ENERGY STAR® Retail Store-Level Assessment – A Look Across the Nation

Seth E. Snell, Ph.D., Applied Proactive Technologies, Inc. Springfield, MA
Lynn Hoefgen, Ph.D., Nexus Market Research, Cambridge, MA
Timothy Pettit, Nexus Market Research, Arlington, VA
Kate Lewis, U.S. EPA, Washington, DC
Jocelyn Spielman, The Cadmus Group, Arlington, VA
Peter Feroli, Applied Proactive Technologies, Inc. Springfield, MA

Abstract

The U.S. Environmental Protection Agency (EPA) recently initiated an effort to evaluate the consumer shopping experience with ENERGY STAR in the retail channel. The research assesses: 1) retailer knowledge of the program and the extent to which salespeople use ENERGY STAR in the retail sales process, 2) the visibility and overall presence of the ENERGY STAR label in store displays, 3) the availability of ENERGY STAR-qualified and -labeled products, and 4) the accuracy of ENERGY STAR product labeling. In this paper, we describe the assessment approach, present results from the first two rounds of the research, and highlight how EPA and its partners are using the findings.

Introduction

The EPA has recently undertaken research to assess the consumer experience in the search for and selection of ENERGY STAR labeled products in the retail channel. The research seeks to address four main goals:

1) assess retailer knowledge of the program and whether and how salespeople use ENERGY STAR in the retail sales process,
2) check the visibility and overall presence of the ENERGY STAR label in store displays,
3) assess the availability and visibility of ENERGY STAR qualified and labeled products, and
4) assess the accuracy of ENERGY STAR product labeling.

To meet the above goals, two distinct data collection activities were designed: 1) a sales staff evaluation, and 2) a product shelf inventory/display check. The sales staff evaluation is designed to assess retailer knowledge of the ENERGY STAR program and its use in the retail sales process. The product shelf inventory/display check addresses the three remaining goals.

To date, two distinct rounds of the project have been completed. The first round was carried out in November 2001. During this round, Refrigerators, Dishwashers, Clothes Washers, Televisions, CFLs, Interior and Exterior Fixtures, and Table/Floor Lamps were assessed. The second round of the project was fielded in June 2002, and included: CFLs, Interior and Exterior Fixtures, Table/Floor Lamps, Ceiling Fans, DVDs, and Programmable Thermostats. Each round of research was carried out in seven metropolitan areas across the U.S.: Atlanta, GA, Baltimore, MD, Boston, MA, Dallas, TX, Milwaukee, WI, Portland, OR, and San Diego, CA. Data was collected among five national retailers: Home Depot, Lowe's, Sears, Wal-Mart, and Best Buy. Additionally, during the second round of research, data was collected at independent Lighting Showrooms in the metropolitan areas.

In only a short period of time, the RSL assessment has become a valuable mechanism that helps support the EPA's dynamic partnership with retailers and manufacturers of energy efficient products across the U.S. The research provides both qualitative and quantitative measures of the presence and effectiveness of the ENERGY STAR message in the retail marketplace across a wide geographic cross-section of the nation. In this paper, we outline the design and implementation of the RSL methodology and present some key findings from the first two rounds of the research. Although the paper does not offer any retailer-specific information, we also highlight the ways in which this research is used in outreach to retailers included in the study to strengthen relationships and increase the value of the ENERGY STAR to consumers.

Methodology

Given the distinct nature of the data collection activities included in this research, the methodologies for each are presented separately below. For each activity, we describe the training, data collection, and analysis involved.

Sales Staff Evaluation

Sales Staff Evaluator Training. Training for the data collection specialists (sales staff evaluators) for this analysis was a crucial element to the success of the project. Accordingly, all sales staff evaluators received extensive training prior to implementation of the data collection task. The goals of the training were multi-fold. First, it was essential to ensure that the evaluation experiences and resulting data were consistent across stores, regions, and evaluators. Since the data collection was completed by different sales staff evaluators, a set "situation" was designed to be used by each evaluator for each product shopped. These situations included information about why the product is being purchased (e.g. replacement or new), the likes and dislikes of the customer, as well as any specific technical information needed (e.g., ceiling fans with or without lighting). Second, given the nature of the sales staff evaluation experience (especially the importance of completing the data collection anonymously), it was essential that the sales staff evaluators be familiar enough with the data collection instrument to gather the necessary information and complete the form after the experience (and after they had exited the retail location). Third, it was important to ensure that all sales staff evaluators had in-depth knowledge about the ENERGY STAR program specifically and energy efficiency in general.

The training provided to the sales staff evaluators addressed each of these elements, as necessary. The training sessions also provided the sales staff evaluators the opportunity to coordinate efforts, and thereby increase consistency among them. "Lessons learned" from more experienced evaluators or previous RSL assessments were presented and the issues raised were dealt with before the data were collected.

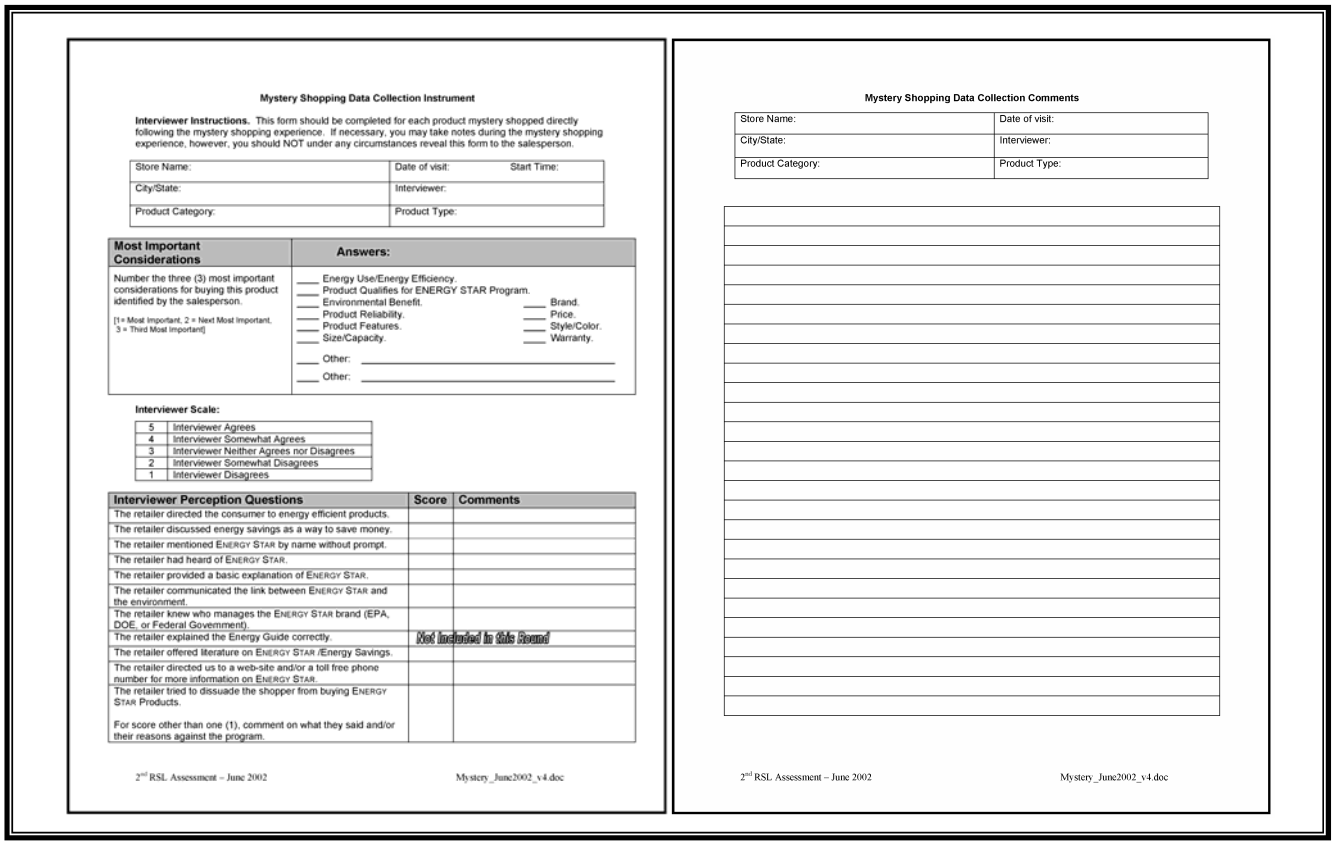
Data Collection. Data for the sales staff evaluation analysis were collected in seven metropolitan areas (San Diego, CA; Atlanta, GA; Boston, MA; Baltimore, MD; Portland, OR; Dallas, TX; & Milwaukee, WI). In each of these metropolitan areas, two or three locations[1] for each of the major retailers (Home

[1] To increase sample size in the second round RSL assessment, an additional location for each major retailer was added to the initial sample for the sales staff evaluations in the Boston and Portland metropolitan areas.

Depot, Lowe's, Sears, Best Buy, and Wal-Mart) were included in the study[2]. In addition to these major retailers, one independent lighting showroom was visited in each metropolitan area during the second round RSL assessment. Each product in the study was separately shopped at each location unless the retailer did not stock the product. This resulted in 320 total observations in Round 1 and 273 total observations in Round 2 for this part of the research.

In each sales staff evaluation experience, field staff initiated contact with a salesperson in the department where the product of interest was located. For each product type, the sales staff evaluators presented the set "situation" discussed in the section above as the reason they were shopping for the product. The sales staff evaluators shopped different products at different times in order to guarantee contact with different sales personnel. This was done to reduce any bias that could occur after an individual salesperson shows and presents the first product to the sales staff evaluator. All evaluators were instructed not to interfere with a salesperson's ability to make a sale to a regular customer by allowing the sales staff to wait on other customers if necessary or returning to the store at a later time.

After completion of each sales staff evaluation experience, the evaluator filled out a data collection protocol characterizing the experience (see Figure 1). The data collection instrument is divided into four sections. The first section captures observational information. In the second section, sales staff evaluators rank the three most important considerations for buying the product identified by



Mystery Shopping Data Collection Instrument

Interviewer Instructions. This form should be completed for each product mystery shopped directly following the mystery shopping experience. If necessary, you may take notes during the mystery shopping experience, however, you should NOT under any circumstances reveal this form to the salesperson.

Store Name:	Date of visit: Start Time:
City/State:	Interviewer:
Product Category:	Product Type:

Most Important Considerations	Answers:
Number the three (3) most important considerations for buying this product identified by the salesperson. [1= Most Important, 2 = Next Most Important, 3 = Third Most Important]	___ Energy Use/Energy Efficiency. ___ Product Qualifies for ENERGY STAR Program. ___ Environmental Benefit. ___ Product Reliability. ___ Product Features. ___ Size/Capacity. ___ Brand. ___ Price. ___ Style/Color. ___ Warranty. ___ Other: _____ ___ Other: _____

Interviewer Scale:

5	Interviewer Agrees
4	Interviewer Somewhat Agrees
3	Interviewer Neither Agrees nor Disagrees
2	Interviewer Somewhat Disagrees
1	Interviewer Disagrees

Interviewer Perception Questions	Score	Comments
The retailer directed the consumer to energy efficient products.		
The retailer discussed energy savings as a way to save money.		
The retailer mentioned ENERGY STAR by name without prompt.		
The retailer had heard of ENERGY STAR.		
The retailer provided a basic explanation of ENERGY STAR.		
The retailer communicated the link between ENERGY STAR and the environment.		
The retailer knew who manages the ENERGY STAR brand (EPA, DOE, or Federal Government).		
The retailer explained the Energy Guide correctly.	Not Included in this Round	
The retailer offered literature on ENERGY STAR /Energy Savings.		
The retailer directed us to a web-site and/or a toll free phone number for more information on ENERGY STAR.		
The retailer tried to dissuade the shopper from buying ENERGY STAR Products. For score other than one (1), comment on what they said and/or their reasons against the program.		

2nd RSL Assessment – June 2002 Mystery_June2002_v4.doc

Mystery Shopping Data Collection Comments

Store Name:	Date of visit:
City/State:	Interviewer:
Product Category:	Product Type:

2nd RSL Assessment – June 2002 Mystery_June2002_v4.doc

Figure 1. Round 2 Sales Staff Evaluation Data Collection Protocol

[2] Since Lowe's stores are not present in the Wisconsin market, sales staff was evaluated at one additional Home Depot location in the Milwaukee metropolitan area and one additional Lowe's location in the Baltimore metropolitan area.

the salesperson. In practice, this is done either by asking the salesperson directly what he or she believes to be the most important considerations or by evaluating the most important considerations based on the discussion with the salesperson. In the third section of the instrument, sales staff evaluators indicate their level of agreement with a series of statements characterizing the salesperson's knowledge of the ENERGY STAR program and energy efficiency, and the extent to which the salesperson uses these in the sales process. The sales staff evaluator's level of agreement is indicated on a five-point scale with five indicating agreement, one indicating disagreement, and three indicating neither agreement nor disagreement. The fourth section of the instrument gathers overall visit comments from the sales staff evaluator.

Based on the sales staff evaluation experience, a score was calculated for each product in each retail location on a scale of 0 (very poor) to 100 (excellent). The sales staff evaluation score measures both the knowledge of the salesperson, and the extent to which he or she used ENERGY STAR in the retail sales process. These sales staff evaluation scores provided the necessary data for a quantitative analysis by region and retailer. A detailed explanation of the data collection and methods used to calculate and analyze the sales staff evaluation scores is provided in the Analysis section below.

The data from the completed hardcopy data collection instruments were then entered into a Microsoft Access™ relational database through a set of data input forms. These forms were designed with data field range rules, which help maintain the overall integrity of the data throughout the data entry process. In addition to these data field restrictions, a number of quality checks were completed after the database was populated, and the project manager corrected any discrepancies.

Analysis. The primary goals of the sales staff evaluation analysis are to assess salesperson knowledge of the ENERGY STAR program and the extent to which salespeople use ENERGY STAR and energy efficiency in the sales process. Because both of these may vary across product type, the analysis is structured to address these goals both in aggregate across the sample, and also by product.

Fundamental to the structure of this analysis is the fact that the EPA is interested in tracking improvements in these areas over time. Accordingly, this analysis must produce a replicable metric that can be implemented in the future and successfully compared with present levels. The information on which the metric is developed is of two separate types. First, for each shopping experience the evaluators rank the three most important considerations for buying the product identified by the salesperson. Second, sales staff evaluators indicate their level of agreement with a series of statements regarding the salesperson's knowledge of ENERGY STAR and energy efficiency and their use in the sales process. The metric generated in this analysis is a combination of these two distinct types of information.

For the "important consideration" information, the retailer was awarded 15 points if "Energy Use/Energy Efficiency" or "Product Qualifies for ENERGY STAR Program" or "Environmental Benefit" were designated as the most important consideration when buying the product. If any of these was designated as the second most important consideration, the retailer was awarded 10 points, and if any was designated third, 5 points. This leads to a range of 0 to 30 points for this portion of the sales staff evaluation – 0 if none is chosen in the top three most important considerations, 30 if all three are chosen.

For the "statement agreement" information, it should be noted that agreement with each of the statements except the last one coincides with the goals of the ENERGY STAR program. For example,

as can be seen in Figure 1, the first statement is: "The retailer directed the consumer to energy efficient products," and the third statement is: "The retailer mentioned ENERGY STAR by name without prompt." The scoring system used in this analysis awards points for agreement with these first ten statements and deducts points for disagreement (see Table 1 for point scoring of first ten statements).

Table 1: Point Scoring for the First Ten Sales staff evaluation Statements

Agreement Description	Scale Value	Points Awarded/Deducted
Interviewer Agrees	5	4
Interviewer Somewhat Agrees	4	2
Interviewer Neither Agrees or Disagrees	3	0
Interviewer Somewhat Disagrees	2	-2
Interviewer Disagrees	1	-4

Agreement with the eleventh statement, "The retailer tried to dissuade the shopper from buying ENERGY STAR products," is contrary to the goals of the ENERGY STAR program. Furthermore, agreement with this statement is a strong statement against the ENERGY STAR program by the retailer, or at least the individual salesperson. Because of the impact of agreement with this statement, sixteen (16) points were deducted from the retailer's score if there was agreement with the statement and eight (8) points were deducted if the sales staff evaluator agreed "somewhat" with the statement. All other levels had points neither awarded nor deducted for this statement.

The next step in the scoring process involved re-scaling the scores over an easily interpretable range (0 to 100). This was completed by linearly re-scaling the values from their natural range to the range of 0 to 100. For example, there are nine statements that apply to the products shopped in the second round of the RSL Assessment. Therefore, the natural range in scores was -52 to 66 (118 points). So the linearly re-scaled score (y) for the raw score (x) would be:

$$y = (x + 52) * 100/118 \qquad \text{[eq.1]}$$

As discussed in the first part of this section, the sales staff evaluation scores were compiled both in aggregate and by product type. The results of this data collection activity are presented in the results section below.

Product Shelf Inventory/Display Checks

Data Collection. Data for the product shelf inventory analysis were collected in the same seven metropolitan areas during the same time period as the sales staff evaluation. In each of these metropolitan areas, one location for each of the major retailers was included in the study.[3]

Training for the data collection specialists also played a vital role in this aspect of the research. Field personnel were trained regarding the use of the specific data collection forms and the particular nuances involved with each product type. This included reviewing the various model number configurations that were expected by product type and store chain. In addition, all field personnel were trained in calculating shelf area for CFLs and completing inventory counts for the other products. All

[3] This is true everywhere except Milwaukee where there are no Lowe's stores. Also, in Round 2 of the RSL Assessment, one Lighting Showroom in each metropolitan area was visited.

personnel involved in the product shelf inventory/display check data collection were selected based on their extensive experience working with retailers. These individuals commonly conduct these types of tasks in their daily work routines. On several occasions during training, the trainees alerted each other about complexities to anticipate and ways to resolve complex issues.

The data collection instrument used for shelf inventory/display check is too long to present in this paper. During each visit, the data collection specialist began the visit with a store overview, Step #1 of the data collection instrument. In addition to the observational tracking information collected in this step, the field personnel noted which product types were to be evaluated at the location and made general comments about the visit and appearance of the store.

Step #2 of the data collection instrument, the product type overview, was completed for each product type encountered in the store. The first data collection task for this step was to note the quantities of each product type. The second task was to note whether there were ENERGY STAR material displayed other than labeled product in each appropriate department of the store and the types of display material, if present. The third task was to comment on the overall appearance of the department and suggest the best opportunities for POP placement in the future. The second and third tasks of this step constitute the display check portion of the analysis.

Step #3 of the product shelf inventory involved collecting detailed model number and ENERGY STAR labeling information for all product occurrences in each retail location as well as other detailed measures of the total amount of product and the amount of the ENERGY STAR labeled product in a given location. Before inventorying the *individual* product occurrences in the store, the field representative collected information regarding the proportion of ENERGY STAR labeled CFLs as compared to all bulbs. Specifically, the field representative measured the proportion of shelf area (width x height) devoted to: 1) All bulbs, 2) CFLs, and 3) ENERGY STAR labeled CFLs. Shelf area rather than linear footage was collected to accommodate the complexity of the retail environment while gathering accurate information about the amount of retail space devoted to each bulb type. Additionally, for interior and exterior fixtures and table and floor lamps, the field representatives collected counts for the number of different fixtures/lamps on display and the number that would potentially qualify for the ENERGY STAR program.[4]

In Step #3 of the visit, the field representative inventoried the following:

1) each model for DVDs, Programmable Thermostats, and CFLs, and
2) each potentially ENERGY STAR qualified model of interior/exterior fixtures and table/floor lamps

The inventory data fields consisted of Brand Name, Model Number, Price, whether the product was ENERGY STAR labeled, and further information about the placement and type of ENERGY STAR label(s) on the product.

As in the sales staff evaluation section of the research, the data from the completed hardcopy data collection instruments were entered into a Microsoft Access™ relational database through a set of data input forms. The forms were designed to be as similar to data collection instrument as possible to avoid data entry confusion. Additionally, the forms were designed with data field range rules that

[4] Potentially ENERGY STAR qualified lighting fixture models include fluorescent interior and exterior fixtures and table/floor lamps, as well as exterior fixtures with motion sensors or photovoltaic cells.

helped maintain the overall integrity of the data throughout the data entry process. Various quality checks were completed both before and after the database was populated. Because of the complexity of the data gathered in this section of the research, data collection redundancies were intentionally incorporated into the data collection forms. These redundancies allowed for detailed cross-field validation on the completed database.

Analysis. The analysis of the wealth of data collected in this research is strongly focused by the goals identified in the Introduction above.

The first goal for this section of the research—"checking the visibility and overall presence of the ENERGY STAR label in store displays"—is addressed in two main ways. First, for each retailer within each department, the data collection specialist noted what, if any, display material was present beyond labeled product. This information was tabulated by product category (i.e. product department) and served as the primary assessment of the display material. Second, and again for each retailer and department, the data collection specialist commented on the overall appearance "as it relates to the prominence of ENERGY STAR" and also suggested the best opportunities for improvement. These comments and suggestions were qualitatively evaluated to assess the adequacy of the ENERGY STAR program presence in the individual departments.

The second goal for this section of the research is to "measure the proportion of shelf area devoted to ENERGY STAR labeled products and/or the proportion of models with the ENERGY STAR label on the sales floor." Using the shelf space and count information for the lighting category of products and the detailed inventory information for the plumbing and electronics categories, these values are directly calculated from the database.

As mentioned in the introduction, a secondary issue to the measurement of proportions of ENERGY STAR labeled product is an assessment of the accuracy of product labeling. To make this assessment, it is essential to evaluate which of the units in the detailed product inventory actually are ENERGY STAR qualified products by means separate from the product labeling. EPA maintains qualifying product lists on-line at the ENERGY STAR website. The active lists at the time of the fieldwork for this research were used to match the products inventoried in the research with the qualifying product lists to independently assess whether the product qualifies. Although there are a number of challenges associated with linking these two databases, the result is a detailed and accurate account of which product units in the inventoried database are ENERGY STAR qualified. With this information on a unit-specific basis, the number of units and models that are mislabeled (either labeled and non-qualifying or non-labeled and qualifying) is evaluated. In an attempt to resolve the situations that yield labeled but not qualified models and units, EPA's program vendors (ICF Consulting and D&R International) contacted manufacturers for additional information, clarifications, or corrections.

Results

Samples of the results from first and second rounds of the RSL Assessment are presented separately in the sections below. In each case, the results of the Sales Staff Evaluation and the ENERGY STAR Label Audit are presented. Although the results of this research *by retailer* comprise quite an important evaluation and outreach mechanism for the EPA, for reasons of confidentiality, those results are not shown here in any form.

First Round Results

Sales Staff Evaluation Results. Table 2 presents the sales staff evaluation scores by product type for the first round of the RSL Assessment. Given the product mix of the first round, Clothes Washers have the highest average sales staff evaluation score (50) across retailers and metropolitan areas. Refrigerators and CFLs follow directly behind with scores of 46 and 41, respectively. Not surprisingly, salesperson knowledge of ENERGY STAR/energy efficiency and their use in the sales process is lowest for TVs. The results of the sales staff evaluation by metropolitan area (see Table 3) highlight the influence of regional program support for the ENERGY STAR program.

Table 2: First Round - Sales Staff Evaluation Scores by Product Type

Product Type	N	Mean	Standard Deviation
All Types	320	39	20
Clothes Washers	56	50	23
Refrigerators	56	46	20
CFLs	42	41	20
Dishwashers	56	38	16
Table & Floor Lamps	33	36	19
Interior & Exterior Fixtures	34	34	18
Televisions	43	25	11

Table 3: First Round - Average Sales Staff Evaluation Scores by Metropolitan Area

Metro Area	CFLs	I&E Fixt.	TF Lamps	TVs	CWs	DWs	Ref.
Average	**41**	**34**	**36**	**25**	**50**	**38**	**46**
San Diego	43	57	44	27	62	51	61
Atlanta	42	22	26	18	36	28	48
Boston	46	52	45	39	55	52	60
Baltimore	42	25	29	22	62	33	38
Portland	55	28	25	22	43	42	40
Dallas	17	23	16	24	34	20	26
Milwaukee	45	39	50	26	55	36	45

Label Audit Results. Table 4 presents the labeling breakdown among ENERGY STAR *qualified* models encountered in the first round of the study. For any given model, three labeling outcomes are possible: 1) the model is *always* labeled, 2) the model is *never* labeled, and 3) it is labeled in some retail locations and not in others (*sometimes* labeled). A reasonably high percentage of qualified TVs are either never (35%) or only sometimes (40%) labeled. In all other product categories, the majority of qualified products are ENERGY STAR labeled. Table 5 presents the labeling status of *non-qualifying* models encountered in the first round of the study. It should be quickly noted that for lighting fixtures, only models that could potentially qualify for the ENERGY STAR were inventoried in this research. Clearly, there are more than 24 non-qualifying Table/Floor Lamp models in the retail stores included in this study. In fact, there were 24 different non-qualifying Table/Floor Lamp models among those that were potentially qualifying (i.e. fluorescent models). A majority of these models (79%) were found to be labeled even though they did not qualify for the ENERGY STAR. To a much less troubling extent, there

were also Interior Fixture models that did not qualify but were labeled (15%). All other product categories had fewer than 10% of models with this type of mis-labeling. In this first round, the most prominent problem causing mis-labeling of this type (labeled, not qualified) were products that were already labeled, but were qualified on a later ENERGY STAR qualifying product list.

Table 4: First Round - Label Status of Qualified ENERGY STAR Models

Product Type	Always ENERGY STAR Labeled	Sometimes ENERGY STAR Labeled	Never ENERGY STAR Labeled	Total Unique Qualified Models
CFLs	80 (67%)	22 (18%)	17 (14%)	119
Interior Fixtures	79 (78%)	3 (3%)	19 (19%)	101
Exterior Fixtures	44 (62%)	7 (10%)	20 (28%)	71
Table/Floor Lamps	13 (100%)	0 (0%)	0 (0%)	13
TVs	44 (25%)	70 (40%)	61 (35%)	175
Clothes Washers	36 (86%)	4 (10%)	2 (5%)	42
Dishwashers	84 (75%)	16 (14%)	12 (11%)	112
Refrigerators	159 (94%)	9 (5%)	1 (1%)	169

Table 5: First Round - Label Status of Non-Qualified ENERGY STAR Models

Product Type	Always ENERGY STAR Labeled	Sometimes ENERGY STAR Labeled	Never ENERGY STAR Labeled	Total Unique Non-Qualified Models
CFLs	13 (7%)	2 (1%)	174 (92%)	189
Interior Fixtures	38 (15%)	15 (6%)	193 (78%)	246
Exterior Fixtures	11 (8%)	11 (8%)	124 (85%)	146
Table/Floor Lamps	19 (79%)	1 (4%)	4 (17%)	24
TVs	10 (4%)	29 (10%)	243 (86%)	282
Clothes Washers	2 (1%)	0 (0%)	216 (99%)	218
Dishwashers	2 (1%)	3 (1%)	198 (98%)	203
Refrigerators	20 (5%)	15 (4%)	366 (91%)	401

Second Round Results

Sales Staff Evaluation Results. Tables 6 and 7 present the sales staff evaluation scores by product type and metropolitan area for the second round of the RSL Assessment. In the second round, CFLs stand out among the other product types, followed by programmable thermostats.[5] As in the first round, home electronics products (in this case, DVDs) lag behind the other products in terms of ENERGY STAR/energy efficiency messages in the sales process. The influence of regional program support is still evident in the second round results (see Table 7).

[5] Bear in mind that appliances were not included in the second round of the RSL assessment.

Table 6: Second Round - Sales Staff Evaluation Scores by Product Type

Product Type	N	Mean	Standard Deviation
All Types	273	33	16
CFLs	48	47	16
Programmable Thermostats	35	38	17
Interior & Exterior Fixtures	55	31	16
Table & Floor Lamps	55	30	14
Ceiling Fans	48	29	13
DVDs	32	25	8

Table 7: Second Round - Average Sales Staff Evaluation Scores by Metropolitan Area

Metro Area	CFLs	I&E Fixt.	TF Lamps	Ceiling Fans	DVDs	Prog. Thermo.
Average	**47**	**31**	**30**	**29**	**25**	**38**
San Diego	53	41	24	32	19	39
Atlanta	59	34	35	33	30	58
Boston	53	31	33	30	34	39
Baltimore	47	31	26	35	23	55
Portland	43	34	39	26	24	25
Dallas	26	14	14	15	22	14
Milwaukee	43	32	32	36	19	35

Label Audit Results. Tables 8 and 9 show similar label audit results for the second round results as Tables 4 and 5 show for the first round. There are substantially more qualified Ceiling Fans and Exterior Fixtures that are not labeled than the other products in the second round (see Table 8). As was the case in the first round, the home electronics category also has a substantial number of models that are qualified but not labeled.

Table 8: Second Round - Label Status of Qualified ENERGY STAR Models

Product Type	Always ENERGY STAR Labeled	Sometimes ENERGY STAR Labeled	Never ENERGY STAR Labeled	Total Unique Qualified Models
CFLs	92 (81%)	14 (12%)	8 (7%)	114
Interior Fixtures	65 (96%)	2 (3%)	1 (2%)	68
Exterior Fixtures	36 (51%)	3 (4%)	31 (44%)	70
Table/Floor Lamps	32(100%)	0 (0%)	0 (0%)	32
Ceiling Fans	23 (35%)	11 (17%)	32 (49%)	66
DVDs	9 (47%)	5 (26%)	5 (27%)	19
Programmable Thermostats	9 (75%)	2 (17%)	1 (8%)	12

Among the other category of errors (labeled but not qualified), Interior and Exterior Fixtures and Table/Floor Lamps stand out as problem areas. Many of these models were products that had at one

point in time been on the ENERGY STAR qualified products list but had been de-listed for one reason or another. This issue of old inventory remaining on shelves is a difficult problem to address. In the cases where the product is labeled either by the retailers (e.g. on pricing signs) or by regional program partners, it is reasonable to think that over time, the labels will be removed from the product. However, in the cases of manufacturer-applied labels, the label will likely stay on the product until it is purchased.

Table 9: Second Round - Label Status of Non-Qualified ENERGY STAR Models

Product Type	Always ENERGY STAR Labeled	Sometimes ENERGY STAR Labeled	Never ENERGY STAR Labeled	Total Unique Qualified Models
CFLs	12 (10%)	3 (3%)	101 (87%)	116
Interior Fixtures	76 (12%)	18 (3%)	568 (86%)	662
Exterior Fixtures	47 (20%)	14 (6%)	173 (74%)	234
Table/Floor Lamps	3 (10%)	0 (0%)	27 (90%)	30
Ceiling Fans	5 (1%)	4 (1%)	757 (99%)	766
DVDs	14 (9%)	8 (5%)	141 (87%)	163
Programmable Thermostats	4 (9%)	2 (5%)	37 (86%)	43

Conclusions

This research represents the beginning of an on-going evaluation of the various sales and marketing, inventory, and merchandising conditions that exist in the retail channel for products that have earned the ENERGY STAR. EPA is continuing this evaluation to streamline the search for and ultimately, increase the purchase of, ENERGY STAR qualified products sold via the retail channel. With two rounds complete, it is possible to compare and assess trends through time. The same residential lighting products were assessed in both rounds 1 and 2. Additionally, a home electronics product was assessed in each round (TVs in round 1 and DVD players in round 2). In terms of the sales staff evaluation, for the products included in both rounds, CFLs consistently scored higher than the other products. The home electronics products consistently scored lower than the other products. Given the day-to-day and salesperson-to-salesperson fluctuations in performance within individual retail locations, it is expected that the sales staff evaluation scores will have a high degree of variability. More data points are needed before it will be reasonable to assess trends in individual products through time.

Given the two categories of labeling errors assessed in the label audit section of the research (labeled and not qualified; qualified and not labeled), comparison of round 1 and round 2 results yields several insights. In the first round (which included appliances), a significant number of instances of labeled and not qualified errors were attributed to models which appeared on later EPA qualified product lists. This problem was effectively addressed following the first round and was not a significant source of error in the second round. The second main cause of labeling errors of this kind was models which at one point in time qualified for the ENERGY STAR but were later de-listed due to qualified product specification changes. This type of error was prevalent in both rounds of the study. Home electronic equipment and exterior fixtures stand out from both rounds of the research for the second category of labeling errors (qualified but not labeled models). Additionally, from the second round, a high fraction of ceiling fan models were found to be qualified but not labeled.

The RSL assessment has proven a vital element of the EPA's outreach to retailers and manufacturers, and provides a mechanism to track the effect of changes in the ENERGY STAR message and program across the U.S. The research provides on-going, replicable, and detailed information about:

1) retailer knowledge of the program and whether and how salespeople use ENERGY STAR in the retail sales process,
2) the visibility and overall presence of the ENERGY STAR label in store displays,
3) the availability and visibility of ENERGY STAR qualified and labeled products, and
4) the accuracy of ENERGY STAR product labeling.

The third round of the RSL Assessment is currently underway, and results should be completed by September 2003. The fourth round is expected to be fielded during the Fall of 2003.

Acknowledgements

The authors would like to acknowledge the work of the field personnel involved in this project, especially Jordan Stern who is primarily responsible for the product shelf inventory data collection. The substantial effort and expertise of the field personnel involved has been essential to the success of the research.