CEE ENERGY STAR® HOUSEHOLD SURVEY REPORT (2000)

Part I - Results

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Subcontractor
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EXECUTIVE SUMMARY

SUMMARY OF KEY FINDINGS

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1998 Home Appliance Buying Trends Survey

Pre-Post Awareness Tracking Study

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CONCLUSIONS

1 INTRODUCTION

1.1 THE ENERGY STAR® PROGRAM

1.2 PURPOSE OF THE SURVEY

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1.3 SURVEY SPONSORSHIP

1.4 TIMING

1.5 REPORT ORGANIZATION

2 METHODS

2.1 GENERAL APPROACH

2.2 QUESTIONNAIRE DESIGN

2.3 SAMPLING

2.3.1 National Sample

- ***High message saturation:***

- ***Low message saturation:***

- ***Other:***

2.3.2 Member Samples

-
-
-
-
-

2.3.3 Combined Sample

-
-

Exhibit 2-1
Venn Diagram of Combined Sample

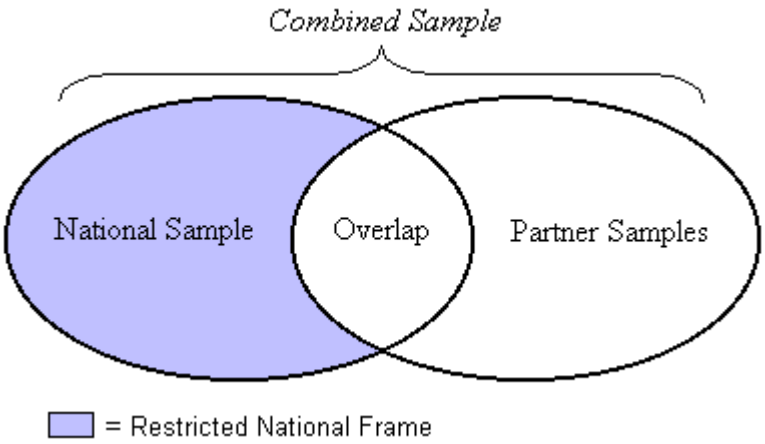

Table 2-1
Distribution of Frames and Samples

	National Alone	Member Alone	Combined
# of DMAs	57	27	74*
# households (millions)	69.9	13.5	72.8*
% U.S. households	69.2%	13.4%	72%*
% of combined frame	96%	18.5%	100%
Sample			
# households	780	2,176	3,496
% of sample	22.3%	77.7%	100%

2.4 ANALYSIS

2.5 RESPONSE RATES

Table 2-2
Survey Response Rates

	National Alone		Member Alone	Combined
	Initial	Additional		
Sent	7,500	6,400	20,350	34,250
Returned	491	289	2,716	3,496
Response Rate	6.5%	4.5%	13.3%	10.2%

-
-
-
-
-

2.6 PRECISION OF ESTIMATES

- ***Confidence intervals around sample means and proportions.***

- ***Confidence intervals for estimated differences.***

- ***Statistical significance (p-value) of differences between subgroup sample means and proportions.***

α α

$\alpha =$

3

FINDINGS

3.2.1 Coding the Levels of Understanding

-
-
-
-

-
-
-
-

3.2.2 Overall Findings

3.2.3 Understanding by Subgroup

- ***By awareness of the ENERGY STAR label prior to the survey.***

- ***By housing type and tenure.***

perceived

- ***By age of respondent.***

- ***By income.***

3.2.4 Comparison With Other Studies

-
- *1998 Home Appliance Buying Trends Survey*
- *Pre-Post ENERGY STAR Awareness Tracking Study*
-

-

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3.3.1 Where People Learned about ENERGY STAR

3.3.2 Comparison With Other Studies

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3.4.1 Effect of Rebates

3.4.2 Findings by Subgroup

3.4.3 Comparison With Other Studies

Consumer Reports

4 CONCLUSIONS

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APPENDIX A

Survey Questionnaire

ENERGY STAR® Household Survey

May we have your help? We are a nonprofit association promoting energy efficiency and need your input in conducting a national random survey. We are assessing a national program promoted by the U.S. Environmental Protection Agency, the U.S. Department of Energy, several state governments, and numerous electric and gas utility companies. Your response is very important. Please take a few minutes to fill out this questionnaire, fold it according to the instructions, staple or tape it together, and mail it back (no postage necessary). All responses will be kept confidential. Thanks for your participation.

The Consortium for Energy Efficiency
Boston, MA
http://www.CEEforMT.org

Fold on Dotted Line

Staple or tape here

Household Survey Instructions

Who should complete the survey?
Please pass this questionnaire to the person in your household who makes decisions about major appliance and home electronics purchases.

How to complete the survey?
Please read the questions below. Write your brief response neatly or mark the answers that best fit your situation with an X in the boxes provided. Based on your response, you will be asked to proceed to the next question or instructed to skip to another question.

Where to return the survey?
When you are finished, please refold the questionnaire, staple or tape where indicated, and drop it in any mailbox. No postage is necessary.

Whom to call with questions?
If you have any questions about the study or the questionnaire, please call Opinion Dynamics Corporation at 1-800-966-1254.

1 Please look at the ENERGY STAR Label above. Write the first message that comes to mind when you see the ENERGY STAR Label.

_____

_____

_____

_____

2 Please write any other messages that come to mind when you see the ENERGY STAR Label.

_____

_____

_____

3 Prior to this survey, had you ever heard of or seen this Label? ☐ Yes **(Proceed to Question 4 on page 2)**

☐ No *(Skip to Question 11 on page 3)*

4 Please review the following list and mark with an X all places in which you have seen or heard about the ENERGY STAR Label.

- ☐ In newspapers or magazines
- ☐ On television
- ☐ On utility inserts or by direct mail
- ☐ On displays in stores
- ☐ On the Internet
- ☐ From a sales person or contractor
- ☐ From a friend, neighbor, relative, or coworker
- ☐ Other
- ☐ None of these sources
- ☐ Don't know

5 Please review the following list and mark with an **X** all the products or product literature on which you have seen the ENERGY STAR Label.

Heating and Cooling Products

- ☐ Central air conditioner
- ☐ Furnace or boiler
- ☐ Heat pump
- ☐ Thermostat
- ☐ Room air conditioner

Home Office Equipment

- ☐ Computer or monitor
- ☐ Computer printer
- ☐ Copying machine
- ☐ Fax machine
- ☐ Scanner

Home Appliances/Lighting

- ☐ Dishwasher
- ☐ Refrigerator
- ☐ Lighting fixture
- ☐ Washing machine
- ☐ Compact fluorescent light bulb
- ☐ Microwave

Home Electronics

- ☐ Television
- ☐ VCR
- ☐ Audio product

Building Materials

- ☐ Window
- ☐ Door
- ☐ Skylight
- ☐ Insulation
- ☐ Roofing material

☐ ***Newly Built Home***

☐ ***None of These Products***

6 Have you purchased any of the products listed in Question **5** in the last 12 months?

- ☐ Yes **(Proceed to Question 7)**
- ☐ No *(Skip to Question* **12** *on page 3)*

7 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)?

- ☐ Yes. On which products did you see the ENERGY STAR label? (please list all products)

_____

_____

_____

(Proceed to Question 8)

- ☐ No *(Skip to Question* **11** *on page 3)*
- ☐ Don't Know *(Skip to Question* **11** *on page 3)*

8 For any ENERGY STAR product(s) you purchased, did the presence or absence of the ENERGY STAR Label influence your purchasing decision?

- ☐ Yes **(Proceed to Question 9)**
- ☐ No **(Proceed to Question 9)**
- ☐ Don't Know **(Proceed to Question 9)**

9 If you purchased an ENERGY STAR product, did you receive rebates or reduced-rate financing?

- ☐ Yes **(Proceed to Question 10)**
- ☐ No *(Skip to Question* **11** *on page 3)*
- ☐ Don't Know *(Skip to Question* **11** *on page 3)*

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

☐ Very Likely ☐ Somewhat Likely ☐ Somewhat Unlikely ☐ Very Unlikely ☐ Don't Know

Please continue on the next page

11 Which of the following products have you purchased in the last 12 months? Please mark with an **X** all that apply.

Heating and Cooling Products

- ☐ Central air conditioner
- ☐ Furnace or boiler
- ☐ Heat pump
- ☐ Thermostat
- ☐ Room air conditioner

Home Appliances/Lighting

- ☐ Dishwasher
- ☐ Refrigerator
- ☐ Lighting fixture
- ☐ Washing machine
- ☐ Compact fluorescent light bulb
- ☐ Microwave

Building Materials

- ☐ Window
- ☐ Door
- ☐ Skylight
- ☐ Insulation
- ☐ Roofing material

☐ ***Newly Built Home***

☐ ***None of These Products***

Home Office Equipment

- ☐ Computer or monitor
- ☐ Computer printer
- ☐ Copying machine
- ☐ Fax machine
- ☐ Scanner

Home Electronics

- ☐ Television
- ☐ VCR
- ☐ Audio product

12 Please look at the product types listed below. Please mark with an **X** the source(s) of information you are most likely to use to obtain information about that product type. Mark all that apply.

Heating and Cooling Products

- ☐ *Consumer Reports* and other product-oriented magazines
- ☐ Other magazines
- ☐ Newspapers
- ☐ Radio
- ☐ Television
- ☐ Electric or gas utility program
- ☐ Advice from retailers
- ☐ Advice from contractors
- ☐ Advice from a friend, neighbor, relative, or coworker
- ☐ Internet
- ☐ Other
- ☐ Don't know

Home Appliances/Lighting/Home Electronics

- ☐ *Consumer Reports* and other product-oriented magazines
- ☐ Other magazines
- ☐ Newspapers
- ☐ Radio
- ☐ Television
- ☐ Electric or gas utility program
- ☐ Advice from retailers
- ☐ Advice from contractors
- ☐ Advice from a friend, neighbor, relative, or coworker
- ☐ Internet
- ☐ Other
- ☐ Don't know

Please note: We emphasize that this survey is **strictly confidential.** Your responses will be included with the responses of other survey participants, and your name will not be associated with your responses or be provided to the government or any other party.

13 How many personal computers are in use in your home?

Number of computers:_____

(If your answer is 0, please skip to Question **15***)*

14 Adding together the use of all computers in your home, what is the average number of hours per day that computers are turned on?

Average number of hours:_____

15 How many people live in your household, including yourself? *(Please count children as well as adults. Include all members of your household whether or not they are related to you.)*

Number of people in household:_____

16 What is your age?

- ☐ 18 - 24
- ☐ 25 - 34
- ☐ 35 - 44
- ☐ 45 - 54
- ☐ 55 - 64
- ☐ 65 - 74
- ☐ 75 +

17 What is your gender?

- ☐ Male
- ☐ Female

18 Are you the person responsible for paying the energy bill(s) in your household?

- ☐ Yes
- ☐ No

19 Which of the following best describes your home?

- ☐ Single-family home not attached to others
- ☐ Townhouse or row house
- ☐ Duplex or triplex
- ☐ Apartment (in building with 4+ units)
- ☐ Mobile home
- ☐ Other

20 How many bedrooms do you have in your home?

Number of bedrooms:_____

21 Do you or members of your household own or rent your present home?

- ☐ Own
- ☐ Rent
- ☐ Occupy but do not pay rent

22 Please mark the box indicating the total combined income in the last 12 months of all family members living in your household. *(Include income before taxes and deductions from all sources.)*

- ☐ Less than $5,000
- ☐ $5,000 - $9,999
- ☐ $10,000 - $14,999
- ☐ $15,000 - $19,999
- ☐ $20,000 - $24,999
- ☐ $25,000 - $49,999
- ☐ $50,000 - $74,999
- ☐ $75,000 and over

Thank you very much for your assistance

APPENDIX B

Fifty-seven Largest DMAs

Table B-1
The Fifty-seven DMAs in the National Sample

DMA Rank	DMA Market Name	GRPS through 12/99	Publicity Category

APPENDIX C

Sample Weighting and Variance Estimation Methodology

Sample Weighting and Variance Estimation Methodology

a

w_a p_a N_a n_a

p_a n_a N_a
n_a a
N_a $a.$

a

,

w_a p_a p_a p_a

p_a n_m N_m
n_m m

N_m $m.$
p_a n_a N_a
n_a a
N_a $a.$

x g
j

$X \qquad \Sigma_{j \in g} \quad j \quad j \quad \Sigma_{j \in g} \quad j$

Variance Estimation

$X_T \qquad X_{TP} \quad X_{TR}$

$P \qquad R$

$V\ X_T \qquad V\ X_{TP} \qquad V\ X_{TR}$

$$\bar{X}_T = \frac{N_{TP}\bar{X}_{TP} + N_{TR}\bar{X}_{TR}}{N_{TP} + N_{TR}}$$

N_{TP} N_{TR}

$$V\left(\bar{X}_T\right) = \left(N_{TP} \quad N_T\right) \; V\left(\bar{X}_{TP}\right) + \left(N_{TR} \quad N_T\right) \; V\left(\bar{X}_{TR}\right)$$

N_T N_{TP} N_{TR}

Subgroup Estimates

N_{TP} N_{TR}