERDA Territory	ES Market Share	No. ES Units	Number Reported by Homes Programs	Baseline Units	Net Units Credited to NYESP	Comparison: Reported ES Units Sold by Partners	Ratio of Net Units to Reported Partner ES Sales
Appliances								
Refrigerator	403,226	47%	188,651	910	129,429	58,311	91,375	0.64
Clothes Washer	304,394	56%	170,971	324	150,559	20,088	72,736	0.28
Dishwasher	211,765	74%	156,086	2,161	145,736	8,189	74,580	0.11
Room AC	526,242	49%	260,205	-	189,119	71,085	107,715	0.66
Air cleaner	1,530	63%	962	-	699	263	638	0.41
Dehumidifier	333,894	31%	103,186	114	74,997	28,075	68,457	0.41
Freezer	70,726	35%	25,041	5	17,180	7,856	15,618	0.50
Through-the-Wall AC	39,074	66%	25,746	-	18,713	7,034	15,461	0.45
Ceiling Fan	28,698	40%	11,600	-	8,431	3,169	7,696	0.41
Total Appliances	1,919,548	49%	942,448	3,515	734,863	204,070	454,276	0.45
Lighting								
Fixture	2,796,853	21%	574,507	4,619	NA	48,869	54,299	0.90
Ceiling Fan with Light	21,866	28%	6,034	-	NA	2,791	3,101	0.90
Total Lighting	2,818,720	21%	580,540	4,619	NA	51,660	57,400	0.90
Total Appliances and Lighting	4,738,267	32%	1,522,989	8,134	734,863	255,730	511,676	0.50

Table 42. 2008 ENERGY STAR Sales Attributable to the NYESP Program

	A	B	C	D	E	F	G	H
	Total No. Units Sold in NYSERDA Territory	ES Market Share	No. ES Units	Number Reported by Homes Programs	Baseline Units	Net Units Credited to NYESP	Comparison: Reported ES Units Sold by Partners	Ratio of Net Units to Reported Partner ES Sales
Appliances								
Refrigerator	423,851	41%	173,312	5,008	127,566	40,738	102,355	0.40
Clothes Washer	301,225	47%	142,797	1,907	72,555	68,335	69,844	0.98
Dishwasher	216,454	79%	171,502	15,972	149,200	6,331	81,130	0.08
Room AC	1,061,786	48%	510,429	-	420,405	90,025	169,232	0.53
Air cleaner	7,934	85%	6,737	-	5,549	1,188	3,731	0.32
Dehumidifier	20,270	73%	14,816	116	12,203	2,497	8,205	0.30
Freezer	42,690	13%	5,662	39	4,167	1,456	4,307	0.34
Through-the-Wall AC	79,293	72%	56,738	-	46,731	10,007	27,411	0.37
Ceiling Fan	22,162	38%	8,503	-	7,004	1,500	4,709	0.32
Total Appliances	2,175,665	50%	1,090,498	23,042	845,380	222,076	470,924	0.47
Lighting								
Fixture	2,488,366	20%	507,526	22,892	NA	48,417	53,797	0.90
Ceiling Fan with Light	10,606	41%	4,310	-	NA	1,752	1,947	0.90
CFL	9,657,012	88%	8,498,170	1,605,056	NA	1,175,245	734,528	1.60
Total Lighting	12,155,983	74%	9,010,006	1,627,948	NA	1,225,414	790,272	1.55
Total Appliances and Lighting	14,331,648	70%	10,100,504	1,650,990	845,380	1,447,490	1,261,196	1.15

Sources for Table 41 and Table 42 labeled by column heading:

- A Based on AHAM shipments or extrapolated based on partner sales data.
- B Based on sales data of national and NYSERDA partners and end-use customer survey.
- C Columns (A) * (B).
- D Quarterly reports for the NYSERDA Homes Programs.
- E Based on national partner sales data from a comparison group of states (that have not run ENERGY STAR programs), selected based on income and education levels similar to those of New York.
- F For appliances, columns (C) – (D+E). For lighting, (G) * (H).
- G NYSERDA partner sales data.
- H For appliances, columns (F) / (G). For fixtures, NTG value from New York Tech Manual. For CFLs, NTG value from NMR Group. 2010. *Results of the Multistate CFL Modeling Effort: Final*. Submitted to NYSERDA. March 2010.

Table 43. 2007 ENERGY STAR Lighting Sales Attributable to the NYE\$P Program

	A	B	C	D	E
	Reported ES Units Sold by Partners	2006 Net-to-Gross Ratio	2008 Net-to-Gross Ratio	Effective 2007 Net-to-Gross Ratio	Net Units Credited to NYE\$P
Lighting					
Fixture	32,066	1.00	0.90	0.95	30,463
Ceiling Fan with Light	2,114	1.00	0.90	0.95	2,008
CFL	416,656	1.00	1.60	1.30	541,653
Total Lighting	450,836			1.27	574,124

Table 43 Sources:

- A Partner sales data.
- B Summit Blue Consulting. *New York Energy Smart Products Program Market Characterization, Market Assessment and Causality Evaluation*. July 2007
- C NYSERDA. *New York System Benefits Charge Programs Evaluation and Status Report, Quarter Ending June 30, 2009, Final Report*. August 2009.
- D Average of (B) and (C).
- E (A) * (D).

Table 44. 2009 Net Sales and Measure Savings Estimates for NYE\$P Program

Sales and Savings Figures	(A)	(B)	(C)	(D)	(A*D)	(B*D)	(C*D)
	kWh per Unit	kW per Unit	MMBtu per Unit	2009 Unit Sales	kWh Total Savings	Coinc. Peak kW Savings	MMBtu Total Savings
Appliances							
Refrigerator	79.0	0.011	-	58,311	4,606,589	631	-
Clothes Washer	126.7	0.009	0.76	20,088	2,545,396	181	15,267
Dishwasher	78.0	0.018	5.53	8,189	638,748	147	45,285
Room AC	39.6	0.067	-	71,085	2,814,972	4,748	-
Air cleaner	163.7	0.025	-	263	42,994	7	-
Dehumidifier	184.1	0.036	-	28,075	5,169,160	1,011	-
Freezer	38.6	0.005	-	7,856	303,233	42	-
Through-the-wall AC	50.2	0.083	-	7,034	353,088	584	-
Ceiling Fan	6.8	0.005	-	3,169	21,550	16	-
Total Appliances				204,070	16,495,731	7,367	60,553
Lighting							
Fixture	220.5	0.017	-	48,869	10,774,371	806	-
Ceiling Fan with Light	73.5	0.013	-	2,791	205,131	36	-
Total Lighting				51,660	10,979,502	843	-
Total Appliances and Lighting				255,730	27,475,233	8,209	60,553

Table 44 Notes and Sources:

- A Figures from NYSERDA Deemed Savings Database Revision 13.
- B Coincidence/on peak figures from NYSERDA Deemed Savings Database Revision 13.
- C Gas savings figures from NYSERDA Deemed Savings Database Revision 13.
- D Measure installations attributable to the NYESP Program.
- A*D Note that total energy and demand savings are based on figures that may include additional significant digits that are not presented in this table.
- A, B Lighting fixtures include both stationary and permanent fixture savings.

Since this report is estimating savings for program years 2007, 2008 and 2009, the Team relied on NYSERDA’s Deemed Savings Database (DSD) Revision 13 for per unit energy and demand savings. For CFL bulbs however, the New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs (aka Technical Manual) was used. Although earlier versions of the Technical Manual produced in late 2008 and throughout 2009 contain algorithms for some of the measures covered by the NYESP, not all covered measures are included in the Technical Manual, nor are all the inputs necessary to calculate savings per the Technical Manual available for covered measures based on the Team’s analysis. For CFL bulbs, since this measure is now supported by NYSERDA under the Energy Efficiency Portfolio Standard program and NYSERDA has developed the necessary inputs, the Team used per-unit energy and demand savings values consistent with the Technical Manual, rather than the DSD. Table 45 includes these CFL figures. Energy and demand savings for program year 2007 estimates savings for only lighting and these figures are included in Table 46.

Table 45. 2008 Net Sales and Measure Savings Estimates for NYE\$P Program

Sales and Savings Figures	(A)	(B)	(C)	(D)	(A*D)	(B*D)	(C*D)
	kWh per Unit	kW per Unit	MMBtu per Unit	2008 Unit Sales	kWh Total Savings	Coinc. Peak kW Savings	MMBtu Total Savings
Appliances							
Refrigerator	79.0	0.011	-	40,738	3,218,290	441	-
Clothes Washer	126.7	0.009	0.76	68,335	8,658,731	615	51,935
Dishwasher	78.0	0.018	5.53	6,331	493,793	114	35,009
Room AC	39.6	0.067	-	90,025	3,564,975	6,014	-
Air cleaner	163.7	0.025	-	1,188	194,460	30	-
Dehumidifier	184.1	0.036	-	2,497	459,760	90	-
Freezers	38.6	0.005	-	1,456	56,193	8	-
Through-the-wall AC	50.2	0.083	-	10,007	502,349	831	-
Ceiling Fan	6.8	0.005	-	1,500	10,198	7	-
Total Appliances				222,076	17,158,748	8,149	86,943
Lighting							
Fixture	220.5	0.017	-	48,417	10,674,761	799	-
Ceiling Fan with Light	73.5	0.013	-	1,752	128,794	23	-
CFL	53.7	0.004	-	1,175,245	63,143,553	4,325	-
Total Lighting				1,225,414	73,947,107	5,147	-
Total Appliances and Lighting				1,447,490	91,105,855	13,296	86,943

Table 45 Notes and Sources:

- A Figures from NYSERDA Deemed Savings Database Revision 13. CFL figures from NY Technical Manual assuming 46 delta watts and 3.2 hours of use per day.
- B Coincidence/on peak figures from NYSERDA Deemed Savings Database Revision 13.
- C Gas savings figures from NYSERDA Deemed Savings Database Revision 13.
- D Measure installations attributable to the NYE\$P Program.
- A*D Note that total energy and demand savings are based on figures that may include additional significant digits that are not presented in this table.
- A, B Lighting fixtures include both stationary and permanent fixture savings.

Table 46. Lighting 2007 Net Sales and Measure Savings Estimates for NYE\$P Program

	(A)	(B)	(C)	(D)	(A*D)	(B*D)	(C*D)
Sales and Savings Figures	kWh per Unit	kW per Unit	MMBtu per Unit	2007 Unit Sales	kWh Total Savings	Coinc. Peak kW Savings	MMBtu Total Savings
Lighting							
Fixture	220.5	0.017	-	30,463	6,716,236	503	-
Ceiling Fan with Light	73.5	0.013	-	2,008	147,610	26	-
CFL	53.7	0.004	-	541,653	29,101,922	1,993	-
Total Lighting				574,124	35,965,768	2,522	-

Table 46 Notes and Sources:

- A Figures from NYSERDA Deemed Savings Database Revision 13. CFL figures from NY Technical Manual assuming 46 delta watts and 3.2 hours of use per day.
- B Coincidence/on peak figures from NYSERDA Deemed Savings Database Revision 13.
- C Not applicable for lighting.
- D Measure installations attributable to the NYE\$P Program.

Table 47. Installed Savings from NYE\$P Program Inception through Year End 2009

Years	Electricity Savings (MWh)	Peak Demand Savings (MW)	Gas Savings (MMBtu)
Inception through 2007 ^a	615,469	121.9	280,298
2007 Lighting	35,966	2.5	-
2008	91,106	13.3	86,943
2009 ^b	27,475	8.2	60,553
Cumulative	770,016	145.9	427,794

^a New York System Benefits Charge Programs Evaluation and Status Report, Quarter Ending June 30, 2009, Final Report August 2009. Does not include 2007 lighting measures.

^b Starting in 2009, CFLs are not included.

6. Findings and Recommendations

At the end of 2009, the NYESP Program had 1,103 participating partners, representing 344 active retail store fronts and 759 active lighting storefront partners. The majority of the storefronts (79 percent) were independent retailers, while 21 percent were part of a chain. The Program offered 519 full retailer training sessions, with 3,185 participants. In 2009, the NYESP Program paid 2,923 incentives worth \$3,698,190 to participating retailers and manufacturers. Cumulatively, since its inception in 1999 to end of 2009, the Program paid 21,660 incentive worth over \$15.8 million.

6.1 Market Characterization - Findings

Market characterization provides background information useful in defining programs, delivery concepts, target markets, and the potential for a program (see Section 3). The following are selected findings from the market characterization effort:

- The results of a comprehensive distribution channel analysis highlight the increasing importance – and dominance – of five retailers. More than half of the combined telephone survey respondent purchases for every product category came from the top five retailers; for clothes washers, 69 percent of purchases came from the top five retailers.
- Individual households (owners and renters) selected and purchased the vast majority (more than 83 percent, down from 90 percent in 2007) of all products studied. Landlords were the second most active purchasers but were far behind the owners or tenants, purchasing 23 percent of the refrigerators, five percent of the clothes washers, 14 percent of the dishwashers, seven percent of the room AC units, and five percent of the light fixtures. Contractors made up two percent of the purchasers, while builders, others, and unknowns make up the last three percent.
- Survey respondents said they usually collected product information in the stores (50 percent for all products), but the Internet was also an important source of information (26 percent for all products). Nearly all purchases – 91 percent of refrigerators, 90 percent of clothes washers, 80 percent of dishwashers, 94 percent of room AC units, and 87 percent of lighting fixtures – were made in person at the retail store. Internet purchases were five percent of all purchases, while telephone purchases were two percent. Catalog, others, and unknowns make up the final four percent. This is very similar to the percentages seen in the 2007 Evaluation.
- Market share was estimated for all products through the Residential End-Use Customer Telephone Survey, sales data from the national ENERGY STAR partners, and NYSERDA ENERGY STAR partners. Market shares for all of the appliances show a general upward trend from 2001 with a slight dip in 2007 followed by a rebound through 2009. For 2009 the highest NYSERDA area market share was obtained by dishwashers (75 percent), followed by clothes washers (56 percent), room air conditioners (49 percent), and refrigerators (47 percent).

- Despite concern that the 2010 ARRA Appliance Rebate Program would cause customers to delay purchases from 2009 to 2010 in order to qualify for a rebate, the net change to sales in fourth quarter 2009 was zero percent, or no impact overall, according to retail respondents.

6.2 Market Assessment - Findings

Market assessment tracks changes in markets over time with a specific focus on market indicators that might be influenced by the NYESP Program (see Section 4). The following are selected findings from the market assessment effort:

- Promotional activities appear to be effective as 63 percent of survey respondents reported that they had seen or heard an advertisement or information about ENERGY STAR in the last year.
- As reported through surveys, appliance sales floors in both NYSERDA partner retailers and in non-Program comparison areas are made up of over 50 percent ENERGY STAR models (as high as 79 percent for dishwashers); however, ENERGY STAR stocking of lighting fixtures is lower. The ENERGY STAR stocking trend among NYSERDA retailers is increasing steadily over time, with 2010 ENERGY STAR appliance stocking levels of ENERGY STAR higher than in the previous survey.
- One notable change in customer perception since the previous CEE survey is that consumers do not necessarily equate ENERGY STAR with quality.
- Manufacturers report that NYSERDA-sponsored buy-downs have increased sales by as much as 20 to 30 percent. Partner retailers indicated NYSERDA-sponsored cooperative advertising results in average sales lift ranging from 19 percent for dishwashers to 45 percent for lighting fixtures.
- Market share analysis indicates that the ENERGY STAR market share of most appliances has increased since 2007 and significantly increased since 2001. Retailer surveys confirm the trend, indicating that consumer demand for ENERGY STAR products is increasing—both inside and outside NYSERDA territory. Market shares in NYSERDA territory continue to be higher than shares in non-Program areas.
- According to both the 2010 residential survey and the CEE survey, consumer awareness of and understanding of the ENERGY STAR label is very high and increasing only slightly for NYSERDA customers.
- Survey results in 2010 showed a marked increase (47 percent versus 34 and 36 percent in 2007 and 2003) in customers who were influenced to purchase ENERGY STAR by their prior purchases. Another survey question looked at willingness to recommend ENERGY STAR products to a friend, and 74 percent of the respondents said they would definitely (54 percent) or probably (20 percent) recommend ENERGY STAR labeled products. This is a significant increase

in recommendation likelihood from the 2007 Evaluation, yet 16 percent in 2010 versus three percent in 2007 indicated they were likely to *not* recommend ENERGY STAR to a friend, indicating an increase in unsatisfied customers.

- A significant share of NYSERDA partner retailers recognize the profitability of promoting ENERGY STAR, as the majority said they would continue to stock (83 percent) and advertise (58 percent) ENERGY STAR products even without NYSERDA’s assistance. The majority agreed, however, that without NYSERDA’s Program, ENERGY STAR sales would likely decrease.
- End-users recognize that the ENERGY STAR means energy savings, as evidenced by their unaided responses to this question on a survey.
- Although 98 percent of retailers reportedly train salespeople about energy efficiency, the majority of consumers do not recollect active promotion of ENERGY STAR products by salespeople. In the best case, 57 percent of refrigerator purchasers recall a salesperson bringing up energy efficiency, and at worst case 75 percent of room air conditioning customers reported that ENERGY STAR was not discussed at all.

6.3 Estimated Net Savings

Savings from product sales and installations were derived by first estimating the market share for ENERGY STAR products through estimates of total market size and sales of ENERGY STAR products. Next, portions of the market share were allocated to exogenous, non-NYE\$P Program effects, including the impact of the national Environmental Protection Agency/Department of Energy ENERGY STAR Program, naturally occurring adoption (including the impact of higher energy prices and interest generated by programs in neighboring states), and the impacts of other NYSERDA residential programs. The remaining market share, after netting out these other effects, was considered attributable to the NYE\$P Program.

The results from this study are combined with those from the previous MCA analysis, which focused on Program impacts prior to 2008, to yield combined estimates of savings since Program inception. Estimated net savings are summarized in Table 48.

Table 48. Installed Savings from NYE\$P Program Inception through Year End 2009

Years	Electricity Savings (MWh)	Peak Demand Savings (MW)	Gas Savings (MMBtu)
Inception through 2007	615,469	121.9	280,298
2007 Lighting	35,966	2.5	-
2008	91,106	13.3	86,943
2009	27,475	8.2	60,553
Cumulative	770,016	145.9	427,794

6.4 Recommendations

- Survey results indicated that nearly all purchases were conducted in-person at the retail store. This highlights the influence that retailer staff can have when helping customers decide what type of product to purchase. Although 98 percent of retailers reportedly train salespeople about energy efficiency, the majority of consumers do not recollect active promotion of ENERGY STAR products by salespeople. The MCA team recommends NYSERDA emphasize to retail partners the importance of salespeople recommending ENERGY STAR when discussing appliance options with consumers.
- NYESP Program participation is high throughout the territory for all appliances in the study. More than half of appliance products sold in the territory are sold by partner stores. Lighting fixture sellers, however, are not participating nearly as much. Only about nine percent of fixtures sold in the NYSERDA territory are sold at NYESP Program partner stores, while national partners in the NYSERDA territory make up 73 percent. The MCA team recommends NYSERDA promote the benefits of the Program to a wider array and volume of lighting sellers in New York.
- Survey data from the current MCA research as well as the national CEE study indicate that consumer awareness and understanding of the ENERGY STAR label is continuing to increase. The data also show higher prices for ENERGY STAR products versus non-ENERGY STAR products, however, which may be an adoption barrier to many potential customers. While prices could take a while to come down as demand continues to increase, the MCA team recommends that the Program target some of its marketing efforts on conveying the message that ENERGY STAR rated products save money in the long run.
- Another issue that the MCA team recommends addressing is the small but increasing minority of customers who definitely would not purchase ENERGY STAR again and definitely would not recommend ENERGY STAR. A follow up study to understand the concerns of this group could lead to more effective target marketing that could dispel some of the perceptions that act as barriers to the adoption of ENERGY STAR products.
- Survey data show that TV commercials are the most effective means of advertising to create awareness of ENERGY STAR, which could be problematic for NYSERDA partners, which tend to consist of small, non-chain stores with limited budgets. The MCA team recommends NYSERDA consider how it might provide television advertising on behalf of these smaller retailers.

Overall, the NYESP Program has been highly effective in raising awareness and the adoption of ENERGY STAR products in New York. A majority of consumers are aware of the ENERGY STAR label and participating stores believe that the Program has been a contributor to this awareness. The MCA team believes that the potential for growth in the ENERGY STAR market is real and that the Program can influence this growth in New York.

Appendix A. Home Electronics Saturation Analysis

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Executive Summary

Energy use from home electronics continues to increase as the number and type of energy using devices increases. In order to better understand the saturation of home electronics equipment; in early 2010 APPRISE Incorporated technicians performed a follow up to their 2009 home electronics audit within the NYSERDA territory. Technicians recorded information about home television, audio, and computer devices, such as the type of equipment, hours of use, and auxiliary components.

APPRISE conducted a total of 303 audits in 2009 and 296 audits in 2010. Homes were initially recruited on the telephone as part of the NYSERDA CFL Expansion Program Random Digit Dial Telephone Surveys from 2009 and 2010. The data were weighted by customer demographics of geography, age of household members, householders' education, and household size to match the population distribution based on the *American Community Survey*.¹ Data were collected on TVs, audio devices, and computers present in the home. The methodology did not change between 2009 and 2010. Additionally, a telephone survey of 408 NYSERDA area customers was conducted in 2010 to understand buying habits and the role of energy efficiency in their purchase decisions.

This report presents the site data analysis, including comparisons between downstate New York and upstate New York when they differ. Downstate refers to New York City (including the five boroughs) plus Westchester County. Upstate refers to the rest of the upstate NYSERDA region, which includes the remainder of New York except for Nassau and Suffolk counties. In instances where the two New York populations are similar, data for all of the NYSERDA territory are shown. Results and analysis of the telephone survey are also reported. All data were analyzed by The Cadmus Group Inc., which is a part of the Market Characterization and Assessment (MCA) Team with Navigant Consulting, Inc.

Results highlighted from the site visits performed in both 2009 and 2010 include significant changes between findings for each year. One key behavior change noted included an increase in the percent of households who manually use power strips to turn off their power strips and equipment when not in use. For all three electronics types (TV, audio, and computer equipment), homeowners in 2010 were more likely to shut off their equipment directly or through a power strip when they went on vacation, at the end of each day, or when they finished using it than they were in 2009. Another positive sign for energy efficiency was noted in that while the overall saturation of TVs and computers remained stable, the ENERGY STAR[®] share of both these devices increased. Also, some homes appear to have disposed of rarely used third, fourth, or fifth TVs, as the saturation of homes with more than two TVs dropped between 2009 and 2010. It is also apparent that people are replacing old Cathode Ray Tube TVs (CRTs) with the purchase of new flat panel TVs, which increased from 0.4 per home to 0.6 per home between 2009 and 2010.

¹ <http://www.census.gov/acs/www/>

During the telephone survey, the majority of respondents reported that energy efficiency was very important when deciding which electronic device to purchase. When asked the same question about purchasing a particular item such as a TV or audio device, fewer respondents indicated that energy efficiency was important or very important to them. This may reflect that in general people are in favor of energy efficiency, but that when it comes to trade-offs in specific purchases it may be a lower priority. These findings may also indicate a lack of awareness that energy use among electronics varies significantly.

The results indicate that while energy usage behavior is changing slightly, motivation is not high to change behavior or to purchase energy saving electronics. Therefore, MCA Team recommendations include further promotion of ENERGY STAR products and smart power strips that focus on savings to consumers. NYSERDA may even consider offering a promotion in which people receive a smart power strip for free when they purchase an ENERGY STAR device.

Telephone survey results also indicate that the majority of the population is buying electronic devices every year. This presents a unique touch-point opportunity for NYSERDA to educate customers about the benefits of ENERGY STAR appliances at their point of purchase. General advertising in cooperation with retailers, point-of-purchase signs, and trained sales representatives are all possible mechanisms for reaching these customers when they are shopping for new electronic devices. It also presents an opportunity to promote electronics recycling, as many customers purchasing electronics are replacing outdated devices. The MCA Team recommends NYSERDA work with recycling organizations to provide the means for recycling and to promote the message that people should properly dispose of their unwanted electronic devices.

Introduction

Energy use from home electronics continues to increase as the number and size of devices increases, as well as the type of energy those devices use. In order to better understand the home electronics market, NYSERDA requested two research endeavors to gather customer information about electronics saturations, use, and purchasing habits:

1. Site visits of 296 NYSERDA territory households, and
2. A telephone survey of 408 NYSERDA territory households.

Site Visits

In early 2009 and 2010, the survey firm APPRISE Incorporated performed site visits to assess the saturation of home electronics equipment. These visits were performed in conjunction with the CFL Expansion Program on-site surveys. The home electronics equipment assessment was conducted to determine the amount of change that occurred in homes between 2009 and 2010 and to improve on the data collection methodology from 2009. Technicians recorded information about home television, audio, and computer devices, such as make and model, hours of use, and auxiliary components.

Homes were initially recruited on the telephone as part of the 2010 NYSERDA CFL Expansion Program Random Digit Dial Telephone Survey. The data were weighted by home ownership, household member age, head of household education, and household size to match the population distribution based on the *American Community Survey*.

In this report, 2009 data are shown next to 2010 data when result differences are statistically significant at the 90 percent confidence level. . The 2009 data are also available in the appendix, which was updated from the initial study results due to a change in the population distribution between upstate and downstate.² In 2009, Westchester County was a part of the upstate population, while in 2010, Westchester County was considered to be downstate, and thus the 2009 data were re-run to reflect this change. Weights were adjusted accordingly.

Weights

When data are not shown for the NYSERDA territory as a whole, they are broken down into downstate and upstate. The downstate region encompasses New York City (including the five boroughs) plus Westchester

² Initially, Westchester was categorized as part of upstate New York. To be consistent with other NYSERDA definitions for upstate and downstate, the analysis was rerun, categorizing Westchester as being downstate.

County. Upstate encompasses the rest of the upstate NYSEDA region, which includes the remainder of New York except for Nassau and Suffolk counties.

Two sets of weights were provided to Cadmus from APPRISE. One set of weights was used to analyze upstate and downstate data separately and the second set of weights was used when analyzing NYSEDA data as a whole. Weights were calculated so that the weighted sample distribution of certain variables was the same as the population distribution of those variables. The variables were geography, age of household members, householder education, and household size, and were pulled from the U.S. Census Bureau American Community Survey.

As an example, if in New York City 12 percent of the sample is in the Bronx, but 15.5 percent of the population is in the Bronx, the sample from the Bronx was multiplied by 1.29 (15.5/12) so that 5.5 percent of the weighted sample is in the Bronx. This process was iterated until the sample distribution for all variables matched with the population distributions.

When analyzing NYSEDA data as a whole, APPRISE provided a multiplier by which each weight was multiplied. This multiplier ensured that the proportion of upstate and downstate in the weighted sample is the same as the proportion of upstate and downstate in the NYSEDA population.

Telephone Survey

The 2010 New York Energy Smart Products (NYESP) Home Electronics Phone Survey was managed by APPRISE Incorporated, and interviews were conducted by Princeton Survey Research Associates International in August 2010. Over 400 NYSEDA residents were interviewed about their energy usage habits and the electronic devices in their home. The survey took approximately 20 minutes to complete. The purpose of the survey was to gather high-level data on electronics saturations as well as attitudes towards energy efficiency and purchasing decisions. Weights were based on region (upstate versus downstate), number of adults in household, number of children, gender, education, race, and household phone use.

Although respondents for this survey were not the same population as those who participated in the home electronics site visits, their responses were insightful and an appropriate accompaniment to the findings from the site visits. Telephone survey respondents were chosen from separate random samples of landline and cell phone users in a 3:1 ratio. On-site surveys were recruited through a telephone survey using random digit dialing for landlines only in NYSEDA regions.

The remainder of this report is organized into the following sections respectively:

- Site Visits: Television (TV) Findings
- Site Visits: Audio Findings
- Site Visits: Computer Findings

- NYESP Home Electronics Phone Survey
- Conclusions
- Appendix: 2009 Site Visit Results.

Site Visits: Television (TV) Findings

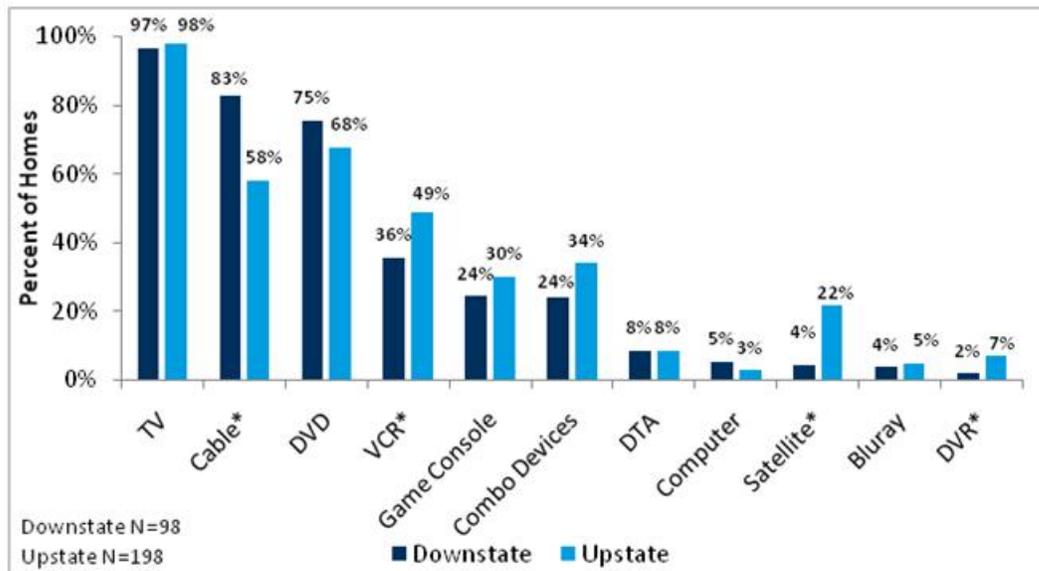
While the overall saturation of TVs remained stable between 2009 and 2010 with over two TVs per home, the average number of liquid crystal displays (LCD) TVs per home increased from 0.4 to 0.6, indicating that approximately 900,000 new TVs were purchased between 2009 and 2010, replacing traditional CRTs.

NYSERDA customers reportedly watch an average of 4.3 hours of TV per day, as reported in both the 2009 and 2010 surveys. Most TVs were located in bedrooms or living rooms. The majority of TVs were not ENERGY STAR rated since most are still CRTs and 90 percent of CRTs are not ENERGY STAR rated. Among newer TV types, such as LCD and plasma, 58 percent are ENERGY STAR rated.

Penetration of Technology

Nearly all NYSEERDA homes downstate (97 percent) and upstate (98 percent) had TVs. Upstate and downstate differed in the use of auxiliary devices, however. The most common auxiliary device attached to TVs in downstate was a cable box (83 percent versus 58 percent for upstate) and in upstate was a DVD player (75 percent versus 68 percent for downstate) (Figure 1).

Figure 1. Percent of Homes with TVs and Their Auxiliary Devices, 2010



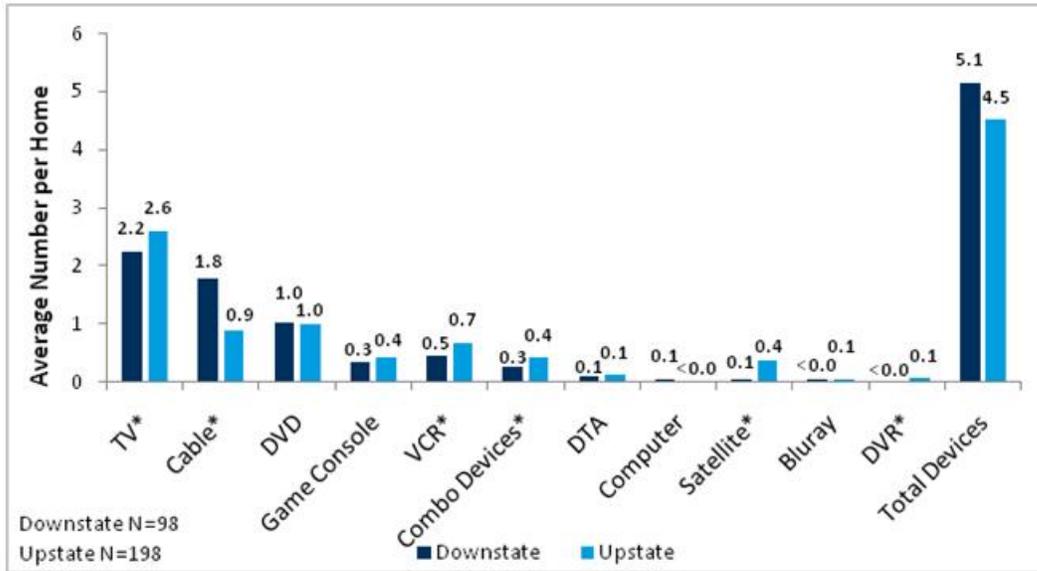
DTA is a digital to analog converter.

* Indicates statistical significance: we used the chi-squared test to the 90 percent confidence level. The null is that responses from the two sets of respondents (downstate and upstate) are the same. Therefore, statistical significance indicates a small probability (less than 10 percent) of responses given from both groups being the same.

Saturation of Technology

On average, downstate NYSERDA homes had 2.2 TVs, while upstate NYSERDA homes had 2.6 TVs. Downstate and upstate both averaged close to one DVD player, and downstate homes had almost two cable connections per home and upstate homes had almost one connection per home. On average, downstate homes had more TV auxiliary devices than upstate homes (5.1 versus 4.5) (Figure 2).

Figure 2. Average Number of TVs and Their Auxiliary Devices per Home, 2010**



* Indicates statistical significance.

** In addition to the auxiliary devices shown, total devices also include additional devices not featured in the chart. When calculating the average total devices, combo devices were counted as one device since the data collected do not distinguish how many devices composed each combo device.

Table 1 shows that homes in 2010 most commonly had two or three TVs. Findings were similar in 2009. It appears that homes with three, four, and five TVs downsized slightly in 2010, though none of the differences are statistically significant.

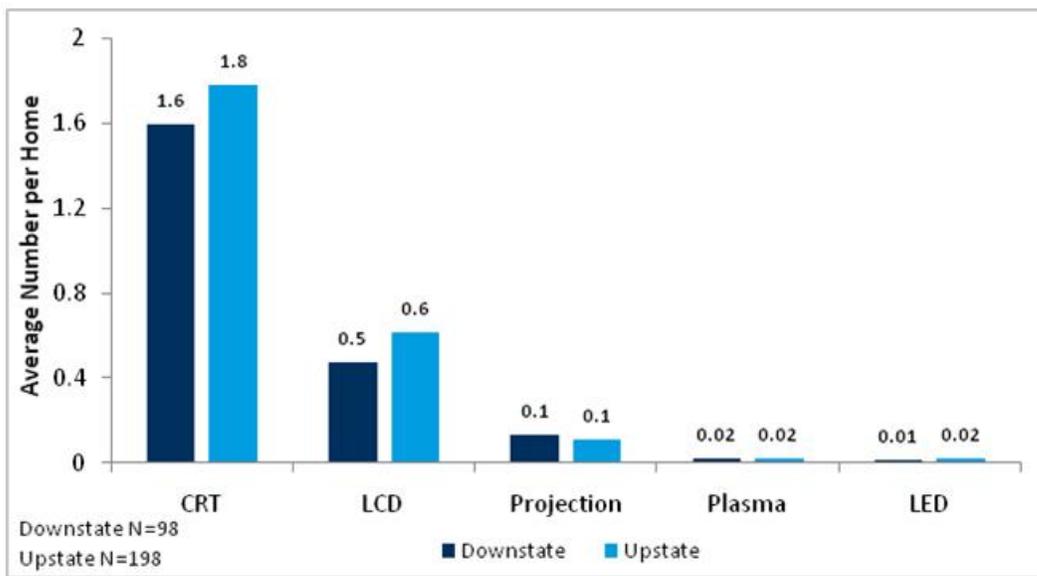
Table 1. Number of TVs Found in Homes, NYSERDA Territory

# of TVs	2009	2010
Zero	3%	3%
One	22%	22%
Two	28%	31%
Three	28%	26%
Four	12%	11%
Five or more	8%	7%

TV Characterization

As noted in Figure 3, CRTs were the most common type of TVs in NYSERDA households: of all TVs observed, 70 percent were CRTs. The next most common types of TVs were: liquid crystal displays (LCDs) at 24 percent, followed by plasma TVs at five percent (Figure 4). In comparison to 2009, the number of CRTs per household decreased from 2.0 to 1.7. LCD TVs, however, are continuing to gain market share. From 2009 to 2010, the number of observed LCD TVs per household increased from 0.4 to 0.6 (Figure 5).³ Table 2 shows the average screen size by TV type among all TVs observed on-site. CRTs had the smallest average screen size at 22.9 inches, and projection TVs had the largest screen size at 58.0 inches. LCD, LED, and plasma TVs had average screen sizes of 32.8, 36, and 38 inches, respectively.

Figure 3. TV Type, 2010



³ This change is statistically significant at the 90 percent confidence level for both CRTs and LCD TVs.

Figure 4. TV Type, NYSERDA Territory, 2010

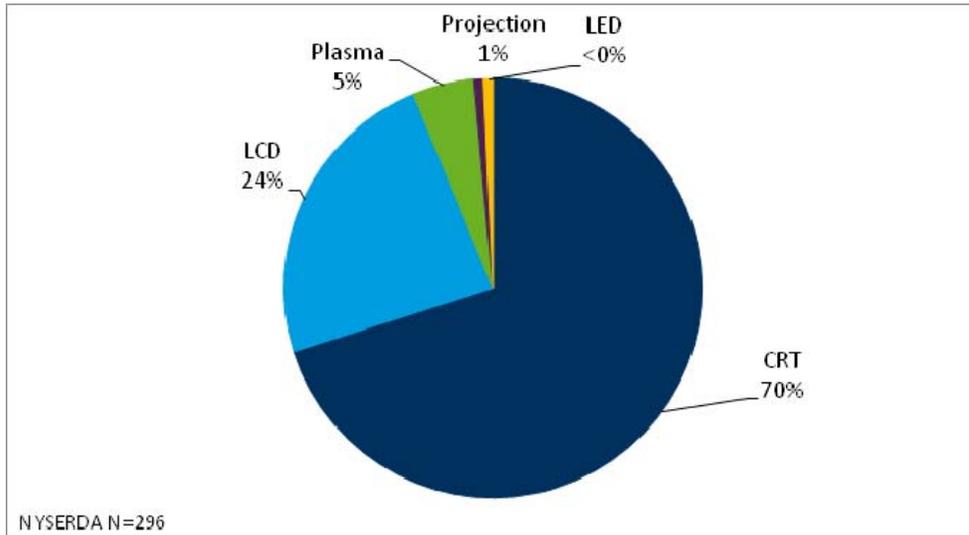
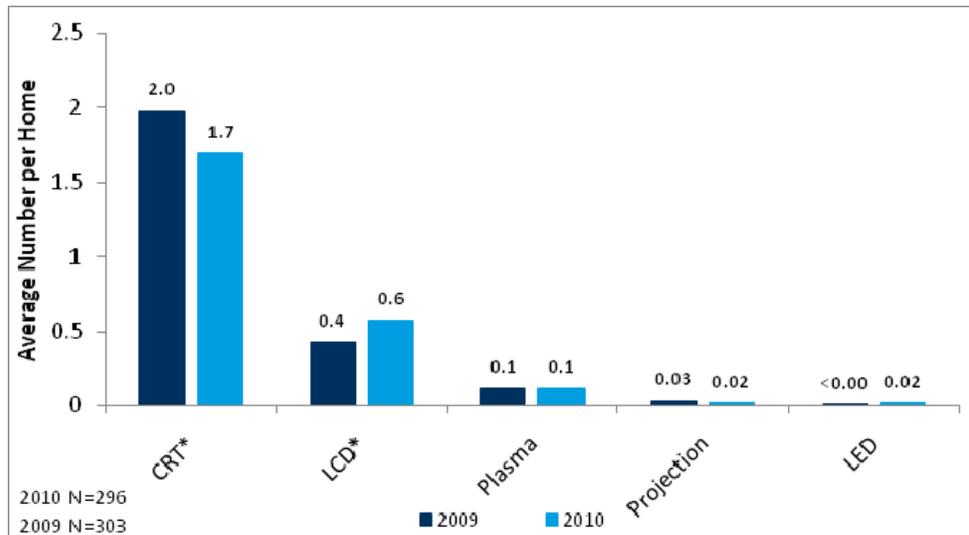


Figure 5. TV Type, 2009 vs. 2010



* Indicates statistical significance.

Table 2. Average Screen Size by TV Type

TV Type	Average Size in Inches
CRT	22.9
LCD	32.8
LED	37.6
Plasma	38.0
Projection	58.0

With so many brands available, the most common TV brands, Sony and Sharp, only garner nine percent and eight percent of the market, respectively (Figure 6). An average of 1.1 TVs were located in NYSERDA customer bedrooms, and an average of 1.0 was in living rooms. The next most common locations for TVs were kitchens and basements (Figure 7).

Figure 6. TV Brand, NYSERDA Territory, 2010

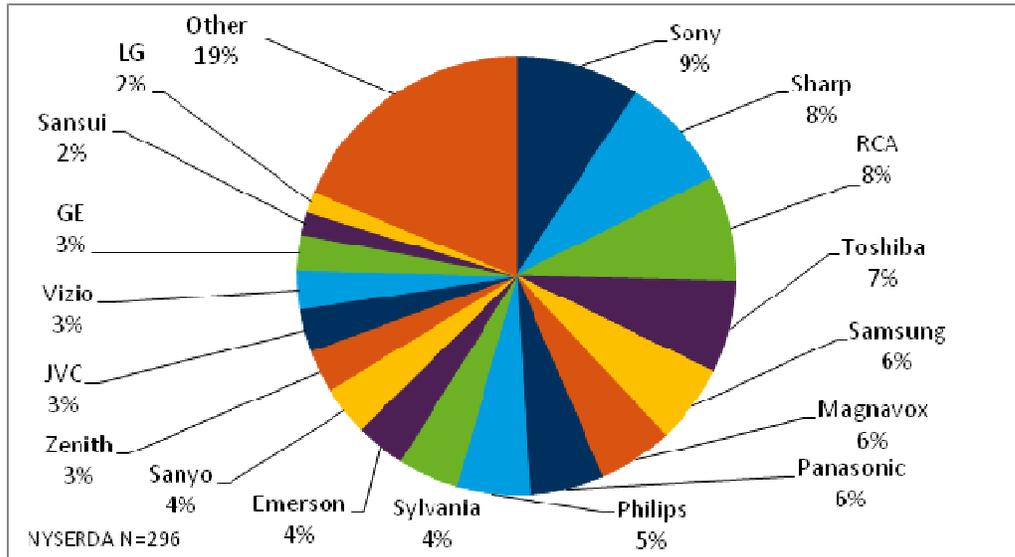
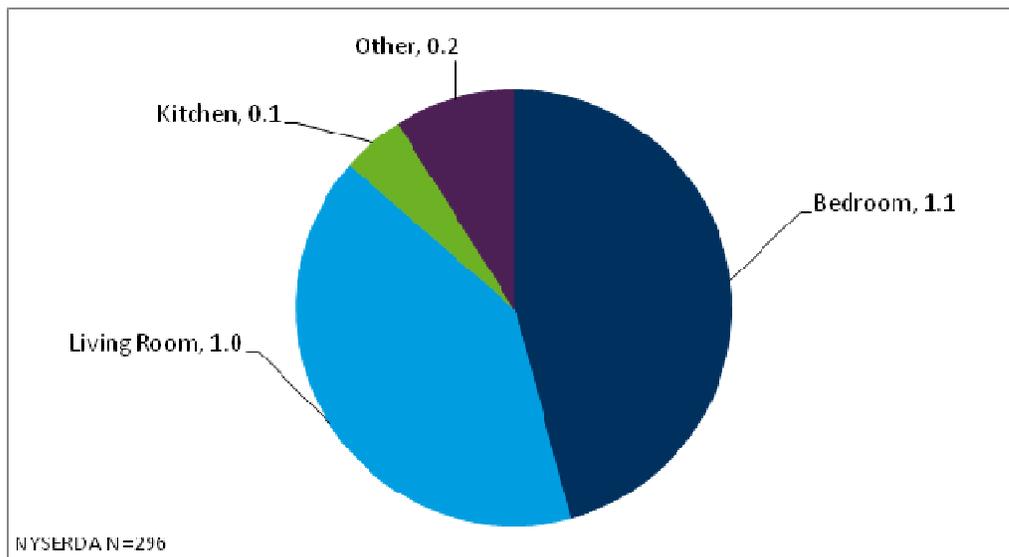


Figure 7. Average Number of TVs per Room, NYSERDA Territory, 2010



Notes:

- Basements are represented in the 'Other' category.
- 'Living room,' in every applicable chart, is the sum of both the living room and family room categories taken from site visit data.

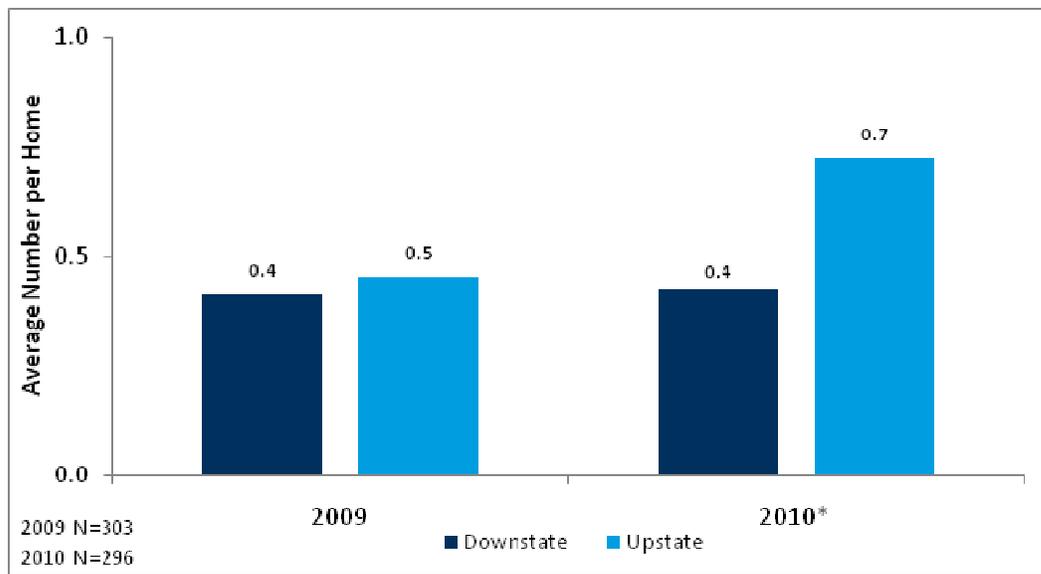
- The ‘Other’ category, in every applicable chart, consists of both the original ‘Other’ category and all additional categories representing an average of less than 0.0.

Power Usage Habits

As in 2009, there was a higher incidence in 2010 of ENERGY STAR TVs versus non-ENERGY STAR TVs in upstate homes compared to downstate homes (Figure 8). Interestingly, the number of ENERGY STAR TVs rose from 16 percent in 2009 to 28 percent in 2010 among upstate homes (a difference that is statistically significant), but did not increase significantly in downstate homes. One hypothesis is that this is due to the nine percent increase in flat panel TVs in upstate homes compared to the five percent increase in downstate homes. The majority of flat panel TVs purchased in the last year may have been ENERGY STAR; however, such data were not collected and thus cannot be verified. Overall, 24 percent of homes had an ENERGY STAR TV (Figure 9), an increase from 17 percent in 2009.⁴

Unlike CRTs, a greater percentage of LCD and plasma TVs were ENERGY STAR rated versus non-ENERGY STAR rated (58 percent for both LCD and plasma TVs) (Figure 10).

Figure 8. All ENERGY STAR TVs—2009 vs. 2010*



* Indicates that statistical significance is present between 2009 and 2010 when looking at the NYSERDA territory as a whole, and between upstate versus downstate for 2010 at the 90 percent confidence level.

⁴ This difference is statistically significant at the 90 percent confidence level.

Figure 9. All TVs—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2010

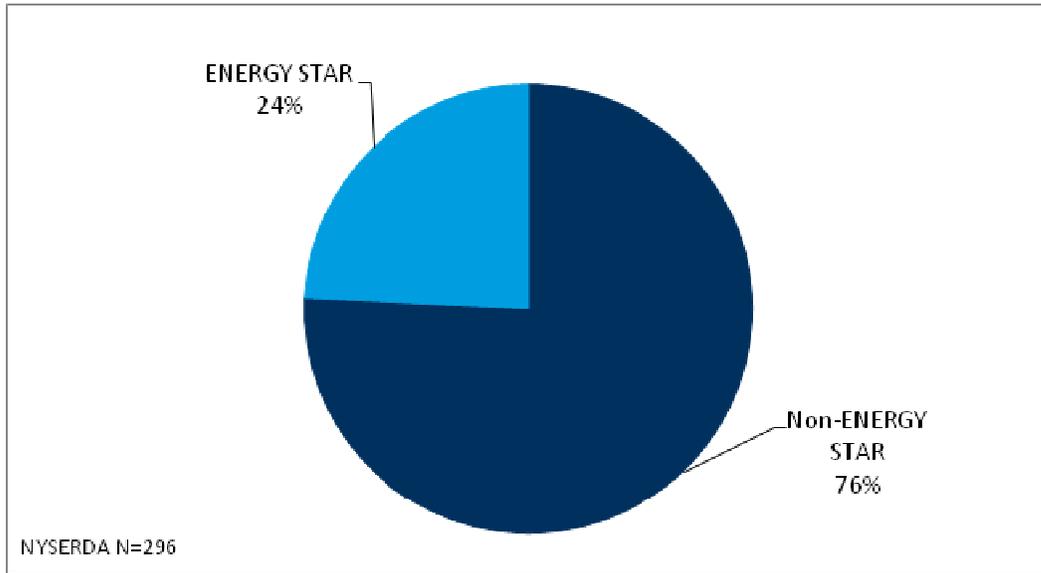
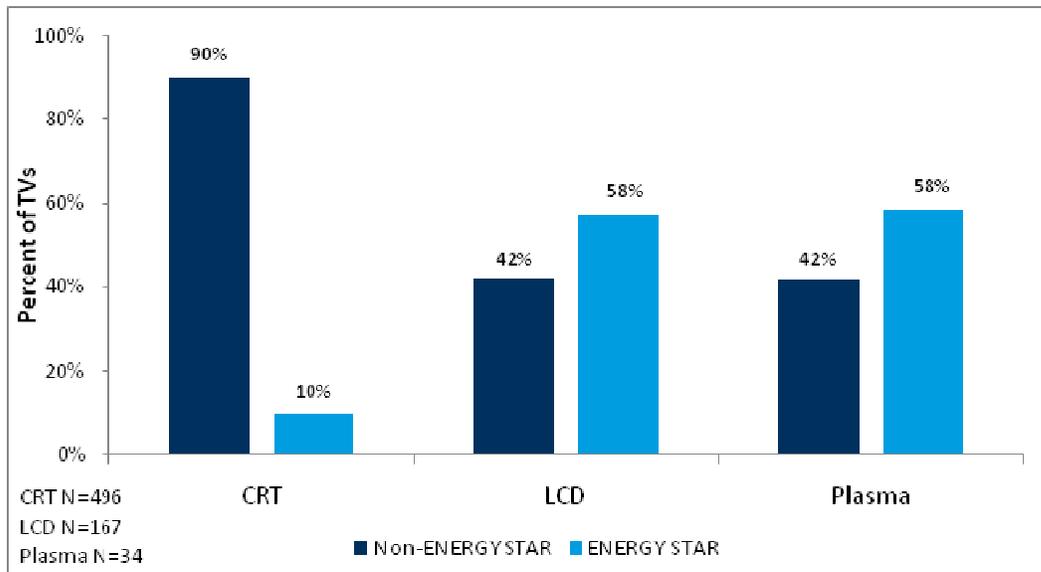


Figure 10. TV Types—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2010*



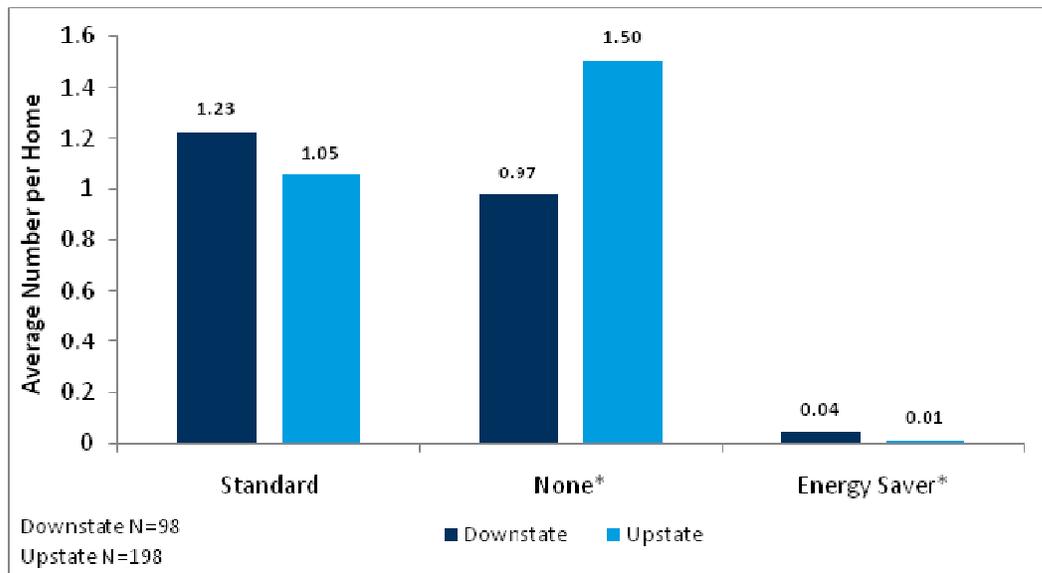
* The number of projection and LED TVs on-site were too low to include in the chart with a reliable percentage.

Power Strips

The saturation of power strips increased from 2009 to 2010 from 42 percent to 47 percent, although over half of all TVs are not connected to a power strip and only one percent use energy-saver power strips (Figure 11 and

Figure 12). Energy-saver power strips turn off selected devices when they are not in use through either a timer or through being programmed to turn off all devices on the strip when one device is turned off. While the majority of those audited in 2010 never turn their standard power strip off (75 percent, Figure 13), a higher percent (88 percent) never turned them off in 2009 (Table 3).

Figure 11. Presence and Type of Power Strip, 2010*



* Indicates statistical significance.

Figure 12. Presence and Type of Power Strip, NYSERDA Territory, 2010

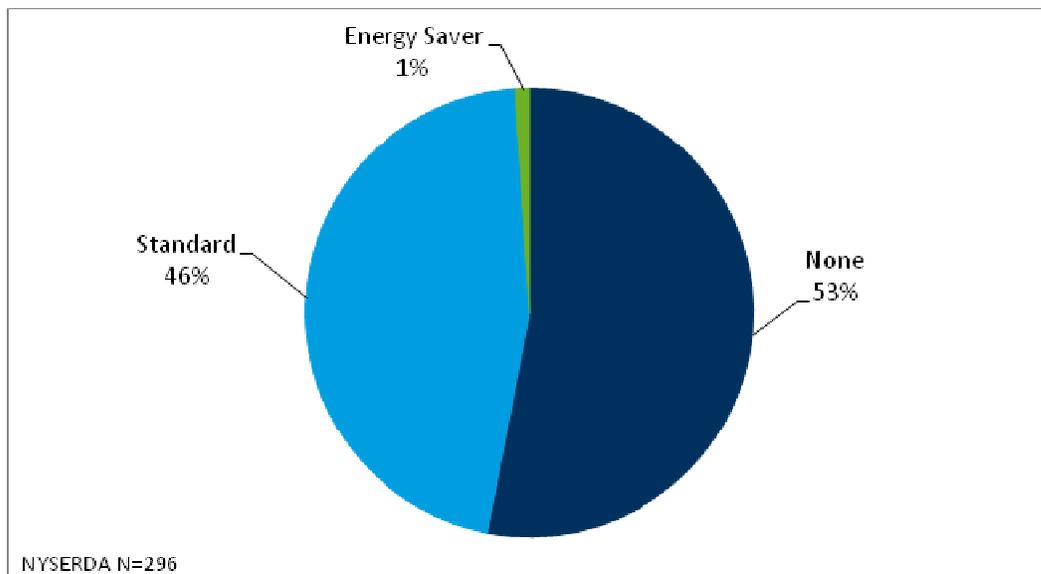


Figure 13. When Power Strips Attached to a TV are Turned Off, NYSERDA Territory, 2010

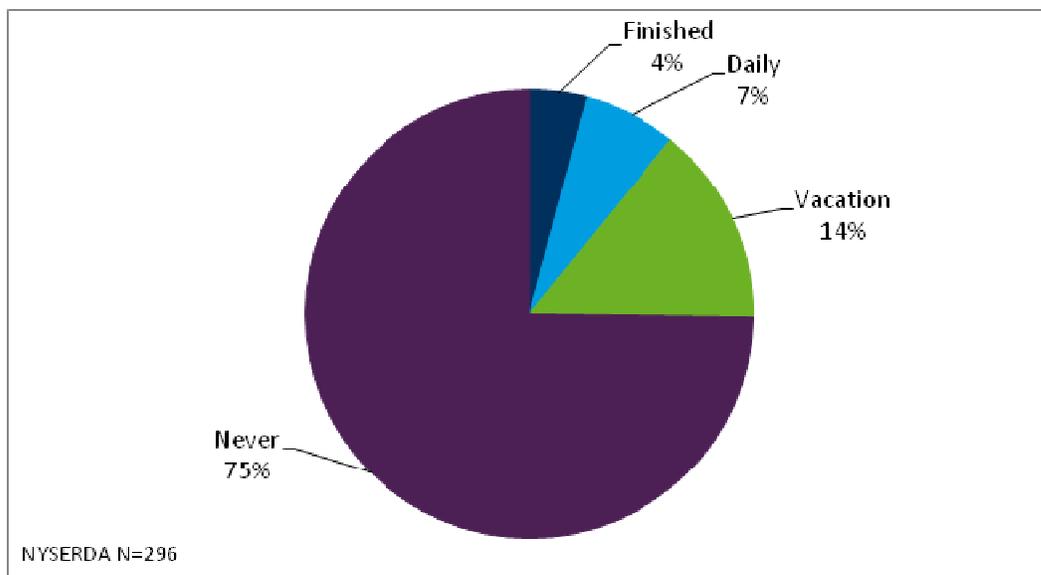


Table 3. Power Strips and Energy Usage Habits, NYSERDA Territory

	2009	2010
Type of Power Strip		
None*	58%	53%
Standard	41%	46%

Energy Saver	1%	1%
When Turn Off Power Strip		
When Finished	5%	4%
Daily*	2%	7%
Vacation*	5%	14%
Never	88%	75%

* Indicates statistical significance.

The number of TV viewing hours among downstate NYSERDA customers was slightly higher than among upstate NYSERDA customers. In the downstate territory, customers watched an average of about five hours of TV per day (4.9), while in the upstate territory, customers watched an average of about four hours of TV per day (3.8) (Table 4).⁵ The NYSERDA-wide average was 4.3.

Table 4. Average Number of Hours of TV Watched per Day

Year	NYSERDA	Downstate	Upstate
2009	4.3	4.4	4.2
2010*	4.3	4.9	3.8

* Indicates statistical significance between downstate and upstate customers.

The figures below show the maximum number of hours at least one TV was turned on in customer homes and the average amount of time all TVs were turned on. Since most homes contain multiple TVs, these figures taken together give an indication of TV viewing habits.

Figure 14 shows the maximum amount of TV hours viewed per day. Although there may have been multiple TVs on at one time, the data in this chart were derived from the TV that was on for the longest amount of time in each home (site technicians collected usage information from all TVs in the home). It is assumed that this TV was most likely the one being viewed continuously. Among the ranges of time TVs were on, five to 10 hours was the most common range (40 percent) followed by three to four hours (22 percent).

Figure 15 displays the average time all TVs were on in customers' homes. Among all the NYSERDA territory, the average amount of time customers watched zero to two hours, three to four hours, or five to 10

⁵ For each TV in their home, respondents were asked "How many hours a day do you use this television?" The average hours of use for each home were used to derive a total average. Due to the wording of the question, responses could include both active and passive TV viewing.

hours split fairly evenly (34 percent, 28 percent, and 30 percent). Results on TV usage did not vary much between 2009 and 2010.

Figure 14. Max TV Viewing Hours per Day, NYSERDA Territory, 2010

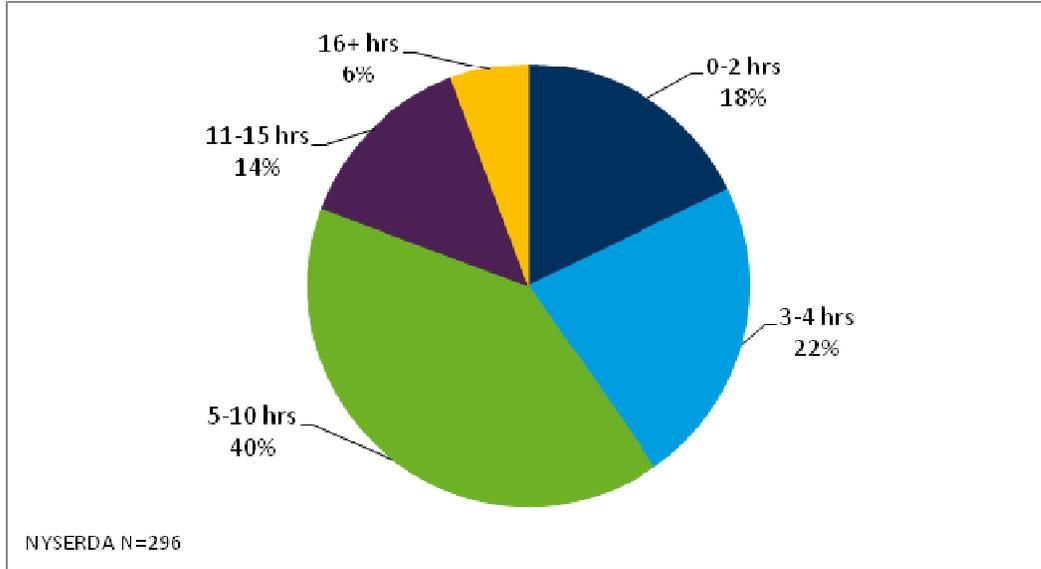
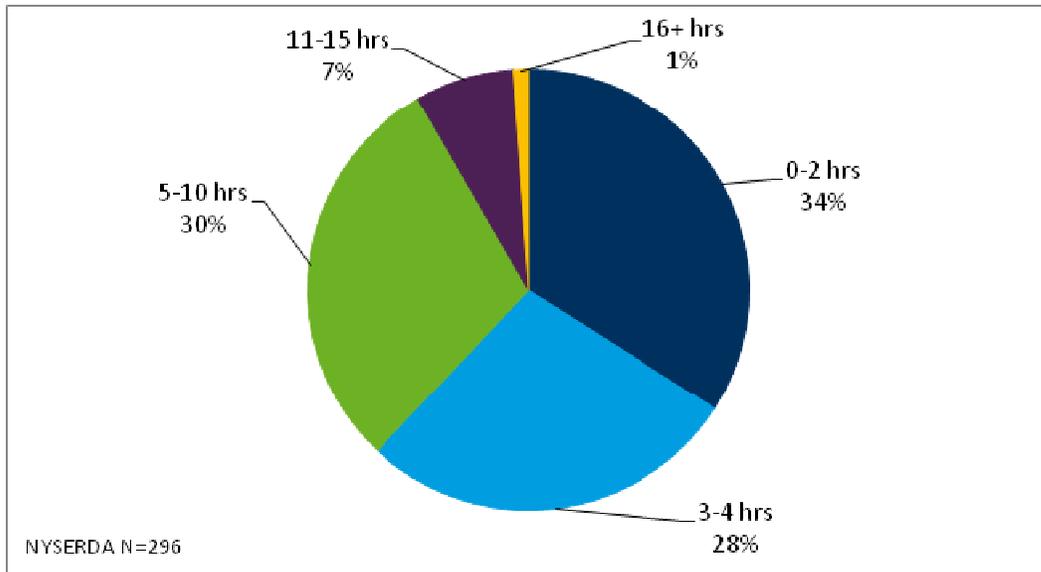


Figure 15. Average Time all TVs were On, NYSERDA Territory, 2010

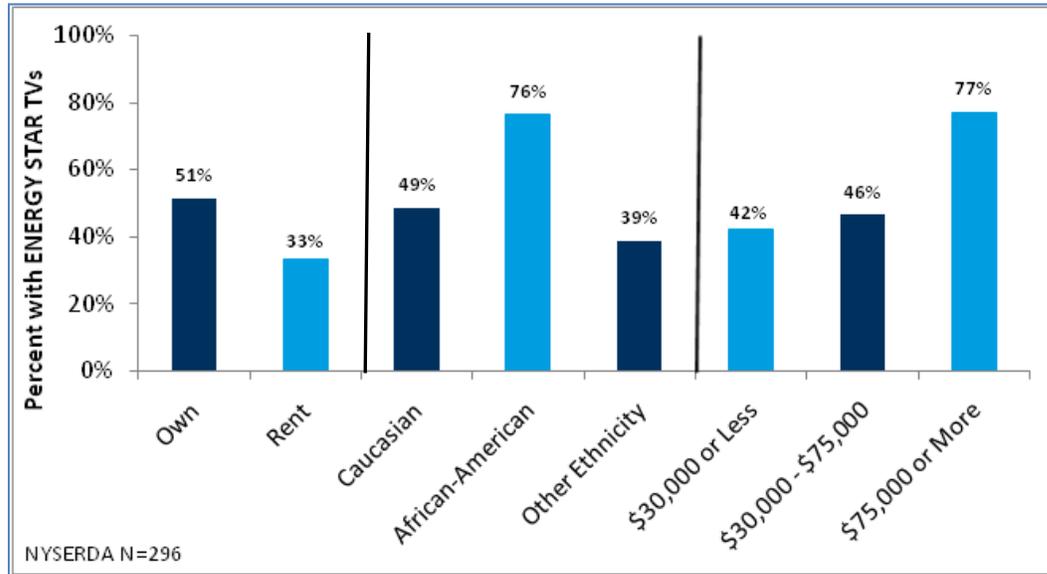


TV Demographics

Figure 16 shows the percent of households with ENERGY STAR TVs based on certain demographic variables. Those who owned their homes, were African-American, or made \$75,000 or more per year had a

higher percentage of ENERGY STAR TVs than those who were renting their homes, who were not African-American, and who made less than \$75,000 per year.

Figure 16. Percent with an ENERGY STAR TV, NYSERDA Territory, 2010*



* Indicates statistical significance in all three categories: ownership status, ethnicity, and income.

Site Visits: Audio Findings

Audio devices were recorded as either stand-alone or component systems. A stand-alone device is a self-contained system that may have any combination of radio, tape deck, CD player, and speakers. A stand-alone device works on its own, such as a stereo with a radio and tape or CD player, but may have extra devices attached to it, such as additional speakers. A component system has no core device and is made up of several auxiliary devices working together, such as a radio receiver with separate speakers and a CD player. A smaller boom box which only includes a radio, tape player, CD player, or iPod dock with speakers was not counted or recorded. Either a component or a stand-alone system could have auxiliary units, which are devices connected to the core audio device.

It should be noted that the site visit protocol for 2010 varied slightly from 2009 in order to improve the consistency across auditors. Site visit protocols were developed with the intent to collect data on boom boxes only if they were large. In 2009, however, some auditors collected information on smaller boom boxes. The protocols were clarified in 2010 to ensure all auditors ignored small boom boxes. As such, 2009 and 2010 overall audio saturation data may not be directly comparable. Also, the data collection protocol for both years only counted audio devices as “audio” if they were *not* attached to either a computer or TV. Otherwise, they were counted as auxiliary devices of the TV or computer.

Although saturation data between 2009 and 2010 are not directly comparable, a notable difference between the two years is that a higher percentage of households in 2010 with audio equipment attached to power strips are turning them off when they are not in use. In 2010, 62 percent reported that they never turned off (Figure 25) their power strip, which is down from 83 percent in 2009 (

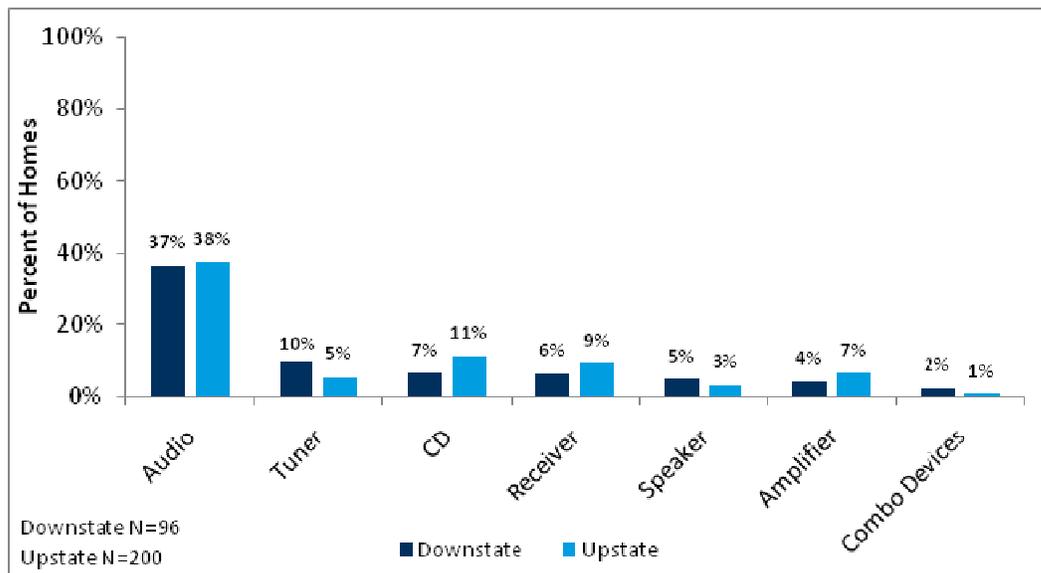
Table 6).

Nearly 60 percent of all audio systems owned by NYSERDA customers were stand-alone. The percentage of homes with audio devices was lower than the percentage with TVs.⁶ Again, most devices were located in living rooms and bedrooms, and the majority of devices were not ENERGY STAR rated (91 percent). The average amount of time NYSERDA customers spent listening to audio devices was 1.5 hours.

Penetration of Technology

The percentage of NYSERDA customers with an audio device was nearly the same for both downstate and upstate (37 percent versus 38 percent). The most popular types of auxiliary devices were tuners and CD players (Figure 17).

Figure 17. Percent of Homes with Audios and Their Auxiliary Devices, 2010

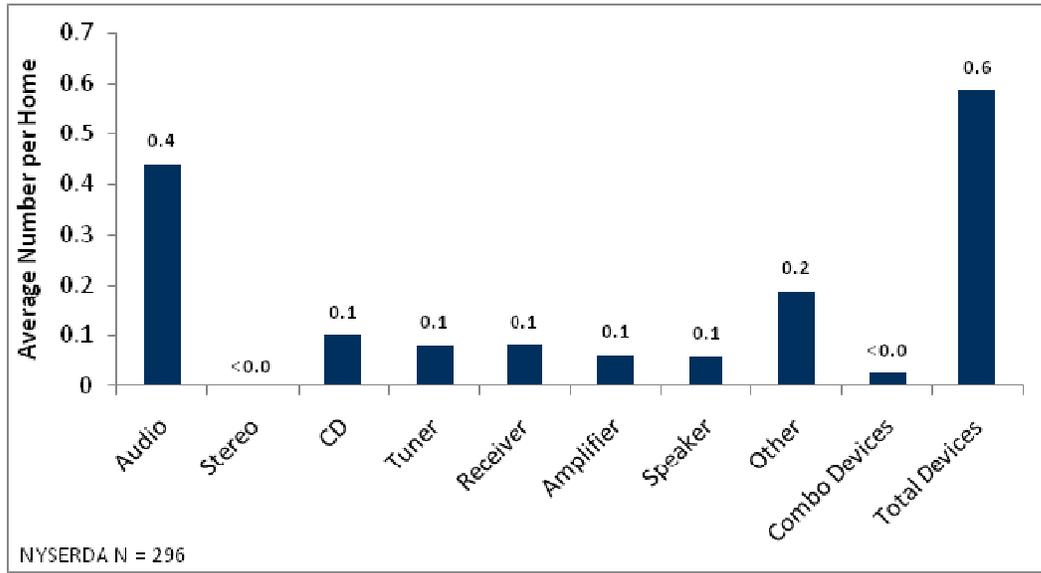


Saturation of Technology

The average number of audio devices among all NYSERDA customers was 0.4 and the average number of auxiliary devices was 0.6. There was little difference between upstate and downstate customers (Figure 18).

⁶ It should be noted though that for both 2009 and 2010, an audio device next to a computer or a TV was recorded as an auxiliary device of the computer or TV, even if they were not attached, and was not recorded in the audio data set. Subsequently, the number of audio devices recorded in the audio section of this report represents only audio systems not next to computers or TVs.

Figure 18. Average Number of Audios and Their Auxiliary Devices per Home, 2010



Audio Characterization

Figure 19 shows the average number of audio devices per home, categorized by type of system and upstate versus downstate areas. Nearly 60 percent of NYSERDA customers have a stand-alone audio device (Figure 20).

As with TVs, most audio devices were located in living rooms and bedrooms. An average of 0.2 audio devices were in customer bedrooms, and an average of 0.1 devices were in customer living rooms (Figure 21).

Figure 19. Audio Type, 2010

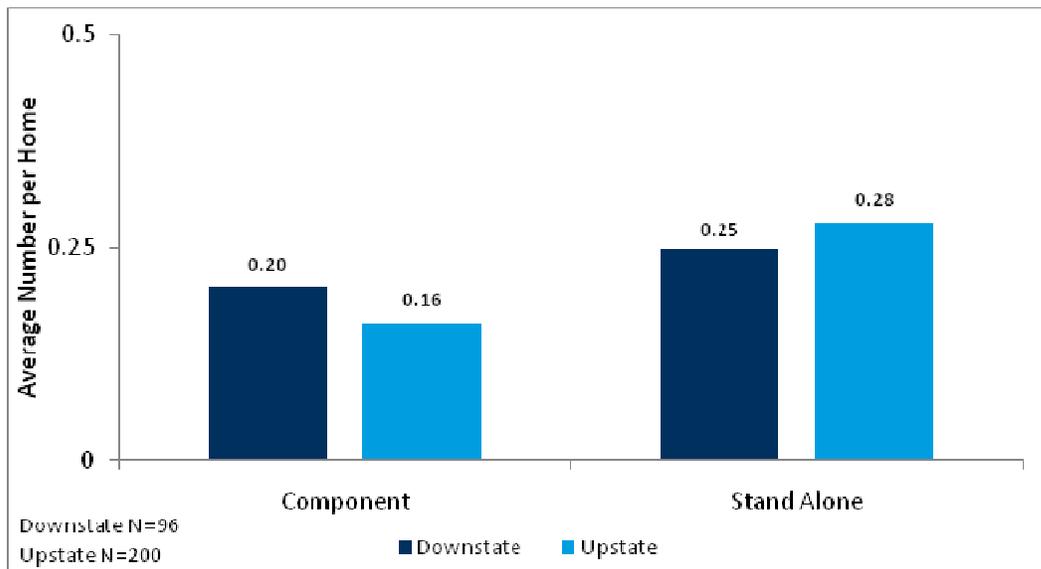


Figure 20. Audio Type, NYSERDA Territory, 2010

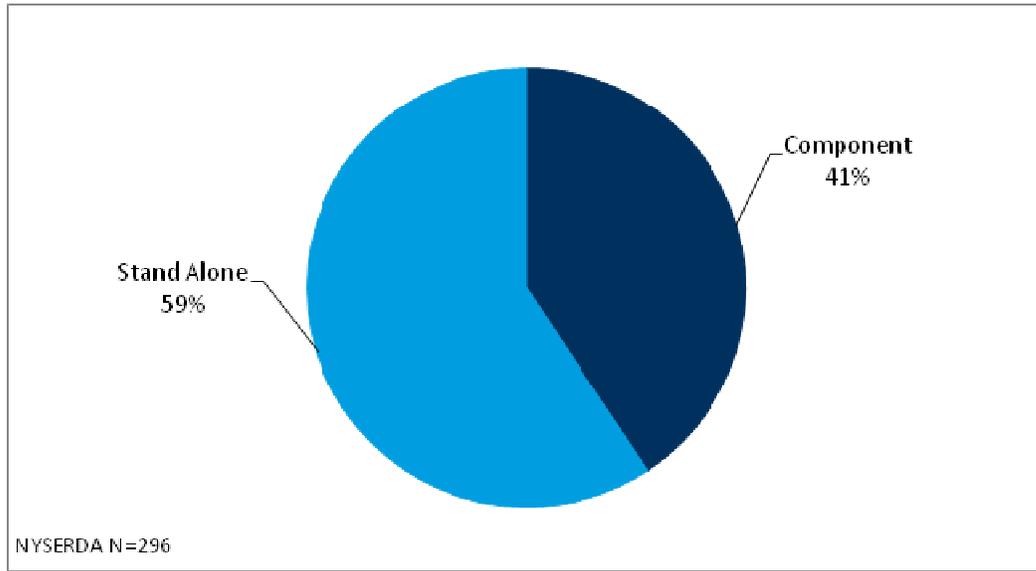


Figure 21. Average Number of Audios per Room, NYSERDA Territory, 2010

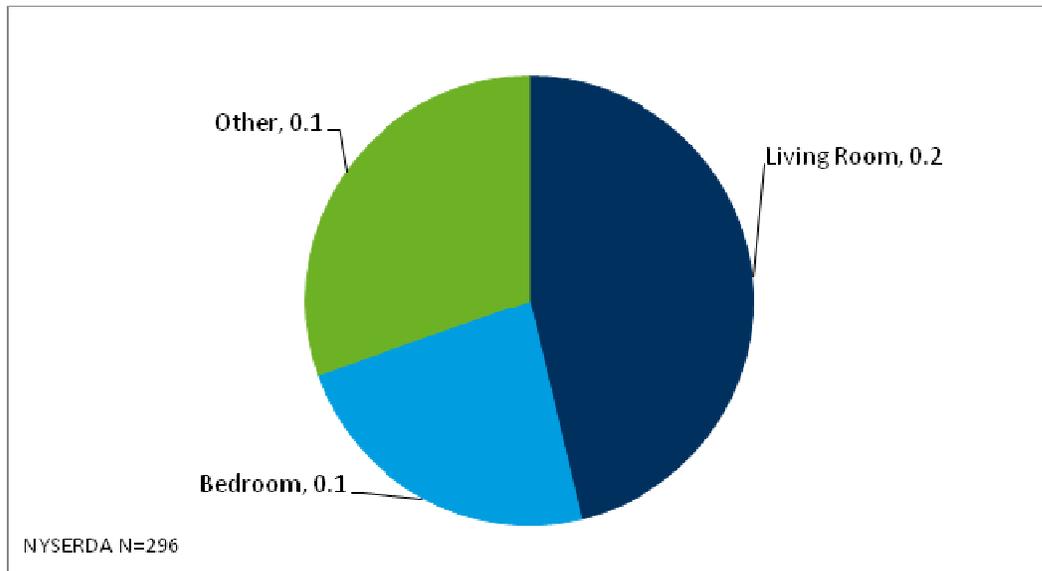


Table 5 shows that it was most common for NYSERDA homes to have no separate audio devices (63 percent). However, of that 63 percent, 22 percent of those homes had an audio device next to either a TV or computer.⁷ The next most common circumstance was for a home to have one audio device (30 percent).⁸

⁷ Recall that audio devices were only counted in this category if they were *not* next to a TV or computer. Otherwise, they were counted as an auxiliary device in the respective TV or computer category.

⁸ Note again that small boom boxes and iPods or iPod docks were not recorded.

Table 5. Number of Audio Devices Found in Homes, NYSERDA Territory

# of Audios	2010
Zero	63%
One	30%
Two	7%
Three	1%
Four	0%
Five or more	0%

Power Usage Habits

Figure 22 shows the average number of audio devices per home and the share that were ENERGY STAR rated in both upstate and downstate for 2010. The majority of audio devices in 2010 were not ENERGY STAR rated (91 percent; Figure 23), which is understandable since fewer ENERGY STAR options exist for audio devices.

Figure 22. Average Number of ENERGY STAR Audios and Total Audios per Home, 2010

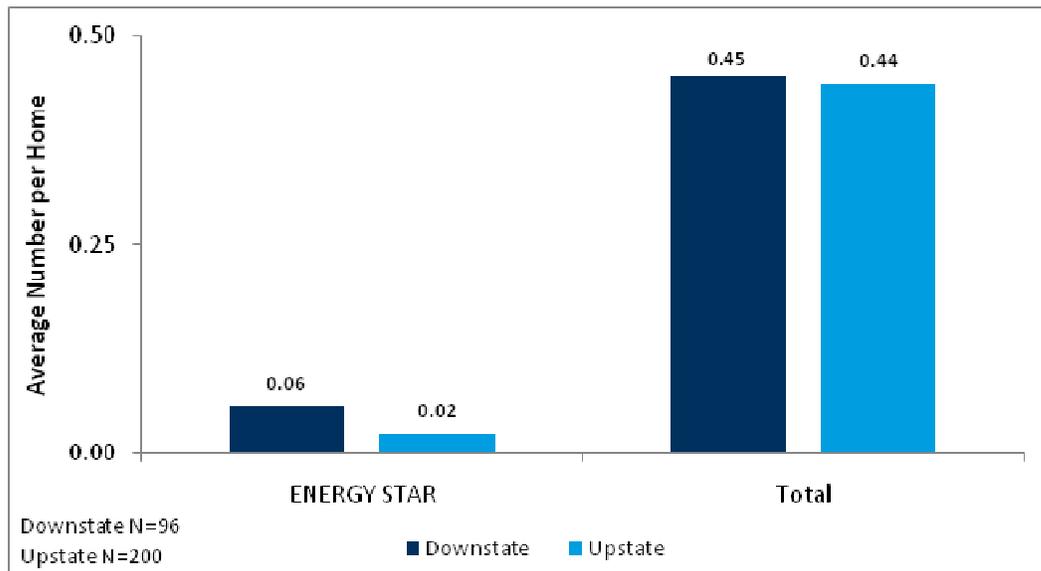
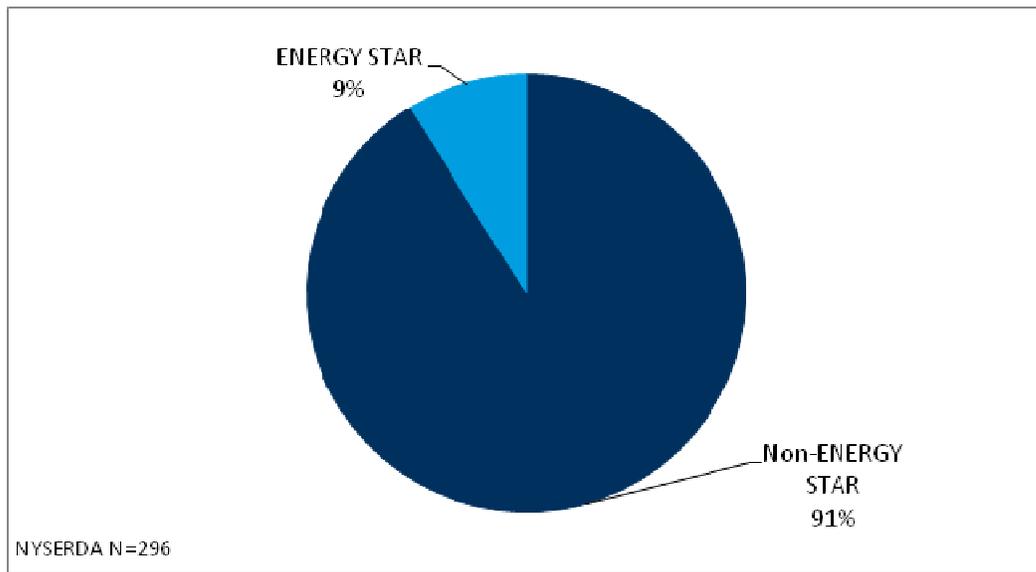


Figure 23. All Audios—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2010



Twenty-nine percent of audio devices were connected to a power strip; however, none of those power strips were energy-saver (Figure 24). While the percentage of customers who had their audio device plugged into a power strip remained the same between 2009 and 2010, more people turned their power strip off in 2010 compared to 2009. In 2010, 62 percent never turned off their power strip (Figure 25), which is down from 83 percent in 2009 (

Table 6). Those who do turn off their power strip either do so when finished using the audio device (25 percent) or at the end of each day (5 percent).

Figure 24. Presence and Type of Power Strip in Audio Devices, NYSERDA Territory, 2010

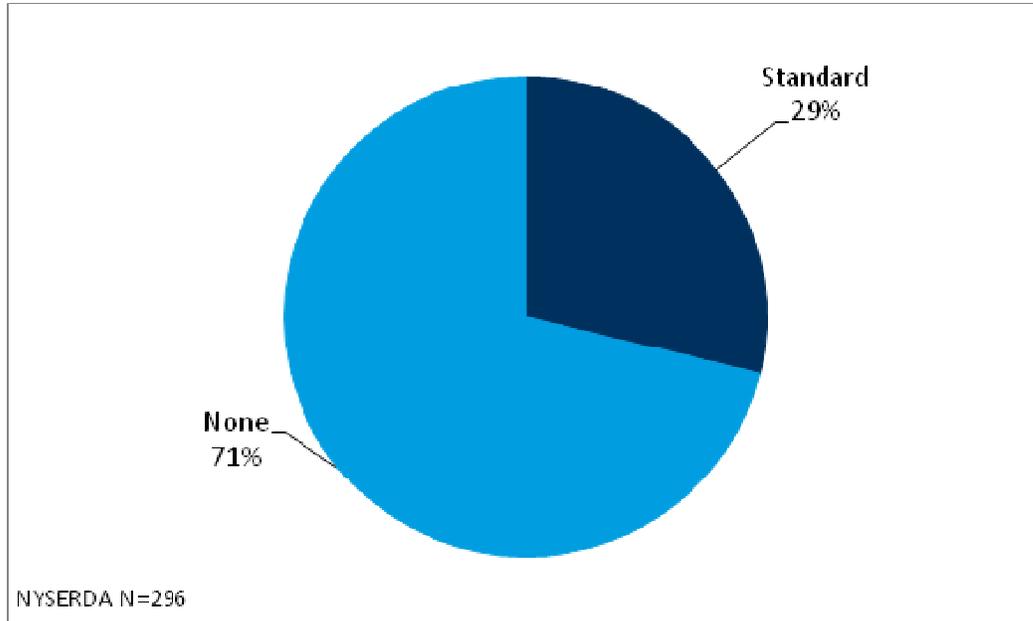


Figure 25. When Power Strips Attached to Audio Devices were Turned Off, NYSERDA Territory, 2010

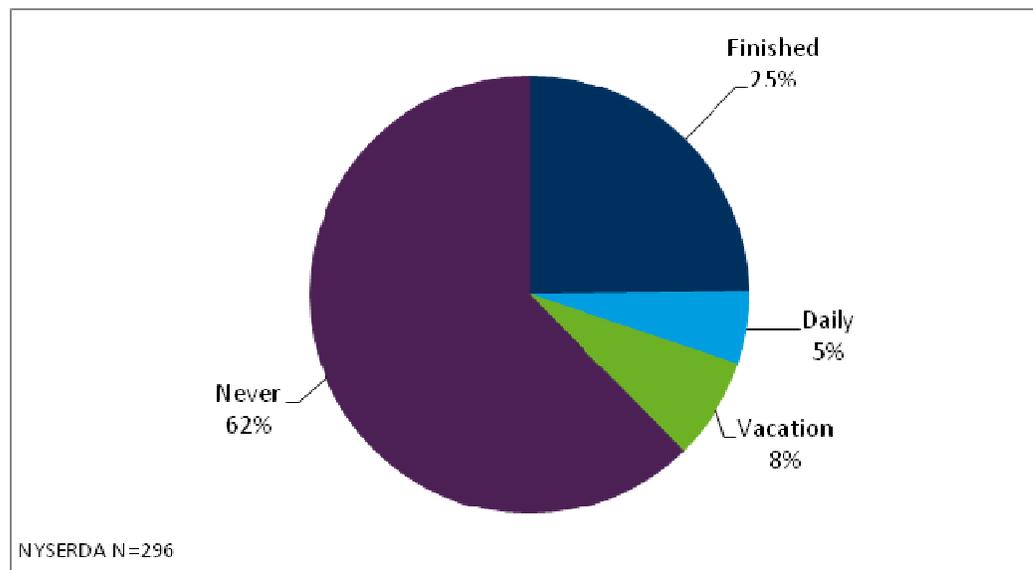


Table 6. When Power Strips are Turned Off, 2009 vs. 2010

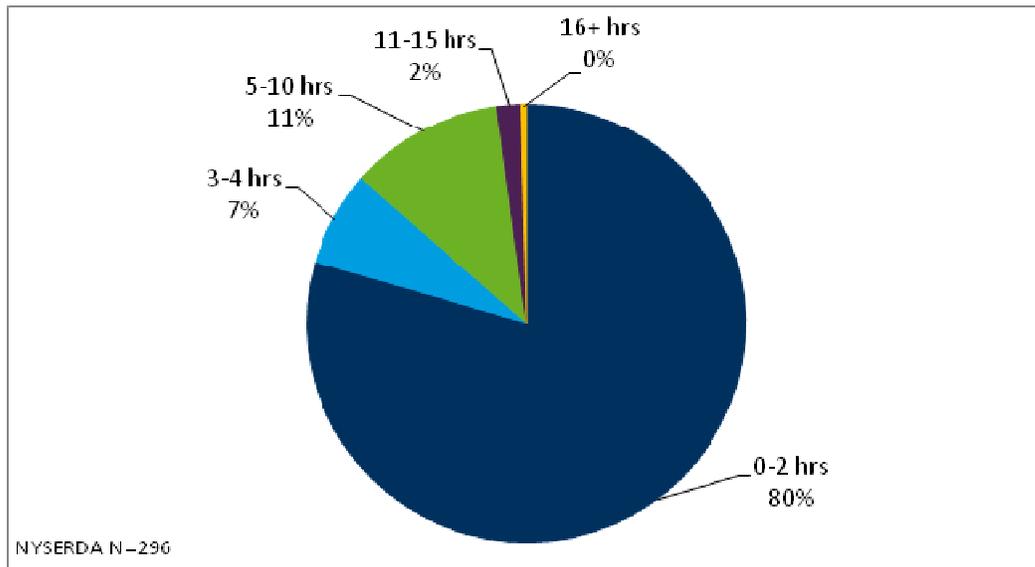
When Turned Off	2009		2010	
	#	%	#	%
When Finished	7.8	8.8%	9.1	24.9%
Daily	1.3	1.5%	1.9	5.2%
Vacation	5.6	6.3%	2.8	7.7%
Never	74.1	83.4%	22.8	62.3%

The average number of hours downstate and upstate customers listen to their audio devices is nearly identical (1.5 versus 1.6; Table 7).⁹ Figure 26 shows the maximum time at least one audio device is turned on during the day. The zero to two hour range was clearly the most common response at 80 percent. Figure 27 shows the average amount of time all audio devices in customers’ homes were on. Eighty-one percent had each of their devices on for an average of zero to two hours.

Table 7. Average Number of Hours of Audio Usage

Year	NYSERDA	Downstate	Upstate
2009	1.7	1.9	1.5
2010	1.5	1.5	1.6

Figure 26. Max Audio Usage per Day, NYSERDA Territory, 2010



⁹ Participants were asked “How many hours per day is your audio device turned on?” Due to the wording of the question, responses could include both active and passive listening.

Figure 27. Average Time all Audios Were On, NYSERDA Territory, 2010

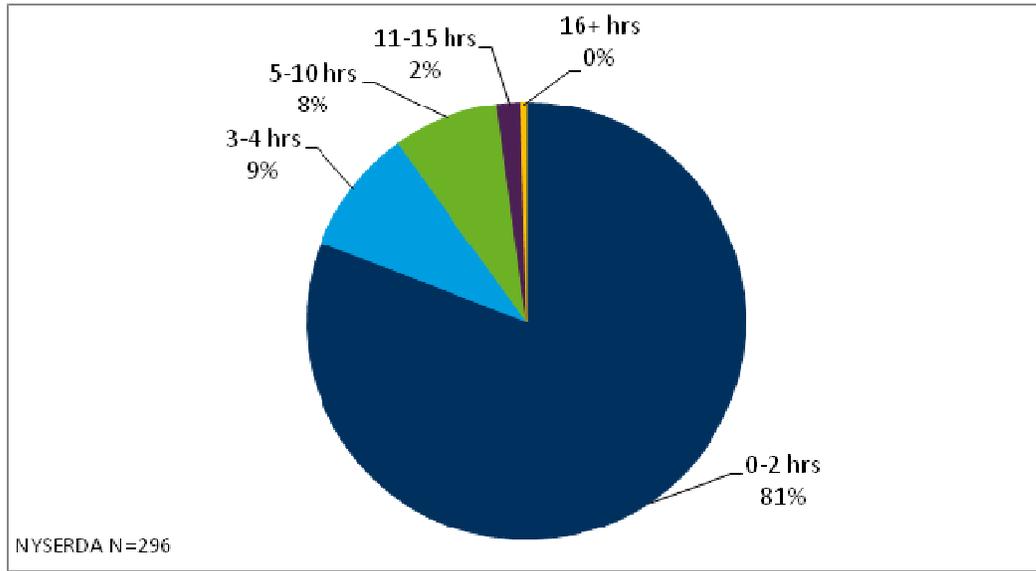
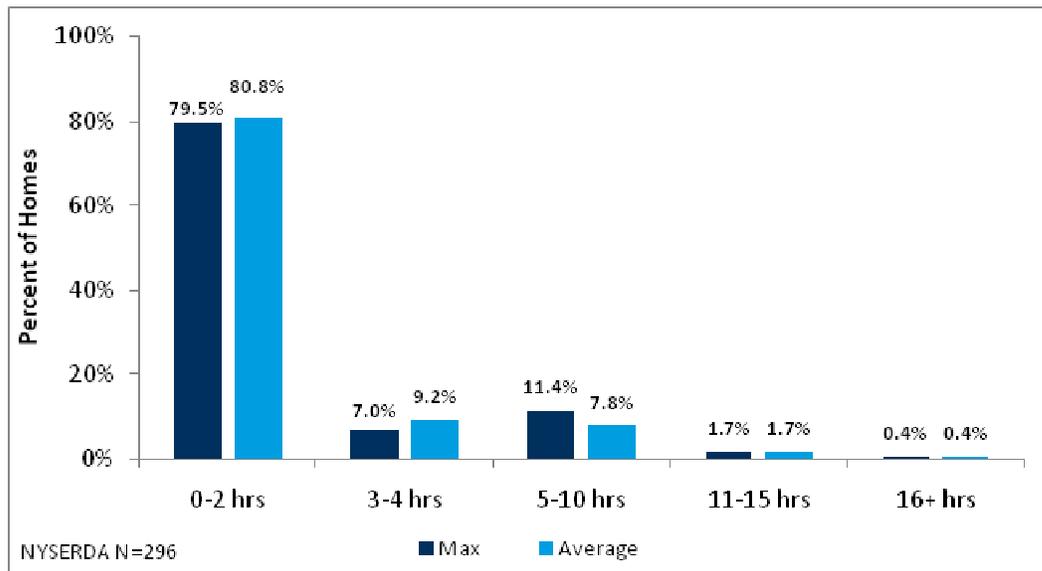


Figure 28. Maximum and Average Time Audio Devices Were On, 2010



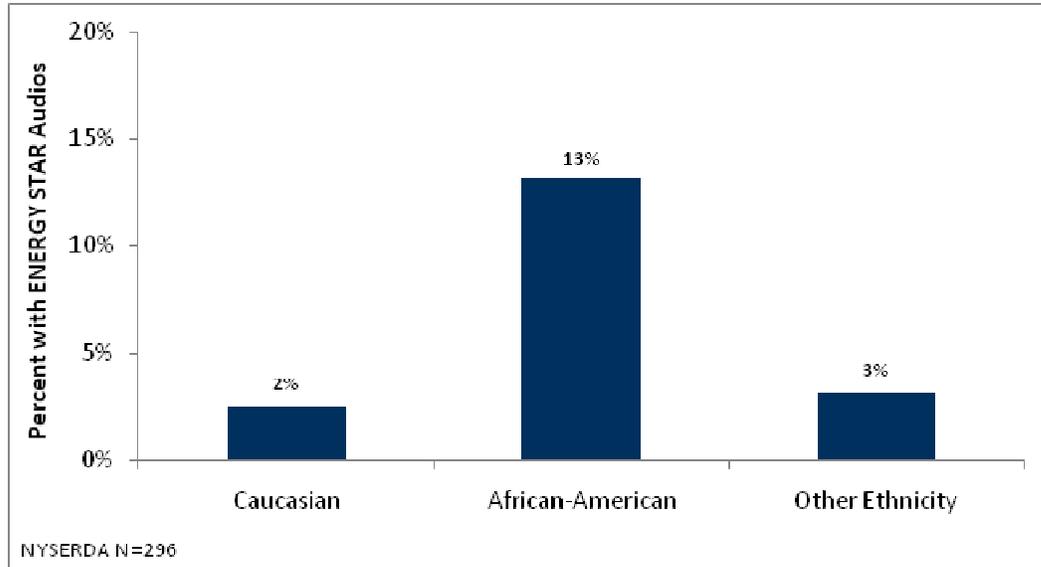
Maximum is defined as the maximum time the most commonly used device is on for each household.
 Average is the average time all devices were on for each household.

Audio Demographics

Figure 29 shows the percentage of households with an ENERGY STAR audio device based on ethnicity. Like TVs, those who are African-American had a higher percentage of ENERGY STAR audios than those

who were not African-American.¹⁰ The differences based on other demographic variables, such as ownership status and income, were minimal.

Figure 29. Percent With an ENERGY STAR Audio Device, NYSERDA Territory, 2010



¹⁰ Ethnicity was the only demographic category in household presence of ENERGY STAR audio devices in which a significant difference could be discerned. The number of responses in certain demographic categories were too small to compare.

Site Visits: Computer Findings

From 2009 to 2010, the percentage of ENERGY STAR computers found on-site increased from 10 percent to 18 percent.

A higher percentage of customers had computers than audio devices, although the percentage of TVs in homes was the greatest measure. Downstate customers had 1.2 computers in their homes, while upstate customers had 1.3, on average. Over half of all computers were desktop units, as opposed to laptops and netbooks, and NYSERDA customers spent an average of over three hours per day on their home computers.¹¹ Eighty-two percent of all computers were not ENERGY STAR rated,¹² although half of all customers turned their computers off once they finished using them.

Penetration of Technology

Both upstate and downstate territories have a similar penetration of computers (73 percent downstate, 71 percent upstate). Over half of both populations had a separate monitor¹³ and nearly 30 percent had a modem.¹⁴ Additional auxiliary devices, such as a fax machine or separate DVD or CD players, were less common among NYSERDA computer owners (Figure 30).

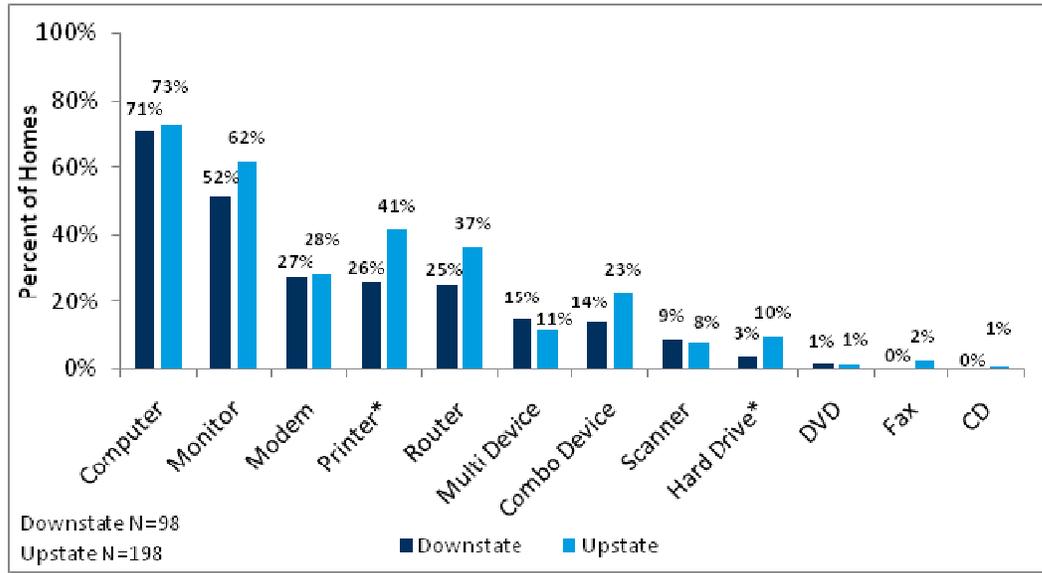
¹¹ Unlike TVs and audio devices, participants were asked to report how many hours per day they actively use their computer, since it is common for people to leave their computer on 24/7 with a screen saver or in standby mode.

¹² The inventory included all computers in a home, no matter the age of the device. Therefore, the ENERGY STAR market share is not indicative of the current ENERGY STAR market share of computer sales.

¹³ The monitor category is not closer to 100 percent because some computers are laptops and the monitor would not be counted as an auxiliary unit.

¹⁴ The percentage of those with a modem could be greater than represented. For those with a combined modem and router, both of the categories were left blank and the combination category was recorded. Specifics about the devices composing the combination category were not collected.

Figure 30. Percent of Homes With Computers and Their Auxiliary Devices, 2010



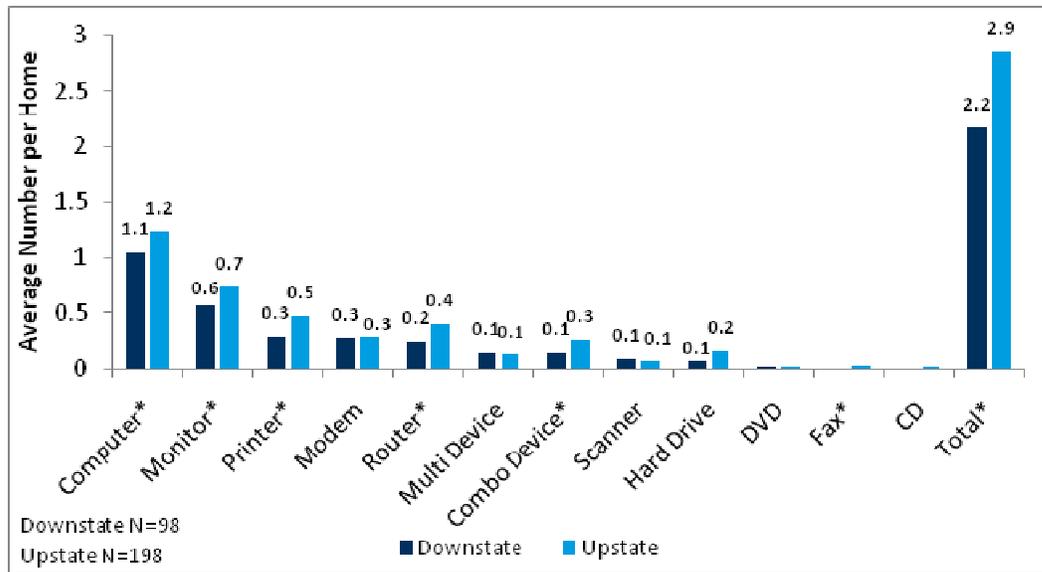
A multifunction device is a printer that incorporates additional capabilities such as scanning, photocopying, faxing, or sending E-mail. An example of a combination device is an external CD/DVD player.

* Indicates statistical significance.

Saturation of Technology

Downstate customers averaged 1.1 computers per home, and upstate customers averaged 1.2 computers per home. On average, downstate customers had a total of 2.2 devices attached to their computers, and upstate customers had 2.9 (Figure 31).

Figure 31. Average Number of Computers and Their Auxiliary Devices per Home, 2010



* Indicates statistical significance.

Computer Characterization

Downstate and upstate residents both average 0.5 laptops per home. For desktops, the average was 0.6 for downstate residents and 0.7 for upstate residents (Figure 32). Desktops make up over half of computer types for NYSERDA customers (57 percent; Figure 33).

Figure 32. Computer Type, 2010

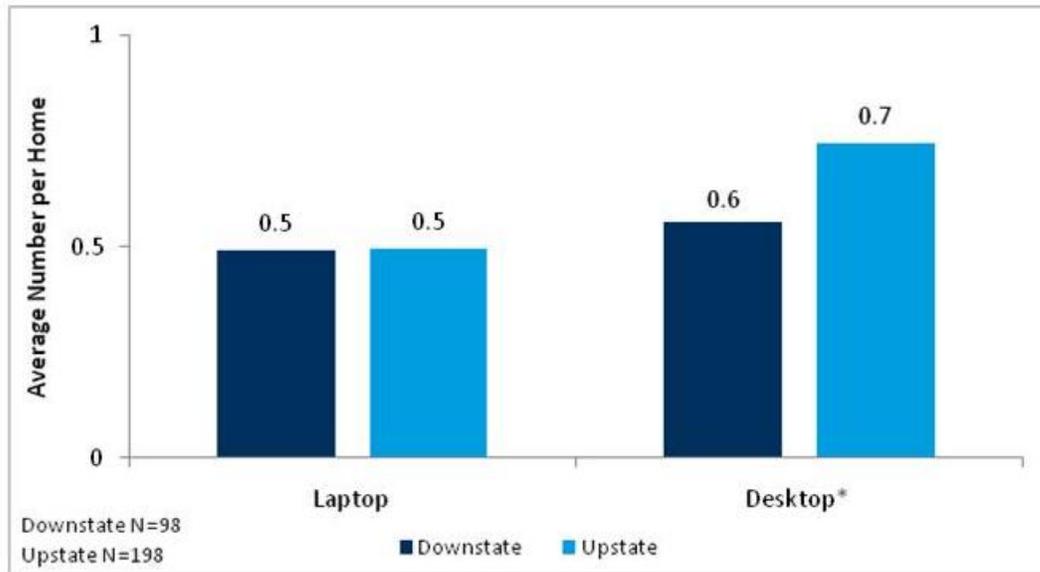
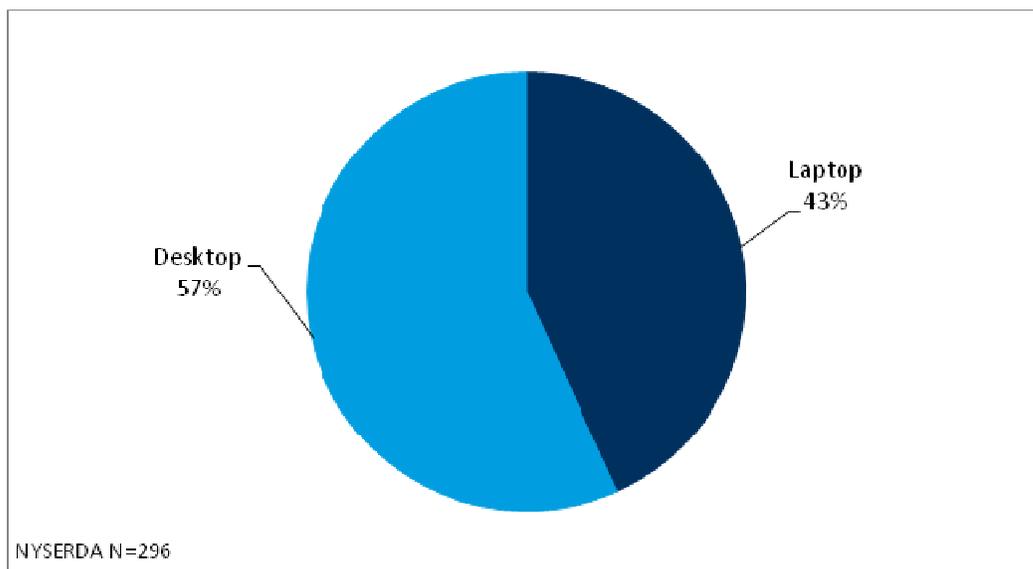
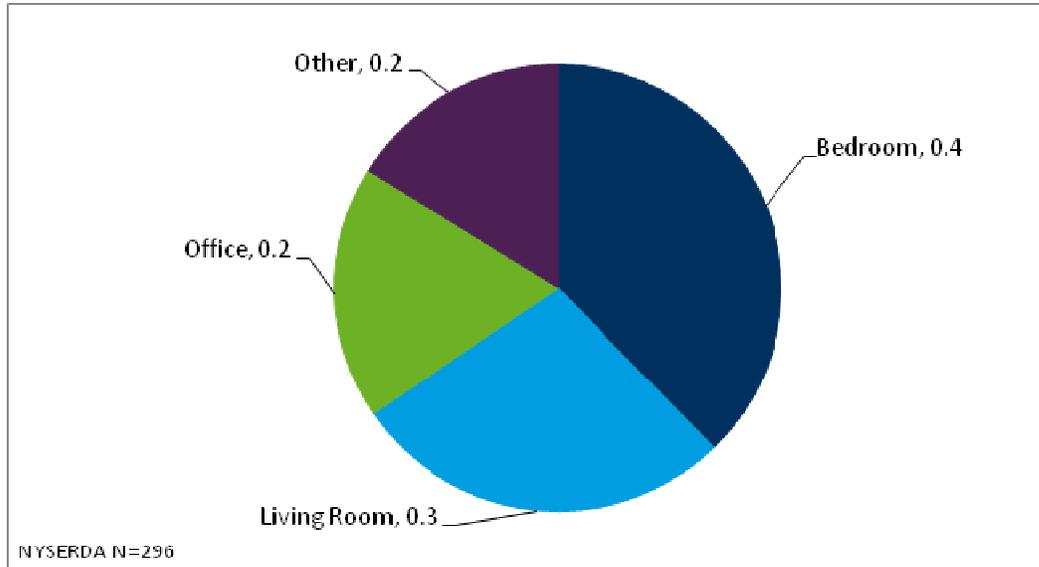


Figure 33. Computer Type, NYSERDA Territory, 2010



The greatest number of computers was located in bedrooms and living rooms (0.4 and 0.3, on average). This was closely followed by an average of 0.2 computers in offices (Figure 34).

Figure 34. Average Number of Computers per Room, NYSERDA Territory, 2010



There is very little change in computer saturation from 2009 to 2010.

Table 8 shows that most NYSERDA customer homes had just one computer (46 percent), followed by two computers (23 percent). Approximately three percent of homes had four or more computers. There is very little change in computer saturation from 2009 to 2010.

Table 8. Percent of Computers in Homes, NYSERDA Territory

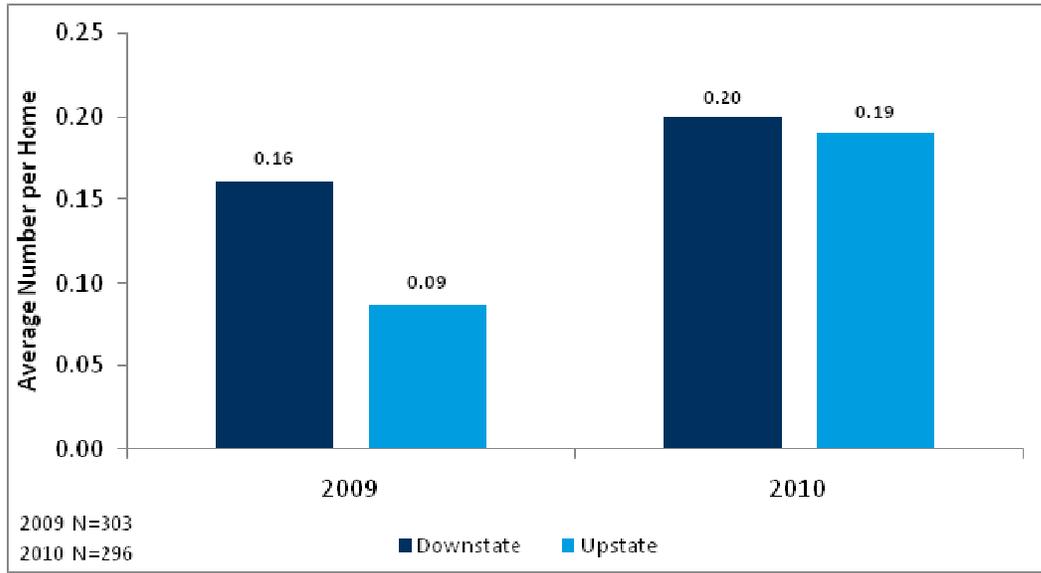
# of Computers	2009	2010
Zero	20%	20%
One	44%	46%
Two	21%	23%
Three	8%	7%
Four*	4%	2%
Five or more	2%	1%

* Indicates statistical significance from 2009 to 2010.

Power Usage Habits

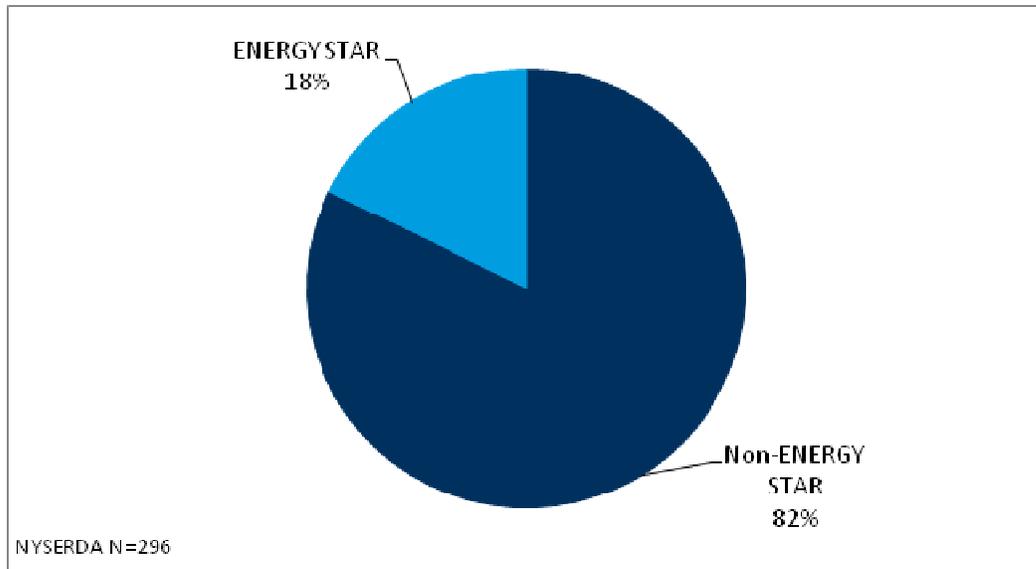
The average number of ENERGY STAR rated computers was nearly identical between upstate and downstate customers (Figure 35). Eighteen percent of all computers among NYSERDA customers were ENERGY STAR rated in 2010 (Figure 36), compared to 10 percent in 2009.

Figure 35. ENERGY STAR Computers—2009 vs. 2010



Differences between 2009 and 2010 are statistically significant at the 90 percent confidence level. Statistical significance was not found between downstate and upstate for either year.

Figure 36. All Computers—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2010



Almost half of all NYSERDA customers turned off their computers when finished using them (43 percent). Thirty percent turned them off daily, and another 16 percent reported never turning them off. An additional 11 percent turned their computers off only when going on vacation (Figure 37). From 2009 to 2010, the number of people who never turn their computer off decreased from 23 percent to 16 percent (

Table 9).

Over half (58 percent) had their computer's standby mode go into effect automatically. Almost one-quarter (22 percent) never used their computer's standby mode (Figure 38). This question is independent of when computers are turned off, which is discussed below.

Figure 37. When Computers Were Turned Off, NYSERDA Territory, 2010

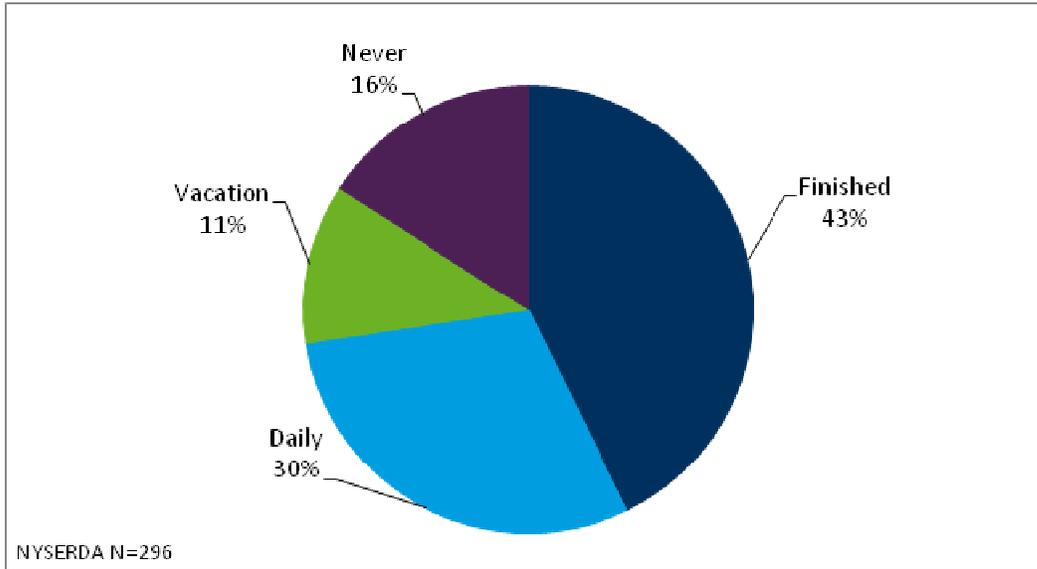


Figure 38. When Standby Mode was Used, NYSERDA Territory, 2010

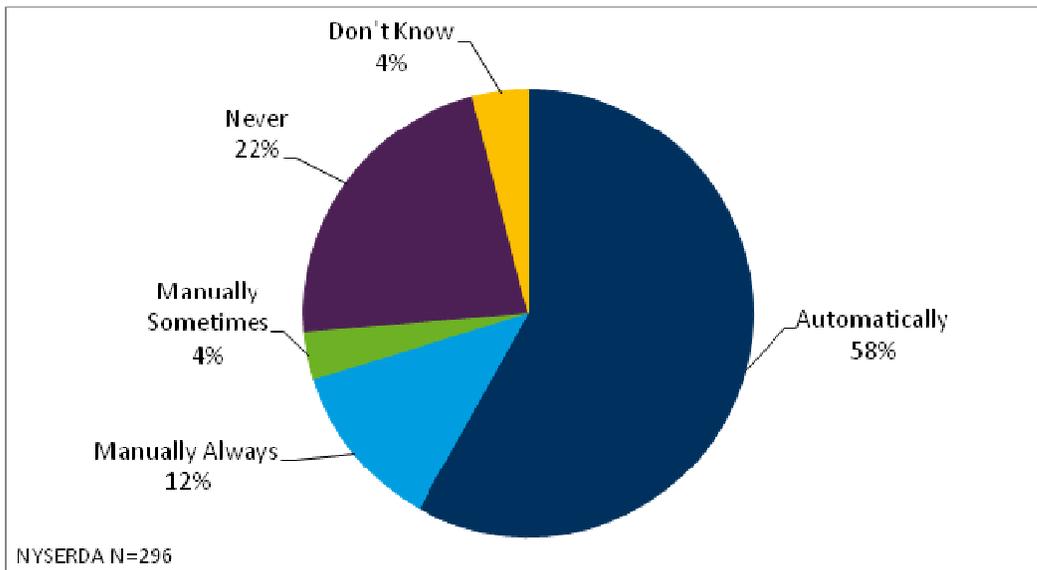


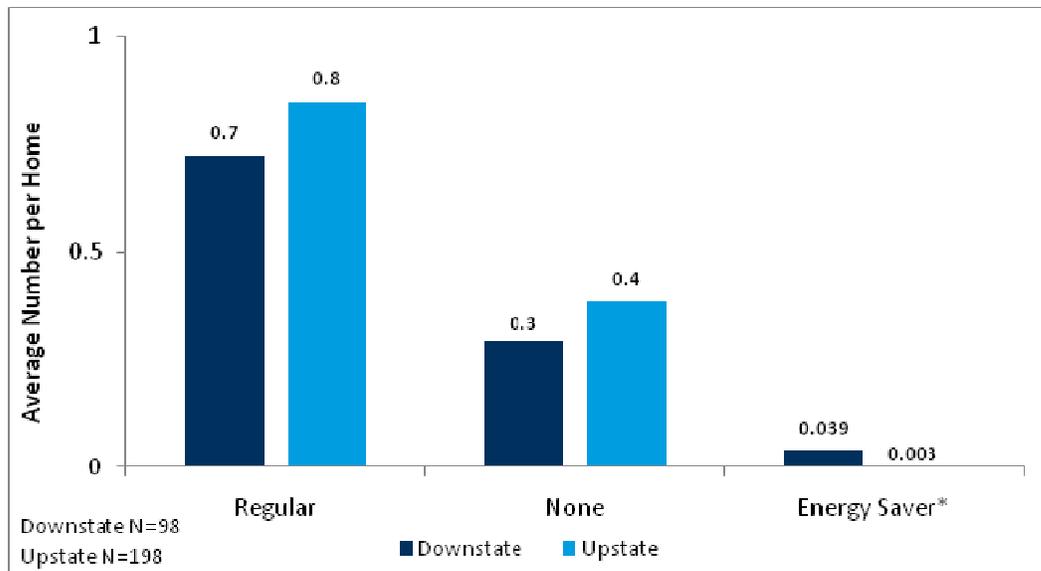
Table 9. Energy Usage Habits, NYSERDA Territory

	2009	2010
Turn Off Computer		
Finished*	50%	43%
Daily	22%	30%
Vacation*	5%	11%
Never*	23%	16%
Use of Stand By Mode		
Automatically*	67%	58%
Manually Always	8%	12%
Manually Sometimes*	1%	4%
Never	21%	22%

* Indicates statistical significance between 2009 and 2010.

Seventy percent of NYSERDA customers had their computer attached to a power strip. However, of these power strips, only two percent were energy saver (Figure 40). Furthermore, of those with power strips, 73 percent never turned them off (Figure 41).

Figure 39. Presence and Type of Power Strip Attached to Computers, 2010



* Difference is statistically significant at the 90 percent confidence level.

Figure 40. Presence and Type of Power Strip Attached to Computers, NYSERDA Territory, 2010

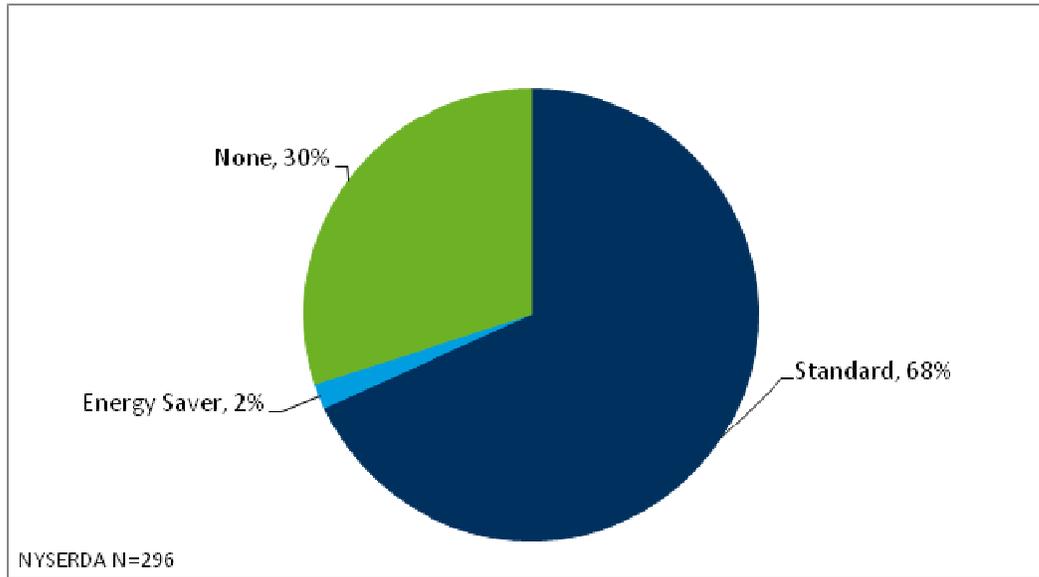


Figure 41. When Power Strips Attached to Computers Were Turned Off, NYSERDA Territory, 2010

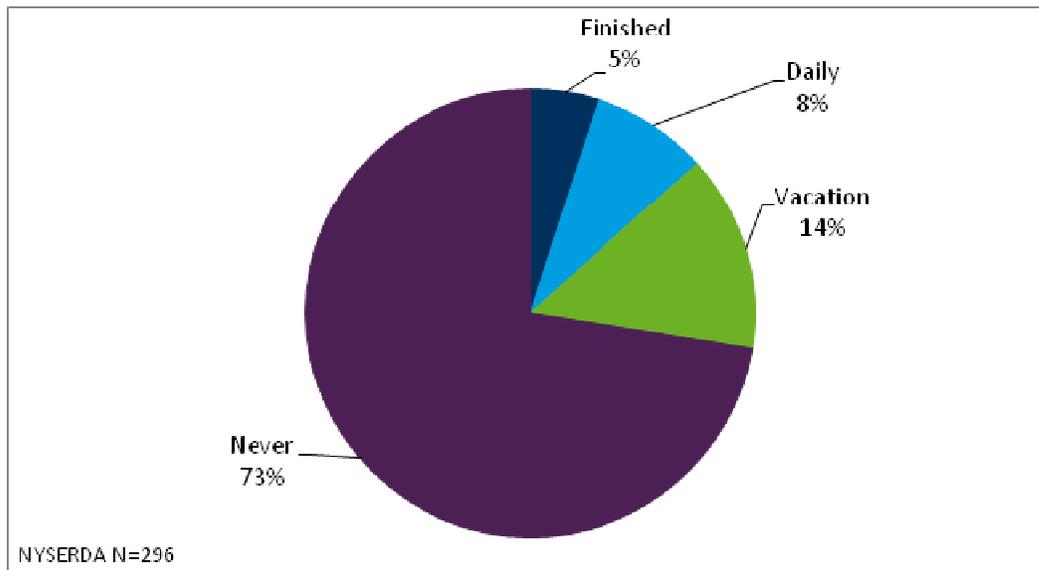


Table 10. Power Strips and Computer Energy Usage Habits, NYSERDA Territory

	2009	2010
Power Strips		
None	29%	30%
Standard*	70%	68%
Energy Saver	1%	2%
Motion Sensor	0%	<1%
Turn Off Power Strips		
When Finished	7%	5%
Daily*	3%	8%
Vacation	11%	14%
Never*	79%	73%

* The difference between 2009 and 2010 is statistically significant at the 90 percent confidence level.

Downstate customers used their computers, on average, for slightly longer periods than upstate customers (3.5 hours versus 3.3 hours;¹⁵ Table 11). Figure 42 reflects the computer that was on for the longest amount of time in each person's home. Although the zero to two hour range made up the highest percentage (39 percent), the three to four hour and five to 10 hour ranges were also sizable (21 percent and 24 percent). Those in the five to 10 hour range and above may represent an approximation of the share of households with someone working at home.

Figure 43 shows the average amount of time all computers in customer homes were in use. The zero to two hour range was the greatest at 52 percent, followed by the five to 10 hour range (24 percent).

Table 11. Average Number of Computer Usage Hours*

Year	NYSERDA	Downstate	Upstate
2009	5.1	5.0	5.1
2010	3.4	3.5	3.3

*The differences between 2009 and 2010 are statistically significant at the 90 percent confidence level. Differences between upstate and downstate are not statistically significant.

¹⁵ This value was calculated by taking the average of the average hours of use of all computers within each household.

Figure 42. Max Computer Usage per Day, NYSERDA Territory, 2010

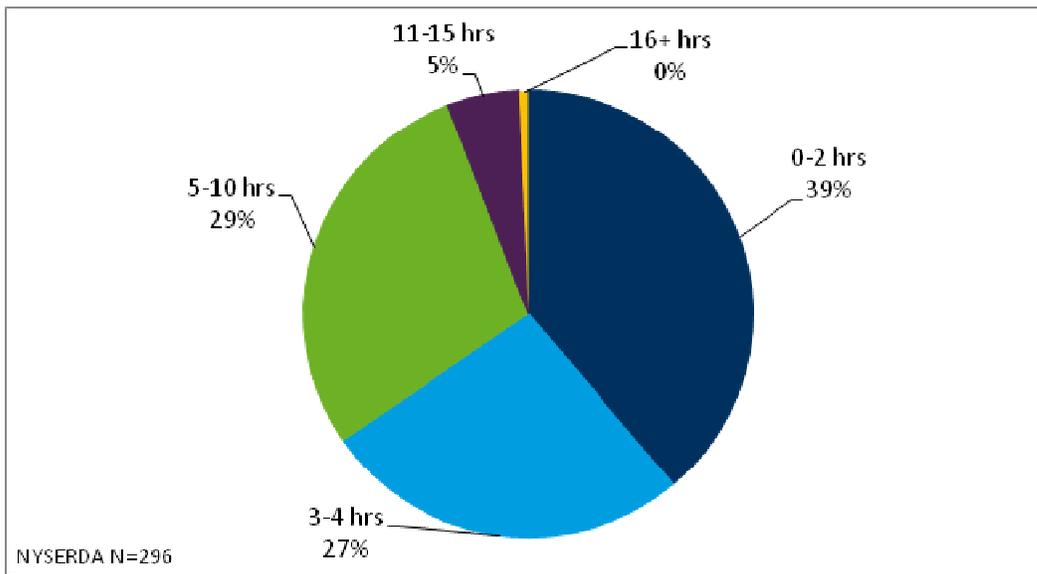
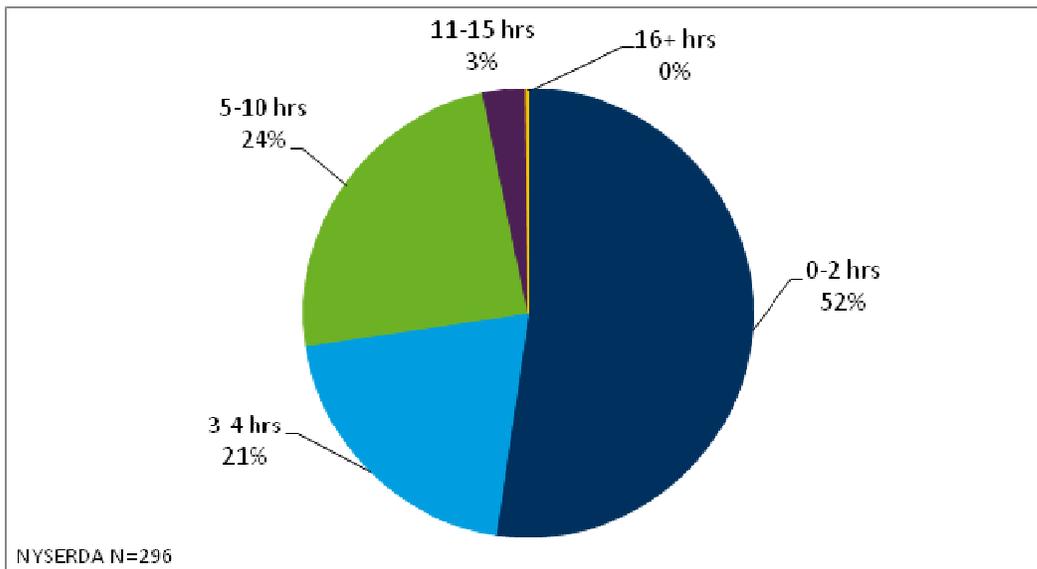


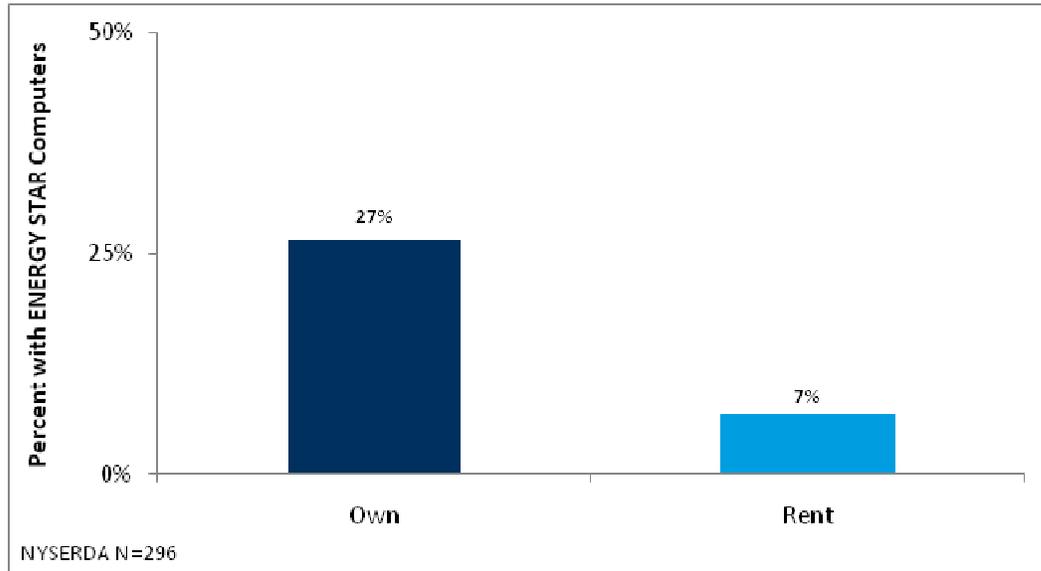
Figure 43. Average Time Computers Were On, NYSERDA Territory, 2010



Computer Demographics

Figure 44 shows the percentage of households with an ENERGY STAR computer based on homeownership status. A higher percentage of homeowners had an ENERGY STAR computer than those who rented their homes.

Figure 44. Percent With an ENERGY STAR Computer, NYSERDA Territory, 2010



New York Energy Smart Products Home Electronics Phone Survey

In August 2010, over 400 NYSERDA-area residents were interviewed about their energy usage habits and the electronic devices in their home. The survey took approximately 20 minutes to complete. The purpose of the survey was to gather high level data on electronics saturations as well as attitudes towards energy efficiency and purchasing decisions.

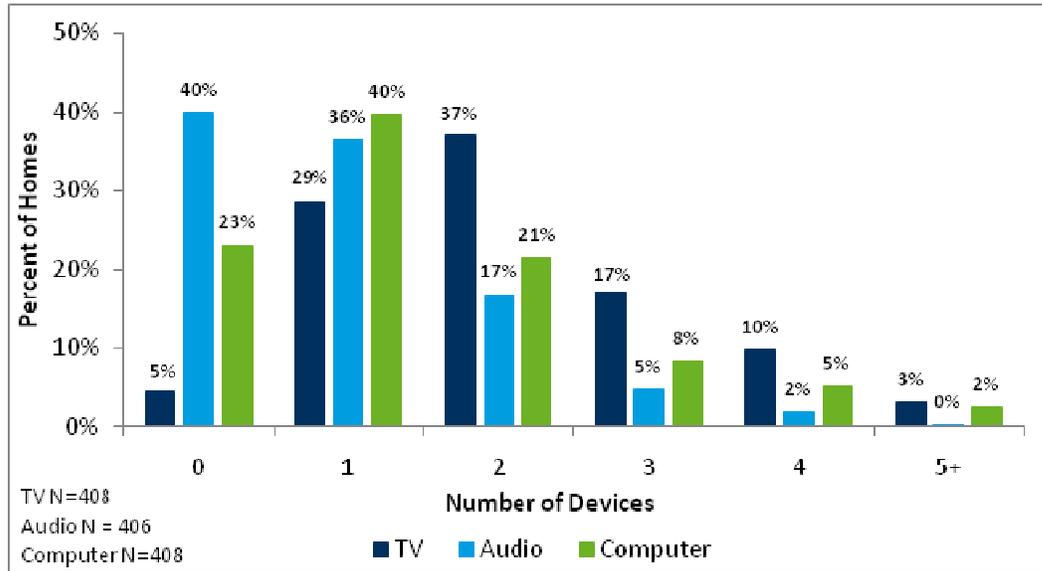
Overall Saturations

Figure 45 shows that while only five percent of NYSERDA territory customers had no TVs, 40 percent had no audio devices,¹⁶ and 23 percent had no computers. Findings from the survey also revealed the most common penetration of devices; 37 percent of households had two TVs, 40 percent had one computer, and 40 percent had no audio devices.

In comparison, the on-site findings indicate that 97 percent of households had at least one TV, 37 percent had at least one audio device, and 72 percent had at least one computer. With the exception of the difference in methodology for defining audio devices, results between on-site data and telephone survey data are similar for TVs and computers. The telephone survey data show that 95 percent of households had at least one TV and 77 percent had at least one computer. The small difference in presence of devices is due to sampling error.

¹⁶ Respondents were instructed to report only audio devices that included stand-alone stereos, component stereo systems, and surround sound systems. They were told not to report boom boxes, small clock radios, or iPods. Audio data will not be comparable to site visit data since site visits only categorized audio components that were not connected to a TV or computer.

Figure 45. Percent of Homes with TVs, Audio Devices, and Computers



Presence of Devices and When Purchased

The majority of homes had one to three TVs (83 percent; Figure 46). Only five percent of homes had no TV. Respondents were asked specific questions about their most commonly used TV and their second most commonly used TV, if they had two or more TVs. Seventy-one percent of respondents bought their most commonly used TV three or more years ago and 60 percent bought their second most commonly used TV three or more years ago (Figure 47). Findings revealed that flat screen TVs are nearly as common as CRTs (Figure 48). Among flat screen TVs, standard LCDs were the most common followed by plasma screens, and then LED-enhanced LCDs (Figure 49).

Figure 46. Percent of Homes with TVs and Number of TVs

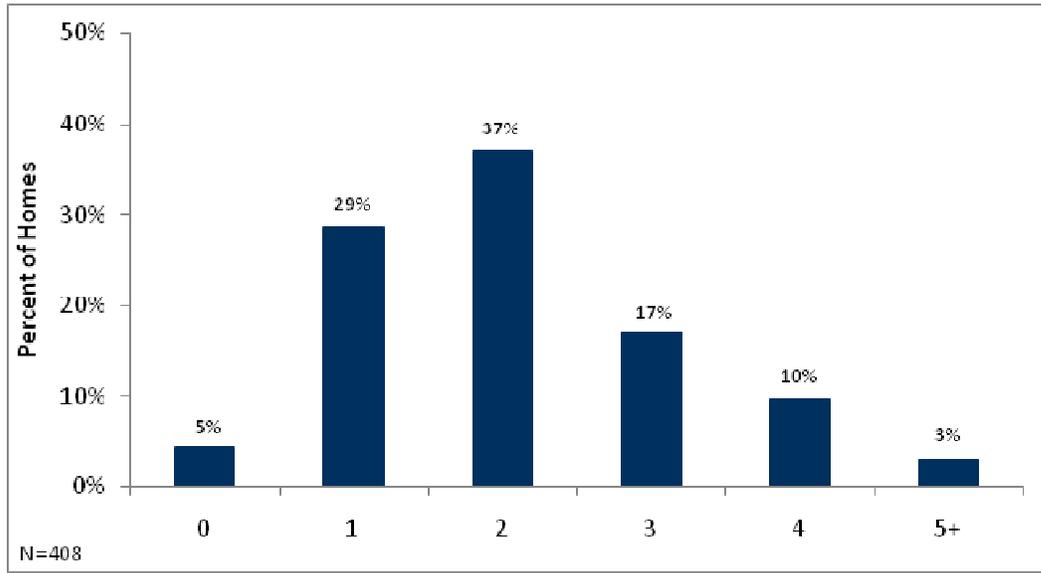


Figure 47. When TV was Purchased

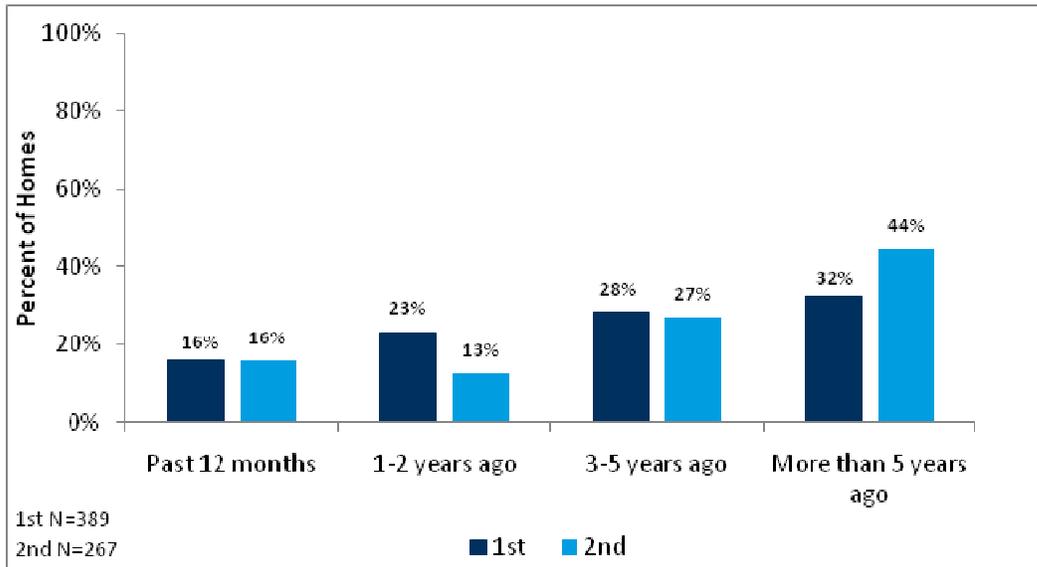


Figure 48. Type of TVs

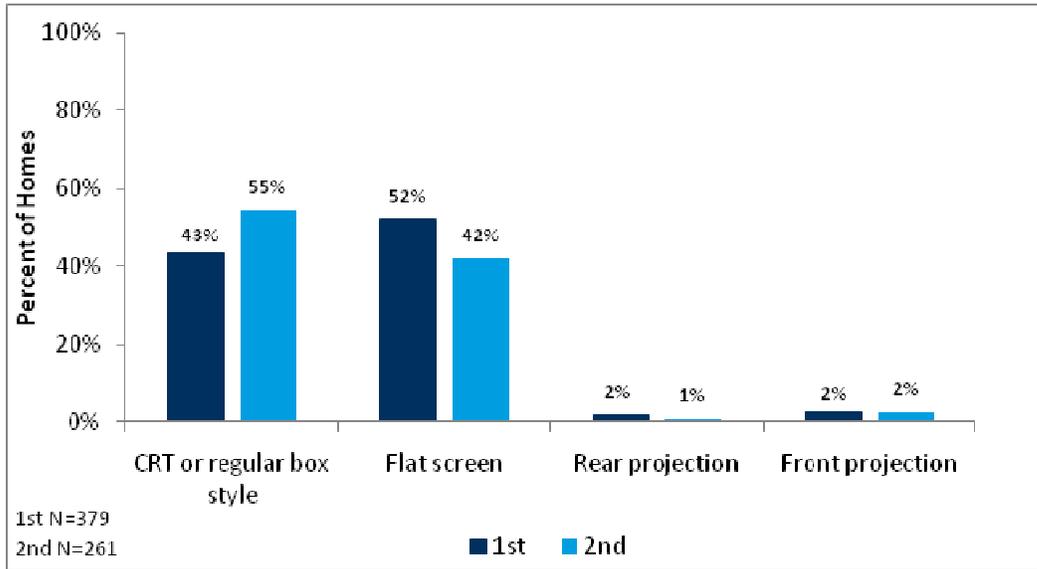
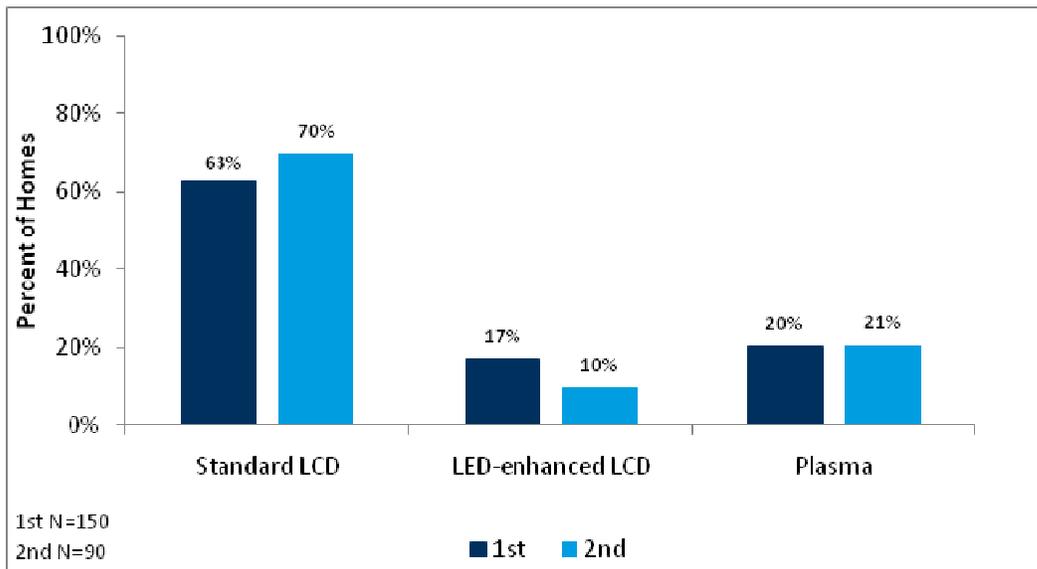


Figure 49. Type of Flat Screen



The majority of homes had zero or one audio device (**Error! Not a valid bookmark self-reference.**). However, homes that reported having no audio device may have a small boom box or an iPod, as these devices were not considered in this survey. Like TVs, the majority of audio devices were purchased three or more years ago (Figure 51). The most commonly used audio device was evenly split between a stand-alone system and a component system (50 percent and 49 percent; Figure 52). A stand-alone device was explained to the respondents as working on its own, such as a stereo with radio, tape player, and/or CD

player that may have extra devices attached to it such as extra speakers. A component system was explained as being made up of different components working together, such as a radio receiver with separate speakers and a CD player.

Figure 50. Percent of Homes with Audio Devices

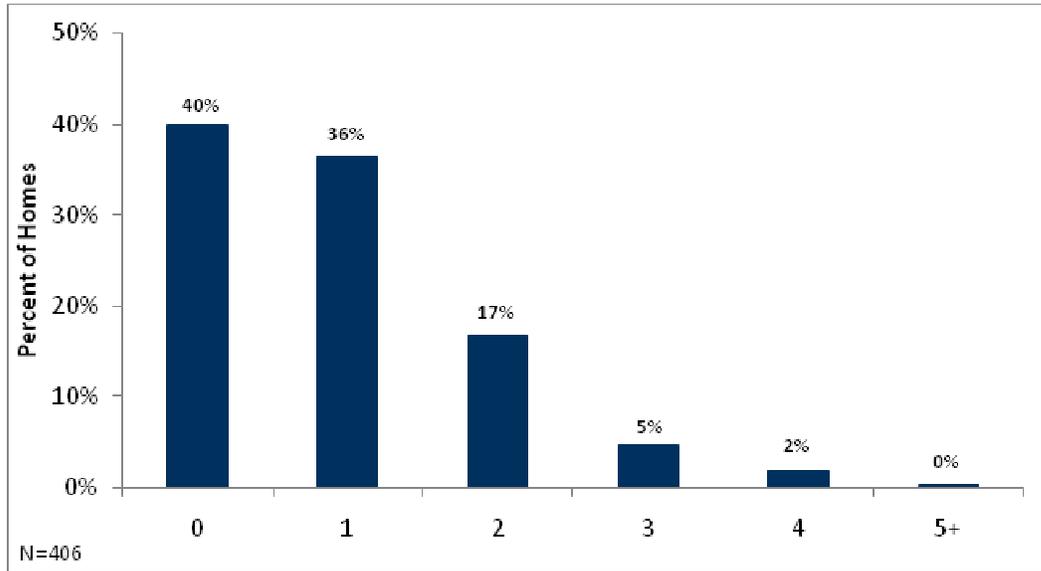


Figure 51. When Audio Device was Purchased

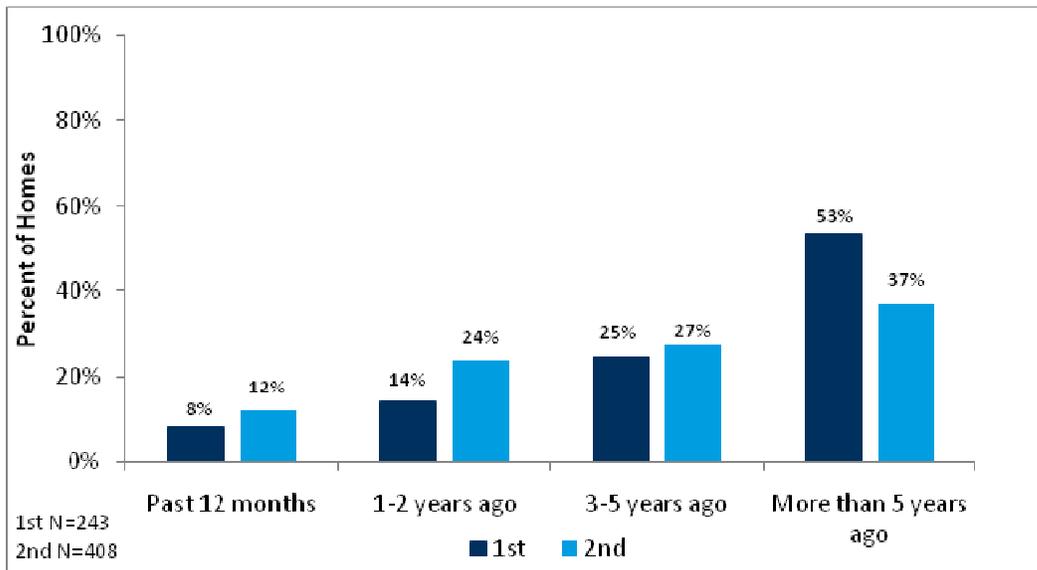
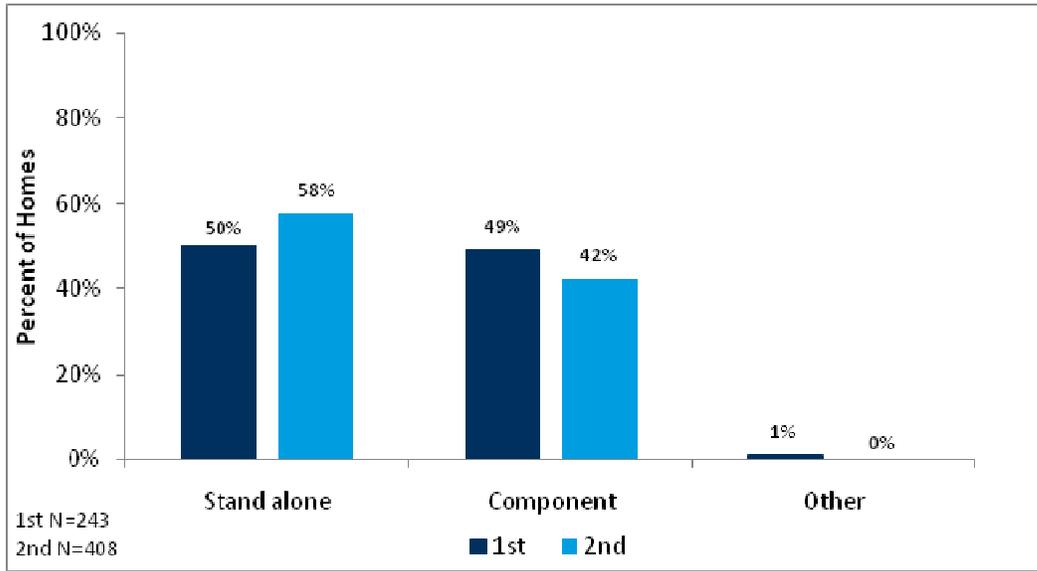
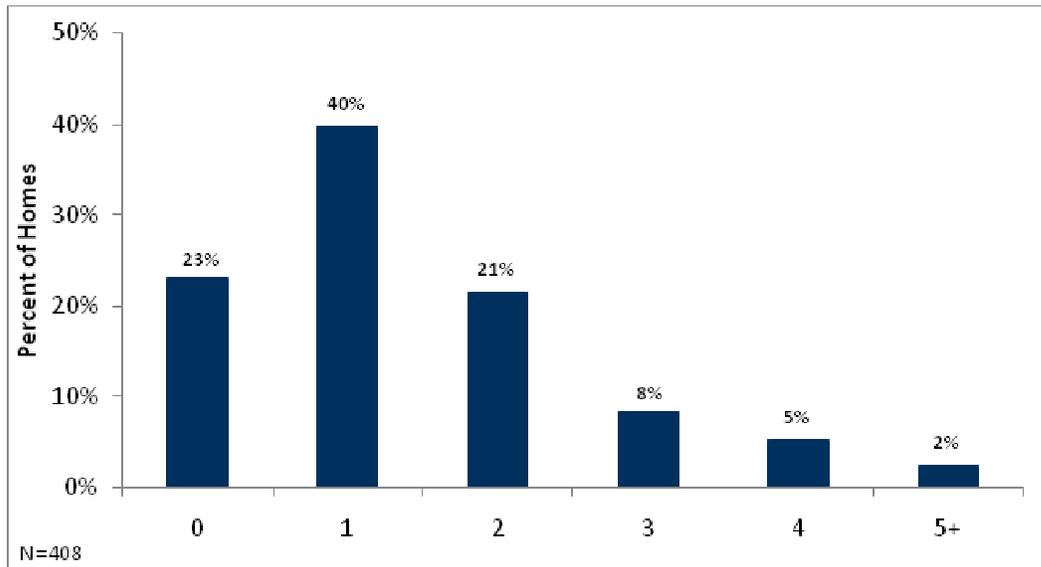


Figure 52. Type of Audio Device



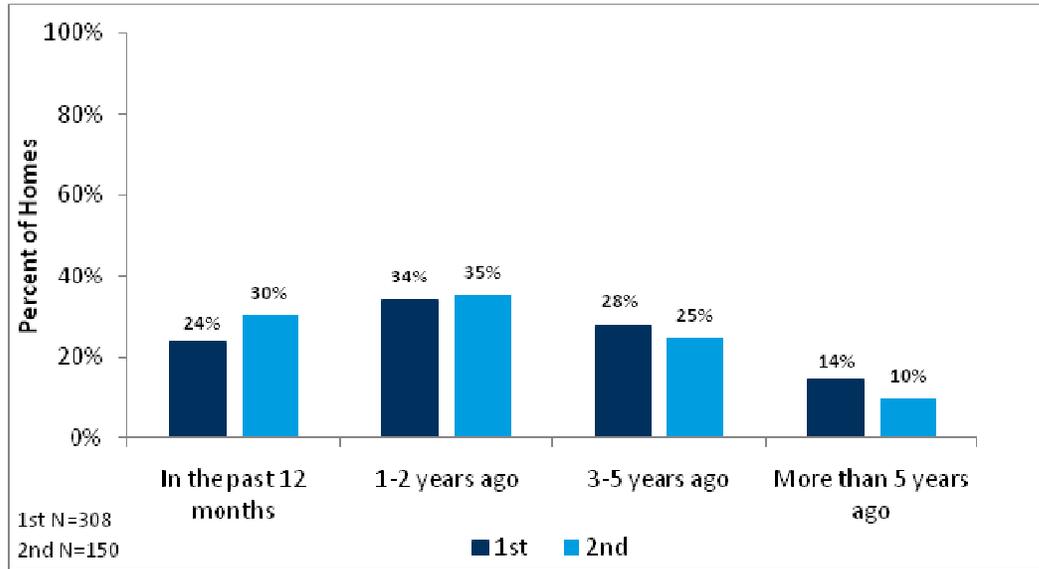
As shown in Figure 53, 40 percent of all households surveyed reported having only one computer. Twenty-three percent reported having no computer and 21 percent reported having two computers

Figure 53. Percent of Homes with Computers



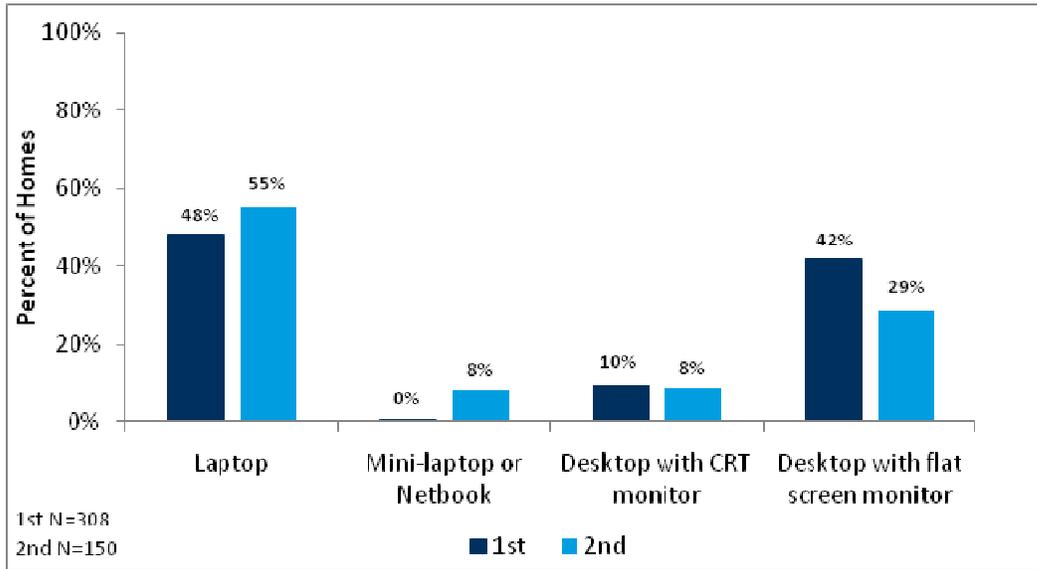
Respondents were also asked when they purchased their computers. Fifty-eight percent of households purchased their most commonly used computer within the last two years, and 65 percent purchased their second most commonly used computer within the last two years (Figure 54).

Figure 54. When Computer was Purchased



Questions were also asked regarding the type of computer most commonly used in their household. Over half of households (52 percent) have a desktop computer as their most commonly used computer. Of that 52 percent, 42 percent have a flat screen monitor. Fifty-five percent of households second most commonly used computer is a laptop (Figure 55).

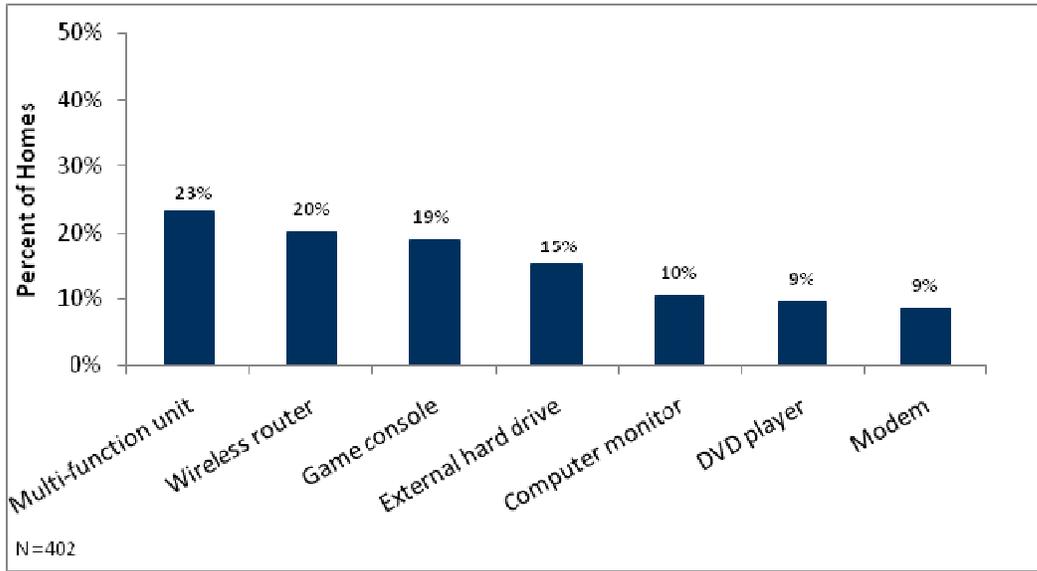
Figure 55. Type of Computers



Purchases Made in the Past Year

Survey participants were asked about recent purchases of electronic devices. Among respondents, the most commonly purchased auxiliary electronic devices within the past year were multi-function units (an all-in-one printer, fax machine, scanner, and copier; 23 percent), wireless routers (20 percent), and game consoles (19 percent; Figure 56).

Figure 56. Auxiliary Electronic Devices Purchased in the Last Year



Respondents were asked how much money they spent on electronic devices last year. On average, 53 percent of respondents spent less than \$500 on electronic devices in the past year, while 20 percent spent more than \$1,000 (Error! Not a valid bookmark self-reference.). Respondents were also asked how much they spend on electronic devices in an average year, in case their spending habits for the past year were unique. Sixty-six percent of respondents spend less than \$500 each year, and 10 percent spend more than \$1,000 each year (Figure 58). The majority of respondents spent less than \$1,000 on their first and second most commonly used TVs.

Figure 57. Estimated Amount Spent on All Electronic Devices in the Past Year

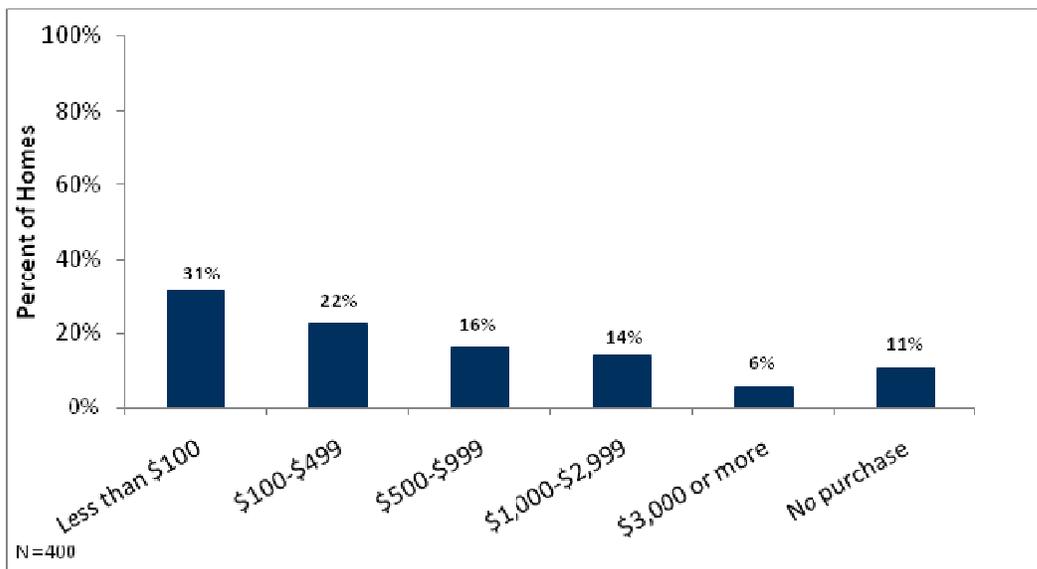
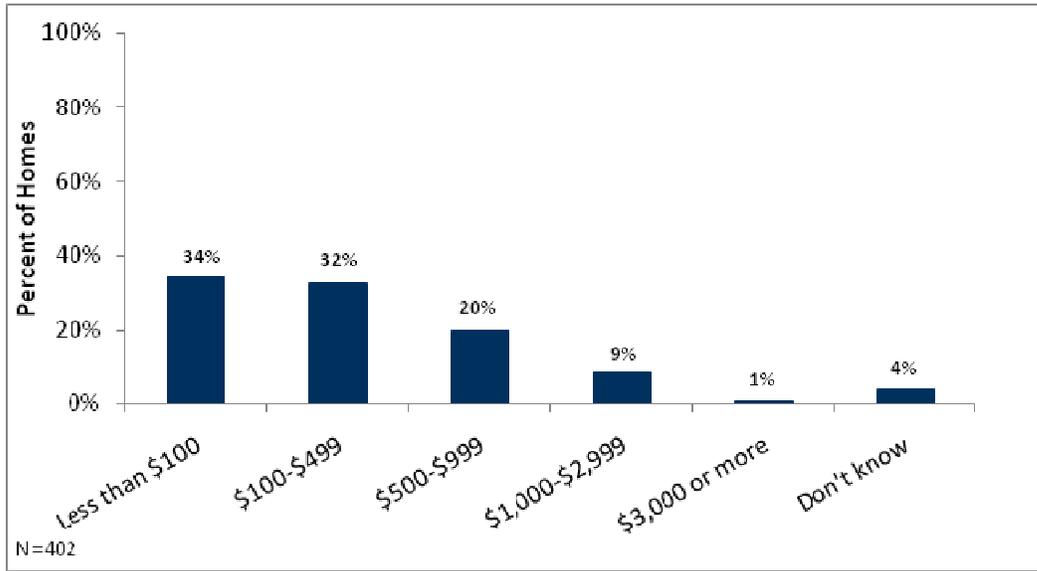
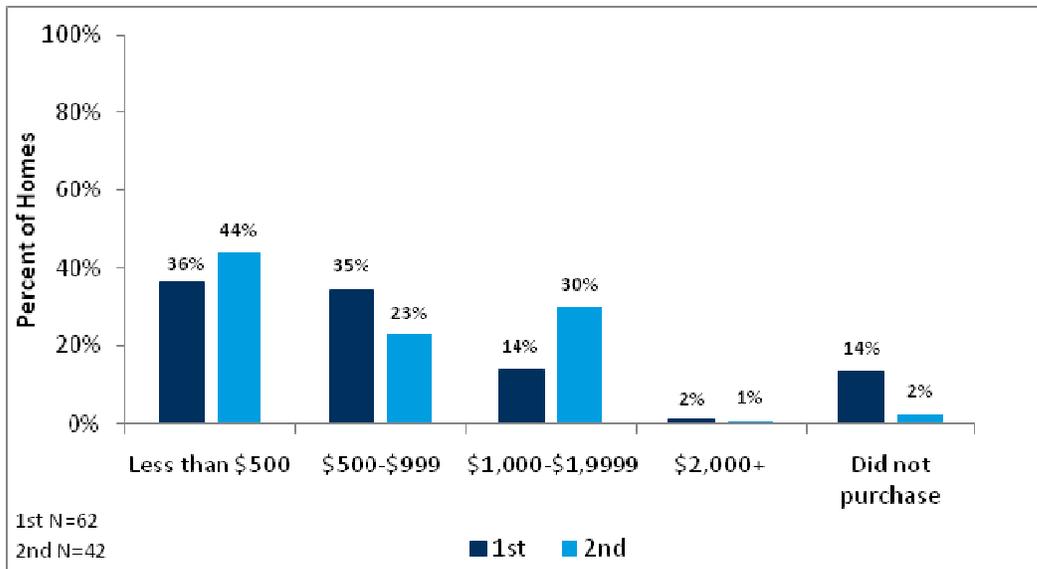


Figure 58. Estimated Amount Spent on All Electronic Devices in One Year on Average



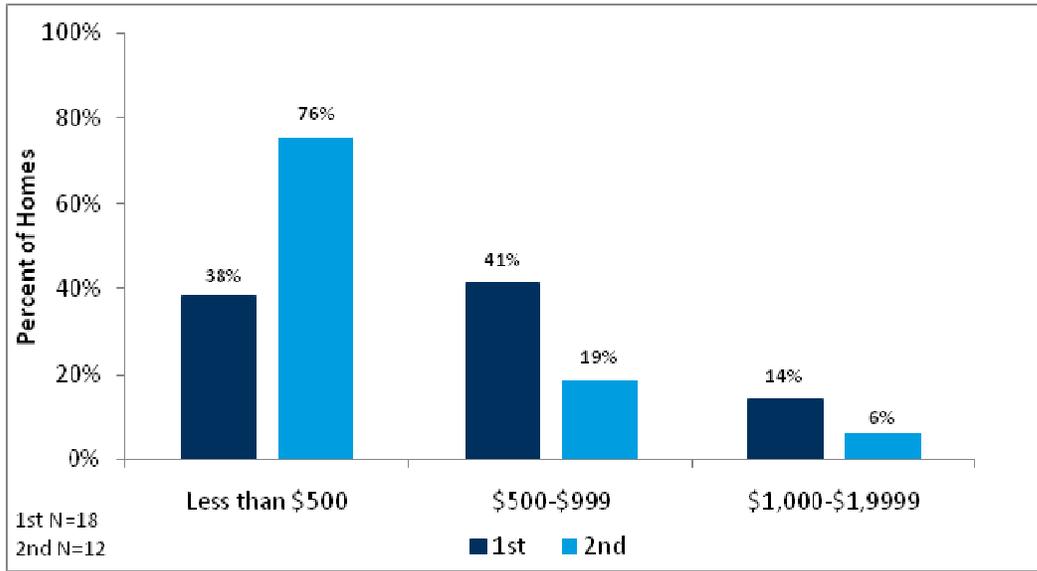
Next, respondents were asked about the cost of specific electronics devices. Very few spent \$2,000 or more on their TV set (Figure 59).

Figure 59. Cost of TV



When asked how much they spent on their most commonly used audio devices, the majority of respondents spent less than \$1,000 (79 percent). Among the second most commonly used audio devices, the majority spent less than \$500 (76 percent; Figure 60).

Figure 60. Cost of Audio Device



Almost half of respondents spent between \$500 and \$999 on their most commonly used computer. The majority of respondents spent less than \$2,000 on each of their first and second most commonly used computers (Figure 61).

Figure 61. Cost of Computer

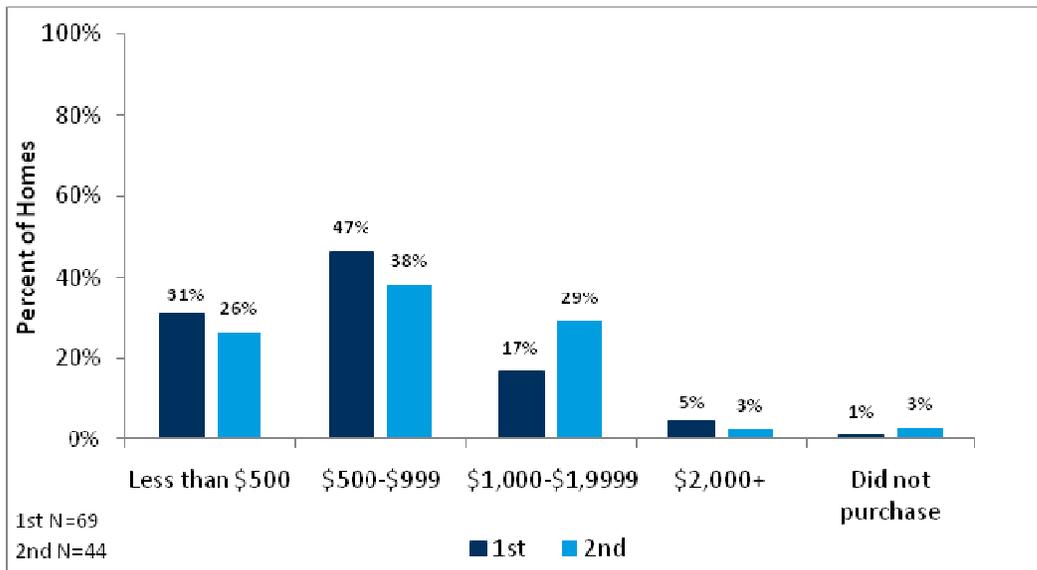


Table 12 indicates the distribution of prices paid by respondents for smaller electronics devices. For the most part, all of these devices cost under \$500.

Table 12. Amount Spent on the Following Devices

Electronic Device	Free with Purchase or Gift	Less than \$100	\$100-\$250	\$250-\$499	\$500-\$749	\$750-\$999	\$1,000 or More
Multifunction unit	13%	27%	41%	12%	3%	3%	1%
Wireless router	29%	43%	25%	3%	0%	0%	0%
Game console	8%	6%	35%	44%	2%	1%	5%
External hard drive	3%	35%	49%	12%	0%	0%	0%
Computer monitor	21%	11%	22%	37%	6%	0%	3%
DVD player	30%	42%	16%	8%	0%	0%	4%
Modem	41%	32%	13%	9%	5%	0%	0%

Energy Awareness and Behavior

Nearly two-thirds of all respondents (63 percent) were unaware of the existence of a phantom load even after it was explained to them (Figure 62). Respondents were asked how often they unplug devices not in use. While 28 percent of respondents said that they “always” or “frequently” unplug devices, 43 percent rarely or never unplug devices (Figure 63). Twenty-eight percent of respondents said that they have one or more electronic device attached to a smart power strip (Figure 64). This finding does not match the site visits findings in which less than two percent of any type of electronic device was attached to a smart power strip. The MCA Team believes the phone survey finding indicates that even when people are given the definition of a smart power strip, awareness of them is so low that the definition is misinterpreted by most and people mistakenly claimed to have a smart power strip in their home.

Figure 62. Awareness of Phantom Load

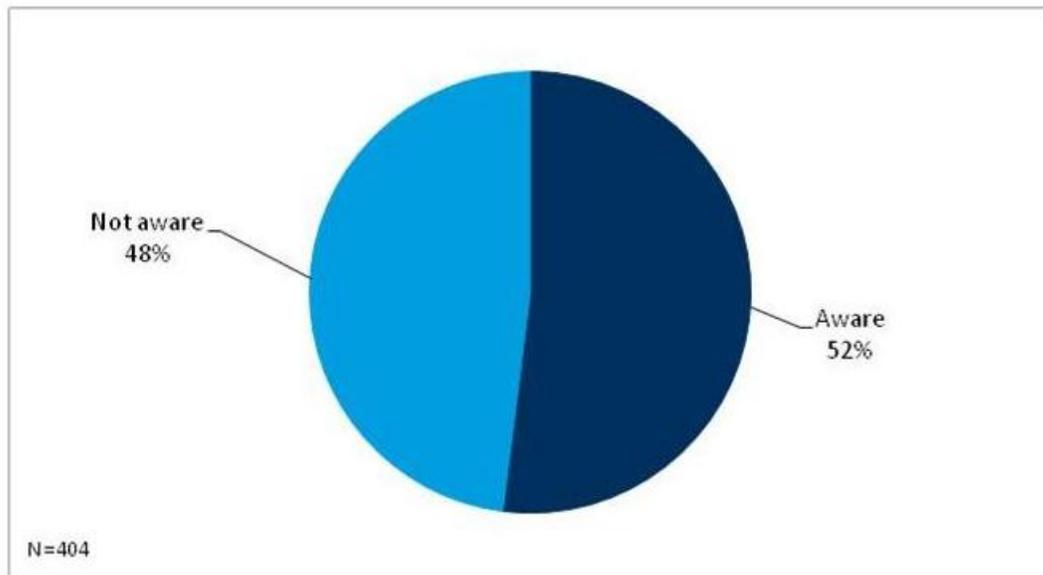


Figure 63. Frequency an Electronic Device is Unplugged When Not in Use

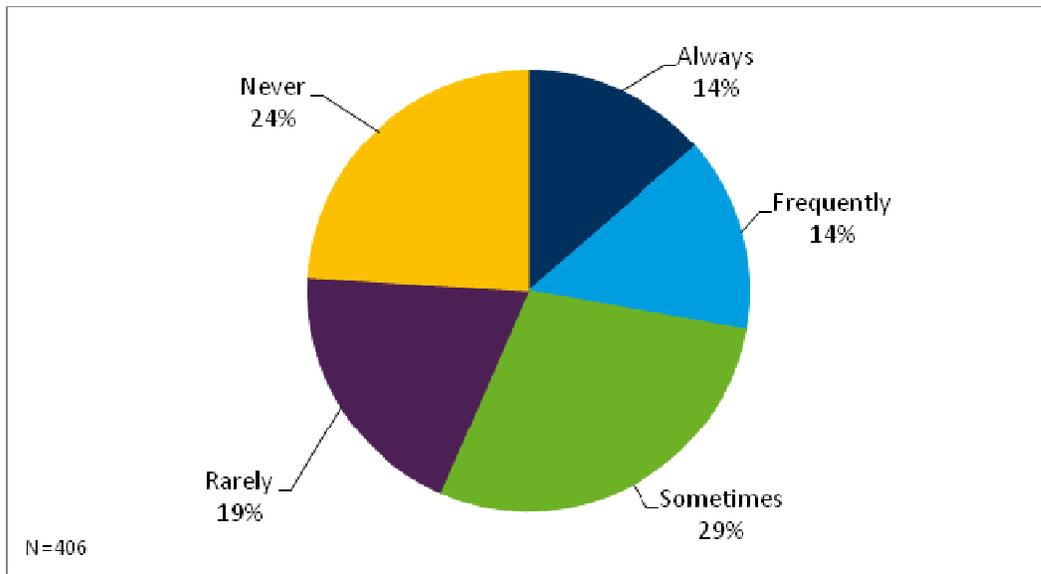
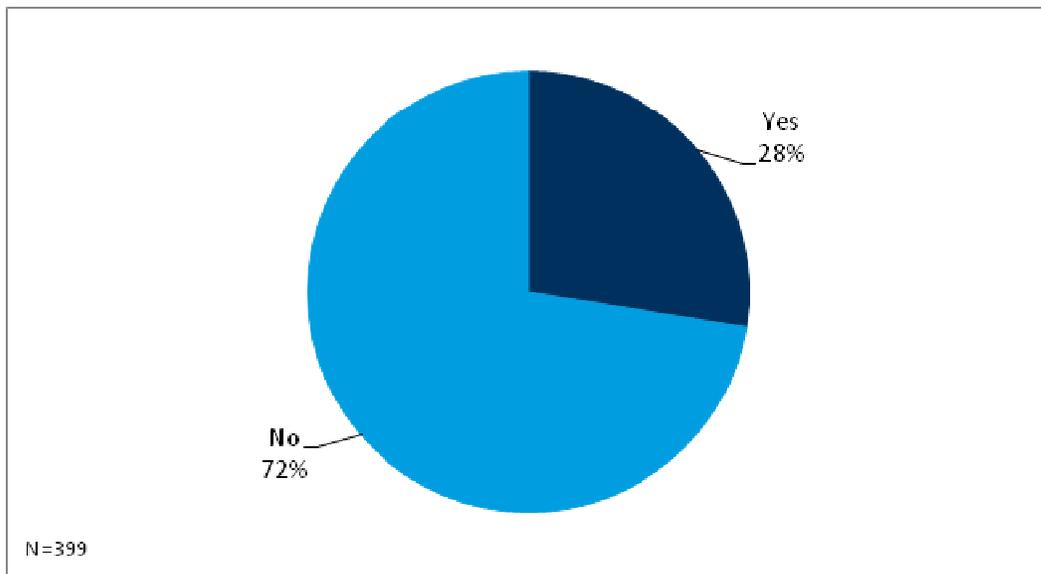


Figure 64. Percent of Respondents with One or More Device Attached to a Smart Power Strip



Respondents were asked how important particular factors were when deciding to purchase an electronic device. Over 60 percent of respondents reported getting the lowest price and purchasing technology that is easy to understand and use as being “very important” (62 percent and 68 percent).

Seventy-seven percent reported energy efficiency as being “very important” or “somewhat important” (42 percent and 35 percent; Figure 65). Sixty-eight percent said that they are either “very willing” or “somewhat willing” to purchase energy saving electronic devices (

Figure 66).

When asked how important energy efficiency was when purchasing a TV, less than 20 percent said that it was “very important.” Forty percent and 44 percent (first most commonly used TV and second most commonly used TV) said that energy efficiency was “not at all important” (Figure 67).

Respondents also reported that energy efficiency was not that important when purchasing an audio device. Among homeowners most commonly used device, 56 percent reported that energy efficiency was “not at all important” and 49 percent reported the same when purchasing their second most commonly used audio device (Figure 68). While the majority of respondents reported energy efficiency to not be too important when purchasing a computer, a higher percentage of respondents did consider energy efficiency to be somewhat important when purchasing both their most common and second most commonly used computers (Figure 69). It could be concluded from this information that while in general people believe energy efficiency is very important and they are willing to purchase energy savings devices, these beliefs don’t convert into actual purchasing behavior for specific electronics. This could be due to a lack of awareness that energy efficiency differs among different TVs, audio devices, and computers.

Figure 65. Importance of Factors when Purchasing an Electronic Device

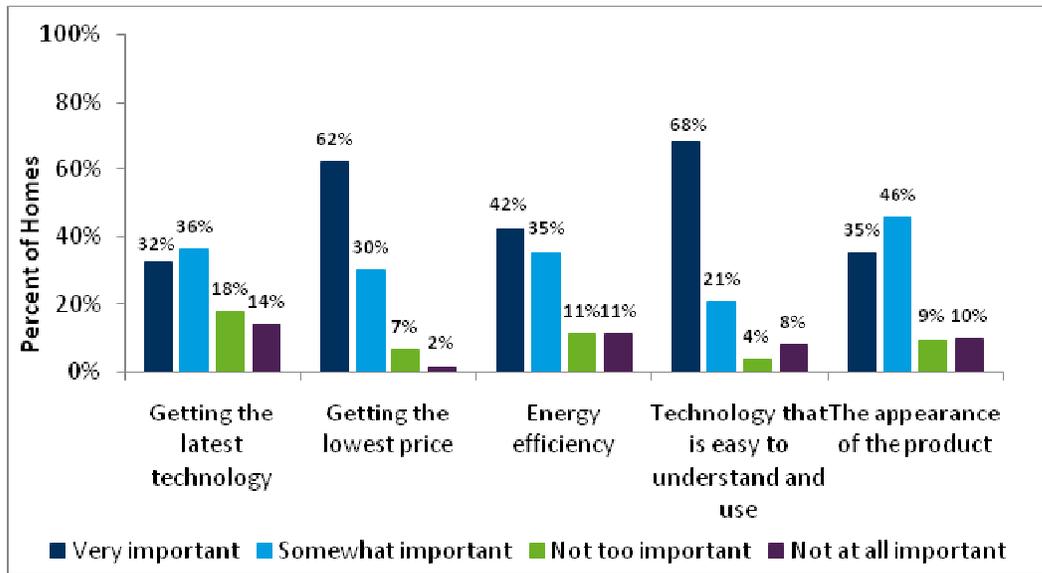


Figure 66. Willingness to Purchase an Energy Saving Electronic Device

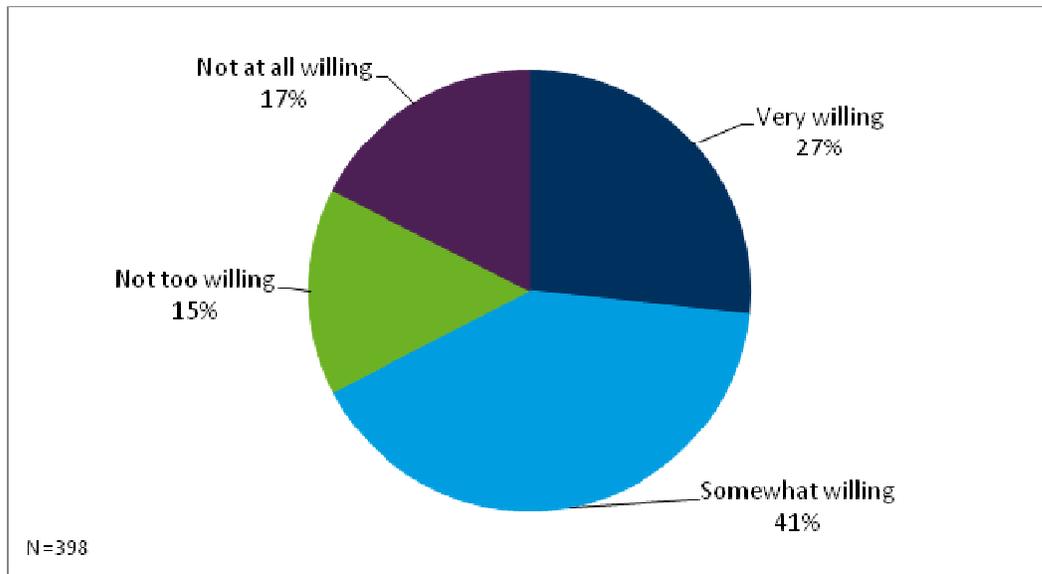


Figure 67. Importance of Energy Efficiency When Purchasing a TV

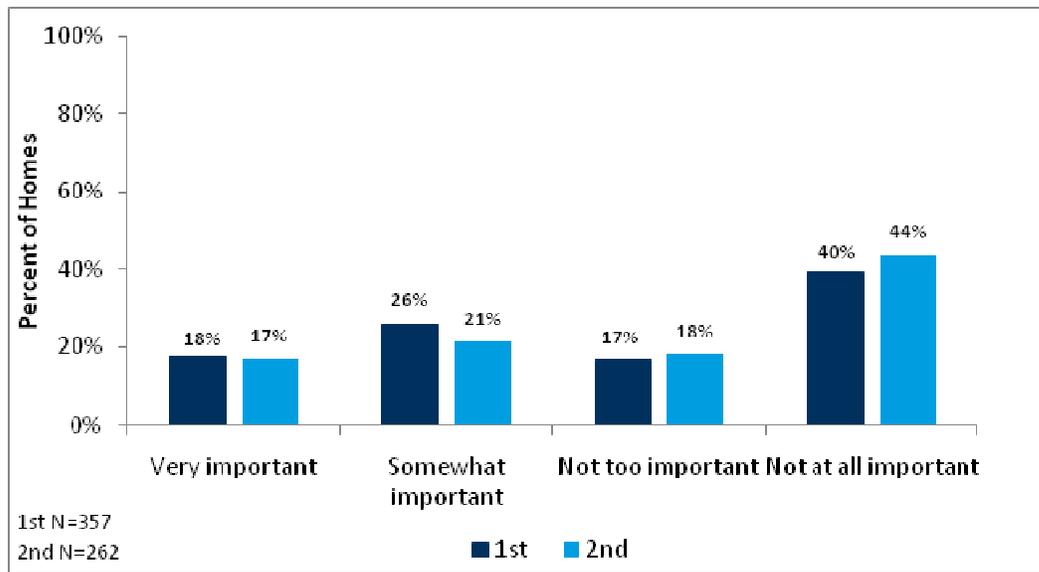


Figure 68. Importance of Energy Efficiency When Purchasing an Audio Device

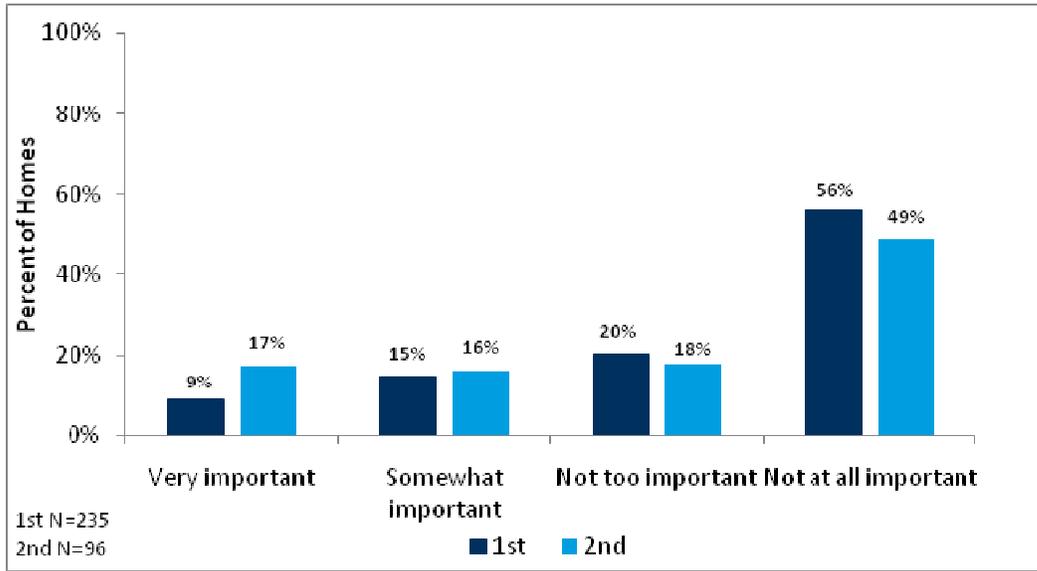
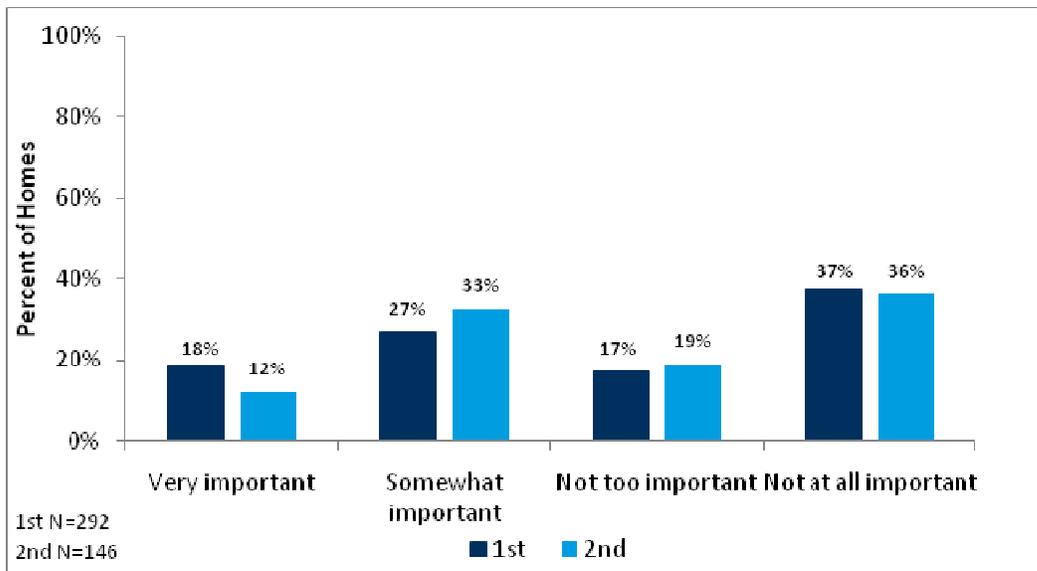


Figure 69. Importance of Energy Efficiency When Purchasing a Computer



Age of Purchasing Decision Makers

Among all electronic device purchases, the 35 to 54 age group was the category with the largest percent of purchase decision makers (Figure 70 through Figure 72 and Table 13). This is consistent with the typical age group of those who purchase homes and have families.

Figure 70. Age of Person Who Decided to Purchase TV

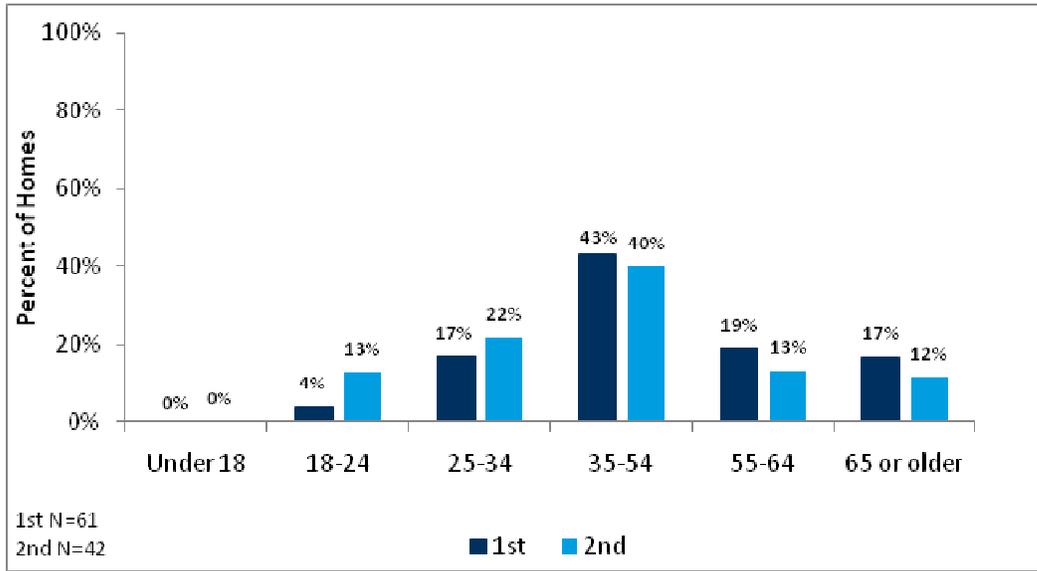


Figure 71. Age of Person Who Decided to Purchase Audio Device

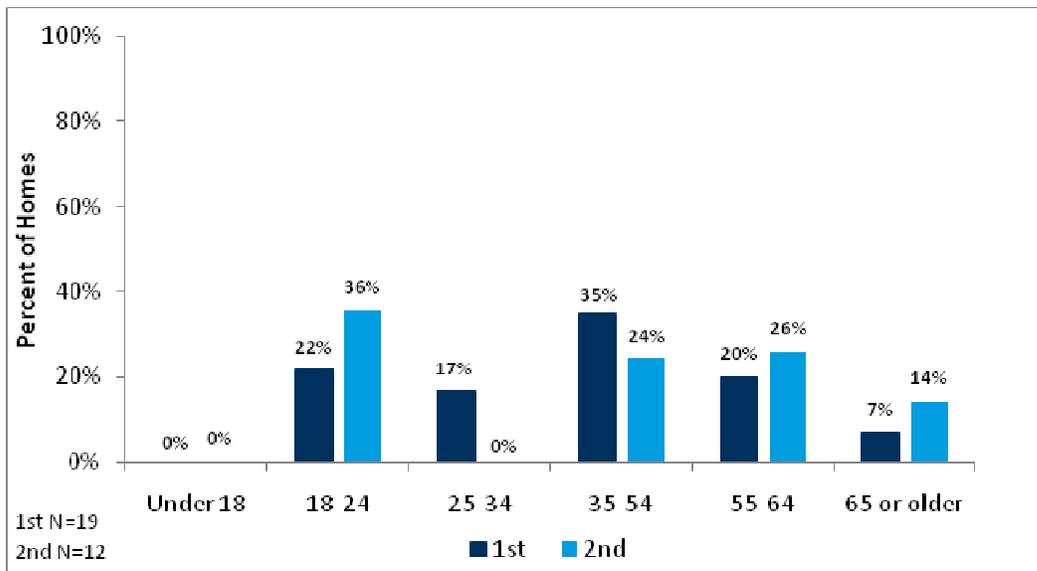


Figure 72. Age of Person Who Decided to Purchase Computer

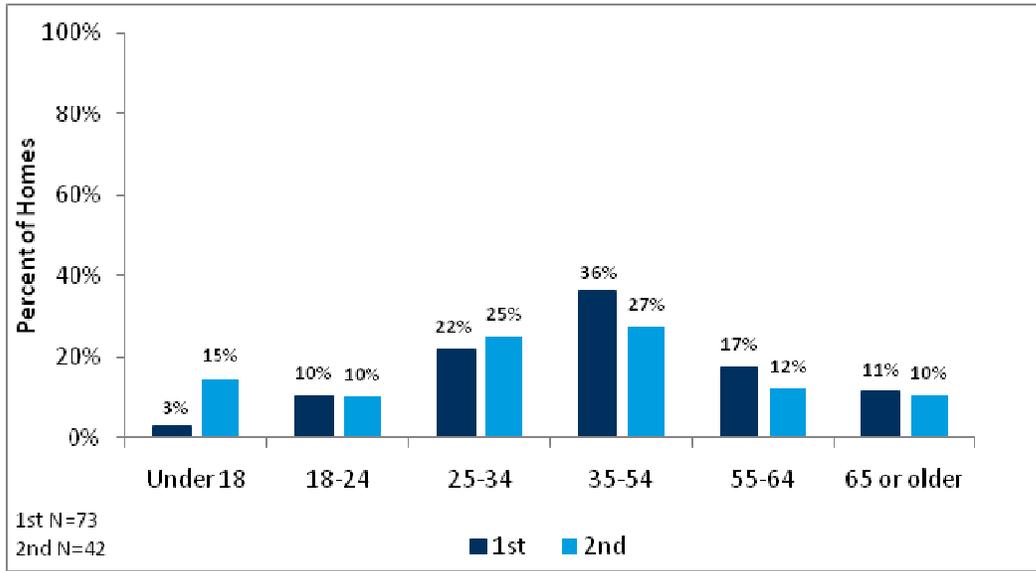


Table 13. Age of Person Who Decided to Purchase Devices

Electronic Device	Under 18	18-24	25-34	35-54	55-64	65 or Older
Multifunction unit	3%	11%	13%	46%	18%	10%
Wireless router	3%	8%	32%	39%	15%	2%
Game console	11%	15%	24%	45%	4%	0%
External hard drive	0%	20%	26%	35%	13%	5%
Computer monitor	2%	20%	16%	35%	17%	11%
DVD player	4%	2%	11%	68%	10%	5%
Modem	7%	21%	11%	41%	16%	4%

Conclusions

While the overall saturation of TVs and computers remained stable between 2009 and 2010 as determined through the on-site visits, the ENERGY STAR® share of both these devices increased. There was also a slight shift in homes with three, four, or five TVs, which had a lower saturation in 2010 compared to 2009 while homes with two TVs had a higher saturation in 2010 compared to 2009. It is apparent that people are replacing old Cathode Ray Tube TVs (CRTs) with the purchase of new flat panel TVs, which increased from 0.4 per home to 0.6 per home between 2009 and 2010; an estimated increase of 900,000 TVs. Respondents may be getting rid of rarely used third, fourth, and fifth TVs around the same time as purchasing a new flat panel TV. Since the majority of new flat panel TVs are ENERGY STAR® rated, this change out is serving to increase its overall share.

The one year period between site visits performed in both 2009 and 2010 saw an increase in the percent of households who turn off their power strips or equipment. For all three electronics types, homeowners in 2010 were more likely to shut off their equipment directly or through a power strip when they went on vacation, at the end of each day, or when they finished using it than they were in 2009 indicating a potential response to educational efforts.

While this shift is encouraging, there appears to be more opportunity to increase awareness and invoke behavioral change. The telephone survey found that 63 percent were unaware of the existence of a phantom load even after it was explained to them. While 28 percent of respondents said that they “always” or “frequently” unplug devices, 43 percent rarely or never unplug devices.

During the telephone survey, the majority of respondents reported that energy efficiency was very important when deciding which electronic device to purchase. When asked the same question about purchasing a particular item such as a TV or audio device, fewer respondents indicated that energy efficiency was important or very important to them. This may reflect that in general people are in favor of energy efficiency, but that when it comes to trade-offs in specific purchases it may be a lower priority. These findings may also indicate a lack of awareness that energy use among electronics varies significantly.

The results indicate that while energy usage behavior is changing slightly, motivation is not high to change behavior or to purchase energy saving electronics. Therefore, MCA Team recommendations include further promotion of ENERGY STAR products and smart power strips that focus on savings to consumers. NYSERDA may even consider offering a promotion in which people receive a smart power strip for free when they purchase an ENERGY STAR device.

The most commonly purchased auxiliary electronic devices within the past year were multi-function units (an all-in-one printer, fax machine, scanner, and copier; 23 percent), wireless routers (20 percent), and game consoles (19 percent). In one year on average, 66 percent of respondents thought they spent less than \$500 on electronics, and another 20 percent spent between \$500 and \$1,000.

Telephone survey results also indicate that the majority of the population is buying electronic devices every year. This presents a unique touch-point opportunity for NYSERDA to educate customers about the benefits of ENERGY STAR appliances at their point of purchase. General advertising in cooperation with retailers, point-of-purchase signs, and trained sales representatives are all possible mechanisms for reaching these customers when they are shopping for new electronic devices. It also presents an opportunity to promote electronics recycling, as many customers purchasing electronics are replacing outdated devices. The MCA Team recommends NYSERDA work with recycling organizations to provide the means for recycling and to promote the message that people should properly dispose of their unwanted electronic devices.

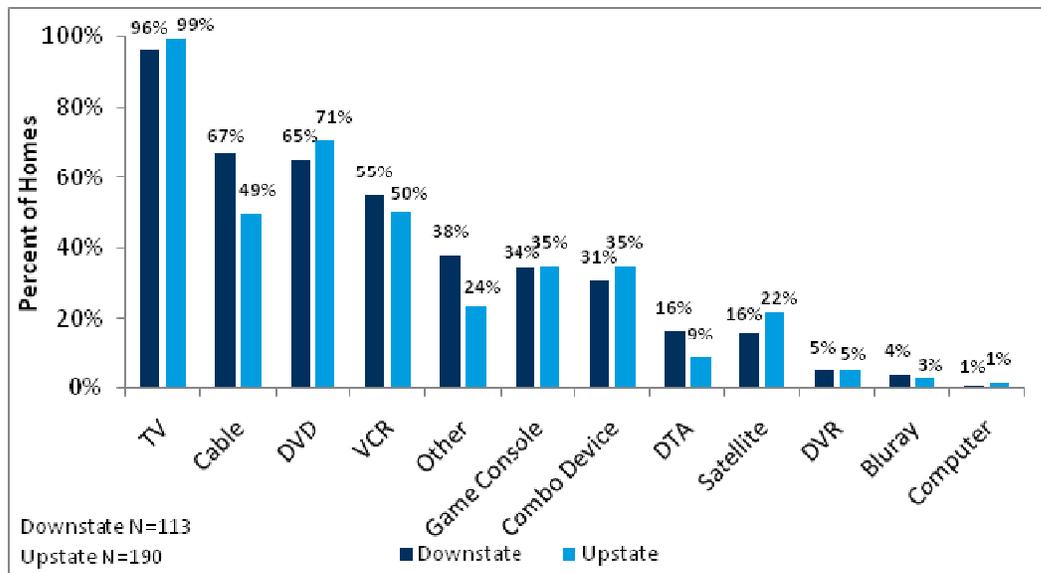
Supplemental Findings to Appendix A

2009 Findings

The full list of updated 2009 figures and charts are included in this report for reference. Since the 2009 report ¹⁷ was written, the downstate area was re-characterized to include the Westchester area, which was part of upstate in 2009. Results changed only slightly due to this re-characterization.

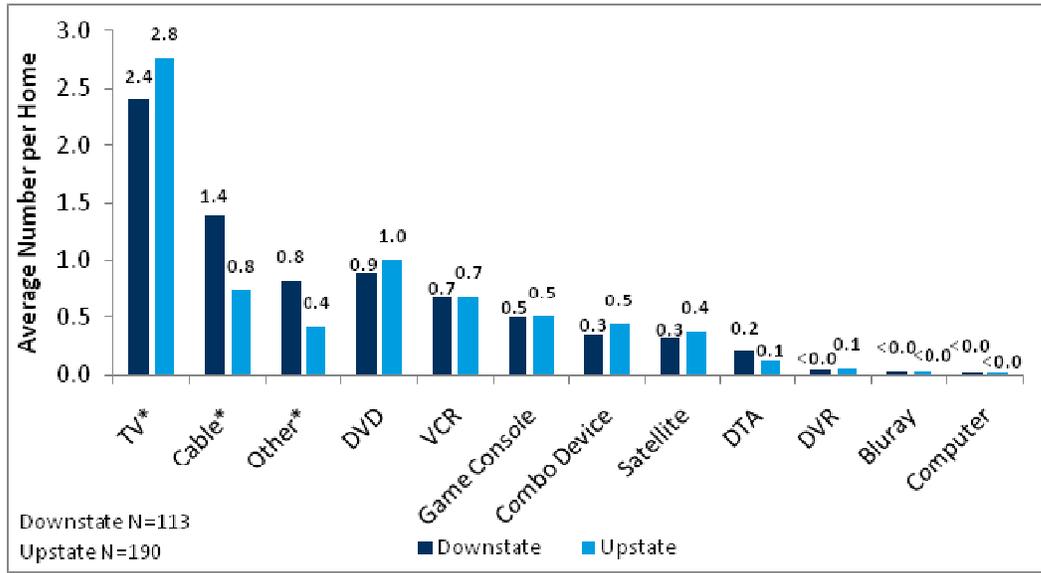
TV Findings

Figure 73. Percent of Homes with TVs and Their Auxiliary Devices, 2009



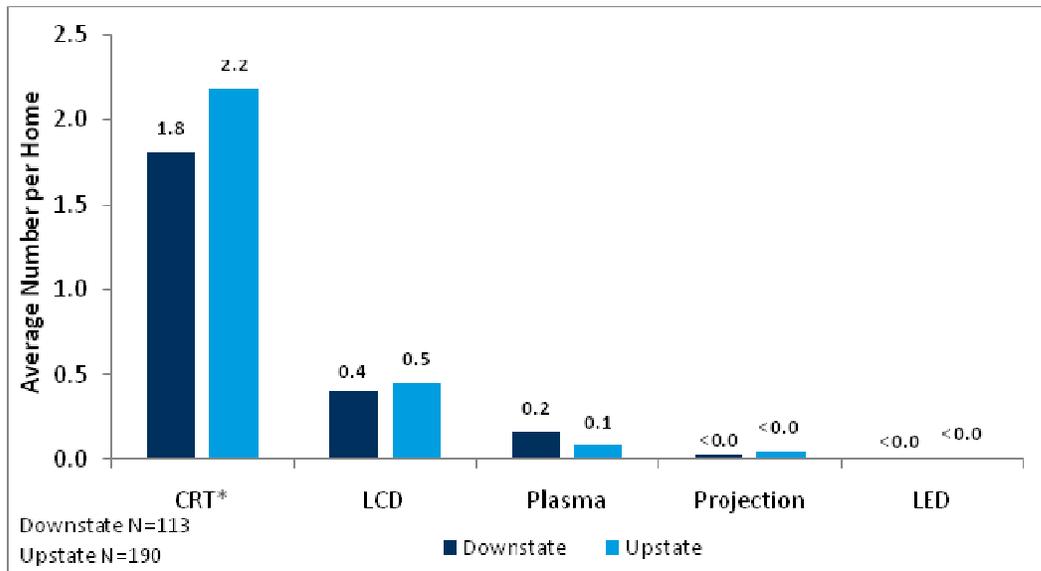
¹⁷ Home Electronics Saturation Analysis, March 19, 2010.

Figure 74. Average Number of TVs and Their Auxiliary Devices per Home, 2009



* Indicates statistical significance.

Figure 75. TV Type, 2009



* Indicates statistical significance.

Figure 76. TV Type, NYSERDA Territory, 2009

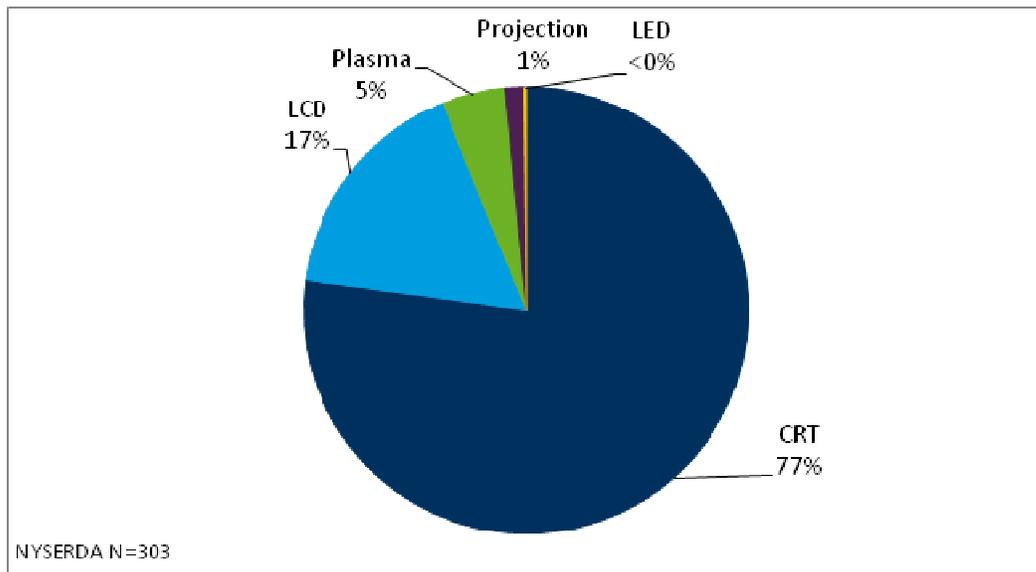


Figure 77. TV Brand, NYSERDA Territory, 2009

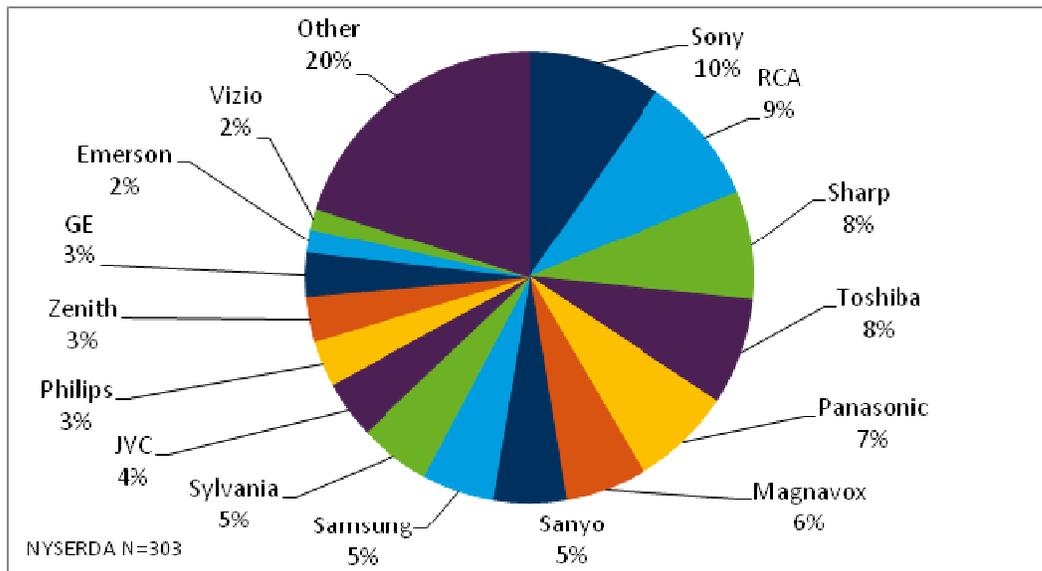


Figure 78. Average Number of TVs per Room, NYSERDA Territory, 2009

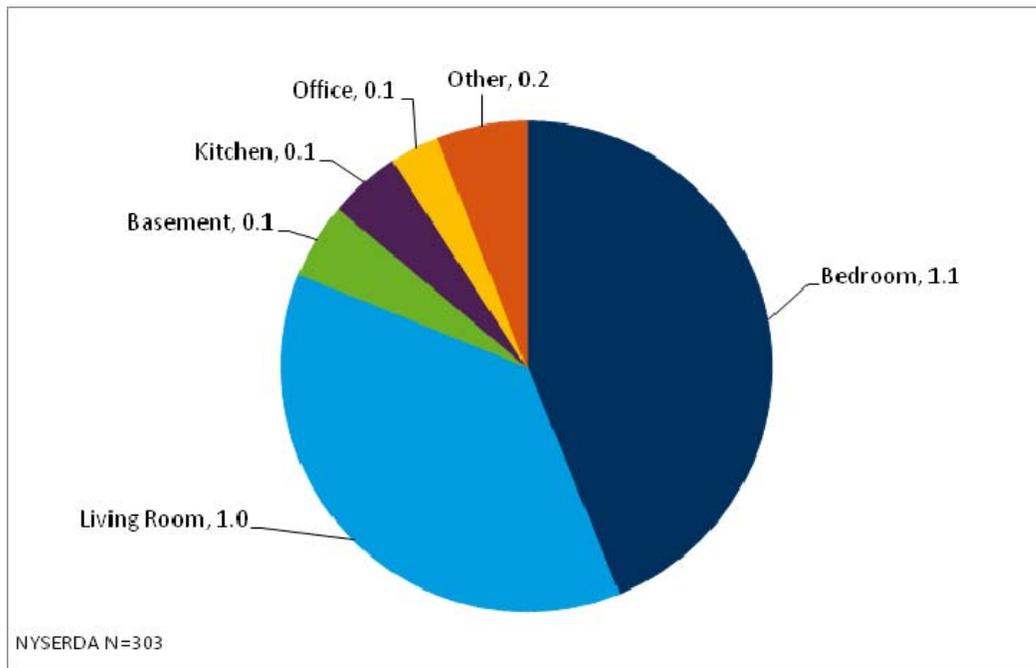


Figure 79. All TVs—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2009

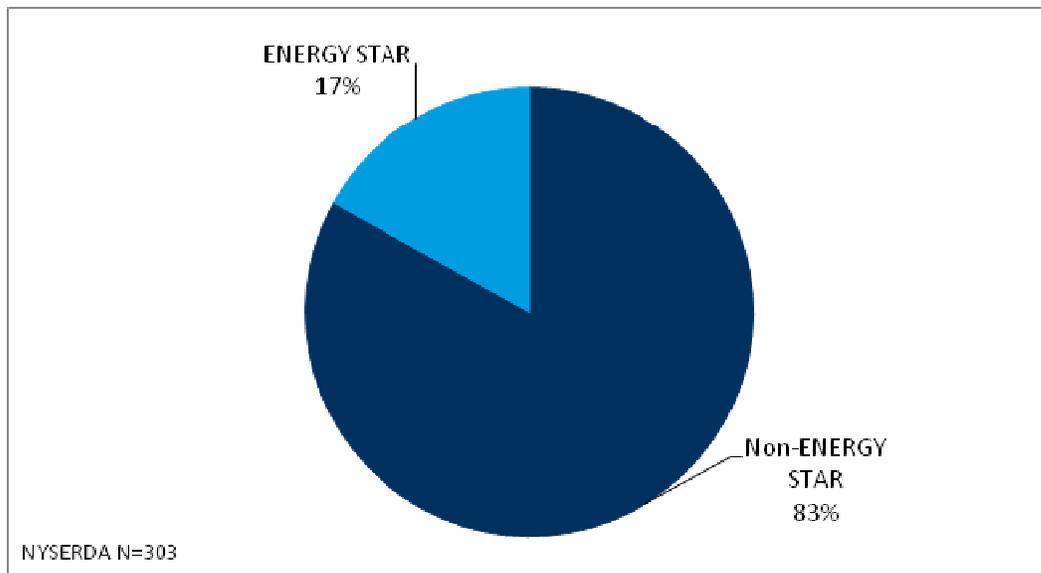


Figure 80. Presence and Type of Power Strip, 2009

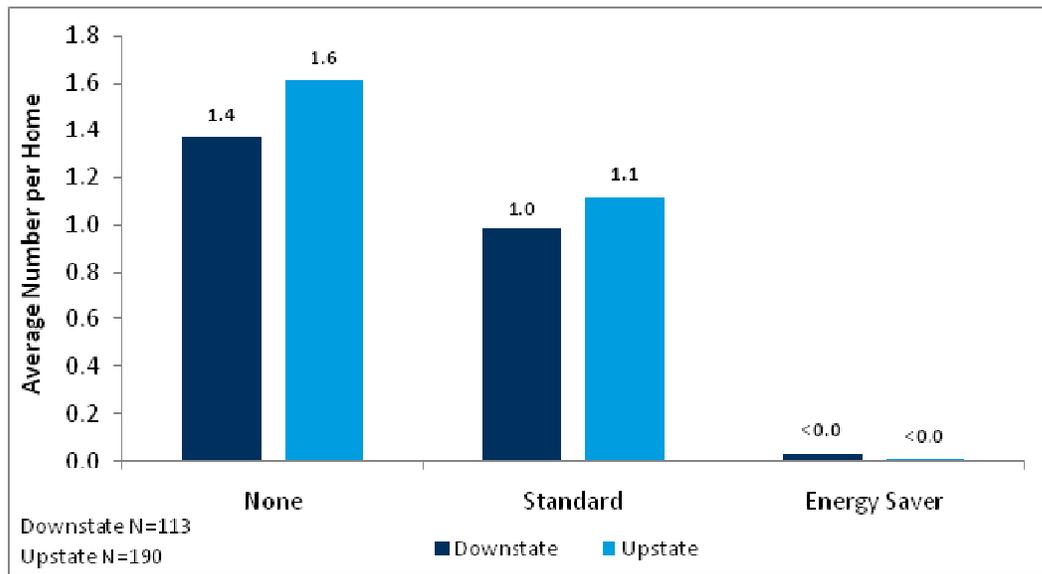


Figure 81. Presence and Type of Power Strip, NYSERDA Territory, 2009

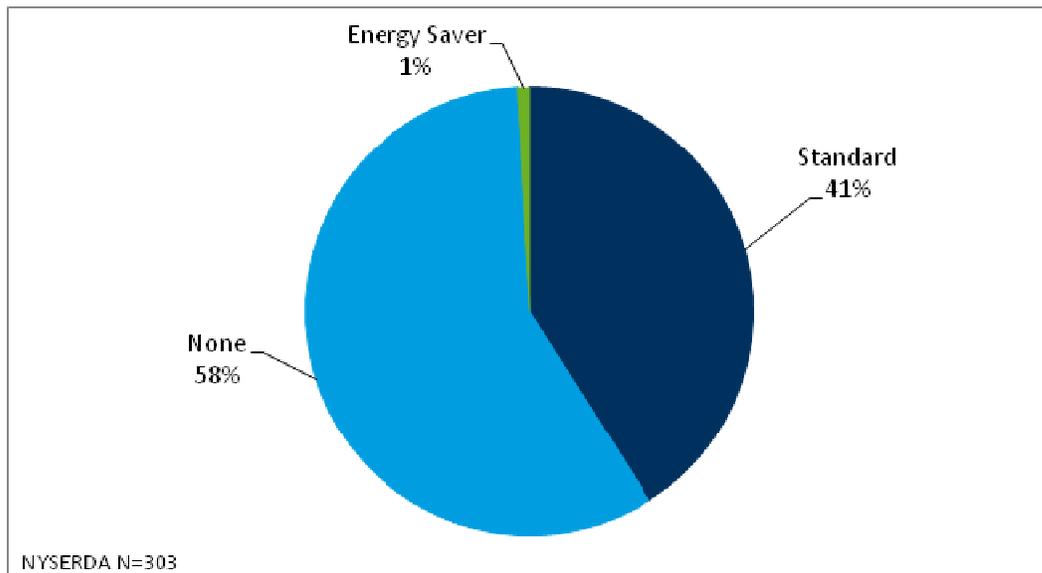


Figure 82. When Power Strips are Turned Off, NYSERDA Territory, 2009

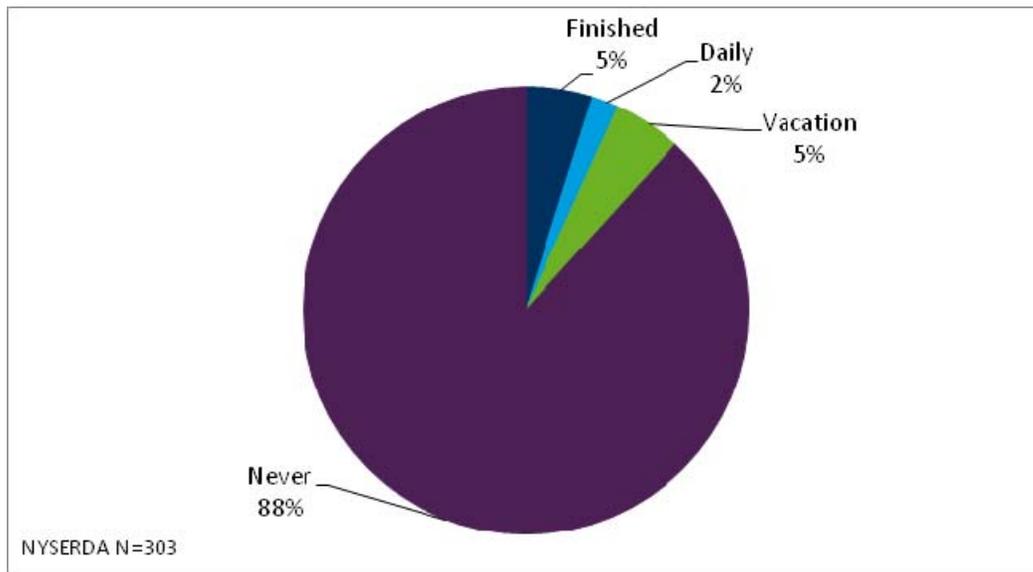


Figure 83. Max TV Viewing per Day, NYSERDA Territory, 2009

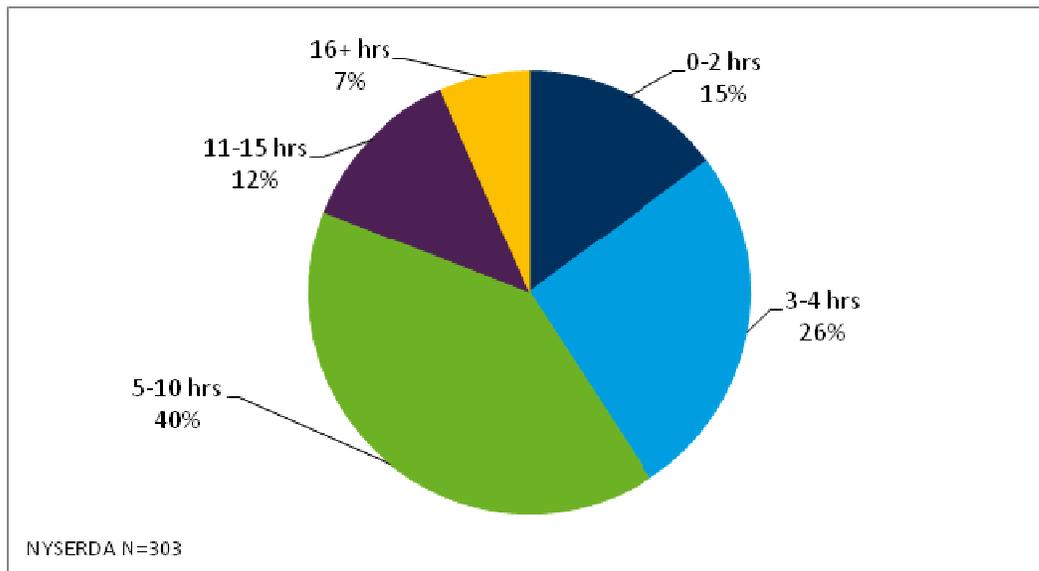
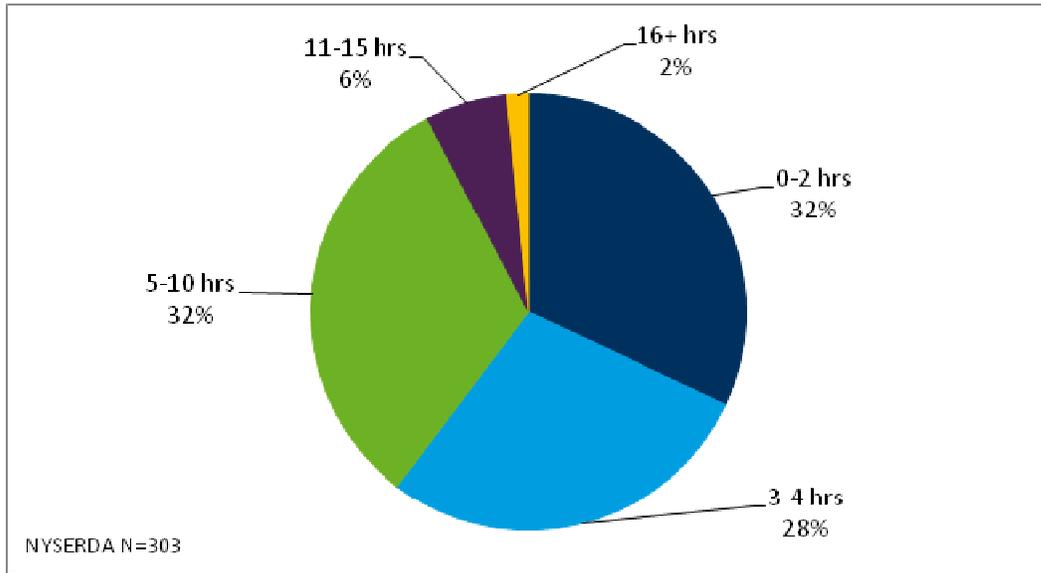
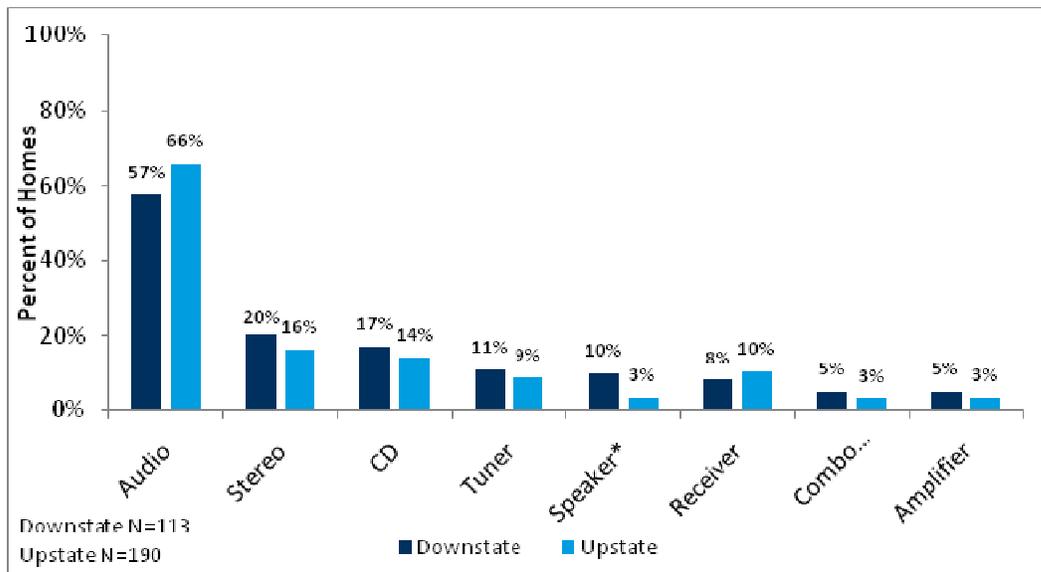


Figure 84. Average Time All TVs Were On, NYSERDA Territory, 2009



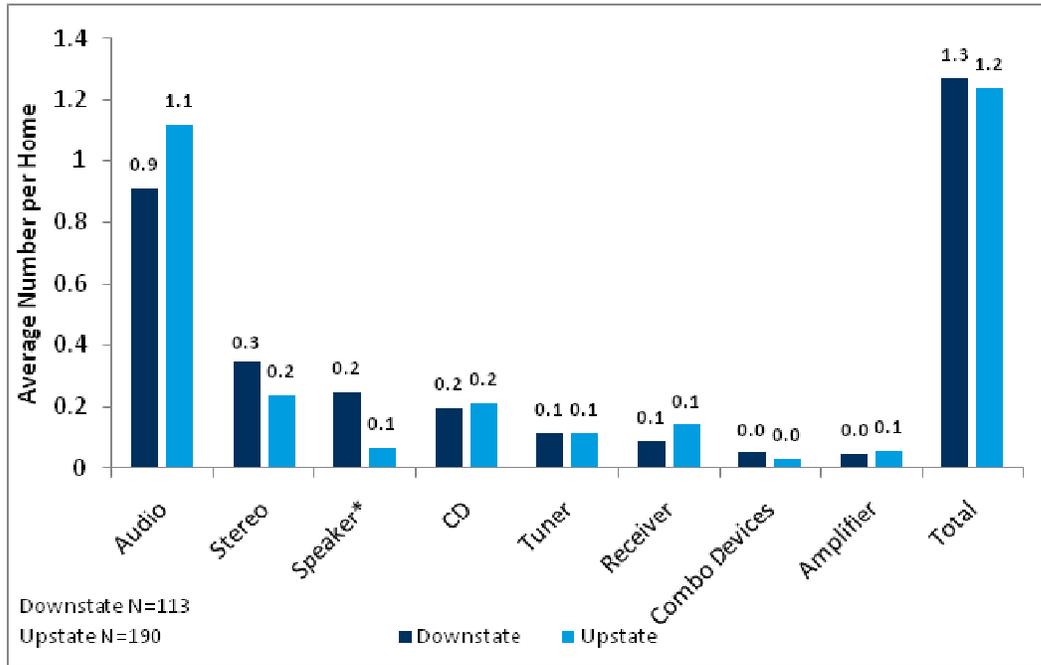
Audio Findings

Figure 85. Percent of Homes with Audios and Their Auxiliary Devices, 2009



* Indicates statistical significance.

Figure 86. Average Number of Audios and Their Auxiliary Devices per Home, 2009



* Indicates statistical significance.

Figure 87. Audio Type, 2009

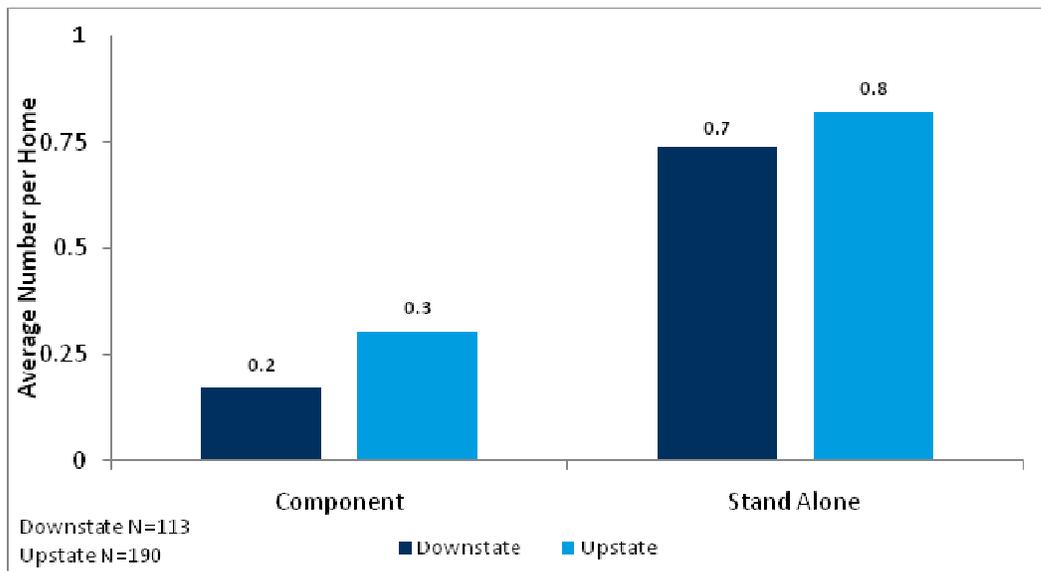


Figure 88. Audio Type, NYSERDA Territory, 2009

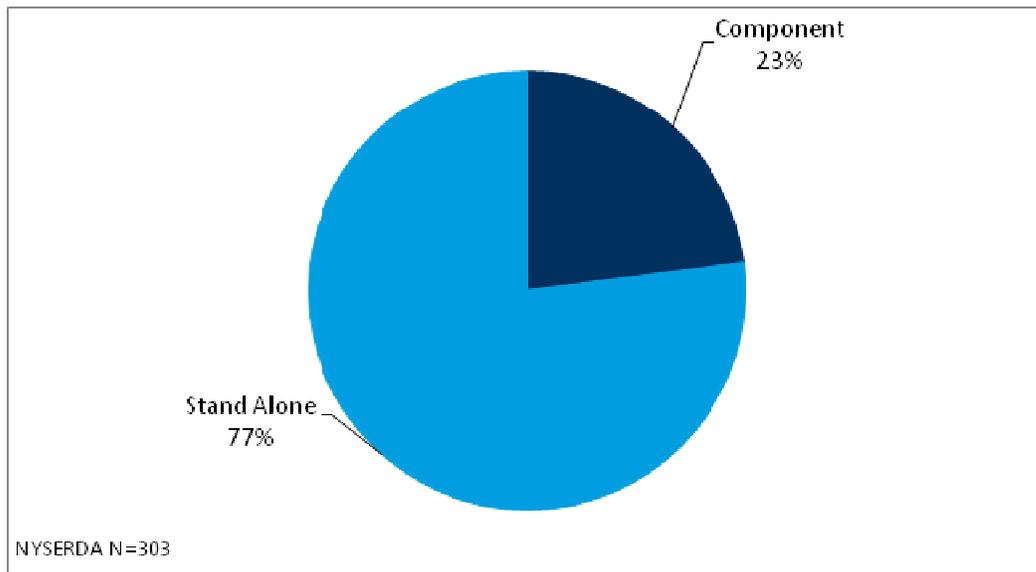


Figure 89. Average Number of Audios per Room, NYSERDA Territory, 2009

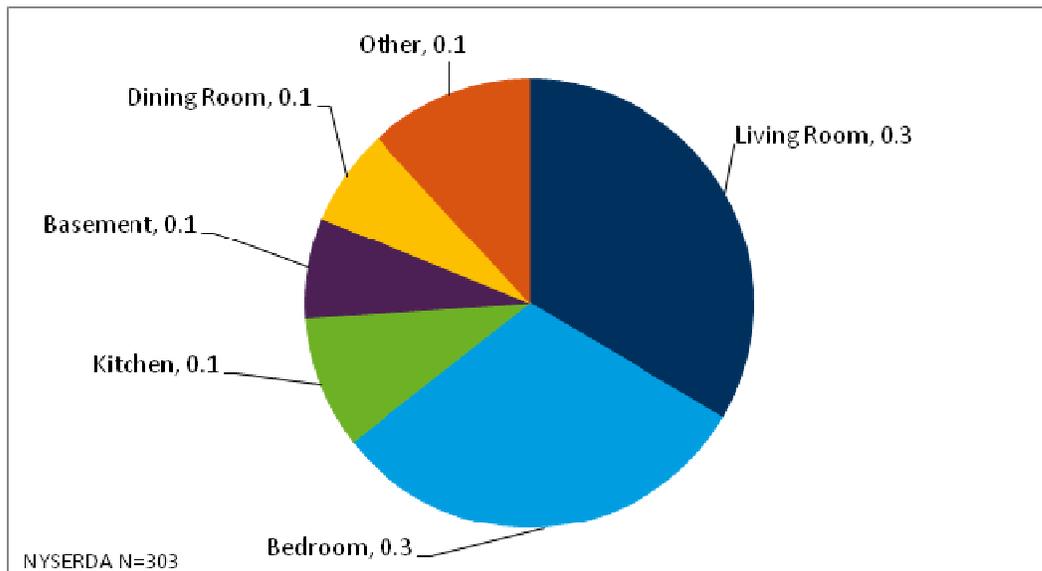


Figure 90. All Audios—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2009

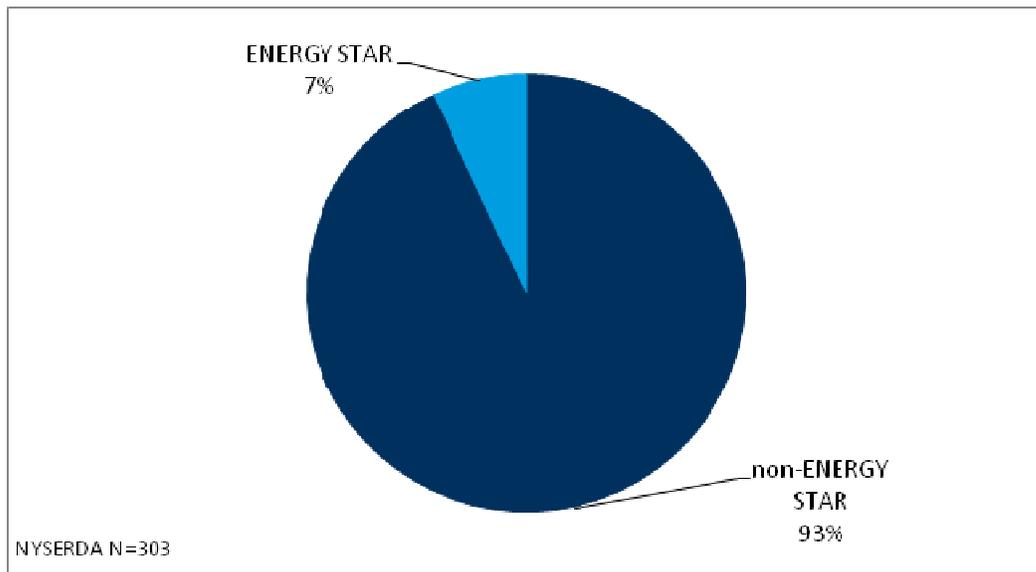


Figure 91. Presence and Type of Power Strip, 2009

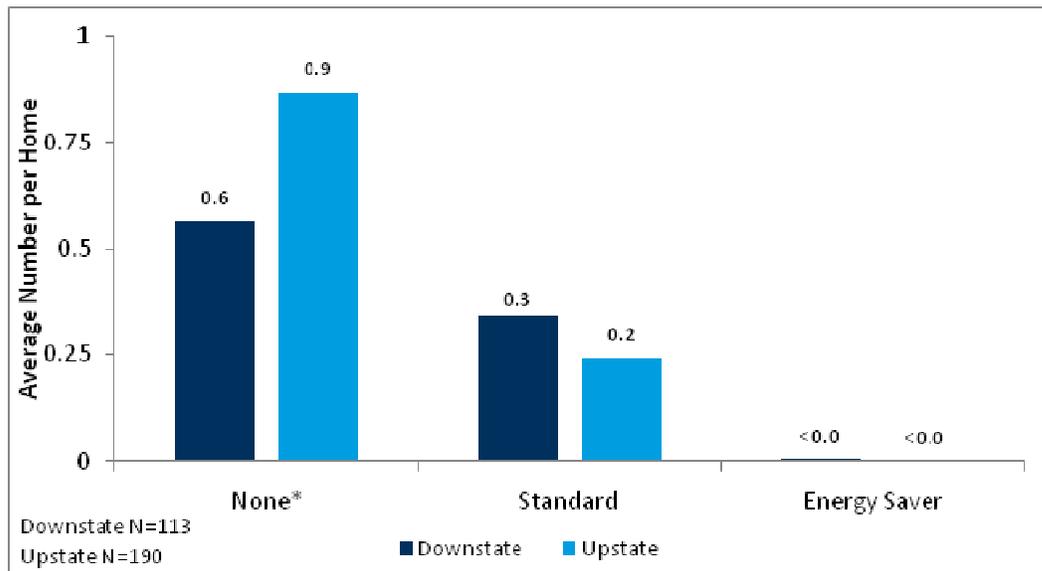


Figure 92. Presence and Type of Power Strip, NYSERDA Territory, 2009

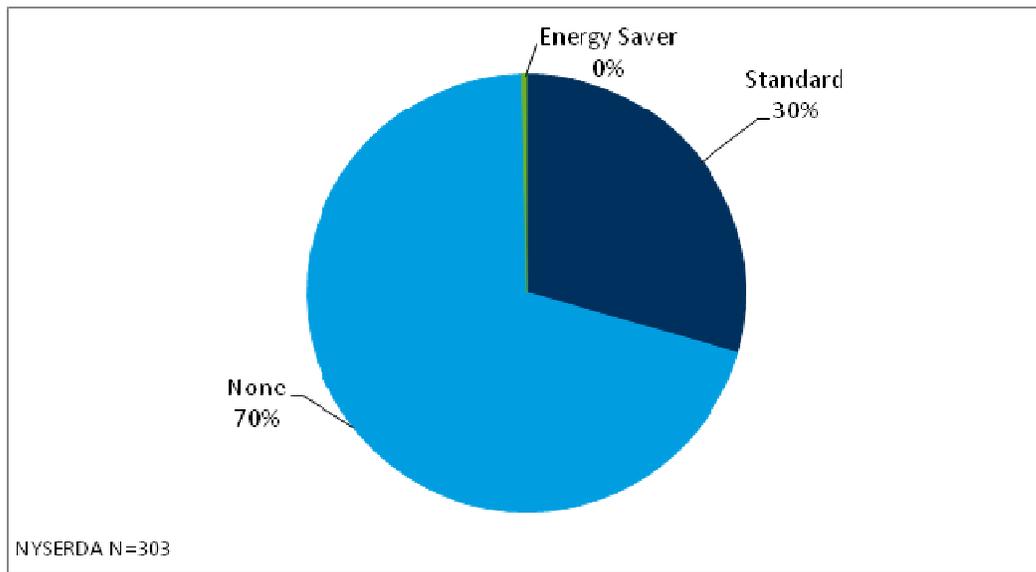


Figure 93. When Power Strips Were Turned Off, NYSERDA Territory, 2009

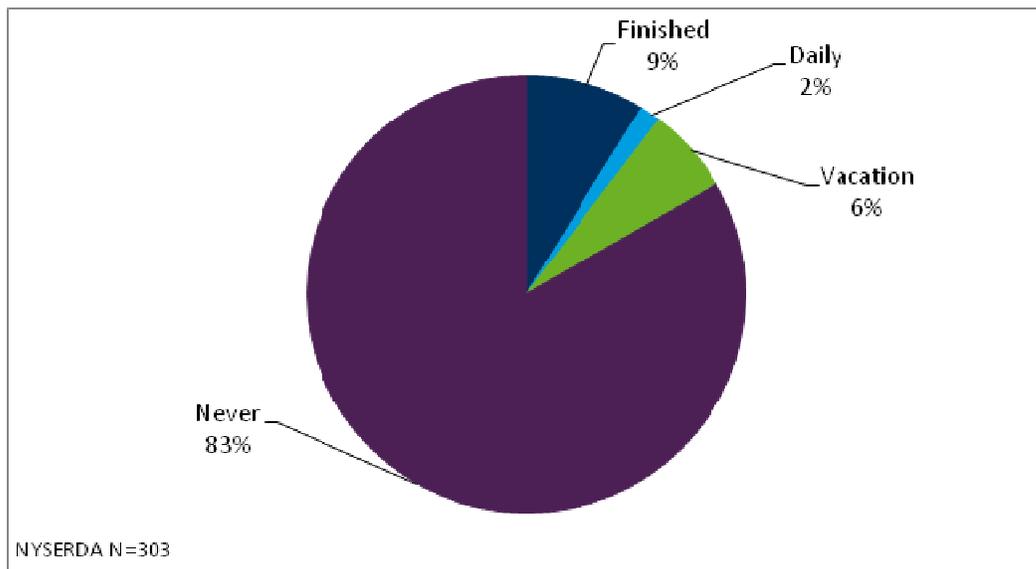


Figure 94. Max Audio Usage per Day, NYSERDA Territory, 2009

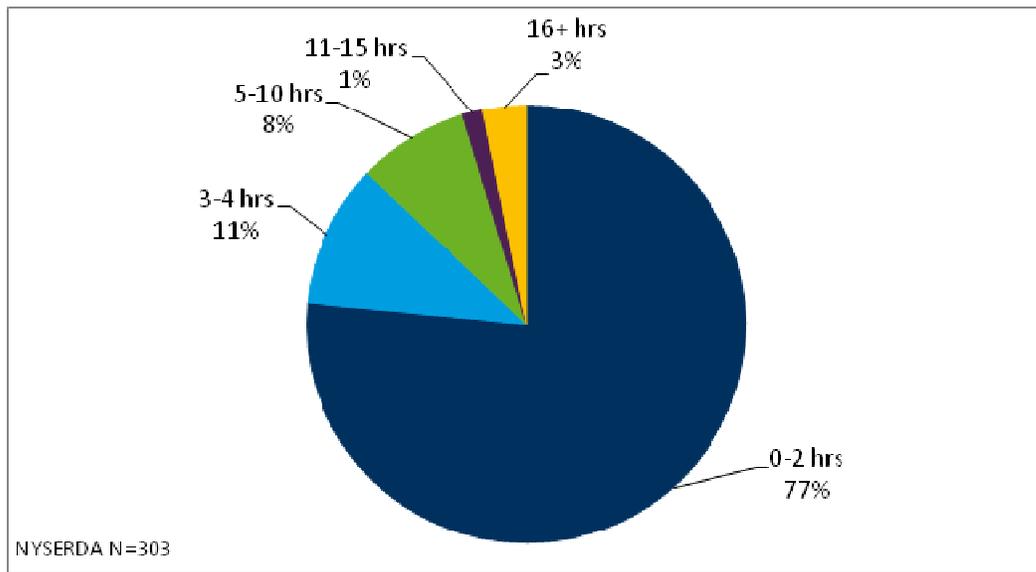
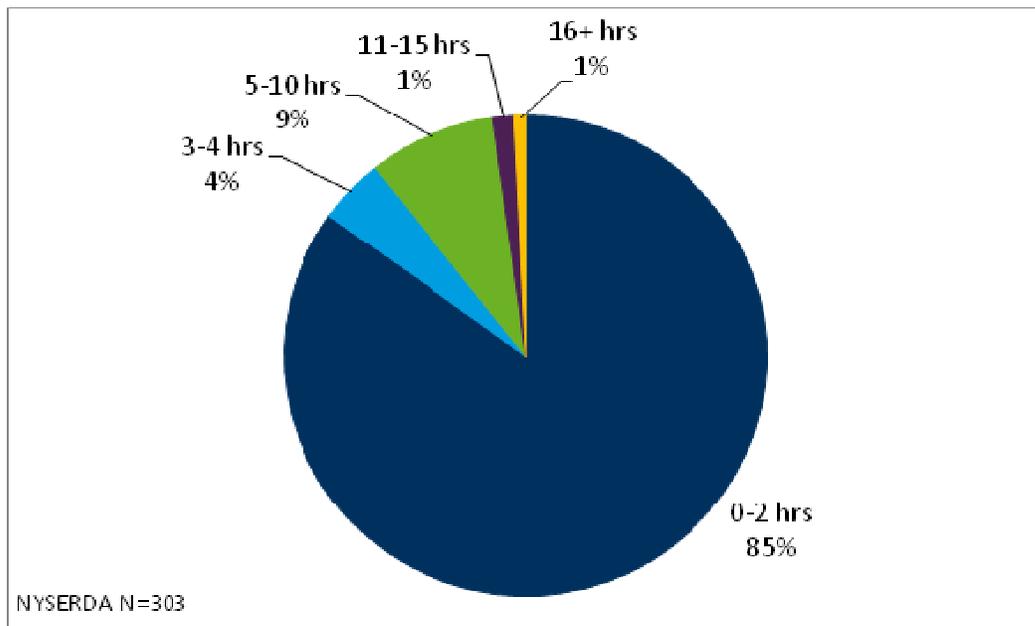
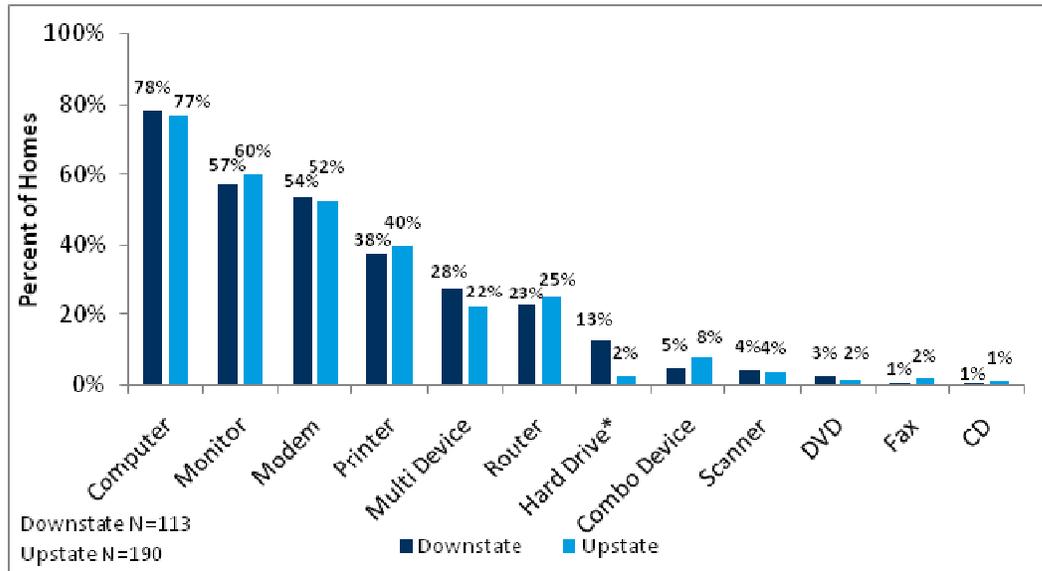


Figure 95. Average Time All Audios Were On, NYSERDA Territory, 2009



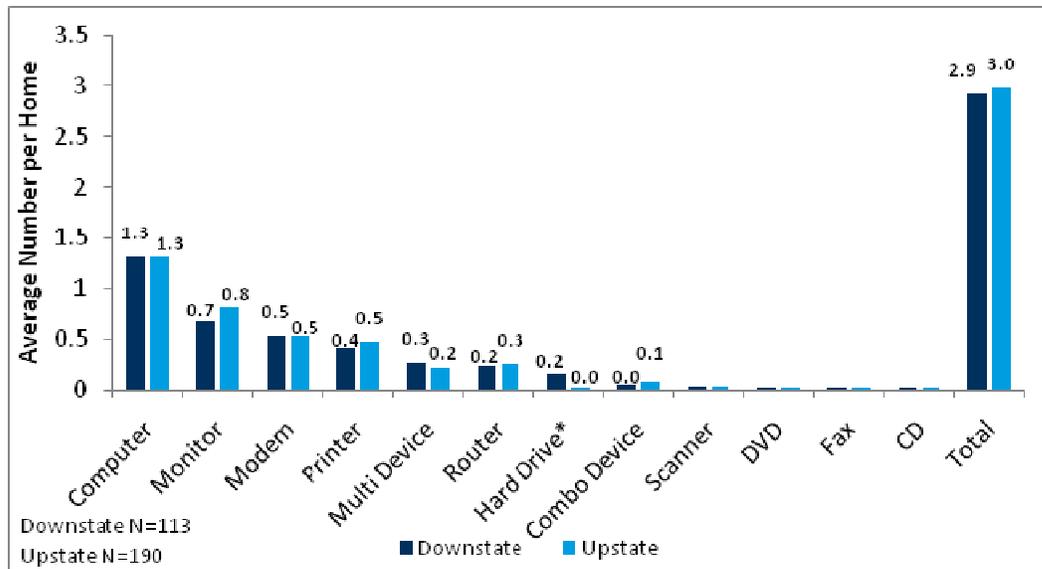
Computer Findings

Figure 96. Percent of Homes with Computers and Their Auxiliary Devices, 2009



* Indicates statistical significance.

Figure 97. Average Number of Computers and Their Auxiliary Devices per Home, 2009



* Indicates statistical significance.

Figure 98. Computer Type, 2009

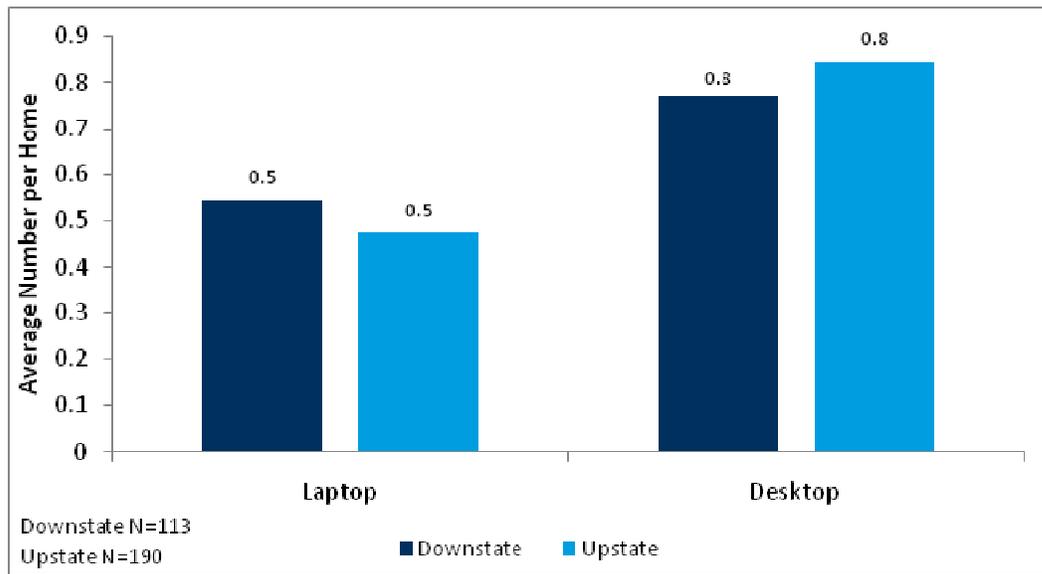


Figure 99. Computer Type, NYSERDA Territory, 2009

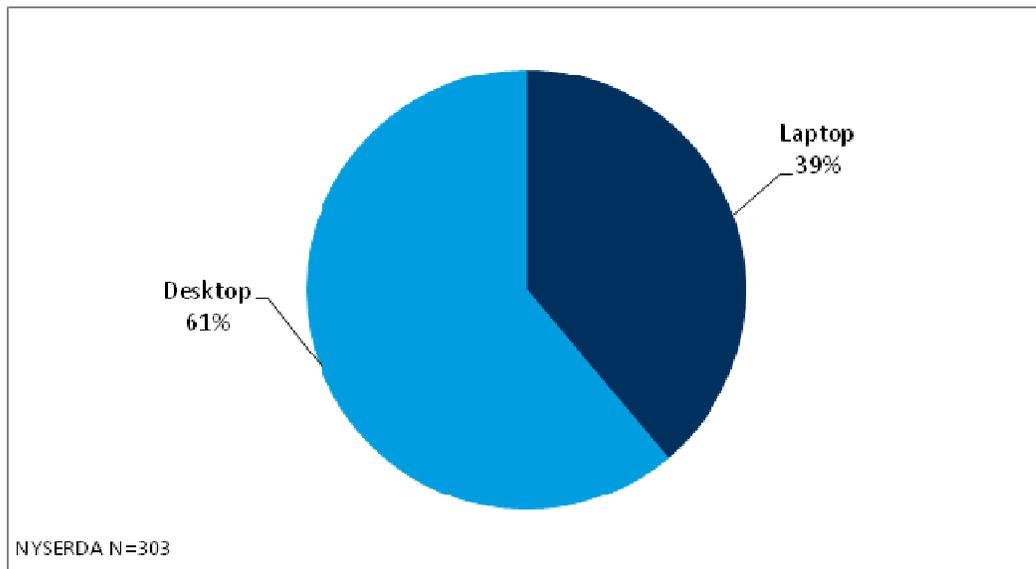


Figure 100. Average Number of Computers per Room, NYSERDA Territory, 2009

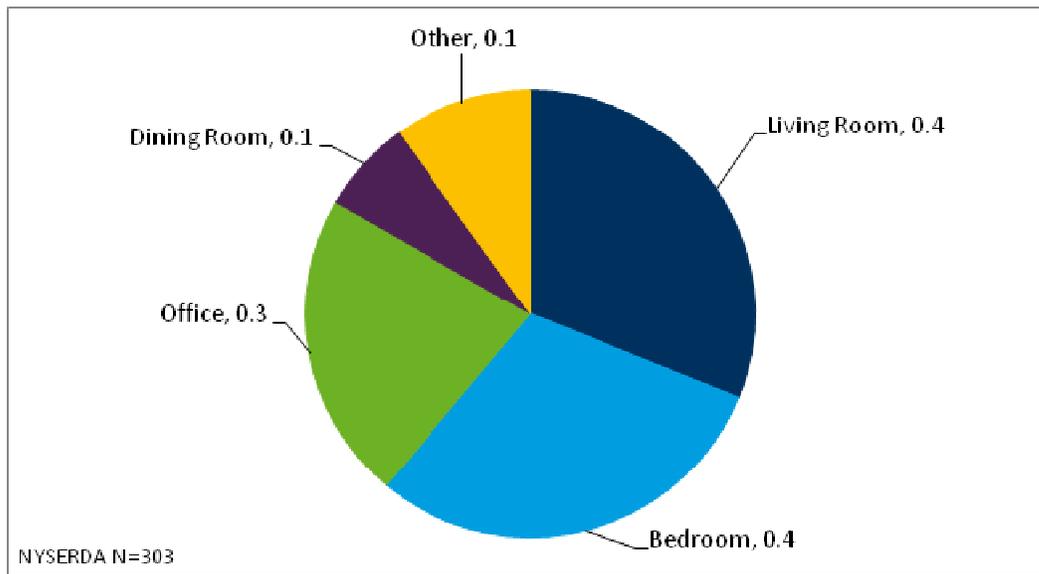


Figure 101. All Computers—ENERGY STAR vs. Non-ENERGY STAR, NYSERDA Territory, 2009

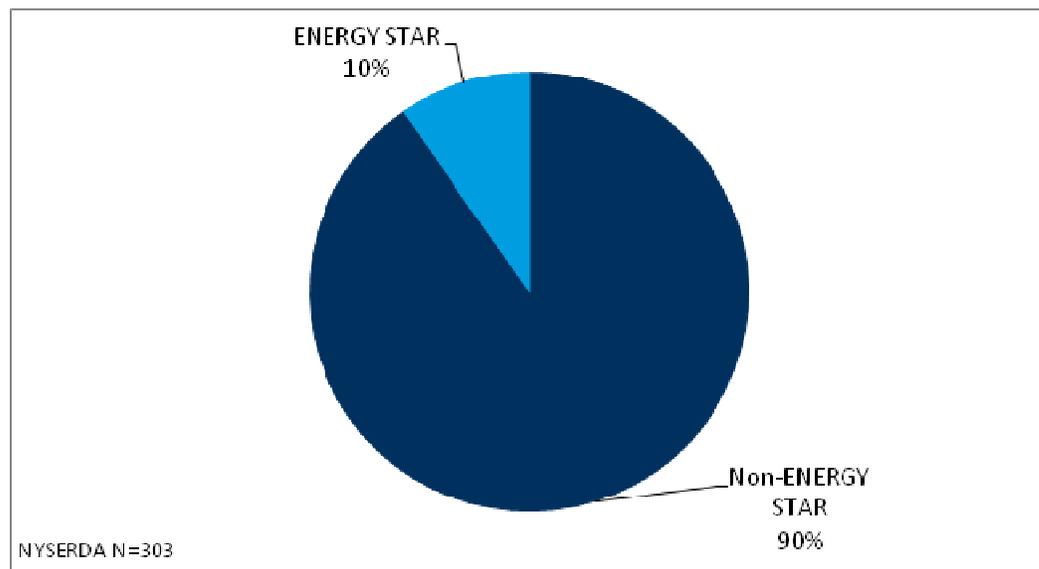


Figure 102. When Computers Were Turned Off, NYSERDA Territory, 2009

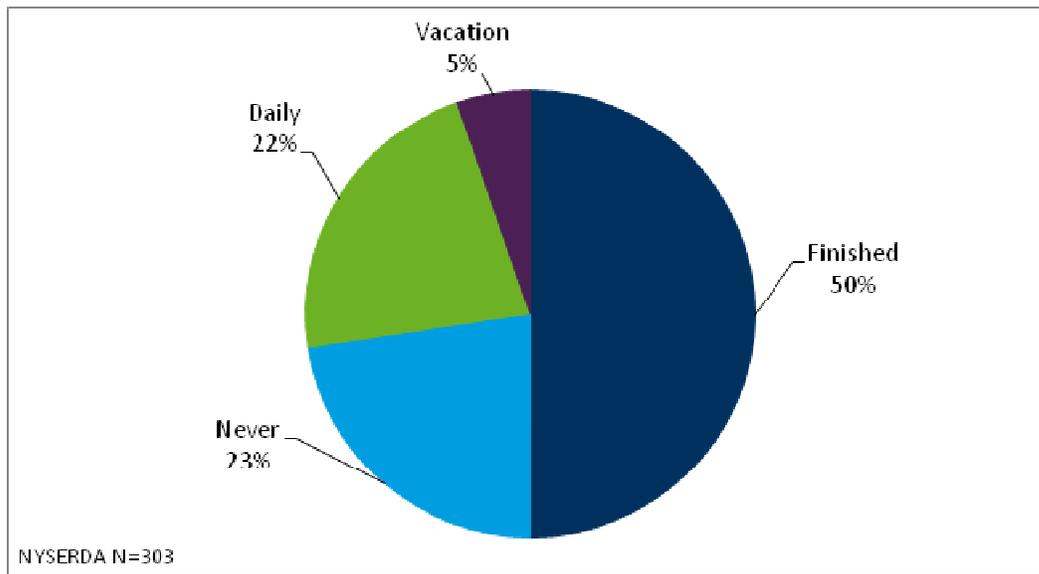


Figure 103. When Standby Mode was Used, NYSERDA Territory, 2009

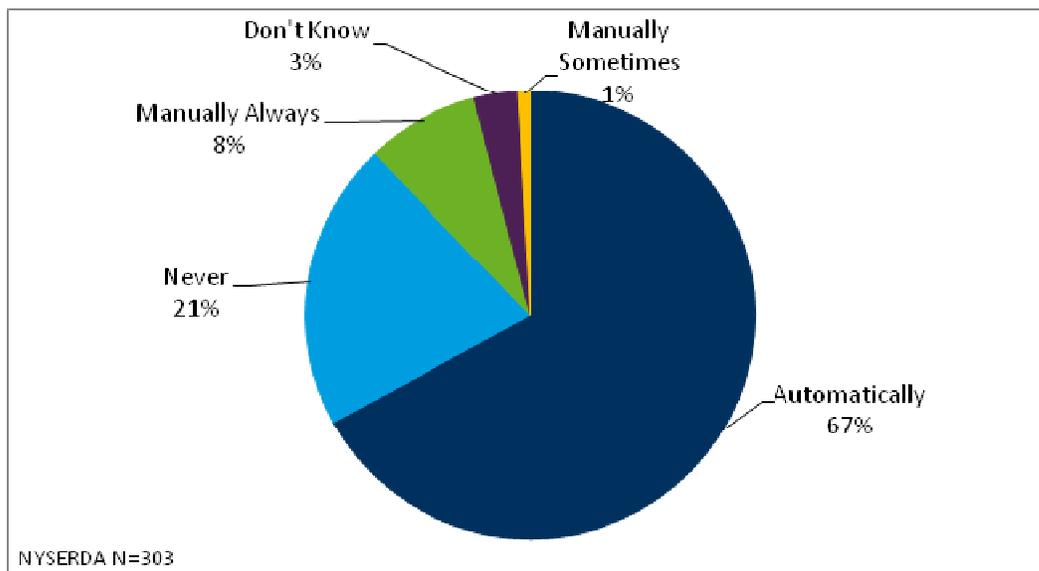


Figure 104. Presence and Type of Power Strip, 2009

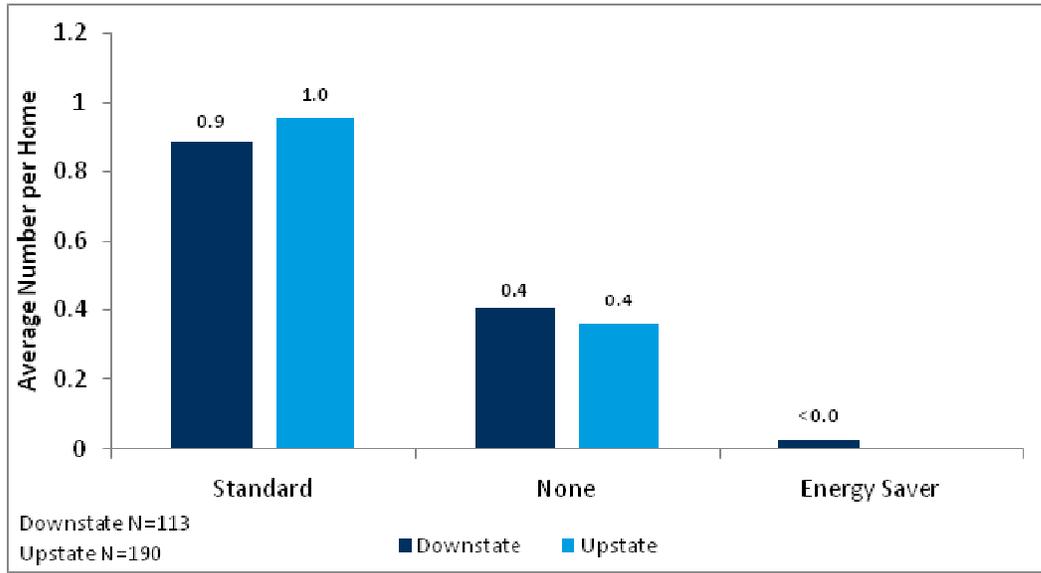


Figure 105. Presence and Type of Power Strip, NYSERDA Territory, 2009

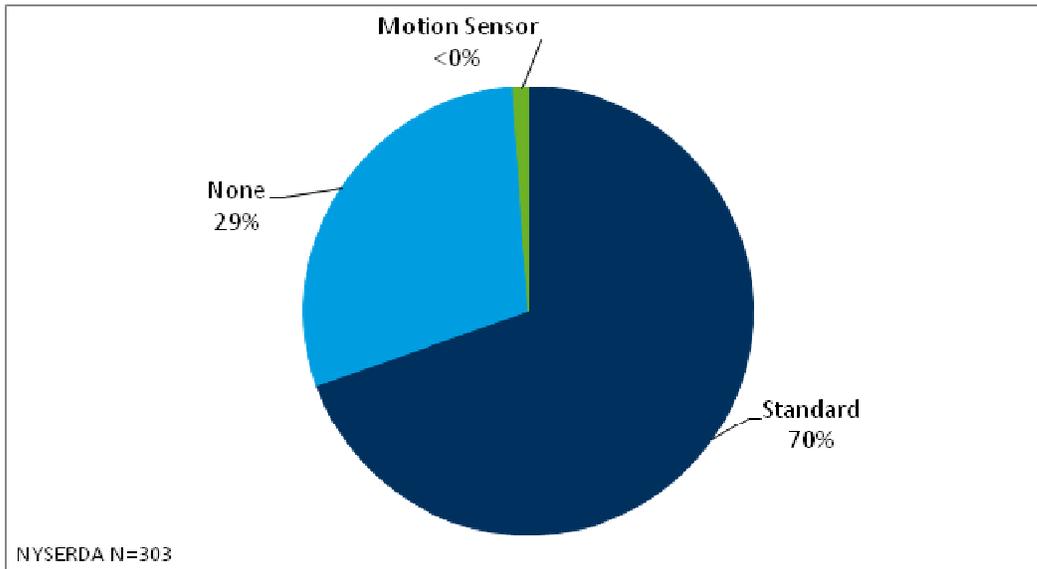


Figure 106. When Power Strips Were Turned Off, NYSERDA Territory, 2009

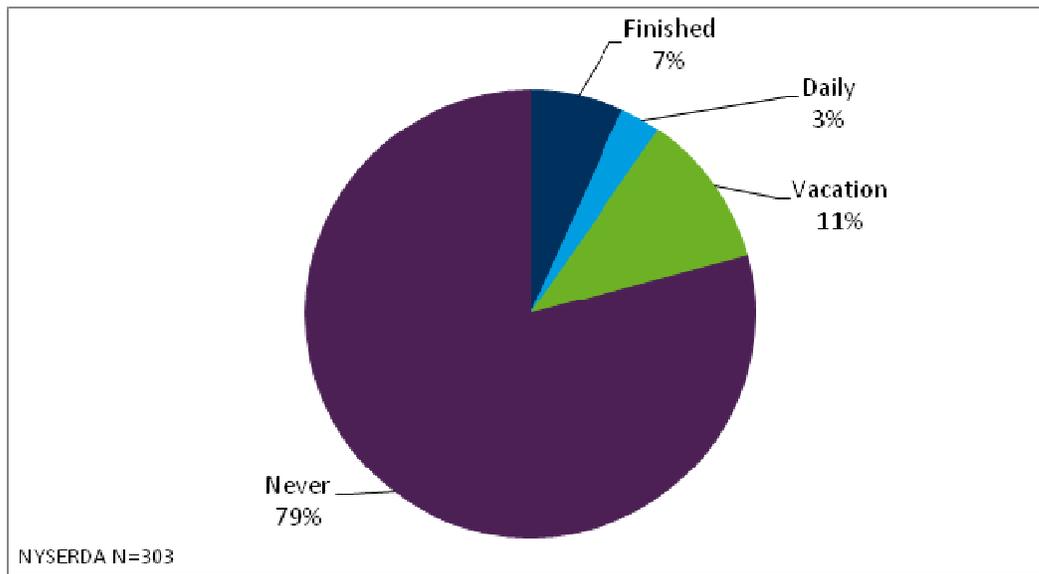


Figure 107. Max Computer Usage per Day, NYSERDA Territory, 2009

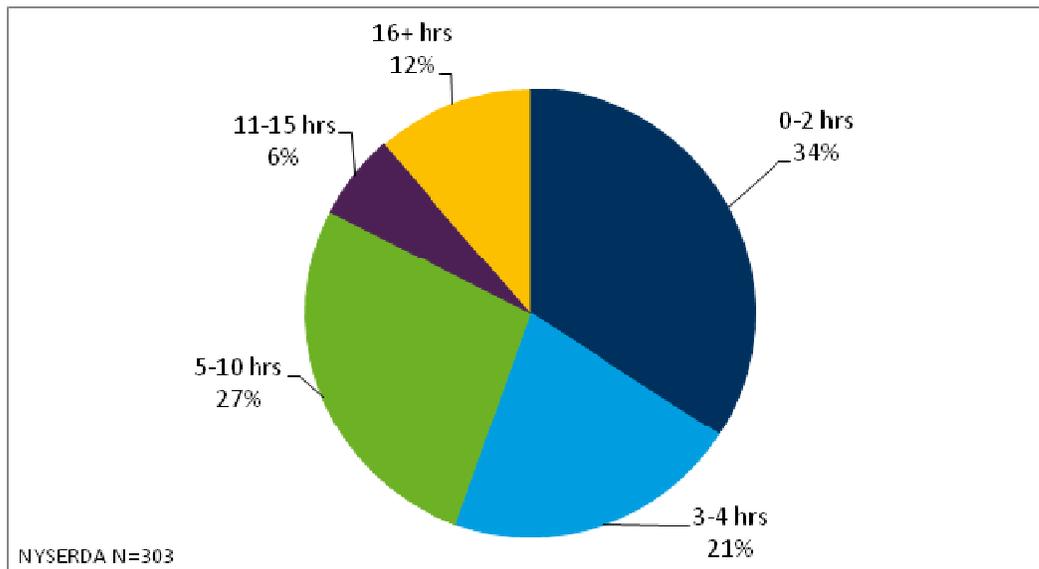
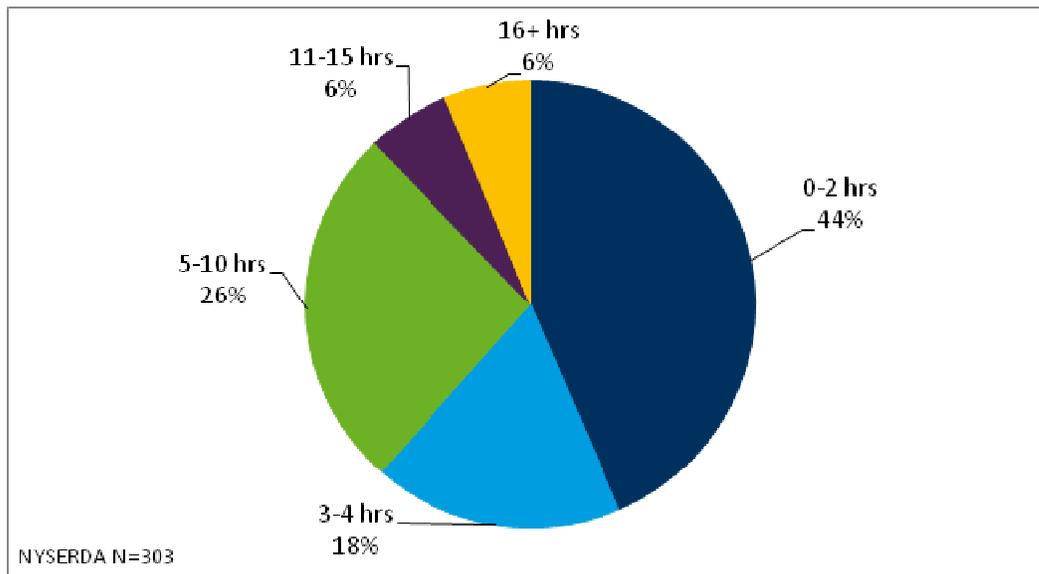


Figure 108. Average Time All Computers Were On, NYSERDA Territory, 2009



Appendix B. CEE Web TV Survey Results and Discussion

In recent years, the Consortium for Energy Efficiency (CEE) has conducted an annual survey of households across the nation. In 2001, 2004, 2006, 2008, and 2010, NYSERDA elected to fund an over-sample within the NYE\$P service area. This provided an opportunity to collect time series data for the NYSERDA area and to draw comparisons to the national results.

Nationally, the 2001 survey was conducted both by mail and by WebTV, although in the NYSERDA area, it was administered exclusively by mail. From 2004 to 2010, the survey and all over-samples were administered exclusively by WebTV.¹ The over-samples conducted in NYSERDA’s service area in 2004, 2006, 2008, and 2010 included several questions in addition to those in the national surveys. Sample sizes for both the national surveys and the NYSERDA over-samples are presented in Table B-1.²

Table B-1. Sample Size and Statistics for CEE National and NYSERDA Over-samples

	2010		2008		2006		2004		2001	
	NYSERDA	National								
Sample Size	300	1,430	295	1,866	334	2,192	492	1,249	646	1,995
Precision at 95% confidence level	5.7%	2.6%	5.7%	2.3%	5.4%	2.1%	4.4%	2.8%	3.9%	2.2%

Throughout this discussion, national results exclude the NYSERDA over-sample and any other client specific over-sample areas surveyed by CEE. In previous reports, a NYSERDA and national area average was provided, but for 2010 this has been left out for conciseness.

As in previous years’ studies, to consider the publicity’s effect on national awareness, the designated metropolitan areas (DMAs) in the national sample frame were classified by publicity category using the following criteria:

- **High publicity:** Active local ENERGY STAR program *recently*³ sponsored by a utility, state agency, or other organization for two or more continuous years. Activities must include *sustained*⁴ promotions and publicity from non-federal activities. NYSERDA’s service area is a high-publicity area.
- **Low publicity:** Federal campaign activities only, and no *significant*⁵ regional program sponsor activities.

¹ Where possible, comparisons between 2001, 2004, 2006, 2008, and 2010 national results rely on WebTV data to provide the most appropriate basis for comparison.

² Unless otherwise stated, all NYSERDA, national (total), and national excluding NYSERDA percentages are based on the weighted sample. The number of respondents (n’s) for the tables are unweighted for all columns. Note that in the national report, the over-sample populations were excluded; only the base samples were used for analysis. To match the national report, the national (total) columns in this report include only the base NYSERDA sample.

³ As defined by the EPA, the two years of activity must include the time of the survey fielding.

⁴ As defined by the EPA, the two years of activity must be continuous.

- **Other:** All other DMAs.

The remainder of this appendix summarizes findings of the 2010 CEE survey and the NYSERDA over-sample. Differences between NYSERDA 2010 and national 2010 results are described in the text, as are differences between NYSERDA year-to-year results and national year-to-year results.

1.1 ENERGY STAR LABEL RECOGNITION

In 2010, 70% of customers within the NYSERDA area reported recognizing the ENERGY STAR label without being prompted by a description or visual image of the label, and 80% reported recognizing the ENERGY STAR label with prompting (*i.e.*, after being shown a visual image of the label). Both these percentages are lower than 2008 findings (76% and 89%, respectively).

Unaided recognition was the same in the 2010 national average as in 2008 (60%). Aided recognition increased slightly from 74% in 2008 to 76% in 2010, continuing the upward trend from 2001. Table B-2 shows unaided and aided recognition results for each survey year.

Table B-2. ENERGY STAR Label Recognition (Prior to the survey, have you ever heard or seen the ENERGY STAR Label?)

	2010		2008		2006		2004		2001	
	NYSERDA	National								
Recognizes ENERGY STAR Label--Unaided Recognition	70% *	60%	76% *^	60% ^	64% *	51%	62% *	40%	NA	NA
Recognizes ENERGY STAR Label--Aided Recognition	80% ^	76%	89% *^	74% ^	81% *^	67%	72% *^	60%	57%	40%

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

1.2 PRODUCT ASSOCIATIONS

In the 2010 national survey, the products consumers most associated with the ENERGY STAR label were refrigerators, clothes washers, dishwashers, and windows. In the NYSERDA area, the appliances most associated with the ENERGY STAR label were refrigerators, clothes washers, dishwashers, and room air conditioners. Respondents in the NYSERDA area were more likely to associate room air conditioners with the label (67% in the NYSERDA area versus 46% in the rest of the nation), perhaps as a residual effect from the Keep Cool and Stay Cool programs. These and additional comparisons can be seen in Table B-3.

⁵ In addition to any direct federal publicity efforts, publicity efforts must include a deliberate and multifaceted regional program sponsor investment in ENERGY STAR programming, such as direct marketing and promotional efforts.

Table B-3. As you review the list, please select each of the products, product literature, or packaging on which you have seen the ENERGY STAR label.

	2010		2008		2006		2004		2001	
	NYSERDA	National WebTV								
	n=233	n=996	n=227	n=1153	n = 250	n = 1470	n = 314	n = 610	n = 354	n = 710
Central A/C	44%	49%	40%*	48%	41%	46%^	37%^	36%	29%	26%
Furnace or Boiler	38%	33%	37%*^	32%^	28%	30%	28%^	24%	25%	13%
Heat Pump	10%*	22%	11%*	20%^	9%*	16%	7%^	9%	2%	7%
Thermostat	14%	18%	20%	17%^	11%*	14%	9%*	14%	9%	6%
Room A/C	67%*	46%	72%*	44%^	69%^	41%	61%*^	35%	51%	26%
Computer or Monitor	31%^	36%	77%*	36%	29%*	37%	29%*^	42%	41%	47%
Computer Printer	15%^	14%	25%*	17%	10%*	14%	10%*^	15%	17%	14%
Copying Machine	15%	12%	14%	15%^	14%^	12%	9%*^	13%	14%	12%
Fax Machine	11%	8%	8%	10%^	9%	9%	8%^	8%	12%	8%
Scanner	9%	7%	8%	10%	6%*	10%	6%*^	10%	10%	10%
Dishwasher	72%	74%	64%*	70%^	59%^	59%	52%^	50%	39%	33%
Refrigerator	88%^	85%	78%	81%^	83%*	73%	80%*^	61%	70%	47%
Lighting Fixture	24%	21%	23%	23%^	16%^	17%	10%*^	14%	14%	13%
Washing Machine	77%^	77%	68%	72%^	66%^	63%	59%*^	49%	37%	34%
CFL Bulb	28%	32%	32%	31%^	22%^	22%	11%*^	18%	16%	15%
Microwave Oven	51%^	45%	36%	38%^	44%*^	33%	33%*^	29%	22%	22%
Television	39%	44%^	34%	32%^	33%*	29%	29%	28%	25%	22%
VCR	18%^	19%^	10%	9%^	18%*	12%	15%^	15%	8%	15%
Audio Product	14%	11%	15%*	9%	12%	10%	9%	10%	5%	10%
Window	45%	50%	48%	47%^	37%	37%	35%^	31%	23%	26%
Door	31%	27%	34%*	25%^	26%*^	19%	21%*^	14%	11%	11%
Skylight	12%	11%	12%	11%	12%^	11%	7%*^	5%	3%	6%
Insulation	27%	25%	29%*	21%^	20%*^	17%	15%^	12%	9%	10%
Roofing Material	12%	13%	17%*	10%	8%	9%	6%^	5%	3%	4%
New Home	21%	24%	22%	24%^	27%*	21%	25%*^	20%	10%	14%
None	4%	5%	NA	NA	8%	7%	6%	7%	NA	NA
Heating and Cooling Products	NA	NA	86%*	69%^	81%*^	66%	76%*	61%	NA	NA
Home Office Equipment	NA	NA	38%	41%	37%*	42%	32%*	44%	NA	NA
Home Appliances/Lighting	NA	NA	87%*	90%^	87%*	83%	84%*	80%	NA	NA
Home Electronics	NA	NA	35%	34%^	35%	31%	32%	33%	NA	NA
Building Materials	NA	NA	56%*	50%^	41%	42%	37%	35%	NA	NA

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

1.3 SELF-REPORTED INFLUENCE OF THE ENERGY STAR LABEL

Nationally, 51% of the respondents who reported purchasing an ENERGY STAR-labeled product said they were “very much” influenced by the presence of the ENERGY STAR label; in NYSERDA’s area, 63% gave the same response. A total of 86% of the national respondents reported they were influenced “very much, somewhat, or slightly influenced” by the ENERGY STAR label, while 88% of NYSERDA respondents reported being influenced at the same level.

On the NYSERDA level, the difference between the percentage of respondents who reported being influenced by the ENERGY STAR label in 2010 and those who reported being influenced in 2008 increased (but not significantly) in all three affirmative response categories. For the national level, responses for the “very much, somewhat, or slightly” category increased slightly (but also not significantly) from 2008. Table B-4 presents these results.

Table B-4. For any ENERGY STAR-labeled product(s) you purchased, how much did the presence or absence of the ENERGY STAR label influence your purchasing decision?

	2010		2008		2006		2004		2001	
	NYSERDA	National	NYSERDA	National	NYSERDA	National	NYSERDA	National	NYSERDA	National Mail
	n=66	n=302	n=100	n=484	n = 81	n = 498	n = 104	n = 233	n = 138	n = 420
Very Much	63%	51%	47%	53% [^]	37%	33%	29%	26%	33%	27%
Very Much or Somewhat	77%	75%	69% [*]	76% [^]	72% [*]	63%	65% [*]	53%	67%	54%
Very Much, Somewhat, or Slightly	88%	86%	82%	85% [^]	88% ^{*^}	79%	80% [*]	73%	78%	72%
Not at all	12%	14%	17%	15% [^]	12% ^{*^}	21%	20% [*]	27%	22%	28%

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

[^] Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

1.4 REBATE AND FINANCING INFLUENCE

Among the 97 households in the total 2010 national sample who purchased ENERGY STAR-labeled products with financial incentives, most (76%) would have been “somewhat” or “very likely” to have purchased these products without the incentives; almost all (95%) would have been at least slightly likely to have made their purchases in the absence of incentives

Although only 19 NYSERDA households surveyed reported having purchased an ENERGY STAR product with an incentive, all NYSERDA respondents reported being “very, somewhat, or slightly likely” to have bought the product without an incentive. Similar to

the 2008 findings, these results continue to indicate more people report being willing to purchase ENERGY STAR products on their own, without a rebate or incentive.

Table B-5. If rebates or reduced-rate financing had not been available, how likely is it that you would have purchased the ENERGY STAR-labeled product?

	2010		2008		2006		2004		2001	
	NYSERDA	National Mail								
	n=19	n=97	n=18	n=73	n = 11	n = 111	n = 21	n = 46	n = 25	n = 88
Very Likely	68%	45%	47%*	73%^	26%*	59%	60%	52%	40%	34%
Very or Somewhat Likely	95%	76%	90%	76%^	67%*	85%	100%*	80%	80%	66%
Very, Somewhat, or Slightly Likely	100%	95%	99%	99%	96%	97%	100%	95%	92%	91%
Not at all likely	0%	5%	1%*	15%^	4%	3%	0%	5%	8%	8%

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

1.5 PURCHASE OF ENERGY STAR

Of nationwide households that recognized the ENERGY STAR label and purchased a product, 77% purchased at least one ENERGY STAR-labeled product in the past 12 months. Additionally, Table B-6 shows 82% of the NYSERDA respondents who recognized the label purchased at least one labeled product in the past 12 months. This recognition has increased since 2008 for both samples: the nationwide statistics increased from 72% in 2008 to 77% in 2010; and the NYSERDA statistics increased from 74% to 82%.

Table B-6. For any of the products you purchased, did you see the ENERGY STAR label (on the product itself, on the packaging, or on the instructions)?

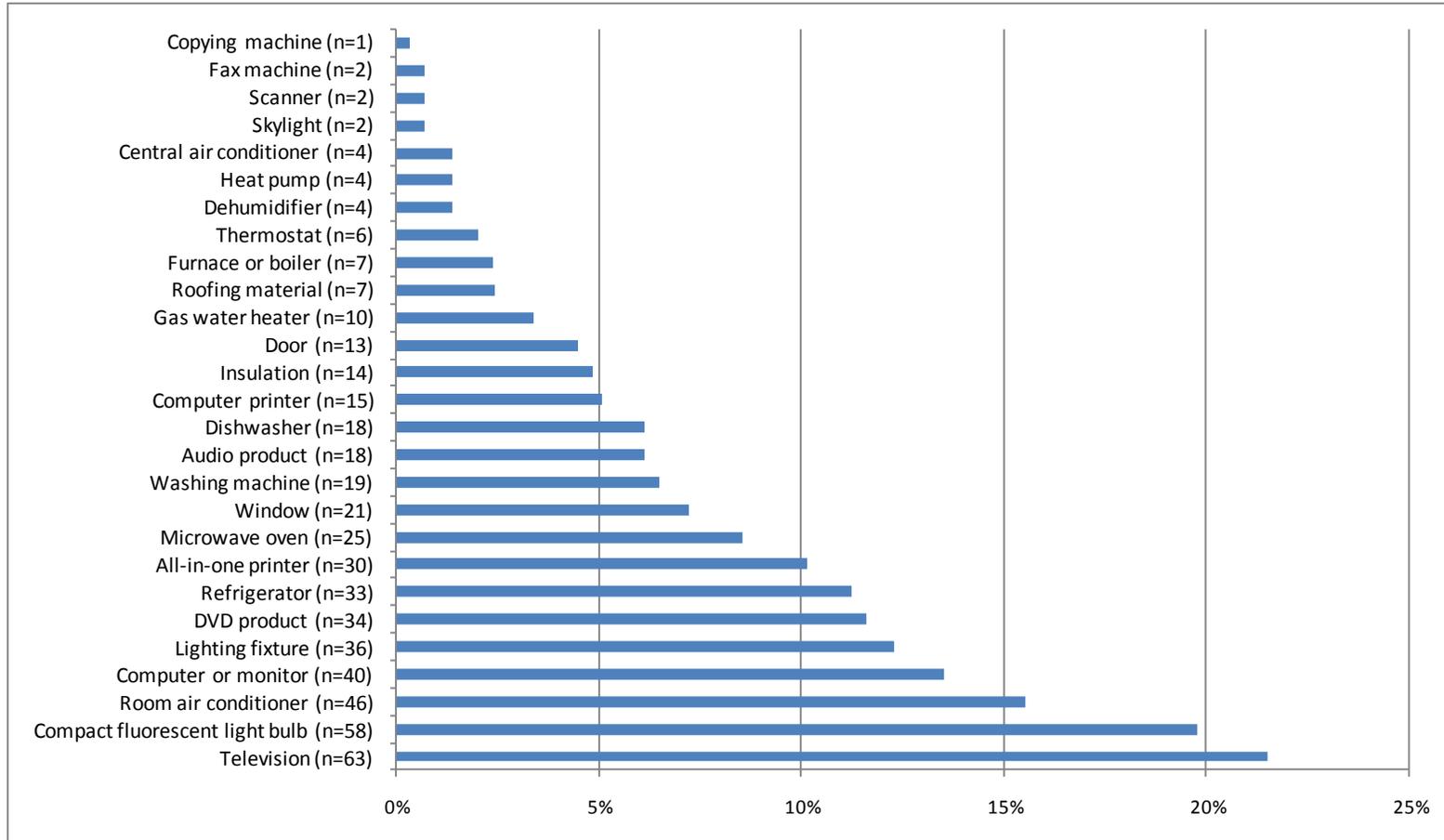
	2010		2008		2006		2004	
	NYSERDA	National	NYSERDA	National	NYSERDA	National	NYSERDA	National
	n=132	n=553	n=100	n=520	n = 126	n = 776	n = 165	n = 336
Yes	82%	77%	74%	72%^	77%*^	65%	58%*	68%
No	18%	23%	26%	26%	23%	35%	42%	32%

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

For respondents in the NYSERDA area, follow-up questions were asked to better understand the market penetration of products purchased within the past year. Products purchased (either ENERGY STAR or non-ENERGY STAR) by the most respondents in the past 12 months were: televisions (22%), CFL bulbs (20%), and room air conditioners (16%), (Figure B-1).

Figure B-1. Percent of Respondents Who Purchased Products (2010 NYSERDA Only)



1.6 LOYALTY TO ENERGY STAR

Respondents were asked to rate how likely they would be to recommend ENERGY STAR-labeled products to a friend on a scale of 0-10, where

0 was not at all likely and 10 was extremely likely. Almost three-quarters of NYSERDA respondents (72%) and over two-thirds of national respondents (excluding NY) (67%) reported they would be “very likely” to recommend ENERGY STAR products to a friend. In

2008, 84% of national respondents reported they were at least “somewhat likely” to recommend ENERGY STAR products to a friend. In 2010, this statistic increased to 92%.

Table B-7. Likelihood of Recommending ENERGY STAR Products

	2010		2008		2006		2004		2001	
	NYSERDA	National Mail								
	n=165	n=756	n = 106	n = 505	n = 88	n = 527	n = 94	n = 208	n=122	n=370
Very Likely (7-10)	72%^	67%^	58%	51%^	50%^	45%	40%	41%	47%	42%
Somewhat Likely (4-6)	24%	25%^	35%	33%	28%	33%	37%^	32%	25%	29%
Slightly Likely (1-3)	4%	5%^	4%*	12%^	17%	19%	14%	19%	15%	16%
Not at all Likely (0)	1%	3%	3%	4%	5%	3%	10%	9%	13%	14%

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

1.7 INFORMATION SOURCES SEEN

National and NYSERDA respondents were asked where they recalled seeing or hearing about the ENERGY STAR label (

Table B-8). Most households in both response groups saw the label on appliances or electronic equipment (67% nationally; 68% for NYSERDA) as well as on displays in stores (66% nationally; and 65% for NYSERDA). TV commercials were the third most common place the label was noted, with 46% of national respondents (excluding NY) and 58% of NYSERDA respondents mentioning them.

Some increases occurred in many of the categories over the 2008 survey. In the national (total) sample, more respondents reported seeing or hearing about the ENERGY STAR label from newspaper or magazine advertisements (25%, up from 22%) and TV commercials (46%, up from 38%).

For the NYSERDA over-sample, increases over 2008 responses were reported for newspaper or magazine advertisements (35%, up from 29%) direct mail or circular advertisements (17%, up from 10%), displays in stores (65%, up from 63%), TV commercials (58%, up from 54%), and salespeople (18%, up from 13%).

Table B-8. Where did you hear or see something about ENERGY STAR? Please mark all that apply

	2010		2008		2006		2004		2001	
	NYSERDA	National	NYSERDA	National	NYSERDA	National	NYSERDA	National	NYSERDA	Nationwide WebTV
	n=234	n=1004	n = 222	n = 1075	n = 232	n = 1328	n = 308	n = 566	n = 355	n = 639
Newspaper or magazine advertisement	35%*	25%	29%*	22%	28%*	24%	26%*^	17%	35%	27%
Newspaper or magazine article	18%	13%	23%	15%	15%^	12%	11%*^	7%	14%	12%
TV commercial	58%*	46%^	54%*^	38%^	42%*^	34%	52%*	29%	55%	36%
TV news feature story	9%	7%	6%	5%	5%	5%	5%^	3%	7%	3%
Radio commercial	12%*	7%	15%*	8%^	13%*	6%	11%*	5%	12%	4%
Billboard	9%*	5%	11%*	5%	10%*	6%	8%*	2%	6%	3%
Utility mailing or bill inserts	30%	27%	30%	29%^	26%^	26%	21%*^	25%	37%	23%
Direct mail or circular advertisement	17%^	12%	10%	11%	8%	10%	9%	7%	9%	7%
Labels on appliances or electronic equipment	68%	67%	66%	68%^	69%*	65%	65%	65%	61%	65%
Yellow EnergyGuide label	25%	22%	20%	21%	24%	22%	21%	19%	18%	20%
Displays in stores	65%	66%	63%^	65%^	55%	56%	57%*^	49%	41%	29%
Internet	17%	16%	15%^	17%^	11%	11%	8%*	11%	7%	9%
Salesperson	18%	13%	13%	12%^	9%	8%	9%^	7%	6%	3%
Contractor	4%^	4%	9%*^	4%^	2%	2%	2%	2%	2%	1%
Realtor	3%	2%	4%	3%	2%	2%	3%*	1%	NA	NA
Lender	1%	0%	1%	1%^	1%*^	0%	0%	0%	NA	NA
Homebuilder	6%	7%	8%*^	6%^	5%	3%	6%*	3%	NA	NA
Friend, neighbor, relative, or co-worker	10%	6%	11%*^	5%	6%*	4%	6%*	3%	5%	4%
Other	4%	2%	2%*	3%	3%	4%	2%*	6%	NA	NA
Don't know	6%	4%^	4%*^	7%^	8%*^	11%	3%*	10%	NA	NA

* NYSERDA and National results for the same year are statistically different at the p<0.1 level

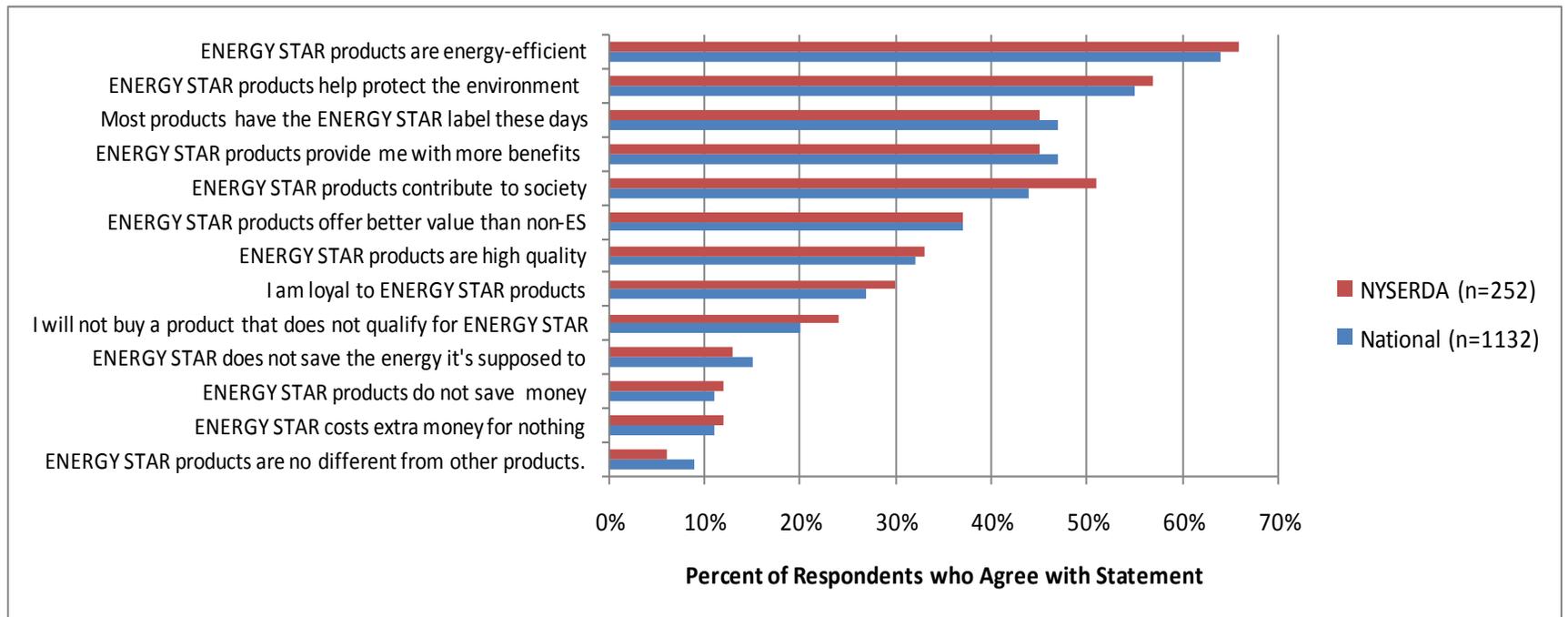
^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

1.8 PERCEPTION REGARDING ENERGY STAR PRODUCTS

Respondents generally felt ENERGY STAR products helped protect the environment, provide more benefits, and save more energy than products without the label. Few national or NYSERDA respondents (11% and 12%, respectively) agreed buying ENERGY STAR products resulted in them feeling like they had spent extra money for nothing, while 32% of national respondents and 33% of NYSERDA respondents believed ENERGY STAR products were of higher quality than products without the label. Additionally, 37% of national respondents and 37% of NYSERDA respondents agreed ENERGY STAR products offered better values than products without the ENERGY STAR label. Further, 47% of national respondents and 45% of NYSERDA respondents agreed ENERGY STAR products provided them with more benefits than products without the ENERGY STAR label.

For other questions concerning ENERGY STAR products, however, NYSERDA respondents differed from the national sample. For example, 51% of NYSERDA respondents and 44% of national respondents believed buying ENERGY STAR products made them feel like they were contributing to society.

Figure B-2. Percent of Respondents Who Agree with ENERGY STAR Issues



1.9 ADDITIONAL QUESTIONS FOR THE NYSERDA OVER-SAMPLE

Since 2004, a series of questions were asked only for the NYSERDA over-sample. Results for these questions are summarized below.

- Over two-thirds (70%) of NYSERDA respondents said, prior to the ENERGY STAR purchase they made in the last 12 months, they had previously purchased a product with the ENERGY STAR label.
- Over one-third (41%) of respondents reported they had heard promotions related to the ENERGY STAR or **New York Energy \$martSM** programs; 43% reported they had not heard any promotions; and 16% did not know.
- In 2010, less than half of respondents who had made recent purchases placed a high level of importance on promotions they had heard related to the ENERGY STAR or **New York Energy \$martSM** programs when selecting specific products: on a 1-to-5 scale, with 5 as “very important,” 45% gave promotions a “4” or a “5,” compared to 33% in 2006
- Of households in the NYSERDA respondent group, 96% reported energy efficiency being at least somewhat important (3, 4, or 5 on a 5-point scale) in the selection of appliances, lighting, and other products for the home, compared to other criteria (such as price and features). This percentage decreased slightly from 98% reporting these results in 2008. Results from this question are shown in Table B-9.

Table B-9. Importance of Energy Efficiency in Appliance Selection for NYSERDA Over-Sample

	2010 NYSERDA (n=108)	2008 NYSERDA (n=100)	2006 NYSERDA (n=84)	2004 NYSERDA (n=486)
5 (Very Important)	32%	44%	43% ^	27%
4	44%	38%	31%	37%
3	20%	16%	21%	27%
2	3%	2%	4%	4%
1 (Not at all Important)	1%	0%	0%	3%
Refused	0%	0%	1%	2%
Total	100%	100%	100%	100%

^ Results for this territory are statistically different from the same territory the previous survey year at the p<0.1 level.

- Of households in the NYSERDA respondent group, 72% said they gave energy efficiency more consideration in selecting appliances, lighting, and other home products than they did two years ago. Twenty-six percent of remaining respondents said they gave energy efficiency the same consideration in selecting these products as they did two years ago, and 2% of respondents said they gave energy efficiency less consideration.

1.10 KEY FINDINGS

- Both aided and unaided recognition of the ENERGY STAR label remained significantly higher in NYSERDA's area than nationally: in 2010, 76% of national respondents recognized the label with an aid, and 60% recognized the label without, while 80% of NYSERDA respondents recognized the label with an aid, and 70% recognized the label without.
- A clear majority of NYSERDA respondents (88%) reported the ENERGY STAR label very much, somewhat, or slightly influenced their purchasing decisions. This number increased from 82% in the 2008 survey.
- Most respondents who received rebates for their purchases, both nationally and in NYSERDA territory, said they likely would have bought the ENERGY STAR product without a rebate. This indicates very high free-ridership for most product rebates.
- Ninety-six percent of respondents in NYSERDA's area said they were very or somewhat likely to recommend ENERGY STAR-labeled products to a friend.
- The most common locations of ENERGY STAR labels cited by NYSERDA respondents were: television ads, store displays, and appliance or electrical equipment labels.
- Energy efficiency in appliance selection was considered about the same importance to respondents making a purchase in 2010 compared to 2008. About three-quarters rated a very high to high level of importance to energy efficiency in appliance selection in 2010, compared to a slightly higher 82% in 2008.

APPENDIX C. Survey Instruments

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1 ENERGY STAR Products Home Appliance Survey

**NYSERDA ENERGY STAR Products
End Use Customer Phone Survey 2010
Field Version
December 20, 2010**

Hello, my name is _____, and I'm calling on behalf of the New York State Energy Research and Development Authority (NYSERDA). NYSERDA is conducting a study about appliances, lighting purchases and energy use in New York State. May I please speak to an adult head of household who is involved in decision-making about appliances and lighting fixtures?

[READ IF NECESSARY: For most people it takes only about 5 minutes, but it may take as long as 15 to 20 minutes.]

[READ IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency, low-income, and research and development programs for consumers. We are not trying to sell you anything or sign you up for any program.]

[IF RESPONDENT HAS QUESTIONS, THEY CAN CALL: Victoria Engel at NYSERDA: (518) 862-1090, ext. 3207.]

1. NO NEED FOR QUESTION VERIFYING ADULT
2. MOVED TO DEMOGRAPHIC/ADDITIONAL SCREENER SECTION

3. First, please tell me if, during calendar year 2009, you shopped for any of the following appliances or lighting products for use in the home where you are now. [READ OPTIONS 1 TO 5. CHECK ALL THAT APPLY]

- 01 Refrigerator
- 02 Clothes washer
- 03 Dishwasher
- 04 Room air conditioner
- 05 Lighting fixture [READ IF NECESSARY: LIGHTING FIXTURES INCLUDES FLOOR LAMPS, TORCHIERES, TABLE LAMPS, CEILING FIXTURES, WALL-MOUNTED FIXTURES, OR EXTERIOR FIXTURES.]
- 06 NONE OF THESE
- 96 REFUSED
- 97 DON'T KNOW

4. During the calendar year 2009, did you actually purchase any of these products, brand new, or did someone—such as a contractor or landlord—purchase them in New York for your use in the home where you are now? [READ OPTIONS 1 TO 5. CHECK ALL THAT APPLY]

- 01 Refrigerator
- 02 Clothes washer
- 03 Dishwasher
- 04 Room air conditioner
- 05 Lighting fixture [READ IF NECESSARY: LIGHTING FIXTURES INCLUDES FLOOR LAMPS, TORCHIERES, TABLE LAMPS, CEILING FIXTURES, WALL-MOUNTED FIXTURES, OR EXTERIOR FIXTURES.]
- 06 NONE [ASK Q5 IF RELEVANT, THEN IF SELECTED AS NON-PURCHASER ASK Q6-Q11 AND (ESH1-HP1 & ALL DEMOS); OR IF SELECTED AS A FAILED SCREENER ASK (ESH1-HP1) AND (Q150, Q152, Q153, ZIP, & Q155)]
- 96 REFUSED [TERMINATE]
- 97 DON'T KNOW [IF SELECTED AS NON-PURCHASER ASK Q6-Q11 AND (ESH1-HP1 & ALL DEMOS); OR IF SELECTED AS A FAILED SCREENER ASK (ESH1-HP1) AND (Q150, Q152, Q153, ZIP, & Q155)]

[FOR EACH APPLIANCE TYPE MENTIONED IN Q3 BUT NOT IN Q4, ASK Q5, ELSE SKIP TO Q6]

5. Is there any particular reason why you didn't purchase a [INSERT PRODUCT FROM Q3] in 2009? [DO NOT READ LIST UNLESS NEEDED TO PROMPT]
- 01 PURCHASED SINCE DECEMBER 2009
 - 02 WAITING FOR PRODUCT TO GO ON SALE
 - 03 HAVEN'T DECIDED WHICH MODEL TO PURCHASE YET
 - 04 DIDN'T HAVE THE MONEY TO PURCHASE AT THAT TIME
 - 05 DECIDED NOT TO PURCHASE
 - 06 FOUND A USED PRODUCT INSTEAD
 - 07 WAITING FOR ARRA REBATES
 - 08 PURCHASED OUTSIDE OF NEW YORK
 - 09 OTHER [SPECIFY] _____
 - 96 REFUSED
 - 97 DON'T KNOW
6. The Energy Guide is a large, yellow label that shows, in dollars, the average energy used by an appliance during one year. It shows how a particular model compares to models using the greatest and smallest amounts of energy in its category. Have you seen or heard of such a label before now?
- 01 YES
 - 02 NO
 - 96 REFUSED
 - 97 DON'T KNOW
7. Have you ever seen or heard of the ENERGY STAR label?
- 01 YES **[SKIP TO 9]**
 - 02 NO
 - 96 REFUSED
 - 97 DON'T KNOW
8. The ENERGY STAR label has the word "energy" followed by a five-pointed star under a dome or half-circle. Some labels also show the continents and the oceans of the earth in a half circle. ENERGY STAR labels are used by the Environmental Protection Agency (EPA) and the Department of Energy to identify and label highly energy-efficient appliances for consumers. They may appear on some appliances and other products; retail stores may also post them at entrances and other locations; they may also appear on the yellow Energy Guide label. Have you seen or heard of such a label before now?
- 01 YES
 - 02 NO **[SKIP TO FIRST APPLIANCE MODULE BASED ON Q4]**
 - 96 REFUSED **[SKIP TO FIRST APPLIANCE MODULE BASED ON Q4]**
 - 97 DON'T KNOW **[SKIP TO FIRST APPLIANCE MODULE BASED ON Q4]**

9. What does the ENERGY STAR label mean to you? [CHECK ALL THAT APPLY; DO NOT READ RESPONSES]

- 01 SAVE MONEY ON OPERATION
- 02 ENERGY EFFICIENT/SAVINGS
- 03 ENERGY CONSERVATION
- 04 SAVINGS (NOT LINKED TO OPERATION)
- 05 ENVIRONMENTAL BENEFITS
- 06 ENERGY/ENVIRONMENTAL PRODUCT STANDARDS
- 07 ENERGY [NO LINK TO EFFICIENCY]
- 08 ENVIRONMENT [NO LINK TO BENEFIT]
- 09 PRODUCT STANDARDS [NO ENVIRONMENTAL LINK]
- 10 ELECTRICITY
- 11 QUALITY
- 12 GOVERNMENT BACKING
- 13 CONFUSES WITH ENERGY GUIDE
- 14 MENTIONS SPECIFIC PRODUCTS
- 15 SAVE MONEY ON PURCHASE
- 16 NEGATIVE PERCEPTION [SPECIFY] _____
- 17 OTHER [SPECIFY] _____
- 96 REFUSED
- 97 DON'T KNOW

10. Do you remember seeing or hearing any advertising or information about ENERGY STAR or energy-efficiency in general over the past year?

- 01 YES, SAW/HEARD ENERGY STAR ADVERTISEMENTS OR INFORMATION [INCLUDES ENERGY EFFICIENCY]
- 02 YES, SAW OR HEARD ENERGY-EFFICIENCY ADVERTISING OR INFORMATION ONLY
[SKIP TO 11]
- 03 NO **[SKIP TO FIRST APPLIANCE MODULE BASED ON Q4]**
- 96 REFUSED **[SKIP TO FIRST APPLIANCE MODULE BASED ON Q4]**
- 97 DON'T KNOW **[SKIP TO FIRST APPLIANCE MODULE BASED ON Q4]**

10a. What was the advertisement or information about? [DO NOT READ; CHECK ALL THAT APPLY]

- 01 NEGATIVE INFORMATION [SPECIFY] _____
- 02 INFORMATION ON SPECIFIC PRODUCTS THAT ARE ENERGY STAR
- 03 HOW ENERGY STAR WILL SAVE MONEY
- 04 HOW ENERGY STAR HELPS THE ENVIRONMENT
- 05 HOW ENERGY STAR IS QUALITY PRODUCTS
- 06 OTHER [NO NEED TO SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

11. Can you tell me where you saw or heard those advertising or informational materials? [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

- 01 TV AD
- 02 TV NEWS FEATURE STORY
- 03 RADIO AD
- 04 RADIO PUBLIC SERVICE ANNOUNCEMENT
- 05 RETAIL STORE SIGN AND INFORMATIONAL MATERIALS
- 06 NEWSPAPER OR MAGAZINE AD
- 07 NEWSPAPER INSERT
- 08 BILLBOARD
- 09 A UTILITY MAILING OR BILL INSERT
- 10 AN INTERNET SITE
- 11 AD IN A MOVIE THEATRE
- 12 CHILD CAME HOME FROM SCHOOL WITH MATERIALS/CHILD CAME HOME FROM SCHOOL WANTING TO DO AN AUDIT OF THE HOUSE
- 13 YELLOW ENERGY GUIDE LABEL
- 14 AT THE NY STATE FAIR OR ANOTHER PUBLIC EVENT
- 15 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

[EACH RESPONDENT GETS NO MORE THAN TWO MODULES FROM AMONG THE APPLIANCES AND LIGHTING FIXTURES IN Q4, MAINTAINING A QUOTA OF 200 PER MODULE.

THEY SHOULD BE RANDOMLY ASSIGNED BUT FOLLOW THE HIERARCHY OF IMPORTANCE (1 – REFRIG, 2 –CLOTHES WASHER, 3 – DISHWASHER, 4 – LIGHTING FIXTURE, 5 – ROOM A/C). NOTE THIS HIERARCHY IS SUBJECT TO CHANGE DURING FIELD PERIOD AS INCIDENCE IS BETTER KNOWN.]

Refrigerator Purchaser Module

[ASK 12-40 IF Q4 = 01 AND SELECTED FOR REFRIGERATOR MODULE]

12. Now I would like to ask you a few questions about your new refrigerator. Was it purchased by you, a remodeling contractor, a new home builder, or the landlord?

- 01 RESPONDENT OR MEMBER OF HOUSEHOLD **[SKIP TO 14]**
- 02 REMODELING CONTRACTOR
- 03 HOMEBUILDER
- 04 LANDLORD
- 05 OTHER [SPECIFY] _____
[SKIP TO 14]
- 96 REFUSED
- 97 DON'T KNOW

13. Was the specific refrigerator model selected by you or by the landlord, contractor, or builder?

- 01 RESPONDENT
- 02 LANDLORD, CONTRACTOR OR BUILDER **[SKIP TO 37]**
- 03 JOINT DECISION (FOR EXAMPLE, CONTRACTOR/BUILDER OFFERED CHOICES FROM WHICH YOU SELECTED)
- 96 REFUSED
[SKIP TO 37]
- 97 DON'T KNOW
[SKIP TO 37]

14. What method did you use to buy your refrigerator? Was it . . . [READ 1 TO 4, ROTATING THE ORDER WITH EACH SURVEY, THEN READ 5; CHECK ALL THAT APPLY]

- 01 Through a catalog **[SKIP TO 16]**
- 02 Over the Internet **[SKIP TO 16]**
- 03 Over the telephone **[SKIP TO 16]**
- 04 At a retail store
- 05 Or some other way? [Specify] _____ **[SKIP TO 16]**
- 96 REFUSED
[SKIP TO 19]
- 97 DON'T KNOW **[SKIP TO 19]**

15. In what city and state is the store located?

CITY/TOWN: _____ STATE: _____

96 REFUSED

97 DON'T KNOW

16. What is the name of the store?

STORE: _____

96 REFUSED

97 DON'T KNOW

[IF 16 = 96 OR 97, ASK 17; OTHERWISE SKIP TO 18]

17. Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?

01 SEARS [SKIP
TO 19]

02 HOME DEPOT [SKIP TO 19]

03 BEST BUY [SKIP TO 19]

04 LOWE'S [SKIP
TO 19]

05 PC RICHARD /PC RICHARD & SON [SKIP TO 19]

06 NONE OF THESE

96 REFUSED

97 DON'T KNOW

IF Q16 = SEARS, HOME DEPOT, BEST BUY, LOWE'S, PC RICHARDS, SKIP TO Q19]

18. Which of the following types of stores would you say it was? [READ LIST. ACCEPT ONE RESPONSE ONLY]

01 Appliance store

02 Furniture store

03 Department store or discount department store

04 Hardware store

05 Home improvement store [READ IF NECESSARY: THE DIFFERENCE BETWEEN A
HARDWARE STORE AND HOME IMPROVEMENT STORE IS THAT HARDWARE STORES
ARE USUALLY SMALLER AND DO NOT SELL LARGER ITEMS LIKE LUMBER]

06 Drug store

07 Grocery store

08 Home furnishing store

09 Lighting specialty store

10 Other type of store [Specify]

96 REFUSED

97 DON'T KNOW

19. Please tell me what features were important to you in selecting your refrigerator. [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

- 01 QUALITY; GOOD BRAND NAME
- 02 PRICE
- 03 COST TO OPERATE
- 04 ENERGY EFFICIENCY; SOMETHING THAT DOES NOT USE A LOT OF ELECTRICITY
- 05 SIZE; NEEDED SOMETHING TO FIT SPACE
- 06 ONLY ITEM IN STOCK
- 07 SPECIAL FEATURES [SPECIFY]
- 08 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

20. Where did you look for product information to decide which refrigerator to buy? [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

- 01 LOOKED AT NEWSPAPER ADVERTISEMENTS OR INSERTS OR OTHER RETAILER CATALOGS [ASK 21]
- 02 LOOKED ON THE INTERNET [ASK 22 TO 23]
- 03 CALLED RETAILERS ON THE PHONE [ASK 24 TO 27]
- 04 VISITED STORES [ASK 28 TO 31]
- 05 LOOKED AT CONSUMER REPORTS [SKIP TO 32]
- 06 OTHER [SPECIFY] [SKIP TO 32]
- 96 REFUSED [SKIP TO 32]
- 97 DON'T KNOW [SKIP TO 32]

21. [IF 7= 1 OR 8= 1] Did the newspaper advertisements, inserts, or catalogs display the ENERGY STAR label on any refrigerator models?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 20]

22. What kind of Internet sites did you look at? That is, who was the sponsor or what was the name of the site? [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

- 01 RETAIL STORE SITES (E.G., SEARS.COM, HOMEDEPOT.COM, LOWES.COM)
- 02 CONSUMER SITES (E.G., CONSUMERREPORTS.ORG)
- 03 ENERGYSTAR.GOV
- 04 GETENERGYSMART.ORG
- 05 NYSERDA.ORG
- 06 OTHER GOVERNMENT WEB SITES
- 07 MANUFACTURERS' SITES
- 08 UTILITY OR ELECTRIC COMPANY SITES
- 09 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

23. [IF 7= 1 OR 8= 1] Did the Internet sites display the ENERGY STAR logo on any refrigerator models?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 20]

[IF 7= 1 OR 8= 1, ASK 24 OTHERWISE GO TO 26]

24. Did the retailers you *called* talk about specific refrigerator models being ENERGY STAR labeled?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM [SKIP TO 26]
- 96 REFUSED [SKIP TO 26]
- 97 DON'T KNOW [SKIP TO 26]

25. Did the salesperson bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

26. Did the retailers you *called* discuss the amount of energy different refrigerators use or the cost to operate them?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM [SKIP TO NEXT RESPONSE CHOICE IN 20]
- 96 REFUSED [SKIP TO NEXT RESPONSE CHOICE IN 20]
- 97 DON'T KNOW [SKIP TO NEXT RESPONSE CHOICE IN 20]

27. Did the salespersons bring up the topic of the amount of energy different refrigerators use or the cost to operate them, or did they talk about it only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 20]

[IF 7= 1 OR 8= 1, ASK 28 OTHERWISE GO TO 30]

28. Did the salespersons at the retailers you *visited* talk about specific refrigerator models being ENERGY STAR labeled?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM [SKIP TO 30]
- 96 REFUSED [SKIP TO 30]
- 97 DON'T KNOW [SKIP TO 30]

29. Did the salespersons bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

30. Did the salespersons at the retailers you *visited* discuss the amount of energy different refrigerators use or the cost to operate them?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM [SKIP TO NEXT RESPONSE CHOICE IN 20]
- 96 REFUSED [SKIP TO NEXT RESPONSE CHOICE IN 20]
- 97 DON'T KNOW [SKIP TO NEXT RESPONSE CHOICE IN 20]

31. Did the salespersons bring up the topic of the amount of energy different refrigerators use or the cost to operate them, or did they talk about it only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

[IF 7=1 OR 8=1, ASK 32 OTHERWISE GO TO 37]

32. Did the refrigerator you bought have an ENERGY STAR label on it or on the packaging or instructions?

- 01 YES
- 02 NO [SKIP TO 35]
- 96 REFUSED [SKIP TO 35]
- 97 DON'T KNOW [SKIP TO 35]

33. How influential was the ENERGY STAR label in your decision to purchase the refrigerator you chose? Would you say it was not at all influential, slightly influential, somewhat influential, very influential, or extremely influential?

- 01 NOT AT ALL INFLUENTIAL
- 02 SLIGHTLY INFLUENTIAL
- 03 SOMEWHAT INFLUENTIAL
- 04 VERY INFLUENTIAL
- 05 EXTREMELY INFLUENTIAL
- 96 REFUSED
- 97 DON'T KNOW

34. Why did you buy a refrigerator with an ENERGY STAR label? [DO NOT READ. CHECK ALL THAT APPLY]

- 01 USES LESS ENERGY; ENERGY EFFICIENCY
- 02 BETTER FOR THE ENVIRONMENT
- 03 ENERGY STAR LABEL CONNOTES QUALITY/CHOSE ON QUALITY/BETTER OVERALL QUALITY
- 04 CHOSE ON BRAND NAME
- 05 CHOSE ON PRICE
- 06 BETTER OVERALL CONSTRUCTION
- 07 HAD SPECIAL FEATURES I WANTED
- 08 HAD THE LOOK I WANTED
- 09 ONLY TYPE AVAILABLE
- 10 NO PARTICULAR REASON
- 11 LESS NOISE
- 16 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 37]

35. Did any of the refrigerators you considered buying have an ENERGY STAR label?

- 01 YES
- 02 NO [SKIP TO 37]
- 96 REFUSED [SKIP TO 37]
- 97 DON'T KNOW [SKIP TO 37]

36. [ASK IF 32 = 02 AND Q35=1] Why did you select a refrigerator without an ENERGY STAR label? [DO NOT READ. CHECK ALL THAT APPLY]

- 01 TOO EXPENSIVE
- 02 ENERGY STAR LABEL HAS NEGATIVE CONNOTATIONS FOR ME
- 03 WASN'T SURE WHAT THE LABEL MEANT
- 04 DIDN'T LIKE OVERALL QUALITY
- 05 DIDN'T LIKE OVERALL CONSTRUCTION
- 06 COULDN'T FIND THE SPECIAL FEATURES I LIKED
- 07 COULDN'T FIND THE STYLE/LOOK I LIKED
- 08 JUST WAS NOT A CONSIDERATION
- 12 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

37. The most important information we need for this study is the brand name, size in cubic feet, and model number of your new refrigerator. This information will enable us to look up the unit's efficiency information in industry directories. The model number can usually be found on the inside wall of the refrigerator. Most refrigerators show the model number above or to the left of the serial number. We do not need the serial number, only the model number. I would also like you to tell me if you see an ENERGY STAR label near the model number or on the inside door of the refrigerator. May I ask you to please get this information for me? If you cannot walk over there with the phone, you may need to grab a pencil and paper to jot it down.

01 What is the brand name of your new refrigerator?

- 01 AMANA
- 02 FRIGIDAIRE
- 03 GENERAL ELECTRIC OR GE
- 04 KENMORE
- 05 KITCHEN AID
- 06 MAYTAG
- 07 SUB-ZERO
- 08 VIKING
- 09 WHIRLPOOL
- 10 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

02 What is the cubic feet of your new refrigerator?

RECORD NUMBER _____

- 96 REFUSED
- 97 DON'T KNOW

03 What is the model number of your new refrigerator?

[READ IF NECESSARY: THE MODEL NUMBER CAN USUALLY BE FOUND ON THE INSIDE WALL OF THE REFRIGERATOR. MOST REFRIGERATORS SHOW THE MODEL NUMBER ABOVE OR TO THE LEFT OF THE SERIAL NUMBER. WE DO NOT NEED THE SERIAL NUMBER, ONLY THE MODEL NUMBER.]

RECORD VERBATIM _____

- 96 REFUSED
- 97 DON'T KNOW

[NOTE TO INTERVIEWER: REPEAT THE MODEL NUMBER BACK TO THE RESPONDENT SLOWLY AND CHECK THAT IT IS CORRECT. IF THE RESPONDENT CANNOT TELL WHICH THE MODEL NUMBER IS, RECORD MORE THAN ONE NUMBER. MODEL NUMBER IS EXTREMELY IMPORTANT!]

04 Are there any additional model number(s)?

- 01 YES
- 02 NO [SKIP TO 05]
- 96 REFUSED [SKIP TO 05]
- 97 DON'T KNOW [SKIP TO 05]

04a. What are the other model numbers?

RECORD NUMBER _____

- 96 REFUSED
- 97 DON'T KNOW

05 Is there an ENERGY STAR label near the model number or inside door of the refrigerator?

- 01 YES
- 02 NO
- 96 REFUSED
- 97 DON'T KNOW

[IF ANY OF 37_1-37_5 = 96 OR 97, DO 37_6]

06 **[NOTE TO INTERVIEWER: DO NOT ASK. PLEASE CODE WHY RESPONDENT DID NOT FILL INFORMATION IN 37.]**

- 01 REFUSED TO LOOK
- 02 LOOKED BUT COULD NOT FIND
- 03 OTHER [SPECIFY]

[IF ANY OF 37_1-37_5 = 96 OR 97, ASK 38-39]

38. Is the freezer compartment of your new refrigerator on the top, bottom, or side?

- 01 TOP
- 02 BOTTOM
- 03 SIDE
- 04 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

39. Does your new refrigerator have through-the-door ice, through-the-door water, or both?

- 01 YES, THROUGH-THE-DOOR ICE ONLY
- 02 YES, THROUGH-THE-DOOR WATER ONLY
- 03 YES, BOTH ICE AND WATER
- 04 NONE
- 96 REFUSED
- 97 DON'T KNOW

40. What impact, if any, has the economic recession had on your decision to purchase a refrigerator? [DO NOT READ CHOICES, BUT SELECT ALL THAT APPLY. PROBE TO MAKE SURE RESPONDENT MENTIONS ALL FACTORS THAT HAVE INFLUENCED THEIR PURCHASING DECISIONS IF THERE IS MORE THAN ONE FACTOR.]

- 01 I DELAYED THE PURCHASE OF THE APPLIANCE.
- 02 I BOUGHT A LESS EXPENSIVE MODEL THAN I WOULD HAVE LIKED TO HAVE PURCHASED.
- 03 I BOUGHT A DIFFERENT MODEL THAN I WOULD HAVE LIKED TO HAVE PURCHASED.
- 04 I PURCHASED A SMALLER ONE THAN I WOULD HAVE LIKED.
- 05 I PURCHASED ONE THAT DIDN'T LOOK AS NICE AS I WOULD HAVE LIKED.
- 06 I PURCHASED ONE WITHOUT THE ICE-MAKER.
- 07 I PURCHASED ONE WITHOUT THE CHILLED WATER SUPPLIER.
- 08 I PURCHASED ONE WITH A SMALLER FREEZER THAN I WOULD HAVE LIKED.
- 09 OTHER [SPECIFY]
- 10 NO IMPACT
- 96 REFUSED
- 97 DON'T KNOW

Clothes Washer Purchaser Module

[ASK 41-71 IF Q4 = 02 AND SELECTED FOR CLOTHES WASHER MODULE]

41. Now I would like to ask a few questions about your new clothes washer. Was it purchased by you, a remodeling contractor, a new home builder, or the landlord?

- 01 RESPONDENT OR MEMBER OF HOUSEHOLD **[GO TO 43]**
- 02 REMODELING CONTRACTOR
- 03 HOMEBUILDER
- 04 LANDLORD
- 05 OTHER (SPECIFY: _____) **[GO TO 43]**
- 96 REFUSED
- 97 DON'T KNOW

42. Was the specific clothes washer model selected by you or by the landlord, contractor, or builder?

- 01 RESPONDENT
- 02 LANDLORD, CONTRACTOR OR BUILDER **[SKIP TO 66]**
- 03 JOINT DECISION (E.G., CONTRACTOR/BUILDER OFFERED CHOICES FROM WHICH YOU SELECTED) **[SKIP TO 66]**
- 96 REFUSED
- 97 DON'T KNOW **[SKIP TO 66]**

43. What method did you use to buy your clothes washer? Was it . . . [READ 1 TO 4, ROTATING THE ORDER WITH EACH SURVEY, THEN READ 5; CHECK ALL THAT APPLY]

- 01 Through a catalog **[SKIP TO 45]**
- 02 Over the internet **[SKIP TO 45]**
- 03 Over the telephone **[SKIP TO 45]**
- 04 At a retail store
- 05 Or some other way? [specify] **[SKIP TO 45]**
- 96 REFUSED **[SKIP TO 48]**
- 97 DON'T KNOW **[SKIP TO 48]**

44. In what city and state is the store located?

- City/Town: _____ State: _____
- 96 REFUSED
 - 97 DON'T KNOW

45. And what is the name of the store?

Store: _____

- 96 REFUSED
- 97 DON'T KNOW

[IF 45 = 96 OR 97, ASK 46; OTHERWISE SKIP TO 47]

46. Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?

- 01 SEARS [SKIP TO 48]
- 02 HOME DEPOT [SKIP TO 48]
- 03 BEST BUY [SKIP TO 48]
- 04 LOWE'S [SKIP TO 48]
- 05 PC RICHARD/PC RICHARD & SON [SKIP TO 48]
- 06 NONE OF THESE
- 96 REFUSED
- 97 DON'T KNOW

IF Q45=SEARS, HOME DEPOT, BEST BUY, LOWES, PC RICHARDS, SKIP TO Q48.

47. Which of the following types of stores would you say it was? [READ LIST. ACCEPT ONE RESPONSE ONLY]

- 01 Appliance store
- 02 Furniture store
- 03 Department store or discount department store
- 04 Hardware store
- 05 Home improvement store [READ IF NECESSARY: THE DIFFERENCE BETWEEN A HARDWARE STORE AND HOME IMPROVEMENT STORE IS THAT HARDWARE STORES ARE USUALLY SMALLER AND DO NOT SELL LARGER ITEMS LIKE LUMBER]
- 06 Drug store
- 07 Grocery store
- 08 Home furnishing store
- 09 Lighting specialty store
- 10 Other type of store [specify]
- 96 REFUSED
- 97 DON'T KNOW

48. Please tell me what features were important to you in selecting your clothes washer. [DO NOT READ RESPONSE; PROBE; RECORD ALL THAT APPLY]

- 01 QUALITY; GOOD BRAND NAME
- 02 PRICE
- 03 COST TO OPERATE
- 04 ENERGY EFFICIENCY; SOMETHING THAT DOES NOT USE A LOT OF ELECTRICITY
- 05 SIZE; SOMETHING TO FIT THE SPACE
- 06 ONLY ITEM IN STOCK
- 07 SPECIAL FEATURES [SPECIFY]
- 08 OTHER [SPECIFY]
- 09 ENERGY EFFICIENCY; SOMETHING THAT DOES NOT USE A LOT OF WATER
- 96 REFUSED
- 97 DON'T KNOW

49. Where did you look for product information to decide which clothes washer to buy? [DO NOT READ RESPONSES; CHECK ALL THAT APPLY]

- 01 LOOKED AT NEWSPAPER ADVERTISEMENTS OR INSERTS OR OTHER RETAILER CATALOGS [ASK 50]
- 02 LOOKED ON THE INTERNET [ASK 51 TO 52]
- 03 CALLED RETAILERS ON THE PHONE [ASK 53 TO 56]
- 04 VISITED STORES [ASK 57 TO 60]
- 05 LOOKED AT CONSUMER REPORTS [SKIP TO 61]
- 06 OTHER [SPECIFY] _____ [SKIP TO 61]
- 96 REFUSED [SKIP TO 61]
- 97 DON'T KNOW [SKIP TO 61]

50. [IF 7 = 1 OR 8 = 1] Did the newspaper advertisements or inserts or catalogs display the ENERGY STAR label on any clothes washer models?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 49]

51. What kind of Internet sites did you look at? That is, who was the sponsor or what was the name of the site? [DO NOT READ; MULTIPLE RESPONSE]

- 01 RETAIL STORE SITES (E.G., SEARS.COM, HOMEDEPOT.COM, LOWES.COM)
- 02 CONSUMER SITES (E.G., CONSUMERREPORTS.ORG)
- 03 ENERGYSTAR.GOV
- 04 GETENERGYSMART.ORG
- 05 NYSERDA.ORG
- 06 OTHER GOVERNMENT SITES
- 07 MANUFACTURERS' SITES
- 08 UTILITY OR ELECTRIC COMPANY SITES
- 09 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

52. [IF 7 = 1 OR 8 = 1] Did the Internet site display the ENERGY STAR logo on any clothes washer models?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 49]

[IF 7 = 1 OR 8 = 1, ASK 53 OTHERWISE GO TO 55]

53. Did the retailers you *called* talk about specific clothes washer models being ENERGY STAR labeled?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM [SKIP TO 55]
- 96 REFUSED [SKIP TO 55]
- 97 DON'T KNOW [SKIP TO 55]

54. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

55. Did the retailers you *called* discuss the amount of energy different clothes washers use or the costs to operate them?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED

[SKIP TO NEXT RESPONSE CHOICE IN 49]

[SKIP TO NEXT RESPONSE CHOICE IN

49]

- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN

49]

56. Did the salesperson(s) bring up the topic of the amount of energy different clothes washers use or the costs to operate them, or did they talk about it only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 49]

[IF 7 = 1 OR 8 = 1, ASK 57 OTHERWISE GO TO 59]

57. Did the salespersons at the retailers you *visited* talk about specific clothes washer models being ENERGY STAR labeled?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 59]

[SKIP TO 59]

[SKIP TO 59]

58. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

63. Why did you buy a clothes washer with an ENERGY STAR label? [DO NOT READ. ALLOW MULTIPLE RESPONSE; PROBE]

- 01 USES LESS ENERGY; ENERGY EFFICIENCY
- 02 BETTER FOR THE ENVIRONMENT
- 03 ENERGY STAR LABEL CONNOTES QUALITY/CHOSE ON QUALITY/BETTER OVERALL QUALITY
- 04 CHOSE ON BRAND NAME
- 05 CHOSE ON PRICE
- 06 BETTER OVERALL CONSTRUCTION
- 07 HAD SPECIAL FEATURES I WANTED
- 08 HAD THE LOOK I WANTED
- 09 ONLY TYPE AVAILABLE
- 10 NO PARTICULAR REASON
- 11 LESS NOISE
- 12 REDUCES THE AMOUNT OF WATER
- 13 USES LESS DETERGENT
- 14 SHORTENS TIME TO DRY CLOTHES/DISHES
- 15 REDUCES WEAR AND TEAR ON CLOTHES
- 16 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 66]

64. Did any of the clothes washers you considered buying have an ENERGY STAR label?

- 01 YES
- 02 NO **[SKIP TO 66]**
- 96 REFUSED **[SKIP TO 66]**
- 97 DON'T KNOW **[SKIP TO 66]**

65. **[ASK IF 61 = 02 AND 64=1]** Why did you select a clothes washer without an ENERGY STAR label? **[DO NOT READ. CHECK ALL THAT APPLY]**

- 01 TOO EXPENSIVE
- 02 ENERGY STAR LABEL HAS NEGATIVE CONNOTATIONS FOR ME
- 03 WASN'T SURE WHAT THE LABEL MEANT
- 04 DIDN'T LIKE OVERALL QUALITY
- 05 DIDN'T LIKE OVERALL CONSTRUCTION
- 06 COULDN'T FIND THE SPECIAL FEATURES I LIKED
- 07 COULDN'T FIND THE STYLE/LOOK I LIKED
- 08 JUST WAS NOT A CONSIDERATION
- 12 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

66. Did you also buy a clothes dryer when you bought your clothes washer?

- 01 YES
- 02 NO **[SKIP TO 68]**
- 96 REFUSED **[SKIP TO 68]**
- 97 DON'T KNOW **[SKIP TO 68]**

67. Did your clothes dryer purchase influence your decision to purchase a particular clothes washer model?

- 01 YES
- 02 NO
- 96 REFUSED
- 97 DON'T KNOW

68. Where is the door you put the clothes through on your new clothes washer; on top or on the front panel, similar to the door on a clothes dryer?

- 01 TOP
- 02 FRONT
- 96 REFUSED
- 97 DON'T KNOW

69. The most important information we need for this study is the brand name and model number of your new clothes washer. This information will enable us to look up the unit's efficiency information in industry directories. The model number can usually be found on the front of the machine or on the inside of the door. Most clothes washers show the model number above or to the left of the serial number. We do not need the serial number, only the model number. I would also like you to tell me if you see an ENERGY STAR label on the front of your new clothes washer or on the control panel. May I ask you to please get this information for me? If you cannot walk over there with the phone, you may need to grab a pencil and paper to jot it down.

01 What is the brand name of your new clothes washer?

[READ IF NECESSARY: THIS SHOULD BE ON THE FRONT OF THE MACHINE
OR ON THE CONTROL PANEL.]

- | | |
|---|--|
| 01 ADMIRAL | 18 MALBER |
| 02 AMANA | 19 MAYTAG (ATLANTIS / NEPTUNE
/ NEPTUNE TL / NEPTUNE
STACK) |
| 03 ARISTON | 20 MIELE (TOUCHTRONIC SERIES /
NOVOTRONIC / SUPER
NOVOTRONIC) |
| 04 ASKO | 21 QUIETLINE |
| 05 AVANTI | 22 SAMSUNG |
| 06 BOSCH (AXXIS / AXXIS+ /
ESSENCE / NEXXT / NEXXT
PREMIUM / NEXXT PREMIUM
PLATINUM / DLX) | 23 SIEMENS |
| 07 DANBY DESIGNER | 24 SIMPLICITY |
| 08 EQUATOR | 25 SPEED QUEEN |
| 09 EUROTECH | 26 SPLENDIDE |
| 10 FISHER & PAYKEL (ECOSMART /
INTUITIVE) | 27 STABER |
| 11 FRIGIDAIRE | 28 SUMMIT |
| 12 GENERAL ELECTRIC (HARMONY) | 29 THOR (SOFTLINE) |
| 13 GIBSON | 30 WHIRLPOOL (CALYPSO / DUET /
DUET HT / RESOURCE SAVER /
ULTIMATE CARE) |
| 14 IMPERIAL | 31 OTHER (SPECIFY) |
| 15 KENMORE (ELITE CALYPSO /
HE3 / HE3T / HE4T) | 96 REFUSED |
| 16 KITCHEN AID (ENSEMBLE
SUPERBA) | 97 DON'T KNOW |
| 17 LG ELECTRONICS (TROMM
(FRONT CONTROLS) / TROMM
(REAR CONTROLS)) | |

[NOTE TO INTERVIEWER: THE NAMES IN PARENTHESES ARE BRAND NAMES THAT THE
MANUFACTURERS HAVE ATTACHED TO SOME QUALIFIED MACHINES. THESE ARE
PROVIDED BECAUSE YOU MAY HEAR THESE NAMES.]

02 What is the model number of your new clothes washer?

[READ IF NECESSARY: IT MAY BE ON THE FRONT OF THE MACHINE BUT MORE LIKELY ON THE INSIDE OF THE DOOR. MOST CLOTHES WASHERS SHOW THE MODEL NUMBER ABOVE OR TO THE LEFT OF THE SERIAL NUMBER. WE DO NOT NEED THE SERIAL NUMBER, ONLY THE MODEL NUMBER.]

RECORD VERBATIM _____

96 REFUSED

97 DON'T KNOW

[NOTE TO INTERVIEWER: REPEAT THE MODEL NUMBER BACK TO THE RESPONDENT SLOWLY AND CHECK THAT IT IS CORRECT. IF THE RESPONDENT CANNOT TELL WHICH THE MODEL NUMBER IS, RECORD MORE THAN ONE NUMBER. MODEL NUMBER IS EXTREMELY IMPORTANT!]

03 Is there an ENERGY STAR label near on the front of your new clothes washer or on the control panel?

01 YES

02 NO

96 REFUSED

97 DON'T KNOW

[IF ANY OF 69_1-69_3 = 96 OR 97, DO 69_4]

04 [NOTE TO INTERVIEWER: DO NOT ASK. PLEASE CODE WHY RESPONDENT DID NOT FILL INFORMATION IN 69.]

01 REFUSED TO LOOK

02 LOOKED BUT COULD NOT FIND

03 OTHER [SPECIFY]

70. THERE IS NO QUESTION 70

71. What impact, if any, has the economic recession had on your decision to purchase a clothes washer?

[DO NOT READ CHOICES, BUT SELECT ALL THAT APPLY. PROBE TO MAKE SURE RESPONDENT MENTIONS ALL FACTORS THAT HAVE INFLUENCED THEIR PURCHASE DECISIONS IF THERE IS MORE THAN ONE FACTOR.]

- 01 I DELAYED THE PURCHASE OF THE APPLIANCE.
- 02 I BOUGHT A LESS EXPENSIVE MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED.
- 03 I BOUGHT A DIFFERENT MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED.
- 04 I PURCHASED A SMALLER ONE THAN I WOULD HAVE LIKED.
- 05 I PURCHASED ONE THAT DIDN'T LOOK AS NICE AS I WOULD HAVE LIKED.
- 06 I PURCHASED ONE THAT WAS NOISIER THAN I WOULD HAVE LIKED.
- 07
- 08
- 09 OTHER [SPECIFY]
- 10 NO IMPACT
- 96 REFUSED
- 97 DON'T KNOW

Dishwasher Purchaser Module

[ASK 72-98 IF Q4 = 03 AND SELECTED FOR DISHWASHER MODULE]

72. Now I would like to ask you a few questions about your new dishwasher. Was it purchased by you, a remodeling contractor, a new home builder, or the landlord?

- 01 RESPONDENT OR MEMBER OF HOUSEHOLD **[SKIP TO 74]**
- 02 REMODELING CONTRACTOR
- 03 HOMEBUILDER
- 04 LANDLORD
- 05 OTHER [SPECIFY] _____ **[SKIP TO 74]**
- 96 REFUSED
- 97 DON'T KNOW

73. Was the specific dishwasher model selected by you or by the landlord, contractor, or builder?

- 01 RESPONDENT
- 02 LANDLORD, CONTRACTOR OR BUILDER **[SKIP TO 97]**
- 03 JOINT DECISION (FOR EXAMPLE, CONTRACTOR/BUILDER OFFERED CHOICES FROM WHICH YOU SELECTED)
- 96 REFUSED
- [SKIP TO 97]**
- 97 DON'T KNOW
- [SKIP TO 97]**

74. What method did you use to buy your dishwasher? Was it . . . [READ 1 TO 4, ROTATING THE ORDER WITH EACH SURVEY, THEN READ 5; CHECK ALL THAT APPLY]

- 01 Through a catalog **[SKIP TO 76]**
- 02 Over the internet **[SKIP TO 76]**
- 03 Over the telephone **[SKIP TO 76]**
- 04 At a retail store
- 05 Or some other way? [Specify] _____ **[SKIP TO 76]**
- 96 REFUSED **[SKIP TO 79]**
- 97 DON'T KNOW **[SKIP TO 79]**

75. In what city and state is the store located?

City/Town: _____ State: _____

- 96 REFUSED
- 97 DON'T KNOW

76. And what is the name of the store?

Store: _____

- 96 REFUSED
- 97 DON'T KNOW

[IF 76 = 96 OR 97, ASK 77; OTHERWISE SKIP TO 78]

77. Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?

- 01 SEARS [SKIP TO 79]
- 02 HOME DEPOT [SKIP TO 79]
- 03 BEST BUY [SKIP TO 79]
- 04 LOWE'S [SKIP TO 79]
- 05 PC RICHARD/PC RICHARD & SON [SKIP TO 79]
- 06 NONE OF THESE
- 96 REFUSED
- 97 DON'T KNOW

IF Q76=SEARS, HOME DEPOT, BEST BUY, LOWES, OR PC RICHARD, SKIP TO Q79

78. Which of the following types of stores would you say it was? [READ LIST. ACCEPT ONE RESPONSE ONLY]

- 01 Appliance store
- 02 Furniture store
- 03 Department store or discount department store
- 04 Hardware store
- 05 Home improvement store [READ IF NECESSARY: THE DIFFERENCE BETWEEN A HARDWARE STORE AND HOME IMPROVEMENT STORE IS THAT HARDWARE STORES ARE USUALLY SMALLER AND DO NOT SELL LARGER ITEMS LIKE LUMBER]
- 06 Drug store
- 07 Grocery store
- 08 Home furnishing store
- 09 Lighting specialty store
- 10 Other type of store [Specify]
- 96 REFUSED
- 97 DON'T KNOW

79. Please tell me what features were important to you in selecting your dishwasher. [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

- 01 QUALITY; GOOD BRAND NAME
- 02 PRICE
- 03 COST TO OPERATE
- 04 ENERGY EFFICIENCY; SOMETHING THAT DOES NOT USE A LOT OF ELECTRICITY
- 05 SIZE; NEEDED SOMETHING TO FIT SPACE
- 06 ONLY ITEM IN STOCK
- 07 SPECIAL FEATURES [SPECIFY]
- 08 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

80. Where did you look for product information to decide which dishwasher to buy? [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

- 01 LOOKED AT NEWSPAPER ADVERTISEMENTS OR INSERTS OR OTHER RETAILER CATALOGS [ASK 81]
- 02 LOOKED ON THE INTERNET [ASK 82-83]
- 03 CALLED RETAILERS ON THE PHONE [ASK 84-87]
- 04 VISITED STORES [ASK 88-91]
- 05 LOOKED AT CONSUMER REPORTS [SKIP TO 92]
- 06 OTHER [SPECIFY] [SKIP TO 92]
- 96 REFUSED [SKIP TO 92]
- 97 DON'T KNOW [SKIP TO 92]

81. [IF 7= 1 OR 8= 1] Did the newspaper advertisements or inserts or catalogs display the ENERGY STAR label on any dishwasher models?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 80]

86. Did the retailers you *called* discuss the amount of energy different dishwasher use or the costs to operate them?

01 YES, ALL OF THEM

02 YES, SOME OF THEM

03 NO, NONE OF THEM [SKIP TO NEXT RESPONSE CHOICE IN 80]

96 REFUSED

[SKIP TO NEXT RESPONSE CHOICE IN

80]

97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 80]

87. Did the salespersons bring up the topic of the amount of energy different dishwashers use or the costs to operate them, or did they talk about it only after you specifically mentioned it?

01 SALESPERSON BROUGHT IT UP

02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT

03 SOME OF BOTH

96 REFUSED

97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 80]

[IF 7= 1 OR 8= 1, ASK 88 OTHERWISE GO TO 90]

88. Did the salespersons at the retailers you *visited* talk about specific dishwasher models being ENERGY STAR labeled?

01 YES, ALL OF THEM

02 YES, SOME OF THEM

03 NO, NONE OF THEM

[SKIP TO 90]

96 REFUSED

[SKIP TO 90]

97 DON'T KNOW

[SKIP TO 90]

89. Did the salespersons bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

01 SALESPERSON BROUGHT IT UP

02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT

03 SOME OF BOTH

96 REFUSED

97 DON'T KNOW

90. Did the salespersons at the retailers you *visited* discuss the amount of energy different dishwashers use or the costs to operate them?

- 01 YES, ALL OF THEM
- 02 YES, SOME OF THEM
- 03 NO, NONE OF THEM
- 96 REFUSED
- 80]**
- 97 DON'T KNOW
- 80]**

[SKIP TO NEXT RESPONSE CHOICE IN 80]
[SKIP TO NEXT RESPONSE CHOICE IN 80]
[SKIP TO NEXT RESPONSE CHOICE IN 80]

91. Did the salespersons bring up the topic of the amount of energy different dishwashers use or the cost to operate them, or did they talk about it only after you specifically mentioned it?

- 01 SALESPERSON BROUGHT IT UP
- 02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT
- 03 SOME OF BOTH
- 96 REFUSED
- 97 DON'T KNOW

[IF 7=1 OR 8=1, ASK 92 OTHERWISE GO TO 97]

92. Did the dishwasher you bought have an ENERGY STAR label on it or on the packaging or instructions?

- 01 YES
- 02 NO
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 95]
[SKIP TO 95]
[SKIP TO 95]

93. How influential was the ENERGY STAR label in your decision to purchase the dishwasher you did? Would you say it was not at all influential, slightly influential, somewhat influential, very influential, or extremely influential?

- 01 NOT AT ALL INFLUENTIAL
- 02 SLIGHTLY INFLUENTIAL
- 03 SOMEWHAT INFLUENTIAL
- 04 VERY INFLUENTIAL
- 05 EXTREMELY INFLUENTIAL
- 96 REFUSED
- 97 DON'T KNOW

94. Why did you buy a dishwasher with an ENERGY STAR label? [DO NOT READ. CHECK ALL THAT APPLY]

- 01 USES LESS ENERGY; ENERGY EFFICIENCY
- 02 BETTER FOR THE ENVIRONMENT
- 03 ENERGY STAR LABEL CONNOTES QUALITY/CHOSE ON QUALITY/BETTER OVERALL QUALITY
- 04 CHOSE ON BRAND NAME
- 05 CHOSE ON PRICE
- 06 BETTER OVERALL CONSTRUCTION
- 07 HAD SPECIAL FEATURES I WANTED
- 08 HAD THE LOOK I WANTED
- 09 ONLY TYPE AVAILABLE
- 10 NO PARTICULAR REASON
- 11 LESS NOISE
- 12 REDUCES THE AMOUNT OF WATER
- 13 USES LESS DETERGENT
- 14 SHORTENS TIME TO DRY CLOTHES/DISHES
- 16 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 97]

95. Did any of the dishwashers you considered buying have an ENERGY STAR label?

- 01 YES
- 02 NO **[SKIP TO 97]**
- 96 REFUSED **[SKIP TO 97]**
- 97 DON'T KNOW **[SKIP TO 97]**

96. [ASK IF 92 = 02 AND Q95=1] Why did you select a dishwasher without an ENERGY STAR label? [DO NOT READ. CHECK ALL THAT APPLY]

- 01 TOO EXPENSIVE
- 02 ENERGY STAR LABEL HAS NEGATIVE CONNOTATIONS FOR ME
- 03 WASN'T SURE WHAT THE LABEL MEANT
- 04 DIDN'T LIKE OVERALL QUALITY
- 05 DIDN'T LIKE OVERALL CONSTRUCTION
- 06 COULDN'T FIND THE SPECIAL FEATURES I LIKED
- 07 COULDN'T FIND THE STYLE/LOOK I LIKED
- 08 JUST WAS NOT A CONSIDERATION
- 12 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

97. The most important information we need for this study is the brand name and model number of your new dishwasher. This information will enable us to look up the unit's efficiency information in industry directories. The model number can usually be found on the inside wall of the dishwasher. Most dishwashers show the model number above or to the left of the serial number. We do not need the serial number, only the model number. I would also like you to tell me if you see an ENERGY STAR label near the model number or on the inside door of the dishwasher. May I ask you to please get this information for me? If you cannot walk over there with the phone, you may need to grab a pencil and paper to jot it down.

01 What is the brand name of your new dishwasher?

- 01 AMANA
- 02 BOSCH
- 03 FRIGIDAIRE
- 04 GENERAL ELECTRIC OR GE
- 05 HOTPOINT
- 06 JENN AIR
- 07 KENMORE
- 08 KITCHEN AID
- 09 LG
- 10 MAYTAG
- 11 MIELE
- 12 WHIRLPOOL
- 13 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

02 What is the model number of your new dishwasher?

[READ IF NECESSARY: THE MODEL NUMBER CAN USUALLY BE FOUND ON THE INSIDE WALL OF THE DISHWASHER. MOST DISHWASHERS SHOW THE MODEL NUMBER ABOVE OR TO THE LEFT OF THE SERIAL NUMBER. WE DO NOT NEED THE SERIAL NUMBER, ONLY THE MODEL NUMBER.]

RECORD VERBATIM _____

96 REFUSED

97 DON'T KNOW

[NOTE TO INTERVIEWER: REPEAT THE MODEL NUMBER BACK TO THE RESPONDENT SLOWLY AND CHECK THAT IT IS CORRECT. IF THE RESPONDENT CANNOT TELL WHICH THE MODEL NUMBER IS, RECORD MORE THAN ONE NUMBER. MODEL NUMBER IS EXTREMELY IMPORTANT!]

03 Is there an ENERGY STAR label near the model number or on the inside door of the dishwasher?

01 YES

02 NO

96 REFUSED

97 DON'T KNOW

[IF ANY OF 97_1-97_3 = 96 OR 97, DO 97_4]

04 **[NOTE TO INTERVIEWER: DO NOT ASK. PLEASE CODE WHY RESPONDENT DID NOT FILL INFORMATION IN 97.]**

01 REFUSED TO LOOK

02 LOOKED BUT COULD NOT FIND

03 OTHER [SPECIFY]

98. What impact, if any, has the economic recession had on your decision to purchase a dishwasher?

[DO NOT READ CHOICES BUT SELECT ALL THAT APPLY. PROBE TO MAKE SURE RESPONDENT MENTIONS ALL FACTORS THAT HAVE INFLUENCED THEIR PURCHASE DECISION IF THERE IS MORE THAN ONE FACTOR.]

- 01 I DELAYED THE PURCHASE OF THE APPLIANCE
- 02 I BOUGHT A LESS EXPENSIVE MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED
- 03 I BOUGHT A DIFFERENT MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED
- 04 I PURCHASED A SMALLER ONE THAN I WOULD HAVE LIKED
- 05 I PURCHASED ONE THAT DIDN'T LOOK AS NICE AS I WOULD HAVE LIKED
- 06 I PURCHASED A NOISIER ONE THAN I WOULD HAVE LIKED
- 07
- 08
- 09 OTHER [SPECIFY]
- 10 NO IMPACT
- 96 REFUSED
- 97 DON'T KNOW

Room Air Conditioner Purchaser Module

[ASK 99-130 if Q4 = 04 AND SELECTED FOR ROOM A/C MODULE]

99. Now I would like to ask a few questions about your room air conditioner purchase. How many new air conditioners were purchased for your home during calendar year 2009?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

[IF Q99 = 96 OR 97, SKIP TO 102]

100. How many were window units, through-the-wall units, and portable units?

[READ IF NECESSARY: THROUGH-THE-WALL AIR CONDITIONERS DIFFER FROM WINDOW UNITS IN THAT THEY NEED TO BE FITTED IN A HOLE CREATED IN THE WALL WHICH OFFERS BETTER INSULATION, AND THEY TYPICALLY REMAIN IN PLACE THROUGHOUT THE YEAR. PORTABLE UNITS ARE FREE-STANDING AND CAN BE MOVED THROUGHOUT THE HOME.]

01 RECORD NUMBER OF WINDOW UNITS _____

96 REFUSED

97 DON'T KNOW

02 RECORD NUMBER OF THROUGH-THE-WALL UNITS _____

96 REFUSED

97 DON'T KNOW

03 RECORD NUMBER OF PORTABLE UNITS _____

96 REFUSED

97 DON'T KNOW

101. **[ASK IF 99 > 1]** Did you buy all these room air conditioners at the same time or at different times over the year?

01 ALL AT SAME TIME

02 DIFFERENT TIMES OVER THE YEAR [READ: For the next few questions I would like you to think about the most recent room air conditioner you purchased during calendar year 2009. I'd like you to think about the most recent purchase as a whole – this can include more than one room air conditioner but think of just the one purchase.]

96 REFUSED

97 DON'T KNOW

102. Was it/were they purchased by you, a remodeling contractor, a new home builder, or the landlord?

01 AT LEAST ONE WAS PURCHASED BY RESPONDENT OR MEMBER OF HOUSEHOLD

[SKIP TO 104]

02 ALL PURCHASED BY REMODELING CONTRACTOR

03 ALL PURCHASED BY HOMEBUILDER

04 ALL PURCHASED BY LANDLORD

05 OTHER [SPECIFY]

[SKIP

TO 104]

96 REFUSED

97 DON'T KNOW

103. Was/were the specific room air conditioner model(s) selected by you or by the landlord, contractor or builder?

01 RESPONDENT

02 LANDLORD, CONTRACTOR OR BUILDER

[SKIP

TO 129]

03 JOINT DECISION (FOR EXAMPLE, CONTRACTOR/BUILDER OFFERED CHOICES FROM WHICH YOU SELECTED ONE)

96 REFUSED

[SKIP TO 129]

97 DON'T KNOW

[SKIP TO 129]

104. What method did you use to buy your room air conditioner(s)? Was it . . . [READ 1 TO 4, ROTATING THE ORDER WITH EACH SURVEY, THEN READ 5; CHECK ALL THAT APPLY]

01 Through a catalog

[SKIP

TO 106]

02 Over the Internet

[SKIP

TO 106]

03 Over the telephone

[SKIP

TO 106]

04 At a retail store

05 OR SOME OTHER WAY? [SPECIFY]

[SKIP TO 106]

96 REFUSED

[SKIP TO 109]

97 DON'T KNOW

[SKIP

TO 109]

105. In what city and state is the store located?

City/Town: _____ State: _____

- 96 REFUSED
- 97 DON'T KNOW

106. And what is the name of the store?

Store: _____

- 96 REFUSED
- 97 DON'T KNOW

[IF 106 = 96 OR 97, ASK 107; OTHERWISE SKIP TO 108]

107. Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?

- 01 SEARS [SKIP TO 109]
- 02 HOME DEPOT [SKIP TO 109]
- 03 BEST BUY [SKIP TO 109]
- 04 LOWE'S [SKIP TO 109]
- 05 PC RICHARD/PC RICHARD & SON [SKIP TO 109]
- 06 NONE OF THESE
- 96 REFUSED
- 97 DON'T KNOW

IF Q106=SEARS, HOME DEPOT, BEST BUY, LOWES OR PC RICHARD, SKIP TO 109

108. Which of the following types of stores would you say it was? [READ LIST. ACCEPT ONE ANSWER ONLY]

- 01 Appliance store
- 02 Furniture store
- 03 Department store or discount department store
- 04 Hardware store
- 05 Home improvement store [READ IF NECESSARY: THE DIFFERENCE BETWEEN A HARDWARE STORE AND HOME IMPROVEMENT STORE IS THAT HARDWARE STORES ARE USUALLY SMALLER AND DO NOT SELL LARGER ITEMS LIKE LUMBER]
- 06 Drug store
- 07 Grocery store
- 08 Home furnishing store
- 09 Lighting specialty store
- 10 Other type of store [Specify]
- 96 REFUSED
- 97 DON'T KNOW

109. Please tell me what features were important to you in selecting your room air conditioner. [DO NOT READ RESPONSE; PROBE; RECORD ALL THAT APPLY]
- 01 QUALITY; GOOD BRAND NAME
 - 02 PRICE
 - 03 COST TO OPERATE
 - 04 ENERGY EFFICIENCY; SOMETHING THAT DOES NOT USE A LOT OF ELECTRICITY
 - 05 SIZE; COOLING CAPACITY; NEEDED SOMETHING THAT WOULD COULD COOL THE WHOLE ROOM OR APARTMENT
 - 06 ONLY ITEM IN STOCK
 - 07 SPECIAL FEATURES [SPECIFY]
 - 08 OTHER [SPECIFY]
 - 96 REFUSED
 - 97 DON'T KNOW

110. Where did you look for product information to decide which room air conditioner to buy? [DO NOT READ RESPONSES; CHECK ALL THAT APPLY]
- 01 LOOKED AT NEWSPAPER ADVERTISEMENTS OR INSERTS OR OTHER RETAILER CATALOGS [ASK 111]
 - 02 LOOKED ON THE INTERNET [ASK 112 – 113]
 - 03 CALLED RETAILERS ON THE PHONE [ASK 114 – 117]
 - 04 VISITED STORES [ASK 118 – 121]
 - 05 LOOKED AT CONSUMER REPORTS [SKIP TO 122]
 - 06 OTHER [SPECIFY]_____ [SKIP TO 122]
 - 96 REFUSED [SKIP TO 122]
 - 97 DON'T KNOW [SKIP TO 122]

111. [IF 7=1 OR 8=1] Did the newspaper advertisements or inserts or catalogs display the ENERGY STAR label on any room air conditioner models?
- 01 YES, ALL OF THEM
 - 02 YES, SOME OF THEM
 - 03 NO, NONE OF THEM
 - 96 REFUSED
 - 97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 110]

116. Did the retailers you *called* discuss the amount of energy different room air conditioners use or the cost to operate them?

01 YES, ALL OF THEM

02 YES, SOME OF THEM

03 NO, NONE OF THEM

96 REFUSED

CHOICE IN 110]

97 DON'T KNOW

110]

[SKIP TO NEXT RESPONSE CHOICE IN 110]

[SKIP TO NEXT RESPONSE

[SKIP TO NEXT RESPONSE CHOICE IN

117. Did the salesperson(s) bring up the topic of the amount of energy different room air conditioners use or the cost to operate them, or did they talk about it only after you specifically mentioned it?

01 SALESPERSON BROUGHT IT UP

02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT

03 SOME OF BOTH

96 REFUSED

97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 110]

[IF 7=1 OR 8=1, ASK 118 OTHERWISE GO TO 120]

118. Did salespersons at the retailer you *visited* talk about specific room air conditioner models being ENERGY STAR labeled?

01 YES, ALL OF THEM

02 YES, SOME OF THEM

03 NO, NONE OF THEM

96 REFUSED

97 DON'T KNOW

[SKIP TO 120]

[SKIP TO 120]

[SKIP TO 120]

119. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

01 SALESPERSON BROUGHT IT UP

02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT

03 SOME OF BOTH

96 REFUSED

97 DON'T KNOW

120. Did the salespersons at the retailer or retailers you *visited* discuss the amount of energy different room air conditioners use or the cost to operate them?

01 YES, ALL OF THEM

02 YES, SOME OF THEM

03 NO, NONE OF THEM

[SKIP TO NEXT RESPONSE CHOICE IN 110]

96 REFUSED

[SKIP TO NEXT RESPONSE CHOICE IN 110]

97 DON'T KNOW

[SKIP TO NEXT RESPONSE CHOICE IN 110]

121. Did the salesperson(s) bring up the topic of the amount of energy different room air conditioners use or the cost to operate them, or did they talk about it only after you specifically mentioned it?

01 SALESPERSON BROUGHT IT UP

02 SALESPERSON TALKED ABOUT IT ONLY AFTER I MENTIONED IT

03 SOME OF BOTH

96 REFUSED

97 DON'T KNOW

122. **[IF 7=1 OR 8=1, ASK 122 OTHERWISE GO TO 129]** Did [the/any of the] room air conditioner(s) you bought have an ENERGY STAR label on it, or on the packaging or instructions?

01 YES

02 NO

[SKIP TO 127]

96 REFUSED

[SKIP TO 127]

97 DON'T KNOW

[SKIP TO 127]

123. **[IF 122 = 01 AND Q99 > 1]** How many of the room air conditioners you bought have an ENERGY STAR label on them or on the packaging or instructions?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

124. How influential was the ENERGY STAR label in your decision to purchase the room air conditioner you did? Would you say it was not at all influential, slightly influential, somewhat influential, very influential or extremely influential?

- 01 NOT AT ALL INFLUENTIAL
- 02 SLIGHTLY INFLUENTIAL
- 03 SOMEWHAT INFLUENTIAL
- 04 VERY INFLUENTIAL
- 05 EXTREMELY INFLUENTIAL
- 96 REFUSED
- 97 DON'T KNOW

125. **THERE IS NO QUESTION 125**

126. Why did you buy a room air conditioner with an ENERGY STAR label?
[DO NOT READ; MULTIPLE RESPONSE; PROBE]

- 01 USES LESS ENERGY; ENERGY EFFICIENCY
- 02 BETTER FOR THE ENVIRONMENT
- 03 ENERGY STAR LABEL CONNOTES QUALITY/CHOSE ON QUALITY/BETTER OVERALL QUALITY
- 04 CHOSE ON BRAND NAME
- 05 CHOSE ON PRICE
- 06 BETTER OVERALL CONSTRUCTION
- 07 HAD SPECIAL FEATURES I WANTED
- 08 HAD THE LOOK I WANTED
- 09 ONLY TYPE AVAILABLE
- 10 NO PARTICULAR REASON
- 11 LESS NOISE
- 16 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 129]

127. Did any of the room air conditioners you considered buying have an ENERGY STAR label?

- 01 YES
- 02 NO **[SKIP TO 129]**
- 96 REFUSED **[SKIP TO 129]**
- 97 DON'T KNOW **[SKIP TO 129]**

128. [ASK IF ASK 122 = 2 AND 127=1] Why did you select a room air conditioner without an ENERGY STAR label? [DO NOT READ; MULTIPLE RESPONSE; PROBE]

- 01 TOO EXPENSIVE
- 02 ENERGY STAR LABEL HAS NEGATIVE CONNOTATIONS FOR ME
- 03 WASN'T SURE WHAT THE LABEL MEANT
- 04 DIDN'T LIKE OVERALL QUALITY
- 05 DIDN'T LIKE OVERALL CONSTRUCTION
- 06 COULDN'T FIND THE SPECIAL FEATURES I LIKED
- 07 COULDN'T FIND THE STYLE/LOOK I LIKED
- 08 JUST WAS NOT A CONSIDERATION
- 12 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

129. The most important information we need for this study is the brand name, capacity in Btus per hour and model number of your air conditioner. This information will enable us to look up the unit's efficiency information in industry directories. The model number can usually be found on the back side of the air conditioner. Most air conditioners show the model number above or to the left of the serial number. We do not need the serial number, only the model number. I would also like you to tell me if you see an ENERGY STAR label near the model number or somewhere on the air conditioner. May I ask you to please get this information for me? If you cannot walk over there with the phone, you may need to grab a pencil and paper to jot it down.

01 What is the brand name of your new air conditioner?

- | | |
|---------------|-----------------------|
| 01 ADMIRAL | 11 SHARP |
| 02 ARCTIC AIR | 12 SUNBEAM |
| 03 CARRIER | 13 TRANE |
| 04 FRIGIDAIRE | 14 WESTPOINT |
| 05 GE | 15 WHIRLPOOL |
| 06 KENMORE | 16 WHITE-WESTINGHOUSE |
| 07 LG | 17 OTHER [SPECIFY] |
| 08 MAYTAG | 96 REFUSED |
| 09 PANASONIC | 97 DON'T KNOW |
| 10 SAMSUNG | |

02 What is the capacity in btus/hr ___?

RECORD NUMBER _____

- 96 REFUSED
- 97 DON'T KNOW

- 03 What is the model number of your new air conditioner?
[READ IF NECESSARY: THE MODEL NUMBER CAN USUALLY BE FOUND ON THE BACK SIDE OF THE AIR CONDITIONER. MOST AIR CONDITIONERS SHOW THE MODEL NUMBER ABOVE OR TO THE LEFT OF THE SERIAL NUMBER. WE DO NOT NEED THE SERIAL NUMBER, ONLY THE MODEL NUMBER.]

RECORD VERBATIM _____

96 REFUSED

97 DON'T KNOW

[NOTE TO INTERVIEWER: REPEAT THE MODEL NUMBER BACK TO THE RESPONDENT SLOWLY AND CHECK THAT IT IS CORRECT. IF THE RESPONDENT CANNOT TELL WHICH THE MODEL NUMBER IS, RECORD MORE THAN ONE NUMBER. MODEL NUMBER IS EXTREMELY IMPORTANT!]

- 04 Is there an ENERGY STAR label near the model number or somewhere on the air conditioner?

01 YES

02 NO

96 REFUSED

97 DON'T KNOW

[IF ANY OF 129_1-129_4 = 96 OR 97, DO 129_5]

- 05 [NOTE TO INTERVIEWER: DO NOT ASK. PLEASE CODE WHY RESPONDENT DID NOT FILL INFORMATION IN 129.]**

01 REFUSED TO LOOK

02 LOOKED BUT COULD NOT FIND

03 OTHER [SPECIFY]

130. What impact, if any, has the economic recession had on your decision to purchase a room air conditioner? [DO NOT READ CHOICES BUT SELECT ALL THAT APPLY. PROBE TO MAKE SURE RESPONDENT MENTIONS ALL FACTORS THAT HAVE INFLUENCED THEIR PURCHASE DECISION IF THERE IS MORE THAN ONE FACTOR.]

- 01 I DELAYED THE PURCHASE OF THE APPLIANCE
- 02 I BOUGHT A LESS EXPENSIVE MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED
- 03 I BOUGHT A DIFFERENT MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED
- 04 I PURCHASED A SMALLER ONE THAN I WOULD HAVE LIKED
- 05 I PURCHASED ONE THAT DIDN'T LOOK AS NICE AS I WOULD HAVE LIKED
- 06 I BOUGHT A NOISIER MODEL THAN I WOULD HAVE LIKED
- 07
- 08
- 09 OTHER [SPECIFY]
- 10 NO IMPACT
- 96 REFUSED
- 97 DON'T KNOW

Lighting Fixture Purchaser Module

[ASK 131-145 IF Q4 = 05 AND SELECTED FOR LIGHTING FIXTURE MODULE]

131. Now I would like to ask a few questions about your lighting fixture purchase. How many new lighting fixtures were purchased for your home during calendar year 2009? This includes floor lamps, torchieres, table lamps, ceiling fixtures, wall-mounted fixtures, or exterior fixtures. ['Torchier' is PRONOUNCED: tour-she-AIR]
[READ IF NECESSARY: Torchieres are tall floor lamps that give direct upward light]

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

[IF 131 = 96 OR 97 SKIP TO 133]

132. How many of these new fixtures were...?
01...Torchieres? ['Torchier' is PRONOUNCED: tour-she-AIR]
[READ IF NECESSARY: Torchieres are tall floor lamps that give direct upward light]

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

- 02 ...Other floor lamps?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

- 03 ...Ceiling fixtures?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

- 04 ...Wall-mounted fixtures?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

- 05 ...Table lamps?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

- 06 ...Exterior fixtures?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

- 07 ...Other [Specify]?

RECORD NUMBER _____

96 REFUSED

97 DON'T KNOW

IF MORE THAN ONE LIGHTING FIXTURE PURCHASE READ: For the next few questions I would like you to think about the most recent lighting fixture purchase you made during calendar year 2009. I'd like you to think about the most recent purchase as a whole – this can include more than one lighting fixture but think of just the one purchase.

133. Was it/were they purchased by you, a remodeling contractor, a new home builder, or the landlord?

01 AT LEAST ONE WAS PURCHASED BY RESPONDENT OR MEMBER OF THE HOUSEHOLD
[SKIP TO 135]

02 ALL PURCHASED BY REMODELING CONTRACTOR

03 ALL PURCHASED BY NEW HOME BUILDER

04 ALL PURCHASED BY LANDLORD

05 OTHER [SPECIFY] [SKIP TO 135]

96 REFUSED

97 DON'T KNOW

134. Was/were the specific fixture(s) selected by you or by the landlord, contractor, or builder?

01 RESPONDENT

02 LANDLORD, CONTRACTOR OR BUILDER [SKIP TO
GENERAL ENERGY STAR SUMMARY SECTION]

03 JOINT DECISION (E.G., CONTRACTOR/BUILDER OFFERED CHOICES FROM WHICH WE
SELECTED)

96 REFUSED

[SKIP TO GENERAL ENERGY STAR SUMMARY SECTION]

97 DON'T KNOW

[SKIP TO GENERAL ENERGY STAR SUMMARY SECTION]

135. What method did you use to buy these lighting fixtures? Was it . . . [READ 1 TO 4,
ROTATING THE ORDER WITH EACH SURVEY, THEN READ 5; CHECK ALL THAT APPLY]

01 Through a catalog [SKIP TO 136a]

02 Over the Internet [SKIP TO 136a]

03 Over the telephone [SKIP TO 136a]

04 At a retail store

05 Or some other way? (Specify: ____) [SKIP TO 136a]

96 REFUSED [SKIP TO 138]

97 DON'T KNOW [SKIP TO 138]

136. In what city and state is the store located?

CITY/TOWN _____ STATE _____

96 REFUSED

97 DON'T KNOW

136a What is the name of the store?

STORE _____

96 REFUSED

97 DON'T KNOW

IF 136a=96 OR 97, ASK Q136b, OTHERWISE SKIP TO 137

136b Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?

01 SEARS

[SKIP TO 138]

02 HOME DEPOT

[SKIP TO 138]

03 BEST BUY

[SKIP TO 138]

04 LOWE'S

[SKIP TO 138]

05 PC RICHARD /PC RICHARD & SON **[SKIP TO 138]**

06 NONE OF THESE

96 REFUSED

97 DON'T KNOW

IF Q136a=SEARS HOME DEPOT, BEST BUY, LOWE'S, OR PC RICHARD, SKIP TO Q138

137. Which of the following types of stores would you say it was? [READ LIST. ACCEPT ONE ANSWER ONLY.]

01 Appliance

02 Furniture store

03 Department store or discount department store

04 Hardware store

05 Home improvement store [READ IF NECESSARY: THE DIFFERENCE BETWEEN A HARDWARE STORE AND HOME IMPROVEMENT STORE IS THAT HARDWARE STORES ARE USUALLY SMALLER AND DO NOT SELL LARGER ITEMS LIKE LUMBER]

06 Drug store

07 Grocery store

08 Home furnishing store

09 Lighting specialty store

10 Or some other type of store [Specify]

96 REFUSED

97 DON'T KNOW

138. Please tell me what features were important to you in selecting your lighting fixtures.
[DO NOT READ; CHECK ALL THAT APPLY.]

01 QUALITY; OF CONSTRUCTION; GOOD BRAND NAME
02 PRICE
03 COST TO OPERATE
04 ENERGY EFFICIENCY; SOMETHING THAT DOES NOT USE A LOT OF ELECTRICITY
05 SIZE; NEEDED SOMETHING TO FIT SPACE
06 ONLY ONE ITEM IN STOCK
07 SPECIAL FEATURES (SPECIFY_
08 OTHER (SPECIFY)
09 APPROPRIATE TYPE (I.E., FLOOR V. WALL-MOUNTED V. ETC)
10 STYLE OR APPEARANCE
11 LIGHT OUTPUT
12 HAVING A DIMMER SWITCH
13 HAVING A THREE-WAY SWITCH
14 TYPE OF BULB IT USES (I.E., HALOGEN V. INCANDESCENT V. CFL)
96 REFUSED
97 DON'T KNOW

139. **[ASK IF 138 DOES NOT = 04]** Did you consider the energy efficiency of the fixtures that you purchased? In other words, did you attempt to purchase a fixture that used as little energy as possible and provided the lighting output (or lumens) that you wanted?

01 YES
02 NO
96 REFUSED
97 DON'T KNOW

140. Does the fixture have a screw or pin base for the light bulb?
[READ IF NECESSARY: A screw base is a traditional light bulb that screws into a socket. A pin base is a lamp that fits into a socket with pins.]

01 SCREW
02 PIN
96 REFUSED

97 DON'T KNOW

[IF 7 DOES NOT = 1 AND 8 DOES NOT = 1, SKIP TO 145]

141. Did any of the lighting fixtures you purchased have the ENERGY STAR label on them?

- 01 YES
- 02 NO
- 96 REFUSED
- 97 DON'T KNOW

141a. **[IF 141 = 01 AND 131 > 1]** How many of the lighting fixtures you bought have an ENERGY STAR label on them or on the packaging or instructions?

RECORD NUMBER _____

- 96 REFUSED
- 97 DON'T KNOW

[IF 141= 2, 96, OR 97 SKIP TO 143]

142. How influential was the ENERGY STAR label in your decision to purchase the lighting fixtures you did? Would you say it was not at all influential, slightly influential, somewhat influential, very influential, or extremely influential?

- 01 NOT AT ALL INFLUENTIAL
- 02 SLIGHTLY INFLUENTIAL
- 03 SOMEWHAT INFLUENTIAL
- 04 VERY INFLUENTIAL
- 05 EXTREMELY INFLUENTIAL
- 96 REFUSED
- 97 DON'T KNOW

142_01. Why did you buy a lighting fixture with an ENERGY STAR label? [DO NOT READ. CHECK ALL THAT APPLY]

- 01 USES LESS ENERGY; ENERGY EFFICIENCY
- 02 BETTER FOR THE ENVIRONMENT
- 03 ENERGY STAR LABEL CONNOTES QUALITY/CHOSE ON QUALITY/BETTER OVERALL QUALITY
- 04 CHOSE ON BRAND NAME
- 05 CHOSE ON PRICE
- 06 BETTER OVERALL CONSTRUCTION
- 07 HAD SPECIAL FEATURES I WANTED
- 08 HAD THE LOOK I WANTED
- 09 ONLY TYPE AVAILABLE
- 10 NO PARTICULAR REASON
- 16 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

[SKIP TO 145]

143. Did any of the lighting fixtures you considered buying have an ENERGY STAR label?

- 01 YES
- 02 NO
- 96 REFUSED
- 97 DON'T KNOW

144. **[ASK IF 143 = 1]** Why did you select lighting fixtures without an ENERGY STAR label? [DO NOT READ. CHECK ALL THAT APPLY]

- 01 TOO EXPENSIVE
- 02 ENERGY STAR LABEL HAS NEGATIVE CONNOTATIONS FOR ME
- 03 WASN'T SURE WHAT THE LABEL MEANT
- 04 DIDN'T LIKE OVERALL QUALITY
- 05 DIDN'T LIKE OVERALL CONSTRUCTION
- 06 COULDN'T FIND THE SPECIAL FEATURES I LIKED
- 07 COULDN'T FIND THE STYLE/LOOK I LIKED
- 08 JUST WAS NOT A CONSIDERATION
- 09 LIGHT OUTPUT DIDN'T MEET MY NEEDS
- 10 DIDN'T HAVE DIMMER
- 11 DIDN'T HAVE 3 WAY SWITCH
- 12 OTHER (SPECIFY)
- 96 REFUSED
- 97 DON'T KNOW

145. What impact, if any, has the economic recession had on your decision to purchase a lighting fixture? [DO NOT READ CHOICES BUT SELECT ALL THAT APPLY. PROBE TO MAKE SURE THE RESPONDENT MENTIONS ALL FACTORS THAT HAVE INFLUENCED THEIR PURCHASE DECISION IF THERE IS MORE THAN ONE FACTOR.]

- 01 I DELAYED THE PURCHASE OF THE LIGHTING FIXTURE
- 02 I BOUGHT A LESS EXPENSIVE MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED
- 03 I BOUGHT A DIFFERENT MODEL THEN I WOULD HAVE LIKED TO HAVE PURCHASED
- 04 I PURCHASED A SMALLER ONE THAN I WOULD HAVE LIKED
- 05 I PURCHASED ONE THAT DIDN'T LOOK AS NICE AS I WOULD HAVE LIKED
- 06 I PURCHASED FEWER FIXTURES THAN I NEEDED
- 07
- 08
- 09 OTHER [SPECIFY]
- 10 NO IMPACT
- 96 REFUSED
- 97 DON'T KNOW

General ENERGY STAR Summary Questions

[IF Q32=1 OR Q61=1 OR Q92=1 OR Q122=1 OR 141=1, ASK 146 AND 147; OTHERWISE GO TO 148]

146. As you were shopping for the ENERGY STAR products that you purchased this past year, did you have any prior, personal experiences with ENERGY STAR products that influenced your decision to buy ENERGY STAR products again?

- 01 YES, I DID HAVE EXPERIENCE
- 02 NO, I DIDN'T HAVE EXPERIENCE
- 96 REFUSED
- 97 DON'T KNOW

147. Based on all your experiences with ENERGY STAR products, how likely are you to recommend ENERGY STAR-labeled products to a friend? Would you say you:

- 01 Definitely would not recommend
- 02 Probably would not recommend
- 03 Might or might not recommend
- 04 Probably would recommend
- 05 Definitely would recommend
- 96 REFUSED
- 97 DON'T KNOW

148. Based on all the information you now have about ENERGY STAR, how likely are you to buy an ENERGY STAR-labeled product in the future? Would you say you:

- 01 Definitely would not purchase
- 02 Probably would not purchase
- 03 Might or might not purchase
- 04 Probably would purchase
- 05 Definitely would purchase
- 96 REFUSED
- 97 DON'T KNOW

Demographic/Additional Screener Questions

ESH1. In the past two years, that is since May of 2008, have you purchased a newly constructed home?

- 1 YES
- 2 NO [SKIP TO HP1]
- 96 REFUSED [SKIP TO HP1]
- 97 DON'T KNOW [SKIP TO HP1]

ESH2. Is your new home labeled as an ENERGY STAR home? This would mean that your home was tested for energy efficiency and received a score of 84 or higher, meaning that the home is at least 30% more efficient than a standard home.

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

HP1. In the past two years, that is, since May 2008, have you purchased any of the following items for your home?

- a. Furnace
- b. Water heater
- c. Windows
- d. Attic or Wall insulation
- e. An addition or renovation to your home

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

Now I have a few final questions for statistical purposes only.

149. Is this home a permanent or seasonal residence?

- 01 PERMANENT RESIDENCE
- 02 SEASONAL RESIDENCE
- 96 REFUSED
- 97 DON'T KNOW

150. Do you own or rent your home?
- 01 OWN
 - 02 RENT
 - 03 OCCUPY WITHOUT RENT
 - 96 REFUSED
 - 97 DON'T KNOW
151. What type of residence do you live in? Would you say...? [READ RESPONSES]
- 01 Single family (house on a separate lot)
 - 02 Two to four-family building
 - 03 Apartment in a building with five or more units
 - 04 Town or row house (adjacent walls to another house)
 - 05 Mobile home, house trailer
 - 06 Other [Specify]
 - 96 REFUSED
 - 97 DON'T KNOW
152. What is the highest level of education you have completed? Would you say...? [READ CATEGORIES]
- 01 Less than high school
 - 02 High school graduate
 - 03 Technical or trade school graduate
 - 04 Some college
 - 05 Two-year college graduate
 - 06 Four-year college graduate
 - 07 Some graduate or professional school
 - 08 Graduate or professional degree
 - 96 REFUSED
 - 97 DON'T KNOW
153. Which of the following categories best describes your age? [READ CATEGORIES]
- 01 18 to 24
 - 02 25 to 34
 - 03 35 to 44
 - 04 45 to 54
 - 05 55 to 64
 - 06 65 or over
 - 96 REFUSED
 - 97 DON'T KNOW

154. What category best describes your total household income in 2009, before taxes? [READ CATEGORIES]

- 01 Less than \$15,000
- 02 \$15,000 - \$24,999
- 03 \$25,000 - \$34,999
- 04 \$35,000 - \$49,999
- 05 \$50,000 - \$74,999
- 06 \$75,000 - \$99,999
- 07 \$100,000 or more
- 96 REFUSED
- 97 DON'T KNOW

ZIP. What is your zip code?

RECORD NUMBER _____

- 96 REFUSED
- 97 DON'T KNOW

155. [DO NOT READ] Gender

- 01 FEMALE
- 02 MALE
- 96 REFUSED
- 97 DON'T KNOW

Site Visit Recruiting Questions

[ASK THIS SECTION IF Q4 = 4 AND/OR 5; OTHERWISE GO TO CLOSINGS]

156. In the next few months, a site visit technician, contracted by NYSERDA, will be visiting homes to collect data on **[IF Q4 = 04** insert: <room air conditioners> **and [IF Q4 = 05** insert <lighting fixtures>]. The site visit should take no more than 45 minutes, and participants will be given a \$50 gift card in appreciation for their participation. Would you be interested in being a part of this type of visit?

- 01 YES **[SKIP TO 158]**
- 02 NO **[SKIP TO CLOSINGS]**
- 96 REFUSED **[SKIP TO CLOSINGS]**
- 97 DON'T KNOW

157. **[IF 156 = 97]** That is okay, you don't have to decide right now. Would it be okay if I take your name and have someone call you when the scheduling takes place?

- 01 YES
- 02 NO **[SKIP TO CLOSINGS]**
- 96 REFUSED **[SKIP TO CLOSINGS]**
- 97 DON'T KNOW **[SKIP TO CLOSINGS]**

158. **[IF 156 = 01 OR 157 = 01]** And your name?

- 01 RECORD VERBATIM _____
- 96 REFUSED
- 97 DON'T KNOW

159. **[IF 156 = 01 OR 157 = 01]** And what is the best number to call you about a visit?

- 01 RECORD VERBATIM _____
- 96 REFUSED
- 97 DON'T KNOW

Closings

1. Screener and Site Visit Qualified Respondent
[IF (ESH2 = 02, 96, 97) or (at least one of HP1_a, HP1_b, HP1_c, HP1_d, or HP1_e = 01) AND 159 = 01, SAY]: Great, you should be hearing from a site visit representative contracted by NYSERDA in the next few months to schedule a visit. There is also a chance that NYSERDA may contact you again in a few months to participate in a brief survey as part of their research for other programs. Again, thank you for your help. Have a nice day.
2. Only Site Visit Qualified Respondent
[IF (ESH2 DOES NOT = 02, 96, 97 or ESH1 = 02, 96, 97) AND (each HP1_a, HP1_b, HP1_c, HP1_d, AND HP1_e = 02, 96, 97) AND 159 = 01, SAY]: Great, you should be hearing from a site visit representative contracted by NYSERDA in the next few months to schedule a visit. Those are all the questions I have. Thank you very much for your time and participation. Have a great day.
3. Only Screener Qualified Respondent
[IF (ESH2 = 02, 96, 97) or (at least one of HP1_a, HP1_b, HP1_c, HP1_d, or HP1_e = 01) AND (Q4 DOES NOT = 4 OR 5), SAY]: Those are all of the questions I have for you. Thank you so much for your time. There is a chance that NYSERDA may contact you again in a few months to participate in a brief survey as part of their research for other programs. Again, thank you for your help. Have a nice day.
4. Neither Screener nor Site Visit Qualified Respondent
[IF (ESH2 DOES NOT = 02, 96, 97 or ESH1 = 02, 96, 97) AND (each HP1_a, HP1_b, HP1_c, HP1_d AND HP1_e = 02, 96, 97) AND (Q4 DOES NOT = 4 OR 5), SAY]: Those are all the questions I have. Thank you very much for your time and participation. Have a great day.
5. AC and Lighting Purchaser who decline Site Visit but are Screener Qualified
[IF (ESH2 = 02, 96, 97) or (at least one of HP1_a, HP1_b, HP1_c, HP1_d, or HP1_e = 01) AND (Q4 = 4 OR 5) AND (Q159 DOES NOT = 01), SAY]: Those are all of the questions I have for you. Thank you so much for your time. There is a chance that NYSERDA may contact you again in a few months to participate in a brief survey as part of their research for other programs. Again, thank you for your help. Have a nice day.
6. AC and Lighting Purchaser who decline Site Visit but are not Screener Qualified
[IF (ESH2 DOES NOT = 02, 96, 97 or ESH1 = 02, 96, 97) AND (each HP1_a, HP1_b, HP1_c, HP1_d AND HP1_e = 02, 96, 97) AND (Q4 = 4 OR 5) AND (Q159 DOES NOT = 01), SAY]: Those are all the questions I have. Thank you very much for your time and participation. Have a great day.

2 ENERGY STAR Products Home Electronics Survey

NYSERDA Energy Smart Products Home Electronics
Phone Survey 2010
CATI Programming Version
August 17, 2010

N= 400 NY adults age 18 and older
300 LL and 100 cell interviews
200 Upstate and 200 Downstate (Downstate includes Westchester county, but excludes
Suffolk and Nassau counties)
Planned Field Period – 8/09/10-8/23/10
Job #30062

LAND LINE INTRODUCTION: Hello, my name is _____, and I'm calling on behalf of the New York State Energy Research and Development Authority (NYSERDA). We are conducting a study about the usage of home electronic devices in New York State. May I please speak with an adult head of household who is familiar with your home electronics equipment?

IF PERSON IS UNAVAILABLE, SCHEDULE A TIME TO CALL BACK. IF NEW RESPONDENT IS BROUGHT TO THE PHONE, RE-READ INTRO.

IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency and research and development programs for consumers.

IF NECESSARY: If you have questions, please call: Victoria Engel-Fowles at NYSERDA: (866) 697-3732, ext. 3207.

LS1. Can you please tell me your ZIP code?
_____ RECORD 5-digit ZIP code
99998 (DO NOT READ) Don't know – SCREENING REFUSAL
99999 (DO NOT READ) Refused – SCREENING REFUSAL

IF ZIP CODE IS OUTSIDE NEW YORK STATE, SCREEN OUT AS "OUTSIDE NY STATE".

IF ZIP CODE IS IN NASSAU OR SUFFOLK COUNTIES, SCREEN OUT AS "LONG ISLAND".

IF REFUSED ZIP CODE, RECORD AS SCREENING REFUSAL.

IF VALID ZIP CODE, PROCEED TO MAIN INTERVIEW.

CELL PHONE INTRODUCTION: Hello, I am ___ calling on behalf of the New York State Energy Research and Development Authority (NYSERDA). We are conducting a study about the usage of home electronic devices in New York State. I know I am calling you on a cell phone. If you would like to be reimbursed for your cell phone minutes, we will pay eligible respondents \$5 for participating in this survey. This is not a sales call.

IF RESPONDENT SAYS DRIVING/UNABLE TO TAKE CALL: Thank you. We will try you another time.

VOICE MAIL MESSAGE (LEAVE ONLY ONCE -- THE FIRST TIME A CALL GOES TO VOICEMAIL): I am calling for Princeton Survey Research on behalf of New York State Energy Research and Development Authority (NYSERDA). We are conducting a study about electronics purchases and energy use in New York State. We will try to reach you again but if you would like to call us to take the survey, please call 1-877-332-3541 in the next day or so. Thank you.

IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency and research and development programs for consumers.

IF NECESSARY: If respondent has questions, they can call: Victoria Engel-Fowles at NYSEDA: (866) 697-3732, ext. 3207, ext. 3207.

CELL PHONE SCREENING INTERVIEW:

- CS1. Are you under 18 years old, OR are you 18 or older?
- 1 UNDER 18 – SCREEN OUT AS INELIGIBLE
 - 2 18 OR OLDER – GO TO CS2
 - 98 DON’T KNOW – SCREENING REFUSAL
 - 99 REFUSED – SCREENING REFUSAL

- CS2. Can you please tell me your ZIP code?
- _____ RECORD 5-digit ZIP code
- 98 (DO NOT READ) Don’t know
 - 99 (DO NOT READ) Refused

IF ZIP CODE IS OUTSIDE NEW YORK STATE, SCREEN OUT AS “OUTSIDE NY STATE”.

IF ZIP CODE IS IN NASSAU OR SUFFOLK COUNTIES, SCREEN OUT AS “LONG ISLAND”.

IF REFUSED ZIP CODE, RECORD AS SCREENING REFUSAL.

IF VALID ZIP CODE, PROCEED TO CELL PHONE INTRO TO MAIN INTERVIEW.

CELL PHONE TRANSITION TO MAIN INTERVIEW: We're interested in learning more about people with cell phones. If you are now driving a car or doing any activity requiring your full attention, I need to call you back later. **[IF APPROPRIATE, GO TO MAIN INTERVIEW]**

IF RESPONDENT SAYS IT IS NOT A GOOD TIME, TRY TO ARRANGE A TIME TO CALL BACK. OFFER THE TOLL-FREE CALL-IN NUMBER THEY CAN USE TO COMPLETE THE SURVEY BEFORE ENDING THE CONVERSATION.

Main Interview

A1. First, for each of the following products, please tell me how many working units you have in YOUR HOME now. By working, I mean the product is plugged in and is used by your household. How many working [INSERT ITEM] do you have in your home? [FOR A1b, INSERT CLARIFICATION HERE]

- a. TVs
- b. Audio Devices – this category includes items such as stand alone stereos, component stereo systems, and surround sound systems, but does not include “boom boxes,” small radios, clock radios, or iPods.
- c. Computers, including both desktops and laptops

[INTERVIEWER NOTE: Mini-laptops and netbooks are included. However, PDAs (personal digital assistants) such as Blackberry devices and other handheld devices are NOT included.]

____ RECORD NUMBER
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

A2. Next, we want to ask you about your use of “smart” power strips, which are different from regular power strips. There are two types of smart power strips. The first type turns off power to all of the attached devices when just one device is turned off. The second type has a timer that turns off all attached devices. Are any of the electronic devices you just told me about, attached to a smart power strip?

1 YES
2 NO
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

Computer Questions

IF A1C=0,98,99 GO TO SCREENER PRIOR TO TV1 QUESTIONS, OTHERWISE CONTINUE WITH C1.

IF A1C=1+, ASK C1 THROUGH C5 FOR THE TWO MOST FREQUENTLY USED COMPUTERS.

IF A1C=1 READ: "You mentioned you have one computer." GO TO C1.

IF A1C=2 READ: "You mentioned you have two computers. First I'd like to ask you some questions about the one you use most frequently." GO TO C1.

IF A1C=3+ READ: "You mentioned you have [INSERT NUMBER FROM A1C] computers. I have some questions about the two you use most frequently. First I'd like to ask you about the one you use most frequently." GO TO C1.

FOR SECOND COMPUTER ASKED ABOUT, USE THIS INTO TEXT: "Now I will ask about the second most frequently used computer."

C1. What type of computer is this one? Is it a [READ LIST]

- 1 Laptop
- 2 Mini-laptop or Netbook
- 3 Desktop with CRT monitor
- 4 Desktop with flat screen monitor
- 5 Or some other kind (SPECIFY)

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

C2. When was this computer purchased? Was it [READ LIST]
[IF GIVEN AS A GIFT, ASK FOR ESTIMATE OF WHEN PURCHASED]

- 1 In the past 12 months
- 2 1 to 2 years ago
- 3 3 to 5 years ago
- 4 More than 5 years ago

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

IF PURCHASED DURING THE PAST 12 MONTHS, ASK C3 AND C4, OTHERWISE SKIP TO C5

- C3. How much do you estimate was spent on this computer, including the monitor, but excluding any extra devices such as printers? Please stop me when I reach the appropriate category. [READ LIST]

IF R SAYS GIFT (CODE 11), PROBE: Even though you did not personally buy it, do you happen to know how much was spent on this computer? Your best guess is fine.

- | | | | |
|---|-----------------------------|----|--|
| 1 | Less than \$250 | 9 | \$2,500 – less than \$3,000 |
| 2 | \$250 – less than \$500 | 10 | \$3,000 or more |
| 3 | \$500 – less than \$750 | 11 | (DO NOT READ) GIVEN AS GIFT
OR BY WORK/SCHOOL |
| 4 | \$750 – less than \$1,000 | 98 | (DO NOT READ) Don't
know |
| 5 | \$1,000 – less than \$1,250 | 99 | (DO NOT READ) Refused |
| 6 | \$1,250 – less than \$1,500 | | |
| 7 | \$1,500 – less than \$2,000 | | |
| 8 | \$2,000 – less than \$2,500 | | |

- C4. What is the age of the person who decided which specific computer model to purchase? [READ LIST]

- | | |
|----|--------------------------|
| 1 | Under 18 |
| 2 | 18-24 |
| 3 | 25-34 |
| 4 | 35-54 |
| 5 | 55-64 |
| 6 | 65 or older |
| 98 | (DO NOT READ) Don't know |
| 99 | (DO NOT READ) Refused |

- C5. When this computer was purchased, how important was the energy efficiency of the computer in the decision – was it very important, somewhat important, not too important or not at all important in the decision to buy this particular computer?

- | | |
|----|--------------------------|
| 1 | VERY IMPORTANT |
| 2 | SOMEWHAT IMPORTANT |
| 3 | NOT TOO IMPORTANT |
| 4 | NOT AT ALL IMPORTANT |
| 98 | (DO NOT READ) Don't know |
| 99 | (DO NOT READ) Refused |

TV Questions

IF A1A=0,98,99 GO TO SCREENER PRIOR TO AD1, OTHERWISE CONTINUE.

IF A1A=1+, ASK TV1 THROUGH TV6 IN SEQUENCE FOR THE TWO MOST FREQUENTLY USED TVs.

IF A1A=1 READ: "You mentioned you have one TV." GO TO TV1.

IF A1A=2 READ: "You mentioned you have two TVs. First I'd like to ask you some questions about the one you use most frequently." GO TO TV1.

IF A1A=3+ READ: "You mentioned you have [INSERT NUMBER FROM A1A] TVs. I have some questions about the two you use most frequently. First I'd like to ask you about the one you use most frequently." GO TO TV1.

FOR SECOND TV ASKED ABOUT, USE THIS INTO TEXT: "Now I will ask about the second most frequently used TV."

TV1. Which of the following types of TVs is this one? [READ LIST]

- 1 CRT or regular box style
 - 2 Flat Screen
 - 3 Rear projection (READ IF NECESSARY: image is projected onto the screen from behind)
 - 4 Front projection (READ IF NECESSARY: projector is in front of the screen, like in the movies)
 - 5 Other (SPECIFY)
- 98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

IF FLAT SCREEN IN TV1, ASK TV2, OTHERWISE GO TO TV3

TV2. Is your flat screen TV a standard LCD, an LED-enhanced LCD, a Plasma, or an organic LED, also called OLED?

[**INTERVIEWER NOTE:** IF R RESPONDS WITH HDTV OR HIGH DEFINITION, SAY: Okay, there are various types of TVs that receive high definition signals. What specific type of high definition TV is it – LCD, LED-enhanced LCD, Plasma, or organic LED?"]

[**READ IF NECESSARY:** An organic LED is very thin, bright, and does not have any backlighting .]

- 1 STANDARD LCD (Fluorescent Backlighting)
- 2 LED-ENHANCED LCD (LED Backlighting)
- 3 PLASMA
- 4 OLED

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

TV3. When was this TV purchased? Was it [READ LIST]

- 1 In the past 12 months
- 2 1 to 2 years ago
- 3 3 to 5 years ago
- 4 More than 5 years ago

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

IF PURCHASED IN THE PAST 12 MONTHS, ASK TV4 AND TV5, OTHERWISE SKIP TO TV6

TV4. How much do you estimate was spent on this TV, excluding extra devices, such as a DVD player or surround sound system? Please stop me when I reach the appropriate category. [READ LIST]

IF R SAYS GIFT (CODE 11), PROBE: Even though you did not personally buy it, do you happen to know how much was spent on this TV? Your best guess is fine.

- | | |
|-------------------------------|--------------------------------|
| 1 Less than \$250 | 9 \$2,500 – less than \$3,000 |
| 2 \$250 – less than \$500 | 10 \$3,000 or more |
| 3 \$500 – less than \$750 | 11 (DO NOT READ) GIVEN AS GIFT |
| 4 \$750 – less than \$1,000 | 98 (DO NOT READ) Don't know |
| 5 \$1,000 – less than \$1,250 | 99 (DO NOT READ) Refused |
| 6 \$1,250 – less than \$1,500 | |
| 7 \$1,500 – less than \$2,000 | |
| 8 \$2,000 – less than \$2,500 | |

TV5. What is the age of the person who decided which specific TV model to purchase?
[READ LIST]

- 1 Under 18
- 2 18-24
- 3 25-34
- 4 35-54
- 5 55-64
- 6 65 or older
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

TV6. When this TV was purchased, how important was the energy efficiency of the TV in the purchase decision – was it very important, somewhat important, not too important or not at all important in the decision to buy this particular TV?

- 1 VERY IMPORTANT
- 2 SOMEWHAT IMPORTANT
- 3 NOT TOO IMPORTANT
- 4 NOT AT ALL IMPORTANT
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

Audio Questions

IF A1B=0,98,99 GO TO G1, OTHERWISE CONTINUE.

IF A1B=1+, ASK AD1 THROUGH AD5 IN SEQUENCE FOR THE TWO MOST FREQUENTLY USED AUDIO DEVICES.

IF A1B=1 READ: "You mentioned you have one audio device." GO TO AD1.

IF A1B=2 READ: "You mentioned you have two audio devices. First I'd like to ask you some questions about the one you use most frequently." GO TO AD1.

IF A1B=3+ READ: "You mentioned you have [INSERT NUMBER FROM A1B] audio devices. I have some questions about the two you use most frequently. First I'd like to ask you about the one you use most frequently." GO TO AD1.

FOR SECOND AUDIO DEVICE ASKED ABOUT, USE THIS INTO TEXT: "Now I will ask about the second most frequently used audio device."

AD1. **[FOR FIRST DEVICE SHOW:]** Is this audio device a stand-alone device or a component system? A stand-alone device works on its own, such as a stereo with radio and tape or a CD player, but it may have extra devices attached to it, such as extra speakers. A component system is made up of the different components working together, such as a radio receiver, with separate speakers and a CD player.

[IF A1B=2+, FOR SECOND DEVICE, SHOW:] Is this audio device a stand-alone device or a component system? **[READ AS NECESSARY:** A stand-alone device works on its own, such as a stereo with radio and tape or a CD player, but it may have extra devices attached to it, such as extra speakers. A component system is made up of the different components working together, such as a radio receiver, with separate speakers and a CD player.]

- 1 STAND ALONE
- 2 COMPONENT
- 3 OTHER [SPECIFY]
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

AD2.

When was this audio device purchased? Was it [READ LIST]

- 1 In the past 12 months
- 2 1 to 2 years ago
- 3 3 to 5 years ago
- 4 More than 5 years ago
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

IF PURCHASED IN THE PAST 12 MONTHS, ASK AD3 AND AD4, OTHERWISE SKIP TO AD5

AD3. How much do you estimate was spent on this audio device? Please stop me when I reach the appropriate category. [READ LIST]

IF R SAYS GIFT (CODE 12), PROBE: Even though you did not personally buy it, do you happen to know how much was spent on this audio device? Your best guess is fine.

- 1 Less than \$100
- 2 \$100 – less than \$250
- 3 \$250 – less than \$500
- 4 \$500 – less than \$750
- 5 \$750 – less than \$1,000
- 6 \$1,000 – less than \$1,250
- 7 \$1,250 – less than \$1,500
- 8 \$1,500 – less than \$2,000
- 9 \$2,000 – less than \$2,500
- 10 \$2,500 – less than \$3,000
- 11 \$3,000 or more
- 12 (DO NOT READ) GIVEN AS GIFT
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

AD4. What is the age of the person who decided which specific audio device model to purchase? [READ LIST]

1 Under 18

2 18-24

3 25-34

4 35-54

5 55-64

6 65 or older

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

AD5. When this audio device was purchased, how important was the energy efficiency of the device in the decision – was it very important, somewhat important, not too important or not at all important in the decision to buy this particular audio device?

1 VERY IMPORTANT

2 SOMEWHAT IMPORTANT

3 NOT TOO IMPORTANT

4 NOT AT ALL IMPORTANT

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

General Home Electronic Questions

Now I'd like to ask you some general questions about home electronics.

G1. How much do you estimate that you spent on home electronics devices in the past 12 months [IF ANY COMPUTER, TV, OR AUDIO DEVICE PURCHASED IN PAST 12 MONTHS PER C2, TV3, OR AD2, INSERT: ",including any electronic devices that you already told me about?"]? [READ LIST]

- 1 Less than \$100
- 2 \$100 – less than \$500
- 3 \$500 – less than \$1,000
- 4 \$1,000 – less than \$3,000
- 5 \$3000 or more
- 6 (DO NOT READ) Did not purchase anything
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

G2. How much would you estimate that you spend on home electronic devices in one year on average, would you say it is...[READ LIST]

- 1 Less than \$100
- 2 \$100 – less than \$500
- 3 \$500 – less than \$1,000
- 4 \$1,000 – less than \$3,000
- 5 \$3000 or more
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

- G3. Besides the TV's, computers, and audio devices I asked you about earlier, please think back to all of the electronic devices you purchased or received during the past 12 months. Please tell me if you have purchased or received any of the following electronics equipment in the past 12 months [READ LIST]

[AFTER EVERY 4 ITEMS, SAY: And in the past 12 months have you purchased or received...."]

- 02 Computer monitor
 - 03 Multi-function unit, which is an all-in-one printer, fax machine, scanner, and copier
 - 04 Printer that is not part of a multi-function unit
 - 05 Fax machine that is not part of a multi-function unit
 - 06 Scanner that is not part of a multi-function unit
 - 07 External hard drive
 - 08 External DVD player, for a computer
 - 09 External CD player, for a computer
 - 10 Modem
 - 11 Wireless router
 - 12 External computer speakers
 - 13 BluRay disc player
 - 14 Combination unit, which is a DVD and VCR in one unit
 - 15 VCR that is not part of a combination unit
 - 16 DVD player, other than BluRay and not part of a combination unit
 - 17 Game console, such as Xbox, Wii, or Play Station
 - 18 DVR device
 - 19 Set top box
 - 20 Cable card reader
 - 21 DTA or digital to analog converter
 - 22 External stereo speakers
-
- 1 YES
 - 2 NO
 - 98 (DO NOT READ) Don't know
 - 99 (DO NOT READ) Refused

[AFTER READING THROUGH THE ENTIRE G3 SECTION, ASK G4 AND G5 IN SEQUENCE FOR EACH YES IN G3]

- G4. How much do you estimate was spent on the [INSERT ITEM FROM G3]? Would you say it was...[READ LIST]

[NOTE TO INTERVIEWER: IF MORE THAN ONE OF EACH ITEM, RECORD THE SUM OF THE PURCHASE PRICES]

- 1 Free with purchase, or a gift
 - 2 Less than \$100
 - 3 \$100 – less than \$250
 - 4 \$250 – less than \$500
 - 5 \$500 – less than \$750
 - 6 \$750 – less than \$1,000
 - 7 \$1,000 or more
- 98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

- G5. What is the age of the person who decided which model of [INSERT ITEM FROM G3] to purchase?

- 1 Under 18
 - 2 18-24
 - 3 25-34
 - 4 35-54
 - 5 55-64
 - 6 65 or older
- 98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

- G6. Now I'd like you to rate the importance of several factors that you may consider when making electronics purchase decisions for your home. For each of these please tell me if it is very important, somewhat important, not too important, or not at all important when making electronics purchases. First, how important is [INSERT ITEM]?

[READ CATEGORIES 1-4 AS NECESSARY]

[READ IF NECESSARY: "Even if you have not purchased any electronics recently, please think about what factors might go into your decision if you were purchasing electronics."]

[RANDOMIZE]

- a. Getting the latest technology
- b. Getting the lowest price
- c. Energy efficiency
- d. Technology that is easy to understand and use
- e. The appearance of the product

- 1 Very important
- 2 Somewhat important
- 3 Not too important
- 4 Not at all important

98 (DO NOT READ) Don't know

99 (DO NOT READ) Refused

- G7. How often do you unplug electronic devices when they are not in use – would you say always, frequently, sometimes, rarely, or never?

- 1 ALWAYS
 - 2 FREQUENTLY
 - 3 SOMETIMES
 - 4 RARELY
 - 5 NEVER
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

G8. How willing are you to purchase energy saving electronic devices, such as a smart power strip that either automatically shuts off all connected electronic devices when one device is turned off OR that turns off devices with a timer? Are you very willing, somewhat willing, not too willing, or not at all willing?

- 1 VERY WILLING
- 2 SOMEWHAT WILLING
- 3 NOT TOO WILLING
- 4 NOT AT ALL WILLING
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

G9. Have you ever heard the phrase "phantom load" regarding energy use by electronic devices?

- 1 YES
- 2 NO
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

G10. [IF G9=YES: As you may know] "Phantom load" is the energy an electronic device consumes when it is not being used but is plugged in and is in standby mode or has an illuminated light or a clock. Prior to when I read this description just now, were you aware of this type of energy use by electronic devices?

- 1 YES, AWARE
- 2 NO, NOT AWARE
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

Demographic Questions

Now I have a few final questions for statistical purposes only.

- HH1. How many adults currently live in your household, including yourself?
(IF NECESSARY: That is, how many people age 18 and over, including yourself)

____(1-6) RECORD NUMBER (ENTER 6 if 6 OR GREATER)
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

- HH2. How many of these adults (**IF HH1=2-6:** including yourself) have a personal cell phone?

[INTERVIEWER NOTE: If two adults in a household share one cell phone, code this as "1"]

____(0-6) RECORD NUMBER (ENTER 6 if 6 OR GREATER)
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

- HH3. How many children under the age of 18 live in your household?

____(0-6) RECORD NUMBER (ENTER 6 if 6 OR GREATER)
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

IF HH3=1-6, ASK HH4

- HH4. How many of these children have a personal cell phone?

____(0-6) RECORD NUMBER (ENTER 6 if 6 OR GREATER)
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

IF CELL SAMPLE, ASK LLPHONE

LLPHONE. Is there at least one telephone inside your home that is currently working and is not a cell phone?

- 1 YES, HOME TELEPHONE
2 NO, HOME TELEPHONE
98 (DO NOT READ) Don't know
99 (DO NOT READ) Refused

D1. What type of residence do you live in? Would you say...? [READ LIST]

- 1 Single family, with house on a separate lot
- 2 Two to four-family building
- 3 Apartment in a building with five or more units
- 4 Town or row house, with adjacent walls to another house
- 5 Mobile home, house trailer
- 6 Other [SPECIFY]
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D2. Do you own or rent your home?

- 1 OWN
- 2 RENT
- 3 OCCUPY WITHOUT RENT
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D3. Is the house where I have reached you today a permanent or seasonal residence?

- 1 PERMANENT RESIDENCE
- 2 SEASONAL RESIDENCE
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D4. Are you of Hispanic or Latino background, such as Mexican, Puerto Rican, Cuban, or some other Spanish background?

- 1 YES
- 2 NO
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D5. What is your race? Are you white, black, Asian or some other race?

(IF RESPONDENT SAYS HISPANIC, ASK: Do you consider yourself a white Hispanic or a black Hispanic? CODE AS WHITE (1) OR BLACK (2). IF RESPONDENT REFUSED TO PICK WHITE OR BLACK HISPANIC, RECORD HISPANIC AS "OTHER," (4))

- 1 WHITE
- 2 BLACK OR AFRICAN-AMERICAN
- 3 ASIAN
- 4 OTHER OR MIXED RACE
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D6. What is the last grade or class that you completed in school? Would you say...? [READ LIST]

- 1 None or Grades 1-8
- 2 High school incomplete (IF NECESSARY: grades 9-11)
- 3 High school graduate (IF NECESSARY: grade 12 or GED certificate)
- 4 Technical, trade or vocational school after high school
- 5 Some college, no four-year degree (IF NECESSARY: includes associate degree)
- 6 College graduate (IF NECESSARY: B.S., B.A., or other four-year degree)
- 7 Post-graduate or professional schooling after college (IF NECESSARY: Master's degree or Ph.D; law or medical school)
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D7. Are you currently married, living with a partner, widowed, divorced, separated, or have you never been married?

- 1 MARRIED
- 2 LIVING WITH A PARTNER
- 3 WIDOWED
- 4 DIVORCED
- 5 SEPARATED
- 6 NEVER BEEN MARRIED
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

IF D7=1,2, ASK D8, OTHERWISE GO TO D9

D8. What is the last grade or class that your (IF D7=1: spouse/IF D7=2: partner) completed ?
Would you say...? [READ LIST]

- 1 None or Grades 1-8
- 2 High school incomplete (IF NECESSARY: grades 9-11)
- 3 High school graduate (IF NECESSARY: grade 12 or GED certificate)
- 4 Technical, trade or vocational school after high school
- 5 Some college, no four-year degree (IF NECESSARY: includes associate degree)
- 6 College graduate (IF NECESSARY: B.S., B.A., or other four-year degree)
- 7 Post-graduate or professional schooling after college (IF NECESSARY: Master's degree or Ph.D; law or medical school)
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D9. Which of the following categories best describes your age? [READ LIST]

- 1 18 to 24
- 2 25 to 34
- 3 35 to 44
- 4 45 to 54
- 5 55 to 64
- 6 65 or over
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D10. What category best describes your total household income in 2009, before taxes? [READ LIST]

- 1 Less than \$15,000
- 2 \$15,000 – less than \$25,000
- 3 \$25,000 – less than \$35,000
- 4 \$35,000 – less than \$50,000
- 5 \$50,000 – less than \$75,000
- 6 \$75,000 – less than \$100,000
- 7 \$100,000 or more
- 98 (DO NOT READ) Don't know
- 99 (DO NOT READ) Refused

D11. [Do not read] GENDER

- 1 MALE
- 2 FEMALE

ASK CELL PHONE SAMPLE ONLY:

MONEY5. That's the end of the interview. We'd like to send you \$5 for your time.
Can I please have your full name and a mailing address where we can send you the money?

[INTERVIEWER NOTE: If R does not want to give full name, explain we only need it to send the \$5 out to them personally.]

- 1 **[ENTER FULL NAME] – INTERVIEWER: PLEASE VERIFY SPELLING**
- 2 **[ENTER MAILING ADDRESS]**
- 3 **[City]**
- 4 **[State]**
- 5 **[Confirm Zip code]**
- 9 Respondent does not want the money (**VOL.**)

CLOSING: Those are all the questions I have for you. Thank you very much for your time and participation, we really appreciate your help with this study. Have a nice day/evening.

3 *Participating Retailer Survey*

**ENERGY STAR Products
Participating Appliance Retailer Survey 2010
CATI Programming Version
June 29, 2010**

ASK TO SPEAK WITH THE STORE OR SALES MANAGER. IF STORE MANAGER IS NOT AVAILABLE ASK TO SPEAK TO ANYONE WHO DEALS WITH STOCKING PATTERNS AND SALES TRENDS. WHEN HE/SHE IS ON THE PHONE CONTINUE WITH INTRODUCTION.

Hello, my name is [interviewer name], and I'm calling on behalf of the New York State Energy Research and Development Authority ("NYSERDA"). NYSERDA is conducting a study about appliance and lighting fixture purchases and energy use in New York State. We are evaluating NYSERDA's New York Energy Smart Products program. This program provides incentives to retailers to encourage sales of ENERGY STAR appliances. Our records show that your store participated in the program.

I'd like to speak with someone in your store who is familiar with the stocking patterns or sales trends for the appliances and lighting fixtures you sell? Would that be you?

[If there are two different representatives for appliances and lighting, ask to speak to the appliance rep first, then try to follow-up with the lighting fixture rep.]

- 1 YES
- 2 NO [Attempt to get respondent; if respondent not available, ask if anyone else at the establishment makes purchasing or stocking decisions. IF NOT a good time to talk, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX.]

[READ IF NECESSARY This study will help us understand the impact this program has had on energy efficiency appliances and lighting fixtures. We would like to learn more about your experiences with stocking and selling energy efficient appliances.]

[READ IF NECESSARY: I'm not selling anything; I'd just like to ask your opinion about ENERGY STAR appliance and lighting fixture trends. The study team of The Cadmus Group and APPRISE, as independent research firms, will keep the information private to the extent permitted by law. NYSERDA's analysis will only use summary level data and will not identify individual respondents or firms.]

[IF REFERRED TO CORPORATE: “Right now we are looking for input at the store level; corporate-level surveys are being conducted as another part of this study.]

[IF RESPONDENT HAS QUESTIONS, THEY CAN CALL: Victoria Engel-Fowles at (518) 862-1090 ext. 3207]

Section 1. Respondent Information

RI1 Are you aware of the fact that your store participates in the NYSEDA Energy Smart Products Program as a retail partner or weren't you aware of this?

[READ IF NECESSARY: This program provides incentives to retailers to encourage sales of ENERGY STAR appliances.]

- 1 YES, AWARE
- 2 NO [ASK TO SPEAK TO SOMEONE WHO KNOWS ABOUT THE PROGRAM, IF NO ONE AVAILABLE OR KNOWS ABOUT THE PROGRAM TERMINATE]
- 96 REFUSED [TERMINATE]
- 97 DON'T KNOW [TERMINATE]

RI2. Does your store sell any of the following types of appliances: [READ LIST. GET YES OR NO TO EACH].

- a. Clothes washer
- b. Dishwashers
- c. Refrigerators
- d. Room air conditioners
- e. Lighting fixtures [READ IF NECESSARY: LIGHTING FIXTURES INCLUDES FLOOR LAMPS, TORCHIERES, TABLE LAMPS, CEILING FIXTURES, WALL- MOUNTED FIXTURES, OR EXTERIOR FIXTURES.]
- f. None of these [THANK AND TERMINATE]

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

Section 2. Awareness and Stocking

For these first questions, we're going to review your stocking patterns for appliance and lighting fixture products.

ST1. First, are you familiar with the ENERGY STAR label that identifies energy-efficient models of appliances and lighting fixtures?

- 1 YES [SKIP TO ST3]
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

ST2. The ENERGY STAR label has the word "energy" followed by a five-pointed star under a dome or half-circle. Some labels also show the continents and the oceans of the earth in a half circle. ENERGY STAR labels are used by the Environmental Protection Agency and the Department of Energy to identify and label highly energy-efficient appliances for consumers. They may appear on some appliances and other products; retail stores may also post them at entrances and other locations; they may also appear on the yellow Energy Guide label. Have you seen or heard of such a label before now?

- 1 YES
- 2 NO [THANK AND TERMINATE]
- 96 REFUSED
- 97 DON'T KNOW [THANK AND TERMINATE]

ST3. Does your store carry products with the ENERGY STAR label?

- 1 YES
- 2 NO [THANK AND TERMINATE]
- 96 REFUSED [THANK AND TERMINATE]
- 97 DON'T KNOW [THANK AND TERMINATE]

ST4. Which of the following appliance types and fixtures does your store carry that have the ENERGY STAR label? : [READ LIST. ALLOW MULTIPLE ANSWERS]

- 1 Clothes washers
- 2 Dishwashers
- 3 Refrigerators
- 4 Room air conditioners
- 5 Lighting fixtures
- 96 REFUSED [THANK AND TERMINATE]
- 97 DON'T KNOW [THANK AND TERMINATE]

ST5. Did you carry ENERGY STAR appliances and fixtures before you became NYSERDA retail partner or not?

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

ST6. Which of the following types of **NON-ENERGY STAR** products do you carry on a regular basis? [READ LIST, ALLOW MULTIPLE RESPONSES]

- 1 Clothes washers
- 2 Dishwashers
- 3 Refrigerators
- 4 Room air conditioners
- 5 Lighting fixtures
- 96 REFUSED
- 97 DON'T KNOW

For the next couple of questions, I'd like you to think just about the ENERGY STAR appliances and lighting fixtures you sell.

ST7. According to your best estimate, what percentage of the following products on your sales floor as of **January 1, 2010** was ENERGY STAR rated? First, what percent of the [ENTER ITEM FROM ST4] on your sales floor on January 1, 2010 were Energy Star rated? [ASK FOR EACH ITEM MENTIONED IN ST4] [READ LIST – STOP WHEN RESPONDENT SELECTS CATEGORY]

- a. Clothes washers
- b. Dishwashers
- c. Refrigerators
- d. Room Air conditioners
- e. Lighting fixtures [Note retailers may have information disaggregated by type of fixture i.e. portable, outdoor, etc. Please ask them to estimate the average percentage across all lighting fixtures.]
 - 1 Less than 10%
 - 2 10% to less than 20%
 - 3 20% to less than 30%
 - 4 30% to less than 40%
 - 5 40% to less than 50%
 - 6 50% to less than 60%
 - 7 60% to less than 70%
 - 8 70% to less than 80%
 - 9 80% to less than 90%
 - 10 90% or more
 - 96 REFUSED
 - 97 DON'T KNOW

ST7a. Is the percentage of ENERGY STAR [INSERT PRODUCT FROM ST4] **currently on your sales floor** any different than it was on January 1, 2010?

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

ST7b. [ASK IF ST7a = 1] What percent of the [INSERT PRODUCT FROM ST4] currently on your sales floor are ENERGY STAR rated? [READ LIST, STOP WHEN RESPONDENT SELECT CATEGORY].

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

[IF ST4=ROOM AC, ASK ST7D1 OTHERWISE GO TO ST8]

ST7d1. I'd like you to think back to the **summer of 2009**. What percentage of the room air conditioners on your sales floor during the summer of 2009 were ENERGY STAR room ACs? [READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST8. Now please think back to **January 2009**. What percentage of each of these products on your sales floor as of January 1, 2009 were ENERGY STAR rated? [ONLY LIST PRODUCTS FROM ST4]? [READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- a. Clothes washers
- b. Dishwashers
- c. Refrigerators
- d. Room Air conditioners
- e. Lighting fixtures [Note retailers may have information disaggregated by type of fixture i.e. portable, outdoor, etc. Please ask them to estimate the average percentage across all lighting fixtures.]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

[IF ST4=ROOM AC, ASK ST8d1, OTHERWISE GO TO ST9]

ST8d1. Now, I'd like you to think back to the **summer of 2008**. What percentage of the room air conditioners on your sales floor during the summer of 2008 were ENERGY STAR room ACs?

[READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

For the next couple of questions, I'd like you to think about ALL of the appliances and lighting fixtures you sell, not just the ENERGY STAR appliances and lighting fixtures.

ASK ST9, ST9a, ST9b, ST9c, ST9d, ST9e IN SEQUENCE FOR UP TO TWO PRODUCTS MENTIONED IN ST4

ST9. Between January 2009 and January 2010, did the OVERALL QUANTITY of [INSERT PRODUCT FROM ST4] you carried increase, decrease, or stay about the same? [READ IF NECESSARY: We're asking here about all [INSERT PRODUCT TYPE FROM ST4] not just ENERGY STAR products.]

- 1 INCREASE
- 2 DECREASE
- 3 STAYED ABOUT THE SAME
- 96 REFUSED
- 97 DON'T KNOW

IF ST9 = STAYED THE SAME, DK, REF, SKIP TO ST9c.

ST9a By what percentage did the overall quantity of [INSERT PRODUCT FROM ST4] you carried [increase/decrease] between January 2009 and January 2010? [READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST9b. Why did the overall quantity of [INSERT PRODUCT FROM ST4] you carry [increase/decrease] between January 2009 and January 2010? [DO NOT READ. CHECK ALL THAT APPLY]

- 1 CUSTOMER DEMAND HAS INCREASED/DECREASED
- 2 WE ARE PROMOTING THESE MORE/LESS
- 3 WE ARE TRYING TO OFFER MORE ENVIRONMENTALLY FRIENDLY PRODUCTS
- 4 WE ARE GROWING/REDUCING [INSERT PRODUCTION FROM ST4] BUSINESS
- 5 OTHER [SPECIFY] _____
- 96 REFUSED
- 97 DON'T KNOW

ST9c. Between January 2010 and now, has the overall quantity of [INSERT PRODUCT FROM ST4] you carry increased, decreased, or stayed about the same?

- 1 INCREASED
- 2 DECREASED
- 3 STAYED ABOUT THE SAME
- 96 REFUSED
- 97 DON'T KNOW

IF ST9c = STAYED THE SAME, DK, REF, SKIP TO ST10.

ST9d. By what percentage has the overall quantity of [INSERT PRODUCT FROM ST4] you carry [increased/decreased] between January 2010 and now?
[READ LIST, STOP WHEN RESPONDENT SELECT CATEGORY].

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST9e. Why has the overall quantity of [INSERT PRODUCT FROM ST4] you carry [increased/decreased] between January 2010 and now? [CHECK ALL THAT APPLY]

- 1 CUSTOMER DEMAND HAS INCREASED/DECREASED
- 2 WE ARE PROMOTING THESE MORE/LESS
- 3 WE ARE TRYING TO OFFER MORE ENVIRONMENTALLY FRIENDLY PRODUCTS
- 4 WE ARE GROWING/REDUCING [INSERT PRODUCTION FROM ST4] BUSINESS
- 5 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

ST10. On a scale of 1 to 5, with 1 being not very helpful and 5 being extremely helpful, how well do you think the ENERGY STAR label helps consumers identify products that use less energy than other comparable products?

- 1 NOT VERY HELPFUL
- 2
- 3
- 4
- 5 EXTREMELY HELPFUL
- 96 REFUSED
- 97 DON'T KNOW

IF ST10 < 3, ASK ST11, OTHERWISE SKIP TO ST12

ST11. Why do you say that?

ST12. In your opinion, what do consumers think of when they see the ENERGY STAR label?
[DO NOT READ. CHECK ALL THAT APPLY]

- 1 ENERGY EFFICIENCY OR ENERGY SAVINGS
- 2 SAVING MONEY ON OPERATING COSTS
- 3 MENTIONS SPECIFIC ENERGY STAR PRODUCTS
- 4 ENVIRONMENTAL BENEFIT
- 5 ELECTRICITY
- 6 ENERGY/ENVIRONMENTAL PRODUCT STANDARDS
- 7 ENERGY CONSERVATION
- 8 ENERGY (NO LINK TO EFFICIENCY)
- 9 PRODUCT STANDARDS (NO ENVIRONMENTAL/ENERGY EFFICIENCY LINK)
- 10 SAVING MONEY ON PURCHASE
- 11 CONFUSES IT WITH ENERGY GUIDE
- 12 GOVERNMENT BACKING
- 13 QUALITY
- 14 ENVIRONMENT (NO LINK TO BENEFIT)
- 15 SAVINGS (NOT LINKED TO OPERATION)
- 16 NEGATIVE PERCEPTION [SPECIFY]
- 17 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

ST13. Now I'm going to read you a list of factors that may or may not influence which models get displayed. For each one, please tell me how important a factor it is for determining which models get displayed – very important, somewhat important, not too important or not important at all. First, [INSERT ITEM. ROTATE], how important a factor is this in determining which models get displayed?

- a. You want a mix of features/sizes
- b. You want a mix of prices
- c. You want a mix of prices that matches what you think your customers want
- d. You display what customers have asked for in the past
- e. The market determines the proportion
- f. You need to keep a supply of less-expensive models for your customers
- g. Corporate office determines this
- h. Depends on the stock you have on hand

- 1 VERY IMPORTANT
- 2 SOMEWHAT IMPORTANT
- 3 NOT TOO IMPORTANT
- 4 NOT AT ALL IMPORTANT
- 96 REFUSED
- 97 DON'T KNOW

[IF MORE THAN ONE VERY OR SOMEWHAT IMPORTANT IN ST13 a-h, ASK ST13_1]

ST13_1. Which of these factors is the MOST important in determining which models get displayed?

[SHOW ITEMS TO WHICH RESPONDENT ANSWERED VERY OR SOMEWHAT IN ST13. READ LIST IF NECESSARY.]

- 1 MIX OF FEATURES/SIZES
- 2. MIX OF PRICES
- 3. MIX OF PRICES THAT MATCHES WHAT WE THINK OUR CUSTOMERS WANT
- 4. DISPLAY WHAT CUSTOMERS HAVE ASKED FOR IN THE PAST
- 5. THE MARKET DETERMINES THE PROPORTION
- 6. WE NEED TO KEEP A SUPPLY OF LESS-EXPENSIVE MODELS FOR OUR CUSTOMERS
- 7. CORPORATE OFFICE DETERMINES THIS
- 8. DEPENDS ON THE STOCK WE HAVE ON HAND
- 96 REFUSED
- 97 DON'T KNOW

Now I'd like to ask some questions about your participation as a NYSERDA retail partner.

Question Order

- **IF ONE PRODUCT MENTIONED IN ST4, ASK ST14, TR1 – TR15 IN SEQUENCE THEN GO TO PA1**
- **IF TWO PRODUCTS MENTIONED IN ST4, ASK ST14, TR1 – TR15 IN SEQUENCE THEN GO BACK TO ST14, TR1-TR15 FOR THE SECOND PRODUCT FROM ST4 THEN MOVE ON TO PA1**
- **IF MORE THAN 2 PRODUCTS MENTIONED IN ST4, ASK ST14, TR1 – TR15 IN SEQUENCE THEN GO BACK TO ST14, TR1-TR15 FOR THE SECOND PRODUCT FROM ST4 THEN ASK TR3 THROUGH TR6 AND TR14 THROUGH TR15A ABOUT ALL REMAINING PRODUCTS MENTIONED IN ST4 THEN MOVE ON TO PA1**

ST14. How has participating as a NYSEDA retail partner affected the number of different models of ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] that your store carried during calendar year 2009? Would you say that because of being a NYSEDA retail partner, you[READ LIST]

- 1 Carried more ENERGY STAR models
- 2 Carried fewer ENERGY STAR models
- 3 Carried the same number of different ENERGY STAR models (e.g., it hasn't affected the stock)
- 96 REFUSED
- 97 DON'T KNOW

Section 3. Sales Trends

TR1. Would your store carry ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] without the support of NYSEDA's New York Energy Smart Products Program or not?

- 1 YES
- 2 NO [SKIP TO TR3]
- 96 REFUSED
- 97 DON'T KNOW

IF TR1=1, 96, 97, ASK TR2

TR2. Would your store still advertise ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] without the support of NYSEDA's program or not?

- 1 YES
- 2 NO
- 3 MAYBE (VOLUNTEERED)
- 96 REFUSED
- 97 DON'T KNOW

TR3. Now think about NYSERDA's ENERGY STAR promotional incentives for [INSERT PRODUCT MENTIONED FROM ST4]. If these promotional incentives were not available, do you think your sales of these appliances/fixtures would be about the same, lower, or higher?

- 1 SAME
- 2 LOWER
- 3 HIGHER
- 96 REFUSED [SKIP TO TR7]
- 97 DON'T KNOW [SKIP TO TR7]

TR4. Why do you think this is? [DO NOT READ. CODE ALL THAT APPLY]

- 1 [SHOW FOR TR3=3] WE ADVERTISE MORE AND ATTRACT MORE BUSINESS
- 2 [SHOW FOR TR3=3] CONSUMERS WANT THESE AND FIND OUT WE HAVE THEM
- 3 [SHOW FOR TR3=1 OR 2] – WE HAVEN'T NOTICED ANY INCREASE FROM ADVERTISING
- 4 [SHOW FOR TR3=1 OR 2] – THE ADVERTISEMENTS WERE INEFFECTIVE
- 5 [SHOW FOR TR3=1 OR 2] – CUSTOMERS WOULD BUY WITHOUT ADVERTISING
- 6 [SHOW FOR TR3=1 OR 2] – ES PRODUCTS ARE EXPENSIVE SO WOULD NOT PUSH IF NO INCENTIVES TO OFFER
- 7 [SHOW FOR ALL] OTHER [SPECIFY]
- 96 REFUSED [SKIP TO TR7]
- 97 DON'T KNOW [SKIP TO TR7]

TR5. [ASK IF TR3=2 OR 3] By what percentage do you estimate your store's sales of ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] would be [TR3 higher/lower] if the ENERGY STAR promotional incentives for [INSERT PRODUCT MENTIONED FROM ST4] were not available? [READ LIST UNTIL RESPONDENT PICKS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

TR6. **THERE IS NO QUESTION TR6**

TR7. In your opinion, between January 1, 2009 and January 1, 2010, did sales of your ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4], [READ LIST]:

- 1 Increase
- 2 Decrease,
- 3 or stay about the same
- 96 REFUSED
- 97 DON'T KNOW

TR7a. How about between January 1, 2010 and now, did sales of your ENERGY STAR [INSERT PRODUCT FROM ST4], [READ LIST]:

- 1 Increase
- 2 Decrease
- 3 or stay about the same
- 96 REFUSED
- 97 DON'T KNOW

TR7b. In your opinion, why did sales of your ENERGY STAR [INSERT PRODUCT FROM ST4] [increase/decrease] between Jan 2010 and now? [DO NOT READ. CHECK ALL THAT APPLY]

- 1 CUSTOMER DEMAND HAS INCREASED/DECREASED FROM GOVERNMENT INCENTIVES SUCH AS ARRA OR TAX INCENTIVES
- 2 WE ARE PROMOTING THESE MORE/LESS
- 3 GROWING/SHRINKING AWARENESS AND DEMAND FOR MORE ENVIRONMENTALLY FRIENDLY PRODUCTS
- 4 WE ARE GROWING/REDUCING [INSERT PRODUCTION FROM ST4] BUSINESS
- 5 OTHER [SPECIFY] _____
- 96 REFUSED
- 97 DON'T KNOW

[ONLY ASK TR8-TR10a ONCE FOR THE FIRST PRODUCT]

TR8. Did your store promote and sell ENERGY STAR appliances eligible for American Reinvestment and Recovery Act or ARRA stimulus funding or not? [INTERVIEWER NOTE: THIS MAY ALSO BE REFERRED TO AS 'GREAT APPLIANCE SWAP OUT' OR JUST 'SWAP OUT']

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

TR9. During the fourth quarter of 2009, did your store provide information to consumers either through advertising or direct salesperson communication on the potential benefits of anticipated 2010 ARRA stimulus funding for ENERGY STAR appliances or not?

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

TR10. In your opinion, what impact, if any, did consumer awareness of the planned 2010 rebates on Energy Star appliances have on your fourth quarter 2009 sales of ENERGY STAR appliances? Would you say consumer awareness that rebates could occur a few months later increased sales, decreased sales, or had no impact on 4th quarter 2009 sales?

- 1 INCREASED SALES
- 2 DECREASED SALES
- 3 HAD NO IMPACT [GO TO TR11]
- 96 REFUSED [GO TO TR11]
- 97 DON'T KNOW [GO TO TR11]

TR10a By what percent do you think 4th quarter 2009 sales [increased/decreased] as a result of consumer awareness of future rebates on Energy Star appliances? [READ LIST. STOP WHEN RESPONDENT SELECTS AN ANSWER]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

Now I'd like to ask about consumer demand for ENERGY STAR products.

TR11. Thinking about shoppers in your store over the past few years, would you say consumer demand for ENERGY STAR [INSERT PRODUCT FROM ST4] has [READ LIST]:

- 1 INCREASED SIGNIFICANTLY
- 2 INCREASED SOMEWHAT
- 3 REMAINED THE SAME [GO TO TR13]
- 4 DECREASED SOMEWHAT [GO TO TR12]
- 5 DECREASED SIGNIFICANTLY [GO TO TR12]
- 96 REFUSED [GO TO TR13]
- 97 DON'T KNOW [GO TO TR13]

TR11a. On a scale of 1 to 5, where 1 is not at all important and 5 is very important, how important was the New York ENERGY STAR Products Program in helping to bring about this increase in consumer demand for ENERGY STAR products?

- 1 NOT AT ALL IMPORTANT
- 2
- 3
- 4
- 5 VERY IMPORTANT
- 96 REFUSED
- 97 DON'T KNOW

IF TR11= REMAINED THE SAME, DK, OR REF, GO TO TR13

TR12. I'm going to read you a list of factors that may or may not have had an effect on consumer demand for ENERGY STAR [INSERT PRODUCT TYPE FROM ST4]. For each one, please tell me if the factor had a positive effect, a negative effect or no effect on consumer demand for this type of ENERGY STAR product. [INTERVIEWER NOTE: IF 'BOTH POSITIVE AND NEGATIVE' PROBE ONCE TO GET AT THE NET EFFECT AS POSITIVE OR NEGATIVE]

- a. The economy
- b. Higher energy prices.
- c. New Federal standards to improve the energy efficiency of appliances
- d. State standards for appliances
- e. State-level promotional activities
- f. Environmental concerns
- g. New or improved energy-efficient appliance technologies
- h. The sales of competing retailers
- i. NYSERDA's New York Energy Smart Products Program

ALWAYS READ LAST:

j. Were there any other factors that had an effect on consumer demand for this type of Energy Star product? (SPECIFY _____)

IF YES: Was it a positive effect, negative effect?

- 1 POSITIVE EFFECT
- 2 NEGATIVE EFFECT
- 3 NO EFFECT
- 96 REFUSED
- 97 DON'T KNOW

FOR EACH TR12 POSITIVE/NEGATIVE EFFECT, ASK TR12A

TR12a And would you say the effect of [INSERT ITEM FROM TR12] on consumer demand was a small [positive/negative] effect, a moderate effect, or a large effect?

- 1 SMALL
- 2 MODERATE
- 3 LARGE
- 96 REFUSED
- 97 DON'T KNOW

TR13. Did you have an expectation that **ENERGY STAR** [INSERT PRODUCT MENTIONED FROM ST4] sales would increase through your participation in the NYSERDA program or not?

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

TR14. What percentage of your total **ENERGY STAR** [INSERT PRODUCT MENTIONED FROM ST4] sales would you estimate result from NYSERDA's promotional incentives? [READ LIST. STOP WHEN RESPONDENT SELECTS AN ANSWER]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

TR15. What would you estimate are total sales of **ENERGY STAR** [INSERT PRODUCT MENTIONED FROM ST4] for your store over the course of a year? [IF CANNOT DO SALES PER YEAR, ASK SALES PER MONTH]

- _____ RECORD SALES PER YEAR
- _____ RECORD SALES PER MONTH
- 96 REFUSED
- 97 DON'T KNOW

IF TR15=DK OR REFUSED, ASK TR15A, OTHERWISE SKIP TO PA1

TR15a What would you estimate are total number of units of **ENERGY STAR** [INSERT PRODUCT MENTIONED FROM ST4] for your store over the course of a year? [IF CANNOT DO UNITS PER YEAR, ASK UNITS PER MONTH]

- _____ RECORD NUMBER OF UNITS PER YEAR
- _____ RECORD NUMBER OF UNITS PER MONTH
- 96 REFUSED
- 97 DON'T KNOW

Section 4. Promotion/Advertising Practices

PA1. Which, if any, of the following media do you use to advertise ENERGY STAR products?

[READ LIST, CODE ALL THAT APPLY]

- 1 Newspaper
- 2 Radio
- 3 TV
- 4 Web site (specify: _____)
- 5 Social Media (specify: _____)
- 6 Yellow Pages
- 7 Other (specify: _____)
- 8 None
- 96 REFUSED
- 97 DON'T KNOW

Section 5: Appliance Pricing

[FOR EACH PRODUCT MENTIONED IN ST4, ASK PR1 THROUGH PR4 THEN RETURN TO PR1 AND BEGIN ASKING THE QUESTIONS FOR THE NEXT PRODUCT MENTIONED IN ST4. ONCE COMPLETE, MOVE ONTO F1.]

PR1. Now I would like to ask you a few questions about your [INSERT PRODUCT MENTIONED FROM ST4] pricing. Some retailers use something called “keystone pricing,” where the retail price is set at twice the wholesale price. Is this how you determine the retail price for the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] you sell or do you use a different method?

- 1 YES, USE KEYSTONE PRICING [SKIP TO PR3]
- 2 NO, USE DIFFERENT METHOD
- 96 REFUSED [SKIP TO PR3]
- 97 DON'T KNOW [SKIP TO PR3]

PR2. How do you determine the retail price for the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] you sell?

- 1 CORPORATE OFFICE DECIDES
- 2 PERCENTAGE PRICING -- EVERYTHING IS MARKED UP A PERCENTAGE OTHER THAN 100%
- 3 WE PRICE TO COMPETE WITH OTHER RETAILERS
- 4 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

PR3. Are the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] priced higher, lower, or about the same as similar, non-ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] in your store?

- 1 HIGHER
- 2 LOWER
- 3 ABOUT THE SAME [SKIP TO F1]
- 96 REFUSED [SKIP TO F1]
- 97 DON'T KNOW [SKIP TO F1]

PR4. By what percentage are the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] priced [PR3, higher/lower] than non-ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] in your stores? [READ LIST. STOP WHEN RESPONDENT SELECTS A CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

Section 6: Firmographics

Finally, I have a few questions about your store characteristics.

F1. Would you consider this store independently-owned, a franchise, or part of a corporation?

- 1 INDEPENDENTLY-OWNED
- 2 FRANCHISE
- 3 CORPORATE OWNED
- 4 OTHER (SPECIFY)_____
- 96 REFUSED
- 97 DON'T KNOW

F2. What is the square footage of the store's sales area? Your best estimate is fine.

- ___ RECORD SQ FOOTAGE
- 96 REFUSED
- 97 DON'T KOW

F3. How many employees work at this particular store location?

____ RECORD NUMBER OF EMPLOYEES

96 REFUSED

97 DON'T KNOW

F4. In which category would you place your store? Is it a ... [READ RESPONSES, ALLOW ONE RESPONSE ONLY]

1 Mass merchandiser (such as Target or Walmart).

2 Discount store (such as Big Lots or a 99¢ store).

3 Large home improvement (such as Home Depot or Lowe's).

4 Hardware (such as ACE Hardware).

5 Grocery (such as Safeway or King Supers).

6 Drug store (such as Rite Aid).

7 Small business (independent retailer)

8 Other (SPECIFY) _____

96 REFUSED

97 DON'T KNOW

F5. What is your FIRST name?

RECORD FIRST NAME _____

96 REFUSED

F6. What is your job title?

RECORD JOB TITLE _____

96 REFUSED

CLOSING: Those are all the questions I have. Thank you so much for your time today. We really appreciate your participation in this important study. Have a nice evening.

4 Comparison Retailer Survey

ENERGY STAR Products
Comparison Appliance Retailer Survey 2010
CATI Programming Version
July 12, 2010

ASK TO SPEAK WITH THE STORE OR SALES MANAGER. IF STORE MANAGER IS NOT AVAILABLE ASK TO SPEAK TO ANYONE WHO DEALS WITH STOCKING PATTERNS AND SALES TRENDS. WHEN HE/SHE IS ON THE PHONE CONTINUE WITH INTRODUCTION.

Hello, my name is [interviewer name], and I'm calling on behalf of the New York State Energy Research and Development Authority ("NYSERDA"). NYSERDA is conducting a study about appliance and lighting fixture purchases and energy use in different locations across the U.S. including [INSERT SAMPLE AREA]. We're interested in learning about your experiences with stocking and selling energy efficient appliances.

I'd like to speak with someone in your store who is familiar with the stocking patterns or sales trends for the appliances and lighting fixtures you sell? Would that be you?

[If there are two different representatives for appliances and lighting, ask to speak to the appliance rep first, then try to follow-up with the lighting fixture rep.]

- 1 YES
- 2 NO [Attempt to get respondent; if respondent not available, ask if anyone else at the establishment makes purchasing or stocking decisions. IF NOT a good time to talk, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX.]

[READ IF NECESSARY: I'm not selling anything; I'd just like to ask your opinion about ENERGY STAR appliance and lighting fixture trends. The study team of The Cadmus Group and APPRISE, as independent research firms, will keep the information private to the extent permitted by law. NYSERDA's analysis will only use summary level data and will not identify individual respondents or firms.]

[IF REFERRED TO CORPORATE: "Right now we are looking for input at the store level; corporate-level surveys are being conducted as another part of this study.]

[IF RESPONDENT HAS QUESTIONS, THEY CAN CALL: Victoria Engel-Fowles (518) 862-1090 ext. 3207]

Section 1. Respondent Information

RI1. THERE IS NO QUESTION RI1

RI2. First, does your store sell any of the following types of appliances: [READ LIST. GET YES OR NO TO EACH].

- a. Clothes washer
- b. Dishwashers
- c. Refrigerators
- d. Room air conditioners
- e. Lighting fixtures [READ IF NECESSARY: LIGHTING FIXTURES INCLUDES FLOOR LAMPS, TORCHIERES, TABLE LAMPS, CEILING FIXTURES, WALL- MOUNTED FIXTURES, OR EXTERIOR FIXTURES.]
- f. None of these [THANK AND TERMINATE]

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

Section 2. Awareness and Stocking

For these first questions, we're going to review your stocking patterns for appliance and lighting fixture products.

ST10. Are you familiar with the ENERGY STAR label that identifies energy-efficient models of appliances and lighting fixtures?

- 1 YES [SKIP TO ST3]
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

ST11. The ENERGY STAR label has the word “energy” followed by a five-pointed star under a dome or half-circle. Some labels also show the continents and the oceans of the earth in a half circle. ENERGY STAR labels are used by the Environmental Protection Agency and the Department of Energy to identify and label highly energy-efficient appliances for consumers. They may appear on some appliances and other products; retail stores may also post them at entrances and other locations; they may also appear on the yellow Energy Guide label. Have you seen or heard of such a label before now?

- 1 YES
- 2 NO [THANK AND TERMINATE]
- 96 REFUSED
- 97 DON'T KNOW [THANK AND TERMINATE]

ST12. Does your store carry products with the ENERGY STAR label?

- 1 YES
- 2 NO [THANK AND TERMINATE]
- 96 REFUSED [THANK AND TERMINATE]
- 97 DON'T KNOW [THANK AND TERMINATE]

ST13. Which of the following appliance types and fixtures does your store carry that have the ENERGY STAR label? : [READ LIST. ALLOW MULTIPLE ANSWERS]

- 1 Clothes washers
- 2 Dishwashers
- 3 Refrigerators
- 4 Room air conditioners
- 5 Lighting fixtures
- 96 REFUSED [THANK AND TERMINATE]
- 97 DON'T KNOW [THANK AND TERMINATE]

ST14. THERE IS NO QUESTION ST5

ST15. Which of the following types of **NON-ENERGY STAR** products do you carry on a regular basis? [READ LIST, ALLOW MULTIPLE RESPONSES]

- 1 Clothes washers
- 2 Dishwashers
- 3 Refrigerators
- 4 Room air conditioners
- 5 Lighting fixtures
- 96 REFUSED
- 97 DON'T KNOW

For the next couple of questions, I'd like you to think about the ENERGY STAR appliances and lighting fixtures you sell.

ST16. According to your best estimate, what percentage of the following products on your sales floor as of **January 1, 2010** was ENERGY STAR rated? First, what percent of the [ENTER ITEM FROM ST4] on your sales floor on January 1, 2010 were Energy Star rated? [ASK FOR EACH ITEM MENTIONED IN ST4] [READ LIST – STOP WHEN RESPONDENT SELECTS CATEGORY]

- a. Clothes washers
- b. Dishwashers
- c. Refrigerators
- d. Room Air conditioners
- e. Lighting fixtures [Note retailers may have information disaggregated by type of fixture i.e. portable, outdoor, etc. Please ask them to estimate the average percentage across all lighting fixtures.]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST7a. Is the percentage of ENERGY STAR [INSERT PRODUCT FROM ST4] **currently on your sales floor** any different than it was on January 1, 2010?

- 1 YES
- 2 NO
- 96 REFUSED
- 97 DON'T KNOW

ST7b. **[ASK IF ST7a = 1]** What percent of the [INSERT PRODUCT FROM ST4] currently on your sales floor are ENERGY STAR rated? [READ LIST, STOP WHEN RESPONDENT SELECT CATEGORY].

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

[IF ST4=ROOM AC, ASK ST7D1 OTHERWISE GO TO ST8]

ST7d1. I'd like you to think back to the **summer of 2009**. What percentage of the room air conditioners on your sales floor during the summer of 2009 were ENERGY STAR room ACs? [READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST17. Now please think back to **January 2009**. What percentage of each of these products on your sales floor as of January 1, 2009 were ENERGY STAR rated? [ONLY LIST PRODUCTS FROM ST4]? [READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- a. Clothes washers
- b. Dishwashers
- c. Refrigerators
- d. Room Air conditioners
- e. Lighting fixtures [Note retailers may have information disaggregated by type of fixture i.e. portable, outdoor, etc. Please ask them to estimate the average percentage across all lighting fixtures.]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

[IF ST4=ROOM AC, ASK ST8d1, OTHERWISE GO TO ST9]

ST8d1. Now, I'd like you to think back to the **summer of 2008**. What percentage of the room air conditioners on your sales floor during the summer of 2008 were ENERGY STAR room ACs?

[READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

For the next couple of questions, I'd like you to think about ALL of the appliances and lighting fixtures you sell, not just the ENERGY STAR appliances and lighting fixtures.

ASK ST9, ST9a, ST9b, ST9c, ST9d, ST9e IN SEQUENCE FOR UP TO TWO PRODUCTS MENTIONED IN ST4

ST18. Between January 2009 and January 2010, did the OVERALL QUANTITY of [INSERT PRODUCT FROM ST4] you carry increase, decrease, or stay about the same?
[READ IF NECESSARY: We're asking here about all [INSERT PRODUCT TYPE FROM ST4] not just ENERGY STAR products.]

- 1 INCREASE
- 2 DECREASE
- 3 STAYED ABOUT THE SAME
- 96 REFUSED
- 97 DON'T KNOW

IF ST9 = STAYED THE SAME, DK, REF, SKIP TO ST9c.

ST9a. By what percentage did the overall quantity of [INSERT PRODUCT FROM ST4] you carried [increase/decrease] between January 2009 and January 2010?
[READ LIST, STOP WHEN RESPONDENT SELECTS CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST9b. Why did the overall quantity of [INSERT PRODUCT FROM ST4] you carry [increase/decrease] between January 2009 and January 2010? [DO NOT READ. CHECK ALL THAT APPLY]

- 5 CUSTOMER DEMAND HAS INCREASED/DECREASED
- 6 WE ARE PROMOTING THESE MORE/LESS
- 7 WE ARE TRYING TO OFFER MORE ENVIRONMENTALLY FRIENDLY PRODUCTS
- 8 WE ARE GROWING/REDUCING OUR BUSINESS IN THESE TYPES OF APPLIANCES
- 5 OTHER [SPECIFY] _____
- 96 REFUSED
- 97 DON'T KNOW

ST9c. Between January 2010 and now, has the overall quantity of [INSERT PRODUCT FROM ST4] you carry increased, decreased, or stayed about the same?

- 1 INCREASED
- 2 DECREASED
- 3 STAYED ABOUT THE SAME
- 96 REFUSED
- 97 DON'T KNOW

IF ST9c = STAYED THE SAME, DK, REF, SKIP TO ST10.

ST9d. By what percentage has the overall quantity of [INSERT PRODUCT FROM ST4] you carry [increased/decreased] between January 2010 and now? [READ LIST, STOP WHEN RESPONDENT SELECT CATEGORY].

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

ST9e. Why has the overall quantity of [INSERT PRODUCT FROM ST4] you carry [increased/decreased] between January 2010 and now? [CHECK ALL THAT APPLY]

- 1 CUSTOMER DEMAND HAS INCREASED/DECREASED
- 2 WE ARE PROMOTING THESE MORE/LESS
- 3 WE ARE TRYING TO OFFER MORE ENVIRONMENTALLY FRIENDLY PRODUCTS
- 4 WE ARE GROWING/REDUCING [INSERT PRODUCTION FROM ST4] BUSINESS
- 5 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

ST10. On a scale of 1 to 5, with 1 being not very helpful and 5 being extremely helpful, how well do you think the ENERGY STAR label helps consumers identify products that use less energy than other comparable products?

- 1 NOT VERY HELPFUL
- 2
- 3
- 4
- 5 EXTREMELY HELPFUL
- 96 REFUSED
- 97 DON'T KNOW

IF ST10 < 3, ASK ST11, OTHERWISE SKIP TO ST12

ST11. Why do you say that?

ST12. In your opinion, what do consumers think of when they see the ENERGY STAR label?
[DO NOT READ. CHECK ALL THAT APPLY]

- 18 ENERGY EFFICIENCY OR ENERGY SAVINGS
- 19 SAVING MONEY ON OPERATING COSTS
- 20 MENTIONS SPECIFIC ENERGY STAR PRODUCTS
- 21 ENVIRONMENTAL BENEFIT
- 22 ELECTRICITY
- 23 ENERGY/ENVIRONMENTAL PRODUCT STANDARDS
- 24 ENERGY CONSERVATION
- 25 ENERGY (NO LINK TO EFFICIENCY)
- 26 PRODUCT STANDARDS (NO ENVIRONMENTAL/ENERGY EFFICIENCY LINK)
- 27 SAVING MONEY ON PURCHASE
- 28 CONFUSES IT WITH ENERGY GUIDE
- 29 GOVERNMENT BACKING
- 30 QUALITY
- 31 ENVIRONMENT (NO LINK TO BENEFIT)
- 32 SAVINGS (NOT LINKED TO OPERATION)
- 33 NEGATIVE PERCEPTION [SPECIFY]
- 34 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

ST13. Now I'm going to read you a list of factors that may or may not influence which models get displayed. For each one, please tell me how important a factor it is for determining which models get displayed – very important, somewhat important, not too important or not important at all. First, [INSERT ITEM. ROTATE] how important a factor is this in determining which models get displayed?

- a. You want a mix of features/sizes
- b. You want a mix of prices
- c. You want a mix of prices that matches what you think your customers want
- d. You display what customers have asked for in the past
- e. The market determines the proportion
- f. You need to keep a supply of less-expensive models for your customers
- g. Corporate office determines this
- h. Depends on the stock you have on hand

- 1 VERY IMPORTANT
- 2 SOMEWHAT IMPORTANT
- 3 NOT TOO IMPORTANT
- 4 NOT AT ALL IMPORTANT
- 96 REFUSED
- 97 DON'T KNOW

IF MORE THAN ONE VERY OR SOMEWHAT IMPORTANT IN ST13A-H, ASK ST13.1]

ST13_1 Which of these factors is the MOST important in determining which models get displayed?

[SHOW ITEMS TO WHICH RESPONDENT ANSWERED VERY OR SOMEWHAT IN ST13. READ LIST IF NECESSARY.]

- 1 MIX OF FEATURES/SIZES
- 2 MIX OF PRICES
- 3 MIX OF PRICES THAT MATCHES WHAT WE THINK OUR CUSTOMERS WANT
- 4 DISPLAY WHAT CUSTOMERS HAVE ASKED FOR IN THE PAST
- 5 THE MARKET DETERMINES THE PROPORTION
- 6 WE NEED TO KEEP A SUPPLY OF LESS-EXPENSIVE MODELS FOR OUR CUSTOMERS
- 7 CORPORATE OFFICE DETERMINES THIS
- 8 DEPENDS ON THE STOCK WE HAVE ON HAND
- 96 REFUSED
- 97 DON'T KNOW

Question Order

- **IF ONE PRODUCT MENTIONED IN ST4, ASK TR7 – TR15A IN SEQUENCE THEN GO TO PA1**
- **IF TWO PRODUCTS MENTIONED IN ST4, ASK TR7 – TR15A IN SEQUENCE THEN GO BACK TO TR7-TR15A FOR THE SECOND PRODUCT FROM ST4 THEN MOVE ON TO PA1**
- **IF MORE THAN 2 PRODUCTS MENTIONED IN ST4, ASK TR7 – TR15A IN SEQUENCE THEN GO BACK TO TR7-TR15A FOR THE SECOND PRODUCT FROM ST4 THEN ASK TR15 THROUGH TR15A ABOUT ALL REMAINING PRODUCTS MENTIONED IN ST4 THEN MOVE ON TO PA1**

ST14. THERE IS NO QUESTION ST14

Section 3. Sales Trends

- TR16. THERE IS NO QUESTION TR1**
TR17. THERE IS NO QUESTION TR2
TR18. THERE IS NO QUESTION TR3
TR19. THERE IS NO QUESTION TR4
TR20. THERE IS NO QUESTION TR5
TR21. THERE IS NO QUESTION TR6

Now I would like to ask some questions about sales trends of your ENERGY STAR products.

TR22. In your opinion, between January 1, 2009 and January 1, 2010, did sales of your ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4], [READ LIST]:

- 1 Increase
- 2 Decrease,
- 3 or stay about the same
- 96 REFUSED
- 97 DON'T KNOW

TR7a. How about between January 1, 2010 and now, did sales of your ENERGY STAR [INSERT PRODUCT FROM ST4], [READ LIST]:

- 1 Increase
- 2 Decrease
- 3 or stay about the same
- 96 REFUSED
- 97 DON'T KNOW

IF TR7B IF TR7A=1,2

TR7b. In your opinion, why did sales of your ENERGY STAR [INSERT PRODUCT FROM ST4] [increase/decrease] between January 2010 and now? [DO NOT READ. CHECK ALL THAT APPLY]

- 1 CUSTOMER DEMAND HAS INCREASED/DECREASED FROM GOVERNMENT INCENTIVES SUCH AS ARRA OR TAX INCENTIVES
- 2 WE ARE PROMOTING THESE MORE/LESS
- 3 GROWING/SHRINKING AWARENESS AND DEMAND FOR MORE ENVIRONMENTALLY FRIENDLY PRODUCTS
- 4 WE ARE GROWING/REDUCING [INSERT PRODUCTION FROM ST4] BUSINESS
- 5 OTHER [SPECIFY] _____
- 96 REFUSED
- 97 DON'T KNOW

TR23. THERE IS NO QUESTION TR8

TR24. THERE IS NO QUESTION TR9

TR25. THERE IS NO QUESTION TR10

TR10a. THERE IS NO QUESTION TR10a

Now I'd like to ask about consumer demand for ENERGY STAR products.

TR26. Thinking about shoppers in your store over the past few years, would you say consumer demand for ENERGY STAR [INSERT PRODUCT FROM ST4] has [READ LIST]:

- | | | |
|----|-------------------------|---------------------|
| 1 | INCREASED SIGNIFICANTLY | |
| 2 | INCREASED SOMEWHAT | |
| 3 | REMAINED THE SAME | [GO TO TR13] |
| 4 | DECREASED SOMEWHAT | [GO TO TR12] |
| 5 | DECREASED SIGNIFICANTLY | [GO TO TR12] |
| 96 | REFUSED | [GO TO TR13] |
| 97 | DON'T KNOW | [GO TO TR13] |

TR11a. THERE IS NO QUESTION TR11a

IF TR11= REMAINED THE SAME, DK, OR REF, GO TO TR13

TR27. I'm going to read you a list of factors that may or may not have had an effect on consumer demand for ENERGY STAR [INSERT PRODUCT TYPE FROM ST4]. For each one, please tell me if the factor had a positive effect, a negative effect or no effect on consumer demand for this type of ENERGY STAR product. [INTERVIEWER NOTE: IF 'BOTH POSITIVE AND NEGATIVE' PROBE ONCE TO GET AT THE NET EFFECT AS POSITIVE OR NEGATIVE]

- a. The economy
- b. Higher energy prices.
- c. New Federal standards to improve the energy efficiency of appliances
- d. State standards for appliances
- e. State-level promotional activities
- f. Environmental concerns
- g. New or improved energy-efficient appliance technologies
- h. The sales of competing retailers
- i. Local Utility Incentive Programs

ALWAYS READ LAST:

j. Were there any other factors that had an effect on consumer demand for this type of Energy Star product? (SPECIFY _____)

IF YES: Was it a positive effect, negative effect?

- 1 POSITIVE EFFECT
- 2 NEGATIVE EFFECT
- 3 NO EFFECT
- 96 REFUSED
- 97 DON'T KNOW

FOR EACH TR12 POSITIVE/NEGATIVE EFFECT, ASK TR12A

TR12a And would you say the effect of [INSERT ITEM FROM TR12] on consumer demand was a small [positive/negative] effect, a moderate effect, or a large effect?

- 1 SMALL
- 2 MODERATE
- 3 LARGE
- 96 REFUSED
- 97 DON'T KNOW

TR28. THERE IS NO QUESTION TR13

TR29. THERE IS NO QUESTION TR14

TR30. What would you estimate are total sales of **ENERGY STAR** [INSERT PRODUCT MENTIONED FROM ST4] for your store over the course of a year? [IF CANNOT DO SALES PER YEAR, ASK SALES PER MONTH]

- _____ RECORD SALES PER YEAR
- _____ RECORD SALES PER MONTH
- 96 REFUSED
- 97 DON'T KNOW

IF TR15=DK OR REFUSED, ASK TR15A, OTHERWISE SKIP TO PA1

TR15a What would you estimate are total number of units of **ENERGY STAR** [INSERT PRODUCT MENTIONED FROM ST4] for your store over the course of a year? [IF CANNOT DO UNITS PER YEAR, ASK UNITS PER MONTH]

- _____ RECORD NUMBER OF UNITS PER YEAR
- _____ RECORD NUMBER OF UNITS PER MONTH
- 96 REFUSED
- 97 DON'T KNOW

Section 4. Promotion/Advertising Practices

PA1. Which, if any, of the following media do you use to advertise ENERGY STAR products?
[READ LIST, CODE ALL THAT APPLY]

- 1 Newspaper
- 2 Radio
- 3 TV
- 4 Web site (specify: _____)
- 5 Social Media (specify: _____)
- 6 Yellow Pages
- 7 Other (specify: _____)
- 8 None
- 96 REFUSED
- 97 DON'T KNOW

Section 5: Appliance Pricing

[FOR EACH PRODUCT MENTIONED IN ST4, ASK PR1 THROUGH PR4 THEN RETURN TO PR1 AND BEGIN ASKING THE QUESTIONS FOR THE NEXT PRODUCT MENTIONED IN ST4. ONCE COMPLETE, MOVE ONTO F1.]

PR5. Now I would like to ask you a few questions about your [INSERT PRODUCT MENTIONED FROM ST4] pricing. Some retailers use something called “keystone pricing,” where the retail price is set at twice the wholesale price. Is this how you determine the retail price for the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] you sell or do you use a different method?

- 1 YES, USE KEYSTONE PRICING [SKIP TO PR3]
- 2 NO, USE DIFFERENT METHOD
- 96 REFUSED [SKIP TO PR3]
- 97 DON'T KNOW [SKIP TO PR3]

PR6. How do you determine the retail price for the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] you sell?

- 1 CORPORATE OFFICE DECIDES
- 2 PERCENTAGE PRICING -- EVERYTHING IS MARKED UP A PERCENTAGE OTHER THAN 100%
- 3 WE PRICE TO COMPETE WITH OTHER RETAILERS
- 4 OTHER [SPECIFY]
- 96 REFUSED
- 97 DON'T KNOW

PR7. Are the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] priced higher, lower, or about the same as similar, non-ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] in your store?

- 1 HIGHER
- 2 LOWER
- 3 ABOUT THE SAME [SKIP TO F1]
- 96 REFUSED [SKIP TO F1]
- 97 DON'T KNOW [SKIP TO F1]

PR8. By what percentage are the ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] priced [PR3, higher/lower] than non-ENERGY STAR [INSERT PRODUCT MENTIONED FROM ST4] in your stores? [READ LIST. STOP WHEN RESPONDENT SELECTS A CATEGORY]

- 1 Less than 10%
- 2 10% to less than 20%
- 3 20% to less than 30%
- 4 30% to less than 40%
- 5 40% to less than 50%
- 6 50% to less than 60%
- 7 60% to less than 70%
- 8 70% to less than 80%
- 9 80% to less than 90%
- 10 90% or more
- 96 REFUSED
- 97 DON'T KNOW

Section 6: Firmographics

Finally, I have a few questions about your store characteristics.

F6. Would you consider this store independently-owned, a franchise, or part of a corporation?

- 1 INDEPENDENTLY-OWNED
- 2 FRANCHISE
- 3 CORPORATE OWNED
- 4 OTHER (SPECIFY) _____
- 96 REFUSED
- 97 DON'T KNOW

F7. What is the square footage of the store's sales area? Your best estimate is fine.

- ___ RECORD SQ FOOTAGE
- 96 REFUSED
- 97 DON'T KOW

F8. How many employees work at this particular store location?

- ___ RECORD NUMBER OF EMPLOYEES
- 96 REFUSED
- 97 DON'T KNOW

F9. In which category would you place your store? Is it a ... [READ RESPONSES, ALLOW ONE RESPONSE ONLY]

- 1 Mass merchandiser (such as Target or Walmart).
- 2 Discount store (such as Big Lots or a 99¢ store).
- 3 Large home improvement (such as Home Depot or Lowe's).
- 10 Large electronics (such as Best Buy).
- 4 Hardware (such as ACE Hardware).
- 5 Small lumber (independents).
- 6 Drug store (such as Rite Aid).
- 7 Small electronics (independent electronics retailer).
- 8 Other (SPECIFY) _____
- 9 Department stores (such as Sears).
- 96 REFUSED
- 97 DON'T KNOW

F10. What is your FIRST name?

RECORD FIRST NAME _____

96 REFUSED

F6. What is your job title?

RECORD JOB TITLE _____

96 REFUSED

CLOSING: Those are all the questions I have. Thank you so much for your time today. We really appreciate your participation in this important study. Have a nice day.

5 *Corporate Retailer Interview Guide*

ENERGY STAR Products and Marketing Program INTERVIEW GUIDE FOR REGIONAL/NATIONAL RETAILERS, 2010

Interviewer:	
Retailer Name:	City and State:
Contact Name:	Contact Title:
Phone:	Email:
Respondent's overall responsibility:	
Date:	Comments:

Introduction [For Interviewers]

Contact Protocol

- Call potential respondents to find most appropriate respondent. Obtain e-mail address(es) of appropriate respondents. If company refuses interview, determine reasons for refusal and if it's logistical, try to find workaround.
- Send e-mail interview invitation to appropriate respondent. This invitation will include:
 - Explanation of purpose and scope of interview.
 - Explanation of time frame within which the interview will need to be completed.
 - Explanation of expected duration of interview and flexibility to complete interview over multiple sessions.
 - Instructions to propose a convenient interview time.
 - Contact information for interviewers.
 - Assurances of confidentiality.
 - A letter attachment from NYSERDA explaining the importance of the interview.
- If target respondent does not respond to the email invitation within a few days, a follow-up call will be made to try to schedule an interview time, find an alternate interview target, or determine reasons for refusal.
- Once an interview time has been arranged, the respondent will be emailed a copy of the interview guide as well as a customized data table similar to Table 1 below.

At the beginning of the interview, collect information on respondent's position and overall responsibilities.

Stocking Patterns

1. According to our records, your company has participated in the NYSERDA New York Energy \$martSM Products Program. This program shares the cost of advertising with retailers to promote ENERGY STAR appliances and lighting fixtures in New York. I'd like to ask you some questions about how this program has had an impact on your company's stocking, pricing and marketing of ENERGY STAR appliances and lighting fixtures in New York and elsewhere. First, can you tell me which of the following products that are promoted by funding through NYSERDA's program do you stock in your stores in New York?: [Allow for multiple answers]
 1. Clothes washers
 2. Dishwashers
 3. Refrigerators
 4. Air conditioners
 5. Lighting fixtures

2. Do you stock these same products in all of your stores outside of New York, some of your stores outside of New York, or no other stores? [ASK IF SAME FOR EACH PRODUCT THEY STOCK]
 1. Yes, everywhere
 2. Yes, some stores
 3. No other stores

3. The New York Energy \$martSM Products program is designed to promote ENERGY STAR products over other products that are less energy efficient. For each product you mentioned earlier, can you tell me the percentage of models you stock in New York that are ENERGY STAR rated vs. non-ENERGY STAR rated?

Appliance	% ENERGY STAR	% non-ENERGY STAR
Clothes washer		
Dishwasher		
Refrigerator		
Air conditioner		
Lighting fixtures		

4. Can you describe how you decide which products and models you choose to stock in your different stores across the country? _____

5. On a scale of 0 to 10 where zero is "no influence" and 10 is "significant influence", how much influence has the New York Energy \$martSM Products Program had on the mix of model types that you stock in stores outside of New York?
 - a. Clothes washers ____
 - b. Dishwashers ____
 - c. Refrigerators ____
 - d. Air conditioners ____
 - e. Lighting fixtures ____

6. [For each product in Q5>0, ask] Please describe how the New York Energy \$martSM Products influenced the mix of [insert product from Q5] model types you stock in stores outside of New York. _____
7. We have identified the areas of Washington D.C., Houston, Texas, and the state of Ohio as being areas with no significant utility promotions for ENERGY STAR products. Do you have access to information about stocking and sales trends in these specific areas?
- a. Yes
 - b. No [SKIP QUESTIONS 8 AND 10]
 - c. Not Sure
8. Can you tell me the percentage of models you stock that are ENERGY STAR rated vs. non-ENERGY STAR rated in each of these areas for each of the products mentioned earlier? (estimates are okay).
- a. Yes [complete table and skip to Q10]
 - b. No

Appliance	Washington D.C. Area		Houston, Texas Area		State of Ohio	
	Percent ENERGY STAR	Percent Non-ENERGY STAR	Percent ENERGY STAR	Percent Non-ENERGY STAR	Percent ENERGY STAR	Percent Non-ENERGY STAR
Clothes washers						
Dish washers						
Refrigerators						
Air conditioners						
Lighting fixtures						

9. Can you tell me in general for areas outside of New York, the percentage of models you stock that are ENERGY STAR-rated vs. non-ENERGY STAR-rated for each of the products mentioned earlier?

Appliance	Percent ENERGY STAR	Percent Non-ENERGY STAR
Clothes washers		
Refrigerators		
Air conditioners		
Lighting fixtures		

10. Can you tell me the percentage of models you sold during calendar year 2008 and 2009 that are ENERGY STAR rated vs. non-ENERGY STAR rated in New York?

Appliance	2008		2009	
	% ENERGY STAR	% non-ENERGY STAR	% ENERGY STAR	% non-ENERGY STAR
Clothes washer				
Dishwasher				
Refrigerator				
Air conditioner				
Lighting fixtures				

11. Can you tell me the percentage of models you sold during calendar year 2009 that are ENERGY STAR rated vs. non-ENERGY STAR rated in each of these areas for each product mentioned earlier (estimates are acceptable)?

1. Yes [COMPLETE TABLE BELOW, THEN SKIP TO 12]
2. No
3. Don't know

Appliance	Washington D.C. Area		Houston, Texas Area		State of Ohio	
	Percent of ENERGY STAR	Percent of Non-ENERGY STAR	Percent of ENERGY STAR	Percent of Non-ENERGY STAR	Percent of ENERGY STAR	Percent of Non-ENERGY STAR
Clothes Washers						
Dishwashers						
Refrigerators						
Room Air Conditioners						
Lighting Fixtures						

12. Can you estimate your sales of ENERGY STAR vs. non-ENERGY STAR rated products in general for outside the New York area during calendar year 2009?

- a. Yes [please complete the table below]
- b. No
- c. Don't know

Appliance	Percent of ENERGY STAR	Percent of non-ENERGY STAR
Clothes Washer		
Dishwasher		
Refrigerator		
Air conditioner		
Lighting Fixtures		

Pricing

13. [Ask for each product mentioned from Q1] Some retailers use something called “keystone pricing” where the retail price is set at twice what the wholesale price is. Do you use this approach for all, some, or none of the [Insert product mentioned from Q1] that you sell?
- a. All
 - b. Some
 - a. Please describe when you use keystone pricing or not. (Probe for differences on ENERGY STAR vs. non-ENERGY STAR products)
 - c. None
 - a. How do you determine the retail price for the [Insert product mentioned from Q1] you sell?
14. On a scale of 0 to 10 where zero is “no influence” and 10 is “significant influence”, how much influence has the New York Energy \$martSM Products Program had on your pricing of the following ENERGY STAR products in stores outside of New York?
- a. Clothes washers ____
 - b. Dishwashers ____
 - c. Refrigerators ____
 - d. Air conditioners ____
 - e. Lighting fixtures ____

Marketing

15. [Ask for each appliance in Q4 with percent non-ENERGY STAR products > 0]. Above you mentioned that your company stocks both ENERGY STAR and non-ENERGY STAR [insert product from Q4]. Do you promote the non-ENERGY STAR [insert product from Q4] differently than you do the New York Energy \$martSM Products program ENERGY STAR [insert product mentioned from Q4]?
- a. Yes
 - a. How are your promotional efforts different?
 - b. No
16. [Ask if Q2 = All or Some]. Above you mentioned that your company stocks ENERGY STAR [insert product/s from Q1] outside of New York. Please tell me which of the following statements best answers the question of how your promotion of these products varies between New York and outside of New York?
- a. We only promote these ENERGY STAR products in New York
 - b. We only promote these ENERGY STAR products in New York and in other areas where utility incentives are offered
 - c. We apply the same promotional practices we use in New York in all areas where we sell.
 - d. We apply the same promotional practices we use in New York in some other areas we sell.
 - a. How do you decide where to use the promotional efforts?
 - e. Other (specify)

17. On a scale of 0 to 10 where zero is “no influence” and 10 is “significant influence”, how much influence has the New York Energy \$martSM Products program had on your promotion of the following ENERGY STAR products outside of New York?

- a. Clothes washers ____
- b. Dishwashers ____
- c. Refrigerators ____
- d. Air conditioners ____
- e. Lighting fixtures ____

18. If [For each product in Q16 >0, ask] Please describe how the New York Energy \$martSM Products program influence the mix of [insert product from Q16] model types you stock in stores outside of New York. _____

19. [Ask for each product mentioned from Q1] During the calendar year 2009, did your company ever use the same or similar promotion of the following ENERGY STAR products in Washington, D.C., Houston, Texas, or the state of Ohio as you used in New York through the New York Energy \$martSM Products program?

- a. Yes
 - a. Clothes washers ____
 - b. Dishwashers ____
 - c. Refrigerators ____
 - d. Air conditioners ____
 - e. Lighting fixtures ____
- b. No
- c. Don't know

Sales Trends

20. If the NYSERDA ENERGY STAR promotional incentives for [Ask for each product mentioned from Q1] had not been available do you think your sales of these appliances/fixtures in New York would be about the same, lower, or higher?

- 1. Same
- 2. Lower
- 3. Higher
- 4. Don't Know
- 5. Refused

21. Why do you think that is? [If Q19=1, 4, or 5, skip to Q22] _____

22. By what percentage do you estimate your company's sales of ENERGY STAR [Insert products mentioned from Q19] in New York would be [Q19 higher/lower] during the calendar year 2009 if the ENERGY STAR promotional incentives for [insert product mentioned from Q19] were not available?

(RECORD PERCENTAGE) _____% (higher/lower)

D (Don't Know)

R (Refused)

23. I'm going to read you a list of factors that may or may not have had an effect on consumer demand for ENERGY STAR [INSERT PRODUCT TYPE FROM Q1]. For each one, please tell me if the factor had a positive effect, a negative effect or no effect on consumer demand for this type of ENERGY STAR product.

- a. The economy
- b. Higher energy prices.
- c. New Federal standards to improve the energy efficiency of appliances
- d. State standards for appliances
- e. State-level promotional activities
- f. Environmental concerns
- g. New or improved energy-efficient appliance technologies
- h. The sales of competing retailers
- i. NYSEDA's New York Energy Smart Products Program

ALWAYS READ LAST:

j. Were there any other factors that had an effect ENERGY STAR sales of this type of Energy Star product? (SPECIFY _____)

IF YES: Was it a positive effect, negative effect?

1 POSITIVE EFFECT

2 NEGATIVE EFFECT

3 NO EFFECT

96 REFUSED

97 DON'T KNOW

24. [Ask for each product mentioned from Q1] For your company overall, when compared to 2008, did the proportion of sales of [Insert product mentioned from Q1] that are ENERGY STAR rated for the calendar year 2009, increase, decrease or stayed the same?

- a. Clothes Washers
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- b. Dishwashers ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- c. Refrigerators ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- d. Air Conditioners ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- e. Lighting Fixtures ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same

25. [If answered Increased or Decreased in Q19] Why do you think that is? _____

26. [Ask for each product mentioned from Q1] How do sales proportions of ENERGY STAR vs. non ENERGY STAR [Insert product mentioned from Q1] in New York generally compare to other regions? Are they higher, lower, or about the same?

- a. Clothes Washers
 - a. Higher
 - b. Lower
 - c. About the same
- b. Dishwashers ____
 - a. Higher
 - b. Lower
 - c. About the same
- c. Refrigerators ____
 - a. Higher
 - b. Lower
 - c. About the same
- d. Air Conditioners ____
 - a. Higher
 - b. Lower
 - c. About the same
- e. Lighting Fixtures ____
 - a. Higher
 - b. Lower
 - c. About the same

27. [For each product in Q26, ask] Why do you think that is? _____
28. On a scale of 0 to 10, with 0 being not at all likely (or insignificantly) to 10 being highly likely (or significantly), how likely would it be, if NYSEDA withdrew its promotional incentives for ENERGY STAR appliances, sales of ENERGY STAR products in New York would decrease?

29. If Q28 > 0, why do you think that is? _____
30. Did you promote and sell ENERGY STAR appliances eligible for American Reinvestment and Recovery Act or ARRA stimulus funding in some or all of your stores?
- i. Yes, all
 - ii. Yes, some
 - i. In which locations? [prompt for New York, Washington D.C., Ohio, or Houston, TX] _____
 - iii. No
31. During the fourth quarter of 2009, did any of your stores provide information to consumers either through advertising or direct salesperson communication on the potential benefits of anticipated 2010 ARRA stimulus funding for ENERGY STAR appliances?
- a. Yes, all stores
 - b. Yes, some stores,
 - i. In which locations? [prompt for New York, Washington D.C., Ohio, or Houston, TX] _____
 - c. No
32. In your opinion, did consumer awareness of the upcoming rebates on ENERGY STAR appliances have an impact on fourth quarter 2009 sales of your ENERGY STAR [insert product mentioned from Q1] in New York?
- a. Yes, increased
 - i. By what percent, do you estimate? ____%
 - b. Yes, Decreased
 - i. [By what percent, do you estimate? ____%
 - c. No

Awareness

33. What do you believe is the current level of awareness among consumers in New York of the ENERGY STAR label? Would you say that...[READ LIST]
- i. Greater than 75%
 - ii. 50-74%
 - iii. 25-49%, or
 - iv. 0-24% of consumers are aware of the ENERGY STAR label?

34. What do you believe is the current level of understanding among consumers in New York of the meaning of the ENERGY STAR label? Would you say that...[READ LIST]
- i. Greater than 75%
 - ii. 50-74%
 - iii. 25-49%, or
 - iv. 0-24% of consumers understand the ENERGY STAR label?
35. How do you think this awareness level compares to other regions of the country?
- i. Greater than
 - ii. Less than
 - iii. Varies by region
 - iv. About the same
36. [If Q35 is greater than or less than, ask] Why do you think that is? _____
37. Are there any factors that you believe limit customer demand for ENERGY STAR [Insert product mentioned from Q1]?
- i. Yes. Please explain. [IF NECESSARY, USE PROMPTS: E.G., LACK OF AWARENESS, PRODUCT PRICING, AND PERCEPTIONS REGARDING PRODUCT PERFORMANCE] _____
 - ii. No.
38. [If Demand Barriers Identified] Has there been any progress recently to reduce these barriers?
- i. Yes. What factors lead to the reduced barriers?

 - ii. No.
39. [if Demand Barriers Identified] What do you think needs to happen to overcome these customer demand barriers to ENERGY STAR [Insert product mentioned from Q1]?
40. Despite these barriers, would you say that consumer demand for ENERGY STAR products, over the past year, has:
- i. Increased
 - ii. Decreased
 - iii. Stayed the same
 - iv. Don't know
- a. Increased
 - b. Decreased
 - c. Stayed the same
 - d. Don't know

41. [Ask if Q40 = increase] On a scale of 1 to 5, where 5 means very important and 1 means not at all important, how important was the New York ENERGY STAR Products program in helping to bring about this increase in consumer demand?

- i. 1 – Not at all important
- ii. 2
- iii. 3
- iv. 4
- v. 5 – Very important
- vi. Don't know

42. Is there anything else you'd like to add about the New York Energy \$martSM Products program?

Thank you for your time.

6 *Manufacturer Interview Guide*

New York Energy SmartSM Products Program INTERVIEW GUIDE FOR MANUFACTURERS, 2010

Interviewer:	
Manufacturer Name:	City and State:
Contact Name:	Contact Title:
Phone:	E-mail:
Respondent's overall responsibility:	
Date:	Comments:

Introduction [FOR INTERVIEWERS]

Contact Protocol

- Call potential respondents to ascertain the most appropriate respondent. Obtain e-mail address(es) of appropriate respondents. If the company refuses an interview, determine the reasons for refusal, and, if it is logistical in nature, try to find a work-around.
- Send an e-mail interview invitation to the appropriate respondent. This invitation will include:
 - Explanation of the purpose and scope of the interview.
 - Explanation of the time frame within which the interview will need to be completed.
 - Explanation of the expected duration of the interview and required flexibility to complete the interview over multiple sessions.
 - Instructions to propose a convenient interview time.
 - Contact information for interviewers.
 - Confidentiality assurances.
 - A letter attachment from NYSEDA explaining the importance of the interview.

If the target respondent does not respond to the e-mail invitation within a few days, a follow-up call will be made to try to schedule an interview time, find an alternate interview target, or determine reasons for refusal.

Once an interview time has been arranged, the respondent will be e-mailed a copy of the interview guide.

At the beginning of the interview, information will be collected on the respondent's position and overall responsibilities.

Program Participation

30. According to our records, your company has participated in the NYSERDA New York Energy Smart Products Program. This program shares the cost of advertising with manufacturers to promote ENERGY STAR appliances in New York. I'd like to ask you some questions about how this program has impacted your company's production, pricing, and sales trends of ENERGY STAR appliances in New York and elsewhere. First, can you tell me which of the following appliances, promoted by funding through NYSERDA's New York Energy Smart Products Program, you supply to retailers in New York? [Allow for multiple answers]

1. Clothes washers
2. Dishwashers
3. Refrigerators
4. Air conditioners
5. ENERGY STAR lighting fixtures

31. [For each product mentioned in Q1, ask:] Do you offer these same ENERGY STAR products to all of your retailers outside of New York, some of your retailers outside of New York, or no other stores?

- a. Clothes Washers
 - a. Yes, everywhere
 - b. Yes, some stores
 - c. No other stores outside of New York
- b. Dishwashers ____
 - a. Yes, everywhere
 - b. Yes, some stores
 - c. No other stores outside of New York
- c. Refrigerators ____
 - a. Yes, everywhere
 - b. Yes, some stores
 - c. No other stores outside of New York
- d. Room Air Conditioners ____
 - a. Yes, everywhere
 - b. Yes, some stores
 - c. No other stores outside of New York
- e. Lighting Fixtures ____
 - a. Yes, everywhere
 - b. Yes, some stores
 - c. No other stores outside of New York

32. [If Q2 = a or b for any products in Q1] Do you recall factors that influenced your decision to start selling the same [Insert product mentioned from Q1] as promoted by New York Energy Smart Products Program to retailers outside of New York? [DO NOT READ, BUT PROMPT IF NECESSARY]

- a. Offer inventory comparable to competitors
- b. Requests by retailer customers
- c. We offer similar products to all our retailers
- d. Economies of scale in manufacturing these products
- e. Consumer demand
- f. We are offering promotions
- g. Other [Specify] _____

Product Offerings

33. The New York Energy Smart Products Program is designed to promote ENERGY STAR products over other products that are less energy efficient. For each product you mentioned earlier, can you tell me the percentage of models you sold in New York during calendar year 2009 that are ENERGY STAR rated vs. non-ENERGY STAR?

Appliance	Percentage of ENERGY STAR	Percentage of non-ENERGY STAR
Clothes Washer		
Dishwasher		
Refrigerator		
Air conditioner		
Lighting Fixtures		

34. Can you describe how you decide which products and models you choose to market to different retailers across the country? _____

35. On a scale of 0 to 10, where zero is “no influence” and 10 is “significant influence,” how much influence has the New York Energy Smart Products Program had on the mix of model types you supplied to retailers outside of New York during calendar year 2009?

- a. Clothes Washers ____
- b. Dishwashers ____
- c. Refrigerators ____
- d. Room Air Conditioners ____
- e. Lighting Fixtures ____

36. If [6 >0], please describe how the New York Energy Smart Products Program influenced the mix of model types you supply to retailers outside of NY [REQUEST FOR FIRST PRODUCT AND THEN ASK IF SIMILAR FOR REMAINDER, IF NOT SIMILAR ASK HOW IT DIFFERS] _____

37. We are specifically interested in comparing your ENERGY STAR and non-ENERGY STAR sales in Washington D.C., Houston, Texas, and the state of Ohio, which are areas without significant utility efforts to promote ENERGY STAR products. Can you tell me the percentage of models you sold during calendar year 2009 that are ENERGY STAR rated vs. non-ENERGY STAR rated in each of these areas for each product mentioned earlier (estimates are acceptable)?

1. Yes [complete table below, then skip to 10
2. No
3. Don't know

Appliance	Washington D.C. Area		Houston, Texas Area		State of Ohio	
	Percent of ENERGY STAR	Percent of Non-ENERGY STAR	Percent of ENERGY STAR	Percent of Non-ENERGY STAR	Percent of ENERGY STAR	Percent of Non-ENERGY STAR
Clothes Washers						
Dishwashers						
Refrigerators						
Room Air Conditioners						
Lighting Fixtures						

38. Can you estimate your sales of ENERGY STAR vs. non-ENERGY STAR rated products in general for outside the New York area during calendar year 2009?

- a. Yes [please complete the table below]

Appliance	Percent of ENERGY STAR	Percent of non-ENERGY STAR
Clothes Washer		
Dishwasher		
Refrigerator		
Air conditioner		
Lighting Fixtures		

- b. No
- c. Don't know

39. How many different types of ENERGY STAR [insert product from Q1] did you manufacture as of January 1, 2010, and how many did you manufacturer as of January 1, 2009?

Appliance	Jan 1, 2010	Jan 1, 2009
Clothes Washer		
Dishwasher		
Refrigerator		
Air conditioner		
Lighting Fixtures		

40. How many different types of ENERGY STAR [insert product from Q1] do you currently sell in New York versus other areas of the country? [Probe for Washington D.C., Houston, and Ohio, or, if unknown, a general estimate of sales outside of New York.]

Appliance	New York	Washington D.C.	Houston, TX	Ohio	General Outside of New York
Clothes Washers					
Dishwashers					
Refrigerators					
Room Air Conditioners					
Lighting Fixtures					

41. On a scale of 0 to 10, where 0 equals not at all for any customers and 10 means very well for all customers, how well do you believe the current mix of ENERGY STAR [insert product from Q1] you manufacture meets the needs of all customers in all areas looking to purchase [insert product from Q1]?

- a. Clothes Washers ____
- b. Dishwashers ____
- c. Refrigerators ____
- d. Room Air Conditioners ____
- e. Lighting Fixtures ____

42. If [Q6 <10], please describe what customer needs you believe are not being met through your current offerings? _____ [OBTAIN FOR EACH TYPE OF APPLIANCE]

Pricing

43. [Ask if manufacturer participated in buy-down offered for each product type in Q1] How has your participation in the buy-downs from NYSERDA affected your sales of [insert buy-down product] in New York? [Do not read answers]

- a. Sales have increased.
 - a. By what percentage would you estimate your sales have increased since participation in the buy-downs? ____
- b. Sales have decreased.
 - a. By what percentage would you estimate your sales have decreased since participation in the buy-downs?
- c. Sales have remained the same.
- d. Other [Specify].
- e. Don't know.
- f. Refused.

44. [Ask for each product mentioned in Q1] During calendar year 2009, , did your company ever offer its own price discounts or rebates to retailers or consumers on [Insert product mentioned from Q1]?

- a. Yes
 - a. What were your reasons for providing these discounts?
 - b. What was the typical range of these discounts?
 - c. Were there particular models for which you were more likely to offer these discounts?
 - d. If yes, which models? (Probe for ENERGY STAR vs. non ENERGY STAR)
 - e. Were there particular stores or regions of the country where you were more likely to offer these discounts?
 - f. If yes, which stores or regions and why?
 - g. Did you offer these discounts in Washington D.C., Houston, Texas, or the state of Ohio?
- b. No
 - a. Why not?

45. On a scale of 0 to 10, where zero equals “no influence” and 10 equals “significant influence,” how much influence has the New York Energy Smart Products Program had on your pricing of the following ENERGY STAR products that you supply to retailers outside of New York?

- a. Clothes Washers ____
- b. Dishwashers ____
- c. Refrigerators ____
- d. Room Air Conditioners ____
- e. Lighting Fixtures ____

46. If [Q16 >0], please describe how the New York Energy Smart Products Program has influenced your pricing for retailers outside of New York _____ [ASK FOR FIRST APPLIANCE THEN ASK IF SIMILAR OR DIFFERENT FOR REMAINING, IF DIFFERENT, ASK HOW DIFFERENT]

47. How has the incremental cost of ENERGY STAR [insert product from Q1], compared to non-ENERGY STAR, changed in the last few years? Would you say it has...[make sure to ask for the incremental cost, not the absolute cost]

- a. Increased significantly
- b. Increased somewhat
- c. Stayed the same
- d. Decreased somewhat
- e. Decreased significantly
- f. Don't Know
- g. Refused

48. [If Increase or Decrease] To what do you attribute this change?
49. [IF DECREASE] On a scale of 1 to 5, where 5 means very important and 1 means not at all important, how important was the New York Energy Smart Products Program in helping to bring about this decrease in incremental cost? ___ Please describe _____

Marketing

50. If your company supplies both ENERGY STAR and non-ENERGY STAR appliances, do you promote the non-ENERGY STAR appliances differently than you do the New York Energy Smart Products Program-promoted ENERGY STAR appliances?
- a. I do not supply non-ENERGY STAR appliances.
 - b. Yes.
 - a. How are your promotional efforts different?
 - c. No.
51. [Ask if Q2= a or b for each product mentioned in Q1.] Earlier, you mentioned your company supplies ENERGY STAR appliances outside of New York. Please tell me which of the following statements best answers the question of how your promotion of these products varies between New York and outside of New York?
- a. We only promote these ENERGY STAR products in New York.
 - b. We only promote these ENERGY STAR products in New York and other areas where utility incentives are offered.
 - c. We apply the same promotional practices in New York as in all areas where we sell.
 - d. We apply the same promotional practices in New York in some other areas we sell.
 - a. How do you decide where to use the promotional efforts?
 - e. Other (specify).
52. On a scale of 0 to 10, where zero is “no influence” and 10 is “significant influence,” how much influence has the New York Energy Smart Products Program had on your promotion of the following ENERGY STAR products outside of New York?
- a. Clothes Washers ____
 - b. Dishwashers ____
 - c. Refrigerators ____
 - d. Room Air Conditioners ____
 - e. Lighting Fixtures ____

53. If 23 > 0, please describe how the New York Energy Smart Products Program influenced your promotion efforts outside of New York. [START WITH FIRST PRODUCT AND ASK IF SIMILAR OR DIFFERENT FOR REMAINING, IF DIFFERENT ASK HOW]

- a. Clothes Washers _____
- b. Dishwashers _____
- c. Refrigerators _____
- d. Room Air Conditioners _____
- e. Lighting Fixtures _____

54. [Ask for each product carried from Q1] During the calendar year 2009, did your company ever use the same or similar promotions of the following ENERGY STAR products in Washington, D.C., Houston, Texas, or the state of Ohio as you used in New York through the New York Energy Smart Products Program?

- a. Yes – please explain
 - a. Clothes Washers _____
 - b. Dishwashers _____
 - c. Refrigerators _____
 - d. Room Air Conditioners _____
 - e. Lighting Fixtures _____
- b. No

55. When you supply ENERGY STAR-sponsored NYSERDA appliances in New York, how do you market these appliances to New York retailers? _____

Sales Trends

56. [Ask for each product mentioned in Q1] Did your total sales of [insert product mentioned from Q1] to retailers in New York for the calendar year 2009, in comparison to 2008, increase, decrease, or stay the same for your company?

- a. Clothes Washers
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- b. Dishwashers ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- c. Refrigerators ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- d. Room Air Conditioners ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- e. Lighting Fixtures ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same

57. [Ask for each product circled from Q1] Have the proportion of sales in New York of [insert product mentioned from Q1] that are ENERGY STAR rated for calendar year 2009, in comparison to 2008, increased, decreased, or stayed the same?

- a. Clothes Washers____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- b. Dishwashers ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- c. Refrigerators ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- d. Room Air Conditioners ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same
- e. Lighting Fixtures ____
 - a. Increased
 - b. Decreased
 - c. Stayed the same

58. I'm going to read you a list of factors that may or may not have had an effect on the proportion of ENERGY STAR sales of [INSERT PRODUCT TYPE FROM Q1] in New York. For each one, please tell me if the factor had a positive effect, a negative effect or no effect on the proportion of ENERGY STAR sales for this product in New York.

- a. The economy
- b. Higher energy prices.
- c. New Federal standards to improve the energy efficiency of appliances
- d. State standards for appliances
- e. State-level promotional activities
- f. Environmental concerns
- g. New or improved energy-efficient appliance technologies
- h. The sales of competing retailers
- i. NYSERDA's New York Energy Smart Products Program

ALWAYS READ LAST:

j. Were there any other factors that had an effect ENERGY STAR sales of this type of Energy Star product in New York? (SPECIFY _____)

IF YES: Was it a positive effect, negative effect?

- 1 POSITIVE EFFECT
- 2 NEGATIVE EFFECT
- 96 NO EFFECT
- 96 REFUSED
- 97 DON'T KNOW

59. From your perspective, how do you think demand for ENERGY STAR appliances changed from calendar year 2008 to calendar year 2009 in areas outside of New York? _____

60. On a scale of 0 to 10, with 0 being not at all likely (or insignificantly) to 10 being highly likely (or significantly), how likely would it be, if NYSERDA withdrew its promotional incentives for ENERGY STAR appliances, sales of ENERGY STAR products in New York would decrease?

61. If Q31 > 0, why do you think that is? _____

62. Do you have any other comments or questions you would like to share with me today about your production and sales of ENERGY STAR appliances in New York or elsewhere?

This concludes the interview. Thank you very much for your time and participation.

7 2009 Home Electronics Site Visit Instrument and Procedures

Home Electronic Equipment Saturation

On-Site Data Collection Form

Television/Video Equipment Saturation

Primary Device (TV)							Auxiliary Devices (# of each type in bundle)											Strip		
Room	Make	Size	TV Devices	Type Plasma/ LCD/CRT/ Projection/ Other	Energy 	Hrs of Use ¼ to 24 or (D/W/M/ Y/N)	VCR	DVD	BluRay	DVR	Cable Box	Satellite Box	Game Console	Computer	Other	Combo Units	Total	Reg./ Energy Savor/ Motion Sensor/ N	Off? F/D/V /N	

Power Strip Information

Make	Model	Notes

Home Electronics Saturation Survey Instructions

1. Once the CFL Saturation Survey has been completed, start the Home Electronics Saturation Survey. Indicate to the interviewee the change in surveys.
2. Go through each room and part of the home systematically to locate “bundles” of electronics.
3. Each line on the data collection form is for a “bundle.” A bundle is any group of multiple electronic devices consisting of a primary unit and its auxiliary components. The bundle may use a power strip or just several wall sockets. Bundles can rest on a wall unit, table, desk, stand, or other furniture pieces. Refer to Exhibits list if needed.

Primary Device

4. Find the primary device set defined in the following order:
 - **TV**, if one is present;
 - If it is not, **computer**, if one is present;
 - If it is not, **audio system**, if one is present.

Turn to the corresponding survey form.

If none of these three devices are present, it is not defined as a bundle and will not be recorded.

5. If a computer is part of a TV bundle, then DO NOT repeat the bundle on the computer equipment form. If an audio system is part of a TV bundle and/or part of a computer bundle, DO NOT repeat the bundle on the audio equipment form. Each bundle is only recorded once
6. **For the TV/Video bundle only:** Identify and record the specific make of the TV and measure the size of the TV screen. Also note if there are any devices that are combined with a TV (i.e. TV-DVD combinations or TV-VCR combinations) in the “TV Devices” column.
7. Identify the type of the primary device.
8. Look for the Energy Star logo on the primary device. If you don’t see it, ask the interviewee if the device is Energy Star.
9. Ask the interviewee for the daily hours of use of the primary device. If the given number is less than ¼, use the following codes:

Codes	Meanings
D	A few minutes a day
W	At least once a week
M	At least once a month
Y	At least once a year
N	Never

10. **For the computer only:** Ask the interviewee if he/she ever turns off the computer and choose from the following:

Codes	Meaning
F	Turn off when FINISHED with work
D	Turn off on a DAILY basis (i.e. at night before sleep)
V	Turn off when go on VACATION or leave home for long period
N	NEVER turn off

11. **For the computer only:** Ask the interviewee if he/she ever uses energy saving settings like stand by or hibernate and choose from the following:

Codes	Meaning
A	Sets computer to AUTOMATICALLY use energy saving settings
MA	ALWAYS MANUALLY uses the settings
MS	SOMETIMES MANUALLY uses the settings
N	NEVER uses the settings

Auxiliary Devices

12. Identify each auxiliary device with a separate plug in the bundle. Record the bundle's quantity of that specific device in the designated boxes (for example, put "2" under "Powered Speaker" if there are 2 powered speakers in the audio bundle). Refer to Exhibits list if needed.
13. For auxiliary devices that are combo units, just count the total number of combo units in the bundle and record the number in the "Combo Units" column. A combo unit is any electronic device with two or more functions that use only one plug (i.e., VCR-DVD combo). Refer to Exhibits list if needed. **DO NOT** count the device separately under the other auxiliary device headings.
14. Count the total number of auxiliary devices in the bundle with a separate plug. Double check that the number entered under the "Total" column is equal to the sum of all other boxes in the same row under the "Auxiliary Devices" column.

Power Strip

15. Identify the type of power strip in the bundle, and if it is a regular, energy savor, or motion sensor power strip. If no power strip is present, record N for none.
16. If there is a power strip, ask if the interviewee turns it off and choose from the following:

Codes	Meaning
F	Turn off when FINISHED with work
D	Turn off on a DAILY basis (i.e. at night before sleep)
V	Turn off when go on VACATION or leave home for long period
N	NEVER turn off

17. If there is an energy-saving power strip, record the make and model number on the "Power Strip" form.
18. Move to the next bundle in the room and repeat 4-16. When all bundles are complete, move to the next room and repeat steps 2-16.

8 2010 Home Electronics Site Visit Instrument and Procedures

Home Electronic Equipment Saturation

On-Site Data Collection Form

Television/Video Equipment Saturation

Primary Device (TV)							Auxiliary Devices (# of each type in bundle)											Strip		
Room See codes	Make	Size	TV Devices	Type Plasma / LCD / CRT / Projection /LED / Other	Energy 	Hrs of Use ¼ to 24 or (D/W/M/ Y/N)	VCR	DVD	Blu- Ray	DV R	Cable Box	Satellite Box	DTA Converter	Game Console	Computer	Other	Combo Units	Total	R/ ES/ MS/ N	Off? F/D/ V/N

Energy Saver Power Strip Information

Energy Saver #	Make	Model	Notes

**Home Electronics Collection Form
Code Sheet**

Room Codes	Meanings
LR	Living Room
DR	Dining Room
F	Foyer
H	Hall
K	Kitchen
FR	Family Room
BR	Bedroom
BT	Bathroom
OF	Office
U	Utility/Laundry
C	Closet
BA	Basement
G	Garage
E	Exterior
O	Other [Specify]

Hours of Use Codes	Meanings
D	At most a few minutes a day
W	1 to few times a week
M	1 to few times a month
Y	1 to few times a year
N	Never

Computer Off Codes	Meanings
F	Turn off when FINISHED with work
D	Turn off on a DAILY basis (e.g. at night before sleep)
V	Turn off when go on VACATION or leave home for a long period
N	NEVER turn off

Computer Sandby Codes	Meanings
A	Sets computer to AUTOMATICALLY use energy saging settings
MA	ALWAYS MANUALLY uses the settings
MS	SOMETIMES MANUALLY uses the settings
N	NEVER uses the settings

Power Strip Type Codes	Meanings
R	Regular Power Strip
ES	Energy Saver Power Strip
MS	Motion Sensor Power Strip
N	None

Power Strip Off Codes	Meanings
F	Turn off when FINISHED with work
D	Turn off on a DAILY basis (e.g. at night before sleep)
V	Turn off when go on VACATION or leave home for long period
N	NEVER turn off