



## **ENERGY EFFICIENCY MARKET ASSESSMENT OF NEW JERSEY CLEAN ENERGY PROGRAMS**

### **APPENDIX: SURVEY INSTRUMENTS**

### **FINAL**

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July 20, 2006

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# **RESIDENTIAL HVAC PROGRAM SURVEY INSTRUMENTS**

**RES HVAC Participating EUC Survey**  
**v12/18/05**

Respondent Name: \_\_\_\_\_  
Respondent Phone Number: \_\_\_\_\_  
Date: \_\_\_\_\_  
Interviewer(s): \_\_\_\_\_

“Hello, my name is \_\_\_\_\_ and I am calling on behalf of the New Jersey Clean Energy Programs. We’re researching a small sample of Customers who received a rebate for installing high-efficiency heating cooling and ventilation equipment in their home. May I please speak to the person who makes the decisions in your household regarding heating and cooling? I want to assure you that this is not a sales call.

The program was formerly known as the Warm Advantage and Cool Advantage programs. The program records indicate that you received a rebate for installing this type of equipment. The purpose of this research is to assess your understanding and awareness of the benefits of high-efficiency heating and cooling equipment. The New Jersey BPU does not intend to report the information you provide other than in an aggregated form that protects your identity.

This interview will take between 15 and 20 minutes. We recognize that this is a sizeable time commitment and we can proceed now over the phone; or we can schedule a more convenient time.”

**A. Introduction**

A1. The program records show that you received a rebate for installing

- Central Air Conditioning (SEER 13)
- Central Air Conditioning (SEER 14)
- Heat Pump (SEER 13)
- Heat Pump (SEER 14)
- Ground Source Heat Pump (SEER 13)
- Furnace (≥90% AFUE)
- Boiler (≥85% AFUE)
- Gas Water Heater (≥0.62 Energy Factor)

*[For the rest of the survey replace (Unit Type) with type of HVAC unit rebated]*

Is this information correct?

- Yes (**proceed with A3**) .....1
- No (**go to A2**) .....2
- Don't know/unsure .....98

A2. What equipment did you receive a rebate for? \_\_\_\_\_

A3. Is now a good time to complete this short survey? (If yes proceed to next section, if no go to below)

A4. Schedule another time? [If yes, write in scheduled date and time \_\_\_\_\_]

**B. Background**

B1. What type of home do you live in – single family or multi-family (i.e., apartment or condo)?

- Single family .....1
- Multi-family .....2
- Other (Specify)\_\_\_\_\_ 3
- Don't Know/Not sure .....98

B2. Do you pay your own utility bills?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF B2=1 THEN ASK B3 ELSE END.]

B3. Do you own the unit's central heating or cooling equipment? [*We are not examining room air conditioners as part of this study.*]

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF B3=1 THEN ASK B4 ELSE END.]

B4. Did the new (UNIT TYPE) replace an existing (UNIT TYPE)?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF B4= 1 THEN ASK B5 ELSE SKIP TO C1]

B5. Was the (UNIT TYPE) that was replaced operating at the time of replacement or had it failed?

- Operating .....1
- Failed .....2
- Don't Know/Not Sure .....98

[IF B5=1 THEN ASK B6 ELSE SKIP TO C1]

B6. Why did you replace the existing (UNIT TYPE) with a new one? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Unit was old .....1
- Better performance .....2
- Higher efficiency .....3
- Lower operating costs .....4
- Greater comfort .....5
- Contractor suggested change .....6
- Other (Specify) \_\_\_\_\_7

Don't Know/Not Sure .....98

**C. Contractor Selection**

C1. How did you select the contractor that installed your new (UNIT TYPE)? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Word of Mouth .....1
- Saw newspaper ad .....2
- Saw TV ad .....3
- Direct mail .....4
- Heard radio ad .....5
- Saw Internet ad .....6
- Yellow page listing .....7
- Contractor previously serviced the unit .....8
- Contractor's name was on the indoor unit .....9
- Other (Specify) \_\_\_\_\_.....10
- Don't Know/Not Sure .....98

C2. When you chose your contractor, were you looking for a specific brand of (UNIT TYPE) equipment?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

C3. Did you get quotes from more than one contractor?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF C3=1 THEN ASK C4. ELSE SKIP TO C8.]

C4. How many?

Enter # \_\_\_\_\_

Don't Know 97

C5. How many of the quotes were based on an on-site inspection of your home?

Enter # \_\_\_\_\_

Don't Know/Not Sure .....98

C6. How many of the quotes were provided in writing?

Enter # \_\_\_\_\_

Don't Know/Not Sure .....98

C8a. What was your primary reason for selecting the firm who installed your (UNIT TYPE)? (DO NOT PROMPT)

C8b. What were your additional reasons for selecting the firm who installed your (UNIT TYPE)?  
(DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

	Primary C8a	2nd C8b
Reputation .....	1	1
Qualifications .....	2	2
Installed cost of unit .....	3	3
Warranty length and/or features .....	4	4
Operating cost of unit .....	5	5
Unit efficiency .....	6	6
Ability to install within required timeframe .....	7	7
Availability of a maintenance contract .....	8	8
Don't Know/Not Sure .....	98	98

C9. Were you satisfied with the HVAC equipment and its installation performed by your contractor?

Very satisfied [SKIP TO D1].....	1
Somewhat satisfied [SKIP TO D1].....	2
Neutral [SKIP TO D1].....	3
Not very satisfied .....	4
Very unsatisfied .....	5
Don't know/Not sure [SKIP TO D1].....	98

C10. Why weren't you satisfied with the HVAC equipment and its installation performed by your contractor? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

Installation took too long .....	1
Installation cost too much .....	2
Too expensive to operate .....	3
Too noisy .....	4
Comfort problem .....	5
Other (Specify) _____.....	6
Don't Know/Not Sure .....	98

**D. Energy Efficiency Awareness**

D1. Prior to purchasing your new (UNIT TYPE), did you know that high efficiency (UNIT TYPE) were available?

Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF D1=1 THEN ASK D2 ELSE SKIP TO E1]

D2. Did you request information on high efficiency (UNIT TYPE) from your contractor?

Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF D2=2 THEN ASK D3 ELSE SKIP TO E4]

D3. Why didn't you request information on high efficiency (UNIT TYPE) from your contractor?  
(DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

Cost too much .....	1
Not convinced operating costs would be lower/no savings .....	2
Reliability concerns .....	3
Not readily available .....	4
Other (Specify).....	5
Don't Know/Not Sure .....	98

D4. What are the benefits of installing a high efficiency (UNIT TYPE)? (DO NOT PROMPT)  
(ALLOW MULTIPLE RESPONSES)

Lower operating costs .....	1
Less energy use .....	2
Improved performance .....	3
Greater comfort .....	4
Increased reliability .....	5
Less pollution/environmental impacts .....	6
Received utility rebate .....	7
Other (Specify) .....	8
Don't Know/Not Sure .....	98

D5a. How is the efficiency of (UNIT TYPE) measured? (DO NOT PROMPT)

SEER .....	1
Seasonal energy efficiency ratio .....	2
AFUE .....	3
Annual fuel utilization efficiency .....	4
% Efficiency .....	5
Don't Know/Not Sure .....	98

D5b. For (UNIT TYPE) what (INSERT RESPONSE FROM D5a) defines a high efficiency unit?

Enter value .....	
Don't Know/Not Sure .....	98



D6. In addition to installing high efficiency (UNIT TYPE), what other factors affect the performance of your heating and cooling system? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

Duct leakage .....	1
Duct insulation .....	2
Proper refrigerant charge .....	3
Proper equipment sizing .....	4
Adequate airflow over the indoor coils .....	5
Other (Specify) .....	6
Don't Know/Not sure.....	98

**E. Equipment Selection**

E1. Did the contractor who installed your (UNIT TYPE) recommend more than one unit for you to consider installing?

Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF E1=1 THEN ASK E2. ELSE SKIP TO E9]

E2. Did the contractor discuss with you that some units are more efficient than others?

Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF E2=1 THEN ASK E3. ELSE SKIP TO E10]

E3. Did the contractor define any specific efficiency level as being high efficiency?

Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF E3=1 THEN ASK E4. ELSE SKIP TO E5]

E4. [If E3 =1] What level did the contractor define as high efficiency? (Prompt if necessary - Air conditioner and heat pump efficiencies are measured in SEER. Furnace and boiler efficiencies are measured as a percentage or in AFUE).

Enter value \_\_\_\_\_

ENERGY STAR rated .....	1
Don't Know/Not Sure .....	98

E5. Did the contractor discuss the operating costs of different units?

Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF E5=1 THEN ASK E6. ELSE SKIP TO E7]

E6. [E5 = 1] Did the contractor provide any type of operating cost comparison between units of different efficiencies?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

E7. Did the contractor provide prices for both standard and high efficiency units?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF E7=1 THEN ASK E8. ELSE SKIP TO E9]

E8. [If E7=1] How much more was the high efficiency unit? (ALLOW EITHER A Incremental \$ OR % Difference RESPONSE)

- ENTER \$ Amount ..... \$\_\_\_\_\_ or
- ENTER % Difference ..... \_\_\_\_\_%
- Don't Know/Not Sure ..... 998

E9. Did the contractor recommend that you install a high efficiency (UNIT TYPE)?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF E9=1 THEN ASK E10. ELSE SKIP TO E12]

E10. Besides your contractor, did you rely on any other sources of information to help you choose your (UNIT TYPE)?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF E10=1 THEN ASK E11. ELSE SKIP TO SKIP RULE BEFORE F1]

E11. What other sources of information did you use? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Utility program information.....1
- Energy Star .....2
- Manufacturer advertisements .....3
- Family/friend recommendation .....4
- Past experience with brand .....5
- Other (specify) .....6
- Don't Know/Not Sure .....98

**F. Installation Practices**

[IF Unit Type = Central AC or Heat Pump THEN ASK F1 ELSE SKIP TO F2]

F1. Did the contractor discuss with you the size of cooling (heating) capacity of the (UNIT TYPE)?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF F1=1 THEN ASK F2. ELSE SKIP TO F3]

F2. Did the contractor provide you with any documentation supporting the size of the unit installed in your home?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF Unit Type = Central AC or Heat Pump THEN ASK F3. ELSE SKIP TO F11.]

F3. Did the contractor discuss with you the need to ensure a proper refrigerant charge in the unit?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

F4. Did the contractor discuss with you the need to ensure proper airflow in the indoor part of the system?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

F5. Did the contractor check to see that your ductwork was adequately insulated?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF F5=1 THEN ASK F6. ELSE SKIP TO F7]

F6. Did the contractor recommend that insulation be added?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

F7. Did the contractor discuss the impact of leakage in your ductwork on the efficiency of your cooling and/or heating system?

- Yes .....1
- No .....2
- Don't Know/Not Sure.....98

[IF F7=1 THEN ASK F8. ELSE SKIP TO F10b]

F8. Did the contractor offer to measure the leakage in your ductwork?

- Yes .....1
- No .....2
- Don't Know/Not Sure.....98

[IF F8=1 THEN ASK F9. ELSE SKIP TO F10b]

F9. Did you accept the contractor's offer to measure the leakage in your ductwork?

- Yes .....1
- No .....2
- Don't Know/Not Sure.....98

[IF F9=2 THEN ASK F10a. ELSE SKIP TO F10b]

F10a. Why didn't you accept the contractor's offer to measure the leakage in your ductwork?

- Too expensive .....1
- Ducts already tight .....2
- Not enough savings .....3
- Benefits unclear .....4
- Other (specify) \_\_\_\_\_ .....5
- Don't Know/Not Sure.....98

F10b. Did you have additional ductwork added as part of your installation?

- Yes .....1
- No .....2
- Don't Know/Not Sure.....98

F11. Prior to the installation of the new (UNIT TYPE), were all of the thermostats in your home programmable thermostats?

- Yes .....1
- No .....2
- Don't Know/Not Sure.....98

[IF F11=2 THEN ASK F12. ELSE SKIP TO F14]

F12. Did the contractor recommend that new programmable thermostats be installed?

- Yes .....1
- No .....2
- Don't Know/Not Sure.....98

[IF F12=1 THEN ASK F13. ELSE SKIP TO F14]

F13. Did you have the thermostats installed?  
 Yes .....1  
 No .....2  
 Don't Know/Not Sure.....98

F14. Do you know the (efficiency) of your new (UNIT TYPE)? (Define "efficiency as "SEER" if a CAC or HP, or as "AFUE or % efficiency" if a furnace or boiler)  
 Yes .....1  
 No .....2  
 Don't Know/Not Sure.....98

F15. And what is the (efficiency) of your new (UNIT TYPE)?  
 Record value \_\_\_\_\_  
 Don't Know/Not Sure.....98

F16. Did you replace an existing unit?  
 Yes .....1  
 No .....2  
 Don't Know/Not Sure.....98

[IF F16=1 THEN ASK F17. ELSE SKIP TO G1]

F17. Do you know the (efficiency) of your OLD (UNIT TYPE)? (Define "efficiency as "SEER" if a CAC or HP, or as "AFUE or % efficiency" if a furnace or boiler)  
 Yes .....1  
 No .....2  
 Don't Know/Not Sure.....98

F18. And what is the (efficiency) of your OLD (UNIT TYPE)?  
 Record value \_\_\_\_\_  
 Don't Know/Not Sure.....98

**G. Utility Program Awareness and Participation**

G1. How did you find out about the rebate program? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Contractor suggestion .....1
- Recommended by friend or family member .....2
- Program brochure/direct mail .....3
- Saw newspaper ad .....4
- Saw TV ad .....5
- Heard radio ad .....6
- Saw internet ad .....7
- Discussion with utility staff .....8
- Bill insert .....9
- Other (Specify) .....10
- Don't know/Not Sure .....98

G2. On a scale of 1 to 5, where 1 means you are "very dissatisfied" and 5 means you are "very satisfied", how satisfied are you with the utility program?

- Very dissatisfied [ASK G3] .....1
- Somewhat Dissatisfied [ASK G3] .....2
- Neither Satisfied or Dissatisfied [ASK G3] .....3
- Somewhat Satisfied [SKIP TO G4] .....4
- Very Satisfied [SKIP TO G4] .....5

G3. Were there specific problems with the program?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF G3=1 THEN ASK G3b. ELSE SKIP TO G4.]

G3b. What were those problems?

Record response \_\_\_\_\_

G4. Now I am going to ask you to rate your satisfaction with each of the following aspects of the New Jersey Residential HVAC program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating very satisfied and 1 indicating very dissatisfied:

Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-very dissatisfied, 2-somewhat dissatisfied, 3-neither, 4-somewhat satisfied, 5-very satisfied*

Statement	1	2	3	4	5
Cost of participation	3	4	5		
Quality of marketing support materials	3	4	5		
Certification and verification process	3	4	5		
Ease of participation	3	4	5		
Responsiveness of program staff	3	4	5		
Amount of paperwork required to participate	3	4	5		
h. The program overall	1	2	3	4	5

G5. Can you tell me what benefits you received from participating in the program?  
(DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Correct equipment sizing .....1
- Proper airflow over the indoor coils .....2
- Duct leakage measurement .....3
- Proper refrigerant charge .....4
- Purchase/installation of efficient equipment .....5
- Other (Specify) .....6
- Don't Know/Not Sure .....98

G6. If you hadn't participated in the program, would you have still installed a high efficiency (UNIT TYPE)?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF G6=2 THEN ASK G7. ELSE SKIP TO SKIP RULE BEFORE G8.]

G7. Why wouldn't you have installed a high efficiency (UNIT TYPE)? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Not aware of high efficiency option .....1
- Didn't know where to get high-efficiency equipment .....2
- Not aware of cost savings .....3
- Cost of EE units too high .....4
- Other (Specify) .....5
- Don't Know/Not Sure .....98

G8. Have you noticed any changes since your new (UNIT TYPE) was installed?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF G8=1 THEN ASK G9. ELSE SKIP TO G10.]

G9. What type of changes have you noticed? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Lower utility bills .....1
- Higher utility bills .....2
- Improved comfort .....3
- Less comfort .....4
- Quieter operation .....5
- Other (Specify) \_\_\_\_\_.....6
- Don't Know/Not Sure .....98

G10. Overall, how would you rate the effectiveness of the New Jersey Residential HVAC program?

- Very effective -> **SKIP TO G14**.....1
- Somewhat effective .....2
- Neutral .....3
- Not very effective .....4
- Very un-effective .....5
- Don't know/unsure .....98

G11. Why do you rate the effectiveness of the New Jersey Residential HVAC program this way?

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G12. What should be changed about the program? (*Do not prompt; Circle all that apply*)

- No suggestions .....1
- Higher incentive amounts .....2
- Higher project size threshold for incentives .....3
- Lower project size threshold for incentives .....4
- More marketing directly to end users .....5
- Too much of his time is needed to complete paperwork .....6
- Should be more technical support for customers .....7
- Better communication with vendors .....8
- More timely program announcements .....9
- Others \_\_\_\_\_.....10
- Don't know/unsure .....98

G13. IF MORE THAN ONE SUGGESTED CHANGE

Which one of these suggestions would be most important to change?

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G14. Do you have any other comments about the New Jersey Residential HVAC program?

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**H. ENERGY STAR® Awareness**

H1. Have you heard of the ENERGY STAR® Program for air conditioners, gas furnaces or gas boilers?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF H1=1 THEN ASK H2. ELSE SKIP TO I1.]

H2. In your words, what does the ENERGY STAR® Program do? (DO NOT PROMPT) (Allow multiple responses) (*note: will score as 'yes' if two of the four are mentioned*)

- Federal Gov't/ Dept. of Energy/ EPA program .....1
- Promote high efficiency HVAC equipment .....2
- Work with manufacturers .....3
- Marketing/ labeling program .....4
- Don't Know/Not Sure .....98

**I. Market Barriers**

I1. What do you think the barriers are to purchasing high-efficiency HVAC equipment for customers like yourself?

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I2. What do you consider to be the major barriers to the purchase of high-efficiency HVAC equipment in New Jersey? (*Do not prompt; Circle all that apply*)

- None .....0
- First costs .....1
- Lack of awareness of program .....2
- Lack of awareness of the benefits (energy and non-energy) .....3
- Lack of contractors knowledge .....4
- Can't differentiate between quality and poor installation .....5
- Payback .....6
- Lack of technical knowledge .....7
- Other ( \_\_\_\_\_ ) .....8
- Don't know/unsure .....98

I3. How effective is the New Jersey HVAC program in reducing these barriers? (PROBE: What do you need as far as support, information, or tools to help you buy a high-efficiency HVAC unit?)

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14. Overall, do you feel these barriers are increasing, decreasing, or remaining the same?	
Increasing → 0a. Why? _____	1
Staying the same .....	2
Decreasing → 0b. Why? _____	3
Don't know/unsure .....	98

**J. Customer Demographics**

Before we finish, I have just a few more questions about your household.

J1. Do you own or rent your home?	
Own .....	1
Rent .....	2
Don't Know/Not Sure .....	98

J2. About how large is your home?	
Square Feet _____	
Don't Know/Not Sure .....	98
Refused .....	99

J3. And how many rooms does your home have? Please exclude closets, bathrooms, hallways, garages, and unfinished basements?	
Number of rooms _____	
Don't Know/Not Sure .....	98
Refused .....	99

[IF B1=2 THEN ASK J4a. ELSE ASK J4b.]

J4a. How many housing units are in your building?	
2 to 4 .....	1
5 or more .....	2
Don't Know/Not Sure .....	98

[SKIP TO J5a]

J4b. What type of single family home do you live in? (READ LIST)	
Detached .....	1
Mobile Home .....	2
Other (Specify) _____	3
Don't Know/Not Sure .....	98

J8. We'd like to send one or two trained inspectors to your home to evaluate your heating & cooling systems. In exchange for your assistance, we will pay you \$50. Are you interested in participating?	
Yes .....	1
No .....	2
Don't Know/Not Sure .....	98

[IF J8 =1 THEN ASK I9. ELSE SKIP TO GOODBYE.]

J9. Someone will call back in the next few weeks to schedule an appointment. Who should we ask for when we call back?

Record name \_\_\_\_\_

J10. When is the best time to call? Record response \_\_\_\_\_

J11. Are weekends ok?

Yes .....1  
No .....2

Thank you for your time. Good Bye.

Note to interviewer

Record Gender: Male of Female?

**Residential HVAC  
DRAFT Participating Contractor Survey  
V 1/20/06**

Contact Name: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Survey ID Number: \_\_\_\_\_

“Hello, my name is \_\_\_\_\_ and I am calling on behalf of the New Jersey Clean Energy Programs. We’re interviewing a sample of contractors who have participated in the rebate program for installing high-efficiency heating and cooling equipment. The program was formerly known as the Warm Advantage and Cool Advantage programs. May I please speak to (CONTACT NAME)? I want to assure you that this is not a sales call.

The program records indicate that your company participated in this program. The purpose of this research is to assess your understanding and awareness of the benefits of high-efficiency heating and cooling equipment. The New Jersey BPU does not intend to report the information you provide other than in an aggregated form that protects your identity.

This interview will take between 15 and 20 minutes. We recognize that this is a sizeable time commitment and we can proceed now over the phone; or we can schedule a more convenient time.”

NP1. Have you heard of the residential high-efficiency HVAC program (also known as Warm Advantage and Cool Advantage operated by New Jersey’s utilities)?

- Yes .....1
- No .....2
- Don’t know .....98

NP1a. [ASK IF NP1 = 1] Have you participated in this program?

- Yes [Continue with Survey] .....1
- No [Go to Non-Participant Survey] .....2
- Don’t know [Continue with Survey] .....98

**A. Company Background**

We’d like to begin by asking you a few general questions about your company.

A1. In how many heating and/or cooling systems did you install in residential homes in 2005?

- a. ENTER NUMBER IN EXISTINGS HOMES ..... \_\_\_\_\_
- b. ENTER NUMBER IN NEW HOMES ..... \_\_\_\_\_

[IF A1. = 0, THEN SKIP to A3.]

A2. In what percentage of the homes did you install the ductwork as well as heating and cooling equipment itself?

- a .ENTER PERCENT IN EXISTING HOMES..... \_\_\_\_\_ %
- b .ENTER PERCENT IN NEW HOMES ..... \_\_\_\_\_ %

A3. Roughly how many units of residential [type of equipment] did you install in 2005?

- a. Gas furnaces ..... \_\_\_\_\_
- b. Gas boilers ..... \_\_\_\_\_
- c. Central air conditioners ..... \_\_\_\_\_
- d. Air source heat pumps ..... \_\_\_\_\_
- e. Oil and propane heating equipment ..... \_\_\_\_\_
- f. Programmable thermostats ..... \_\_\_\_\_

A4. What percent of your [type of equipment] installations in existing homes were emergency installations of failed units?

- a. Gas furnaces ..... \_\_\_\_\_ %
- b. Gas boiler ..... \_\_\_\_\_ %
- c. Central air conditioners ..... \_\_\_\_\_ %
- d. Heat pumps ..... \_\_\_\_\_ %

A5. Which of the following best describes the geographic area your company is active in?

- Your local city or town ..... 1
- A metropolitan area..... 2
- A significant portion of New Jersey ..... 3
- All of New Jersey..... 4
- A multi-state region ..... 5
- Other (Specify)..... 6

A6. How many employees work at this location?

ENTER NUMBER OF EMPLOYEES ..... \_\_\_\_\_

A7a. How many of these employees work in the field as residential installers?

ENTER NUMBER OF EMPLOYEES IN FIELD ..... \_\_\_\_\_

A7b. Does the same field staff typically handle both residential HVAC installations and service calls?

- Handle both..... 1
- Separate installer and service technician staff ..... 2
- Don't know/Not Sure ..... 98

A8. Where do you recruit new technicians and installers from? [CIRCLE ALL THAT APPLY]

- Vo-tech schools.....1
- Community colleges .....2
- Trade schools .....3
- Other firms .....4
- Trade journals .....5
- General newspaper help wanted .....6
- Other (Specify).....7
- Don't know/Not Sure.....98

A9a. Which electric utility provides service to most of the homes you worked on this year?  
ENTER NAME ...\_\_\_\_\_

E.9b. Which gas utility provides service to most of the homes you worked on this year?  
ENTER NAME ...\_\_\_\_\_

[IF RESPONDENT INSTALLED > 5 SYSTEMS (SEE A2.) IN NEW CONSTRUCTION, ASK B1., OTHERWISE SKIP TO B3.]

**B. Market Share and Marketing To Builders And General Contractors**

Now I'd like to ask you a few questions about your experience in selling energy efficient equipment in new construction.

B1. What percentage of the [TYPE OF EQUIPMENT] you installed in new homes in 2005 were (or had) [EFFICIENCY CRITERIA FROM ANSWER GRID] or above?

[CODE ANSWERS IN GRID BELOW. DON'T INSTALL THAT KIND OF EQUIPMENT = 997, DON'T KNOW/NOT SURE = 998, REFUSED= 999.]

[IF RESPONDENT INSTALLED > 5 SYSTEMS (SEE A2.) IN EXISTING CONSTRUCTION, ASK B3, OTHERWISE SKIP TO C1.]

B3. What percentage of the [TYPE OF EQUIPMENT] you installed in existing homes in 2005 were (or had) [EFFICIENCY CRITERIA FROM ANSWER GRID] or above?

[CODE ANSWERS IN GRID BELOW. DON'T INSTALL THAT KIND OF EQUIPMENT = 997, DON'T KNOW/NOT SURE = 998, REFUSED= 999.]

For B1. and B3.

Type	Efficiency Criteria	B1. (%)	B3. (%)
a. Gas Furnaces	AFUE ≥90%		
b. Gas Boilers	AFUE ≥85%		
c. Central Air Conditioners	Tier 1 - SEER 13/EER 11		
d. Central Air Conditioners	Tier 2 - SEER 14/EER 11.5 or EER 12		
e. Central Air Conditioners	Tier 2 - SEER 15/EER 12.5		
f. Air Source Heat Pumps	Tier 1 - SEER 13/EER 11 and 8 HSPF		
g. Air Source Heat Pumps	Tier 2 - SEER 14/EER 11.5/12 and 8.5 HSPF		
h. Air Source Heat Pumps	Tier 2 - SEER 15/EER 12.5 and 8.5 HSPF		
j. Gas Water Heater	≥0.62 Energy Factor		
k. Programmable Thermostats	ENERGY STAR		

[IF RESPONDENT INSTALLED > 5 SYSTEMS (SEE A2.) IN NEW CONSTRUCTION, ASK THIS SECTION (QUESTIONS C1. - C4.)]

**C. Marketing Of Energy Efficient Equipment In New Homes**

The next set of questions address marketing of energy-efficient heating and cooling equipment to builders and general contractors.

C1. Of the new construction projects you completed as a subcontractor over the past two years, what percentage did you get ....

- a. By submitting a price bid on a written or verbal specification \_\_\_\_%
- b. Through existing relations with the builder, with no bidding.. \_\_\_\_%
- c. By submitting qualifications ..... \_\_\_\_%
- d. Through other channels (Specify)..... \_\_\_\_%

C2. How much influence you think your recommendations had an effect on the general contractors’ decisions regarding selection of heating and cooling equipment?

- A lot .....1
- Some .....2
- Not much.....3
- None .....4
- Don’t know/Not sure.....98

d. [ASK IF C2c. = 1 OR 2] Can you give me an example of the kinds of influence you had on a builder’s selection of heating and cooling equipment?

\_\_\_\_\_

\_\_\_\_\_

C3. Over the past two years has a builder or general contractor ever requested that you install equipment that exceeds current minimum federal efficiency standards?

- Yes .....1
- No.....2

[IF C3. = 1] In what percentage of projects did this occur ...

C3a. for heating equipment..... \_\_\_\_\_%

C3b. for central cooling equipment ..... \_\_\_\_\_%

C4. Is the installation of high-efficiency HVAC equipment more prevalent in new homes or existing homes?

NEW Homes .....1

EXISTING Homes.....2

Don't know/Not Sure.....98

C5. Do you think there are any business advantages for your company in marketing high efficiency heating and cooling equipment to home builders?

Yes .....1

No.....2

Don't know/Not Sure.....98

C5a. [IF C5. = 1] What are those advantages?

\_\_\_\_\_

\_\_\_\_\_

C5b. [IF C5. = 2] Why do you think there are no advantages?

\_\_\_\_\_

\_\_\_\_\_

[ASK C6. IF > 5 CENTRAL AIR CONDITIONERS WERE INSTALLED IN 2005. SEE ANSWERS TO QUESTION A3. ELSE SKIP TO C7.]

C6. Have you found that call-backs to address central air conditioner equipment or installation problems are more frequent when you use energy efficient versus standard equipment, less frequent, or about the same?

More frequent.....1

Less frequent.....2

About the same .....3

Don't know/Not Sure.....98

C6a. What types of problems are causing your air conditioner callbacks?

\_\_\_\_\_

\_\_\_\_\_

[ASK C7. IF > 5 GAS FURNACES AND BOILERS WERE INSTALLED IN 2005. SEE ANSWERS TO QUESTIONS A3. OTHERWISE SKIP TO D1.]



C7. Have you found that call-backs to address gas furnace or boiler equipment or installation problems are more frequent when you use energy efficient versus standard equipment, less frequent, or about the same?

- More frequent.....1
- Less frequent.....2
- About the same .....3
- Don't know/Not Sure.....98

C7a. What types of problems are causing your gas HVAC callbacks? [PROBE ON HEAT EXCHANGER, CONDENSATE, AND VENTING PROBLEMS]

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[ASK SECTION D IF RESPONDENT HAS COMPLETED > 5 INSTALLATIONS IN EXISTING HOMES. SEE ANSWERS TO QUESTIONS A1 AND A2]

**D. Marketing Of Energy Efficient Equipment In Existing Homes**

Now I'd like to ask you a few more questions about your experience in selling heating and cooling equipment to owners of existing homes

D1. When you discuss the selection of heating and cooling equipment with owners of existing homes, how often do you inform them about high efficiency models. Would you say it is ...

- In all or most cases.....1
- In some cases .....2
- In relatively few cases.....3
- In no case .....4
- Don't know/Not Sure.....98

[IF D1. = 4 SKIP TO E1.]

D1b. In addition to energy savings, which features do you emphasize in promoting high-efficiency equipment with customers? [circle all that apply]

- No other features mentioned .....0
- Quieter operation .....1
- Greater reliability .....2
- Longer service life .....3
- Better warranty .....4
- Greater reliability .....5
- Comfort .....6
- Utility rebate .....7
- Availability of financing .....8
- Other (Specify) \_\_\_\_\_9
- Don't Know/Not Sure .....98

D2a. What methods do you use to promote and market heating and cooling equipment and installations? [READ LIST. CIRCLE ALL THAT APPLY]

D2b. In which of these do you mention high efficiency HVAC equipment? [CIRCLE ALL THAT APPLY]

D2c. Which of these methods is the most effective in generating new sales leads [CIRCLE ONLY ONE]

	D2a.	D2b.	D2c.
1 Newspaper or other print advertising	1	1	1
2 Prior customer relationship	2	2	2
3 Word of mouth	3	3	3
4 Yellow Pages	4	4	4
5 Radio Ads	5	5	5
6 Other _____	6	6	6
98 Don't Know/Not Sure	98	98	98

[IF D1 = 4 (NEVER PROMOTE HIGH EFFICIENCY MODELS) SKIP TO NEXT SECTION (QUESTION E1)]

D3a. What is the biggest problem you encounter in promoting high efficiency central air conditioners in existing homes? [CIRCLE ONE]

D3b. Are there other reasons? [CIRCLE ALL THAT APPLY]

D4a. What is the biggest problem you encounter in promoting high efficiency gas furnaces and boilers in existing homes? [CIRCLE ONE]

D4b. Are there other reasons? [CIRCLE ALL THAT APPLY]

<b>Contactors Barriers</b>	D3a.	D3b.	D4a.	D4b.
0 No other problems	0	0	0	0
1 Promotion of energy efficiency not important to business strategy	1	1	1	1
2 Perception that customers generally not interested in energy efficiency	2	2	2	2
3 Savings to customers do not justify extra costs	3	3	3	3
4 Performance problems with high efficiency equipment	4	4	4	4
5 Reliability problems with high efficiency equipment	5	5	5	5
6 Availability problems	6	6	6	6
7 Do not believe it is profitable	7	7	7	7
8 Utility rebate paperwork is a hassle	8	8	8	8
9 Utility inspection process is a hassle	9	9	9	9
10 Not aware of high efficiency equipment	10	10	10	10
11 Other _____	11	11	11	11
98 Don't Know/Not Sure	98	98	98	98

D5. [IF RELIABILITY OR PERFORMANCE CITED, ASK TO EXPLAIN]

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D6. What is the average wholesale equipment costs of a ..... [Not Sure = 99998 and Refusal = 99999]

Equipment	Average Costs (\$)
a. SEER 12 CAC	
b. SEER 13 CAC	
c. SEER 14 CAC	
d. SEER 15 CAC	

D7. How often do you promote ECM furnaces to your customers?

- In all or most cases.....1
- In some cases .....2
- In relatively few cases.....3
- In no case .....4
- Don't know/Not Sure.....98

D7a. [If D7 = 1 or 2] How do you promote ECM furnaces? [Probe for the sales pitch]

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D8. Why do customers choose to install furnaces without ECMs instead of ECM furnaces?

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D9. What is the extra cost for an ECM furnace compared to a furnace without an ECM?  
[Not Sure = 99998 and Refusal = 99999]

Extra cost for ECM Furnace .....\$ \_\_\_\_\_

**E. Market Barriers**

E1. What do you consider to be the major barriers to the **CUSTOMER’S** purchase of high-efficiency HVAC equipment in New Jersey? (*Do not prompt; Circle all that apply*)

- None .....0
- First costs .....1
- Lack of awareness of program .....2
- Lack of awareness of the benefits (energy and non-energy) .....3
- Lack of contractors knowledge .....4
- Can’t differentiate between quality and poor installation .....5
- Payback .....6
- Lack of technical knowledge .....7
- Other ( \_\_\_\_\_ ) .....8
- Don't know/unsure .....98

E2. How effective is the New Jersey HVAC program in reducing these barriers? (PROBE: What do you need as far as support, information, or tools to help you buy a high-efficiency HVAC unit?)

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Thinking back over the past two years, do you think the [Read Barrier] of high-efficiency HVAC equipment has Increased significantly (1); Increased Somewhat (2); Stayed the Same(3); Decreased Somewhat(3); or Decreased Significantly (5)?

<b>Market Barrier</b>	<b>←Incr. Same Decr.→</b>
E3. Initial cost of	1 2 3 4 5 DK
E4. Operational & Maintenance cost of	1 2 3 4 5 DK
E5. Availability of	1 2 3 4 5 DK
E6. Availability of information on ( <i>Lack of information being a barrier</i> )	1 2 3 4 5 DK
E7. End-user awareness of ( <i>Lack of awareness being a barrier</i> )	1 2 3 4 5 DK
E8. Availability of financial incentives ( <i>Prog inctvs more avail=decr bar</i> )	1 2 3 4 5 DK
E9. Avail of technical assistance for ( <i>Prog tech asst more avail=decr bar</i> )	1 2 3 4 5 DK
E10. Other Barrier _____	1 2 3 4 5 DK
E11. Other Barrier _____	1 2 3 4 5 DK

E12. Overall, do you feel these barriers are increasing, decreasing, or remaining the same?

- Increasing → E12a. Why? .....1
- Staying the same .....2
- Decreasing → E12b. Why? .....3
- Don't know/unsure .....98

**F. Utility Program Awareness and Participation**

F1. How did you find out about the rebate program? (DO NOT PROMPT) (ALLOW MULTIPLE RESPONSES)

- Contractor suggestion .....1
- Recommended by friend or family member .....2
- Program brochure/direct mail .....3
- Saw newspaper ad .....4
- Saw TV ad .....5
- Heard radio ad .....6
- Saw internet ad .....7
- Discussion with utility staff .....8
- Bill insert .....9
- Other (Specify) .....10
- Don't know/Not Sure .....98

F2. Were there specific problems with the program?

- Yes .....1
- No .....2
- Don't Know/Not Sure .....98

[IF F2=1 THEN ASK F2b. ELSE SKIP TO F3.]

F2b. What were those problems?

Record response \_\_\_\_\_

F3. Now I am going to ask you to rate your satisfaction with each of the following aspects of the New Jersey Residential HVAC program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating very satisfied and 1 indicating very dissatisfied:

Would you say that you very dissatisfied, somewhat dissatisfied, neutral, somewhat satisfied or strongly satisfied with the following aspects of the program

*1-very dissatisfied, 2-somewhat dissatisfied, 3-neither, 4-somewhat satisfied, 5-very satisfied*

Statement	Rating
a. Cost of participation	1 2 3 4 5
b. Quality of marketing support materials	1 2 3 4 5
c. Certification and verification process	1 2 3 4 5
d. Ease of participation	1 2 3 4 5
e. Responsiveness of program staff	1 2 3 4 5
g. Amount of paperwork required to participate	1 2 3 4 5
h. The program overall	1 2 3 4 5

F4. Overall, how effective is the New Jersey Residential HVAC Rebate program at stimulating the market for high-efficiency equipment?

Very effective -> <b>SKIP TO F8</b> .....	1
Somewhat effective .....	2
Neutral .....	3
Not very effective .....	4
Very un-effective .....	5
Don't know/unsure .....	98

F5. Why do you rate the effectiveness of the New Jersey Residential HVAC Rebate program this way?

---

F6. What should be changed about the program? (*Do not prompt; Circle all that apply*)

No suggestions .....	1
Higher incentive amounts .....	2
Higher project size threshold for incentives .....	3
Lower project size threshold for incentives .....	4
More marketing directly to end users .....	5
Too much of his time is needed to complete paperwork .....	6
Should be more technical support for customers .....	7
Better communication with vendors .....	8
More timely program announcements .....	9
Others _____ .....	10
Don't know/unsure .....	98

F7. IF MORE THAN ONE SUGGESTED CHANGE

Which one of these suggestions would be most important to change?

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F8. Do you have any other comments about the New Jersey Residential HVAC program?

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**G. Awareness Of Energy Star**

G1. How would you explain what the ENERGY STAR label means to you in regard to the residential HVAC equipment you sell or install? [DO NOT PROMPT. CIRCLE ALL THAT APPLY]

- The product meets certain efficiency specifications .....1
- The specifications were worked out with industry .....2
- The product saves energy.....3
- The product saves my customers money .....4
- The product is reliable .....5
- The product is more expensive than standard models .....6
- The product helps the environment.....7
- Other (Specify).....8
- Not familiar with ENERGY STAR label.....9

G1a. [IF G1 = 9]. Prior to this interview, were you aware of the ENERGY STAR standards for residential HVAC equipment?

- Yes .....1
- For some of the types of equipment covered.....2
- Somewhat.....3
- No.....4
- Don't know .....98

G1b. [IF G1. = 9]. Do you use the ENERGY STAR label as a selling point for high efficiency HVAC equipment?

- Yes .....1
- No.....2
- Don't know .....98

G1c. [IF G1b. = NO] Why not? \_\_\_\_\_  
\_\_\_\_\_

**H. Installation Practices**

[Ask the following question for all HVAC that the contractor installs, including those installed OUTSIDE of the NJ Clean Energy program.]

H1. What methods do you use most often to size heating and cooling equipment including those units installed OUTSIDE the program? [CIRCLE ALL THAT APPLY]

- Size to previous unit.....1
- Use tons/square foot estimate/rule of thumb .....2
- Other rules of thumb .....3
- Manual J.....4
- Computer program (Name of program \_\_\_\_\_).....5
- Other (Specify \_\_\_\_\_).....6
- Don't know .....98

[IF RESPONSE TO F1 DOES NOT INCLUDE 4 OR 5, THEN ASK H2.]

H2. Why don't you use Manual J calculations to determine system sizing for all the units that you install? [CIRCLE ALL THAT APPLY]

- Too time consuming .....1
- Results aren't accurate .....2
- Other methods works as well.....3
- Other (Specify) \_\_\_\_\_.....4
- Don't know .....98

H3. What duct installation procedures do you usually take to ensure efficient HVAC system operation? [DO NOT READ; CIRCLE ALL MENTIONED.]

- Insulation of all ducts in unconditioned spaces .....1
- Use of special duct mastic to seal joints, seams, holes, corners .....2
- Installation of cold air returns in all rooms except kitchen, bath and laundry .....3
- Other (Specify: \_\_\_\_\_) .....4

H4. How do you check the refrigerant charge in a newly installed heat pump or air conditioner?

- Weigh refrigerant.....1
- Use Superheat method .....2
- Use Subcooling method .....3
- Other (Specify) \_\_\_\_\_.....4
- Don't know .....98

H5. Do you routinely check the airflow over the indoor coils during an installation?

- Yes .....1
- No.....2
- Don't Know .....98

H6. [IF H5. = 1 How do you check the air flow over the coils?

- Don't check.....1
- Use manometer .....2
- Use magnehelic gauge .....3
- Measure temperature drop .....4
- Use other (Specify \_\_\_\_\_) .....5
- Don't know .....98



H7. Have your practices in regard to sizing and installing residential HVAC equipment changed as a result of your experience in your local utility's HVAC REBATE program?

- Yes .....1
- No.....2
- Don't Know .....98

H8. [H7. = 1] Could you describe those changes for me?

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**I. Training and Certification**

I have a few questions on staff training and certification

I1. What percent of your residential installers and service technicians have attended training classes in each of the following: [READ LIST – ENTER NUMBER]

- Manual J (system sizing) ..... \_\_\_\_
- Manual D (duct design) ..... \_\_\_\_
- System charging..... \_\_\_\_
- System airflow measurement..... \_\_\_\_
- High efficiency furnace and boiler installation issues – venting, condensate \_\_\_\_
- Other technical issue (Specify \_\_\_\_\_) ... \_\_\_\_
- Other technical issue (Specify \_\_\_\_\_) ... \_\_\_\_
- Don't know .....98

I2. Where did your installers and service technicians receive this training? [CIRCLE ALL THAT APPLY]

- Provided in-house .....1
- East Heating and Cooling Council.....2
- ACCA sponsored training .....3
- SMACNA sponsored training .....4
- Distributor sponsored training .....5
- DOE/ENERGY STAR .....6
- Manufacturer sponsored training .....7
- Utility sponsored training (Eastern Heating and Cooling Council).....8
- Other (Specify) \_\_\_\_\_ .....9
- Don't know .....98

I3. What percent of your sales staff have received training in how to sell high efficiency equipment [ENTER NUMBER] .....

[If I3 = 0 Skip to I5.]

I4. Where did they receive this training? [CIRCLE ALL THAT APPLY]

Provided in-house .....	1
East Heating and Cooling Council.....	2
ACCA sponsored training.....	3
SMACNA sponsored training.....	4
Distributor sponsored training .....	5
DOE/ENERGY STAR.....	6
Manufacturer sponsored training .....	7
Utility sponsored training .....	8
Other (Specify) _____.....	9
Don't know .....	98

I5. Are you aware of the NATE certification program

Yes .....	1
No.....	2

I6. [IF I5 = 1, Else Goto I1.] What value do you see in your staff receiving NATE certification?

\_\_\_\_\_

\_\_\_\_\_

I7. What percent of your staff have received NATE certification?

ENTER NUMBER.....	_____
Don't know .....	98

That is all the questions that we have for you. Thank you for your time. Your feedback will help the NJ BPU structure the HVAC to best meet the needs of the market.

**RES HVAC Non-Participating Contractor Survey**  
**v 1/20/06**

Contact Name: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Survey ID Number: \_\_\_\_\_

“Hello, my name is \_\_\_\_\_ and I am calling on behalf of the New Jersey Clean Energy Programs. We’re interviewing a sample of contractors install high-efficiency heating and cooling equipment. May I please speak to (CONTACT NAME)? I want to assure you that this is not a sales call.

The purpose of this research is to assess your understanding and awareness of the benefits of high-efficiency heating and cooling equipment. The New Jersey BPU does not intend to report the information you provide other than in an aggregated form that protects your identity.

This interview will take between 15 and 20 minutes. We recognize that this is a sizeable time commitment and we can proceed now over the phone; or we can schedule a more convenient time.”

NP1. Have you heard of the residential high-efficiency HVAC program operated by New Jersey’s utilities (formerly called Warm Advantage and Cool Advantage)?

- Yes .....1
- No .....2
- Don’t know .....98

NP1a. [ASK IF NP1 = 1] Have you participated in this program?

- Yes [Change to Participant Survey] .....1
- No .....2
- Don’t know .....98

NP1b. [ASK IF NP1a. = 2] What was the main reason you did not participate in this program?  
 [CIRCLE ONE]

NP1c. Were there other reasons? [CIRCLE ALL THAT APPLY]

	NP1b.	NP1c.
No other reasons .....	0	0
Promotion of energy efficiency not important to business strategy .....	1	1
Perceive that customers generally not interested in energy efficiency .....	2	2
Savings to customers do not justify extra costs of equipment .....	3	3
Performance problems with high efficiency equipment .....	4	4
Reliability problems with high efficiency equipment .....	5	5
Availability problems with high efficiency equipment .....	6	6
Do not believe it is profitable to promote high efficiency equipment .....	7	7
Utility rebate paperwork is a hassle .....	8	8
Utility inspection process is a hassle .....	9	9
Not aware of high efficiency equipment .....	10	10
Other (Specify) _____ .....	11	11
Don't Know .....	98	98

### A. Company Background

We'd like to begin by asking you a few general questions about your company.

A1. In how many heating and/or cooling systems did you install in residential homes in 2005?

a. ENTER NUMBER IN EXISTINGS HOMES .....

b. ENTER NUMBER IN NEW HOMES .....

[IF A1. = 0, THEN SKIP to A3.]

A2. In what percentage of the homes did you install the ductwork as well as heating and cooling equipment itself?

a .ENTER PERCENT IN EXISTING HOMES..... %

b .ENTER PERCENT IN NEW HOMES .....

A3. Roughly how many units of residential [type of equipment] did you install in 2005?

a. Gas furnaces .....

b. Gas boilers .....

c. Central air conditioners .....

d. Air source heat pumps .....

e. Oil and propane heating equipment .....

f. Programmable thermostats .....

A4. What percent of your [type of equipment] installations in existing homes were emergency installations of failed units?

a. Gas furnaces .....

b. Gas boiler .....

c. Central air conditioners .....

d. Heat pumps .....

A5. Which of the following best describes the geographic area your company is active in?

Your local city or town .....1  
 A metropolitan area.....2  
 A significant portion of New Jersey .....3  
 All of New Jersey.....4  
 A multi-state region .....5  
 Other (Specify).....6

A6. How many employees work at this location?  
 ENTER NUMBER OF EMPLOYEES .....

A7a. How many of these employees work in the field as residential installers?  
 ENTER NUMBER OF EMPLOYEES IN FIELD .....

A7b. Does the same field staff typically handle both residential HVAC installations and service calls?

Handle both.....1  
 Separate installer and service technician staff .....2  
 Don't know/Not Sure.....98

A8. Where do you recruit new technicians and installers from? [CIRCLE ALL THAT APPLY]

Vo-tech schools.....1  
 Community colleges .....2  
 Trade schools .....3  
 Other firms .....4  
 Trade journals .....5  
 General newspaper help wanted .....6  
 Other (Specify).....7  
 Don't know/Not Sure.....98

A9a. Which electric utility provides service to most of the homes you worked on this year?  
 ENTER NAME .....

A9b. Which gas utility provides service to most of the homes you worked on this year?  
 ENTER NAME .....

[IF RESPONDENT INSTALLED > 5 SYSTEMS (SEE A2.) IN NEW CONSTRUCTION, ASK B1., OTHERWISE SKIP TO B3.]

**B. Market Share and Marketing To Builders And General Contractors**

Now I'd like to ask you a few questions about your experience in selling energy efficient equipment in new construction.

B1. What percentage of the [TYPE OF EQUIPMENT] you installed in new homes in 2005 were (or had) [EFFICIENCY CRITERIA FROM ANSWER GRID] or above?

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[IF RESPONDENT INSTALLED > 5 SYSTEMS (SEE A2.) IN EXISTING CONSTRUCTION, ASK B3, OTHERWISE SKIP TO C1.]

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For B1. and B3.

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b. Gas Boilers	AFUE ≥85%		
c. Central Air Conditioners	Tier 1 - SEER 13/EER 11		
d. Central Air Conditioners	Tier 2 - SEER 14/EER 11.5 or EER 12		
e. Central Air Conditioners	Tier 2 - SEER 15/EER 12.5		
f. Air Source Heat Pumps	Tier 1 - SEER 13/EER 11 and 8 HSPF		
g. Air Source Heat Pumps	Tier 2 - SEER 14/EER 11.5/12 and 8.5 HSPF		
h. Air Source Heat Pumps	Tier 2 - SEER 15/EER 12.5 and 8.5 HSPF		
i. Gas Water Heater	≥0.62 Energy Factor		
j. Programmable Thermostats	ENERGY STAR		

[IF RESPONDENT INSTALLED > 5 SYSTEMS (SEE A2.) IN NEW CONSTRUCTION, ASK THIS SECTION (QUESTIONS C1. - C4.)]

### **C. Marketing Of Energy Efficient Equipment In New Homes**

The next set of questions address marketing of energy-efficient heating and cooling equipment to builders and general contractors.

C1. Of the new construction projects you completed as a subcontractor over the past two years, what percentage did you get ....

- a. By submitting a price bid on a written or verbal specification \_\_\_\_\_%
- b. Through existing relations with the builder, with no bidding.. \_\_\_\_\_%
- c. By submitting qualifications ..... \_\_\_\_\_%
- d. Through other channels (Specify)\_\_\_\_\_ \_\_\_\_\_%

C2. How much influence you think your recommendations had an effect on the general contractors' decisions regarding selection of heating and cooling equipment?

- A lot .....1
- Some .....2
- Not much.....3
- None.....4
- Don't know/Not sure.....98

a. [ASK IF C2. = 1 OR 2] Can you give me an example of the kinds of influence you had on a builder's selection of heating and cooling equipment?

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C3. Over the past two years has a builder or general contractor ever requested that you install equipment that exceeds current minimum federal efficiency standards?

- Yes .....1
- No.....2

[IF C3. = 1] In what percentage of projects did this occur ...

- C3a. for heating equipment..... %
- C3b. for central cooling equipment ..... %

C4. Is the installation of high-efficiency HVAC equipment more prevalent in new homes or existing homes?

- NEW Homes .....1
- EXISTING Homes.....2
- Don't know/Not Sure.....98

C5. Do you think there are any business advantages for your company in marketing high efficiency heating and cooling equipment to home builders?

- Yes .....1
- No.....2
- Don't know/Not Sure.....98

C5a. [IF C5. = 1] What are those advantages?

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C5b. [IF C5. = 2] Why do you think there are no advantages?

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[ASK C6. IF > 5 CENTRAL AIR CONDITIONERS WERE INSTALLED IN 2005. SEE ANSWERS TO QUESTION A3. ELSE SKIP TO C7.]

C6. Have you found that call-backs to address central air conditioner equipment or installation problems are more frequent when you use energy efficient versus standard equipment, less frequent, or about the same?

- More frequent.....1
- Less frequent.....2
- About the same .....3
- Don't know/Not Sure.....98

C6a. What types of problems are causing your air conditioner callbacks?

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[ASK C7. IF > 5 GAS FURNACES AND BOILERS WERE INSTALLED IN 2005. SEE ANSWERS TO QUESTIONS A3. OTHERWISE SKIP TO D1.]

C7. Have you found that call-backs to address gas furnace or boiler equipment or installation problems are more frequent when you use energy efficient versus standard equipment, less frequent, or about the same?

- More frequent.....1
- Less frequent.....2
- About the same .....3
- Don't know/Not Sure.....98

C7a. What types of problems are causing your gas HVAC callbacks? [PROBE ON HEAT EXCHANGER, CONDENSATE, AND VENTING PROBLEMS]

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[ASK SECTION D IF RESPONDENT HAS COMPLETED > 5 INSTALLATIONS IN EXISTING HOMES. SEE ANSWERS TO QUESTIONS A1 AND A2]

**D. Marketing Of Energy Efficient Equipment In Existing Homes**

Now I'd like to ask you a few more questions about your experience in selling heating and cooling equipment to owners of existing homes

D1a. When you discuss the selection of heating and cooling equipment with owners of existing homes, how often do you inform them about high efficiency models. Would you say it is ...

- In all or most cases.....1
- In some cases .....2
- In relatively few cases.....3
- In no case .....4
- Don't know/Not Sure.....98

[IF D1a. = 4 SKIP TO E1.]



D1b. In addition to energy savings, which features do you emphasize in promoting high-efficiency equipment with customers? [circle all that apply]

- No other features mentioned .....0
- Quieter operation .....1
- Greater reliability .....2
- Longer service life .....3
- Better warranty .....4
- Greater reliability .....5
- Comfort .....6
- Utility rebate .....7
- Availability of financing .....8
- Other (Specify) \_\_\_\_\_ .....9
- Don't Know/Not Sure .....98

D2a. What methods do you use to promote and market heating and cooling equipment and installations? [READ LIST. CIRCLE ALL THAT APPLY]

D2b. In which of these do you mention high efficiency HVAC equipment? [CIRCLE ALL THAT APPLY]

D2c. Which of these methods is the most effective in generating new sales leads [CIRCLE ONLY ONE]

	D2a.	D2b.	D2c.
1 Newspaper or other print advertising	1	1	1
2 Prior customer relationship	2	2	2
3 Word of mouth	3	3	3
4 Yellow Pages	4	4	4
5 Radio Ads	5	5	5
6 Other _____	6	6	6
98 Don't Know/Not Sure	98	98	98

[IF D1 = 4 (NEVER PROMOTE HIGH EFFICIENCY MODELS) SKIP TO NEXT SECTION (QUESTION E1)]

D3a. What is the biggest problem you encounter in promoting high efficiency central air conditioners in existing homes? [CIRCLE ONE]

D3b. Are there other reasons? [CIRCLE ALL THAT APPLY]

D4a. What is the biggest problem you encounter in promoting high efficiency gas furnaces and boilers in existing homes? [CIRCLE ONE]

D4b. Are there other reasons? [CIRCLE ALL THAT APPLY]

<b>Contactors Barriers</b>	D3a.	D3b.	D4a.	D4b.
0 No other problems	0	0	0	0
1 Promotion of energy efficiency not important to business strategy	1	1	1	1
2 Perception that customers generally not interested in energy efficiency	2	2	2	2
3 Savings to customers do not justify extra costs	3	3	3	3
4 Performance problems with high efficiency equipment	4	4	4	4
5 Reliability problems with high efficiency equipment	5	5	5	5
6 Availability problems	6	6	6	6
7 Do not believe it is profitable	7	7	7	7
8 Utility rebate paperwork is a hassle	8	8	8	8
9 Utility inspection process is a hassle	9	9	9	9
10 Not aware of high efficiency equipment	10	10	10	10
11 Other _____	11	11	11	11
98 Don't Know/Not Sure	98	98	98	98

D5. [IF RELIABILITY OR PERFORMANCE CITED, ASK TO EXPLAIN]

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D6. What is the average wholesale equipment costs of a ..... [Not Sure = 99998 and Refusal = 99999]

<b>Equipment</b>	<b>Average Costs (\$)</b>
a. SEER 12 CAC	
b. SEER 13 CAC	
c. SEER 14 CAC	
d. SEER 15 CAC	

D7a. How often do you promote ECM furnaces to your customers?

- In all or most cases.....1
- In some cases .....2
- In relatively few cases.....3
- In no case .....4
- Don't know/Not Sure.....98

D7b. [If D7a. = 1 or 2] How do you promote ECM furnaces? [Probe for the sales pitch]

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D8. Why do customers choose to install furnaces without ECMs instead of ECM furnaces?

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D9. What is the extra cost for an ECM furnace compared to a furnace without an ECM?

[Not Sure = 99998 and Refusal = 99999]

Extra cost for ECM Furnace .....\$ \_\_\_\_\_

**E. Market Barriers**

E1. What do you consider to be the major barriers to the **CUSTOMER’S** purchase of high-efficiency HVAC equipment in New Jersey? (*Do not prompt; Circle all that apply*)

- None .....0
- First costs .....1
- Lack of awareness of program .....2
- Lack of awareness of the benefits (energy and non-energy) .....3
- Lack of contractors knowledge .....4
- Can’t differentiate between quality and poor installation .....5
- Payback .....6
- Lack of technical knowledge .....7
- Other ( \_\_\_\_\_ ) .....8
- Don't know/unsure .....98

Thinking back over the past two years, do you think the [Read Barrier] of high-efficiency HVAC equipment has Increased significantly (1); Increased Somewhat (2); Stayed the Same(3); Decreased Somewhat(3); or Decreased Significantly (5)?

Market Barrier	←Incr. Same Decr.→
E2. Initial cost of	1 2 3 4 5 DK
E3. Operational & Maintenance cost of	1 2 3 4 5 DK
E4. Availability of	1 2 3 4 5 DK
E5. Availability of information on ( <i>Lack of information being a barrier</i> )	1 2 3 4 5 DK
E6. End-user awareness of ( <i>Lack of awareness being a barrier</i> )	1 2 3 4 5 DK
E7. Availability of financial incentives ( <i>Prog incvts more avail=decr bar</i> )	1 2 3 4 5 DK
E8. Avail of technical assistance for ( <i>Prog tech asst more avail=decr bar</i> )	1 2 3 4 5 DK
E9. Other Barrier _____	1 2 3 4 5 DK
E10. Other Barrier _____	1 2 3 4 5 DK

E11. Overall, do you feel these barriers are increasing, decreasing, or remaining the same?

- Increasing → E11a. Why? .....1
- Staying the same .....2
- Decreasing → E11b. Why? .....3
- Don't know/unsure .....98

[SECTION F HAS BEEN REMOVED FOR THIS SURVEY. REMAINING SECTION NUMBER KEPT TO FACILITATE COMPARISION BETWEEN SURVEYS]

**G. Awareness Of Energy Star**

G1. How would you explain what the ENERGY STAR label means to you in regard to the residential HVAC equipment you sell or install? [DO NOT PROMPT. CIRCLE ALL THAT APPLY]

- The product meets certain efficiency specifications .....1
- The specifications were worked out with industry .....2
- The product saves energy.....3
- The product saves my customers money .....4
- The product is reliable .....5
- The product is more expensive than standard models .....6
- The product helps the environment.....7
- Other (Specify).....8
- Not familiar with ENERGY STAR label.....9

G1a. [IF G1 = 9]. Prior to this interview, were you aware of the ENERGY STAR standards for residential HVAC equipment?

- Yes .....1
- For some of the types of equipment covered.....2
- Somewhat.....3
- No.....4
- Don't know .....98

G1b. [IF G1. = 9]. Do you use the ENERGY STAR label as a selling point for high efficiency HVAC equipment?

- Yes .....1
- No.....2
- Don't know .....98

G1c. [IF G1b. = NO] Why not? \_\_\_\_\_  
\_\_\_\_\_

**H. Installation Practices**

[Ask the following question for all HVAC that the contractor installs, including those installed OUTSIDE of the NJ Clean Energy program.]

H1. What methods do you use most often to size heating and cooling equipment including those units installed OUTSIDE the program? [CIRCLE ALL THAT APPLY]

- Size to previous unit.....1
- Use tons/square foot estimate/rule of thumb .....2
- Other rules of thumb .....3
- Manual J.....4
- Computer program (Name of program \_\_\_\_\_).....5
- Other (Specify \_\_\_\_\_).....6
- Don't know .....98

**[IF RESPONSE TO F1 DOES NOT INCLUDE 4 OR 5, THEN ASK H2.]**

H2. Why don't you use Manual J calculations to determine system sizing for all the units that you install? [CIRCLE ALL THAT APPLY]

- Too time consuming .....1
- Results aren't accurate .....2
- Other methods works as well.....3
- Other (Specify) \_\_\_\_\_.....4
- Don't know .....98

H3. What duct installation procedures do you usually take to ensure efficient HVAC system operation? [DO NOT READ; CIRCLE ALL MENTIONED.]

- Insulation of all ducts in unconditioned spaces .....1
- Use of special duct mastic to seal joints, seams, holes, corners .....2
- Installation of cold air returns in all rooms  
except kitchen, bath and laundry .....3
- Other (Specify: \_\_\_\_\_) .....4

H4. How do you check the refrigerant charge in a newly installed heat pump or air conditioner?

- Weigh refrigerant .....1
- Use Superheat method .....2
- Use Subcooling method .....3
- Other (Specify) \_\_\_\_\_.....4
- Don't know .....98

H5. Do you routinely check the airflow over the indoor coils during an installation?

- Yes .....1
- No.....2
- Don't Know .....98

H6. [IF H5. = 1 How do you check the air flow over the coils?

Don't check.....	1
Use manometer .....	2
Use magnehelic gauge .....	3
Measure temperature drop .....	4
Use other (Specify_____)	5
Don't know .....	98

H7. Have your practices in regard to sizing and installing residential HVAC equipment changed as a result of your experience in your local utility's HVAC REBATE program?

Yes .....	1
No.....	2
Don't Know .....	98

H8. [H7. = 1] Could you describe those changes for me?

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**I. Training and Certification**

I have a few questions on staff training and certification

I1. What percent of your residential installers and service technicians have attended training classes in each of the following: [READ LIST – ENTER NUMBER]

a. Manual J (system sizing).....	___
b. Manual D (duct design) .....	___
c. System charging .....	___
d. System airflow measurement.....	___
e. High efficiency furnace and boiler installation issues – venting, condensate ___	
f. Other technical issue (Specify_____)	___
g. Other technical issue (Specify_____)	___
h. Don't know .....	98

I2. Where did your installers and service technicians receive this training? [CIRCLE ALL THAT APPLY]

Provided in-house .....	1
East Heating and Cooling Council.....	2
ACCA sponsored training .....	3
SMACNA sponsored training .....	4
Distributor sponsored training .....	5
DOE/ENERGY STAR .....	6
Manufacturer sponsored training .....	7
Utility sponsored training (Eastern Heating and Cooling Council).....	8
Other (Specify) _____	9
Don't know .....	98

I3. What percent of your sales staff have received training in how to sell high efficiency equipment  
[ENTER NUMBER] .....

**[If I3 = 0 Skip to I5.]**

I4. Where did they receive this training? [CIRCLE ALL THAT APPLY]

- Provided in-house .....1
- East Heating and Cooling Council.....2
- ACCA sponsored training.....3
- SMACNA sponsored training.....4
- Distributor sponsored training .....5
- DOE/ENERGY STAR.....6
- Manufacturer sponsored training .....7
- Utility sponsored training .....8
- Other (Specify) .....9
- Don't know .....98

I5. Are you aware of the NATE certification program

- Yes .....1
- No.....2

I6. **[IF I5 = 1, Else Goto I1.]** What value do you see in your staff receiving NATE certification?

\_\_\_\_\_  
\_\_\_\_\_

I7. What percent of your staff have received NATE certification?

- ENTER NUMBER.....
- Don't know .....98

That is all the questions that we have for you. Thank you for your time. Your feedback will help the NJ BPU structure the HVAC to best meet the needs of the market.

**NJ Residential HVAC Program  
HVAC Distributor Interviews**

Distributor Name: \_\_\_\_\_  
Distributor Phone: \_\_\_\_\_  
Distributor Street Address: \_\_\_\_\_  
Distributor City, State, Zip: \_\_\_\_\_  
Interviewer Name: \_\_\_\_\_  
Interview Date: \_\_\_\_\_

[Some of the distributors in the sample may sell only commercial HVAC equipment. Please first ask if the distributor sells **RESIDENTIAL** HVAC equipment]

Hello, my name is <interviewer name> I am calling from Summit Blue Consulting on behalf of the New Jersey Board of Public Utilities, BPU. Our company has been hired by the NJ BPU to conduct an assessment of the market for high-efficiency **RESIDENTIAL** HVAC equipment in New Jersey. The purpose of this study is to develop information on the residential HVAC market to refine the current energy efficiency programs to better capture opportunities.

We would like to discuss your stocking practices and sales of high-efficiency HVAC equipment with either the owner or operating manager of your distributorship. Is either the owner or manager available?

[Redo intro with owner/operating manager and add the following]

All the information collected in this interview will be kept strictly confidential and will only be report to the NJ BPU in aggregate. Our study will not show individual responses.

**A) Distributor Profile**

1) What types of RESIDENTIAL HVAC equipment do you carry? [circle all that apply]

- Air conditioning (<65,000 Btuh) .....1
- Air-source heat pumps(<65,000 Btuh) .....2
- Ground-source heat pumps (<65,000 Btuh) .....3
- Gas furnace (<225,000 Btuh).....4
- Gas boilers (<300,000 Btuh).....5
- Other \_\_\_\_\_ .....6

2) Manufacturers lines carried [circle all that apply]

- Carrier .....1
- Trane .....2
- Burnham.....3
- General Electric .....4
- Lennox .....5
- York .....6
- Other \_\_\_\_\_ .....7



- 3) To what areas of NJ do you supply equipment?  
 The entire state.....1  
 Northern NJ.....2  
 Southern NJ.....3  
 Other \_\_\_\_\_.....4
- 4) In your opinion who are the largest residential HVAC distributors that serve NJ?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 5) What portion of your sales are to contractors or business that perform installations outside of NJ?  
 Portion of sales outside NJ..... %
- 6) About how many contractors do you serve?.....
- 7) What is the average size of the contractor? [Allow any of the 3 response types]  
 a) By sales volume .....  
 b) By employees.....  
 c) By number of trucks.....
- 8) Do you serve any large retailers?.....

**B) Market Measurement**

**2005 Levels - This table is provided for the interviewer's information only**

	Federal Min Eff. (Current)	ENERGY STAR (Current)	NJ Tier I (Current)	NJ Tier II (Current)
Central AC	SEER 10	13 SEER (11 EER)	13 SEER (11 EER)	14 SEER (12 EER)
Heat Pumps	SEER 10	13 SEER (11 EER) HSPF 8	13 SEER (11 EER) HSPF 8	14 SEER (12 EER) HSPF 8.5
Gas Furnaces	80%+ AFUE	90%+ AFUE	90%+ AFUE	n/a
Gas Boiler	78%+ AFUE	85%+ AFUE	85%+ AFUE	n/a

**2006 Levels- This table is provided for the interviewer's information only**

	Federal Min Eff. (4/1/06)	ENERGY STAR (4/1/06)	NJ Tier I (proposed)	NJ Tier II (proposed)
Central AC	SEER 13	14 SEER (11.5 EER)	14 SEER (12 EER)	15+ SEER (12.5 EER)
Heat Pumps	SEER 13	14 SEER (11.5 EER) HSPF 8.2	14 SEER (12 EER) HSPF 8.5	15+ SEER (12.5 EER) HSPF 8.5+
Gas Furnaces	80%+ AFUE	90%+ AFUE	90%+ AFUE	n/a
Gas Boiler	78%+ AFUE	85%+ AFUE	85%+ AFUE	n/a

- 1) How do you define “high efficiency” for boilers and furnaces?
- 78-84% AFUE .....1
  - 85-89% AFUE .....2
  - 90%+ AFUE .....3
  - Other \_\_\_\_\_ .....4
- 2) How do you define “high efficiency” for Air Conditioners and Heat Pumps?
- SEER 10-11 .....1
  - SEER 12+ .....2
  - SEER 13+ .....3
  - SEER 14+ .....4
  - SEER 15+ .....5
  - Other \_\_\_\_\_ .....6
- 3) Are you aware of the change in the Federal Minimum Appliance standard for central air conditioning units and heat pumps?
- Yes .....1
  - No.....2
- 3a.) [If 3 = Yes] What is the **new** minimum efficiency standard for central air conditioning units and heat pumps?
- SEER 10 [*old standard*].....1
  - SEER 11 .....2
  - SEER 12.....3
  - SEER 13 [*new standard*] .....4
  - Other \_\_\_\_\_ .....5
  - Don't Know .....98
- 4) Has the new federal minimum standard caused any changes in the supply availability or your stocking practices?
- 
- 
- 
- 
- 
- 
- 5) Are the lower SEER Levels (< SEER 13) still available?
- Yes .....1
  - No.....2
- 5a) Explain
- 
-

6) Have you seen any signs that the manufacturers are trying to “unload” the lower SEER units prior to the change in federal standards?

Yes .....1

No.....2

6a) Explain

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7) For each of the residential HVAC product areas what portion of your sales is in high efficiency categories? Estimate by both Energy Star and by New Jersey Utility standards. (We will have a table of all manufacturer’s product efficiency ratings for reference).

	ENERGY STAR (Current)	% of Sales of Equip Type	NJ Tier II (Current)	% of Sales of Equip Type	NJ Tier II (Current)	% of Sales of Equip Type
Central AC	13 SEER		14 SEER		15+ SEER	
Heat Pumps	13 SEER HSPF 8		14 SEER HSPF 8.5		15+ SEER HSPF 8.5	
Gas Furnaces	90%+ AFUE		n/a		n/a	
Gas Boiler	85%+ AFUE		n/a		n/a	

8) How does portion of high-efficiency equipment vary by the manufacturers that you carry? For example do you sell more high-efficiency Trane units than other units?

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9) Do you think you sell more high-efficiency units than other distributors in the area?

Yes .....1

No.....2

9a) Explain

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10). What is the average wholesale equipment costs of a ..... [Not Sure = 99998 and Refusal = 99999]

Equipment	Average Costs (\$)
a. SEER 12 CAC	
b. SEER 13 CAC	
c. SEER 14 CAC	
d. SEER 15 CAC	
e. Furnace (AFUE < 90%)	
f. Furnace (AFUE ≥ 90%)	
g. Furnace (AFUE ≥ 92% w ECM)	

h. Boiler (AFUE < 85%)	
i. Boiler (AFUE ≥ 85%)	
j. Water Heater (Energy Factor < 0.62)	
k. Water Heater (Energy Factor ≥ 0.62)	

**C) Distributor’s Marketing Strategy**

1) What is your principal product focus? Do you carry product categories with the strongest demand, particular lines of products, or focus on providing quality products?

- Product categories of strongest interest .....1
- Lines of principal emphasis .....2
- Quality levels .....3
- Other .....4

1a) Please explain \_\_\_\_\_  
 \_\_\_\_\_

2) What part of the residential HVAC market do you focus on? Single family vs. multifamily, High end vs. average price, New construction vs. replacement

- Single Family .....1
- Multi-family .....2
- High-end .....3
- Average Price.....4
- New Construction Market.....5
- Replacement market.....6
- Other .....7

2a) Please explain \_\_\_\_\_  
 \_\_\_\_\_

3) What role does high efficiency have in the strategy?

\_\_\_\_\_  
 \_\_\_\_\_

4) Is high efficiency positioned as one of several high-end features, or the principal focus of promotion?

\_\_\_\_\_  
 \_\_\_\_\_

5) What other benefits (besides energy-efficiency) of the equipment are typically promoted and how important is each?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- 6) Do you promote high efficiency equipment?  
 Yes .....1  
 No.....2

6a) How?

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- 7) How do you decide how much high efficiency equipment to stock? (recent trends, seasonal, other?)

- Recent Trends .....1  
 Seasonal .....2  
 Manufacturer Promotions .....3  
 Other .....4  
 Don't Know .....98

- 8) Do manufacturers or contractors influence the product mix you carry?

- Yes .....1  
 No.....2

8a) How?

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- 9) Does this vary among manufacturers or contractors?

- Yes .....1  
 No.....2

9a) Please explain?

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**D) Purchase Decision Making**

- 1) What do you believe are the principal factors in the homeowner's purchase decision?

[circle all that apply]

- Price .....1  
 Lifetime costing .....2  
 Contractor advice .....3  
 Past experience.....4  
 Brand of equipment.....5  
 Efficiency .....6  
 Other quality features (e.g. quiet operation) .....7  
 Low maintenance .....8  
 Other .....9

- 2) Does this vary by market segment?

- Yes .....1  
 No.....2

2a) Please explain?

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**E) Key Barriers to Purchase of Efficient Equipment**

1) What do you believe are the principal barriers to increasing the share of high efficiency HVAC equipment and how important is each? (Ask as an open-ended question but prompt to be sure to include the following)

- Customer perception of high first cost.....1
- Lack of interest of the contractor in selling high efficiency .....2
- Lack of understanding of efficiency by the homeowner .....3
- Skepticism as to the claims of the contractor/manufacturer .....4
- Price competition between contractors on a first cost basis .....5
- Low stock of high efficiency equipment in the field .....6
- Lack of interest of the distributor in selling high efficiency.....7

2) In your opinion what programs could be put in place to lower each of these barriers? (Ask as an open-ended question but prompt to be sure to include the following)

- Financing programs (Do you offer these?) .....1
- Contractor education/training (Do you offer?) .....2
- Consumer education.....3
- Subsidy programs (Rebates) .....4
- Other \_\_\_\_\_ .....5

3) Do you participate in the New Jersey electric and gas utility HVAC program?

- Yes .....1
- No.....2
- Don't Know .....98

4) [If 3 = Yes] How can the utility programs be improved?

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5) [If 3 = No] Why don't you participate the New Jersey electric and gas utility HVAC program??

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**F) Future Trends in High Efficiency Market**

1) What changes do you see coming in the future in the HVAC market nationally and in New Jersey?

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2) How will the importance of energy efficiency change in the future? Why??

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3) How will this change how you operate your business? Why??

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**That is all the questions I have for you. Thank you for your time. Your feedback is very important to help the NJ BPU understand the HVAC market in New Jersey.**

# **NJ ENERGY STAR HOMES PROGRAM SURVEY INSTRUMENTS**



**NJ ENERGY STAR<sup>®</sup>**  
**Residential New Construction**  
**Confirmed Energy Star Home Buyer**  
**(Confirmed Participant)**  
**Consumer Telephone Survey**

**I. Contact Info and Intro**

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities is conducting a study about energy use in New Jersey. I'd like to ask you a few questions – for most people it takes a few minutes, but it may take as long as 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx]

- 1. Yes, Continue with respondent.....Continue
- 2. No – New respondent coming to phone.....Reintroduce yourself
- 3. No – Respondent not available .....Schedule callback
- 99. Refused .....Thank and Terminate

[ONCE CORRECT PERSON IS ON THE LINE, REINTRODUCE AND CONTINUE.]

Could you spare about five to ten minutes now, or is there a more convenient time I could call you back?

- 1. Yes – Available now.....Continue
- 2. Not available .....Arrange callback
- 3. No.....Thank and Terminate
- 98. Don't know .....Thank and Terminate
- 99. Refused .....Thank and Terminate

i. First, just to confirm, is this a new home that was built within the last two years?

- 1. Yes .....Continue
- 2. No.....Thank and Terminate

- 98. Don't know .....Continue
  
- ii. Were you involved in the decision to purchase this home?
  - 1. Yes .....Continue
  - 2. No.....Ask for the head of household or other decision-maker and begin again
  
- iii. Does this house have any special designation or label, that you know of?
  - 1. Yes, it is an ENERGY STAR home .....SKIP TO AW5.
  - 2. No.....Continue
  - 98. Don't know .....Continue

**Awareness and Availability**

AW1. Have you ever seen or heard of the ENERGY STAR [*emphasize "STAR"*] label?

- 1. Yes .....skip to AW3
- 2. No
- 98. Not sure/Don't know

AW2. 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; they may also appear on the yellow Energy Guide label. Had you seen or heard of such a label before now?

- 1. Yes .....
- 2. No .....Skip to "Decision Making Process" Section
- 98. Not sure/Don't know .....Skip to "Decision Making Process" Section

AW3. Have you ever seen or heard of the ENERGY STAR label for homes?

- 1. Yes
- 2. No
- 98. Not sure/Don't know

AW4. To the best of your knowledge, is your new home an ENERGY STAR labeled home?  
This would mean that your home was tested for energy efficiency and received a Home Energy Rating (HERS) score of at least 86.

- |                         |   |
|-------------------------|---|
| 1. Yes                  | Note that everyone getting this survey should be an Energy Star home buyer      |
| 2. No                   | Switch to Non-Participant Survey and begin at "Decision Making Process" Section |
| 98. Not sure/Don't know | Switch to Non-Participant Survey and begin at "Decision Making Process" Section |

AW5. At what point in the home-buying process did you become aware of ENERGY STAR labeled homes? Was it . . . ?

1. Before starting the home search
2. Realtor brought it up
3. Builder brought it up
4. Other brought it up (specify: \_\_\_\_\_)
98. Don't know [DO NOT READ]
99. Refused

AW6. Through what source did you first become aware of ENERGY STAR labeled homes?

**[DO NOT READ; CHECK ONE]**

1. TV Advertising
2. TV news feature story
3. Radio ad
4. NJ Clean Energy Public Service Announcement or other PSA
5. Print ads or brochures
6. Newspaper/magazine article
7. Website/Internet (unspecified)
8. www.njcleanenergy.com
9. www.energystar.gov
10. Builder or sales agent
11. Architect
12. Word of mouth (friend, coworker, acquaintance)
13. Model home tour
14. At a public event
15. Received a packet of information left at the house
16. Other (specify: \_\_\_\_\_)
98. Don't know/Don't remember
99. Refused

AW7. What does the ENERGY STAR label for New Homes mean to you? **[Open Ended]**

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AW8. **[If AW5 not equal 3]** Did the builder bring up, as a selling point, that a home was an ENERGY STAR home?

1. Yes
2. No
98. Don't know/Don't remember/Not applicable (no contact with builder)

AW9. **[If AW5 not equal 2]** Did the sales agent or realtor bring up, as a selling point, that a home was an ENERGY STAR home?

1. Yes
2. No
98. Don't know/Don't remember/Not applicable (no contact with realtor)

AW10. [If AW8=1 or AW9=1] Which ENERGY STAR features did the builder or sales agent promote? [DO NOT READ; CHECK ALL THAT APPLY]

1. Energy efficiency
2. Air quality
3. Overall quality
4. Cooling system
5. Heating system
6. Duct tightness
7. Tight construction/less draftiness
8. Durability
9. Less moisture buildup/mold
10. Home comfort
11. Other (specify: \_\_\_\_\_)
12. None specifically
98. Don't know/Don't remember

AW11. [If AW4=1] Did you see the ENERGY STAR label on or associated with the home you purchased – either on a plaque, on the doormat, or on the Home Energy Rating Certificate?

1. Yes
2. No
98. Don't know/Don't remember

AW12. Did you see the ENERGY STAR label on or associated with other homes that you looked at?

1. Yes
2. No
98. Don't know/Don't remember

AW13 In your experience searching for your new home or for a builder who could construct one, how available would you say that ENERGY STAR labeled homes were? Would you say they were . . . ?

1. Very unavailable
2. Somewhat unavailable
3. Neither available nor unavailable
4. Somewhat available
5. Very available
98. Don't know [DO NOT READ]
99. Refused

- AW14. [If AW4=1] Do you know how a home qualifies as an ENERGY STAR home?
1. Yes (specify: \_\_\_\_\_)
  2. No
  98. Don't know/Don't remember

- AW15. [If AW4=1] Do you know who or what organization did the Home Energy Rating on your home? [If needed: *To qualify as an ENERGY STAR home, your house needed to be rated with the Home Energy Rating System, or HERS.*]
1. Yes (specify: \_\_\_\_\_)
  2. No
  98. Don't know/Don't remember

- AW16. [If AW4=1] Did you arrange for a HERS rater to come test your house, or did your builder arrange to have this test conducted?
1. Respondent arranged for HERS rating
  2. Builder arranged for HERS rating
  98. Don't know
  99. Refused

- AW17. [If AW16=1] How hard or easy was it to find a HERS rater? Would you say HERS raters were very available, somewhat available, somewhat unavailable, or very unavailable?
1. Very unavailable
  2. Somewhat unavailable
  3. Neither available nor unavailable
  4. Somewhat available
  5. Very available
  98. Don't know [DO NOT READ]
  99. Refused

- AW18. [If AW4=1] Do you remember what the HERS rating was for your home?
- \_\_\_\_\_ (HERS rating)
98. Don't know [DO NOT READ]

## Decision-Making Process

- DM1. Which of the following statements best describes your involvement in the design and building of your new home?
1. We bought a home that was already built or a model home
  2. We selected from a number of home designs that the builder offered and made *few* or *no* changes to the standard design

- 3. We selected from a number of home designs that the builder offered and made *some* changes to a standard design
- 4. We had the home custom built to our specifications
- 98. Don't know/Not sure [DO NOT READ]
- 99. Refused

DM2. Did any of the following information sources give you ideas about the home you wanted to buy or build? [READ AND CHECK ALL THAT APPLY]

- 1. Builder's open house
- 2. Print advertisements
- 3. Real estate agents
- 4. Radio
- 5. TV
- 6. Internet
- 7. Friends or relatives
- 8. Utility representative
- 9. Lender
- 10. None of these [DO NOT READ]
- 98. Don't know/Not sure [DO NOT READ]

DM3. People select their home based on a number of different factors. For each factor I read, please tell me how important the factor was in your home purchase decision. Please tell me if it was . . . ?

- 1. Not at all important
- 2. Somewhat unimportant
- 3. Neither important nor unimportant
- 4. Somewhat important
- 5. Very important
- 98. Don't know [DO NOT READ]
- 99. Refused

Location	1	2	3	4	5	98	99
Appearance	1	2	3	4	5	98	99
Price	1	2	3	4	5	98	99
Size	1	2	3	4	5	98	99
Quality of Construction	1	2	3	4	5	98	99
Comfort	1	2	3	4	5	98	99
Availability of Upgrades	1	2	3	4	5	98	99
Mortgage Financing	1	2	3	4	5	98	99
Energy Efficiency	1	2	3	4	5	98	99
Other (Specify: _____)	1	2	3	4	5	98	99

DM4. For each of the following people, would you say they influenced your decision to buy your specific home? Did they have a lot of influence on your decision, some influence, a little influence or no influence on your decision?

- 1. No influence
- 2. Very little influence
- 3. Some influence
- 4. A lot of influence
- 98. Don't know/Don't remember [DO NOT READ]
- 99. Refused

Builder	1	2	3	4	98	99
Real Estate agent	1	2	3	4	98	99
Lender	1	2	3	4	98	99
Utility	1	2	3	4	98	99
Homebuyer Education Class	1	2	3	4	98	99
Other (specify: _____)	1	2	3	4	98	99

DM5. Did you discuss energy efficient mortgages with your lender?

- 1. Yes
- 2. No.....Skip to DM7
- 98. Don't know/Not sure/Not applicable..... Skip to DM7

DM6. [If DM5=1] Did you receive any special mortgage interest rate, or need less income to qualify for a mortgage, because of the energy efficiency of your home?

- 1. Yes (specify: \_\_\_\_\_)
- 2. No
- 98. Don't know/Don't remember

DM7. To the best of your knowledge, which of the following products and features are installed in your new home? [READ FEATURES FROM TABLE BELOW]

- 1. Yes
- 2. No
- 98. Don't know/Not sure

DM8. For each of the items installed please tell me which you purchased as an upgrade over what originally would have been installed. [TABLE BELOW]

- 1. Yes
- 2. No
- 98. Don't know/Not sure



	DM7. Which features are installed?			DM8. Purchased as upgrade to standard package?		
Higher insulation levels than standard construction	Y	N	DK	Y	N	DK
Air sealing	Y	N	DK	Y	N	DK
ENERGY STAR Furnace, Boiler, or heat pump (heating system)	Y	N	DK	Y	N	DK
Duct sealing	Y	N	DK	Y	N	DK
ENERGY STAR windows or doors	Y	N	DK	Y	N	DK
ENERGY STAR Refrigerator	Y	N	DK	Y	N	DK
ENERGY STAR Clothes washer	Y	N	DK	Y	N	DK
ENERGY STAR Dishwasher	Y	N	DK	Y	N	DK
ENERGY STAR Central Air Conditioner	Y	N	DK	Y	N	DK
ENERGY STAR Room Air Conditioning	Y	N	DK	Y	N	DK
ENERGY STAR Lighting ( <i>CFLs or fixtures</i> )	Y	N	DK	Y	N	DK
High Efficiency water heater (Natural gas water heaters: EF of 2.48 for 100+ gal, 2.53 for 60-100 gal, 2.58 for <60 gal with sealed combustion, 2.61 for <60 gal with natural draft ventilation. Electric water heaters: .85 energy factor)	Y	N	DK	Y	N	DK

DM9. For items purchased as an upgrade, please tell us why you decided to purchase this upgrade. **[DO NOT READ LIST, CHECK ALL THAT APPLY]**

1. Save money on energy bill/energy cost too high
2. Increase comfort
3. Improve indoor air quality
4. Better quality equipment/reduced equipment maintenance/longer equipment life
5. Increase resale value
6. Environmental concerns
7. Other (Specify: \_\_\_\_\_)

## Importance of ENERGY STAR

[If AW4=1, Ask; else Skip to IC1] Purchasers of ENERGY STAR homes only. Note that everyone getting this survey should have AW4=1.

IM1. Why did you buy an ENERGY STAR labeled home? [DO NOT READ; CHECK ALL THAT APPLY; PROBE]

1. Higher quality home
2. "Green"/Environmentally friendly
3. Save energy
4. Lower energy/utility bills
5. Reduced draftiness
6. Better indoor air quality
7. Increased comfort
8. Home is more valuable/resale value
9. Incentive or rebate (specify source: \_\_\_\_\_)
10. Other reason (specify: \_\_\_\_\_)

IM2. What do you consider to be the most important benefit of purchasing an ENERGY STAR home? [DO NOT READ; SELECT ONE ITEM ONLY]

1. Higher quality home
2. "Green"/Environmentally friendly
3. Save energy
4. Lower energy/utility bills
5. Reduced draftiness
6. Better indoor air quality
7. Increased comfort
8. Home is more valuable/resale value
9. Incentive or rebate (specify source: \_\_\_\_\_)
10. Other reason (specify: \_\_\_\_\_)

IM3. [If AW5 = 1] Were you specifically looking for an ENERGY STAR labeled home when you began your home search?

1. Yes
2. No.....Skip to IM5

IM4. [If AW5 = 1] Did you limit your search to ENERGY STAR homes or did you also look at non-ENERGY STAR homes when you were searching for your new house?

1. ENERGY STAR only
2. Also searched non-ES Homes
98. Don't know

IM5. How important a factor was your home’s ENERGY STAR label in your decision to buy this particular home rather than another home? Would you say it was . . . ?

1. Not at all important
2. Somewhat unimportant
3. Neither important nor unimportant
4. Somewhat important
5. Very important
98. Don’t know [DO NOT READ]
99. Refused

IM6. How likely is it that you would have purchased this home if it were not an ENERGY STAR Labeled Home? Would you say that you . . . ?

1. Definitely would have purchased
2. Probably would have purchased
3. Might or might not have purchased
4. Probably would not have purchased
5. Definitely would not have purchased
98. Don’t know [DO NOT READ]
99. Refused

## Incremental Cost

Now I’d like to get your estimation of the cost and value of energy-efficient homes.

IC1. [If AW4= 1] Please project how much of an influence each of the following incentives had or would have had on your decision to purchase your home. Would you say . . . ?

1. Probably a lot of influence
2. Probably some influence
3. Might or might have an influence
4. Probably would not much influence
5. Probably not have had any influence
98. Don’t know [DO NOT READ]
99. Refused

Reduced interest mortgage rates	1	2	3	4	5	98	99
Reduced closing costs or fees	1	2	3	4	5	98	99
Utility rebates	1	2	3	4	5	98	99
Energy efficiency certification or label	1	2	3	4	5	98	99

IC2. Based on energy efficiency features alone, do you think a home's purchase price would . . . ?

1. Not increase at all
2. Increase by less than \$500
3. Increase by \$500 - \$2500
4. Increase by \$2500 - \$5000
5. Increase more than \$5000
98. Don't know [DO NOT READ]

IC5. Please tell me if your energy bills are . . . ?

1. Higher than you expected
2. Lower than you expected
3. About as you expected.....Skip to PE1
98. Don't know [DO NOT READ].....Skip to PE1

IC6. Why do you think that is? [DO NOT READ; CHECK ALL THAT APPLY]

1. We have not been in the house long enough
2. We just haven't been paying attention to the bills/energy use
3. We haven't used the energy-saving features as much as we expected
4. We're not sure how to make the comparison
5. We don't believe there have been any savings
6. We use more energy saving features than we thought we would
7. Other (specify: \_\_\_\_\_)

## Perceptions of Energy Efficient/ENERGY STAR Homes

[Note: PE1 and PE4 are asked all respondents. Purchasers of ENERGY STAR homes [AW4=1] will get question PE5. Purchasers who did not purchase an ENERGY STAR home [AW4 not equal 1] will get question PE6.]

PE1. Compared to a 'typical' home, would you say your home is 'energy efficient?'

1. Yes
2. No.....Skip to PE3

PE2. In percentages, how much energy would you say your home uses compared to the typical home? [DO NOT READ]

1. More than a typical home .....Skip to PE4
2. About the same amount .....Skip to PE4
3. 5% less .....Skip to PE4
4. 10% less .....Skip to PE4
5. 15% less .....Skip to PE4

- 6. 20% less .....Skip to PE4
- 7. 25% less .....Skip to PE4
- 8. Other (specify: \_\_\_\_\_) .....Skip to PE4

PE3. [If PE1 = 2] Why do you think your home is not energy efficient? [OPEN ENDED]

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PE4. How satisfied are you with the home’s energy efficiency attributes?

- 1. Not at all satisfied
- 2. Somewhat dissatisfied
- 3. Neither satisfied nor dissatisfied
- 4. Somewhat satisfied
- 5. Very satisfied
- 98. Don’t know [DO NOT READ]
- 99. Refused

PE5. [If AW4=1] Please tell me how much you agree or disagree with each of the following statements. Would you say you . . . [READ STATEMENTS IN RANDOM ORDER]

- 1. Strongly disagree
- 2. Somewhat disagree
- 3. Neither agree nor disagree
- 4. Somewhat agree
- 5. Strongly agree
- 98. Don’t know [DO NOT READ]
- 99. Refused

ENERGY STAR homes are hard to find	1	2	3	4	5	98	99
ENERGY STAR homes are more comfortable than standard homes	1	2	3	4	5	98	99
Most new homes are energy-efficient even if they are not ENERGY STAR certified	1	2	3	4	5	98	99
ENERGY STAR homes provide additional quality	1	2	3	4	5	98	99
ENERGY STAR homes are worth more	1	2	3	4	5	98	99
It’s hard to understand the benefits of ENERGY STAR homes	1	2	3	4	5	98	99
ENERGY STAR homes have lower energy bills	1	2	3	4	5	98	99

## DE. Demographic/Economic Module

Finally, I have a few general questions for statistical purposes. This information will be combined across all respondents and will not be shared with anyone outside of the evaluation team in any way that identifies you or your household.

DE1. Which of the following types of housing units would you say best describes your home?  
Is it a . . .

1. Single-family detached house
2. Single-family attached house (duplex, townhouse, row house)
3. Other (Specify: \_\_\_\_\_)
99. Refused **[DO NOT READ]**

DE2. What is the approximate square footage of your home?

\_\_\_\_\_ Sq Ft .....Skip to DE4

98. Don't know
99. Refused

DE3. **[If DE2 = 98]** How many rooms are in your home, not counting bathrooms? **[DO NOT READ, CHECK ONE]**

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10 or more
99. Refused

DE4. Are you a first-time homebuyer or did you own a home before you bought this one?

1. First-time homebuyer
2. Previously owned home
99. Refused

DE5. How long have you lived in this home?

\_\_\_\_\_ Months or \_\_\_\_\_ Years

DE6. Including yourself, how many children and adults normally live in this household on a full-time basis? Include all members of your household whether or not they are related to you, but do not include anyone who is just visiting or children who may be away at college or in the military.

\_\_\_\_\_

99. Refused

DE7. What is the highest level of education you have completed? Would you say...? [READ CATEGORIES]

1. Less than high school
2. High school graduate
3. Technical or trade school graduate
4. Some college
5. Two-year college graduate
6. Four-year college graduate
7. Some graduate or professional school
8. Graduate or professional degree
99. Refused

DE8. Which of the following categories best describes your age? Stop me when I reach your category. [READ CATEGORIES]

1. 18 to 24
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 or over
99. Refused

DE9. What category best describes your total household income in 2004, before taxes? Again, stop me when I reach your category. [READ CATEGORIES]

1. Less than \$15,000
2. \$15,000 - \$24,999
3. \$25,000 - \$34,999
4. \$35,000 - \$49,999
5. \$50,000 - \$74,999
6. \$75,000 - \$99,999
7. \$100,000 or more
99. Refused

DE12. Respondent's gender [RECORD, BUT DO NOT ASK]

1. Male
2. Female

*Those are all the questions I had. Thank you very much for your time!*



**NJ ENERGY STAR<sup>®</sup>**  
**Residential New Construction**  
**Non-Participant**  
**Consumer Telephone Survey**

**I. Contact Info and Intro**

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities is conducting a study about energy use in New Jersey. I'd like to ask you a few questions – for most people it takes a few minutes, but it may take as long as 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx]

- 1. Yes, Continue with respondent.....Continue
- 2. No – New respondent coming to phone.....Reintroduce yourself
- 3. No – Respondent not available .....Schedule callback
- 99. Refused .....Thank and Terminate

[ONCE CORRECT PERSON IS ON THE LINE, REINTRODUCE AND CONTINUE.]

Could you spare about five to ten minutes now, or is there a more convenient time I could call you back?

- 1. Yes – Available now.....Continue
- 2. Not available .....Arrange callback
- 3. No.....Thank and Terminate
- 98. Don't know .....Thank and Terminate
- 99. Refused .....Thank and Terminate

i. First, just to confirm, is this a new home that was built within the last two years?

- 1. Yes .....Continue
- 2. No.....Thank and Terminate
- 98. Don't know .....Continue

- ii. Were you involved in the decision to purchase this home?
  - 1. Yes .....Continue
  - 2. No.....Ask for the head of household or other decision-maker and begin again
  
- iii. Does this house have any special designation or label, that you know of?
  - 1. Yes, it is an ENERGY STAR home .....Switch to Participant survey and begin at AW5.
  - 2. No.....Continue
  - 98. Don't know .....Continue

**Awareness and Availability**

AW1. Have you ever seen or heard of the ENERGY STAR [*emphasize “STAR”*] label?

- 1. Yes .....skip to AW3
- 2. No
- 98. Not sure/Don't know

AW2. 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; they may also appear on the yellow Energy Guide label. Had you seen or heard of such a label before now?

- 1. Yes
- 2. No .....Skip to “Decision Making Process” Section
- 98. Not sure/Don't know .....Skip to “Decision Making Process” Section

AW3. Have you ever seen or heard of the ENERGY STAR label for homes?

- 1. Yes
- 2. No
- 98. Not sure/Don't know

- AW4. To the best of your knowledge, is your new home an ENERGY STAR labeled home?  
This would mean that your home was tested for energy efficiency and received a Home Energy Rating (HERS) score of at least 86.
1. Yes .....Complete Participant Survey
  2. No.....Continue
  98. Not sure/Don't know .....Continue

- AW5. [If AW3=1] At what point in the home-buying process did you become aware of ENERGY STAR labeled homes? Was it . . . ?
1. Before starting the home search
  2. Realtor brought it up
  3. Builder brought it up
  4. Other brought it up (specify: \_\_\_\_\_)
  98. Don't know [DO NOT READ]
  99. Refused

- AW6. [If AW3=1] Through what source did you first become aware of ENERGY STAR labeled homes? [DO NOT READ; CHECK ONE]
1. TV Advertising
  2. TV news feature story
  3. Radio ad
  4. NJ Clean Energy Public Service Announcement or other PSA
  5. Print ads or brochures
  6. Newspaper/magazine article
  7. Website/Internet (unspecified)
  8. www.njcleanenergy.com
  9. www.energystar.gov
  10. Builder or sales agent
  11. Architect
  12. Word of mouth (friend, coworker, acquaintance)
  13. Model home tour
  14. At a public event
  15. Received a packet of information left at the house
  16. Other (specify: \_\_\_\_\_)
  98. Don't know/Don't remember
  99. Refused

AW7. [If AW3=1] What does the ENERGY STAR label for New Homes mean to you? [Open Ended]

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AW8. [If AW3=1 and AW5 not equal 3] Did the builder bring up, as a selling point, that a home was an ENERGY STAR home?

1. Yes
2. No
98. Don't know/Don't remember/Not applicable (no contact with builder)

AW9. [If AW3=1 and AW5 not equal 2] Did the sales agent or realtor bring up, as a selling point, that a home was an ENERGY STAR home?

1. Yes
2. No
98. Don't know/Don't remember/Not applicable (no contact with realtor)

AW10. [If AW3=1 and (If AW8=1 or AW9=1)] Which ENERGY STAR features did the builder or sales agent promote? [DO NOT READ; CHECK ALL THAT APPLY]

1. Energy efficiency
2. Air quality
3. Overall quality
4. Cooling system
5. Heating system
6. Duct tightness
7. Tight construction/less draftiness
8. Durability
9. Less moisture buildup/mold
10. Home comfort
11. Other (specify: \_\_\_\_\_)
12. None specifically
98. Don't know/Don't remember

AW12. [If AW3=1] Did you see the ENERGY STAR label on or associated with other homes that you looked at?

1. Yes
2. No
98. Don't know/Don't remember

AW13 [If AW3=1] In your experience searching for your new home or for a builder who could

construct one, how available would you say that ENERGY STAR labeled homes were?  
Would you say they were . . . ?

1. Very unavailable
2. Somewhat unavailable
3. Neither available nor unavailable
4. Somewhat available
5. Very available
98. Don't know [DO NOT READ]
99. Refused

AW14. [If AW3=1] Do you know how a home qualifies as an ENERGY STAR home?

1. Yes (specify: \_\_\_\_\_)
2. No
98. Don't know/Don't remember

AW19. [If AW3=1 and AW4=2] Did you consider an ENERGY STAR home and then select a non-ENERGY STAR model?

1. Yes
2. No
98. Don't know/Don't remember

AW20. [If AW3=1 and AW4=2 and AW19=1] Why didn't you purchase an ENERGY STAR home?

Specify : \_\_\_\_\_

## Decision-Making Process

DM1. Which of the following statements best describes your involvement in the design and building of your new home?

1. We bought a home that was already built or a model home
2. We selected from a number of home designs that the builder offered and made *few* or *no* changes to the standard design
3. We selected from a number of home designs that the builder offered and made *some* changes to a standard design
4. We had the home custom built to our specifications
98. Don't know/Not sure [DO NOT READ]
99. Refused

DM2. Did any of the following information sources give you ideas about the home you wanted to buy or build? **[READ AND CHECK ALL THAT APPLY]**

1. Builder's open house
2. Print advertisements
3. Real estate agents
4. Radio
5. TV
6. Internet
7. Friends or relatives
8. Utility representative
9. Lender
10. None of these **[DO NOT READ]**
98. Don't know/Not sure **[DO NOT READ]**

DM3. People select their home based on a number of different factors. For each factor I read, please tell me how important the factor was in your home purchase decision. Please tell me if it was . . . ?

1. Not at all important
2. Somewhat unimportant
3. Neither important nor unimportant
4. Somewhat important
5. Very important
98. Don't know **[DO NOT READ]**
99. Refused

Location	1	2	3	4	5	98	99
Appearance	1	2	3	4	5	98	99
Price	1	2	3	4	5	98	99
Size	1	2	3	4	5	98	99
Quality of Construction	1	2	3	4	5	98	99
Comfort	1	2	3	4	5	98	99
Availability of Upgrades	1	2	3	4	5	98	99
Mortgage Financing	1	2	3	4	5	98	99
Energy Efficiency	1	2	3	4	5	98	99
Other (Specify: _____)	1	2	3	4	5	98	99

DM4. For each of the following people, would you say they influenced your decision to buy your specific home? Did they have a lot of influence on your decision, some influence, a little influence or no influence on your decision?

1. No influence
2. Very little influence
3. Some influence
4. A lot of influence
98. Don't know/Don't remember **[DO NOT READ]**
99. Refused

Builder	1	2	3	4	98	99
Real Estate agent	1	2	3	4	98	99
Lender	1	2	3	4	98	99
Utility	1	2	3	4	98	99
Homebuyer Education Class	1	2	3	4	98	99
Other (specify: _____)	1	2	3	4	98	99

DM5. Did you discuss energy efficient mortgages with your lender?

1. Yes
2. No.....Skip to DM7
98. Don't know/Not sure/Not applicable ..... Skip to DM7

DM6. **[If DM5=1]** Did you receive any special mortgage interest rate, or need less income to qualify for a mortgage, because of the energy efficiency of your home?

1. Yes (specify: \_\_\_\_\_)
2. No
98. Don't know/Don't remember

DM7. To the best of your knowledge, which of the following products and features are installed in your new home? **[READ FEATURES FROM TABLE BELOW]**

1. Yes
2. No
98. Don't know/Not sure

DM8. For each of the items installed please tell me which you purchased as an upgrade over what originally would have been installed. **[TABLE BELOW]**

1. Yes
2. No
98. Don't know/Not sure

	DM7. Which features are installed?			DM8. Purchased as upgrade to standard package?		
Higher insulation levels than standard construction	Y	N	DK	Y	N	DK
Air sealing	Y	N	DK	Y	N	DK
ENERGY STAR Furnace, Boiler, or heat pump (heating system)	Y	N	DK	Y	N	DK
Duct sealing	Y	N	DK	Y	N	DK
ENERGY STAR windows or doors	Y	N	DK	Y	N	DK
ENERGY STAR Refrigerator	Y	N	DK	Y	N	DK
ENERGY STAR Clothes washer	Y	N	DK	Y	N	DK
ENERGY STAR Dishwasher	Y	N	DK	Y	N	DK
ENERGY STAR Central Air Conditioner	Y	N	DK	Y	N	DK
ENERGY STAR Room Air Conditioning	Y	N	DK	Y	N	DK
ENERGY STAR Lighting ( <i>CFLs or fixtures</i> )	Y	N	DK	Y	N	DK
High Efficiency water heater (Natural gas water heaters: EF of 2.48 for 100+ gal, 2.53 for 60-100 gal, 2.58 for <60 gal with sealed combustion, 2.61 for <60 gal with natural draft ventilation. Electric water heaters: .85 energy factor)	Y	N	DK	Y	N	DK

DM9. For items purchased as an upgrade, please tell us why you decided to purchase this upgrade. **[DO NOT READ LIST, CHECK ALL THAT APPLY]**

1. Save money on energy bill/energy cost too high
2. Increase comfort
3. Improve indoor air quality
4. Better quality equipment/reduced equipment maintenance/longer equipment life
5. Increase resale value
6. Environmental concerns
7. Other (Specify: \_\_\_\_\_)

## Incremental Cost

Now I'd like to get your estimation of the cost and value of energy-efficient homes.



IC2. Based on energy efficiency features alone, do you think a home's purchase price would . . . ?

- 1. Not increase at all
- 2. Increase by less than \$500
- 3. Increase by \$500 - \$2500
- 4. Increase by \$2500 - \$5000
- 5. Increase more than \$5000
- 98. Don't know [DO NOT READ]

IC3 [If AW3=1] Do you think the price you paid for your home was higher, lower, or the same as a similar ENERGY STAR home?

- 1. Much lower
- 2. Somewhat lower
- 3. About the same
- 4. Somewhat higher
- 5. Much higher
- 98. Don't know [DO NOT READ]
- 99. Refused

IC4. [If AW4=2] Can you tell me about how much more or less expensive this home was than other similar models that were ENERGY STAR®? [Enter % or \$ AND CHECK MORE OR LESS]

\$ \_\_\_\_\_ or \_\_\_\_\_ %

- 1. More
- 2. Less
- 98. Don't know
- 99. Refused

IC5. Please tell me if your energy bills are . . . ?

- 1. Higher than you expected
- 2. Lower than you expected
- 3. About as you expected.....Skip to PE1
- 98. Don't know [DO NOT READ].....Skip to PE1

- IC6. Why do you think that is? **[DO NOT READ; CHECK ALL THAT APPLY]**
1. We have not been in the house long enough
  2. We just haven't been paying attention to the bills/energy use
  3. We haven't used the energy-saving features as much as we expected
  4. We're not sure how to make the comparison
  5. We don't believe there have been any savings
  6. We use more energy saving features than we thought we would
  7. Other (specify: \_\_\_\_\_)

## Perceptions of Energy Efficient/ENERGY STAR Homes

[Note: PE1 and PE4 are asked all respondents. Purchasers of ENERGY STAR homes [AW4=1] will get question PE5. Purchasers who did not purchase an ENERGY STAR home [AW4 not equal 1] will get question PE6.]

- PE1. Compared to a 'typical' home, would you say your home is 'energy efficient?'
1. Yes
  2. No.....Skip to PE3

- PE2. [If PE1=1] In percentages, how much energy would you say your home uses compared to the typical home? **[DO NOT READ]**
1. More than a typical home .....Skip to PE4
  2. About the same amount .....Skip to PE4
  3. 5% less .....Skip to PE4
  4. 10% less .....Skip to PE4
  5. 15% less .....Skip to PE4
  6. 20% less .....Skip to PE4
  7. 25% less .....Skip to PE4
  8. Other (specify: \_\_\_\_\_) .....Skip to PE4

- PE3. **[If PE1=2]** Why do you think your home is not energy efficient? **[OPEN ENDED]**
- 
-

PE4. How satisfied are you with the home's energy efficiency attributes?

1. Not at all satisfied
2. Somewhat dissatisfied
3. Neither satisfied nor dissatisfied
4. Somewhat satisfied
5. Very satisfied
98. Don't know [DO NOT READ]
99. Refused

PE6. [If AW4 not equal 1] Please tell me how much you agree or disagree with each of the following statements. Would you say you . . . [READ STATEMENTS IN RANDOM ORDER]

1. Strongly disagree
2. Somewhat disagree
3. Neither agree nor disagree
4. Somewhat agree
5. Strongly agree
98. Don't know [DO NOT READ]
99. Refused

Energy efficient homes are hard to find	1	2	3	4	5	98	99
Energy efficient homes are more comfortable than standard homes	1	2	3	4	5	98	99
Most new homes are energy-efficient even if they are not Energy efficient certified	1	2	3	4	5	98	99
Energy efficient homes provide additional quality	1	2	3	4	5	98	99
Energy efficient homes are worth more	1	2	3	4	5	98	99
It's hard to understand the benefits of Energy efficient homes	1	2	3	4	5	98	99
Energy efficient homes have lower energy bills	1	2	3	4	5	98	99

## DE. Demographic/Economic Module

Finally, I have a few general questions for statistical purposes. This information will be combined across all respondents and will not be shared with anyone outside of the evaluation team in any way that identifies you or your household.

DE1. Which of the following types of housing units would you say best describes your home?  
Is it a . . .

1. Single-family detached house
2. Single-family attached house (duplex, townhouse, row house)
3. Other (Specify: \_\_\_\_\_)
99. Refused **[DO NOT READ]**

DE2. What is the approximate square footage of your home?

\_\_\_\_\_ Sq Ft .....Skip to DE4

98. Don't know
99. Refused

DE3. **[If DE2 = 98]** How many rooms are in your home, not counting bathrooms? **[DO NOT READ, CHECK ONE]**

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10 or more
99. Refused

DE4. Are you a first-time homebuyer or did you own a home before you bought this one?

1. First-time homebuyer
2. Previously owned home
99. Refused

DE5. How long have you lived in this home?

\_\_\_\_\_ Months or \_\_\_\_\_ Years

DE6. Including yourself, how many children and adults normally live in this household on a full-time basis? Include all members of your household whether or not they are related to you, but do not include anyone who is just visiting or children who may be away at college or in the military.

---

99. Refused

DE7. What is the highest level of education you have completed? Would you say...? [READ CATEGORIES]

1. Less than high school
2. High school graduate
3. Technical or trade school graduate
4. Some college
5. Two-year college graduate
6. Four-year college graduate
7. Some graduate or professional school
8. Graduate or professional degree
99. Refused

DE8. Which of the following categories best describes your age? Stop me when I reach your category. [READ CATEGORIES]

1. 18 to 24
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 or over
99. Refused

DE9. What category best describes your total household income in 2004, before taxes? Again, stop me when I reach your category. [READ CATEGORIES]

1. Less than \$15,000
2. \$15,000 - \$24,999
3. \$25,000 - \$34,999
4. \$35,000 - \$49,999
5. \$50,000 - \$74,999
6. \$75,000 - \$99,999
7. \$100,000 or more
99. Refused

DE12. Respondent's gender [RECORD, BUT DO NOT ASK]

1. Male
2. Female

*Those are all the questions I had. Thank you very much for your time!*

New Jersey ENERGY STAR®  
Residential New Construction  
Participant Builder Survey

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

Can I speak with \_\_\_\_\_?

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities which is conducting a study on Energy Star new construction. I'd like to ask a few questions about your company's participation in the Program. Would you be the correct person to speak to?

[IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx]

- Yes – Continue with respondent .....Continue
- No – New respondent coming to phone .....Reintroduce yourself
- No – Respondent not available.....Schedule callback
- Refused.....Thank and Terminate

Our survey takes about 20 minutes, do you have time now, or is there a more convenient time I could call you back?

- Yes – Available now .....Continue
- Not available.....Arrange callback
- No .....Thank and Terminate
- Don't know.....Thank and Terminate
- Refused.....Thank and Terminate

## Screening

1. How many homes do you build in New Jersey per year? \_\_\_\_\_
2. What percentage of these homes are Single family detached?  
\_\_\_\_\_ % .....If ZERO, Thank and Terminate
3. What percentage of these homes are Single family attached (duplex, townhouse, rowhouse)  
\_\_\_\_\_ %
4. What percentages of the homes you build are Multifamily Dwellings?  
\_\_\_\_\_ %

## Awareness

5. Are you currently participating in the New Jersey ENERGY STAR Homes program.
  - Yes, currently participating .....**Continue**
  - Yes, in the past but not now  
(Drop out/partial participant).....**Conduct Non-Participant survey—**  
.....**Start at Q6**
  - No, knowledgeable about Energy Star, and chose not to participate (Informed Non-participant):  
.....**Conduct Non-Participant survey--**  
— .....**Continue, Start Q7.**
  - No, heard of it but don't know anything about it. (Non-participant):  
..... **Conduct Non-Participant**  
**survey—** .....**Continue, Start Q22**
  - Not sure/Don't know, (Non-participant)  
..... **Conduct Non-Participant**  
**survey—** .....**Continue, Start Q22**

## Marketing NJ Program

6. When did you sign on to become a builder partner in the New Jersey ENERGY STAR<sup>®</sup> Homes program? [PROBE: THIS WOULD HAVE BEEN WHEN YOU SIGNED AN AGREEMENT TO PARTICIPATE IN THIS PROGRAM IF THEY CAN'T REMEMBER MONTH/YEAR, GET YEAR]  
\_\_\_\_\_ (Month/Year)
  - Don't know



7. How did you first hear about the program? [PROBE: HOW DID YOU HEAR ABOUT THE PROGRAM? DO NOT PROMPT; MARK ALL THAT APPLY]
- Through Utility
  - Contacted by a Consultant
  - Aware of national program
  - Received packet of information from Clean Energy
  - Attended a seminar and learned about the program
  - Learned about the program at home show/local parade of homes
  - Saw/heard ads for the program
  - Attended a program-sponsored session
  - My local/county builders association told me about it
  - Through another builder/contractor
  - Homeowner requested it
  - Other (Specify: \_\_\_\_\_)
  - Don't know/unsure
8. Why did you decide to participate in the program? [DO NOT PROMPT; MARK ALL THAT APPLY]
- Interest in building a better home
  - Interest in reward
  - Integrity of home
  - Already using many of the components or practices
  - Consultant explanation
  - Wanted to market energy efficiency
  - Remember prior programs (Good Cents?)
  - Wanted to separate myself from other builders
  - Training
  - Packet from Clean Energy
  - The people involved in the program are good/knowledgeable people
  - Like to keep up with new techniques/try new things
  - Homeowner requested it
  - House sells better if it's an ENERGY STAR home
  - Other (specify \_\_\_\_\_)
  - Don't know/unsure

9. What do you think are the primary benefits of Energy Star Labeled Homes? **[OPEN ENDED]**
10. Since you began the program what percentage of your homes have met ENERGY STAR standards with a HERS rating of 86 or above?
- \_\_\_\_\_ Percent .....**if 100%, Skip to Q12**
  - Don't know/unsure
11. Why did you build some that were not NJ ENERGY STAR<sup>®</sup> Homes? **[DO NOT READ LIST. MARK ALL THAT APPLY]**
- Fireplace door didn't meet program requirements
  - Customer did not want to build to ENERGY STAR<sup>®</sup> Home guidelines
  - Want to see how they sell first
  - Sometimes it's just too time consuming/have deadlines to meet
  - Cost
  - Weren't really sure what we were getting in to
  - Not in eligible (Smart Growth) area
  - Other (specify: \_\_\_\_\_)
  - Don't know/unsure
  - Not applicable
12. Before you became aware of the NJ ENERGY STAR<sup>®</sup> Homes Program, did you generally implement any of the measures included in ENERGY STAR homes?
- Yes
  - No .....**Skip to Q14**
  - Don't know/not sure
13. What percent would have been the same measures?
- \_\_\_\_\_ % (specify measures: \_\_\_\_\_)
14. **[IF Q10 IS LESS THAN 100%]** Because of your participation, have you installed additional energy efficiency measures or technologies in some of your other new construction?
- Yes
  - No .....**Skip to Q17**
  - Don't know / Don't remember .....**Skip to Q17**
15. **[IF Q14 = YES]** In how many homes?
- \_\_\_\_\_ # homes

16. How did the following items compare to the ENERGY STAR home standards?

Insulation levels	Same	Different: _____
Duct installation and sealing	Same	Different: _____
Air sealing	Same	Different: _____
HVAC systems	Same	Different: _____
Appliances	Same	Different: _____

17. Which of your subcontractors would you say have a working knowledge of the ENERGY STAR Homes Program and incorporate standards into their practices?

- Lighting
- HVAC
- Insulation
- Other (specify: \_\_\_\_\_)

18. In the building trade in general, how well known are the ENERGY STAR building practices? Would you say they are **[READ LIST AND MARK ONE]**

- Well known
- Somewhat known
- Not very well known
- Virtually unknown

19. What is the most effective method you use to promote your homes? **[DO NOT READ; ENTER ONE REPLY]**

- Newspaper ads
- TV/Radio
- Real estate ads
- Outdoor signs
- Model homes
- Brochures / Sales materials
- Internet
- Word of mouth / referrals
- Don't market them, just build them.....**Skip to Q21**
- Other (specify: \_\_\_\_\_)

20. Over the last two years has your marketing and promotion of ENERGY STAR homes . . .

- Increased significantly
- Increased somewhat
- Stayed the same

- Decreased somewhat
- Decreased significantly
- Don't know [DO NOT READ]

## HERS Raters

21. Can you rate the availability of the HERS Raters for me? Would you say they are:
- Completely unavailable
  - Somewhat unavailable
  - Neither available or unavailable
  - Available
  - Very easily available
  - Don't hire or work with HERS raters.....**Skip to 24**
  - Don't know [DO NOT READ]
  - Refused [DO NOT READ]
22. Would you say the availability of HERS raters has increased, decreased, or stayed the same in the last two years?
- Increased
  - Stayed the same
  - Decreased
  - Don't know [DO NOT READ]
23. Are there any issues with HERS ratings or raters that you feel need to be addressed to improve operations of the ENERGY STAR program ?
- 

## SMART GROWTH

24. What percent of the homes you build are in Smart Growth areas? [Define if needed]  
 \_\_\_\_\_% .....**If '100%' skip to Q28**
- Don't know/unsure
25. What percent of homes built in NON Smart Growth areas are
- Certified NJ ENERGY STAR homes .....%
  - National ENERGY STAR Homes .....%
  - Built to ENERGY STAR Specs but not certified .....%

'Standard' construction ..... %

**Skip to 28**

26. **[If Q28 not 'Standard']** Why did you decide to do that, i.e., build ENERGY STAR homes in non-Smart Growth area?

---

27. **[IF Q10 greater than 0]** If the NJ ENERGY STAR program had not existed, what percentage of new homes you constructed during the last 12 months, do you estimate would have met the requirements?

\_\_\_\_\_ Best estimate

## **NJ ENERGY STAR<sup>®</sup> Program**

28. What percentage of all new homes in the area where you work would you guess are Energy Star Homes?

\_\_\_\_\_ %

29. Overall, how effectively do you think the New Jersey Energy Star Homes promotes energy efficient new construction? Would you say...

- Very effective
- Somewhat effective
- Neutral
- Somewhat not effective
- Not at all effective
- Don't know/unsure **[DO NOT READ]**

30. Is there anything they should change to more effectively promote energy efficient new construction? **[DO NOT READ OR PROMPT; MARK ALL THAT APPLY]**

- No suggestions
- Information about which lending institutions are participating
- More marketing to the public
- Certification – make it an industry standard
- Help builders with advertising
- Reduce the amount time is needed
- Have 2 inspections instead of 3
- Better communication surrounding the inspections
- Have consultants spend more time with us
- Better communication with what's going on with the program
- Push more for the builders who are really dedicated to the program
- Give the consultants more freedom to recommend particular systems

- Better coop advertising program
- Increase the standards
- Send the rebate check in a more timely manner
- Provide decals for doors and windows
- Other (specify \_\_\_\_\_)
- Don't know/unsure

31. **[IF Q30 HAS MORE THAN ONE SUGGESTED CHANGE]** Which one of these suggestions would be most important to change?

---

32. I'm going to list some barriers that may lead to the construction and sale of **fewer** Energy Star Homes. Can you rate them for me on a scale from 1-5 (with 1 being not very significant at all and 5 being very significant),

	Not very significant ..... Very significant						
	1	2	3	4	5	DK	R
Builders make decisions without considering the buyer's future energy costs							
Builders lack information about the benefits of energy efficiency and environmental performance							
Builders have limited technical skills to address energy efficiency							
Builders do not differentiate between efficient and standard home construction practices.							

33. The New Jersey ENERGY STAR program promotes the Program in several ways. How successful are these strategies? On a scale from 1-5, with 1 being not at all successful and 5 being very successful, **[ROTATE QUESTIONS]**

	Not at all Successful.....Very Successful						
	1	2	3	4	5	DK	R
Incentives to builders							
Marketing assistance to builders							
Technical assistance to builders and contractors							
Home Energy Rating and ENERGY STAR Certification							
Support to DCA, RESNET and US EPA							
Technical support and training on residential code updates and implementation							

34. Do you work directly with homebuyers?

Yes

No .....Skip to Question 40

35. What do you think are the major barriers homebuyers have in purchasing ENERGY STAR® Homes? [DO NOT READ OR PROMPT; MARK ALL THAT APPLY]

None

First costs

Lack of education and awareness

Uncertain of participating builders

Fireplace requirement

Bad rap when the program first started

Not living in the home long enough to reap the benefits

Other (specify: \_\_\_\_\_)

Don't know/unsure

36. Regarding homebuyers, can you rate the following statements on a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree. [ROTATE QUESTIONS]

1. Strongly agree

2. Somewhat agree

3. Neither agree nor disagree

4. Somewhat disagree

5. Strongly disagree

Don't Know

Refused

Homebuyers understand the benefits of the ENERGY STAR label	1	2	3	4	5	DK	R
Homebuyers understand the value of duct testing and duct sealing	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with home value	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR label with home comfort	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with higher quality homes	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with lower energy bills	1	2	3	4	5	DK	R
Homebuyers think most new homes are energy efficient even if they are not ENERGY STAR certified	1	2	3	4	5	DK	R
The certification process for ENERGY STAR homes does not delay home construction or sale	1	2	3	4	5	DK	R
Homebuyers feel energy efficient homes are hard to find	1	2	3	4	5	DK	R

The higher cost of building an ENERGY STAR home is counterbalanced by faster sales time	1	2	3	4	5	DK	R
---	---	---	---	---	---	----	---

37. Do you promote any specific benefits about your ENERGY STAR homes? **[DO NOT READ]**

- Do not promote anything
- Don't promote any particular feature, just general ENERGY STAR label
- Other (Specify \_\_\_\_\_)
- Don't know
- Refused

38. Based on your experience, which of the energy saving features are most marketable to consumers? **[DO NOT READ OR PROMPT; MARK ALL THAT APPLY]**

- None
- Air conditioner/HVAC
- Appliances
- Programmable Clock thermostat
- Daylighting
- Ducts – tight ducts, insulated ducts
- Fans (attic, whole-house)
- Furnace
- Heat fuel choice
- Heat pump
- Insulation (Roof)
- Insulation (Walls)
- Windows
- Lighting
- Water Heater
- Whole-house Design
- Other (specify: \_\_\_\_\_)
- Don't Know
- Refused

39. Do any of your customers specifically request ENERGY STAR labeled appliances and equipment? What percentage?

\_\_\_\_\_ %



40. In your experience, do homebuyers look to you as their primary source of information on home energy efficiency? **[DO NOT READ]**
- Yes
  - No
  - Don't know/Don't remember
41. Do you think that Energy Star homes sell faster, about the same, or more slowly than similar conventional homes?
- Faster
  - About the same
  - Slower
42. Do you think Energy Star homes are less profitable, about the same, or more profitable than conventional homes?
- Less profit
  - About the same
  - More profit
43. We have talked about some of these aspects and now I am going to ask you to rate your **satisfaction** with each of the following aspects of the ENERGY STAR homes program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating extremely satisfied and 1 indicating extremely dissatisfied:

	Extremely dissatisfied .....Extremely satisfied							
	1	2	3	4	5	DK	R	
Cost of participation	1	2	3	4	5	DK	R	
Quality of marketing support materials	1	2	3	4	5	DK	R	
Technical training	1	2	3	4	5	DK	R	
Certification and verification process	1	2	3	4	5	DK	R	
Ease of participation	1	2	3	4	5	DK	R	
Level of incentives	1	2	3	4	5	DK	R	
Responsiveness of program staff	1	2	3	4	5	DK	R	
Amount of co-op advertising support	1	2	3	4	5	DK	R	
Amount of paperwork required to participate	1	2	3	4	5	DK	R	
Market penetration of ENERGY STAR homes	1	2	3	4	5	DK	R	
The program overall	1	2	3	4	5	DK	R	

## Firmographic

I have some general questions about your firm.

44. Do you build any homes outside of New Jersey? What percentage all the homes you build does that represent?  
\_\_\_\_\_ %
45. What percent of the homes you build are custom-built?  
\_\_\_\_\_ %
46. What percent of the homes you build are spec?  
\_\_\_\_\_ %
47. What is the average size of the homes you build?  
\_\_\_\_\_ sq ft (this is just the home)
48. What is the average selling price of the homes you build?  
\$\_\_\_\_\_ (this is just the home)

**Lastly,**

49. Do you need anything as far as support, information, or tools to help you in your participation in the EnergyStar program, to market homes? [or to overcome any barriers to builder's participation or, from your perspective, the customer participation]  
\_\_\_\_\_
50. Do you have any other comments about the ENERGY STAR homes program?  
\_\_\_\_\_

**Those are all the questions I had. Thank you very much for your time!**

New Jersey ENERGY STAR®  
Residential New Construction  
Non-Participant Builder Survey  
Informed and Uninformed Non-Participants  
Partial Participants

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities which is conducting a study about energy use and building practices. I would like to speak with the owner or someone who is knowledgeable about your company's construction practices.. Is that person available?

- Available and on phone .....Continue
- Not available .....Code and Terminate

I'd like to ask you a few questions – for most people it takes only a few minutes, but it may take as long as 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx]

- Yes – Continue with respondent .....Continue
- No – New respondent coming to phone.....Reintroduce yourself
- No – Respondent not available .....Schedule callback
- Refused .....Thank and Terminate

Do you have about 10-15 minutes now, or is there a more convenient time I could call you back?

- Yes – Available now .....Continue
- Not available .....Arrange callback
- No.....Thank and Terminate
- Don't know .....Thank and Terminate
- Refused .....Thank and Terminate

## Screening

1. How many homes do you typically build in NJ each year?  
 \_\_\_\_\_
2. What percentage of the homes you build are Single family detached  
 \_\_\_\_\_% .....If 0%, thank and terminate
3. What percentage of the homes you build are Single family attached (duplex, townhouse, rowhouse)  
 \_\_\_\_\_%
4. What percentage of the homes you build are Multifamily homes  
\_\_\_\_\_%

## Awareness

5. Have you ever heard of the New Jersey ENERGY STAR Homes program?  
 Yes  
 No.....Skip to Q22:  
.....Conduct Non-participant Survey  
 Not sure/Don't know
6. Has your company participated in the NJ ES Homes Program in the last two years?  
 Yes, currently participating (Participant):  
.....**Conduct Participating Builder's Survey – Start at #5**  
 Yes, in the past but not now (Drop out/partial participant):  
.....Conduct Non-Participant survey—  
.....Continue with Q6  
 No, knowledgeable about Energy Star, and chose not to participate (Informed Non-participant):  
.....Conduct Non-Participant survey—  
.....Continue, Skip to Q7.  
 No, heard of it but don't know anything about it. (Non-participant):  
.....Conduct Non-Participant survey—  
.....Continue, Skip to Q22  
 Not sure/Don't know, (Non-participant)  
.....Conduct Non-Participant survey—  
.....Continue, Skip to Q22

7. Why did you decide to drop out of the program? **[DO NOT PROMPT; MARK ALL THAT APPLY]**
- Hassle
  - No customer demand
  - Geographic limits – build in non-smart growth areas
  - Too much demand/too busy
  - Fireplace door didn't meet program requirements
  - Customer did not want to build to ENERGY STAR<sup>®</sup> Home guidelines
  - Want to see how they sell first
  - Sometimes it's just too time consuming/have deadlines to meet
  - Cost, adds to price
  - Not really sure what we were getting in to
  - Bad experience with prior programs
  - Other (specify: \_\_\_\_\_)
  - Don't know/unsure

8. Why did you decide not to participate in the program? **[DO NOT PROMPT; MARK ALL THAT APPLY]**
- Hassle
  - No customer demand
  - Geographic limits – build in non-smart growth areas
  - Too much demand/too busy
  - Fireplace door didn't meet program requirements
  - Customer did not want to build to ENERGY STAR<sup>®</sup> Home guidelines
  - Want to see how they sell first
  - Sometimes it's just too time consuming/have deadlines to meet
  - Cost, adds to price
  - Not really sure what we were getting in to
  - Bad experience with prior programs
  - Other (specify: \_\_\_\_\_)
  - Don't know/unsure

9. **[Ask if Q6 = Yes, in the past but not now]** What percentage of the homes you have built in the last two years meet ENERGY STAR Labeled Homes standards with a HERS rating of 86 or above?
- \_\_\_\_\_ Percent.....**If 100%, [Confirm non-participation in program. If participant, conduct Participant Survey]**

Don't know/unsure

10. What do you think are the primary benefits of Energy Star Labeled Homes?

---

## NJ Program

11. Have you attended any conferences, seminars or training regarding New Jersey ENERGY STAR new homes?

Yes

No .....Skip to Q14

12. Was there anything that particularly interested you about the program?

---

13. Was there anything that you particularly disliked about the program?

---

14. Overall, how would you rate the effectiveness of the New Jersey ENERGY STAR<sup>®</sup> Homes program in promoting energy efficient new construction?

Very effective

Somewhat effective

Neutral

Somewhat not effective

Not at all effective

Don't know/unsure [DO NOT READ]

15. Why do you rate the effectiveness of the New Jersey ENERGY STAR<sup>®</sup> Homes program this way?

---

16. What percentage of all new homes in the area where you work would you guess are Energy Star Homes?

\_\_\_\_\_ %

17. Do you think that Energy Star homes sell faster, about the same, or more slowly than similar conventional homes?

Faster

About the same

Slower

18. Do you think Energy Star homes are less profitable, about the same, or more profitable than conventional homes?

- Less profit
- About the same
- More profit

19. What do you consider to be the major barriers to home buyers purchasing ENERGY STAR® Homes? **[DO NOT PROMPT; MARK ALL THAT APPLY]**

- None
- First costs
- Lack of education and awareness
- Uncertain of participating builders
- Fireplace requirement
- Bad rap when the program first started
- Not living in the home long enough to reap the benefits
- Other (specify: \_\_\_\_\_)
- Don't know/unsure

20. I'm going to list some barriers that may lead to the construction and sale of **fewer** Energy Star Homes. Can you rate them for me on a scale from 1-5 (with 1 being not very significant at all and 5 being very significant),

	Not very significant ..... Very significant						
	1	2	3	4	5	DK	R
Builders make decisions without considering the buyer's future energy costs							
Builders lack information about the benefits of energy efficiency and environmental performance							
Builders have limited technical skills to address energy efficiency							
Builders do not differentiate between efficient and standard home construction practices.							

21. The New Jersey ENERGY STAR program promotes the Program in several ways. How successful are these strategies? On a scale from 1-5, with 1 being not at all successful and 5 being very successful, [ROTATE QUESTIONS]

	Not at all successful ..... Very successful						
Incentives to builders	1	2	3	4	5	DK	R
Marketing assistance to builders	1	2	3	4	5	DK	R
Technical assistance to builders and contractors	1	2	3	4	5	DK	R
Home Energy Rating and ENERGY STAR Certification	1	2	3	4	5	DK	R
Support to DCA, RESNET and US EPA	1	2	3	4	5	DK	R
Technical support and training on residential code updates and implementation	1	2	3	4	5	DK	R

22. Regarding homebuyers, can you rate the following statements on a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree. [ROTATE QUESTIONS]

1. Strongly agree
  2. Somewhat agree
  3. Neither agree nor disagree
  4. Somewhat disagree
  5. Strongly disagree
- Don't Know  
Refused

Homebuyers understand the benefits of the ENERGY STAR label	1	2	3	4	5	DK	R
Homebuyers understand the value of duct testing and duct sealing	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with home value	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR label with home comfort	1	2	3	4	5	98	99
Homebuyers link the ENERGY STAR home label with higher quality homes	1	2	3	4	5	98	99
Homebuyers link the ENERGY STAR home label with lower energy bills	1	2	3	4	5	98	99
Homebuyers think most new homes are energy efficient even if they are not ENERGY STAR certified	1	2	3	4	5	98	99
The certification process for ENERGY STAR homes does not delay home construction or sale	1	2	3	4	5	98	99
Homebuyers feel energy efficient homes are hard to find	1	2	3	4	5	98	99



The higher cost of building an ENERGY STAR home is counterbalanced by faster sales time	1	2	3	4	5	98	99
---	---	---	---	---	---	----	----

## Building Practices

Next I want to ask you about some of your CURRENT practices regarding specific home features.

### Heating and Cooling

The next set of questions refers to high efficiency heating and cooling equipment.

23. Which of the following types of heating systems do you install in the homes you build?  
**[READ and CHECK ALL THAT APPLY]**
- Standard efficiency gas
  - High efficiency gas with an AFUE 90 or higher
  - Electric Resistance
  - Standard Efficiency Heat Pump
  - High Efficiency Heat Pump with an HSPF of 8.0 or higher
  - Hot water heating
  - Gas/oil fired boiler
  - Wood burning stove
  - Other (specify: \_\_\_\_\_)
  - Don't know **[DO NOT READ]**
  - Refused
24. Which of the following types of cooling systems do you install in the homes you build?  
**[READ and CHECK ALL THAT APPLY]**
- Standard Efficiency Heat Pump
  - High Efficiency Heat Pump with SEER 13.0 or higher
  - Standard Efficiency air conditioner
  - High efficiency air conditioner with SEER of 13.0 or higher
  - Room air conditioners
  - No cooling system
  - Don't know **[DO NOT READ]**
  - Refused

## Lighting

The next set of questions refers to high efficiency lighting. This includes various types of compact fluorescent light bulbs (CFLs) and dedicated CFL fixtures that use only fluorescent light bulbs, and any fixtures and lamps with the ENERGY STAR label

25. How do you typically decide on the type of lighting that goes into a home? **[DO NOT READ; PROMPT IF NEEDED]**
- Buyer has lighting budget, they choose lighting features within the budget
  - Buyer chooses everything, no preset budget or lighting packages
  - Builder has different lighting package options, buyer chooses one
  - Builder installs all standard efficiency fixtures
  - Builders installs all fixtures but uses CFLs in some or all sockets
  - Builder gives general instructions, electrician pick specifics
  - Other (specify: \_\_\_\_\_)
26. Which of the following types of lighting, if any, do you install in the homes you build? **[READ and CHECK ALL THAT APPLY]**
- Compact fluorescent light bulbs (CFLs).....Skip to Q28
  - Dedicated compact fluorescent fixtures.....Skip to Q28
  - Halogen lighting.....Skip to Q28
  - T-5's (long slender fluorescent tubes) .....Skip to Q28
  - T-8's (long slender fluorescent tubes) .....Skip to Q28
  - T-12's (long slender fluorescent tubes) .....Skip to Q28
  - None of these
  - Other (specify: \_\_\_\_\_)
  - Don't know **[DO NOT READ]**.....Skip to Q28
  - Refused .....Skip to Q28

27. Why don't you install ENERGY STAR lighting in the homes you build? **[DO NOT READ; MARK ALL THAT APPLY]**
- Adds too much to home price
  - Bulbs burn out
  - Can't find fixtures
  - Poor light quality / weak light
  - Customers don't request it
  - Equipment problems with fixtures
  - Energy savings not high enough to justify extra cost
  - Other (specify: \_\_\_\_\_)
  - Don't know **[DO NOT READ]**
  - Refused

## Appliances

The following questions are about appliances.

28. Which appliances do you install in the homes you build?
- specify: \_\_\_\_\_
29. Are any of these Energy Star labeled appliances?
- ENERGY STAR dishwasher .....Skip to Q31
  - ENERGY STAR refrigerators .....Skip to Q31
  - ENERGY STAR range/oven/cook stove .....Skip to Q31
  - Other (specify \_\_\_\_\_) .Skip to Q31
  - None
  - Don't know .....Skip to Q31
  - Refused .....Skip to Q31
30. Why don't you install ENERGY STAR appliances in the homes you build? **[DO NOT READ; MARK ALL THAT APPLY]**
- Poor quality
  - Adds too much to home price
  - Can't find qualifying appliances
  - Customers don't request it
  - Energy savings not high enough to justify extra cost
  - Other (specify: \_\_\_\_\_)
  - Don't know
  - Refused

## Windows

The next set of questions relate to high efficiency windows. These are defined as ENERGY STAR-certified and have a U-value of 0.35 or better.

31. Which type of windows do you install in the homes you build? **[READ 1-3 AND CHECK ALL THAT APPLY]**
- High efficiency windows (U-value of .35 or lower).....
  - Standard efficiency windows (U-value of .35 or greater)
  - Both high efficiency and standard efficiency windows
  - Other (specify:\_\_\_\_\_)
  - Don't know
  - Refused
32. Generally speaking, would you say that your window suppliers usually recommend using energy efficient windows? **[DO NOT READ, MARK ONE]**
- Yes, recommend always
  - Yes, recommend most of the time
  - Occasionally recommend
  - Never recommend
  - Builder decides
  - Architect specifies
  - Don't know
  - Refused
33. Why don't you install high efficiency windows in the homes you build? **[DO NOT READ, CHECK ALL THAT APPLY]**
- Adds too much to home price
  - Can't find windows
  - Poor quality
  - Customers don't request it
  - Energy savings not high enough to justify extra cost
  - Good double pane windows are as good as Energy Star windows
  - Other (specify:\_\_\_\_\_)
  - Don't know
  - Refused

## Duct Testing and Sealing

34. Are you familiar with duct tightness testing and duct sealing for ducted heating systems?
- Yes
  - No .....Skip to Q38
  - Don't Know
  - Refused
35. Do you have duct tightness tests performed for the homes you build?
- Yes .....skip to Q38
  - No
  - Sometimes.....skip to Q38
36. Why don't you have the ducts tested in the homes you build? **[DO NOT READ, MARK ALL THAT APPLY]**
- Time consuming.....skip to Q38
  - Tests inaccurate, do not reflect actual equipment performance.....skip to Q38
  - Too expensive .....skip to Q38
  - Not worth hassle .....skip to Q38
  - Customers do not consider testing valuable.....skip to Q38
  - Delays in scheduling testers.....skip to Q38
  - Certified testers not available .....skip to Q38
  - Lack of competence among testers.....skip to Q38
  - Don't know who to call.....skip to Q38
  - Not familiar enough with duct testing .....skip to Q38
  - Ducted systems as installed are tight enough .....skip to Q38
  - Other (specify: \_\_\_\_\_) ....skip to Q38
  - Don't know .....skip to Q38
  - Refused .....skip to Q38

37. What do you view as the benefits to the builder, if any, of duct testing? **[DO NOT READ, CHECK ALL THAT APPLY]**
- Reduced callbacks (liability, warranty issues)
  - Verification that HVAC done correctly
  - Verification that ducts do not leak
  - Catches some problems before customer moves in
  - No benefit
  - Other (specify: \_\_\_\_\_)
  - Don't know
  - Refused

## Firmographics

My last few questions are about your building firm.

38. Do you build any homes outside of New Jersey? What percentage of all the homes you build does that represent?  
\_\_\_\_\_ %
39. What proportion of these homes are custom-built (e.g., client or architect drawn)?  
 \_\_\_\_\_ %
40. What proportion are customized from plans?  
 \_\_\_\_\_ %
41. What proportion of these homes are spec homes?  
 \_\_\_\_\_ %
42. What percent of the homes you build are in Smart Growth areas? **[IF NECESSARY, "SMART GROWTH AREAS ARE...DEFINE]**  
 \_\_\_\_\_ %  
 Don't know/unsure how many are in Smart Growth area  
 Never heard of / don't know what Smart Growth area is
43. **[IF Q9 GREATER THAN 0]** You said that [% named in Q8 ] of the homes you build meet ENERGY STAR label requirements. If the NJ ENERGY STAR program had not existed, what percentage of your new homes constructed during the last 12 months do you estimate would have met these requirements?  
 \_\_\_\_\_ Best estimate
44. What is the average size of the homes you build?  
\_\_\_\_\_ Square footage

45. What is the average selling price of the homes you build?  
\$ \_\_\_\_\_
46. What is the most effective method you use to promote your homes? **[DO NOT READ; ENTER ONE REPLY]**
- Newspaper ads
  - TV/Radio
  - Real estate ads
  - Outdoor signs
  - Model homes
  - Brochures/sales materials
  - Internet
  - Word of mouth/referrals
  - Other (specify: \_\_\_\_\_)
47. My last question: How would you characterize the building industry in general where you are? Is most construction built to minimum code standards or are they more energy efficient homes?

**Those are all the questions I had. Thank you very much for your time!**

New Jersey ENERGY STAR®  
Residential New Construction  
Home Energy Raters with Rating Firm  
Program Manager: MaGrann, EAM

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

### I. Contact Info and Intro

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities, which is conducting a study about energy use and building practices in New Jersey. I would like to speak with [RATER'S NAME]. Is that person available?

- Available and on phone .....Continue
- Not available .....Code and Terminate

I'd like to ask you a few questions – it may take 10-15 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxx) xxx-xxxx]

Your name was included in a list of home energy raters who work in New Jersey. First I'd like to ask about your work.

### Marketing

1. Does (MaGrann/EAM) belong to ? [Mark all that apply]
  - Northeast HERS Alliance
  - RESNET
  - Energy and Environmental Ratings Alliance
  - NERA National Energy Rater's Association
  - Other (specify: \_\_\_\_\_)
  
2. Is (MaGrann/EAM) a certified rating company with the Northeast HERS Alliance?
  - Yes
  - No



3. How does (*MaGrann/EAM*) market their services?  
\_\_\_\_\_
4. The 2005 filing lists utility-specific marketing activities as well as statewide marketing activities for this program. Do you participate in any marketing activities?  
\_\_\_\_\_
5. What promotional/outreach activities have been the *most* effective? How do you track their effectiveness?  
\_\_\_\_\_
6. What promotional/outreach activities have been the *least* effective?  
\_\_\_\_\_
7. Who usually contacts you to conduct the home energy rating?  
\_\_\_\_\_
8. How much interest in energy ratings is there currently?  
\_\_\_\_\_
9. What changes have you seen in levels of interest in the past two years?  
\_\_\_\_\_
10. What has influenced those changes?  
\_\_\_\_\_

### **Trade Allies**

11. What is (*MaGrann/EAM*) primary function as liaison with marketplace stakeholders? (description for MaGrann included NJHMFA, NJ DCA Green Homes Office, Office of Smart Growth, builder associations, major developers).  
\_\_\_\_\_
12. What are the most important trade ally issues in the program?  
\_\_\_\_\_
13. Did you have any trouble recruiting their help?  
\_\_\_\_\_
14. Were some kinds of trade allies more effective allies than others? Which?  
\_\_\_\_\_

15. Could (and should) the program be modified to take fuller advantage of trade allies? How so?

---

## Program Goals

16. Do you have specific program goals? What are they?

---

17. How have the program goals been determined?

---

18. Are these the right goals? Are they meaningful and relevant? Should others be added or some eliminated?

---

19. Do you believe there should be any changes to how the program goals are determined? [If yes] What changes do you suggest?

---

20. In your opinion are the program goals reasonable and achievable? If not, why?

---

21. What are some of the greatest challenges faced in meeting the program goals?

---

## Barriers

22. What are the barriers that prohibit or limit the purchase of Energy Star homes and energy efficiency measures? [If possible fill in table below]

---

23. Looking at the HERS piece of the Energy Star program in general, what do you think is the most important barrier it was designed to overcome?

---

24. What barriers have been most effectively reduced by the Energy Star program and the HERS component?

---

## Incentives

25. Do you feel the current incentive levels are appropriate? Why or why not? [If not] How should they be changed?
- 
26. What effect did limiting the incentives to Smart Growth areas have on the program? [Probe for effects on builder's participation]
- What effect did it have on your HERS home services?
- 
27. Do you think the program will remain viable with that condition? If not, what alternative program structures are viable?
- 
28. Do you feel the market for ES Homes has been transformed? Do you see a continued need for incentives?
- 

## Indicators

*[Note: Have current set of indicators available at interview]*

29. Are you familiar with the Energy Star performance indicators for residential new construction? Do you believe the program indicators are appropriate/relevant indicators of program success
- 
30. Do you feel some items do not belong on the current list of indicators?
- 
31. Are there some indicators that are missing from the current list that you feel are important?
- 
32. What do you believe are the primary indicators of program success?
- 
33. What impact has this program had on the market in general (more awareness, changed current practice, transformed the market, lowered costs, etc)
- 
34. If the program did not exist, what effect do you think it would have on the market?
-

35. What external factors – other than the program – do you think are causing market share of program measures/practices to increase or decrease? [Probe for impact of energy costs, national promotions, federal standards, incremental cost, etc.]
- 

## Energy & Building Codes

36. How much influence do you think the Energy Star program has on state and local building codes?
- 
37. Do you think builders would find it difficult to build all homes to Energy Star standards?
- 
38. What do you think it would take for Energy Star standards to be adopted as code?
- 
39. Should codes be changed to increase energy efficiency beyond Energy Star standards?
- 
40. Are you aware of efforts to establish a statewide energy rating and accreditation system?
- Yes
  - No
41. Do you think your company is interested in a statewide energy rating and accreditation system?
- Yes
  - No (Why not? \_\_\_\_\_)

## Home buyer interests

42. My next questions are about your experience with home buyers in New Jersey. Please tell me how much you agree or disagree with each of the following statements. Would you say you . . . **[READ STATEMENTS IN RANDOM ORDER]**
1. Strongly disagree
  2. Somewhat disagree
  3. Neither agree nor disagree
  4. Somewhat agree
  5. Strongly agree
- Don't know **[DO NOT READ]**  
Refused

Homebuyers understand the benefits of the ENERGY STAR label	1	2	3	4	5	DK	R
Homebuyers understand the value of duct testing and duct sealing	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with home value	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR label with home comfort	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with higher quality homes	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with lower energy bills	1	2	3	4	5	DK	R
Homebuyers think most new homes are energy efficient even if they are not ENERGY STAR certified	1	2	3	4	5	DK	R
The certification process for ENERGY STAR homes does not delay home construction or sale	1	2	3	4	5	DK	R
Homebuyers feel energy efficient homes are hard to find	1	2	3	4	5	DK	R
The higher cost of building an ENERGY STAR home is counterbalanced by faster sales time	1	2	3	4	5	DK	R

43. How would you rate the sales potential of ENERGY STAR homes? Do you think they sell faster, about the same, or more slowly than conventional homes?

- Faster
- About the same
- Slower

44. How would you rate the profit potential of ENERGY STAR homes? Do you think there is less profit, about the same, or more profit than conventional homes?

- Less profit
- About the same
- More profit

45. What kinds of questions do homebuyers typically ask you?

\_\_\_\_\_

46. Do you make suggestions for improvements to the home?

- Yes (specify: \_\_\_\_\_)
- No

47. How often do you produce an Energy Mortgage Report?  
 \_\_\_\_\_ % of homes rated .....If 0%, skip to Q31
48. Do you voluntarily offer it or does the buyer ask for it?
- Voluntarily offer it
  - Homebuyer asks for it
  - Mix of both

## Satisfaction

49. Now I'd like you to rate your satisfaction with each of the following aspects of the ENERGY STAR homes program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating extremely satisfied and 1 indicating extremely dissatisfied: **[READ STATEMENTS IN RANDOM ORDER]**
1. Extremely dissatisfied
  2. Somewhat dissatisfied
  3. Neither satisfied nor dissatisfied
  4. Somewhat satisfied
  5. Extremely satisfied
  98. Don't know **[DO NOT READ]**
  99. Refused

Cost of participation	1	2	3	4	5	D	R
Quality of marketing support materials	1	2	3	4	5	D	R
Technical training	1	2	3	4	5	D	R
Certification and verification process	1	2	3	4	5	D	R
Ease of participation	1	2	3	4	5	D	R
Level of incentives	1	2	3	4	5	D	R
Responsiveness of program staff	1	2	3	4	5	D	R
Amount of co-op advertising support	1	2	3	4	5	D	R
Amount of paperwork required to participate	1	2	3	4	5	D	R
Market penetration of Energy Star homes	1	2	3	4	5	D	R

FINALLY I'd like to ask some general questions:

50. What single aspect of the ENERGY STAR homes program have you found most helpful?

\_\_\_\_\_

51. And what single aspect of the program have you found least helpful?

\_\_\_\_\_

52. Do you have any final comments about the ENERGY STAR homes program?

\_\_\_\_\_

Those are all the questions I had. Thank you very much for you

New Jersey ENERGY STAR®  
Residential New Construction  
Independent Home Energy Raters

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

**I. Contact Info and Intro**

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities, which is conducting a study about energy use and building practices in New Jersey. I would like to speak with [RATER'S NAME]. Is that person available?

- Available and on phone .....Continue
- Not available .....Code and Terminate

I'd like to ask you a few questions – it may take 10-15 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx]

Your name was included in a list of home energy raters who work in New Jersey. First I'd like to ask about your work.

**Firmographic**

1. When did you become a HERS rater?  
\_\_\_\_\_
2. How did you become interested in becoming a HERS home energy rater?  
\_\_\_\_\_
3. For how many homes would you say you've completed ratings altogether?  
\_\_\_\_\_



4. For how many homes would you say you've completed ratings in the last 12 months?  
\_\_\_\_\_
5. For how many homes would you say you've completed ratings in the last 24 months?  
\_\_\_\_\_
6. Where do you do most of the HERS work?  
\_\_\_\_\_
7. Are any homes located in the non-Smart Growth areas?  
 Yes (specify: how many/what %: \_\_\_\_\_)  
 No
8. What were the differences between the homes rated in the non-SG area compared to those in the SG area?  
\_\_\_\_\_
9. What proportion of your work is HERS rating?  
 \_\_\_\_\_ % .....If 100%, skip to Q11
10. Do you do other work in addition to HERS ratings? [Probe: Do you provide other inspection or consulting services at the home?]  
\_\_\_\_\_
11. What do you feel the value is of a HERS rating?  
\_\_\_\_\_

## Marketing

12. What rating organizations do you belong to? [Mark all that apply]  
 Northeast HERS Alliance .....Do not ask Q13, include Q14  
 RESNET  
 Energy and Environmental Ratings Alliance  
 NERA National Energy Rater's Association  
 Other (specify: \_\_\_\_\_)

13. Have you heard of the Northeast HERS Alliance?  
 Yes  
 No.....Skip to Q16
14. Are you a certified rater with the Northeast HERS Alliance?  
 Yes  
 No.....Skip to Q16
15. How did you become a NE HERS Alliance home energy rater?  
 HERS rater training class  
 Challenge test  
 Reciprocity with an accredited HERS member organization
16. Are you familiar with the Office of Clean Energy?  
 Yes  
 No
17. Are you aware of efforts to establish a statewide energy rating and accreditation system?  
 Yes  
 No
18. Are you interested in a statewide energy rating and accreditation system?  
 Yes  
 No (Why not?\_\_\_\_\_)
19. How do you market your services?  
 \_\_\_\_\_
20. Who usually contacts you to conduct the home energy rating?  
 \_\_\_\_\_
21. How much interest in energy ratings is there currently?  
 \_\_\_\_\_
22. What changes have you seen in levels of interest in the past two years?  
 \_\_\_\_\_

23. Is there anything the NE Alliance, RESNET, or other networks could do to assist you in marketing your services?
- 

## Home buyer interests

24. My next questions are about your experience with home buyers in New Jersey. Please tell me how much you agree or disagree with each of the following statements. Would you say you . . . **[READ STATEMENTS IN RANDOM ORDER]**
1. Strongly disagree
  2. Somewhat disagree
  3. Neither agree nor disagree
  4. Somewhat agree
  5. Strongly agree
- Don't know **[DO NOT READ]**  
 Refused

Homebuyers understand the benefits of the ENERGY STAR label	1	2	3	4	5	DK	R
Homebuyers understand the value of duct testing and duct sealing	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with home value	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR label with home comfort	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with higher quality homes	1	2	3	4	5	DK	R
Homebuyers link the ENERGY STAR home label with lower energy bills	1	2	3	4	5	DK	R
Homebuyers think most new homes are energy efficient even if they are not ENERGY STAR certified	1	2	3	4	5	DK	R
The certification process for ENERGY STAR homes does not delay home construction or sale	1	2	3	4	5	DK	R
Homebuyers feel energy efficient homes are hard to find	1	2	3	4	5	DK	R
The higher cost of building an ENERGY STAR home is counterbalanced by faster sales time	1	2	3	4	5	DK	R

25. How would you rate the sales potential of ENERGY STAR homes? Do you think they sell faster, about the same, or more slowly than conventional homes?
- Faster
  - About the same
  - Slower
26. How would you rate the profit potential of ENERGY STAR homes? Do you think there is less profit, about the same, or more profit than conventional homes?
- Less profit
  - About the same
  - More profit
27. What kinds of questions do homebuyers typically ask you?
- 
28. Do you make suggestions for improvements to the home?
- Yes (specify: \_\_\_\_\_)
  - No
29. How often do you produce an Energy Mortgage Report?  
 \_\_\_\_\_ % of homes rated .....If 0%, skip to Q31
30. Do you voluntarily offer it or does the buyer ask for it?
- Voluntarily offer it
  - Homebuyer asks for it
  - Mix of both

## Technical Aspects of HERS Rating

Now I have some questions about HERS training and conducting the rating.

31. How much time does it take to complete the full rating?
-

32. What materials (if any) do you leave at the site. **[DO NOT READ, CHECK ALL THAT APPLY]**
- None
  - Rating
  - Energy efficiency/ENERGY STAR materials
  - Other (specify: \_\_\_\_\_)
33. Where did you receive your HERS training?
- \_\_\_\_\_
34. Is there any aspect of the requirements to become a rater that you feel needs to be changed? Why?
- \_\_\_\_\_
35. Is there any aspect of the standards of practice that you feel needs to be changed? Why?
- \_\_\_\_\_

## Satisfaction

36. Now I'd like you to rate your satisfaction with each of the following aspects of the ENERGY STAR homes program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating extremely satisfied and 1 indicating extremely dissatisfied: **[READ STATEMENTS IN RANDOM ORDER]**
1. Extremely dissatisfied
  2. Somewhat dissatisfied
  3. Neither satisfied nor dissatisfied
  4. Somewhat satisfied
  5. Extremely satisfied
98. Don't know **[DO NOT READ]**
99. Refused

Cost of participation	1	2	3	4	5	D	R
Quality of marketing support materials	1	2	3	4	5	D	R
Technical training	1	2	3	4	5	D	R
Certification and verification process	1	2	3	4	5	D	R
Ease of participation	1	2	3	4	5	D	R
Level of incentives	1	2	3	4	5	D	R
Responsiveness of program staff	1	2	3	4	5	D	R
Amount of co-op advertising support	1	2	3	4	5	D	R
Amount of paperwork required to participate	1	2	3	4	5	D	R
Market penetration of Energy Star homes	1	2	3	4	5	D	R

FINALLY I'd like to ask some general questions:

37. What single aspect of the ENERGY STAR homes program have you found most helpful?

---

38. And what single aspect of the program have you found least helpful?

---

39. Do you have any final comments about the ENERGY STAR homes program?

---

Those are all the questions I had. Thank you very much for your time!

New Jersey ENERGY STAR®  
Residential New Construction  
Home Energy Raters with Rating Firm

Vice President Field Operations: MaGrann, EAM

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

**I. Contact Info and Intro**

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities, which is conducting a study about energy use and building practices in New Jersey. I would like to speak with [RATER'S NAME]. Is that person available?

- Available and on phone .....Continue
- Not available .....Code and Terminate

I'd like to ask you a few questions – it may take 10-15 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx]

Your name was included in a list of home energy raters who work in New Jersey. First I'd like to ask about your work.

## VP Operations

1. *MaGrann* The chart that Ben Adams sent to me shows there are 5 certified HERS raters in your company, and another 9 technical reps and 7 technical analysts. These people aren't certified HERS raters. It looks like there are 2 parts to the certification. The first works with the Specification Submittal forms (including plan take-offs?) and the second is the actual field inspection where the inspection report is completed. Is that right? Could you summarize the process for me?
2. In the last 12 months have you hired and trained additional staff to conduct the ratings?
3. For how many homes would you say you've completed ratings in the last 12 months?
4. For how many homes would you say you've completed ratings in the last 24 months?
5. For how many homes would you say you've completed ratings altogether?
6. I will need to know the number of homes certified, by type, in the last 12 months and in the 12 months preceding. Is that a query you can run with your database?
7. Where does (*MaGrann/EAM*) do most of the HERS work?
8. Are any rated homes located outside of the Smart Growth areas?  
 Yes (specify: how many/what %: .....)  
 No
9. What were the differences between the homes rated in the non-SG area compared to those in the SG area?
10. How much interest in energy ratings is there currently?
11. What changes have you seen in levels of interest in the past two years? Has the demand for raters increased or decreased?  

---
12. What has influenced those changes?  

---
13. Would you say the number of participating builders involved in the last 12 months has increased, decreased or stayed the same?  

---



14. Do you know how often an Energy Mortgage Report is produced?  
\_\_\_\_\_ % of homes rated .....If 0%, skip to Q31
15. Do you voluntarily offer it or does the buyer ask for it?
  - Voluntarily offer it
  - Homebuyer asks for it
  - Mix of both
16. Could you please describe (MaGrann/EAM) relationship with utility clients and the Office of Clean Energy?
17. Are there other entities you report to?
18. How many utility clients does (*MaGrann/EAM*) serve?

## Database

19. The description for your position notes that you maintain the program tracking database, is that right?
20. What type of tracking database is used? (Probe for software system)
21. What are strengths of the current program tracking?
22. What are the weaknesses/areas for improvement of the current program tracking?

## Budgets

23. Are you also in charge of budget reporting and projections?
24. Do you think your budget for Energy Star adequate to cover the need and interest in Energy Star homes?

## Satisfaction

25. Now I'd like you to rate your satisfaction with each of the following aspects of the ENERGY STAR homes program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating extremely satisfied and 1 indicating extremely dissatisfied: **[READ STATEMENTS IN RANDOM ORDER]**
  1. Extremely dissatisfied
  2. Somewhat dissatisfied
  3. Neither satisfied nor dissatisfied

- 4. Somewhat satisfied
- 5. Extremely satisfied
- 98. Don't know [DO NOT READ]
- 99. Refused

Cost of participation	1	2	3	4	5	D	R
Quality of marketing support materials	1	2	3	4	5	D	R
Technical training	1	2	3	4	5	D	R
Certification and verification process	1	2	3	4	5	D	R
Ease of participation	1	2	3	4	5	D	R
Level of incentives	1	2	3	4	5	D	R
Responsiveness of program staff	1	2	3	4	5	D	R
Amount of co-op advertising support	1	2	3	4	5	D	R
Amount of paperwork required to participate	1	2	3	4	5	D	R
Market penetration of Energy Star homes	1	2	3	4	5	D	R

FINALLY I'd like to ask some general questions:

26. What single aspect of the ENERGY STAR homes program have you found most helpful to your work with the HERS ratings?

---

27. And what single aspect of the program have you found least helpful?

---

28. Do you have any final comments about the ENERGY STAR homes program?

---

Those are all the questions I had. Thank you very much for you

# **NJ ENERGY STAR PRODUCTS PROGRAM SURVEY INSTRUMENTS**

NJ ENERGY STAR® PRODUCTS PROGRAM  
CONSUMER TELEPHONE SURVEY

**I. Contact Info and Intro**

Name from list: \_\_\_\_\_

Respondent name (if different): \_\_\_\_\_

Respondent phone from list: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer initials: \_\_\_\_\_

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities is conducting a study about appliance purchases and energy use in New Jersey. I'd like to ask you a few questions – for most people it takes only one or two minutes, but it may take as long as 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for consumers. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: Michael Ambrosio 732-296-0770.

- 1. Respondent interested .....Continue
- 2. Refused .....Code and Terminate

ii. First, I want to verify that you are over 18 years old.

- 1. Yes .....Continue
- 2. No.....Ask to speak with someone over 18, and begin again

iii. I also need to know if the house where I have reached you is where you yourself live and if this is a permanent or a seasonal residence.

- 1. Yes, permanent residence .....Continue
- 2. Yes, seasonal residence .....Continue
- 3. No, don't live here .....Ask to speak to appropriate person, and begin again

I1. Please tell me if you have been shopping for any of the following appliances or lighting products, for use in the home where you are now, in the past 24 months. Have you shopped for a ... [CHECK ALL THAT APPLY]

1. Refrigerator
2. Clothes washer
3. Room air conditioner
4. Light Fixture
5. Light bulbs
6. Thermostats
7. Windows
8. Central Heating and/or cooling system
98. None of these
99. Don't know

I2. In the past two years, 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? Have you purchased a... [CHECK ALL THAT APPLY]

1. Refrigerator
2. Clothes washer
3. Room air conditioner
4. Light Fixture
5. Light bulbs
6. Thermostats
7. Windows
8. Central Heating and/or cooling system
98. None of these
99. Don't know

[GET QUOTA OF 100 WHERE I2=98 OR 99]

I3. The Energy Guide is a large, yellow label that gives the average energy used by an appliance in one year in dollars. It shows how a particular model compares to the models that use the greatest and smallest amounts of energy in its category. Have you seen or heard of such a label before now?

1. Yes
2. No
98. Not sure/Don't know

- I4. Have you ever seen or heard of the ENERGY STAR [*emphasize “STAR”*] label?
1. Yes .....Skip to I6
  2. No
  98. Not sure/Don't know
- I5. 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 products; retail stores may also post them at entrances and other locations; they may also appear on the yellow Energy Guide label. Had you seen or heard of such a label before now?
1. Yes
  2. No .....Skip to I9
  98. Not sure/Don't know .....Skip to I9
- I6. What does the ENERGY STAR label mean to you? [**DO NOT READ RESPONSES; CHECK ALL THAT APPLY**]
1. Save money on operation
  2. Energy efficient/savings
  3. Energy conservation
  4. Savings (not linked to operation)
  5. Environmental benefits
  6. Energy/environmental product standards
  7. Energy [no link to efficiency]
  8. Environment [no link to benefit]
  9. 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. Other (specify: \_\_\_\_\_)
  98. Don't know/No response

17. Do you remember seeing or hearing any advertisements or information about ENERGY STAR or energy-efficiency in general over the past year?
1. Yes, saw or heard ENERGY STAR advertisements or information
  2. Yes, saw or heard energy-efficiency advertisements or information only
  3. No.....Skip to next appropriate module
  98. Don't know .....Skip to next appropriate module

18. Can you tell me where you saw or heard the advertisements or information? **[DO NOT READ; PROBE; CHECK ALL THAT APPLY]**

1. TV ad
2. TV news feature story
3. Radio ad
4. Radio public service announcement
5. Retail store sign and informational materials
6. Newspaper or magazine ad
7. Newspaper insert
8. Billboard
9. A utility mailing or bill insert
10. An Internet site
11. Yellow Energy Guide label
12. Other (specify: \_\_\_\_\_) .....
98. Don't know .....

19. Are you familiar with any of the New Jersey Clean Energy Programs?

1. Yes
2. No.....Skip to next appropriate module

I10. Which ones? **[DO NOT READ LIST; ENTER ALL THAT APPLY]**

1. Residential Electric and Gas HVAC Program
2. Residential New Construction (ENERGY STAR HOMES) Program
3. Home Energy Analysis
4. ENERGY STAR Products Program
5. Other (specify: \_\_\_\_\_ )
98. Don't know/Not sure

I11. Have you participated in any of the New Jersey Clean Energy Programs?

1. Yes
2. No.....Skip to next appropriate module

- I12. Which ones? [DO NOT READ LIST; ENTER ALL THAT APPLY]
1. Residential Electric and Gas HVAC Program .....Skip to next appropriate module
  2. Residential New Construction (ENERGY STAR HOMES) Program
  3. Home Energy Analysis .....Skip to Q16
  4. ENERGY STAR Products Program .....Skip to next appropriate module
  5. Other (specify:\_\_\_\_\_ )
  98. Don't know/Not sure

- I13. [IF Q12 = 2] Are you currently living in an ENERGY STAR-labeled home?
6. Yes
  7. No.....Skip to next appropriate module

- I13. How long have you lived in the home (in months)?
1. \_\_\_\_\_ months

- I14. Were you the first resident to live in this home (was the home new when you purchased it)?
2. Yes
  3. No.....Skip to next appropriate module

[IF I14=1, RECORD NAME AND NUMBER TO ENSURE THEY ARE NOT ALSO CONTACTED FOR THE NEW HOME SURVEY; THANKS

Name: \_\_\_\_\_ Number: \_\_\_\_\_

- I15. How influential was the ENERGY STAR label in selecting your new home?
1. Very influential
  2. Somewhat influential
  3. Neutral
  4. Not very influential
  5. Not at all influential
  98. Don't know

[SKIP TO NEXT APPROPRIATE MODULE]



- I16. How did you become aware of the availability of the Home Energy Analysis program?  
 [DO NOT READ LIST; ENTER ALL THAT APPLY]
- 6. Clean Energy program website (njcleanenergy.org)
  - 7. Utility website
  - 8. Friend or family member recommended
  - 9. Contractor recommended
  - 10. Utility bill insert
  - 11. Other (specify: \_\_\_\_\_)
  - 98. Don't know

- I17. How easy or difficult was the Home Energy Analysis program to complete?
- 1. Very easy
  - 1. Somewhat easy
  - 2. Neither easy nor difficult
  - 3. Somewhat difficult
  - 4. Very difficult
  - 98. Don't know

- I18. How useful was the information you obtained from participating in the Home Energy Analysis program?
- 1. Very useful.....Skip to I20
  - 2. Somewhat useful.....Skip to I20
  - 3. Neutral.....Skip to I20
  - 4. Not very useful
  - 5. Not at all useful
  - 98. Don't know .....Skip to I20

I19. Why do you rate Home Energy Analysis program this way?

\_\_\_\_\_

\_\_\_\_\_

- I20. Did you adopt any of the recommendations from the Home Energy Analysis program?
- 6. Yes
  - 7. No.....Skip to next appropriate module
  - 98. Don't know .....Skip to next appropriate module

I21. What recommendations did you take?

---

---

[IF I2=98 OR 99 SKIP TO DE1]

[EACH RESPONDENT GETS NO MORE THAN TWO MODULES FROM AMONG THE APPLIANCES AND LIGHTING FIXTURES]

*ASSIGNMENT PRIORITIES AND GOALS:*

*CENTRAL HEATING SYSTEM: 75*

*CENTRAL COOLING SYSTEM: 75*

*WINDOWS: 100*

*CLOTHESWASHERS: 200*

*REFRIGERATORS: 200*

*ROOM AIR CONDITIONERS: 100*

*LIGHTING FIXTURES: 100*

*THERMOSTATS: 100*

*[BULBS MODULE CAN GET ASKED AS 3<sup>RD</sup> MODULE, QUOTA OF 200]*

## **CW. Clothes Washer Purchasers**

(If I2 = "Clothes washer")

CW1. Now I would like to ask a few questions about your new clothes washer. Was it purchased by you, your landlord, a remodeling contractor, or a new home builder?

1. Respondent or member of household .....Skip to CW3
2. Landlord
3. Remodeling contractor
4. New home builder
5. Other (specify: \_\_\_\_\_) .....Skip to CW3
98. Don't know

CW2. Was the specific clothes washer model selected by you or by the landlord, contractor or builder?

1. By me/us
2. By the landlord, contractor or builder .....Skip to CW26
3. Joint decision (e.g., contractor/builder offered choices and we selected one)
98. Don't know .....Skip to CW26

- CW3. What method did you use to buy your clothes washer? Was it . . . [READ 1-4 – ROTATING THE ORDER WITH EACH SURVEY – THEN READ 5]
1. Through a catalog .....Skip to CW5
  2. Over the Internet .....Skip to CW5
  3. Over the telephone .....Skip to CW5
  4. At a retail store
  5. Or some other way? (specify: \_\_\_\_\_).....Skip to CW5
  98. Don't know .....Skip to CW5
- CW4. In what city and state is the store located?
- City/Town: \_\_\_\_\_ State: \_\_\_\_\_
- CW5. And what is the name of the store?
- Store: \_\_\_\_\_.....skip to CW7
98. Don't remember
- CW6. Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?
6. Sears .....Skip to CW8
  7. Home Depot .....Skip to CW8
  8. Best Buy .....Skip to CW8
  9. Lowe's .....Skip to CW8
  10. PC Richard.....Skip to CW8
  11. None of these
  98. Don't know
- CW7. Which of the following types of stores would you say it was? [READ 1-5 IN ROTATING ORDER, THEN 6; CHECK ALL THAT APPLY]
1. Appliance store
  2. Furniture or home furnishings store
  3. Department store or discount department store
  4. Hardware store
  5. Home improvement store
  6. Other type of store (specify: \_\_\_\_\_)
  98. Don't know
- CW8. Please tell me what features were important to you in selecting your clothes washer. [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]
1. Quality; good brand name
  2. Price

3. Cost to operate
4. Energy efficiency; something that does not use a lot of electricity; something that does not cost a lot to operate
5. Energy efficiency; something that does not use a lot of water; something that does not cost a lot to operate
6. Special features (specify: \_\_\_\_\_)
7. Other (specify: \_\_\_\_\_)

CW9. Where did you look for product information to decide which clothes washer to buy? **[DO NOT READ RESPONSES; MULTIPLE RESPONSE]**

1. Looked at newspaper circulars or other retailer catalogs.....ASK CW10
2. Looked on the Internet .....ASK CW11 – CW12
3. Called retailers on the phone
4. Visited stores .....[If I4=1 or I5=1, ASK CW13 – CW18; Else Ask CW15 – CW18]
5. Looked at Consumer Reports
6. Other (specify: \_\_\_\_\_)
98. Don't know

**[IF 1, 2, AND 4 ARE NOT CHECKED AND (I4 = 1 OR I5 = 1), SKIP TO CW19; ELSE IF 1, 2, AND 4 ARE NOT CHECKED, SKIP TO CW24]**

CW10. **[IF CW9 #1 is checked AND (I4 = 1 OR I5 = 1)]** Did the circulars or catalogs display the ENERGY STAR label on any clothes washer models?

1. Yes
2. Some did
3. No
98. Don't know

CW11. [IF CW9 #2 IS CHECKED] 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]

1. Retail store sites — e.g., Sears.com, HomeDepot.com, Lowes.com
2. Consumer sites — e.g., ConsumerReports.org
3. EnergyStar.gov
4. www.cleanenergy.com
5. Other government websites
6. Manufacturers' sites
7. Utility or electric company sites
8. Other (specify: \_\_\_\_\_)
98. Don't know

CW12. [IF CW9 #2 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the Internet site display the ENERGY STAR logo on any clothes washer models?

1. Yes
2. Some did
3. No
98. Don't know

CW13. [IF CW9 #4 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the salespersons at the retailers you visited talk about specific clothes washer models being ENERGY STAR labeled?

1. Yes
2. Some did
3. No.....Skip to CW15
1. Don't know .....Skip to CW15

CW14. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

1. Salesperson brought it up
2. Salesperson talked about it only after I asked
3. Some of both
98. Don't know

CW15. Did the salespersons at the retailers you *visited* discuss the amount of energy different clothes washers use or the cost to operate them?

- 1. Yes
- 2. Some did
- 3. No.....If (I4 = 1 OR I5 = 1), skip to CW19; Else Skip to CW24
- 98. Don't know .....If (I4 = 1 OR I5 = 1), skip to CW19; Else Skip to CW24

CW16. Did the salesperson(s) bring up the topic of the amount of energy different clothes washers use or the cost to operate them, or did they talk about it only after you specifically mentioned it?

- 1. Salesperson brought it up
- 2. Salesperson talked about it only after I asked
- 3. Both
- 98. Don't know

CW17. What did the salespersons you visited say about the energy use or operating costs of clothes washers? ? [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]

- 1. Encouraged purchase of ENERGY STAR clothes washer
- 2. Encouraged purchase of high efficiency clothes washer
- 3. Discouraged purchase of ENERGY STAR or high efficiency clothes washer
- 4. Said everything on the market is high efficiency
- 5. Said the unit recommended for other reasons was also high efficiency
- 6. Explained the efficiency levels
- 7. Explained about ENERGY STAR label
- 8. Other (specify: \_\_\_\_\_)
- 98. Don't remember

CW18. [IF CW17=3 THEN ASK] Why was the purchase of an ENERGY STAR or high efficiency model discouraged?

---

---

CW19. [IF (I4 = 1 OR I5 = 1)] [IF (I4 <> 1 OR I5 <> 1) go to CW24] Did the clothes washer you bought have an ENERGY STAR label on it or on the packaging or instructions?

1. Yes
2. No.....Skip to CW22
98. Don't know .....Skip to CW22

CW20. How influential was the ENERGY STAR label in your decision to purchase the clothes washer you did? Would you say it was . . . [READ LIST]?

1. Not at all influential
2. Slightly influential
3. Somewhat influential
4. Very influential
5. Extremely influential
98. Don't know [DO NOT READ]

CW21. Why did you buy a clothes washer with an ENERGY STAR label? [MULTIPLE RESPONSE; PROBE]

1. Uses less energy .....Skip to CW24
2. Reduces the amount of water use.....Skip to CW24
3. Less noise.....Skip to CW24
4. Uses less detergent.....Skip to CW24
5. Shortens time to dry each load/reduced spin cycle.....Skip to CW24
6. Reduced wear and tear on clothes  
(because of the removal of the agitator) .....Skip to CW24
7. To qualify for an incentive or utility rebate (specify source: \_\_\_\_\_)  
Skip to CW24
8. Other reason (Specify: \_\_\_\_\_) .....Skip to CW24

CW22. Did any of the clothes washers you considered buying have an ENERGY STAR label?

1. Yes
2. No
98. Don't know

CW23. Why did you select a clothes washer without an ENERGY STAR label?

1. Too expensive
2. Couldn't find one with the features I wanted
3. Wasn't sure what the label meant
4. Just wasn't a consideration
5. The ENERGY STAR label has negative connotations for me
6. Other (specify: \_\_\_\_\_)

CW24. Did you also buy a clothes dryer when you bought your clothes washer?

- 1. Yes
- 2. No .....Skip to CW26
- 98. Don't know .....Skip to CW26

CW25. Did your clothes dryer purchase influence your decision to purchase a particular clothes washer model?

- 1. Yes
- 2. No
- 98. Don't know

CW26. 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?

- 1. Top
- 2. Front.....Skip to Next  
Appropriate Module
- 98. Don't know

CW27. 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. First, can you tell me the ***make and brand*** name of your new clothes washer? This should be on the front of the machine or on the control panel.

[IN THE TABLE BELOW, 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, BUT THIS DOES NOT COMPLETELY DESCRIBE ALL QUALIFIED MODELS! IT IS IMPORTANT TO ASK FOR THE MODEL NUMBER AS WELL!]



Admiral	Kitchen Aid (Ensemble Superba)
Amana	LG Electronics (Tromm (front controls) / Tromm (rear controls))
Ariston	Malber
Asko	Maytag (Atlantis / Neptune / Neptune TL / Neptune Stack)
Avanti	Miele (Touchtronic Series / Novotronic / Super Novotronic)
Bosch (Axxis / Axxis+ / Essence / Nexxt / Nexxt Premium / Nexxt Premium Platinum / DLX)	Quietline
Danby Designer	Samsung
Equator	Siemens
Eurotech	Simplicity
Fisher & Paykel (Ecosmart / Intuitive)	Speed Queen
Frigidaire	Splendide
General Electric (Harmony)	Staber
Gibson	Summit
Imperial	Thor (Softline)
Kenmore (Elite Calypso / HE3 / HE3t / HE4t)	Whirlpool (Calypso / Duet / Duet HT / Resource Saver / Ultimate Care)
Other _____	

1. Refused to look
99. Looked, but could not find

CW28. And can you tell me the model number of the washer? It may be on the front of the machine, but it's more likely to be just over the top of the control panel.

1. \_\_\_\_\_ Model #
98. Refused to look
2. Looked, but could not find

## RF. Refrigerator Purchasers (If I2 = "Refrigerator")

RF1. 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?

1. Respondent or member of household .....Skip to RF3
2. Landlord
3. Remodeling contractor
4. New home builder
5. Other (specify: \_\_\_\_\_) .....Skip to RF3
98. Don't know

RF2. Was the specific refrigerator model selected by you or by the landlord, contractor or builder?

- 1. Respondent
- 2. Landlord, contractor or builder .....Skip to RF24
- 3. Joint decision (for example, contractor/builder offered choices from which you selected)
- 98. Don't know .....Skip to RF24

RF3. What method did you use to buy your refrigerator? Was it . . . [READ 1-4 – ROTATING THE ORDER WITH EACH SURVEY – THEN READ 5]

- 1. Through a catalog .....Skip to RF5
- 2. Over the Internet .....Skip to RF5
- 3. Over the telephone .....Skip to RF5
- 4. At a retail store
- 5. Or some other way? (specify: \_\_\_\_\_) .....Skip to RF5
- 98. Don't know .....Skip to RF5

RF4. In what city and state is the store located?

City/Town: \_\_\_\_\_ State: \_\_\_\_\_

RF5. And what is the name of the store?

Store: \_\_\_\_\_

98. Don't remember

RF6. Was it Sears, Home Depot, Best Buy, Lowe's, or PC Richard?

- 1. Sears .....Skip to CW8
- 2. Home Depot .....Skip to CW8
- 3. Best Buy .....Skip to CW8
- 4. Lowe's .....Skip to CW8
- 5. PC Richard.....Skip to CW8
- 6. None of these
- 98. Don't know

RF7. Which of the following types of stores would you say it was? [RANDOMIZE AND READ 1-5, THEN 9; CHECK ALL THAT APPLY]

1. Appliance store
2. Furniture or home furnishings store
3. Department store or discount department store
4. Hardware store
5. Home improvement store
6. Other type of store (specify: \_\_\_\_\_)
98. Don't know

RF8. Please tell me what features were important to you in selecting your refrigerator. [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

1. Quality; good brand name
2. Size; needed something to fit space
3. Price
4. Cost to operate
5. Energy efficiency; something that does not use a lot of electricity
6. Special features (specify: \_\_\_\_\_)
7. Other (specify: \_\_\_\_\_)

RF9. Where did you look for product information to decide which refrigerator to buy? [DO NOT READ; PROBE; CHECK ALL THAT APPLY]

1. Looked at newspaper circulars or other retailer catalogs.....Ask RF9
2. Looked on the Internet .....Ask RF10 – RF11
3. Called retailers on the phone
4. Visited stores .....If I4=1 or I5=1, Ask RF13 – RF18; Else Ask RF15 – RF18
5. Looked at Consumer Reports
6. Other (specify: \_\_\_\_\_)
98. Don't know

[IF 1, 2, AND 4 ARE NOT CHECKED AND (I4 = 1 OR I5 = 1), SKIP TO RF19; ELSE IF 1, 2, AND 4 ARE NOT CHECKED, SKIP TO RF24]

RF10. [IF RF9 #1 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the circulars or catalogs display the ENERGY STAR label on any refrigerator models?

1. Yes, all of them
2. Yes, some of them
3. No, none of them
98. Don't know

RF11. [IF RF9 #2 IS CHECKED] 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]

1. Retail store sites — e.g., Sears.com, HomeDepot.com, Lowes.com
2. Consumer sites — e.g., ConsumerReports.org
3. EnergyStar.gov
4. njcleanenergy.com
5. Other government websites
6. Manufacturers' sites
7. Utility or electric company sites
8. Other (specify: \_\_\_\_\_)
98. Don't know

RF12. [IF RF9 #2 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the Internet sites display the ENERGY STAR logo on any refrigerator models?

1. Yes, all of them
2. Yes, some of them
3. No, none of them
98. Don't know

RF13. [IF RF9 #4 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the retailers you *visited* talk about specific refrigerator models being ENERGY STAR labeled?

1. Yes, all of them
2. Yes, some of them
3. No, none of them .....Skip to RF14
98. Don't know .....Skip to RF14

RF14. Did the salespersons bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

1. Salesperson brought it up
2. Salesperson talked about it only after I asked
3. Some of both
98. Don't know

RF15. Did the retailers you *visited* discuss the amount of energy different refrigerators use or the cost to operate them?

- 1. Yes, all of them
- 2. Yes, some of them
- 3. No, none of them .....If (I4 = 1 OR I5 = 1), skip to RF19; Else Skip to RF24]
  
- 98. Don't know .....If (I4 = 1 OR I5 = 1), skip to RF19; Else Skip to RF24]

RF16. 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?

- 1. Salesperson brought it up
- 2. Salesperson talked about it only after I asked
- 3. Some of both
- 98. Don't know

RF17. What did the salespersons you visited say about refrigerators' energy use or operating costs? [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]

- 1. Encouraged purchase of ENERGY STAR refrigerators
- 2. Encouraged purchase of high efficiency refrigerators
- 3. Discouraged purchase of ENERGY STAR or high efficiency refrigerators
- 4. Said everything on the market is high efficiency
- 5. Said the unit recommended for other reasons was also high efficiency
- 6. Explained the efficiency levels
- 7. Explained about ENERGY STAR labels
- 8. Other (specify: \_\_\_\_\_)
- 98. Don't remember

RF18. [IF RF17=3] Why was the purchase of an ENERGY STAR or high efficiency model discouraged?

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RF19. [IF I4 = 1 OR I5 = 1] [IF (I4 <> 1 OR I5 <> 1) go to RF24]Did the refrigerator you bought have an ENERGY STAR label on it or on the packaging or instructions?

- 1. Yes
- 2. No.....skip to RF21
- 98. Not sure/Don't know .....skip to RF21

RF20. How influential was the ENERGY STAR label in your decision to purchase the refrigerator you did? Would you say it was ...?

- 1. Not at all influential
- 2. Slightly influential
- 3. Somewhat influential
- 4. Very influential
- 5. Extremely influential
- 98. Don't know [DO NOT READ]

RF21. Why did you buy a refrigerator with an ENERGY STAR label?

- 1. I wanted an energy efficient model.....Skip to RF24
- 2. The ENERGY STAR label connotes a quality product.....Skip to RF24
- 3. I really chose on Price/It was on sale.....Skip to RF24
- 4. I really chose on Brand name.....Skip to RF24
- 5. I really chose on Quality of manufacturing/parts .....Skip to RF24
- 6. I really chose on Size (physical size) .....Skip to RF24
- 7. To qualify for a rebate (specify source: \_\_\_\_\_) ....Skip to RF24
- 8. I really chose on Other features  
(except energy efficiency – specify: \_\_\_\_\_) .....Skip to RF24
- 9. Other (specify: \_\_\_\_\_) .....Skip to RF24

RF22. Did any of the refrigerators you considered buying have an ENERGY STAR label?

- 1. Yes
- 2. No
- 98. Not sure/Don't know

RF23. Why did you select a refrigerator without an ENERGY STAR label?

- 1. Too expensive
- 2. Couldn't find one with the features I wanted
- 3. Wasn't sure what the label meant
- 4. Just wasn't a consideration
- 5. The ENERGY STAR label has negative connotations for me
- 6. Other (specify: \_\_\_\_\_)

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 easily 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.

RF24a. Brand Name

1. Amana
2. Frigidaire
3. General Electric or GE
4. Kenmore
5. Kitchen Aid
6. Maytag
7. Sub-Zero
8. Viking
9. Whirlpool
10. Other (specify: \_\_\_\_\_)
98. Don't know

RF24b. Cubic Feet \_\_\_\_\_

RF24c. Model Number \_\_\_\_\_

RF24d. Additional model number(s) \_\_\_\_\_

RF24e. ENERGY STAR label

1. Yes
2. No
98. 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!!]

RF29. [NOTE TO INTERVIEWER: IF THE INFORMATION IN RF24-28 IS NOT FILLED OUT, PLEASE INDICATE WHY. DO NOT READ]

1. Refused to look
2. Looked but could not find
3. Other (specify: \_\_\_\_\_)

RF30. Is the freezer compartment of your new refrigerator on the top, bottom, or side?

1. Top
2. Bottom
3. Side
4. Other (specify: \_\_\_\_\_)

RF31. Does your new refrigerator have through-the-door ice or through-the-door water or both?

1. Yes, through-the-door ice only
2. Yes, through-the-door water only
3. Yes, both ice and water
4. No
98. Don't know

## **T. Thermostat Purchasers (If 4 = "Thermostat")**

T1. Now I would like to ask a few questions about your new thermostat. Was it purchased by you, your landlord, a remodeling contractor, or a new home builder?

1. Respondent or member of household .....Skip to T3
2. Landlord
3. Remodeling contractor
4. New home builder
5. Other (specify: \_\_\_\_\_) .....Skip to T3
98. Don't know

T2. Was the specific thermostat model selected by you or by the landlord, contractor or builder?

1. By me/us
2. By the landlord, contractor or builder.....Skip to T19
3. Joint decision (e.g., contractor/builder offered choices and we selected one)
98. Don't know .....Skip to T19



T3. What method did you use to buy the thermostat? Was it . . . [READ 1-4 – ROTATING THE ORDER WITH EACH SURVEY – THEN READ 5]

- 1. Through a catalog .....Skip to T5
- 2. Over the Internet .....Skip to T5
- 3. Over the telephone .....Skip to T5
- 4. At a retail store
- 5. Or some other way? (specify: \_\_\_\_\_).....Skip to T8
- 98. Don't know .....Skip to T8

T4. In what city and state is the store located?

City/Town: \_\_\_\_\_ State: \_\_\_\_\_

T5. And what is the name of the store?

1. Store: \_\_\_\_\_

98. Don't remember

[IF T5 = "Don't remember," ASK T6; OTHERWISE SKIP TO T7]

T6. Was it Sears, Home Depot, Lowe's, or Best Buy?

- 1. Sears .....Skip to T8
- 2. Home Depot .....Skip to T8
- 3. Lowe's .....Skip to T8
- 4. Best Buy .....Skip to T8
- 5. None of these
- 98. Don't know

T7. Which of the following types of stores would you say it was? [RANDOMIZE AND READ 1-5, THEN 6; CHECK ALL THAT APPLY]

- 1. Appliance store
- 2. Furniture or home furnishings store
- 3. Department store or discount department store
- 4. Hardware store
- 5. Home improvement store
- 6. Other type of store (specify: \_\_\_\_\_)
- 98. Don't know

- T8. Please tell me what features were important to you in selecting your thermostat. [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]
1. Quality; good brand name
  2. Price
  3. Ability to easily adjust temperature
  4. Special features (specify: \_\_\_\_\_)
  5. Other (specify: \_\_\_\_\_)

- T9. Where did you look for product information to decide which thermostat to buy? [DO NOT READ RESPONSES; MULTIPLE RESPONSE]
1. Looked at newspaper circulars or other retailer catalogs
  2. Looked on the Internet
  3. Called retailers on the phone
  4. Visited stores
  5. Consulted a HVAC contractor
  6. Looked at Consumer Reports
  7. Other (specify: \_\_\_\_\_)
98. Don't know

[If 1, 2, and 4 are NOT checked AND (I4 = 1 OR I5 = 1), skip to T19;  
Else If 1, 2, and 4 are NOT checked, Skip to T25

- T10. [IF T9 #1 is checked AND (I4 = 1 OR I5 = 1)] Did the circulars or catalogs display the ENERGY STAR label on any thermostat?
1. Yes
  2. Some did
  3. No
98. Don't know

- T11. [IF T9 #2 is checked] 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]
1. Retail store sites — e.g., Sears.com, HomeDepot.com, Lowes.com
  2. Consumer sites — e.g., ConsumerReports.org
  3. EnergyStar.gov
  4. www.cleanenergy.com
  5. Other government websites
  6. Manufacturers' sites
  7. Utility or electric company sites
  8. Other (specify: \_\_\_\_\_)
98. Don't know

- T12. [IF T9 #2 is checked AND (I4 = 1 OR I5 = 1)] Did the Internet site display the ENERGY STAR logo for any thermostat types?
1. Yes
  2. No
  3. Some did
  98. Don't know
- T13. [IF T9 #4 is checked AND (I4 = 1 OR I5 = 1)] Did the salespersons at the retailers you *visited* talk about specific thermostats being ENERGY STAR labeled?
1. Yes
  2. Some did
  3. No.....Skip to T15
  98. Don't know .....Skip to T15
- T14. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?
1. Salesperson brought it up
  2. Salesperson talked about it only after I asked
  3. Some of both
  98. Don't know
- T15. Did the salespersons at the retailers you *visited* discuss the efficiency aspects of different thermostats?
1. Yes
  2. Some did
  3. No .....Skip to T19
  98. Don't know .....Skip to T19
- T16. Did the salesperson(s) bring up the topic of the amount of energy you would use for heating and cooling with different thermostats, or did they talk about it only after you specifically mentioned it?
1. Salesperson brought it up
  2. Salesperson talked about it only after I asked
  3. Both
  98. Don't know

- T17. What did the salespersons you visited say about the energy impacts of different thermostat types? [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]
1. Encouraged purchase of ENERGY STAR thermostat
  2. Encouraged purchase of high efficiency windows
  3. Discouraged purchase of ENERGY STAR or high efficiency windows [IF YES, ASK T18]
  4. Said everything on the market is high efficiency
  5. Said the unit recommended for other reasons was also high efficiency
  6. Explained the efficiency levels and characteristics
  7. Explained about ENERGY STAR label
  8. Other (specify: \_\_\_\_\_)
  98. Don't remember

T18. [IF T17=3] Why was the purchase of an ENERGY STAR thermostat discouraged?

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T19. What was the brand of thermostat(s) purchased?

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[IF I4 = 1 OR I5 = 1] [IF (I4 <> 1 OR I5 <> 1) go to T25]

T20. Did the thermostat(s) you bought have an ENERGY STAR label on it or on the packaging or instructions?

IF THE RESPONDENT DOESN'T KNOW, ASK

- 1) Can you please look at the thermostat for the logo? If there is no logo,.....
- 2) Does the thermostat automatically adjust the temperature at night or at other times when the home is not occupied? IF yes, ASK
- 3) IF THE THERMOSTAT CAME PRE-PROGRAMMED.

IF YES TO 1) OR 2) AND 3), RECORD T2=1.]

1. Yes
2. No .....Skip to T23
98. Don't know .....Skip to T23

- T21. How influential was the ENERGY STAR label in your decision to purchase the thermostat you did? Would you say it was . . .[READ LIST]?
1. Not at all influential
  2. Slightly influential
  3. Somewhat influential
  4. Very influential
  5. Extremely influential
  98. Don't know
- T22. Why did you buy a thermostat with an ENERGY STAR label? [MULTIPLE RESPONSE; PROBE]
1. Uses less energy
  2. Comfort features
  3. Ease of use
  4. If they mention "rebate," probe for source/sponsor
  5. Other (specify: \_\_\_\_\_)
- T23. Did any of the thermostats you considered buying have an ENERGY STAR label?
1. Yes
  2. No
  98. Don't know
- T24. Why did you select a thermostat without an ENERGY STAR label?
1. Too expensive
  2. Couldn't find one with the features I wanted
  3. Too difficult to use
  4. Wasn't sure what the label meant
  5. Just wasn't a consideration
  6. The ENERGY STAR label has negative connotations for me
  7. Other (specify: \_\_\_\_\_)
- T25. During the winter do you regularly have your thermostat set to lower the heating temperature at night and raise it in the morning?
1. Yes
  2. No

- T26. What temperature do you typically set your thermostat in the winter? [RESPONDENT MAY INDICATE A RANGE; IF SO RECORD RANGE OR AVERAGE]
- 26a. Day \_\_\_\_\_ °F
- 26b. Night \_\_\_\_\_ °F
98. Don't know
- T27. In the summer is someone normally at your house during the weekdays?
1. Yes .....Skip to next appropriate module
2. No
98. Don't know .....Skip to next appropriate module
- T28. During the summer do you regularly have your thermostat set to raise the temperature during the day when no one is home?
1. Yes
2. No .....Skip to next appropriate module
98. Don't know .....Skip to next appropriate module
- T29. What temperature do you set your thermostat at during the day in the summer? [RESPONDENT MAY INDICATE A RANGE; IF SO RECORD RANGE OR AVERAGE]
1. Day \_\_\_\_\_ °F
98. Don't know

**AC. Room Air Conditioner Purchasers  
(If I2 = "Room air conditioner")**

- AC1. 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 in the last 2 years?
- \_\_\_\_\_ [IF > 1, ASK AC2 AND AC3]
- AC2. [If AC1 > 1] How many were window units, through-the-wall units, and portable units? [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.]
1. Window units \_\_\_\_\_
2. Through-the-wall units \_\_\_\_\_
3. Portable units \_\_\_\_\_

AC3. [If AC1 > 1] Did you buy all these room air conditioners at the same time or at different times over the past 2 year?

1. All at same time
2. Different times over the year

AC4. The remaining questions concern only the room air conditioner(s) purchased in the last year. Was it/were they purchased by you, your landlord, a remodeling contractor, or a new home builder?

1. At least one was purchased by respondent of member of household .....skip to AC6
2. All were purchased by landlord
3. All were purchased by a remodeling contractor
4. All were purchased by a new home builder
5. Other (specify: \_\_\_\_\_) .....Skip to AC6
98. Don't know

AC5. Was/were the specific room air conditioner model(s) selected by you or by the landlord, contractor or builder?

1. By me/us
2. By the landlord, contractor or builder .....Skip to AC22
3. Joint decision (for example, contractor/builder offered choices and we selected one)
98. Don't know .....Skip to AC22

AC6. What method did you use to buy your room air conditioner(s)? Was it . . . [READ 1-4 – ROTATING THE ORDER WITH EACH SURVEY – THEN READ 5]

1. Through a catalog .....Skip to AC8
2. Over the Internet .....Skip to AC8
3. Over the telephone .....Skip to AC8
4. At a retail store
5. Or some other way? (specify: \_\_\_\_\_) .....Skip to AC8
98. Don't know .....Skip to AC8

AC7. In what city and state is the store located?

City/Town: \_\_\_\_\_ State: \_\_\_\_\_

AC8. And what is the name of the store?

Store: \_\_\_\_\_

98. Don't remember

[IF AC8 = "Don't remember," ASK AC9; OTHERWISE SKIP TO AC10]

AC9. Was it Sears, Home Depot, Best Buy, Lowe's or PC Richard?

1. Sears .....Skip to AC11
2. Home Depot .....Skip to AC11
3. Best Buy .....Skip to AC11
4. Lowe's .....Skip to AC11
5. PC Richard .....Skip to AC11
6. None of these
98. Don't know

AC10. Which of the following types of stores would you say it was? [RANDOMIZE AND READ 1-5, THEN 6; CHECK ALL THAT APPLY]

1. Appliance store
2. Furniture or home furnishings store
3. Department store or discount department store
4. Hardware store
5. Home improvement store
6. Other type of store (specify: \_\_\_\_\_)
98. Don't know

AC11. Please tell me what features were important to you in selecting your room air conditioner. [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]

1. Quality; good brand name
2. Price
3. Cost to operate
4. Energy efficiency; something that does not use a lot of electricity; something that does not cost a lot to operate
5. Size; cooling capacity; needed something that would could the whole room or apartment
6. Only item in stock
7. Special features (specify:\_\_\_\_\_)
8. Other (specify:\_\_\_\_\_)



AC12. Where did you look for product information to decide which room air conditioner to buy?  
[DO NOT READ RESPONSES; MULTIPLE RESPONSE]

1. Looked at newspaper circulars or other retailer catalogs.....Ask AC13
2. Looked on the Internet.....Ask AC14
3. Called retailers on the phone
4. Visited stores.....If I4=1 or I5=1, ASK  
AC16 – AC21;  
Else Ask AC18 –  
AC21
5. Looked at Consumer Reports
6. Other (specify: \_\_\_\_\_)
98. Don't know

[IF 1, 2, AND 4 ARE NOT CHECKED AND (I4 = 1 OR I5 = 1), SKIP TO AC22;  
ELSE IF 1,2, AND 4 ARE NOT CHECKED, SKIP TO AC29]

AC13. [IF AC 12 #1 IS CHECKED] Did the circulars or catalogs display the ENERGY STAR label on any room air conditioner models?

1. Yes
2. No
3. Some did
98. Don't know

AC14. [IF AC12 #2 IS CHECKED] 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 RESPONSES; MULTIPLE RESPONSE]

1. Retail store sites — e.g., Sears.com, HomeDepot.com, Lowes.com
2. Consumer sites — e.g., ConsumerReports.org
3. EnergyStar.gov
4. njcleanenergy.com
5. Other government websites
6. Manufacturers' sites
7. Utility or electric company sites
8. Other (specify: \_\_\_\_\_)
98. Don't know

AC15. [IF AC12 #2 IS CHECKED AND (I4=1 OR I5=1)] Did the Internet site or sites display the ENERGY STAR logo on any room air conditioner models?

- 1. Yes
- 2. Some did
- 3. No
- 98. Don't know

AC16. [IF AC12 #4 IS CHECKED AND (I4=1 OR I5=1)] Did salespersons at the retailer you *visited* talk about specific room air conditioner models being ENERGY STAR labeled?

- 1. Yes
- 2. Some did
- 3. No .....Skip to AC18
- 98. Don't know .....Skip to AC18

AC17. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?

- 1. Salesperson brought it up
- 2. Salesperson talked about it only after I asked
- 3. Some of both
- 98. Don't know

AC18. 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?

- 1. Yes
- 2. Some did
- 3. No .....Skip to AC22
- 98. Don't know .....Skip to AC22

AC19. 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?

- 1. Salesperson brought it up
- 2. Salesperson talked about it only after I asked
- 3. Some of both
- 98. Don't know

AC20. What did the salespersons you visited say about the energy use or operating costs of room air conditioners? [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]

1. Encouraged purchase of ENERGY STAR room air conditioners
2. Encouraged purchase of high efficiency room air conditioners
3. Discouraged purchase of ENERGY STAR or high efficiency room air conditioners
4. Said everything on the market is high efficiency
5. Said the unit recommended for other reasons was also high efficiency
6. Explained the efficiency levels
7. Explained about ENERGY STAR labels
8. Other (specify \_\_\_\_\_)
98. Don't remember

AC21. [IF AC20=3 THEN ASK] Why was the purchase of an ENERGY STAR or high efficiency model discouraged?

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AC22. [IF (I4=1 OR I5=1) AND AC1=1] [IF (I4 <> 1 OR I5 <> 1) AND AC1=1 GO TO NEXT MODULE] Did the room air conditioner you bought have an ENERGY STAR label on it, or on the packaging or instructions?

1. Yes .....Skip to AC24
2. No .....Skip to AC27
98. Don't know .....Skip to AC27

[NOTE TO INTERVIEWER: IF THE RESPONDENT DOESN'T KNOW, ASK THEM TO LOOK AT THE AIR CONDITIONER TO SEE IF IT HAS THE ENERGY STAR LOGO DISPLAYED.]

AC23. [IF (I4=6 OR I5=1) AND AC1>1] [IF (I4 <> 1 OR I5 <> 1) AND AC1>1 GO TO NEXT MODULE] How many of the room air conditioners you bought had an ENERGY STAR label on them, or on the packaging or instructions?

1. \_\_\_\_\_ Number with ES label
98. Don't know

IF AC5=2 or 98, GO TO Next Module

[IF AC23=0 or 98, GO TO AC27]

AC24. How influential was the ENERGY STAR label in your decision to purchase the room air conditioner you did? Would you say it was . . . [READ LIST]?

1. Not at all influential
2. Slightly influential
3. Somewhat influential
4. Very influential
5. Extremely influential
98. Don't know [DO NOT READ]

AC25. Did you only look at ENERGY STAR room air conditioners or did you consider other models as well?

1. ENERGY STAR only
2. Considered other models as well
98. Don't know

AC26. Why did you buy a room air conditioner with an ENERGY STAR label? [DO NOT READ; MULTIPLE RESPONSE; PROBE; THEN GO TO NEXT APPROPRIATE MODULE]

1. I wanted an energy efficient model
2. The ENERGY STAR label connotes a quality product
3. I really chose on Price/It was on sale
4. I really chose on Brand name
5. I really chose on Quality of manufacturing/parts
6. I really chose on Size (physical size)
7. I really chose on Cooling capacity
8. To qualify for a rebate (specify source: \_\_\_\_\_)
9. I really chose on Other features (except energy efficiency – specify: \_\_\_\_\_)
10. Other (specify: \_\_\_\_\_)

AC27. Did any of the room air conditioners you *considered* buying have an ENERGY STAR label?

11. Yes
12. No
98. Don't know

AC28. Why did you select a room air conditioner without an ENERGY STAR label? [DO NOT READ; MULTIPLE RESPONSE; PROBE; THEN GO TO NEXT APPROPRIATE MODULE]

1. Too expensive
2. Couldn't find one with the features I wanted
3. Wasn't sure what the label meant
4. Just wasn't a consideration
5. The ENERGY STAR label has negative connotations for me
6. Other (specify: \_\_\_\_\_)

## LF. Lighting Fixture Purchasers [If I2 = "Lighting Fixture"]

LF1. How many new lighting fixtures were purchased for your home in the past 2 years? This includes all portable or plug-in lamps, any hard-wired fixtures such as ceiling fixtures, and exterior fixtures.

\_\_\_\_\_ Number of fixtures purchased

LF2. How many of these new fixtures were...?

1. \_\_\_\_\_ Portable or plug-in
2. \_\_\_\_\_ Hard-wired
3. \_\_\_\_\_ Exterior fixtures
4. \_\_\_\_\_ Other (specify: \_\_\_\_\_)

LF3. Was it/were they purchased by you, your landlord, a remodeling contractor, or a new home builder?

1. At least one was purchased by respondent or member of household .....Skip to LF5
2. All were purchased by landlord
3. All were purchased by a remodeling contractor
4. All were purchased by a new home builder
5. Other (specify: \_\_\_\_\_) .....Skip to LF5
98. Don't know

LF4. Was/were the specific fixture(s) *selected* by you or by the landlord, contractor or builder?

1. By me/us
2. By the landlord, contractor or builder Skip to next module
3. Joint decision (e.g. contractor/builder offered choices from which we selected)
98. Don't know Skip to next module

[If (LF3 <> 1 AND LF4 <> 1) AND (I4=1 or I5=1), Skip to LF10]  
[ELSE IF (LF3 <> 1 AND LF4 <> 1), Skip to Light Bulb Module]  
[OTHERWISE LF5]

- LF5. What method or methods did you use to buy these lighting fixtures? Was it . . . [READ 1-4 – ROTATING THE ORDER WITH EACH SURVEY – THEN READ 5; CHECK ALL THAT APPLY]
1. Through a catalog
  2. Over the Internet
  3. Over the telephone
  4. At a retail store
  5. Or some other way? (specify: \_\_\_\_\_)
98. Don't know

- LF6. And what are the names of the stores or companies from which you purchased these fixtures? How many fixtures did you purchase from each one? [IF LF5=4 ASK] Where is it located?

Store 1 Name: \_\_\_\_\_ Fixture type \_\_\_\_\_ # of fixtures \_\_\_\_\_ City/State \_\_\_\_\_

Store 2 Name: \_\_\_\_\_ Fixture type \_\_\_\_\_ # of fixtures \_\_\_\_\_ City/State \_\_\_\_\_

Store 3 Name: \_\_\_\_\_ Fixture type \_\_\_\_\_ # of fixtures \_\_\_\_\_ City/State \_\_\_\_\_

Store 4 Name: \_\_\_\_\_ Fixture type \_\_\_\_\_ # of fixtures \_\_\_\_\_ City/State \_\_\_\_\_

Store 5 Name: \_\_\_\_\_ Fixture type \_\_\_\_\_ # of fixtures \_\_\_\_\_ City/State \_\_\_\_\_

98. Don't remember

[IF LF6 = "DON'T REMEMBER," ASK LF7; OTHERWISE Skip to LF8]

- LF7. Which of the following types of stores would you say these were? [RANDOMIZE AND READ 1-6& 7, THEN 9; CHECK ALL THAT APPLY]
1. Appliance store
  2. Furniture or home furnishings store
  3. Department store or discount department store
  4. Hardware store
  5. Home improvement store
  6. Lighting specialty store
  7. Or some other type of store (specify: \_\_\_\_\_)
98. Don't know

LF8. Please tell me what features were important to you in selecting your lighting fixtures.

[DO NOT READ; CHECK ALL THAT APPLY]

1. Price
2. Quality of construction
3. Appropriate type (i.e., floor v. wall-mounted v. etc)
4. Cost to operate
5. Style or appearance
6. Light output
7. Having a dimmer switch
8. Having a three-way switch
9. Type of bulb it takes (i.e., halogen v. incandescent v. CFL)
10. Energy efficiency
11. Other (specify: \_\_\_\_\_)

[IF "ENERGY EFFICIENCY" NOT MENTIONED THEN ASK]

LF9. 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 that provided the lighting output, or lumens, that you wanted?

1. Yes
2. No
98. Don't know

[If I4 <> 1 AND I5 <> 1, Skip to Light Bulb Module]

[IF I4 = 1 OR I5 = 1] [IF (I4 <> 1 OR I5 <> 1) go to NEXT MODULE]

LF10. How many of the lighting fixtures purchased in the past 2 years have the ENERGY STAR label on them?

1. \_\_\_\_\_ Number with ES label
98. Don't know

[IF LF10 = 0 OR 98, Skip to LF13]

LF11. How influential was the ENERGY STAR label in your decision to purchase the lighting fixtures you did? Would you say it was . . . [READ LIST]?

1. Not at all influential
2. Slightly influential
3. Somewhat influential
4. Very influential
5. Extremely influential
98. Don't know [DO NOT READ]

LF12. Why did you buy a light fixture with an ENERGY STAR label? [DO NOT READ; MULTIPLE RESPONSE; PROBE; THEN GO TO NEXT APPROPRIATE MODULE]

1. I wanted an energy efficient model
2. The ENERGY STAR label connotes a quality product
3. I really chose on Price/It was on sale
4. I really chose on Brand name
5. I really chose on Quality of manufacturing/parts
6. I really chose on style/appearance
7. I really chose because it had a dimmer switch
8. I really chose because it had a three-way switch
9. To qualify for a rebate (specify source: \_\_\_\_\_)
10. I really chose on Other features (except energy efficiency – specify: \_\_\_\_\_)
11. Other (specify: \_\_\_\_\_)

LF13. Did any of the lighting fixtures you *considered* buying have an ENERGY STAR label?

1. Yes
2. No
98. Don't know

LF14. Why did you select lighting fixtures without an ENERGY STAR label?

1. Too expensive
2. Quality of construction
3. Didn't find a style/look that I liked
4. Light output didn't meet my needs
5. Quality of the light
6. Didn't have dimmer switch
7. Didn't have three-way switch
8. Just didn't occur to me
9. Other (specify: \_\_\_\_\_)



## LB. Light Bulbs

(If I2="Light bulbs"; Partial module, can be asked in addition to two other modules; quota of 400)

LB1. How many new light bulbs of any kind were purchased for your home in the last 2 years? We're interested in the total number of bulbs – rather than the number of *packages* of bulbs – regardless of whether or not you have installed all of them yet. We're also interested in the total purchased by all members of the household. An estimate is fine.

1. \_\_\_\_\_ Number of bulbs purchased
2. Really can't even estimate / Someone else in the household always purchases

[IF LB1 = 0 OR CAN'T ESTIMATE, SKIP TO NEXT APPROPRIATE MODULE]

LB2. What method did you or other household members use to buy these light bulbs? Was it . . . [READ 1-4 – RANDOMIZE THE ORDER WITH EACH SURVEY – THEN READ 5; CHECK ALL THAT APPLY]

1. Through a catalog
2. Over the Internet
3. Over the telephone
4. At a retail store
5. Or some other way? (specify: \_\_\_\_\_)
98. Don't know

LB3. What are the names of the stores from which you purchased the bulbs? And how many bulbs were purchased at each? Again, actual bulbs, not packages. [IF LB2=4, ASK] Is the store located in New Jersey?

Store 1: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

Store 2: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

Store 3: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

Store 4: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

98. Don't remember

[If LB3 = "Don't remember," Ask LB4; Otherwise Skip to LB5]

LB4. Which of the following types of stores would you say these were? [RANDOMIZE AND READ 1-6, THEN 7; CHECK ALL THAT APPLY]

1. Department store or discount department store
2. Hardware store
3. Home improvement store
4. Drug store
5. Grocery store
6. Lighting specialty store
7. Other (specify: \_\_\_\_\_)
98. Don't know

LB5. Please tell me what features were important to you in selecting your light bulbs. [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]

1. Quality; good brand name
2. Price
3. Cost to operate
4. Energy efficiency; something that does not use a lot of electricity
5. Wattage/Watts
6. Life of bulb
7. Physical size or shape of bulb
8. Quality of Light
9. Special Features (specify: \_\_\_\_\_)
10. Other (specify: \_\_\_\_\_)

[IF "ENERGY EFFICIENCY" NOT MENTIONED THEN ASK]

LB6. Did you consider the energy efficiency of the bulb that you purchased? In other words, did you attempt to purchase a bulb that had as few Watts as possible that provided the lighting output, or lumens, that you wanted, or did you maximize the wattage to get as bright an output as possible?

1. Yes
2. No

[ASK OF ALL]

LB7. Did you purchase any compact fluorescent light bulbs? These are fluorescent bulbs that screw into regular light bulb sockets. They look different than standard incandescent bulbs in that they are often made out of thin tubes of glass bent into loops. They also typically cost a lot more than incandescent bulbs.

1. Yes
2. No.....Skip to LB13

LB8. What are the names of the stores from which you purchased the compact fluorescent bulbs? And how many bulbs were purchased at each? Again, actual bulbs, not packages. [IF LB2=4, ASK] Is the store located in New Jersey?

Store 1: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

Store 2: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

Store 3: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

Store 4: \_\_\_\_\_ # of bulbs \_\_\_\_\_ New Jersey (Y/N)

98. Don't remember

[IF LB8 = "Don't remember," ASK LB9; Else If I4=1 or I5=1, Skip to LB10; ELSE Skip to GN1]

LB9. Which of the following types of stores would you say these were? [RANDOMIZE AND READ 1-6, THEN 7; CHECK ALL THAT APPLY]

1. Department store or discount department store
2. Hardware store
3. Home improvement store
4. Drug store
5. Grocery store
6. Lighting specialty store
7. Other (specify: \_\_\_\_\_)

98. Don't know

[IF I4 = 1 OR I5 = 1] [IF (I4 <> 1 OR I5 <> 1) go to NEXT MODULE]

LB10. How many of the light bulbs you bought had an ENERGY STAR label on them or on the packaging or instructions?

1. \_\_\_\_\_

98. Don't know

[IF LB10=0 OR 98, GO TO LB13]

LB11. How influential was the ENERGY STAR label in your decision to purchase the light bulbs you did? Would you say it was . . . [READ LIST]?

1. Not at all influential
2. Slightly influential
3. Somewhat influential
4. Very influential
5. Extremely influential
98. Don't know [DO NOT READ]

LB12. Why did you buy a light bulb with an ENERGY STAR label? [MULTIPLE RESPONSE; PROBE; THEN GO TO GN1]

1. Quality of construction
2. Longer life
3. Energy efficiency
4. Saves money in the long run
5. Quality of light
6. To qualify for rebate or incentive (specify source: \_\_\_\_\_)
7. Other (specify: \_\_\_\_\_)
98. Don't know

LB13. Did any of the light bulbs you *considered* buying have an ENERGY STAR label?

1. Yes
2. No
98. Don't know

LB14. Why did you not select any light bulbs with an ENERGY STAR label? [DO NOT READ RESPONSES; MULTIPLE RESPONSE]

1. Too expensive
2. Quality of the light
3. Quality of construction (don't trust)
4. Didn't fit my fixture
5. Didn't have dimming capability
6. Didn't have three-way switch
7. Didn't recognize the brand name
8. Not enough light output
9. Previous experience with CFLs—didn't like them
10. Just didn't occur to me
11. Other (specify: \_\_\_\_\_)

## W. Windows Purchasers (If I2 = “Windows”)

W1. Now I would like to ask a few questions about your new windows. Were they purchased by you, your landlord, a remodeling contractor, or a new home builder?

1. Respondent or member of household .....Skip to W3
2. Landlord
3. Remodeling contractor
4. New home builder
5. Other (specify: \_\_\_\_\_) .....Skip to W3
98. Don't know

W2. Were the specific window models selected by you or by the landlord, contractor or builder?

1. By me/us
2. By the landlord, contractor or builder Skip to next module
3. Joint decision (e.g., contractor/builder offered choices and we selected one)
98. Don't know Skip to next module

W3. How many windows did you purchase?

1. 1 to 3
2. 4 to 6
3. 7 or more
4. Whole house
98. Don't know

W4. What method did you use to buy the windows? Was it . . . [READ 1-5 – ROTATING THE ORDER WITH EACH SURVEY – THEN READ 6]

1. Through a catalog .....Skip to W9
2. Over the Internet .....Skip to W9
3. Over the telephone .....Skip to W9
4. At a retail store
5. At a building supply store
6. Or some other way? (specify: \_\_\_\_\_) .....Skip to W9
98. Don't know .....Skip to W9

W5. In what city and state is the store located?

City/Town: \_\_\_\_\_ State: \_\_\_\_\_

W6. And what is the name of the store?

Store: \_\_\_\_\_

98. Don't remember

[IF W6 = "Don't remember," ASK W7; OTHERWISE Skip to W8]

W7. Was it Sears, Home Depot, or Lowe's?

1. Sears .....Skip to W9

2. Home Depot .....Skip to W9

3. Lowe's .....Skip to W9

4. None of these

98. Don't know

W8. Which of the following types of stores would you say it was? [RANDOMIZE AND READ 1-3; CHECK ALL THAT APPLY]

1. Hardware store

2. Home improvement store

3. Window specialty store

4. Other (specify: \_\_\_\_\_)

98. Don't know

W9. Please tell me what features were important to you in selecting your new windows [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]

1. Quality; good brand name

2. Price

3. Energy efficiency; something that does not use a lot of electricity; something that does not cost a lot to operate

4. Heating and cooling costs

5. Reduced noise

6. Reduced draftiness

7. Special feature (specify: \_\_\_\_\_)

8. Other (specify: \_\_\_\_\_)

- W10. Where did you look for product information to decide which window to buy? [DO NOT READ RESPONSES; MULTIPLE RESPONSE]
1. Looked at newspaper circulars or other retailer catalogs
  2. Looked on the Internet
  3. Called retailers on the phone
  4. Visited stores
  5. Consulted a building contractor
  6. Looked at Consumer Reports
  7. Other (specify: \_\_\_\_\_)
  98. Don't know

[IF 1, 2, and 4 ARE NOT CHECKED AND (I4 = 1 OR I5 = 1), Skip to W20;  
ELSE IF 1, 2, AND 4 ARE NOT CHECKED, Skip to W24]

- W11. [IF W10 #1 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the circulars or catalogs display the ENERGY STAR label on any window types?
1. Yes
  2. No
  3. Some did
  98. Don't know

- W12. [IF W10 #2 IS CHECKED] 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; RECORD MULTIPLE RESPONSE]
1. Retail store sites — e.g., Sears.com, HomeDepot.com, Lowes.com
  2. Consumer sites — e.g., ConsumerReports.org
  3. EnergyStar.gov
  4. www.cleanenergy.com
  5. Other government websites
  6. Manufacturers' sites
  7. Utility or electric company sites
  8. Other (specify: \_\_\_\_\_)
  98. Don't know

- W13. [IF W10 #2 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the Internet sites display the ENERGY STAR logo for any window types?
1. Yes
  2. Some did
  3. No
  98. Don't know

- W14. [IF W10 #4 IS CHECKED AND (I4 = 1 OR I5 = 1)] Did the salespersons at the retailers you *visited* talk about specific windows being ENERGY STAR labeled?
1. Yes
  2. Some did
  3. No .....Skip to W16
  98. Don't know .....Skip to W16
- W15. Did the salesperson(s) bring up the topic of ENERGY STAR, or did they talk about ENERGY STAR only after you specifically mentioned it?
1. Salesperson brought it up
  2. Salesperson talked about it only after I asked
  3. Some of both
  98. Don't know
- W16. Did the salespersons at the retailers you *visited* discuss the efficiency aspects of different windows?
1. Yes
  2. Some did
  3. No.....If (I4 = 1 OR I5 = 1),  
skip to W20;  
Else Skip to W24
  98. Don't know .....If (I4 = 1 OR I5 = 1),  
skip to W20;  
Else Skip to W24
- W17. Did the salesperson(s) bring up the topic of the amount of energy you would use for heating and cooling with different windows, or did they talk about it only after you specifically mentioned it?
1. Salesperson brought it up
  2. Salesperson talked about it only after I asked
  3. Some of both
  98. Don't know



- W18. What did the salespersons you visited say about the energy impacts of different window types? [DO NOT READ RESPONSES; PROBE; RECORD ALL THAT APPLY]
1. Encouraged purchase of ENERGY STAR windows
  2. Encouraged purchase of high efficiency windows
  3. Discouraged purchase of ENERGY STAR or high efficiency windows
  4. Said everything on the market is high efficiency
  5. Said the unit recommended for other reasons was also high efficiency
  6. Explained the efficiency levels and characteristics
  7. Explained about ENERGY STAR label
  8. Other (specify: \_\_\_\_\_)
  98. Don't remember

- W19. [IF W18=3 THEN ASK] Why was the purchase of ENERGY STAR or high efficiency windows discouraged?

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[IF I4 = 1 OR I5 = 1] [IF (I4 <> 1 OR I5 <> 1) go to NEXT MODULE]

- W20. Did the window(s) you bought have an ENERGY STAR label on it or on the packaging or instructions?
1. Yes
  2. No.....Skip to W23
  98. Don't know .....Skip to W23

- W21. How influential was the ENERGY STAR label in your decision to purchase the window(s) you did? Would you say it was not at all influential, slightly influential, somewhat influential, very influential or extremely influential?
1. Not at all influential
  2. Slightly influential
  3. Somewhat influential
  4. Very influential
  5. Extremely influential
  98. Don't know

- W22. Why did you buy window(s) with an ENERGY STAR label? [MULTIPLE RESPONSE; PROBE, Skip to the next appropriate module]
1. Uses less energy
  2. Less noise
  3. Makes my home more comfortable
  4. Window style
  5. To qualify for a rebate/incentive (specify source: \_\_\_\_\_)
  6. Other (specify: \_\_\_\_\_)
- W23. Did any of the windows you considered buying have an ENERGY STAR label?
1. Yes
  2. No
  98. Don't know
- W24. Why did you select window(s) without an ENERGY STAR label?
1. Too expensive
  2. Couldn't find one with the features I wanted
  3. Wasn't sure what the label meant
  4. Just wasn't a consideration
  5. The ENERGY STAR label has negative connotations for me
  6. Other (specify: \_\_\_\_\_)

## HVAC Equipment Purchasers (If I2 = "HVAC Equipment")

[QUOTA COOLING =75 (HC1=1,2, or 3) HEATING = 75 (HC=2,3,4,5 OR 6)]

HC1. What HVAC equipment or hot water heater did you purchase? Was it . . . [Read]

1. Central Air Conditioning
2. Heat Pump
3. Ground Source Heat Pump
4. Furnace
5. Boiler
6. Gas Water Heater
99. None of the above .....Skip to next appropriate module

[FOR REST OF MODULE REPLACE <UNIT TYPE> WITH THE TYPE OF UNIT THEY PURCHASED]

HC2. Did you receive a rebate from one of the NJ Utilities for purchasing this piece of equipment?

1. Yes
2. No
3. Got rebate for all
98. Don't Know/Not Sure

[IF HC2 = 1, THEN SKIP TO NEXT MODULE; DOES NOT COUNT TOWARDS QUOTA]

HC3. Did the new <UNIT TYPE> replace an existing <UNIT TYPE>?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC3=1, THEN ASK HC4, ELSE SKIP TO HC6]

HC4. Was the <UNIT TYPE> that was replaced operating at the time of replacement or had it failed?

1. Operating
2. Failed
98. Don't Know/Not Sure

[IF HC4=1, THEN ASK HC5, ELSE SKIP TO HC6]

HC5. Why did you replace the existing <UNIT TYPE> with a new one? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]

1. Unit was old
2. Better performance
3. Higher efficiency
4. Lower operating costs
5. Greater comfort
6. Contractor suggested change
7. Other (Specify: \_\_\_\_\_)
98. Don't Know/Not Sure

HC6. What was your primary reason for selecting the firm who installed your <UNIT TYPE>? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]

1. Reputation
2. Qualifications
3. Installed cost of unit
4. Warranty length and/or features
5. Operating cost of unit
6. Unit efficiency
7. Ability to install within required timeframe
8. Availability of a maintenance contract
9. On an “approved” contractor list
98. Don’t Know/Not Sure

HC7. Were you satisfied with the <UNIT TYPE> installed by your contractor?

1. Very satisfied .....Skip to HC9
2. Somewhat satisfied .....Skip to HC9
3. Neutral.....Skip to HC9
4. Not very satisfied
5. Very unsatisfied
98. Don’t know/Not sure.....Skip to HC9

HC8. Why weren’t you satisfied with the <UNIT TYPE> installed by your contractor? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]

1. Too expensive to operate
2. Too noisy
3. Comfort problem
4. Other (Specify: \_\_\_\_\_)
98. Don’t Know/Not Sure

HC9. Were you satisfied with the installation of the <UNIT TYPE> performed by your contractor?

1. Very satisfied .....Skip to HC11
2. Somewhat satisfied .....Skip to HC11
3. Neutral.....Skip to HC11
4. Not very satisfied
5. Very unsatisfied
98. Don’t know/Not sure.....Skip to HC11

HC10. Why weren't you satisfied with the installation of the <UNIT TYPE> performed by your contractor? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]

1. Installation took too long
2. Installation cost too much
3. Too expensive to operate
4. Too noisy
5. Comfort problem
6. Poor workmanship
7. Did not clean up after installation
8. Other (Specify\_\_\_\_\_)
98. Don't Know/Not Sure

HC11. Prior to shopping for your new <UNIT TYPE>, did you know that high efficiency <UNIT TYPE> were available?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC11=1 THEN ASK HC12, ELSE Skip to HC14]

HC12. Did you request information on high efficiency <UNIT TYPE> from your contractor?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC12= 2 THEN ASK HC13, ELSE Skip to HC14]

HC13. Why didn't you request information on high efficiency <UNIT TYPE> from your contractor? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]

1. Cost too much
2. Not convinced operating costs would be lower/no savings
3. Reliability concerns
4. Not readily available
5. Other (Specify\_\_\_\_\_)
98. Don't Know/Not Sure

- HC14. In your opinion, what do you think some of the benefits of installing a high efficiency <UNIT TYPE> might be? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]
1. Lower operating costs
  2. Less energy use
  3. Improved performance
  4. Greater comfort
  5. Increased reliability
  6. Less pollution/environmental impacts
  7. Received utility rebate
  8. Other (Specify \_\_\_\_\_)
  98. Don't Know/Not Sure

- HC15. How is the efficiency of <UNIT TYPE> measured? [DO NOT PROMPT, ENTER ALL THAT ARE MENTIONED]
1. SEER
  2. Seasonal energy efficiency ratio
  3. AFUE
  4. Annual fuel utilization efficiency
  5. % Efficiency
  6. Other specify
  98. Don't Know/Not Sure .....Skip to HC17

- HC16. For <UNIT TYPE>, what level of <INSERT FIRST RESPONSE FROM HC15> would be considered high-efficiency?
1. Enter value \_\_\_\_\_
  98. Don't Know/Not Sure

- HC17. [DO NOT ASK IF HC1=6] In addition to efficiency level, what other factors can affect the performance of your heating and cooling system? [DO NOT PROMPT; ALLOW MULTIPLE RESPONSES]
1. Duct leakage
  2. Duct insulation
  3. Proper refrigerant charge
  4. Proper equipment sizing
  5. Adequate airflow over the indoor coils
  6. Other (Specify)
  98. Don't Know/Not sure

HC18. Did the contractor who installed your <UNIT TYPE> recommend more than one unit for you to consider installing?

1. Yes
2. No
98. Don't Know/Not Sure

HC19. Did the contractor discuss with you that some units are more efficient than others?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC19=1, THEN ASK HC20, ELSE SKIP TO HC22]

HC20. Did the contractor define any specific efficiency level as being high efficiency?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC20=1, THEN ASKHC21, ELSE SKIP TO HC22]

HC21. What level did the contractor define as high efficiency? [PROMPT IF NECESSARY - Air conditioner and heat pump efficiencies are measured in SEER. Furnace and boiler efficiencies are measured as a percentage or in AFUE. Water heaters Water heater efficiency is measured by EF.]

1. Enter value \_\_\_\_\_ Enter units \_\_\_\_\_
2. ENERGY STAR rated
98. Don't Know/Not Sure

HC22. Did the contractor discuss the operating costs of different units?

3. Yes
4. No
98. Don't Know/Not Sure

[IF HC22=1, THEN ASK HC23, ELSE SKIP TO HC24]

HC23. Did the contractor provide any type of operating cost comparison between units of different efficiencies?

1. Yes
2. No
98. Don't Know/Not Sure

HC24. Did the contractor provide prices for both standard and high efficiency units?

1. Yes
2. No
3. Don't Know/Not Sure

[IF HC24=1 THEN ASK HC25 ELSE SKIP TO HC26]

HC25. How much more expensive was the high efficiency unit? [ALLOW EITHER A INCREMENTAL \$ OR % DIFFERENCE RESPONSE]

1. ENTER \$ Amount \$\_\_\_\_\_ or
2. ENTER % Difference \_\_\_\_\_%
3. Same price
4. Is was actually cheaper
98. Don't Know/Not Sure

HC26. Did the contractor recommend that you install a high efficiency <UNIT TYPE>?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC26=1 THEN ASK HC27, ELSE SKIP TO HC29]

HC27. Besides your contractor, did you rely on any other sources of information to help you choose your <UNIT TYPE>?

1. Yes
2. No
98. Don't Know/Not Sure

[IF HC27=1 THEN ASK HC28, ELSE SKIP TO HC29]

HC28. What other sources of information did you use? [DO NOT PROMPT, ALLOW MULTIPLE RESPONSES]

1. Utility program information
2. ENERGY STAR website or brochures
3. Manufacturer advertisements
4. Family/friend recommendation
5. Past experience with brand
6. Other (specify\_\_\_\_\_)
98. Don't Know/Not Sure



HC29. Do you know the efficiency of your new <UNIT TYPE>? [IF NEEDED, Define “efficiency as “SEER” if a CAC or HP, or as “AFUE or % efficiency” if a furnace or boiler, or as “energy factor (EF)” for water heaters.]

- 1. Yes
- 2. No Skip to HC31
- 98. Don't Know/Not Sure Skip to HC31

HC30. And what is the (efficiency) of your new <UNIT TYPE>?

- 1. Record value \_\_\_\_\_
- 98. Don't Know/Not Sure

HC31. And what was the total cost, including installation, of your new <UNIT TYPE>?

- 1. Record value \_\_\_\_\_
- 98. Don't Know/Not Sure

[IF HC3=1, THEN ASK HC32, ELSE SKIP TO HC34]

HC32. Do you know the (efficiency) of your OLD <UNIT TYPE>? [IF NEEDED, Define “efficiency as “SEER” if a CAC or HP, or as “AFUE or % efficiency” if a furnace or boiler, or as “energy factor (EF)” for water heaters.]

- 1. Yes
- 2. No.....Skip to HC34
- 98. Don't Know/Not Sure.....Skip to HC34

HC33. And what is the (efficiency) of your OLD <UNIT TYPE>?

- 1. Record value \_\_\_\_\_ units \_\_\_\_\_
- 98. Don't Know/Not Sure

HC34. [IF I4=1 OR I5=1] Have you heard of the ENERGY STAR Program for air conditioners, gas furnaces, gas boilers or water heaters?

- 2. Yes
- 3. No
- 98. Don't Know/Not Sure

**GN. General ENERGY STAR Summary Question (ask everyone who purchased at least one ENERGY STAR product)**

[If CW19=1, RF19=1, T20=1, AC22=1 or AC23>0 or 98, LF10>0 or 98, LB10>0 or 98 or W20=1]  
[If I7 < 1, Skip to GN4]

- GN1. Earlier you mentioned that you had seen advertising or information about ENERGY STAR in the past twelve months. Did you learn about the ENERGY STAR program through the ads or information, or were you already aware of ENERGY STAR?
1. Learned about program through ads/information
  2. Already aware
  98. Don't recall
- GN2. Had you seen any advertising or information before you began shopping for your new ENERGY STAR product(s)?
1. Yes
  2. No .....Skip to GN4
  98. Don't recall .....Skip to GN4
- GN3. How helpful was the information in your purchase decisions? Would you say...?
1. Not at all helpful
  2. A little helpful
  3. Somewhat helpful
  4. Very helpful
- GN4. At the time you were shopping for the new ENERGY STAR products that you purchased in the past two years, did you have any prior personal experiences with ENERGY STAR products that influenced your decision to buy one again?
1. Yes
  2. No
  98. Don't recall
- GN5. Based on all your experiences with them, how likely are you to recommend ENERGY STAR-labeled products to a friend? Would you say you...?
1. Definitely would not recommend
  2. Probably would not recommend
  3. Might or might not recommend
  4. Probably would recommend
  5. Definitely would recommend
- GN6. 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...?
1. Definitely would not purchase
  2. Probably would not purchase
  3. Might or might not purchase
  4. Probably would purchase
  5. Definitely would purchase

## DE. Demographic/Economic Module

DE1. Now I have a few final questions for statistical purposes only. Do you own or rent your home?

1. Own
2. Rent
99. Refused

DE2. What type of residence do you live in? Would you say it is a...? [READ RESPONSES]

1. Single family (house on a separate lot)
2. Two- to four-family building
3. Apartment in a building with 5 or more units
4. Town or row house (adjacent walls to another house)
5. Mobile home, house trailer
6. Other (specify \_\_\_\_\_)
99. Refused

DE3. What is the highest level of education you have completed? Would you say...? [READ CATEGORIES]

1. Less than high school
2. High school graduate
3. Technical or trade school graduate
4. Some college
5. Two-year college graduate
6. Four-year college graduate
7. Some graduate or professional school
8. Graduate or professional degree
99. Refused

DE4. Which of the following categories best describes your age?

1. 18 to 24
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 or over
99. Refused

DE5. What category best describes your total household income in 2005, before taxes?

1. Less than \$15,000

2. \$15,000 - \$24,999
3. \$25,000 - \$34,999
4. \$35,000 - \$49,999
5. \$50,000 - \$74,999
6. \$75,000 - \$99,999
7. \$100,000 or more
99. Refused

DE6. [DO NOT READ] Gender

1. Female
2. Male

**Thank you very much!**

# NJ ENERGY STAR® Products Program Manufacturer Telephone Interview

Respondent's name: \_\_\_\_\_

Respondent's title: \_\_\_\_\_

Company name: \_\_\_\_\_

Phone number: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer's initials: \_\_\_\_\_

**[LOOKING FOR SOMEONE WITH TITLE OF PRODUCT MANAGER OR SIMILAR]**

Good morning/afternoon, my name is \_\_\_\_\_ and I'm calling from \_\_\_\_\_. We are a consulting company under contract to the New Jersey Board of Public Utilities to conduct a study with a small group of manufacturers about energy efficient products. As part of this study, I would like to ask about the types of products you make. It usually takes about 10 minutes. Is this a good time?

- Yes .....continue
- No.....What would be a good time?

**[IF NECESSARY: The results of the research we are conducting are being used to plan for future energy efficiency programs in New Jersey. Your answers will be combined with the answers from a number of other manufacturers to develop average statistics. We will not report the information you provide other than in an aggregated form that protects your individual identity and the identity of your company.]**

## **A. Screening**

The specific products covered by the study are ... **[READ LIST]**.

Does your company manufacture these products for sale in New Jersey?

Do you (or an associated retailer) sell these products in New Jersey? Are you the person to speak with at your company about the market for and energy efficiency of these products? [IF NECESSARY, PROMPT OR ASK TO SPEAK TO A PERSON MORE KNOWLEDGEABLE]

Technology	Sell the product in New Jersey	Alternate Contact
Clothes Washers		
Dishwashers		
Refrigerator		
Room AC		
Thermostats		
Light Fixtures		
Light Bulbs		
Windows		

If none sold in New Jersey .....Thank and Terminate

### Program Participation

- Does your company participate in the ENERGY STAR Products program in New Jersey.
  - Yes
  - No.....Skip to Q3
  - Don't know

- Do you participate in the National ENERGY STAR Products program? This program is operated by the Environmental Protection Agency. The ENERGY STAR label designates higher efficiency products. Retailers can participate as a program partner by signing an agreement and providing energy efficient options for their clients.
  - Yes
  - No
  - Don't know

- Does your company participate in any other energy efficiency programs? [MAY BE IN OTHER STATES, RECORD ANYWAY]
  - Yes (specify: \_\_\_\_\_)
  - No.....Skip to Q5
  - Don't know .....Skip to Q5

- Please briefly describe your level of participation. What programs or activities do you participate in (outside of New Jersey)? [Specify National or Other]
 

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## Product Supply and Demand

For each product that you supply, I'd like to ask you several questions about the demand and market share for ENERGY STAR-labeled products. I'll go through that same list of products again. Remember: Your answers will be combined with the answers from a number of other manufacturers of similar products to develop average statistics. We will not report the information you provide other than in an aggregated form that protects your individual identity and the identity of your company.

5. a. First, what is your best estimate of the percent of the <product category> that you make that is eventually sold within New Jersey? [RECORD IN TABLE BELOW]
- b. What percent of the total number of <product category> sold in New Jersey is made by your company, again, just your best estimate? In other words, what is your companies market share in NJ? [RECORD IN TABLE BELOW]

Technology	5a. Percent of total products sold that are sold in NJ	5b. Percent of products sold in NJ that are manufactured by this company
Clothes Washers		
Dishwashers		
Refrigerator		
Room AC		
Thermostats		
Light Fixtures		
Light Bulbs		
Windows		

6. [FOR EACH CATEGORY THAT THEY MANUFACTURE FROM A] Now I'd like to ask a few questions about your product line and how it might be changing. Does your company make any models that are ENERGY STAR rated and if so, how many models? Let's start with...

Technology	ENERGY STAR	Number of Models
Clothes Washers	Yes No	
Dishwashers	Yes No	
Refrigerator	Yes No	
Room AC	Yes No	
Thermostats	Yes No	
Light Fixtures	Yes No	
Light Bulbs	Yes No	
Windows	Yes No	

7. Over the past three years, have you changed the proportion of <product category> units produced that qualify for the ENERGY STAR label? Would you say the number of ENERGY STAR qualifying models has ... ? [RECORD IN TABLE BELOW]

*1=Increased Significantly; 2=Increased Somewhat; 3=Stayed the Same; 4=Decreased Somewhat; 5=Decreased Significantly*

Clothes Washers	1	2	3	4	5	Other	DK
Dishwasher	1	2	3	4	5	Other	DK
Refrigerator	1	2	3	4	5	Other	DK
Room AC	1	2	3	4	5	Other	DK
Thermostats	1	2	3	4	5	Other	DK
Light Fixtures	1	2	3	4	5	Other	DK
Light Bulbs	1	2	3	4	5	Other	DK
Windows	1	2	3	4	5	Other	DK

[IF THE PROPORTION OF ENERGY STAR QUALIFIED HAS STAYED THE SAME ALL PRODUCTS (3), SKIP TO Q9; OTHERWISE ASK Q8]

8. What factors affected your decision to make these changes? [PROBE ON WHETHER THIS IS A CHANGE IN MARKET DEMAND IN TOTAL, OR A CHANGE IN THE DEMAND FOR ES SPECIFICALLY; PROBE FOR ATTRIBUTION TO ANY PROGRAM]

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9. Considering New Jersey only, have you noticed a change in consumer demand for ENERGY STAR *labeled* <product category> over the past three years? Would you say that consumer demand has:

*1=Increased Significantly; 2=Increased Somewhat; 3=Stayed the Same; 4=Decreased Somewhat; 5=Decreased Significantly*

Clothes Washers	1	2	3	4	5	Other	DK
Dishwasher	1	2	3	4	5	Other	DK
Refrigerator	1	2	3	4	5	Other	DK
Room AC	1	2	3	4	5	Other	DK
Thermostats	1	2	3	4	5	Other	DK
Light Fixtures	1	2	3	4	5	Other	DK
Light Bulbs	1	2	3	4	5	Other	DK
Windows	1	2	3	4	5	Other	DK

[IF DEMAND IS THE SAME FOR ALL PRODUCTS (3), SKIP TO Q11; OTHERWISE ASK Q10]

10. What are the reasons you think demand for ENERGY STAR <product> has <increased/decreased>?

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11. How does consumer demand for ENERGY STAR *labeled* <product category> in New Jersey compare with demand in nearby states or market areas? Would you say that in New Jersey demand is

*1= Significantly Higher; 2= Somewhat Higher; 3=About the Same; 4= Somewhat Lower; 5= Significantly Lower*

Clothes Washers	1	2	3	4	5	Other	DK
Dishwasher	1	2	3	4	5	Other	DK
Refrigerator	1	2	3	4	5	Other	DK
Room AC	1	2	3	4	5	Other	DK
Thermostats	1	2	3	4	5	Other	DK
Light Fixtures	1	2	3	4	5	Other	DK
Light Bulbs	1	2	3	4	5	Other	DK
Windows	1	2	3	4	5	Other	DK

[IF DEMAND IS THE SAME FOR ALL PRODUCTS (3) , SKIP TO Q13; OTHERWISE ASK Q12]

12. What are the reasons you think demand for ENERGY STAR <product> is <lower/higher> in New Jersey compared to nearby states or other market areas?

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13. How do you monitor or measure consumer demand for specific products or product features?

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14. Which market areas (state or region) show the highest consumer demand? Which areas show the lowest?

Highest: \_\_\_\_\_

Lowest: \_\_\_\_\_

## Incremental Costs

15. [FOR EACH CATEGORY THAT THEY MANUFACTURE FROM A] Compared with similar, non-ENERGY STAR models, do ENERGY STAR models cost more, less, or the same amount to manufacture? Would you say significantly or somewhat more/less?

[RECORD IN TABLE BELOW]

1= Significantly More; 2= Somewhat More; 3=About the Same; 4= Somewhat Less; 5= Significantly Less

Clothes Washers	1	2	3	4	5	Other	DK
Dishwasher	1	2	3	4	5	Other	DK
Refrigerator	1	2	3	4	5	Other	DK
Room AC	1	2	3	4	5	Other	DK
Thermostats	1	2	3	4	5	Other	DK
Light Fixtures	1	2	3	4	5	Other	DK
Light Bulbs	1	2	3	4	5	Other	DK
Windows	1	2	3	4	5	Other	DK

16. [FOR EACH CATEGORY THAT THEY MANUFACTURE FROM A] What is your best estimate of the incremental *retail cost to the consumer* of an ENERGY STAR model

over a similar non-ENERGY STAR model – in percentage terms? **[RECORD IN TABLE BELOW]**

Technology	Incremental Retail Cost (%)
Clothes Washers	
Refrigerator	
Room AC	
Thermostats	
Light Fixtures	
Light Bulbs	
Windows	

17. And how has that incremental cost changed over the past three years? Would you say it has . . .

*1=Increased Significantly; 2= Increased Somewhat; 3=About the Same; 4= Decreased Somewhat; 5= Decreased Significantly*

Clothes Washers	1	2	3	4	5	Other	DK
Dishwasher	1	2	3	4	5	Other	DK
Refrigerator	1	2	3	4	5	Other	DK
Room AC	1	2	3	4	5	Other	DK
Thermostats	1	2	3	4	5	Other	DK
Light Fixtures	1	2	3	4	5	Other	DK
Light Bulbs	1	2	3	4	5	Other	DK
Windows	1	2	3	4	5	Other	DK

**[IF INCREMENTAL COST IS THE SAME FOR ALL PRODUCTS (3) , SKIP TO Q19; OTHERWISE ASK Q18]**

18. Why has incremental cost <increased/decreased>?

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## ENERGY STAR Market Share

[IF THEY DON'T SELL ANY ENERGY STAR MODELS (FROM 6), SKIP TO 23]

This time, please give me your best estimate for the percentage of products that your company has sold in New Jersey and nationally over the past year that were ENERGY STAR labeled.

19. Approximately, what percentage of your New Jersey [product] sales in 2005 do you estimate were ENERGY STAR labeled? . . . and nationally?

ENERGY STAR Technology	Percent of products that are ENERGY STAR in New Jersey	Percent of products that are ENERGY STAR nationally
Clothes Washers		
Dishwasher		
Refrigerator		
Room AC		
Thermostats		
Light Fixtures		
Light Bulbs		
Windows		

20. And how has that percentage changed over the past three years? Would you say it has . . .

*1=Increased Significantly; 2=Increased Somewhat; 3=Stayed the Same; 4=Decreased Somewhat; 5=Decreased Significantly*

Clothes Washers	1	2	3	4	5	Other	DK
Dishwasher	1	2	3	4	5	Other	DK
Refrigerator	1	2	3	4	5	Other	DK
Room AC	1	2	3	4	5	Other	DK
Thermostats	1	2	3	4	5	Other	DK
Light Fixtures	1	2	3	4	5	Other	DK
Light Bulbs	1	2	3	4	5	Other	DK
Windows	1	2	3	4	5	Other	DK

21. [If increase or decrease] To what do you attribute the change?

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22. Do you see any differences in the sales of ENERGY STAR products versus standard products such as differences by state, new construction vs. remodel, etc.? Please explain.

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## Energy Savings, Product Quality, and Non-Energy Benefits

23. What impact do you think ENERGY STAR products have on overall energy use and bills? Would you say the use of ENERGY STAR products [READ LIST] energy use and bills?
- Significantly decreases
  - Somewhat decreases
  - Doesn't affect
  - Somewhat increases
  - Significantly increases
  - Don't Know
24. What impact on energy consumption do you think customers perceive from ENERGY STAR products?
- Significantly decreases
  - Somewhat decreases
  - Doesn't affect
  - Somewhat increases
  - Significantly increases
  - Don't Know
25. Do you believe that ENERGY STAR appliances/lighting/windows are higher quality products than non-ENERGY STAR models?
- Yes
  - No
  - Don't know
26. Do you believe customers think that ENERGY STAR appliances/lighting/windows are higher quality products than non-ENERGY STAR models?
- Yes
  - No
  - Don't know

27. What additional benefits (other than energy savings) do you think ENERGY STAR products provide? **[DO NOT READ, CHECK ALL THAT APPLY]**
- Better quality
  - Long life
  - Better performance
  - Greater reliability
  - More features
  - Better comfort
  - Easier to use
  - Less noise
  - Other (specify: \_\_\_\_\_)
  - Other (specify: \_\_\_\_\_)
  - None

28. **[IF MULTIPLE RESPONSES TO Q27]** Which non-energy benefits do you feel are most important? How do they differ by product?

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29. How important do you think these additional, non-energy benefits are in terms of selling products? Would you say they are:
- Very important
  - Somewhat important
  - Not very important
  - Not at all important
  - Don't know

**[IF NECESSARY PROBE FOR DIFFERENCES BY PRODUCT]**

30. What do you consider to be the major barriers to customers purchasing ENERGY STAR® Products? [DO NOT READ; RECORD MULTIPLE RESPONSES]

- None
- First cost of ES products
- Lack of education and awareness
- Few retailers carrying qualifying products
- Lack of availability of qualifying products
- Uncertainty about efficiency benefits
- Other (specify: \_\_\_\_\_)
- Don't know/unsure

31. Please tell me how much you agree or disagree with each of the following statements.

Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-strongly disagree, 2-somewhat disagree, 3-neither, 4-somewhat agree, 5-strongly agree*

Statement	Rating				
Consumers understand the benefits of the ENERGY STAR label	1	2	3	4	5
Consumers associate ENERGY STAR label with greater efficiency	1	2	3	4	5
Consumers associate ENERGY STAR label with quality products	1	2	3	4	5

## Marketing of ENERGY STAR

32. Do you leverage the ENERGY STAR label and brand in your own marketing?

- Yes
- No .....Skip to Q34
- Don't know .....Skip to Q34

33. How so?

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34. In the past three years, has your company made any changes to its marketing of ENERGY STAR products?

- Yes .....Skip to Q36
- No
- Don't know

35. Why have you not changed your marketing practices for ENERGY STAR products?  
[Skip to Q37]

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36. What changes have you made? [PROBE FOR TYPE OF MARKETING PROGRAMS, EXPERIENCES, AND USE OF ENERGY STAR SYMBOL/BRANDING]

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37. How do ENERGY STAR products fit into your product line? [PROBE FOR MIX OF ENERGY EFFICIENT VS. STANDARD WINDOWS, MOST COMMONLY MANUFACTURED WINDOW (GLAZING, MATERIALS, U-FACTOR), ETC.]

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[GO TO 38 IF Q1 = 1, ELSE SKIP TO 51]

### Participant Questions (If Q1=Yes)

38. Please briefly describe your level of participation. What program activities do you participate in? [DO NOT READ; CHECK ALL THAT APPLY]

- ENERGY STAR Lighting Incentive Program
- Sales training for Windows
- Other (specify: \_\_\_\_\_)
- None

39. Overall, how would you rate the effectiveness of the New Jersey ENERGY STAR® Products program?

- Very effective.....Skip to 41
- Somewhat effective.....Skip to 41
- Neutral .....Skip to 41
- Not very effective
- Very ineffective
- Don't know/unsure .....Skip to 41



40. Why do you rate the effectiveness of the New Jersey ENERGY STAR® Products program this way?

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41. Is there anything that you think should be changed about the program? [DO NOT PROMPT; SELECT ALL THAT APPLY]

- No suggestions
- More marketing to the public
- Make ES efficiency levels the industry standard
- Help manufacturers or retailers with advertising
- Too much of his time is needed
- More training for manufactures or retailers
- Have consultants spend more time with us
- Better communication with what's going on with the program
- More stringent criteria for participating retailers
- Better coop advertising program
- Provide incentives for manufactures or retailers
- Provide additional incentives for consumers
- Other (specify: \_\_\_\_\_)
- Other (specify: \_\_\_\_\_)
- Don't know/unsure

42. [IF MORE THAN ONE SUGGESTED CHANGE] Which one of these suggestions would be most important to change?

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43. What do you think the barriers are, if any, to participating in the New Jersey ENERGY STAR® Products programs for businesses like yourself?

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44. How effective is the New Jersey ENERGY STAR® Products program in reducing these barriers? [PROBE: What do you need as far as support, information, or tools to help you sell more ENERGY STAR® products?]

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45. The NJ Office of Clean Energy has identified several barriers to the market penetration of ENERGY STAR products. On a scale from 1-5, with 1 being not very important at all and 5 being very important please rate the current importance of the following barriers:

Market Barrier	1 – Not Important 5 – Very Important				
Higher Cost	1	2	3	4	5
Lack of information on the benefits of energy efficiency and environmental performance	1	2	3	4	5
Lack of availability of products	1	2	3	4	5
Uncertainty of efficiency benefits	1	2	3	4	5

46. To overcome these barriers the New Jersey ENERGY STAR program employs several key strategies. On a scale from 1-5, with 1 being not successful at all and 5 being very successful, please rate the effectiveness or success of the following strategies:

Strategy	1 – Not Successful 5 – Very Successful				
Training for participating retailers	1	2	3	4	5
Training for selected manufacturers	1	2	3	4	5
Information for consumers	1	2	3	4	5
Cooperative advertising	1	2	3	4	5
Program web-site	1	2	3	4	5
Incentives for consumers	1	2	3	4	5

47. Now I am going to ask you to rate your satisfaction with each of the following aspects of the ENERGY STAR Products program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating extremely satisfied and 1 indicating extremely dissatisfied:

Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-extremely dissatisfied, 2-somewhat dissatisfied, 3-neither, 4-somewhat satisfied, 5-extremely satisfied*

Statement	Rating				
Quality of marketing support materials	1	2	3	4	5
Ease of participation	1	2	3	4	5
Responsiveness of program staff	1	2	3	4	5
Amount of co-op advertising support	1	2	3	4	5
Amount of paperwork required to participate	1	2	3	4	5
The program overall	1	2	3	4	5

**FINALLY, I'd like to ask a few general questions:**

48. What single aspect of the ENERGY STAR products program have you found most helpful?

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49. And what single aspect of the program have you found least helpful?

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50. Do you have any final comments about the ENERGY STAR products program?

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**Non-Participant Questions (If Q1 is not yes)**

51. Are you aware of the NJ ENERGY STAR Products Program?

- Yes
- No .....Skip to 54
- Don't know .....Skip to 54

52. What is the reason that you do not participate in the NJ ENERGY STAR Products Program? [PROBE FOR DETAILS; DO NOT READ LIST; CHECK ALL THAT APPLY]

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- Not enough marketing to the public
- ES efficiency levels are already the industry standard
- Program works with other manufacturers
- Too much time is needed
- Insufficient training for manufactures or retailers
- Need consultants to spend more time with us
- Need better communication with what's going on with the program
- Criteria for participating retailers is too stringent

- Better coop advertising program
- Need incentives for manufactures or retailers
- Need additional incentives for consumers
- Other (specify: \_\_\_\_\_)
- Other (specify: \_\_\_\_\_)
- Don't know/unsure .....Skip to 54

53. If these changes were made to the program, would you be more likely to participate?

- Yes
- No
- Don't know

54. From your perspective, what should be part of a program to encourage increased adoption of ENERGY STAR-qualified products by consumers?

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55. And what program features would be important in a program to encourage manufacturers to offer more ENERGY STAR-qualified products?

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**Thank you! Those are all the questions I have today.**

# NJ ENERGY STAR® Products Program Retailer Telephone Survey

Respondent's name: \_\_\_\_\_

Respondent's title: \_\_\_\_\_

Store name: \_\_\_\_\_

Street address: \_\_\_\_\_ City / Zip: \_\_\_\_\_

Phone number: \_\_\_\_\_

Interview date: \_\_\_\_\_ Interviewer's initials: \_\_\_\_\_

Good morning/afternoon, may I speak with [CONTACT NAME; IF NO CONTACT ASK FOR THE STORE MANAGER]? My name is \_\_\_\_\_, and I'm calling from \_\_\_\_\_. We are a consulting company under contract to the New Jersey Board of Public Utilities to conduct a study with a small group of retailers that participate in energy efficiency programs. As part of this study, I would like to ask about energy efficiency in your businesses. It usually takes about 10 minutes. Is this a good time?

- Yes .....proceed
- No.....“What would be a good time?”

[IF NECESSARY: The results of the research we are conducting are being used to plan for future energy efficiency programs in New Jersey. Your answers will be combined with the answers from a number of other retailers around the State to develop average statistics. We will not report the information you provide other than in an aggregated form that protects your individual identity and the identity of your store.]

## A. Screening

I'll read a list of items that some stores carry, and I'd like for you to tell me if you carry these items, and if so, how many different models you typically carry. The first one is... [IF NECESSARY; PROMPT OR ASK TO SPEAK TO A PERSON MORE KNOWLEDGEABLE]

Technology	How many models do they carry?	Alternate Contact
Clothes Washers		
Dishwashers		
Refrigerator		
Room AC		
Thermostats		
Light Fixtures		

Light Bulbs		
Windows		
Total		

As I mentioned earlier, the main focus of this study is the energy efficiency of products sold in New Jersey. The next several questions are specifically about the ENERGY STAR label and programs.

- Does your company participate in the ENERGY STAR Products program in New Jersey.
  - Yes
  - No.....Skip to Q3
  - Don't know

[IF Q1 = 1 ASK Q40-69, ELSE SKIP TO Q70-76 AFTER Q39]

- Do you participate in the National ENERGY STAR Products program? This program is operated by the Environmental Protection Agency. The ENERGY STAR label designates higher efficiency products. Retailers can participate as a program partner by signing an agreement and providing energy efficient options for their clients.
  - Yes
  - No
  - Don't know

- How would you best describe your store? Would you say it is...[READ LIST]?
  - Appliance store
  - Furniture or Home furnishing store
  - Department store or Discount department store
  - Hardware store
  - Home improvement store
  - Lighting specialty store
  - Drug store
  - Grocery store
  - Window/Door specialty store
  - Building materials/Lumberyard
  - Other (specify: \_\_\_\_\_)

4. [FOR EACH CATEGORY THAT THEY SELL FROM A] For which of the product categories I mentioned earlier do you sell at least one ENERGY STAR model?  
[RECORD IN TABLE BELOW]

Technology	At least one Energy Star Model
Clothes Washers	
Dishwashers	
Refrigerator	
Room AC	
Thermostats	
Light Fixtures	
Light Bulbs	
Windows	
Total	

5. [FOR EACH CATEGORY THAT THEY SELL FROM A] How familiar are you with ENERGY STAR models of <product category>. Would you say you are . . .

	Clothes Washers	Dishwasher	Refrigerator	Room AC	Thermostats	Light Fixtures	Light Bulbs	Windows
Very Familiar								
Somewhat Familiar								
Slightly Familiar								
Not at All Familiar								
Other								
Don't Know								

6. For those products where you sell at least one ENERGY STAR model, how has your familiarity with these ENERGY STAR products changed over the past year? Would you say it has . . .

	Clothes Washers	Dishwasher	Refrigerator	Room AC	Thermostats	Light Fixtures	Light Bulbs	Windows
Increased Significantly								
Increased Somewhat								
Stayed the Same								
Decreased Somewhat								
Decreased Significantly								
Other								
Don't Know								

7. [IF ANY CHANGES] To what do you attribute the changes in your familiarity with ENERGY STAR products?

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## Incremental Costs

8. [FOR EACH CATEGORY THAT THEY SELL FROM A] For each of the following product categories, please give me your best estimate of the incremental cost of an ENERGY STAR model over a similar non-ENERGY STAR model – in percentage terms.

Technology	Incremental Cost of the Energy Star Model	
Clothes Washers		<input type="checkbox"/> Don't know
Dishwashers		<input type="checkbox"/> Don't know
Refrigerator		<input type="checkbox"/> Don't know
Room AC		<input type="checkbox"/> Don't know
Thermostats		<input type="checkbox"/> Don't know
Light Fixtures		<input type="checkbox"/> Don't know
Light Bulbs		<input type="checkbox"/> Don't know
Windows		<input type="checkbox"/> Don't know
Total		<input type="checkbox"/> Don't know

9. And how has that incremental cost changed during the last three years? Would you say it has . . .

	Clothes Washers	Dishwasher	Refrigerator	Room AC	Thermostats	Light Fixtures	Light Bulbs	Windows
Increased Significantly								
Increased Somewhat								
Stayed the Same								
Decreased Somewhat								
Decreased Significantly								
Other								
Don't Know								

10. What factors have influenced the change in incremental cost?

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## ENERGY STAR Market Share

11. [FOR EACH CATEGORY THAT THEY SELL FROM A] I'll go through that same list one more time. This time, please give me your best estimate for the percentage of products that your store has sold in the past **12 months** that were ENERGY STAR labeled. Remember: Your answers will only be used in combination with the answers



from other retailers around the State to develop *average* statistics. [IF NECESSARY: We will not report the information you provide other than in an aggregated form that protects your individual identity and the identity of your store.]

Technology	Percent of Products sold that have the ENERGY STAR label
Clothes Washers	
Dishwashers	
Refrigerator	
Room AC	
Thermostats	
Light Fixtures	
Light Bulbs	
Windows	

12. And how has that percentage changed over the past *three years*? Would you say it has . . .

	Clothes Washers	Dishwasher	Refrigerator	Room AC	Thermostats	Light Fixtures	Light Bulbs	Windows
Increased Significantly								
Increased Somewhat								
Stayed the Same								
Decreased Somewhat								
Decreased Significantly								
Other								
Don't Know								

13. Why do you think the percentage of ENERGY STAR-labeled units has changed?

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14. Could you tell me approximately how many ENERGY STAR products you sold in each category?

Technology	Total Number Sold
Clothes Washers	
Dishwashers	
Refrigerator	
Room AC	
Thermostats	
Light Fixtures	
Light Bulbs	
Windows	

## Stocking and Display Practices

Now I'd like to talk briefly about your stocking and display practices.

15. Thinking about the **models** of the products that you sell, how is the decision made on the proportion of **models** that you display that are ENERGY STAR? [PROBE FOR REASONS. DO NOT READ. AFTER EACH REASON GIVEN, ASK, "ANY MORE?" AND RECORD ALL MENTIONED. IF NEED MORE SPACE, WRITE IN THE MARGINS.]

- Want a mix of prices  
[ASK HOW THIS AFFECTS THE PROPORTION OF ENERGY STAR MODELS ON DISPLAY AND SELECT AN ANSWER OR RECORD UNDER "OTHER."]
- Have a mix of prices that match what we think our customers will want to pay
- The market determines the proportion
- We need to keep a supply of less-expensive models for our customers
- Corporate office determines what we sell
- Depends on the stock we have on hand
- Our display space limits what we can display  
[ASK HOW THIS AFFECTS THE PROPORTION OF ENERGY STAR MODELS ON DISPLAY AND SELECT AN ANSWER OR RECORD UNDER "OTHER."]
- We stock what customers have asked for in the past
- We can't get more ENERGY STAR models from our distributor
- We have almost all ENERGY STAR products now  
[ASK HOW THEY DECIDED TO DISPLAY SUCH A HIGH PROPORTION OF ENERGY STAR MODELS AND SELECT AN ANSWER OR RECORD UNDER "OTHER."]
- Other (specify: \_\_\_\_\_)
- Other (specify: \_\_\_\_\_)
- Don't know

16. Of these factors affecting your stocking and display decisions, which is most important?

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17. Over the past three years, have you increased, decreased, or left about the same the proportion of units that you display in the store that are ENERGY STAR? Would you say somewhat or significantly increased/decreased?

	Clothes Washers	Dishwasher	Refrigerator	Room AC	Thermostats	Light Fixtures	Light Bulbs	Windows
Increased Significantly								
Increased Somewhat								
Stayed the Same								
Decreased Somewhat								
Decreased Significantly								
Other								
Don't Know								

18. What factors influenced the decision to change the proportion of ENERGY STAR units that you display in your store?

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## Promotion Practices

Next I have a few questions about your marketing and promotion practices.

19. Do you advertise your products in the newspaper, in other print media, or on the radio or TV? **[DO NOT READ LIST]**
- No, don't advertise.....Skip to Q24
  - Newspaper/Neighborhood flyer
  - Radio
  - TV
  - Web site
  - Yellow Pages
  - Other (specify: \_\_\_\_\_)
  - None of these
  - Don't know
20. Do you use or mention the ENERGY STAR label in any of your advertising?
- Yes
  - No.....Skip to Q23

21. Are there any differences in how much you use the ENERGY STAR label for different products? What are those differences?

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22. How has your use of the ENERGY STAR label in your advertising changed during the last three years? Would you say it has...?

- Increased significantly
- Increased somewhat
- Stayed the same
- Decreased somewhat
- Decreased significantly

[SKIP TO Q24]

23. Is there a particular reason why you don't use the ENERGY STAR label in your advertising? [PROBE FOR DIFFERENCES BETWEEN PRODUCTS]

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## Consumer Demand

24. In what percentage of all your current sales transactions do customers ask for or about ENERGY STAR?

- \_\_\_\_\_ %

25. How has that percentage changed over the past three years?

- Significantly less
- Somewhat less
- About the same
- Somewhat more
- Significantly more
- Other ( \_\_\_\_\_ )
- Don't know/Not applicable

26. What factors have influenced that change? [PROBE FOR DIFFERENCES BETWEEN PRODUCTS]

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- 
27. Would you say customers have more interest, the same interest, or less interest in ENERGY STAR products than they had a few years ago? Would you say significantly or somewhat more/less?
- Significantly less
  - Somewhat less
  - About the same
  - Somewhat more
  - Significantly more

## G. Training

28. How often do your salespersons receive a formal training session on the *features of the product line*? By “formal” I mean a group training session rather than personal guidance. [SELECT ALL THAT APPLY]
- \_\_\_\_\_ times per year
  - \_\_\_\_\_ times per month
  - Weekly
  - When they are hired
  - No training session / Informal training .....Skip to G11
  - Other (specify: \_\_\_\_\_)
  - Don't know
  - Refused
29. Who conducts the training? [SELECT ALL THAT APPLY]
- Store manager
  - Brand representative
  - Other (specify: \_\_\_\_\_)
  - Don't know
30. Does this training usually address the energy efficiency of products?
- Yes .....Skip to Q32
  - No
  - Don't Know .....Skip to Q32
31. Why is energy efficiency not covered?
- (RECORD: \_\_\_\_\_)
  - Don't know

32. What type of information would be most useful for your business to have included in a training session on ENERGY STAR products?
- 
- 

## Energy Savings and Product Quality

33. What impact do you think ENERGY STAR products have on overall energy use and bills? Would you say the use of ENERGY STAR products [READ LIST] energy use and bills?
- Significantly decreases
  - Somewhat decreases
  - About the same
  - Somewhat increases
  - Significantly increases
  - Don't Know
34. What impact on energy consumption do you think customers perceive from ENERGY STAR products?
- Significantly decreases
  - Somewhat decreases
  - About the same
  - Somewhat increases
  - Significantly increases
  - Don't Know
35. Do you believe that ENERGY STAR appliances/lighting/windows are higher quality products than non-ENERGY STAR models?
- Yes
  - No
  - Don't know
36. Do you believe customers think that ENERGY STAR appliances/lighting/windows are higher quality products than non-ENERGY STAR models?
- Yes
  - No
  - Don't know

37. What additional benefits (other than energy savings) do you think ENERGY STAR products provide? [DO NOT READ, CHECK ALL THAT APPLY]
- Better quality
  - Long life
  - Better performance
  - Greater reliability
  - More features
  - Better comfort
  - Easier to use
  - Less noise
  - Other (specify: \_\_\_\_\_)
  - Other (specify: \_\_\_\_\_)
  - None
- Skip to 40 if Q1 = 1, Else Skip to 70

38. [If multiple responses to Q37] Which non-energy benefits do you feel are most important? How do they differ by product?
- 
- 

39. How important do you think these additional, non-energy benefits are in terms of selling products? Would you say they are: [PROBE FOR DIFFERENCES BY PRODUCT]
- Very important
  - Somewhat important
  - Not very important
  - Not at all important
  - Don't know
- 
- 

[SKIP TO 40 IF Q1 = 1, ELSE SKIP TO 70]

### Participant Questions (If Q1=Yes)

40. Please briefly describe your level of participation. What program activities do you participate in? [CHECK ALL THAT APPLY]
- ENERGY STAR Lighting Incentive Program
  - ENERGY STAR Room Air Conditioner Rebate Program
  - Co-op advertising

- Sales training
- Other (specify: \_\_\_\_\_)

41. Do you utilize ENERGY STAR in-store point of purchase displays?

- Yes
- No
- Don't Know/Refused

42. Have your sales staff attended the training sponsored by the ENERGY STAR Products Program?

- Yes
- No .....Skip to 48
- Don't Know

Has the training affected your ...? [RECORD RESPONSES IN FOLLOWING TABLE]

43. Promotion of ENERGY STAR products	<input type="checkbox"/> Yes (How? _____) <input type="checkbox"/> No (Why not? _____)
44. Awareness/Knowledge of ENERGY STAR products	<input type="checkbox"/> Yes (How? _____) <input type="checkbox"/> No (Why not? _____)
45. Ability to Educate Consumers regarding ENERGY STAR products	<input type="checkbox"/> Yes (How? _____) <input type="checkbox"/> No (Why not? _____)
46. Ability to Sell ENERGY STAR products	<input type="checkbox"/> Yes (How? _____) <input type="checkbox"/> No (Why not? _____)

47. What aspect of the training was most useful? [DO NOT READ]

- Information on availability of ENERGY STAR products
- Information on potential energy savings
- Information on other product features
- Ideas for increasing sales of ENERGY STAR products
- Other (specify: \_\_\_\_\_)
- Other (specify: \_\_\_\_\_)

48. Have you participated in any other regional or national training related to energy efficiency of ENERGY STAR?

- Yes (describe: \_\_\_\_\_)
- No



Don't Know

49. Overall, how would you rate the effectiveness of the New Jersey ENERGY STAR® Products program?

Very effective .....Skip to 51

Somewhat effective.....Skip to 51

Neutral .....Skip to 51

Not very effective

Very ineffective

Don't know/unsure .....Skip to 51

50. Why do you rate the effectiveness of the New Jersey ENERGY STAR® Products program this way?

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51. What should be changed about the program? [PROBE FOR DETAILS; DO NOT READ LIST; CHECK ALL THAT APPLY]

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No suggestions

More marketing to the public

Make ES efficiency levels the industry standard

Help manufacturers or retailers with advertising

Too much of his time is needed

More training for manufactures or retailers

Have consultants spend more time with us

Better communication with what's going on with the program

More stringent criteria for participating retailers

Better coop advertising program

Provide incentives for manufactures or retailers

Provide additional incentives for consumers

Other (specify: \_\_\_\_\_)

Other (specify: \_\_\_\_\_)

Don't know/unsure

52. [IF MORE THAN ONE SUGGESTED CHANGE] Which one of these suggestions would be most important to change?

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53. What do you consider to be the major barriers to customers purchasing ENERGY STAR® Products? [DO NOT READ; MARK ALL THAT APPLY]

- None
- First cost of ES products
- Lack of education and awareness
- Few retailers carrying qualifying products
- Lack of availability of qualifying products
- Uncertainty about efficiency benefits
- Other (specify: \_\_\_\_\_)
- Don't know/unsure

54. How effective is the New Jersey ENERGY STAR® Products program in reducing these barriers? [PROBE: What do you need as far as support, information, or tools to help you sell more ENERGY STAR® products?]

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55. The NJ Office of Clean Energy has identified several barriers to the market penetration of ENERGY STAR products. On a scale from 1-5, with 1 being not very significant at all and 5 being very significant, please rate the current significance of the following barriers:

Market Barrier	1 – Not Significant 5 – Very Significant				
	1	2	3	4	5
Higher Cost	1	2	3	4	5
Lack of information on the benefits of energy efficiency and environmental performance	1	2	3	4	5
Lack of availability of products	1	2	3	4	5
Uncertainty of efficiency benefits	1	2	3	4	5

56. To overcome these barriers the New Jersey ENERGY STAR program employs several key strategies. On a scale from 1-5, with 1 being not successful at all and 5 being very successful, please rate the effectiveness or success of the following strategies to overcome the barriers:

Strategy	1 – Not Successful 5 – Very Successful				
Training for participating retailers	1	2	3	4	5
Information for consumers	1	2	3	4	5
Cooperative advertising	1	2	3	4	5
Program web-site	1	2	3	4	5
Incentives for consumers	1	2	3	4	5

Please tell me how much you agree or disagree with each of the following statements.

Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-strongly disagree, 2-somewhat disagree, 3-neither, 4-somewhat agree, 5-strongly agree*

Statement	Rating				
57. Consumers understand the benefits of the ENERGY STAR label	1	2	3	4	5
58. Consumers associate ENERGY STAR label with greater efficiency	1	2	3	4	5
59. Consumers associate ENERGY STAR label with quality products	1	2	3	4	5

Now I am going to ask you to rate your satisfaction with each of the following aspects of the ENERGY STAR Products program. For each, please rate your satisfaction on a 1 to 5 scale with 5 indicating extremely satisfied and 1 indicating extremely dissatisfied:

*1-extremely dissatisfied, 2-somewhat dissatisfied, 3-neither, 4-somewhat satisfied, 5-extremely satisfied*

Statement	Rating				
60. Quality of marketing support materials	1	2	3	4	5
61. Ease of participation	1	2	3	4	5
62. Responsiveness of program staff	1	2	3	4	5
63. Amount of co-op advertising support	1	2	3	4	5
64. Amount of paperwork required to participate	1	2	3	4	5
65. The program overall	1	2	3	4	5

**FINALLY, I'd like to ask a few general questions:**

66. What single aspect of the ENERGY STAR products program have you found most helpful?

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67. And what single aspect of the program have you found least helpful?

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68. What changes, if any, would you recommend for the program?

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69. Do you have any final comments about the ENERGY STAR products program?

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**Thank you! Those are all the questions I have today.**

### **Non-Participant Questions (If Q1 is not yes)**

70. Are you aware of the NJ ENERGY STAR Products Program?

- Yes
- No .....Skip to 73
- Don't know .....Skip to 73

71. What is the reason that you do not participate in the NJ ENERGY STAR Products Program? [PROBE FOR DETAILS; DO NOT READ LIST; CHECK ALL THAT APPLY]

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- Not enough marketing to the public
- ES efficiency levels are already the industry standard
- Program works with other manufacturers
- Too much time is needed
- Insufficient training for manufactures or retailers
- Need consultants to spend more time with us
- Need better communication with what's going on with the program
- Criteria for participating retailers is too stringent
- Better coop advertising program
- Need incentives for manufactures or retailers
- Need additional incentives for consumers
- Other (specify: \_\_\_\_\_)
- Other (specify: \_\_\_\_\_)
- Don't know/unsure .....Skip to 73

72. If these changes were made to the program, would you be more likely to participate?
- Yes
  - No
  - Don't know

73. What do you consider to be the major barriers to customers purchasing ENERGY STAR® Products? [DO NOT READ; MARK ALL THAT APPLY]
- None
  - First cost of ES products
  - Lack of education and awareness
  - Few retailers carrying qualifying products
  - Lack of availability of qualifying products
  - Uncertainty about efficiency benefits
  - Other (specify: \_\_\_\_\_)
  - Don't know/unsure

Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-strongly disagree, 2-somewhat disagree, 3-neither, 4-somewhat agree, 5-strongly agree*

Statement	Rating				
74. Consumers understand the benefits of the ENERGY STAR label	1	2	3	4	5
75. Consumers associate ENERGY STAR label with greater efficiency	1	2	3	4	5
76. Consumers associate ENERGY STAR label with quality products	1	2	3	4	5

77. From your perspective, what should be part of a program to encourage increased adoption of ENERGY STAR-qualified products by consumers?

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78. And what program features would be important in a program to encourage retailers to offer more ENERGY STAR-qualified products to consumers?

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**Thank you! Those are all the questions I have today.**

# **C&I CONSTRUCTION PROGRAM SURVEY INSTRUMENTS**

## **C&I Construction Program Participant Survey January 13, 2006 Draft**

### **Contents**

- Contact and Sample Information
- Introduction
- CPD. Confirm Participation Data
  - CPT. Categorize Participant Type
  - EE. Install other energy efficient equipment?
- Program Issues
  - HOW. How and when learned about the program
  - Interaction With Program
    - TA. Technical Assistance
    - OP. Other Program Involvement
  - Feed. Feedback on Program
- B. Program barriers
- M. Market Changes due to the program
- In. Indicators
- S. Satisfaction
- F. Firmographics
- R. Recruit for On-Site
- Z. Final Comments?

## **CONTACT AND SAMPLE INFORMATION**

1. Company name
2. Contact Name
3. Address [May have more than one if more than one measure installed at different addresses]
4. Phone
5. Utility
6. New Construction vs. Retrofit flag
7. School (Y/N flag)
8. Measures installed and date of installation [year only in some cases] [some will have multiple measures listed]
9. Multiple-measures-installed (Y/N flag)
10. Recruit for on-sites (Y/N flag)
11. Government Y/N flag

## **INTRODUCTION**

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities. We are conducting a study about the New Jersey SmartStart Buildings program. I'd like to ask you a few questions – for most people it takes 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for businesses. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx. Your answers will be confidential, we will combine your answers with others before reporting results.]



## CPD. CONFIRM PARTICIPATION DATA

Records we got from your utility indicate that you installed [equipment] in [year] at [address]. I would like to talk to the person most knowledgeable about the decisions that led to this installation.

CPD1. Are you the right person to talk to?

1. Yes – continue
2. No – Can you tell me who is the right person to talk to? Can you connect me to them?

Record name and phone number of the new contact. Restart survey from the beginning.

CPD2. Name:

CPD3. Phone:

CPD4. The records we got from your utility indicate that you received incentives in [year] from [utility] as a rebate for installing the equipment. Is this correct?

1. Yes
2. No
8. Do not know
9. Refused

CPD5. [If CPD4=2 (no)] Did you not install that equipment or not get incentives or is something else incorrect? [Probe. Do not read. Accept multiple responses.]

1. Installed the equipment but did not get incentive from utility
2. Did not install the equipment
3. Installed the equipment got an incentive from somewhere/someone else – not the utility
4. Installed the equipment but not at the address you cited
5. Installed some but not all of the equipment you listed
6. Other [Record verbatim] CPD5B. \_\_\_\_\_

[Terminate if CPD5=1 or 2 – did not install the equipment or recall getting an incentive.]

CPD6. [If CPD5=3] Who gave you the incentive for the equipment? [Record verbatim]

CPD7. [If CPD5=5] Which equipment did you not install? [Record verbatim]

## CPT. Categorize Participant Type

CPT1. Did you install this/these measures as part of a new construction project, a renovation or remodeling project, or to replace equipment? [Accept first answer.]

1. New construction
2. Renovation or remodeling
3. Replace existing equipment
4. Added new equipment but not new construction or renovation [un-prompted]
5. Other [Record verbatim] CPT1B. \_\_\_\_\_
8. Don't know
9. Refused

CPT2A. [If CPT1=3 (replacing existing equipment)] What was your motivation for replacing this equipment? [Do not prompt. Accept multiple answers.]

1. Old equipment was broken
2. Expanding
3. Wanted energy efficient

4. Wanted different features
5. Other [Record verbatim] CPT2A2. \_\_\_\_\_
8. Don't know
9. Refused

CPT2B. [If CPT1=1 (New Construction)] Was this for a building you occupy or that someone else occupies?

1. We occupy
2. Someone else occupies

CPT3. [If CPT2B=2 (someone else occupies)] How would you characterize your business or organization? [Read all. Check one]

1. Investment property owner and/or management company
2. Developer of properties, buildings, and/or projects
3. General contractor and occasional developer
4. Other [Record verbatim] CPT3B. \_\_\_\_\_

CPT4. Did you use an outside contractor to install this equipment?

1. Yes
2. No
8. Do not know
9. Refused

CPT5. [If CPT4=1 (Yes)] Can you tell me the name of the company? [Record verbatim]

8. Do not know
9. Refused

## EE. Install other energy efficient equipment?

EE1. Since you installed this equipment, have you installed any other energy efficiency equipment?

1. Yes
2. No
8. Do not know
9. Refused

EE2. [If EE1=1 (installed other measures)] What did you install? [Record verbatim]

EE3. [If EE1=1 (installed other measures)] Did you get a rebate from your utility for installing these measures?

1. Yes for all measures
2. No
3. Yes for some measures
8. Do not know
9. Refused

EE4. [If EE3=3 (yes some measures)] What equipment? [Record verbatim]

EE5. Were you aware that you could get increased incentives for installing more than one type of measure? [Analysis Note: Indicator]

1. Yes
2. No
8. Do not know
9. Refused

EE6. [If Sample multiple measures flag = Yes or EE3=1 or EE3=3] Did you get an increase in the incentive for installing multiple measures?

1. Yes
2. No
8. Do not know
9. Refused

EE7. [If EE1=1 (installed other measures)] On a scale of 1 to 5 where 1 is "not at all important" and 5 is "very important", how important was your experience with the New Jersey SmartStart Buildings

program (including its financial and technical assistance) in your decision to purchase this other energy efficient equipment?

1. Not at all important      -      5 Very important      8 Don't know      9 Refused

## PROGRAM ISSUES

### HOW. How and when learned about the program

HOW1. How did you first learn that there were incentives available from your utility for the measures you installed? [Do not read. Record first answer.]

1. Contractor told me
2. Architect told me
3. Engineering firm told me
4. Mailing from utility
5. Utility rep
6. Saw an ad
7. Newspaper
8. Retail display
9. Program web site
10. Previous installation
11. Other [Record verbatim] HOW1B. \_\_\_\_\_
12. Don't know
13. Refused

HOW2. [If HOW1 is > 1 and CPT4=1 (used installation contractor)] Did the contractor that installed this equipment bring up the program and its incentives?

1. Yes
2. No
8. Do not know
9. Refused

HOW3A. [If CPT1 > 1 (NOT New Construction)] When did you first learn about the energy efficiency incentives? Was it BEFORE or was it AFTER you first began to think about installing energy efficient equipment?

1. Before
2. After
8. Don't know
9. Refused

HOW3B. [If HOW3A=1 (After)] Did you learn about the energy efficiency incentives BEFORE or AFTER you decided to install the specific energy efficient equipment that you installed?

1. Before
2. After
8. Don't know
9. Refused

HOW3C. [If CPT1=1 (New Construction)] To your best recollection, at what point in the project construction and design process did you learn about the incentives? Was it during the: [Check one]

1. Schematic Design Stage or Prior (example - Conceptual drawings, single line diagrams, HVAC selections not made, materials and finishes not set.)

2. Design Development Stage (example - Design developed for owner's review and approval, costs delineated to compare to budget, drawings 50-60% complete, HVAC systems selected and specified.)
3. Construction Documents Stage (example - All drawings and specifications are complete.)
4. After Project Bid Date
8. Do not know
9. Refused

HOW4. Had you installed energy efficient measures like these in the past?

1. Yes
2. No
8. Do not know
9. Refused

HOW5. [If HOW4=1 (yes)] Had you received utility incentives for measures like these in the past?

1. Yes
2. No
8. Do not know
9. Refused

HOW6. On a scale of 1 to 5 where 1 is "not at all important" and 5 is "very important", how important were the financial incentives from the New Jersey SmartStart Buildings program in your decision to purchase this energy efficient equipment? [If they got more than one measure and they indicate the answer varies across measures, say "Overall, on average across all the measures, how important were the financial incentives?"]

1. Not at all important
- 
- 5 Very important
- 8 Don't know
- 9 Refused

## Interaction With Program

### TA. Technical Assistance

TA1A. [If CPT1=1 (New construction)] Did you get design assistance through the program while in the design phase for this building?

1. Yes
2. No
8. Do not know
9. Refused

TA1B. [If CPT1 >1 (NOT New construction)] Did you get outside technical or design assistance in association with this/these measure(s)?

1. Yes
2. No
8. Do not know
9. Refused

[If TA1A or TA1B=2, 8, or 9, skip section]

TA2. Who provided that assistance? [Do not prompt. Accept multiple answers.]

1. Installation contractor
2. Utility personnel
3. Contractor hired by utility
4. Architect
5. Other [Record verbatim] TA2B. \_\_\_\_\_
8. Don't know
9. Refused

TA3. What did the assistance entail? [Record verbatim]

TA4. On a scale of 1 to 5 where 1 is "not at all important" and 5 is "very important", how important was that assistance in your decision to install the measure(s)?

1. Not at all important
- 
- 5 Very important
- 8 Don't know
- 9 Refused

TA5. What could be done to improve the technical assistance? [Record verbatim]

## OP. Other Program Involvement

OP1. [If TA1A or TA1B=2, 8, or 9 (did not get technical assistance)] Did you have any other involvement with the program or interaction with program staff other than receiving the incentive?  
1. Yes 2. No 8. Do not know 9. Refused

OP2. [If OP1=1 (yes)] What was that involvement? [Record verbatim]

OP3. On a scale of 1 to 5 where 1 is “not at all familiar” and 5 is “very familiar” how familiar are you with the services and incentives the SmartStart Buildings program offers?  
1. Not at all familiar - 5 Very familiar 8 Don’t know 9 Refused

## Feed. Feedback on Program

FEED1. On a scale of 1 to 5 where 1 is “not at all important” and 5 is “very important”, how important was the New Jersey SmartStart Buildings program (including its financial and technical assistance) in your decision to purchase energy efficient equipment when you did?  
1. Not at all important - 5 Very important 8 Don’t know 9 Refused

FEED2. On a scale where 1 is “not at all effective” and 5 is “very effective”, overall how would you rate the effectiveness of the New Jersey SmartStart Buildings program?  
1. Not at all effective - 5 Very effective 8 Don’t know 9 Refused

FEED3. [If FEED2 = 1 or 2] Why do you rate the effectiveness of the program this way? [Record verbatim]

FEED4. What could be done to improve the program? [Record verbatim]

## B. PROGRAM BARRIERS

And now I have a few quick questions on possible barriers that your organization faces with respect to implementing cost-effective energy-efficiency opportunities. On a scale from one to 5, where 1 is very insignificant and 5 is very significant, how significant are each of the following as obstacles to your organization’s investment in cost-effective energy-efficiency opportunities?

1. Not at all important - 5 Very important 8 Don’t know 9 Refused

*[Analysis note: Barriers starting with “BPU” are defined by the BPU, others I defined.]*

BPU1. Unfamiliarity or uncertainty with energy efficient building technologies and designs

BPU2. Bias toward first cost versus operating costs

BPU3. Compressed time schedules for design and construction

BPU4. Aversion to perceived risk-taking despite the proven reliability of efficient technologies and designs

BPU5. Incentive structures and priorities for engineers, designers and contractors which are at variance with efficiency considerations.

B1. Awareness of which products and services are available

B2. Uncertainty over whether actual savings will be equal to or greater than estimated savings

B3. Amount of time it takes to acquire enough information to make an informed decision to invest in an energy-efficiency project

B4. The time and cost associated with selecting contractors and negotiating project terms

B5. Uncertainty over information provided by firms proposing efficiency-related projects

B6. Disagreements between decision makers within your organization over the relative importance of energy-efficiency related investments compared with other capital projects

B7. Lack of access to financing for energy-efficiency related projects

B8. Lack of use of formal financial analyses to evaluate energy equipment purchase decisions

B9. Lack of availability of energy-efficient products and services

B10. What do you need as far as support, information, or tools to help you overcome these barriers?  
[Record verbatim]

## **M. MARKET CHANGES DUE TO THE PROGRAM**

M1. Has your organization developed a policy for the selection of energy-efficient equipment?

1. Yes    2. No    8. Do not know    9. Refused

M2. [If M1=1] Does this policy or specification require the use of the following kinds of equipment?

[Read List. Check all that apply.]

1. High-efficiency lighting
2. Lighting controls
3. High-efficiency packaged air conditioners or chillers
4. High-efficiency boilers
5. High-efficiency furnaces
6. High-efficiency water heaters
7. High efficiency motors
8. Variable speed motor controls, where appropriate
9. Energy management control systems
10. None of the above [Do not read]

M3. [If M1=1] Does the policy require the use of any other kinds of equipment?

1. Yes    2. No    8. Do not know    9. Refused

M4. [If M3=1 (yes)] What? [Record verbatim]

M5. Does your organization have specific criteria for selecting energy efficient equipment based on payback periods, life cycle costs, or internal rate of return?

1. Yes    2. No    8. Do not know    9. Refused

M6. [If M5=1 (yes)] Which?

1. Payback period  
 2. Internal rate of return  
 3. Life-cycle cost analysis  
 4. Other [Record verbatim] M6B. \_\_\_\_\_  
 8. Don't know  
 9. Refused

M7. [If M6=1 (payback period)] How many years or less must the project payback be?

- 8. Do not know    -9. Refused

M8. [If M6=2 (internal rate of return)] What is the minimum percent rate of return required for energy-efficiency related projects? [Record 10% as "10" not "0.10"]

- 8. Do not know    -9. Refused

M9. Are the financial criteria used to make energy-related equipment selections the same as those used to make other capital investments?

1. Yes    2. No    8. Do not know    9. Refused

M10. [If M9=2 (no)] How are they different? [Record verbatim]

## IN. INDICATORS

I am going to read you a list of technologies. For each, please tell me whether you have installed any in the past 2 years.

IN1. In the past 2 years, have you installed [\_\_\_\_]? [Randomly rotate order of questions. Do not ask about measures that are included in sample as installed.]

1. Yes    2. No    8. Do not know    9. Refused

Rebate x% higher,  
 how likely to install

	Technology	IN1. Installed (Y/N)	IN2. Aware of incentives (Y/N)	IN4. Seriously Considered Installing (Y/N)	IN5. Rebate Mattered? (Y/N)	IN6. 10%	IN7. 25%	IN8. 50%
A	Chillers							
B	Ground Source Heat Pump							
C	HVAC							
D	Lighting							
E	Lighting Controls							
F	Motors							
G	Variable Frequency Drives							
H	Gas Boilers							

I	Gas Cooling							
J	Desiccant Gas Cooling							
K	Gas Furnaces							
L	Gas Water Heating							
M	LED traffic lights [ <i>ask only if Government flag = Yes</i> ]							

IN2. Were you aware that the program offers incentives for [\_\_\_\_\_]. [Ask of all technologies]

1. Yes    2. No    8. Do not know    9. Refused

IN3. In the past 2 years, have you seriously considered and rejected installing any of these technologies?

1. Yes    2. No    8. Do not know    9. Refused

IN4. [If IN3=1 (yes)] Which? [Check in Seriously Considered column in table above]

[Programming note: For each technology where IN4=Yes, ask IN5-IN8 for the first technology, then the next, then the next. Do **not** ask IN5 for each technology and then IN6 for each technology etc. Do this for a maximum of 3 technologies (the first three mentioned).]

IN5. [Ask separately for each technology where IN4=Yes and IN2=Yes (knew there were incentives on this technology)] Did the amount of the incentives figure prominently in your decision to install [technology]? [Rebate Mattered column in table above]

1. Yes    2. No    8. Do not know    9. Refused

IN6. [Ask separately for each technology where IN5=Yes] On a scale where 1 is not very likely and 5 is very likely, if the incentives had been 10% higher, how likely would you have been to install the technology? [10% column in table above]

1. Not very likely    -    5 Very likely    8 Don't know    9 Refused

IN7. [If IN6<5] How likely would you have been if the incentives had been 25% higher? [25% column in table above]

1. Not very likely    -    5 Very likely    8 Don't know    9 Refused

IN8. [If IN7<5] How likely would you have been if the incentives had been 50% higher? [50% column in table above]

1. Not very likely    -    5 Very likely    8 Don't know    9 Refused

IN9. Should the New Jersey SmartStart Buildings program offer incentives on any other energy efficient equipment that you would like to install?

1. Yes    2. No    8. Do not know    9. Refused

IN10. [If IN9=1 (yes)] Which? [Record verbatim]

Now I am going to read you the same list of equipment. For each, please rate your current familiarity with energy efficiency options for this kind of equipment, using a scale of 1 to 5 where 1 is "not at all familiar" and 5 is "very familiar".

1. Not at all familiar    -    5 Very familiar    8 Don't know    9 Refused

IN11. How familiar are you with energy efficiency options for ...[Randomly rotate order of questions]



- A. Chillers
- B. Ground Source Heat Pump
- C. HVAC
- D. Lighting
- E. Lighting Controls
- F. Motors
- G. Variable Frequency Drives
- H. Gas Boilers
- I. Gas Cooling
- J. Desiccant Gas Cooling
- K. Gas Furnaces
- L. Gas Water Heating
- M. LED Traffic Lights *[ask only if Government flag = Yes]*
- N. Building commissioning

Now I am going to read you a list of services the program offers. For each, please tell me how familiar you are with the services. On a scale of 1 to 5 where 1 is “not at all familiar” and 5 is “very familiar”

1. Not at all familiar                      -                      5 Very familiar                      8 Don't know    9 Refused

IN12. How familiar are you with the program's [\_\_\_\_]? [Repeat for each service.] [Randomly rotate order of questions]

- A. New Construction Design Support services
- B. Technical Assistance
- C. Building Commissioning services
- D. Chiller Optimization services
- E. Compressed Air studies
- F. Support on commercial energy code requirements
- G. Training in commercial energy code requirements

## S. SATISFACTION

Now I am going to ask you to rate your satisfaction with several aspects of the New Jersey SmartStart Buildings program. For each, please rate your satisfaction on a 1 to 5 scale with 1 indicating very dissatisfied and 5 indicating very satisfied.

1. Very dissatisfied                      -                      5 Very satisfied                      8 Don't know    9 Refused

- S1. Project application and qualification process
- S2. Verification process for measure installation
- S3. Cost of participation
- S4. Quality of informational materials
- S5. Ease of participation
- S6. Responsiveness of program staff
- S7. Amount of paperwork required to participate

S8. The program overall

S9. On the same scale, how satisfied are you with the energy efficient equipment you purchased?

## F. FIRMOGRAPHICS

The last few questions are about your business and are for classification purposes only.

F1. What is the majority of the space used for at this location? [Record first response]

A	Agriculture	L	Apartments/Multifamily
B	Amusement, Social, and Recreational Buildings	M	Office and bank building
C	Education, Schools, colleges, libraries, laboratories (non-manufacturing owned)	N	Public Assembly
D	Food Service, restaurants	P	Public Order and Safety
E	Government Service Building	Q	Religious Worship
F	Grocery / food sales	R	Service
G	Health Care, hospitals and other health treatment	S	Water / wastewater
H	Lodging, Hotel, Motel	T	Warehouse and Storage (excluding manufacturer owned)
J	Manufacturing plants, warehouse, laboratories (Identify Industry Type _____ (e.g., chemical, food, paper, etc.)	U	Other, miscellaneous non-residential buildings
K	Mercantile		

F2. Which of the following options best describes your company's ownership category? Is it a single establishment, one of a chain of establishments, a franchise, a branch office, a headquarters with branch offices elsewhere, a government facility, an educational facility, or something else? [Record first response]

1. a single establishment
2. one of a chain of establishments
3. a franchise
4. a branch office
5. a headquarters with branch offices elsewhere
6. a government facility
7. an educational facility
8. Don't Know
9. Refused
10. Other [Record Verbatim] F2B. \_\_\_\_\_

F3. Does your business own or lease the space you occupy/manage at this location?

1. Own all
2. Lease all
3. Own some and lease some
4. Manage property
5. Other [Record Verbatim] F3B. \_\_\_\_\_
8. Don't Know
9. Refused

F4A. Approximately how many full time employees or full time equivalents does your organization have at your location(s) in New Jersey?

- 8. Do not know      -9. Refused

F4B. [If F4A = -8 (don't know)] Is it [read categories]?

- A. Fewer than 5
- B. 5 - 9
- C. 10 - 19
- D. 20 - 49
- E. 50 - 99
- F. 100 - 249
- G. 250 or more
- H. Don't know
- I. Refused

F5A. How many buildings does your organization own or manage in New Jersey?

- 8. Do not know
- 9. Refused

F5B. [If F5A = -8 (don't know)] Is it [read categories]?

- A. More than one
- B. 2 - 5
- C. 6 - 10
- D. 11 - 20
- E. More than 20
- F. Don't know
- G. Refused

F6. [If F4 > 1] How many new construction projects has your organization completed in the past 3 years?

- 8. Do not know
- 9. Refused

F7. Is your building located in a state-designated "Smart Growth" area?

- 1. Yes
- 2. No
- 3. I have multiple buildings, some are, some are not in Smart Growth areas
- 4. I have multiple buildings, all are in Smart Growth areas
- 5. I have multiple buildings, none are in Smart Growth areas
- 8. Do not know
- 9. Refused

F8. What is the approximate total enclosed square footage of floor space your firm occupies and/or manages at this location? [Location of the measure installed.] This area should include all heated and unheated space in this building, including basements and storage areas if they are used by your business/organization. Do not include space for parking. [Range = 10 - 10,000,000]

- 8. Do not know
- 9. Refused

F9. Finally, what is your title?

- 1. CEO/president/director/CFO/VP
- 2. Business manager/general manager
- 3. Owner
- 4. Facilities/building engineer/manager
- 5. Maintenance manager/assistant
- 6. Operations manager/assistant
- 7. Utilities/energy managers/staff

8. Landlord/property manager
9. Other [Record verbatim] F8B. \_\_\_\_\_

## R. RECRUIT FOR ON-SITE

[A sample of 10 participating end-use customers will be visited to support the baseline study report which will assess engineering savings estimates.]

- R1. [If Recruit for on-sites =Yes] We are scheduling site-visits at some of the participant sites to examine the measures installed and verify the program's energy saving estimates. We would like to send an engineer to your site for this purpose, will that be OK with you?
1. Yes
  2. No
  8. Do not know
  9. Refused
- R2. [If R1 = 2 (no)] I can assure you that our findings will have no affect on the incentives you received or your ability to participate in the program in the future. We are evaluating the program's performance, not yours. Are you sure we cannot schedule an appointment?
1. Yes
  2. No
  8. Do not know
  9. Refused
- R3. [If R1 or R2 = 1 (yes)] Our engineer will be contacting you shortly to schedule an appointment. Should he call you or someone else to schedule that?
1. Call me
  2. Call someone else [Record name and phone number]
    - R3A. Name:
    - R3B. Phone:

## Z. FINAL COMMENTS?

- Z1. That is all of my questions. Do you have any final comments about the New Jersey SmartStart Buildings program? [Record verbatim]

Thank you very much for your time.

[Terminate]

[RECORD DATE, TIME CALLED, AND LENGTH OF INTERVIEW]

Call\_Date:

Time\_Called:

Interview\_Length:

**C&I Construction Program Non-Participant Survey  
January 13, 2006 Draft**

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- Introduction
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  - CPT. Categorize Type
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- B. Program barriers
- M. Market Changes due to the program
- In. Indicators
- F. Firmographics
- Z. Final Comments?

## **CONTACT AND SAMPLE INFORMATION**

- 12. Company name
- 13. Contact Name
- 14. Address
- 15. Phone
- 16. Utility
- 17. New Construction vs. Retrofit flag
- 18. School (Y/N flag)
- 19. Government Y/N flag

## **INTRODUCTION**

Hello, my name is \_\_\_\_\_, and I'm calling on behalf of the New Jersey Board of Public Utilities. We are conducting a study about the New Jersey energy efficiency programs for businesses. I'd like to ask you a few questions – for most people it takes 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for businesses. I'm not selling anything. If you have any questions about this survey or New Jersey energy efficiency programs, you can call: (xxxx) xxx-xxxx. Your answers will be confidential, we will combine your answers with others before reporting results.]

## **CPD. CONFIRM PARTICIPATION DATA**

I would like to talk to the person most knowledgeable about decisions related to purchasing and installing energy-using equipment in your facility.

**CPD1. Are you the right person to talk to?**

- 1. Yes – continue
- 2. No – Can you tell me who is the right person to talk to? Can you connect me to them?

Record name and phone number of the new contact. Restart survey from the beginning.

CPD2. Name:

CPD3. Phone:

## CPT. Categorize Type

*[Categorize Participant Type in participant survey.]*

CPTA. First, have you taken any actions in the past two years to conserve energy in your business?

1. Yes
2. No
8. Do not know
9. Refused

CPTB. What actions have you taken? [Do not prompt. Accept multiple answers.]

- A Chillers
  - B Ground Source Heat Pump
  - C HVAC
  - D Lighting
  - E Lighting Controls
  - F Motors
  - G Variable Frequency Drives
  - H Gas Boilers
  - I Gas Cooling
  - J Desiccant Gas Cooling
  - K Gas Furnaces
  - L Gas Water Heating
  - M LED traffic lights
- Other [Record Verbatim] CPTB1. \_\_\_\_\_

CPT1. [If CPTA=1] Did you install this/these measures/take these actions as part of a new construction project, a renovation or remodeling project, or to replace equipment? [Accept first answer.]

1. New construction
2. Renovation or remodeling
3. Replace existing equipment
4. Added new equipment but not new construction or renovation [un-prompted]
5. Other [Record verbatim] CPT1B. \_\_\_\_\_
8. Don't know
9. Refused

CPT2A. [If CPT1=3 (replacing existing equipment)] What was your motivation for replacing this equipment? [Do not prompt. Accept multiple answers.]

1. Old equipment was broken
2. Expanding
3. Wanted energy efficient
4. Wanted different features
5. Other [Record verbatim] CPT2A2. \_\_\_\_\_
8. Don't know
9. Refused

CPT2B.[If CPT1=1 (New Construction)] Was this for a building you occupy or that someone else occupies?

1. We occupy
2. Someone else occupies

CPT3. [If CPT2B=2 (someone else occupies)] How would you characterize your business or organization? [Read all. Check one]

1. Investment property owner and/or management company
2. Developer of properties, buildings, and/or projects
3. General contractor and occasional developer
4. Other [Record verbatim] CPT3B. \_\_\_\_\_

CPT4. Did you use an outside contractor to install this equipment?

1. Yes
2. No
8. Do not know
9. Refused

CPT5. [If CPT4=1 (Yes)] Can you tell me the name of the company? [Record verbatim]

8. Do not know
9. Refused

## EE. Got Rebate?

[Analysis note: In Participant survey this section is: EE. Install other energy efficient equipment?]

EE3. [If CPTA=1 (installed energy efficient measures)] Did you get a rebate from your utility for installing these measures?

1. Yes for all measures
2. No
3. Yes for some measures
8. Do not know
9. Refused

EE4. [If EE3=3 (yes some measures)] What equipment? [Record verbatim]

EE3B. [If EE3 = 2] Did you apply for utility rebates for any of these installed measures?

1. Yes
2. No
8. Do not know
9. Refused

EE3C. [Ask of everyone but skip if EE3B=1 (yes)] Have you applied for utility rebates for any energy efficiency measures in the past two years (whether you have installed them or not)?

1. Yes
2. No
8. Do not know
9. Refused

[If EE3=2,8,9 skip to next section]

EE5. Were you aware that you could get increased incentives for installing more than one type of measure? [Analysis Note: Indicator]

1. Yes
2. No
8. Do not know
9. Refused

EE6. [If Sample multiple measures flag = Yes or EE3=1 or EE3=3] Did you get an increase in the incentive for installing multiple measures?

1. Yes
2. No
8. Do not know
9. Refused

EE7. [If EE3=1 or 3 (got rebate)] On a scale of 1 to 5 where 1 is “not at all important” and 5 is “very important”, how important was the rebate in your decision to purchase this energy efficient equipment?

1. Not at all important
- 
- 5 Very important
- 8 Don't know
- 9 Refused

[If EE3 = 1 or 3 (got utility rebates) = Participant] Thank and terminate.

# PROGRAM ISSUES

## Interaction With Program

### TA. Technical Assistance

[Skip section if CPTA is not 1]

TA1B. [If CPT1 >1 (NOT New construction)] Did you get outside technical or design assistance in association with this/these measure(s)?

1. Yes    2. No    8. Do not know    9. Refused

[If TA1A or TA1B=2, 8, or 9, skip section]

TA2. Who provided that assistance? [Do not prompt. Accept multiple answers.]

1. Installation contractor
2. Utility personnel
3. Contractor hired by utility
4. Architect
5. Other [Record verbatim] TA2B. \_\_\_\_\_
8. Don't know
9. Refused

TA3. What did the assistance entail? [Record verbatim]

TA4. On a scale of 1 to 5 where 1 is "not at all important" and 5 is "very important", how important was that assistance in your decision to install the measure(s)?

1. Not at all important    -    5 Very important    8 Don't know    9 Refused

TA5. What could be done to improve the technical assistance? [Record verbatim]

### OP. Other Program Involvement

OP1. Have you had any involvement with the New Jersey SmartStart Buildings program or interaction with program staff? [Analysis note: Participant version: "Did you have any other involvement with the program or interaction with program staff other than receiving the incentive?"]

1. Yes    2. No    8. Do not know    9. Refused

OP2. [If OP1=1 (yes)] What was that involvement? [Record verbatim]

OP3. On a scale of 1 to 5 where 1 is "not at all familiar" and 5 is "very familiar" how familiar are you with the services and incentives the SmartStart Buildings program offers?

1. Not at all familiar    -    5 Very familiar    8 Don't know    9 Refused



## Feed. Feedback on Program

FEED2.[If OP1=1] On a scale where 1 is “not at all effective” and 5 is “very effective”, overall how would you rate the effectiveness of the New Jersey SmartStart Buildings program?

1. Not at all effective      -      5 Very effective      8 Don't know    9 Refused

FEED3. [If FEED2 = 1 or 2] Why do you rate the effectiveness of the program this way? [Record verbatim]

FEED4.[If OP1=1] What could be done to improve the program? [Record verbatim]

## B. PROGRAM BARRIERS

And now I have a few quick questions on possible barriers that your organization faces with respect to implementing cost-effective energy-efficiency opportunities. On a scale from one to 5, where 1 is very insignificant and 5 is very significant, how significant are each of the following as obstacles to your organization's investment in cost-effective energy-efficiency opportunities?

1. Not at all important      -      5 Very important      8 Don't know    9 Refused

*[Analysis note: Barriers starting with “BPU” are defined by the BPU, others I defined.]*

BPU1. Unfamiliarity or uncertainty with energy efficient building technologies and designs

BPU2. Bias toward first cost versus operating costs

BPU3. Compressed time schedules for design and construction

BPU4. Aversion to perceived risk-taking despite the proven reliability of efficient technologies and designs

BPU5. Incentive structures and priorities for engineers, designers and contractors which are at variance with efficiency considerations.

B1. Awareness of which products and services are available

B2. Uncertainty over whether actual savings will be equal to or greater than estimated savings

B3. Amount of time it takes to acquire enough information to make an informed decision to invest in an energy-efficiency project

B4. The time and cost associated with selecting contractors and negotiating project terms

B5. Uncertainty over information provided by firms proposing efficiency-related projects

B6. Disagreements between decision makers within your organization over the relative importance of energy-efficiency related investments compared with other capital projects

B7. Lack of access to financing for energy-efficiency related projects

B8. Lack of use of formal financial analyses to evaluate energy equipment purchase decisions

B9. Lack of availability of energy-efficient products and services

B10. What do you need as far as support, information, or tools to help you overcome these barriers?  
[Record verbatim]

## M. MARKET CHANGES DUE TO THE PROGRAM

M1. Has your organization developed a policy for the selection of energy-efficient equipment?

1. Yes    2. No    8. Do not know    9. Refused

M2. [If M1=1] Does this policy or specification require the use of the following kinds of equipment?

[Read List. Check all that apply.]

1. High-efficiency lighting
2. Lighting controls
3. High-efficiency packaged air conditioners or chillers
4. High-efficiency boilers
5. High-efficiency furnaces
6. High-efficiency water heaters
7. High efficiency motors
8. Variable speed motor controls, where appropriate
9. Energy management control systems
10. None of the above [Do not read]

M3. [If M1=1] Does the policy require the use of any other kinds of equipment?

1. Yes    2. No    8. Do not know    9. Refused

M4. [If M3=1 (yes)] What? [Record verbatim]

M5. Does your organization have specific criteria for selecting energy efficient equipment based on payback periods, life cycle costs, or internal rate of return?

1. Yes    2. No    8. Do not know    9. Refused

M6. [If M5=1 (yes)] Which?

1. Payback period
2. Internal rate of return
3. Life-cycle cost analysis
4. Other [Record verbatim] M6B. \_\_\_\_\_
8. Don't know
9. Refused

M7. [If M6=1 (payback period)] How many years or less must the project payback be?

- 8. Do not know    -9. Refused

M8. [If M6=2 (internal rate of return)] What is the minimum percent rate of return required for energy-efficiency related projects? [Record 10% as "10" not "0.10"]

- 8. Do not know    -9. Refused

M9. Are the financial criteria used to make energy-related equipment selections the same as those used to make other capital investments?

1. Yes    2. No    8. Do not know    9. Refused

M10. [If M9=2 (no)] How are they different? [Record verbatim]

## IN. INDICATORS

I am going to read you a list of technologies. For each, please tell me whether you have installed any in the past 2 years.

IN1. In the past 2 years, have you installed [\_\_\_\_]? [Randomly rotate order of technologies]

1. Yes    2. No    8. Do not know    9. Refused

	Technology	IN1. Installed (Y/N)	IN2. Aware of incentives (Y/N)	IN4. Seriously Considered Installing (Y/N)	IN5. Rebate Mattered? (Y/N)	IN6. 10%	IN7. 25%	IN8. 50%
A	Chillers							
B	Ground Source Heat Pump							
C	HVAC							
D	Lighting							
E	Lighting Controls							
F	Motors							
G	Variable Frequency Drives							
H	Gas Boilers							
I	Gas Cooling							
J	Desiccant Gas Cooling							
K	Gas Furnaces							
L	Gas Water Heating							
M	LED traffic lights [ <i>ask only if Government flag = Yes</i> ]							

Rebate x% higher,  
how likely to install

IN2. Were you aware that the SmartStart Buildings program offers incentives for [\_\_\_\_]. [Ask of all technologies]

1. Yes    2. No    8. Do not know    9. Refused

IN3. In the past 2 years, have you seriously considered and rejected installing any of these technologies?

1. Yes    2. No    8. Do not know    9. Refused

IN4. [If IN3=1 (yes)] Which? [Check in Seriously Considered column in table above]

[Programming note: For each technology were IN4=Yes, ask IN5-IN8 for the first technology, then the next, then the next. Do **not** ask IN5 for each technology and then IN6 for each technology etc. Do this for a maximum of 3 technologies (the first three mentioned).]

IN5. [Ask separately for each technology where IN4=Yes and IN2=Yes (knew there were incentives on this technology)] Did the amount of the incentives figure prominently in your decision to install [technology]? [Rebate Mattered column in table above]  
1. Yes    2. No    8. Do not know    9. Refused

IN6. [Ask separately for each technology where IN5=Yes] On a scale where 1 is not very likely and 5 is very likely, if the incentives had been 10% higher, how likely would you have been to install the technology? [10% column in table above]  
1. Not very likely    -    5 Very likely    8 Don't know    9 Refused

IN7. [If IN6<5] How likely would you have been if the incentives had been 25% higher? [25% column in table above]  
1. Not very likely    -    5 Very likely    8 Don't know    9 Refused

IN8. [If IN7<5] How likely would you have been if the incentives had been 50% higher? [50% column in table above]  
1. Not very likely    -    5 Very likely    8 Don't know    9 Refused

IN9. Should the New Jersey SmartStart Buildings program offer incentives on any other energy efficient equipment that you would like to install?  
1. Yes    2. No    8. Do not know    9. Refused

IN10. [If IN9=1 (yes)] Which? [Record verbatim]

Now I am going to read you the same list of equipment. For each, please rate your current familiarity with energy efficiency options for this kind of equipment, using a scale of 1 to 5 where 1 is “not at all familiar” and 5 is “very familiar”.

1. Not at all familiar    -    5 Very familiar    8 Don't know    9 Refused

IN11. How familiar are you with energy efficiency options for ...[Randomly rotate order of questions]

- A. Chillers
- B. Ground Source Heat Pump
- C. HVAC
- D. Lighting
- E. Lighting Controls
- F. Motors
- G. Variable Frequency Drives
- H. Gas Boilers
- I. Gas Cooling
- J. Desiccant Gas Cooling
- K. Gas Furnaces
- L. Gas Water Heating
- M. LED Traffic Lights *[ask only if Government flag = Yes]*
- N. Building commissioning

Now I am going to read you a list of services the program offers. For each, please tell me how familiar you are with the services. On a scale of 1 to 5 where 1 is “not at all familiar” and 5 is “very familiar”

1. Not at all familiar    -    5 Very familiar    8 Don't know    9 Refused

IN12. How familiar are you with the program's [\_\_\_\_]? [Repeat for each service.] [Randomly rotate order of questions] *[Pre-test note: If respondent “not at all familiar” with New Jersey SmartStart*

*Buildings program (OP3=1), do they answer yes to ANY of these items? We may want to skip this question where OP3=1.]*

- A. New Construction Design Support services
- B. Technical Assistance
- C. Building Commissioning services
- D. Chiller Optimization services
- E. Compressed Air studies
- F. Support on commercial energy code requirements
- G. Training in commercial energy code requirements

## F. FIRMOGRAPHICS

The last few questions are about your business and are for classification purposes only.

**F1. What is the majority of the space used for at this location? [Record first response]**

A	Agriculture	L	Apartments/Multifamily
B	Amusement, Social, and Recreational Buildings	M	Office and bank building
C	Education, Schools, colleges, libraries, laboratories (non-manufacturing owned)	N	Public Assembly
D	Food Service, restaurants	P	Public Order and Safety
E	Government Service Building	Q	Religious Worship
F	Grocery / food sales	R	Service
G	Health Care, hospitals and other health treatment	S	Water / wastewater
H	Lodging, Hotel, Motel	T	Warehouse and Storage (excluding manufacturer owned)
J	Manufacturing plants, warehouse, laboratories (Identify Industry Type _____ (e.g., chemical, food, paper, etc.)	U	Other, miscellaneous non-residential buildings
K	Mercantile		

**F2. Which of the following options best describes your company's ownership category? Is it a single establishment, one of a chain of establishments, a franchise, a branch office, a headquarters with branch offices elsewhere, a government facility, an educational facility, or something else? [Record first response]**

1. a single establishment
2. one of a chain of establishments
3. a franchise
4. a branch office
5. a headquarters with branch offices elsewhere
6. a government facility
7. an educational facility
8. Don't Know
9. Refused
10. Other [Record Verbatim] F2B. \_\_\_\_\_

**F3. Does your business own or lease the space you occupy/manage at this location?**

1. Own all
2. Lease all
3. Own some and lease some
4. Manage property
5. Other [Record Verbatim] F3B. \_\_\_\_\_
8. Don't Know
9. Refused

F4A. Approximately how many full time employees or full time equivalents does your organization have at your location(s) in New Jersey?

-8. Do not know      -9. Refused

F4B. [If F4A = -8 (don't know)] Is it [read categories]?

- A. Fewer than 5
- B. 5 - 9
- C. 10 – 19
- D. 20 - 49
- E. 50 – 99
- F. 100 – 249
- G. 250 or more
- H. Don't know
- I. Refused

F5A. How many buildings does your organization own or manage in New Jersey?

-8. Do not know      -9. Refused

F5B. [If F5A = -8 (don't know)] Is it [read categories]?

- A. More than one
- B. 2 - 5
- C. 6 - 10
- D. 11 - 20
- E. More than 20
- F. Don't know
- G. Refused

F6. [If F4 > 1] How many new construction projects has your organization completed in the past 3 years?

-8. Do not know      -9. Refused

F7. Is your building located in a state-designated "Smart Growth" area?

- 1. Yes
- 2. No
- 3. I have multiple buildings, some are, some are not in Smart Growth areas
- 4. I have multiple buildings, all are in Smart Growth areas
- 5. I have multiple buildings, none are in Smart Growth areas
- 8. Do not know
- 9. Refused

F8. What is the approximate total enclosed square footage of floor space your firm occupies and/or manages at this location? This area should include all heated and unheated space in this building, including basements and storage areas if they are used by your business/organization. Do not include space for parking. [Range = 10 – 10,000,000]

- 8. Do not know
- 9. Refused

F9. Finally, what is your title?

- 1. CEO/president/director/CFO/VP
- 2. Business manager/general manager
- 3. Owner

4. Facilities/building engineer/manager
5. Maintenance manager/assistant
6. Operations manager/assistant
7. Utilities/energy managers/staff
8. Landlord/property manager
9. Other [Record verbatim] F8B. \_\_\_\_\_

## Z. FINAL COMMENTS?

Z1. That is all of my questions. Do you have any final comments about the New Jersey SmartStart Buildings program? [Record verbatim]

Thank you very much for your time.

[Terminate]

[RECORD DATE, TIME CALLED, AND LENGTH OF INTERVIEW]

Call\_Date:

Time\_Called:

Interview\_Length:

# C&I Trade Ally Survey

## January 10, 2006 Draft

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## CONTACT AND SAMPLE INFORMATION

20. Company name
21. Contact Name
22. Address
23. Phone
24. Company type
25. Measures installed
26. Participant flag (Y/N)
27. On web site flag

## A. INTRODUCTION

Hello, my name is \_\_\_\_\_, and I'm calling from \_\_\_\_\_ on behalf of the New Jersey Board of Public Utilities. We are conducting a study about the New Jersey SmartStart Buildings program.

[Designers] I would like to talk to the person most knowledgeable about the market for energy efficient equipment in New Jersey.

[Suppliers] I would like to talk to the person most knowledgeable about your sales of energy efficient equipment in New Jersey.

### A1. Are you the right person to talk to?

1. Yes – continue



2. No – Can you tell me who is the right person to talk to? Can you connect me to them?

Record name and phone number of the new contact. Restart survey from the beginning.

A2. Name:

A3. Phone:

I'd like to ask you a few questions – for most people it takes 15 to 20 minutes. [IF NECESSARY: Your participation will help state officials make decisions about future energy efficiency programs for businesses. I'm not selling anything. If you have any questions about this survey or New Jersey Clean Energy programs, you can call: (xxxx) xxx-xxxx. Your answers will be confidential, we will combine your answers with others before reporting results.]

## T. TYPE OF COMPANY

T1. First, can you describe your company for me? What kind of company are you?

1. Architects
2. Commissioning Service Providers
3. Compressed Air Consultants
4. Contractors/Installers
5. Developer
6. Design/Builders
7. Engineers
8. Energy Services
9. Suppliers-Wholesale
10. Suppliers-Retail
11. Other [Record verbatim] \_\_\_\_\_

T2. What kinds of products and services do you supply? [Record all that apply]

1. HVAC
2. Lighting
3. Controls
4. Boilers
5. Compressors
6. Motors
7. Electrical
8. Commissioning
9. Builder
10. Engineering services
11. Architectural services

## AF. AWARENESS AND FAMILIARITY

AF1. On a scale of 1 to 5 where 1 is “not at all familiar” and 5 is “very familiar”, how familiar are you with the New Jersey SmartStart Buildings program? [If necessary: “It is a statewide program that offers commercial and industrial customers an array of services and incentives to improve construction, renovation and equipment upgrade projects. It is currently delivered in joint effort by the New Jersey electric and gas utilities.”]

1. Not at all familiar                      -                      5 Very familiar                      8 Don't know    9 Refused

Now I am going to read you a list of services the program offers. For each, please tell me how familiar you are with the services on the same scale.

1. Not at all familiar                      -                      5 Very familiar                      8 Don't know    9 Refused

AF2. How familiar are you with the program's [\_\_\_\_]? [Repeat for each service.] [Randomly rotate order of questions]

- A. New Construction Design Support services
- B. Technical Assistance
- C. Building Commissioning services
- D. Chiller Optimization services
- E. Compressed Air studies
- F. Support on commercial energy code requirements
- G. Training in commercial energy code requirements

AF3. [For those >3] Have you had any involvement with providing these services through the program?

1. Yes    2. No    8. Do not know    9. Refused

AF4. [If yes] What did it entail? [Record verbatim]

## NON. NONPARTICIPANT REASONS FOR NONPARTICIPATION

**[Nonparticipants only. Participants skip to next section.]**

NON1. In the past 2 years has your company helped your customers install program-qualified equipment for which they, or you, received a rebate from a New Jersey utility?

1. Yes    2. No    8. Do not know    9. Refused

NON2. [If 1, Yes] What kind of equipment was that? [Record verbatim]

**[Skip to next section. Treat these as participants from now on.]**

NON3. [If 2] What is the reason that you have not participated in the New Jersey SmartStart Buildings program? [Record verbatim]

NON4. If these changes were made to the program, would you be more likely to participate?

1. Yes    2. No    8. Do not know    9. Refused

# CPD. CONFIRM PARTICIPATION DATA

## [Participants only]

[Designers/Architects] Records we got from the New Jersey utilities indicate that you had a role in getting [equipment] installed in [year] for [company] as part of the New Jersey SmartStart Buildings program. [If necessary:] The company was located at [location].

[All others] Records we got from the New Jersey utilities indicate that you installed [equipment] in [year] for [company] as part of the New Jersey SmartStart Buildings program. [If necessary:] The company was located at [location].

### CPD1. Is that correct?

1. Yes    2. No    8. Do not know    9. Refused

CPD2. [If CPD1=2 (no)] Did you not install that equipment or not do it through the program or is something else incorrect? [Probe. Do not read. Accept multiple responses.]

1. Installed the equipment but did not get incentive from utility
2. Did not install the equipment
3. Installed the equipment got an incentive from somewhere/someone else – not the utility
4. Installed the equipment but not at the address you cited
5. Installed some but not all of the equipment you listed
6. Other [Record verbatim] CPD5B. \_\_\_\_\_

## E. ENERGY EFFICIENT EQUIPMENT

E1. What kinds of equipment do you specify or install in commercial and industrial settings in New Jersey? [Prompt, if necessary for appropriate types of equipment from the following table.] [Check in table and record verbatim for those not in the table]

E1B. [For motors and VFDs] What sizes do you offer?

E2. Do you offer energy efficient versions or models for all of those products? [Skip for some technologies noted in footnotes to table.]

1. Yes    2. No    8. Do not know    9. Refused

E3. [If no] Which do you offer energy efficient versions for? [Check in table]

E4. Are you aware of any quality or performance problems with energy efficient equipment or designs?

1. Yes    2. No    8. Do not know    9. Refused

E5. [If yes] What are the problems? [Record verbatim] [Probe to understand whether the problems relate to a particular brand or piece of equipment or whether they extend to all products in a class, regardless of manufacturer.]

		E1	E3	IC1	IC2	IN1	IN2	MS1	MS2	MS4	MS5	MS6	MS7			MS8
Technology	Specify or install (Y/N)	Offer e-e versions (Y/N)	Incremental Cost (%>Standard)	Incremental Cost change in 3 years (1-5)	Aware of incentives (Y/N)	Helped Customers get Incentives (Y/N)	% Sold Significantly More Eff. than Standard	Change over 3 years (1-5)	Efficiency of Standard Equipment	% Incremental Cost Covered by Rebates	% e-e sales w/o rebates	Move up at 10% of incremental cost?	25%	50%	75%	Nbr Units Sold
A	Chillers								--							
B	Ground Source Heat Pump		NA	5					--							
C	HVAC	1	1	7	7			7	--	7	7					1
D	Lighting	2	2	7	7			4	--	7	7					2
E	Lighting Controls	3	NA	Skip	Skip			5	5	--						3
F	Motors	6	6	6	6			6	6	--						6
G	Variable Frequency Drives	6	NA	6	6			NA	5	--						6
H	Gas Boilers									AFUE						
I	Gas Cooling		NA	5				NA	5	--						
J	Desiccant Gas Cooling		NA	5				NA	5	--						
K	Gas Furnaces									AFUE						
L	Gas Water Heating									EF or AFUE						
M	LED traffic lights		NA							NA						

1. Specify split systems, air-to-air heat pumps, packaged terminal systems, water source heat pumps, central CX AC systems
2. Specify T8, T5, Metal Halide, CFL fixtures
3. Specify occupancy sensors, daylight dimmer systems, occupancy controlled hi-low controls for fluorescent, and HID controls
4. For **pre-test**, specify %T8s or T5s vs T12, CFL fixture vs incandenscent, metal halide vs standard efficiency [could be any type of fixture]. If this proves unworkable in pre-test, then ask across all products.
5. See different wording for this combination.
6. Specify sizes: 1-5 HP; 6 - 20 HP; 21 - 50 HP; 51 - 100 HP; 101 - 200 HP; 201 - 500 HP. **Pre-test** for IC1+
7. Ask across all types of products within the category, not for specific products, eg ask about all lighting products, not T8s, T5s, etc.

## IC. Incremental Costs

IC1. For each of the technologies you carry, please give me your best estimate of the incremental cost of the highest efficiency model over a similar standard-efficiency model – in percentage terms. First for [\_\_\_\_\_]. [Read list from table above]

[For gas cooling or desiccant gas cooling: "...incremental cost of gas cooling over the same capacity electric system..."]

[For GSHP: "...incremental cost of GSHP over the same capacity electric air-source heat pump..."]

IC2. And how has that incremental cost changed during the last three years? For [\_\_\_\_technology\_\_\_\_], would you say it has

1. Decreased Significantly
2. Decreased Somewhat
3. Neither decreased nor increased
4. Increased Somewhat
5. Increased Significantly

IC3. What factors have influenced the change in incremental cost?

IC4. Would you say your margins on energy efficient equipment are

1. Quite a bit higher than for standard efficiency equipment
2. Somewhat higher
3. About the same
4. Somewhat lower, or
5. Quite a bit lower?
7. Don't know
9. Refused

## IN. Incentive Awareness

IN1. Were you aware that the program offers incentives for [\_\_\_\_\_]. [Ask of all technologies they specify or install] *[Analysis note: CPT2 in participants survey.]*

1. Yes    2. No    8. Do not know    9. Refused

IN2. [For those technologies aware of incentives] Have you helped any of your customers receive rebates for these technologies?

1. Yes    2. No    8. Do not know    9. Refused

IN3. What other technologies or measures do you think should receive utility incentives? [Record verbatim]

## MS. Market Share

MS1. [For the categories that they sell an efficient model from above –for lighting see MS1B. Skip for VFDs] I'll go through that same list one more time. **This time, please give me your best estimate for the percentage of products that your company has sold or installed in the past 12 months that were significantly more efficient than standard equipment.** Remember: Your answers will only be used in combination with the answers from other retailers around the state to develop average statistics. [If necessary: We will not report the information you provide other than in an aggregated form that protects your individual identity and the identity of your store.]

MS1B. [If install or specify lighting controls] Please give me your best estimate of the percentage of projects that your company has worked on in the past 12 months that have included advanced lighting controls with and without utility incentives.

MS1C. [If install or specify lighting controls] Please give me your best estimate of the percentage of floor space that is governed by advanced lighting controls in the projects that your company has worked on in the past 12 months with and without utility incentives.

MS2. And how has that percentage changed over the past three years? Would you say it has ...  
[For VFDs, gas cooling, desiccant gas cooling: "How have your sales of \_\_\_\_ changed over the past three years? Would you say they have...]

1. Decreased Significantly
2. Decreased Somewhat
3. Neither decreased nor increased
4. Increased Somewhat
5. Increased Significantly

MS3. Why do you think the percentage of energy efficient units has changed? [Record verbatim]

MS4A. [For Gas Boilers only] What is the efficiency of the standard boiler you install without utility incentives? [Frame of reference: Protocols specify baseline of 80% AFUE from EPACT standard.]

MS4B. [For Gas Furnaces only] What is the efficiency of the standard furnace you install without utility incentives? [Frame of reference: Protocols specify baseline of 78% AFUE from EPACT standard.]

MS5. What percent of the incremental cost do the utility incentives usually cover?

MS6. What percent of your energy efficient sales were made without utility rebates?

MS7. What percent of your customers would move [up to the energy efficient model]/[down to the standard model] if the rebate covered [\_\_]% of the incremental cost? ["Up" for numbers higher than the respondent's estimate in MS4. "Down" for the others.]

- 10%
- 25%
- 50%
- 75%

MS8. Could you tell me approximately how many units you sold in each category in 2005?

## P. PROMOTION PRACTICES

Next I have a few questions about your marketing and promotion practices.

- P1. Do you advertise your products in the newspaper, in other print media, or on the radio or TV? [Do not read list.]  
1. Yes    2. No    8. Do not know    9. Refused
- P2. Where do you advertise?  
1. Newspaper  
2. Neighborhood flyer  
3. Radio  
4. TV  
5. Web site  
6. Yellow Pages  
7. Other [Record verbatim] \_\_\_\_\_  
8. Don't know  
9. Refused
- P3. Do you refer to or highlight energy efficiency in any of your advertising?  
1. Yes    2. No    8. Do not know    9. Refused
- P4. [If no] Is there a particular reason why you do not? [Record verbatim]
- P5. Are there any differences in how much you promote energy efficiency for different products?  
1. Yes    2. No    8. Do not know    9. Refused
- P6. [If yes] What are those differences? [Record verbatim]
- P7. How has your use of energy efficiency in your advertising changed during the last three years?  
Would you say it has...?  
1. Increased significantly  
2. Increased somewhat  
3. Stayed the same  
4. Decreased somewhat  
5. Decreased significantly

## CD. CONSUMER DEMAND

- CD1. In what percentage of all your current [sales transactions]/[buildings] do **customers ask for** or about the energy efficiency of the equipment?
- CD2. How has that percentage changed over the past three years? Has it ...?  
1. Increased significantly  
2. Increased somewhat  
3. Stayed the same  
4. Decreased somewhat  
5. Decreased significantly

CD3. What factors have influenced that change? [Probe for differences by product]

CD4. In what percentage of all your current [sales transactions]/[buildings] do **you initiate** a discussion about the energy efficiency of the equipment?

CD5. How has that percentage changed over the past three years? Has it ...?

1. Increased significantly
2. Increased somewhat
3. Stayed the same
4. Decreased somewhat
5. Decreased significantly

CD6. What factors have influenced that change? [Probe for differences by product]

## **B. BARRIERS**

Ba1. What do you think the barriers are to participating in the New Jersey SmartStart Buildings program for companies like yours? [Record verbatim]

Ba2. What do you consider to be the major barriers to customer participation in the New Jersey SmartStart Buildings program? [Do not prompt. Check all that apply.]

1. None
2. First costs
3. Lack of education and awareness
4. Uncertain of participating suppliers
5. Specific program requirements
6. Bad rap when the program first started
7. Not remaining in the building long enough to reap the benefits
8. Other [Record Verbatim] \_\_\_\_\_
9. Don't know/unsure
10. Refused

Ba3. How effective is the New Jersey SmartStart Buildings program in reducing these barriers? Would you say it is ...?

1. very ineffective
2. somewhat ineffective
3. neutral
4. somewhat effective
5. or very effective?
8. Don't know
9. Refused



Ba4. What could the program provide you to help you reduce these barriers? [PROBE: What do you need as far as support, information, or tools to help you sell energy efficient equipment?]

And now I want to ask you about some possible barriers that your customers face when considering energy-efficiency opportunities. On a scale from one to 5, where 1 is very insignificant and 5 is very significant, how significant are each of the following as obstacles to your customer's investment in cost-effective energy-efficiency opportunities?

1. Not at all important      -      5 Very important      8 Don't know    9 Refused

*[Analysis note: Barriers starting with "BPU" are defined by the BPU, others I defined.]*

BPU1. Unfamiliarity or uncertainty with energy efficient building technologies and designs

BPU2. Bias toward first cost versus operating costs

BPU3. Compressed time schedules for design and construction

BPU4. Aversion to perceived risk-taking despite the proven reliability of efficient technologies and designs

BPU5. Incentive structures and priorities for engineers, designers and contractors which are at variance with efficiency considerations.

B1. Awareness of which products and services are available

B2. Uncertainty over whether actual savings will be equal to or greater than estimated savings

B3. Amount of time it takes to acquire enough information to make an informed decision to invest in an energy-efficiency project

B4. The time and cost associated with selecting contractors and negotiating project terms

B5. Uncertainty over information provided by firms proposing efficiency-related projects

B6. Disagreements between decision makers over the relative importance of energy-efficiency related investments compared with other capital projects

B7. Lack of access to financing for energy-efficiency related projects

B8. Lack of use of formal financial analyses to evaluate energy equipment purchase decisions

B9. Lack of availability of energy-efficient products and services

B10. What do you need as far as support, information, or tools to help your customers overcome these barriers? [Record verbatim]

## S. STRATEGIES

To overcome these barriers the New Jersey SmartStart Buildings program employs several key strategies. On a scale from 1 to 5, with 1 being not successful at all and 5 being very successful, please rate the effectiveness or success of the following strategies.

1. Not at all successful - 5 Very successful 8 Don't know 9 Refused

- S1. Program emphasis on customer-initiated construction and equipment replacement events that are a normal part of their business practice.
- S2. Coordinated and consistent marketing to commercial and industrial customers, especially large and centralized players, such as national/regional accounts, major developers, etc.
- S3. Consistent efficiency and incentive levels for efficient electric and gas equipment and design practices to permanently raise efficiency levels.
- S4. Prescriptive incentives for pre-identified efficiency equipment and custom measure incentives for more complex and aggressive measures to permanently raise the efficiency levels of standard equipment.
- S5. Design support/technical assistance to developers and their design team for new construction and renovation projects to permanently raise the efficiency levels of design practices.
- S6. Specialized technical assistance for small commercial customers and educational institutions.
- S7. Technical support for newly enacted commercial energy code including training in energy code requirements.

## PROGRAM ISSUES

### PE. Program Effectiveness

PE1. Overall, how would you rate the effectiveness of the New Jersey SmartStart Buildings program, would you say it is ...?

- 1. very ineffective
- 2. somewhat ineffective
- 3. neutral
- 4. somewhat effective
- 5. or very effective?
- 8. Don't know
- 9. Refused

PE2. Why do you rate the effectiveness of the program this way? [Record verbatim]

PE3. What should be changed about the program? [Record verbatim]

1. No suggestions
2. More marketing to the public
3. Make ES efficiency levels the industry standard
4. Help manufacturers or retailers with advertising
5. Too much of his time is needed
6. More training for manufactures or retailers
7. Have consultants spend more time with us
8. Better communication with what's going on with the program
9. More stringent criteria for participating retailers
10. Better coop advertising program
11. Provide incentives for manufactures or retailers
12. Provide additional incentives for consumers
13. Other [Record Verbatim] \_\_\_\_\_
14. Don't know
15. Refused

PE4. [If more than one suggested change] Which one of these suggestions would be most important to change?

## S. Satisfaction

Now I am going to ask you to rate your satisfaction with several aspects of the New Jersey SmartStart Buildings program. For each, please rate your satisfaction on a 1 to 5 scale with 1 indicating very dissatisfied and 5 indicating very satisfied.

1. Very dissatisfied                      -                      5 Very satisfied                      8 Don't know    9 Refused

- S1. Project application and qualification process
- S2. Verification process for measure installation
- S3. Cost of participation
- S4. Quality of informational materials
- S5. Ease of participation
- S6. Responsiveness of program staff
- S7. Amount of paperwork required to participate
- S8. The program overall

## W. Web Site

The website for the New Jersey SmartStart Buildings program includes contact information for companies that offer energy efficient products and services.

W1. We [could/could not] find your company on that web site. Is that correct? [Use sample Web Site flag]

1. Yes    2. No    8. Do not know    9. Refused

W2. Why did you choose [to/not to] have your company on that site? [Record verbatim]

W3. [If on web site] Do you track whether you get customers who found you on that site?

1. Yes    2. No    8. Do not know    9. Refused

W4. [If No] Can you estimate how many referrals do you get in a typical month from the web site?

1. Yes    2. No    8. Do not know    9. Refused

W5. [If W3=1 track or W4=1 can estimate] How many referrals do you get in a typical month from the web site?

W6. [If W5>0] What percent of your business do they represent?

## T. TRAINING

T1. How often do your salespersons receive a formal training session on the features of the product line? By "formal" I mean a group training session rather than personal guidance. [Select All That Apply]

1. \_\_\_\_\_ times per year  
2. \_\_\_\_\_ times per month  
3. Weekly  
4. When they are hired  
5. No training session    [Skip rest of section]  
6. Informal training only    [Skip rest of section]  
7. Other [Record verbatim] \_\_\_\_\_  
8. Don't know    [Skip rest of section]  
9. Refused    [Skip rest of section]

T2. Who conducts the training? [Select All That Apply]

1. Store manager  
2. Brand representative  
3. Other [Record verbatim] \_\_\_\_\_  
8. Don't know  
9. Refused

T3. Does this training usually address the energy efficiency of products?

1. Yes    2. No    8. Do not know    9. Refused

T4. [If yes] Why is energy efficiency not covered?

- [Record verbatim] \_\_\_\_\_  
8. Don't know

9. Refused

T5. What type of information would be most useful for your business to have included in a training session on the energy efficiency features of your products? [Record verbatim]

## F. FIRMOGRAPHICS

F1. Which of the following options best describes your company's ownership category? Is it a single establishment, one of a chain of establishments, a franchise, a branch office, a headquarters with branch offices elsewhere, a government facility, an educational facility, or something else? [Record first response]

1. a single establishment
2. one of a chain of establishments
3. a franchise
4. a branch office
5. a headquarters with branch offices elsewhere
6. a government facility
7. an educational facility
8. Don't Know
9. Refused
10. Other [Record Verbatim] F2B. \_\_\_\_\_

F2. Do you operate out of just one location or more than one in New Jersey?

1. One
2. More than one

F3. [If more than one] How many?

F4A. Approximately how many full time employees or full time equivalents does your organization have at your location(s) in New Jersey?

- 8. Do not know      -9. Refused

F4B. [If F4A = -8 (don't know)] Is it [read categories]?

- A. Fewer than 5
- B. 5 - 9
- C. 10 - 19
- D. 20 - 49
- E. 50 - 99
- F. 100 - 249
- G. 250 or more
- H. Don't know
- I. Refused

- F5. Finally, what is your title?
1. CEO/president/director/CFO/VP
  2. Business manager/general manager
  3. Owner
  4. Facilities/building engineer/manager
  5. Maintenance manager/assistant
  6. Operations manager/assistant
  7. Utilities/energy managers/staff
  8. Landlord/property manager
  9. Other [Record verbatim] F8B. \_\_\_\_\_

**[Designer/Architects only. All others skip this section.]**

F6A. Approximately how many new construction projects per year is your organization involved with in New Jersey?

- F6B. [If don't know or refused] Is it \_\_\_\_
1. One
  2. 2 - 5
  3. 6 - 10
  4. 11 - 20
  5. More than 20
  8. Don't know
  9. Refused

F7. In terms of the new construction projects your firm is involved with, what are the four building types in which you work most frequently? [Circle them below] For each of those four building types, approximately what share of your work is associated with each building type? [Record percents]

___% Agriculture	___% Apartments/Multifamily
___% Amusement, Social, and Recreational Buildings	___% Office and bank building
___% Education, Schools, colleges, libraries, laboratories (non-manufacturing owned)	___% Public Assembly
___% Food Service, restaurants	___% Public Order and Safety
___% Government Service Building	___% Religious Worship
___% Grocery / food sales	___% Service
___% Health Care, hospitals and other health treatment	___% Water / wastewater
___% Lodging, Hotel, Motel	___% Warehouse and Storage (excluding manufacturer owned)
___% Manufacturing plants, warehouse, laboratories (Identify Industry Type _____ (e.g., chemical, food, paper, etc.)	___% Other, miscellaneous non-residential buildings
___% Mercantile	___% Vacant

## Z. FINAL COMMENTS?

Z1. That is all of my questions. Do you have any final comments about the New Jersey SmartStart Buildings program? [Record verbatim]

Thank you very much for your time.  
[Terminate]

[RECORD DATE, TIME CALLED, AND LENGTH OF INTERVIEW]

Call\_Date:

Time\_Called:

Interview\_Length:

# **COMBINED HEAT AND POWER PROGRAM SURVEY INSTRUMENTS**



# CHP Program Participating End Users Survey Instrument

January 2006

Date \_\_\_\_\_  
Respondent Name \_\_\_\_\_  
ID \_\_\_\_\_  
Start Time \_\_\_\_\_  
End Time \_\_\_\_\_  
Survey Administrator Name \_\_\_\_\_

Good morning/afternoon. My name is \_\_\_\_\_ and I work for Summit Blue Consulting. We are under contract with the New Jersey Office of Clean Energy (NJOCE), and I'm calling on their behalf. We are conducting a survey of the owners of Combined Heat and Power system in New Jersey in order to get a better picture of the market and the industry. NJOCE has instituted some programs to support the adoption of Combined Heat and Power (CHPs) in New Jersey and we are interested in talking to you about your experiences, your impressions of the current state of the industry and trends you have seen that have had an impact on the markets for CHP in New Jersey. The results of this research will be used to help NJOCE plan future programs to support renewable energy resource development in New Jersey. This survey will take about 15 minutes; do you have the time to talk with me about your experiences right now? (If Yes, continue with survey. If No, Schedule a time to call back \_\_\_\_\_ AM/PM, on \_\_\_\_\_ Date).

NJOCE does not intend to release the information you provide other than in an aggregated form that protects your identity.

1. We are interested in discussing the system for which a CHP incentive application was submitted at the \_\_\_\_ facility at \_\_\_\_ address [PARTICIPANT]. (If records available, say "According to our records, the following system was submitted for a CHP program incentive.) Do you recall this project?
  1. Yes → (Continue)
  2. No → (If no, thank and terminate interview).
  98. DK → Is there another person with whom I should speak who might be more familiar with your company's involvement in the CHP program?
2. Confirm basic project information from program database (size, cost ,technology, etc.)

**A. IMPORTANCE OF FACTORS**

1-15. [All] On a scale of 1-5 where 1= Most Important, 2= Important, 3=Neutral, 4=Not Important, and 5=Irrelevant, how important were the following factors in deciding whether to install a system, and/or which system to install?

	←	Important	Neutral	Irrelevant	→	
1. Initial cost	1	2	3	4	5	DK
2. Fuel Costs	1	2	3	4	5	DK
3. O & M cost	1	2	3	4	5	DK
4. Lifetime cost	1	2	3	4	5	DK
5. Footprint	1	2	3	4	5	DK
6. Annual fuel use efficiency	1	2	3	4	5	DK
7. Electric energy efficiency	1	2	3	4	5	DK
8. Technology	1	2	3	4	5	DK
9. Marketing image	1	2	3	4	5	DK
10. Rapid availability	1	2	3	4	5	DK
11. Environmental benefits	1	2	3	4	5	DK
12. Monitoring and control	1	2	3	4	5	DK
13. Relationship with utility	1	2	3	4	5	DK
14. Need for backup/Redundancy	1	2	3	4	5	DK
15. Reliability/Continuous performance	1	2	3	4	5	DK

16. [All] What is the typical payback period you require when considering purchasing a CHP system? (Years).

\_\_\_\_\_ Years

17. [All] What is the typical payback period you would require when considering other major equipment purchases? (Years)

\_\_\_\_\_ Years

**B. KNOWLEDGE OF CHP**

- 1. [All] How familiar are you with the different types of CHP systems?
  - 1. Extremely familiar
  - 2. Somewhat familiar
  - 3. Slightly familiar
  - 4. Not at all familiar
  - 98. Don't know
  
- 2. [All] Thinking back over the past two years, would you say your familiarity with CHP systems has increased significantly, increased, stayed the same, decreased, or decreased significantly?
  - 1. Increased Significantly → a. How has it increased? \_\_\_\_\_
  - 2. Increased Somewhat → b. How has it increased? \_\_\_\_\_
  - 3. Stayed the same \_\_\_\_\_
  - 4. Decreased Somewhat → c. How has it decreased? \_\_\_\_\_
  - 5. Decreased Significantly → d. How has it decreased? \_\_\_\_\_
  - 98. Don't know
  
- 3. [All] [IF B2 = 1 or 2] To what do you attribute your increase in awareness of CHP systems? (~~Prompt, if necessary: To what extent has New Jersey's CHP program contributed to your increased awareness?~~)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**C. BASELINE PRACTICTICES/PERCEPTIONS**

- 1. [All] In addition to the system discussed earlier has your company replaced or installed any new CHP system at this or any other location(s) during the last two years?
  - 1. Yes
  - 2. No
  - 98. DK
  
- 2. [All] [IF C1 = 1] How many of these were in New Jersey?  
\_\_\_\_\_
  
- 3.[All] [IF C0 =1] What other locations, and when was the system installed at these locations?  
\_\_\_\_\_  
\_\_\_\_\_

*Thinking specifically about the system installed at [LOCATION]:*

3. How was the project initiated at your company?
  1. Internal initiative and investigation/sought vendor bids afterwards
  2. Vendor or manufacturer contact and initiated
  3. Other \_\_\_\_\_
  98. DK
  
4. Was any CHP feasibility analysis done prior to the submittal of the CHP program incentive application?
  1. Yes
  2. No
  98. DK
  
5. [IF C.5 =1] Who performed the feasibility study and how was it funded?
  1. Internally performed and funded
  2. Consultant performed and internally funded
  3. Vendor-performed and internally funded
  4. Vendor-performed and funded
  5. Other \_\_\_\_\_
  98. DK
  
6. What was the main reason the decision was made to go with the specific CHP system in the program incentive application? What were the main goals that were set for the system?  
\_\_\_\_\_  
\_\_\_\_\_
  
7. What source of capital was planned to pay for the (net-of-program-incentive) CHP system?

Internal funds .....	1
Financing.....	2
Lease with Vendor .....	3
Lease with third party .....	4
Energy Services Agreement.....	5
Other _____	
DK.....	98
  
9. Did you consider any other types or makes of CHP systems?
  1. Yes
  2. No
  98. DK
  
10. [IF C9 = 1] What were the makes and models of the other systems that were considered? And how did the total costs (including installation and equipment) differ with the alternatives you considered?

	Alt Make	Alt Model	CHP (Y/N)	Cap Cost	Install Cost	Prime Mover
1						
2						
3						
4						
5						
6						
7						

11. [IF C9 = 1]Were any of the options considered cleaner generating than the one ultimately chosen?

- 1. Yes
- 2. No
- 98. DK

12. [IF C11 =1] Why was the cleaner option not chosen?

---

13. [IF C9 = 1]Were any of the options considered more efficient than the one ultimately chosen?

- 1. Yes
- 2. No
- 98. DK

14. [IF C13 =1] Why was the more efficient option not chosen?

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15. How did the recoverable heat use affect you decision?

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16. Were environmental concerns or image a part of your decision to purchase this system?

- 1. Yes → Could you expand on the role it played in the decision making?
- 2. No \_\_\_\_\_
- 98. DK \_\_\_\_\_

17. Are there other special features that were considered?

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18. Were any more cutting-edge, emerging technologies considered for the site?

- 1. Yes
- 2. No
- 98. DK

19. [IF B.18=1] What technology? Why was it considered? Why eventually ruled out?

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20. [IF B.18=2] Why not?

21. What is the current status of the project?

- 1. Completed and received CHP incentive
- 2. Completed and awaiting verification and incentive
- 3. Under construction
- 4. In development
- 5. Cancelled

22. [IF C.21<5 SKIP TO 24.] What was the primary reason that the project was cancelled? Other (secondary) reasons?

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23. Is there any change in the CHP program that you believe would have allowed the project to proceed, or was cancellation due to non-program factors?

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24. [If CHP Operational] How satisfied have you been with the CHP system?

- 1. Very
- 2. Somewhat
- 3. Not very
- 4. Not at all
- 98. DK

25. How did you become aware of the NJOCE CHP program?

---

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26. When was that? \_\_\_\_\_

**D. MARKET BARRIERS**

1. What do you consider to be the major barriers to end users' participation in the New Jersey CHP program? (*Do not prompt; Circle all that apply*)

- None .....0
- First costs .....1
- Lack of awareness of program .....2
- Sufficient thermal load.....3
- Fuel Costs.....4
- Payback.....5
- Lack of technical knowledge .....6
- Other (\_\_\_\_\_). .....7
- Don't know/unsure .....98

~~2. How effective is the New Jersey CHP program in reducing these barriers?  
(PROBE: What could you have used as far as support, information, or tools to help you sell the CHP concept within your company/organization?)~~

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3. How important was the CHP program incentive in your company/organization's decision to move forward?

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Thinking back over the past two years, do you think the [Read Barrier] CHP systems has Increased significantly (1); Increased Somewhat (2); Stayed the Same(3); Decreased Somewhat(3); or Decreased Significantly (5)?

Barrier	←Increased	Same	Decreased→	
4. Initial cost of	1	2	3	4 5 DK
5. Operational cost of	1	2	3	4 5 DK
<del>6. Maintenance cost of</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>4 5 DK</del>
<del>7. Availability of</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>4 5 DK</del>
<del>8. State of Technology (as a barrier) to</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>4 5 DK</del>
9. Difficulty of Permitting (Air)	1	2	3	4 5 DK
10. Difficulty of Permitting (Building)	1	2	3	4 5 DK
11. Availability of information on (Lack of information being a barrier)	1	2	3	4 5 DK
<del>12. End-user awareness of (Lack of awareness being a barrier)</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>4 5 DK</del>
13. Internal approval process for (Difficult process being a barrier)	1	2	3	4 5 DK
<del>14. Tariffs on (Utility tariffs)</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>4 5 DK</del>
<del>15. Utility Interconnection</del>	<del>1</del>	<del>2</del>	<del>3</del>	<del>4 5 DK</del>
16. Cost of studies/selecting a	1	2	3	4 5 DK
17. Availability of financial incentives (Prog inctvs more avail=decr bar)	1	2	3	4 5 DK
18. Avail of technical assistance for (Prog tech asst more avail=decr bar)	1	2	3	4 5 DK
19. Energy Savings available from (More savings avail = decr in bar)	1	2	3	4 5 DK
20. Other Barrier _____	1	2	3	4 5 DK
21. Other Barrier _____	1	2	3	4 5 DK

22. Overall, do you feel these barriers are increasing, decreasing, or remaining the same?

1. Increasing → 0a. Why? \_\_\_\_\_

Staying the same

2. Decreasing → 0b. Why? \_\_\_\_\_

98. DK

23. [All] [IF D20 = 2] To what do you attribute the decreases in the barriers?

(Prompt, if necessary: To what extent have New Jersey Clean Energy programs contributed to your increased awareness?)

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**E. CONFIRM ROLE / IMPORTANCE OF PROGRAM**

1. [PARTICIPANT] Prior to your participation in the program, had you previously conducted a feasibility study for the system?

- 1. Yes
- 2. No
- 98. DK

24. [PARTICIPANT] [IF E0 = 1] How was the study funded?

- 1. Self-funded
- 2. Equipment vendor
- 3. University study
- 4. Consultant funded
- 5. Developer funded
- 6. Other: \_\_\_\_\_

25. [PARTICIPANT] [IF E0 = 1] Was the system installed the same as what was recommended by the study?

- 1. Yes
- 2. No
- 98. DK

26. [PARTICIPANT] [IF E3 = 2] Why did you elect to go with a different system or setup?

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27. [PARTICIPANT] [IF E3 = 2] What was different about the installed system compared to the system recommended by the study?

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6. Prior to your participation in the program, had you already included the system in your corporate budget?

- 1. Yes
- 2. No
- 98. DK

7. How did the system purchased differ from the system that you would have purchased if you had not participated in the program?

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8. [IF OPERATIONAL] How has your energy use changed as a result of the installation of your CHP system?

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9. [IF OPERATIONAL] Is your energy consumption different when the system is running compared to when it is not?
- 1. Yes
  - 2. No
  - 98. DK
10. [IF E0 = 1] How does it change?
- 

**F. PROGRAM EFFECTIVENESS**

1. Overall, how would you rate the effectiveness of the New Jersey CHP program?

Very effective -> <b>SKIP TO 5</b> .....	1
Somewhat effective .....	2
Neutral .....	3
Not very effective .....	4
Very un-effective .....	5
Don't know/unsure .....	98

2. Why do you rate the effectiveness of the New Jersey CHP program this way?
- 

3. What should be changed about the program? (*Do not prompt; Circle all that apply*)

No suggestions .....	1
Higher incentive amounts .....	2
Higher project size threshold for incentives .....	3
Lower project size threshold for incentives .....	4
More marketing directly to end users .....	5
Too much of his time is needed to complete paperwork .....	6
Should be more technical support for customers.....	7
More followup assistance to assist permitting, etc. ....	8
More timely program announcements .....	9
Others _____	
Don't know/unsure .....	98

4. IF MORE THAN ONE SUGGESTED CHANGE

Which one of these suggestions would be most important to change?

---

5. Please tell me how much you agree or disagree with each of the following statements. Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-strongly disagree, 2-somewhat disagree, 3-neither, 4-somewhat agree, 5-strongly agree*

<b>Statement</b>	<b>Rating</b>
a. The CHP program has increased our awareness of CHP	1 2 3 4 5
b. Our company has the technical know-how to evaluate whether CHP makes sense for us	1 2 3 4 5
c. The CHP program has increased our interest in CHP	1 2 3 4 5
d. [ For multiple-site companies] Our experience with the CHP program increases the likelihood of CHP at other sites.	1 2 3 4 5
e. The application process for the CHP program does not present a barrier to participate	1 2 3 4 5

*FINALLY< I'd like to ask a few general questions:*

29. What single aspect of the CHP program have you found most helpful?

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30. And what single aspect of the program have you found least helpful?

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31. Do you have any final comments about the CHP program?

## BUSINESS / FIRM-O-GRAPHIC MODULE

### PARTICIPANTS AND NON-PARTICIPANTS

1. [All] What is the principal business activity in this building/site? [8.5, 8.6]	
Agriculture .....	1
Amusement, Social, and Recreational Buildings.....	2
Education, Schools, colleges, libraries, laboratories (non-manufacturing owned).....	3
Food Sales .....	4
Food Service, restaurants.....	5
Government Service Building .....	6
Health Care, hospitals and other health treatment .....	7
Inpatient .....	7a
Outpatient .....	7b
Lodging, Hotel, Motel .....	8
Mercantile .....	9
Retail (Other Than Mall) .....	9a
Enclosed and Strip Malls .....	9b
Multifamily .....	10
5+ apartments .....	10a
Dormitory .....	10b
Office and bank building .....	11
Public Assembly .....	12
Public Order and Safety .....	13
Religious Worship .....	14
Service .....	15
Warehouse and Storage (excluding manufacturer owned) .....	16
Manufacturing plants, warehouse, laboratories .....	17
(Identify Industry Type_____ (e.g., chemical, food, paper, etc.)	
Water / wastewater .....	18
Other, miscellaneous non-residential buildings.....	19
Vacant .....	20
2. [All] Is your organization:	
For Profit.....	1
Not for profit/Non-profit.....	2
Other .....	3
Don't Know .....	98
Refused .....	99

3. Approximately how large are your facilities that have participated in the program, in square feet?
- Up to 5,000.....1
  - 5,001 to 10,000 .....2
  - 10,001 to 15,000 .....3
  - 15,001 to 25,000 .....4
  - 25,001 to 50,000 .....5
  - 50,001 to 100,000 .....6
  - 100,001 to 200,000 .....7
  - 200,001 to 500,000 .....8
  - Over 500,000.....9
  - Don't Know .....98
  - Refused .....99
4. [All] Year Constructed [8.5, 8.6]
- 1919 or Before .....1
  - 1920 to 1945 .....2
  - 1946 to 1959 .....3
  - 1960 to 1969 .....4
  - 1970 to 1979 .....5
  - 1980 to 1989 .....6
  - 1990 to 1999 .....7
  - 2000-2002 .....8
  - After 2002 .....9
  - Don't Know .....98
  - Refused .....99
5. [All] Approximately how many full time employees or full time equivalents does your organization have at your locations in New Jersey? [8.5]
- Fewer than 5 .....1
  - 5 to 9 .....2
  - 10 to 19 .....3
  - 20 to 49 .....4
  - 50 to 99 .....5
  - 100 to 249 .....6
  - 250 or More.....7
  - Don't Know .....98
  - Refused .....99
6. [All] How many locations does your organization have in New Jersey? [8.5]
- One .....1
  - 2 to 5 .....2
  - 6 to 10 .....3
  - 11 to 20 .....4
  - More than 20.....5
  - Currently Unoccupied.....6

Don't Know .....	98
Refused .....	99

7. [All] Is your organization independent, or part of a larger organization? [8.5]

Independent.....	1
Part of a larger organization.....	2
Other (specify)_____ .....	3
Don't know .....	98
Refused .....	99

**CHP Program  
Non-Participating End Users  
Survey Instrument**

**January 2006**

Date \_\_\_\_\_  
Respondent Name \_\_\_\_\_  
ID \_\_\_\_\_  
Start Time \_\_\_\_\_  
End Time \_\_\_\_\_  
Survey Administrator Name \_\_\_\_\_

Good morning/afternoon. My name is \_\_\_\_\_ and I work for Gabel Associates. We are under contract with the New Jersey Board of Public Utilities' Office of Clean Energy (NJOCE), and I'm calling on their behalf. We are conducting a survey of businesses in New Jersey that may be candidates for the installation of Combined Heat and Power systems, in order to get a better picture of the market and the industry. NJOCE has instituted some programs to support the adoption of Combined Heat and Power (CHPs) in New Jersey and we are interested in talking to you about your impressions of the current state of the industry and trends you have seen that have had an impact on the markets for CHP in New Jersey. The results of this research will be used to help NJOCE plan future programs to support renewable energy resource development in New Jersey. This survey will take about 15 minutes. ***Would you be the right person within your organization to talk about these issues?*** Do you have the time to talk with me about your experiences right now? (If Yes, continue with survey. If No, Schedule a time to call back \_\_\_\_\_ AM/PM, on \_\_\_\_\_ Date).

NJOCE does not intend to release the information you provide other than in an aggregated form that protects your identity.

**B. KNOWLEDGE OF CHP**

1. [All] Do you have responsibility within your organization for energy facility energy usage and/or energy facilities? Please briefly summarize your role.

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2. [All] How familiar are you with CHP systems as a source of energy?

- 5. Extremely familiar
- 6. Somewhat familiar
- 7. Slightly familiar
- 8. Not at all familiar
- 98. Don't know

3. [All] Thinking back over the past two years, would you say your familiarity with CHP systems has increased significantly, increased, stayed the same, decreased, or decreased significantly?

- 22. Increased Significantly → a. How has it increased? \_\_\_\_\_
- 23. Increased Somewhat → b. How has it increased? \_\_\_\_\_
- 24. Stayed the same \_\_\_\_\_
- 25. Decreased Somewhat → c. How has it decreased? \_\_\_\_\_
- 26. Decreased Significantly → d. How has it decreased? \_\_\_\_\_
- 98. Don't know

4. **IF B.4. = 1 or 2]** To what do you attribute you increase in awareness of CHP systems?

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### C. PAYBACK PERIODS

1. [All] What would be the typical payback period you would require when considering purchasing a CHP system? (Years).  
\_\_\_\_\_ Years
2. [All] What is the typical payback period you would require when considering other major equipment purchases? (Years)  
\_\_\_\_\_ Years

**D. BASELINE PRACTICTICES/PERCEPTIONS**

1. [All] Has your company replaced or installed any new CHP system at this or any other location(s) in the State during the last two years? **[IF YES, CONFIRM NOT AS PART OF OCE CHP PROGRAM]**
- 1. Yes
  - 2. No
  - 98. DK

**[IF C1 =1 (CHP installations) SKIP TO C.5. IF C1>1 CONTINUE C.2 THRU C.4 THEN SKIP TO D.1.]**

2. Has your company seriously considered or evaluated the installation of a CHP system during the last two years?
- 1. Yes
  - 2. No
  - 98. DK

3. [IF C.2.=2] Why has CHP not been seriously considered or evaluated?

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4. [IF C.2 = 1] What was the reason that the decision was made not to proceed with an installation of CHP? Would the availability of incentives to defray a portion of the up-front capital costs have made a difference in that decision?

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**[FOR C.1>1 (no known CHP installation). END HERE AND SKIP TO D.1.]**

5. **[IF C.1.=1]** How was the project initiated at your company?
- 1. Internal initiative and investigation/sought vendor bids afterwards
  - 2. Vendor or manufacturer contact and initiated
  - 3. Other \_\_\_\_\_
  - 98. DK

27. Was any CHP feasibility analysis done prior to commitment to proceed?
- 1. Yes
  - 2. No
  - 98. DK

28. [IF C.6. =1] Who performed the feasibility study and how was it funded?

- 1. Internally performed and funded
- 2. Consultant performed and internally funded
- 3. Vendor-performed and internally funded
- 4. Vendor-performed and funded
- 5. Other \_\_\_\_\_
- 98. DK

29. What was the main reason the decision was made to go with the specific CHP system installed? What were the main goals that were set for the system?

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9-23. [All] On a scale of 1-5 where 1= Most Important, 2= Important, 3=Neutral, 4=Not Important, and 5=Irrelevant, how important were the following factors in deciding whether to install a system, and/or which system to install?

	← Important   Neutral   Irrelevant →					
	1	2	3	4	5	DK
30. Initial cost	1	2	3	4	5	DK
31. Fuel Costs	1	2	3	4	5	DK
32. O & M cost	1	2	3	4	5	DK
33. Lifetime cost	1	2	3	4	5	DK
34. Footprint	1	2	3	4	5	DK
35. Annual fuel use efficiency	1	2	3	4	5	DK
36. Electric energy efficiency	1	2	3	4	5	DK
37. Technology	1	2	3	4	5	DK
38. Marketing image	1	2	3	4	5	DK
39. Rapid availability	1	2	3	4	5	DK
40. Environmental benefits	1	2	3	4	5	DK
41. Monitoring and control	1	2	3	4	5	DK
42. Relationship with utility	1	2	3	4	5	DK
43. Need for backup/Redundancy	1	2	3	4	5	DK
44. Reliability/Continuous performance	1	2	3	4	5	DK

45. What source of capital was used to pay for the (net-of-program-incentive) CHP system?

Internal funds .....	1
Financing.....	2
Lease with Vendor .....	3
Lease with third party .....	4
Energy Services Agreement.....	5
Other _____	
DK.....	98

**E. MARKET BARRIERS**

1. What do you consider to be the major barriers to installation of a CHP system? (*Do not prompt; Circle all that apply*)

- None .....0
- First costs .....1
- Lack of awareness of program.....2
- Sufficient thermal load.....3
- Fuel Costs.....4
- Payback.....5
- Lack of technical knowledge .....6
- Other ( \_\_\_\_\_ ).....7
- Don't know/unsure .....98

2-10. On a scale of 1-5 where 1= Most Important, 2= Important, 3=Neutral, 4=Not Important, and 5=Irrelevant, how would you rate the importance of the following market barriers to the installation of a CHP system:?

Barrier	←Most Important    Neutral    Irrelevant→					
2. Initial cost of	1	2	3	4	5	DK
3. Operational cost of	1	2	3	4	5	DK
4. Difficulty of Permitting	1	2	3	4	5	DK
5. Cost of studies/selecting a	1	2	3	4	5	DK
6. Availability of financial incentives (Prog inctvs more avail=decr bar)	1	2	3	4	5	DK
7. Avail of technical assistance for (Prog tech asst more avail=decr bar)	1	2	3	4	5	DK
8. Energy Savings available from (More savings avail = decr in bar)	1	2	3	4	5	DK
9. Other Barrier _____	1	2	3	4	5	DK
10. Other Barrier _____	1	2	3	4	5	DK

11. Overall, do you feel these barriers are increasing, decreasing, or remaining the same?

3. Increasing → 0a. Why? \_\_\_\_\_

2. Staying the same

3. Decreasing → 0b. Why? \_\_\_\_\_

98. DK

12. **[IF D.11. = 3]** To what do you attribute the decreases in the barriers? (Prompt, if necessary: To what extent have New Jersey Clean Energy programs contributed to your increased awareness?)

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**E. PROGRAM EFFECTIVENESS**

1. [All] How familiar are you with New Jersey’s CHP program?

- 1. Extremely familiar
- 2. Somewhat familiar
- 3. Slightly familiar
- 4. Not at all familiar
- 98. Don’t know

2. [IF F.1.<4] Why has your company not participated in New Jersey’s CHP program?

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3. [IF F.1. = 1 or 2] Overall, how would you rate the effectiveness of the New Jersey CHP program?

- Very effective .....1
- Somewhat effective .....2
- Neutral .....3
- Not very effective .....4
- Very un-effective .....5
- Don't know/unsure .....98

4. What should be changed about the program? (*Do not prompt; Circle all that apply*)

- No suggestions .....1
- Higher incentive amounts .....2
- Higher project size threshold for incentives .....3
- Lower project size threshold for incentives .....4
- More marketing directly to end users .....5
- Too much of his time is needed to complete paperwork .....6
- Should be more technical support for customers .....7
- More followup assistance to assist permitting, etc. ....8
- More timely program announcements .....9
- Others \_\_\_\_\_
- Don't know/unsure .....98

5. IF MORE THAN ONE SUGGESTED CHANGE

Which one of these suggestions would be most important to change?

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## F. BUSINESS / FIRM-O-GRAPHIC MODULE

### PARTICIPANTS AND NON-PARTICIPANTS

1. [All] What is the principal business activity in this building/site? [8.5, 8.6]	
Agriculture .....	1
Amusement, Social, and Recreational Buildings.....	2
Education, Schools, colleges, libraries, laboratories (non-manufacturing owned).....	3
Food Sales .....	4
Food Service, restaurants.....	5
Government Service Building .....	6
Health Care, hospitals and other health treatment .....	7
Inpatient .....	7a
Outpatient .....	7b
Lodging, Hotel, Motel .....	8
Mercantile .....	9
Retail (Other Than Mall) .....	9a
Enclosed and Strip Malls .....	9b
Multifamily .....	10
5+ apartments.....	10a
Dormitory.....	10b
Office and bank building .....	11
Public Assembly .....	12
Public Order and Safety .....	13
Religious Worship .....	14
Service .....	15
Warehouse and Storage (excluding manufacturer owned) .....	16
Manufacturing plants, warehouse, laboratories .....	17
(Identify Industry Type_____ (e.g., chemical, food, paper, etc.)	
Water / wastewater .....	18
Other, miscellaneous non-residential buildings.....	19
Vacant .....	20
2. [All] Is your organization:	
For Profit.....	1
Not for profit/Non-profit.....	2
Other .....	3
Don't Know .....	98
Refused .....	99

3. Approximately how large are your facilities, in square feet?
- Up to 5,000.....1
  - 5,001 to 10,000 .....2
  - 10,001 to 15,000 .....3
  - 15,001 to 25,000 .....4
  - 25,001 to 50,000 .....5
  - 50,001 to 100,000 .....6
  - 100,001 to 200,000 .....7
  - 200,001 to 500,000 .....8
  - Over 500,000.....9
  - Don't Know .....98
  - Refused .....99
4. [All] Approximately how many full time employees or full time equivalents does your organization have at your locations in New Jersey?
- Fewer than 5 .....1
  - 5 to 9 .....2
  - 10 to 19 .....3
  - 20 to 49 .....4
  - 50 to 99 .....5
  - 100 to 249 .....6
  - 250 or More.....7
  - Don't Know .....98
  - Refused .....99
5. [All] How many locations does your organization have in New Jersey?
- One.....1
  - 2 to 5 .....2
  - 6 to 10 .....3
  - 11 to 20 .....4
  - More than 20.....5
  - Currently Unoccupied.....6
  - Don't Know .....98
  - Refused .....99
6. [All] Is your organization independent, or part of a larger organization?
- Independent.....1
  - Part of a larger organization.....2
  - Other (specify)\_\_\_\_\_ .....3
  - Don't know .....98
  - Refused .....99



# CHP Program Participating Developers Survey Instrument

January 2006

Date \_\_\_\_\_  
Respondent Name \_\_\_\_\_  
Respondent Company \_\_\_\_\_  
ID \_\_\_\_\_  
Start Time \_\_\_\_\_  
End Time \_\_\_\_\_  
Survey Administrator Name \_\_\_\_\_

Good morning/afternoon. My name is \_\_\_\_\_ and I work for Summit Blue Consulting. We are under contract with the New Jersey Office of Clean Energy (NJOCE), and I'm calling on their behalf. We are conducting a survey of the developers of the Combined Heat and Power market in New Jersey in order to get a better picture of the market and the industry. NJOCE has instituted some programs to support the adoption of CHPs in New Jersey and we are interested in talking to you about your experiences, your impressions of the current state of the industry and trends you have seen that have had an impact on the markets for CHP in New Jersey. The results of this research will be used to help NJOCE plan future programs to support distributed generation energy resource development in New Jersey. This survey will take about 15 minutes; do you have the time to talk with me about your experiences right now? (If Yes, continue with survey. If No, Schedule a time to call back \_\_\_\_\_ AM/PM, on \_\_\_\_\_ Date).

NJOCE does not intend to release the information you provide other than in an aggregated form that protects your identity.

1. [All] We are interested in discussing the system in the \_\_\_\_ facility at \_\_\_\_ address [Participant] for which an incentive was applied for under the CHP program. (If records available, say "According to our records, the following system was proposed.) Do you recall this project?
  1. Yes → (Continue)
  2. No → (If no, thank and terminate interview).
  98. DK → Is there another person with whom I should speak who might be more familiar with your company's involvement in the CHP program?
2. Confirm basic project information from program database (size, cost ,technology, etc.)

**A. KNOWLEDGE OF CHP**

1. [All] How familiar are you with the different types of CHP systems? [2.1]
  1. Extremely familiar
  2. Somewhat familiar
  3. Slightly familiar
  4. Not at all familiar
  98. Don't know
  
2. [All] Thinking back over the past two years, would you say your familiarity with CHP systems has increased significantly, increased, stayed the same, decreased, or decreased significantly?
  5. Increased Significantly → 2a. How has it increased? \_\_\_\_\_
  6. Increased Somewhat → 2b. How has it increased? \_\_\_\_\_
  7. Stayed the same \_\_\_\_\_
  8. Decreased Somewhat → 2c. How has it decreased? \_\_\_\_\_
  9. Decreased Significantly → 2d. How has it decreased? \_\_\_\_\_
  98. Don't know
  
3. [All] [IF A2 = 1 or 2] To what do you attribute you increase in awareness of CHP systems? (Prompt, if necessary: To what extent has the NJOCE's CHP program contributed to your increased awareness?)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
4. [All] Thinking back over the past two years, would you say your company's resource commitment and level of activity in New Jersey related to CHP systems has increased significantly, increased, stayed the same, decreased, or decreased significantly?
  1. Increased Significantly → 2a. How has it increased? \_\_\_\_\_
  2. Increased Somewhat → 2b. How has it increased? \_\_\_\_\_
  3. Stayed the same
  4. Decreased Somewhat → 2c. How has it decreased? \_\_\_\_\_
  5. Decreased Significantly → 2d. How has it decreased? \_\_\_\_\_
  98. Don't know
  
5. [All] [IF A4 = 1 or 2] To what do you attribute your company's increased resource commitment and CHP activity in New Jersey? (Prompt, if necessary: To what extent has the NJOCE's CHP program contributed to your increased awareness?)  
\_\_\_\_\_  
\_\_\_\_\_

**B. BASELINE PRACTICTICES/PERCEPTIONS**

1. [All] In addition to the specific system discussed earlier has your company replaced or installed any new CHP system at any other location(s) during the last two years?
  1. Yes
  2. No
  98. DK
  
2. [IF C1 = YES] How many of these were in New Jersey?  
  
\_\_\_\_\_
  
3. [All] [IF C0 > 0] What other locations, and when was the system installed at these locations? Were any of these other projects funded through the CHP program?  
  
\_\_\_\_\_  
  
\_\_\_\_\_

**Thinking specifically about the system at\_[LOCATION]:**

4. [All] What was the main reason this CHP system was planned for installation? What were the main goals that were set for the system?  
  
\_\_\_\_\_
  
5. What is the current status of the project?
  1. Completed and received CHP incentive
  2. Completed and awaiting verification and incentive
  3. Under construction
  4. In development
  5. Cancelled
  
6. [IF C.5<5 SKIP TO 8.] What was the primary reason that the project was cancelled? Other (secondary) reasons?  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_
  
7. Is there any change in the CHP program that you believe would have allowed the project to proceed, or was cancellation due to non-program factors?  
  
\_\_\_\_\_  
  
\_\_\_\_\_

8. [All] Did you consider any other types or makes of CHP systems than the one that was included in the CHP program application?

- 3. Yes
- 4. No
- 98. DK

9. [All] [IF C7 = 1] What were the makes and models of the other systems that were considered? And how did the total costs (including installation and equipment) differ with the alternatives you considered?

	Alt Make	Alt Model	CHP (Y/N)	Cap Cost	Install Cost	Prime Mover
1						
2						
3						
4						
5						
6						
7						

10. [IF C7 = 1] Were any of these options cleaner generating than the one ultimately installed?

- 5. Yes
- 6. No
- 98. DK

11. [IF B10 = 1] Why was the cleaner generating option not installed?

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12. [IF B7 = 1] Were any of the other options considered more efficient than the system ultimately installed?

- 1. Yes
- 2. No
- 98. DK

13. [IF B12 = 1] Why was the more efficient option not installed?

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14. [All] How did the recoverable uses of heat affect your decision?

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15. Were any more cutting-edge, emerging technologies considered for the site?

- 1. Yes
- 2. No
- 98. DK

16. [IF B.15=1] What technology? Why was it considered? Why eventually ruled out?

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17. [IF B.15=2] Why not?

18. [All] Were environmental concerns or image a part of your choice of this system?

- 7. Yes → Could you expand on the role it played in the decision making?
  - 8. No
  - 98. DK
- 
- 

19-33. On a scale of 1-5 where 5 is the highest, how important were the following factors in deciding whether to install a system, and/or which system to install?

	← Important   Neutral   Irrelevant →					
	1	2	3	4	5	DK
19. Initial cost						DK
20. Fuel Cost						
21. O & M cost	1	2	3	4	5	DK
22. Lifetime cost	1	2	3	4	5	DK
23. Footprint	1	2	3	4	5	DK
24. Annual fuel use efficiency	1	2	3	4	5	DK
25. Electric energy efficiency	1	2	3	4	5	DK
26. Technology	1	2	3	4	5	DK
27. Marketing image	1	2	3	4	5	DK
28. Rapid availability	1	2	3	4	5	DK
29. Environmental benefits	1	2	3	4	5	DK
30. Monitoring and control	1	2	3	4	5	DK
31. Relationship with utility	1	2	3	4	5	DK
32. Need for backup/Redundancy	1	2	3	4	5	DK
33. Reliability/Continuous performance	1	2	3	4	5	DK

34. [All] Are there other special features that were considered?

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**C. MARKET BARRIERS**

1. What do you think the barriers are to participating in the New Jersey CHP program for vendors like yourself?
  
2. What do you consider to be the major barriers to customer participation in the New Jersey CHP program? *(Do not prompt; Circle all that apply)*

None .....	0
First costs .....	1
Lack of awareness of program .....	2
Sufficient thermal load.....	3
Fuel Costs.....	4
Payback.....	5
Lack of technical knowledge .....	6
Other ( _____ ).....	7
Don't know/unsure .....	98

3. How effective is the New Jersey CHP program in reducing these barriers?  
 (PROBE: What do you need as far as support, information, or tools to help you sell the CHP concept in New Jersey?)

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Thinking back over the past two years, do you think the [Read Barrier] CHP systems has Increased significantly (1); Increased Somewhat (2); Stayed the Same(3); Decreased Somewhat(3); or Decreased Significantly (5)?

Barrier	←Increased	Same	Decreased→	
4. Initial cost of	1	2	3	4 5 DK
5. Operational cost of	1	2	3	4 5 DK
6. Maintenance cost of	1	2	3	4 5 DK
7. Availability of	1	2	3	4 5 DK
8. State of Technology (as a barrier) to	1	2	3	4 5 DK
9. Difficulty of Permitting (Air)	1	2	3	4 5 DK
10. Difficulty of Permitting (Building)	1	2	3	4 5 DK
11. Availability of information on (Lack of information being a barrier)	1	2	3	4 5 DK
12. End-user awareness of				

(Lack of awareness being a barrier)	1	2	3	4	5	DK
13. Internal approval process for (Difficult process being a barrier)	1	2	3	4	5	DK
14. Tariffs on (Utility tariffs)	1	2	3	4	5	DK
15. Utility Interconnection	1	2	3	4	5	DK
16. Cost of studies/selecting a	1	2	3	4	5	DK
17. Availability of financial incentives (Prog inctvs more avail=decr bar)	1	2	3	4	5	DK
18. Avail of technical assistance for (Prog tech asst more avail=decr bar)	1	2	3	4	5	DK
19. Energy Savings available from (More savings avail = decr in bar)	1	2	3	4	5	DK
20. Other Barrier _____	1	2	3	4	5	DK
21. Other Barrier _____	1	2	3	4	5	DK

22. [All] Overall, do you feel these barriers are increasing, decreasing, or remaining the same?

- 1. Increasing → 0a. Why? \_\_\_\_\_
- 2. Staying the same \_\_\_\_\_
- 3. Decreasing → 0b. Why? \_\_\_\_\_
- 98. DK

## F. PROGRAM EFFECTIVENESS

1. Overall, how would you rate the effectiveness of the New Jersey CHP program?

- Very effective -> **SKIP TO 5** .....1
- Somewhat effective .....2
- Neutral .....3
- Not very effective .....4
- Very un-effective .....5
- Don't know/unsure .....98

2. Why do you rate the effectiveness of the New Jersey CHP program this way?

---

3. What should be changed about the program? (*Do not prompt; Circle all that apply*)

- No suggestions .....1
- Higher incentive amounts .....2
- Higher project size threshold for incentives .....3
- Lower project size threshold for incentives .....4
- More marketing directly to end users .....5
- Too much of his time is needed to complete paperwork .....6
- Should be more technical support for customers .....7
- Better communication with vendors .....8
- More timely program announcements .....9
- Others \_\_\_\_\_ .....10
- Don't know/unsure .....98

4. IF MORE THAN ONE SUGGESTED CHANGE

Which one of these suggestions would be most important to change?

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5. Please tell me how much you agree or disagree with each of the following statements. Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-strongly disagree, 2-somewhat disagree, 3-neither, 4-somewhat agree, 5-strongly agree*

<b>Statement</b>	<b>Rating</b>
a. Large (1mw and >) customers understand the benefits of CHP	1 2 3 4 5
b. Smaller customers (<1mw) understand the benefits of CHP	1 2 3 4 5
c. The CHP program has increased customer interest in CHP	1 2 3 4 5
d. The CHP program has increased your firm's resource commitment to CHP in NJ	1 2 3 4 5
e. The application process for the CHP program does not present a barrier to participate	1 2 3 4 5



*FINALLY< I'd like to ask a few general questions:*

29. What single aspect of the CHP program have you found most helpful?

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30. And what single aspect of the program have you found least helpful?

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31. Do you have any final comments about the CHP program?

## G. (BUSINESS / FIRM-O-GRAPHIC MODULE)

G1. [All] Approximately how many full time employees or full time equivalents does your organization have at your locations in New Jersey?

Fewer than 5 .....	1
5 to 9 .....	2
10 to 19 .....	3
20 to 49 .....	4
50 to 99 .....	5
100 or More .....	6
Don't Know .....	98
Refused .....	99

G2. [All] How many locations does your organization have in New Jersey State?

One .....	1
2 to 5 .....	2
6 to 10 .....	3
More than 10.....	4
Currently Unoccupied.....	5
Don't Know .....	98
Refused .....	99

G3. [All] Has the introduction of the CHP program caused your organization dedicate additional resources in New Jersey in any of the following areas?

- G3a Office locations? [If Yes] How many? \_\_\_\_\_  
 G3b. Sales Staff? [If Yes] How many? \_\_\_\_\_  
 G3c. Technical Staff? [If Yes] How many? \_\_\_\_\_  
 9998 = Don't Know

G4. [All] Is your organization independent, or part of a larger organization?

Independent.....	1
Part of a larger organization.....	2
Other (specify).....	3
Don't know .....	98
Refused .....	99

G5. [All] What is your company's target market for CHP applications? [Circle all that apply]

<50kw .....	1
50-100kw.....	2
101-250kw.....	3
251-500kw .....	4
501kw-1,000kw.....	5
1,001-3,000kw.....	6
>3,000 kw.....	7

Don't know/unsure.....98  
Refused .....99

G6. What CHP technologies does your company actively market?

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## CLOSING MODULE

1. Are you aware of any end users in New Jersey who have installed CHP systems which may have been eligible for participation in NJOCE's CHP program, but which were not participating projects?

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2. Do you have any estimates of the potential CHP market size in New Jersey State?

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3. [All] Do you have any estimates of the current market penetration of CHP?

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**MCAC CHP  
Manufacturers & Dealers  
Survey Instrument**

**January 2006**

Date \_\_\_\_\_  
Respondent Name \_\_\_\_\_  
ID \_\_\_\_\_  
Start Time \_\_\_\_\_  
End Time \_\_\_\_\_  
Survey Administrator Name \_\_\_\_\_

Good morning/afternoon. My name is \_\_\_\_\_ and I work for Summit Blue Consulting. We are under contract with the New Jersey Office of Clean Energy (NJOCE), and I'm calling on their behalf. We are conducting a survey of the Manufacturers and Distributors of Combined Heat and Power equipment in order to get a better picture of the market and the industry. NJOCE has instituted some programs to support the adoption of CHPs in New Jersey and we are interested in talking to you about your experiences, your impressions of the current state of the industry and trends you have seen that have had an impact on the markets for CHP in New Jersey. The results of this research will be used to help NJOCE plan future programs to support renewable energy resource development in New Jersey.

Are you in fact the best person to talk to regarding the New Jersey market?

(If Yes, continue with survey. If No, ask to whom you should speak \_\_\_\_\_ and restart with that person).

This survey will take about 10 minutes; do you have the time to talk with me about your experiences right now? (If Yes, continue with survey. If No, Schedule a time to call back \_\_\_\_\_ AM/PM, on \_\_\_\_\_ Date).

NJOCE does not intend to release the information you provide other than in an aggregated form that protects your identity.

**A. TYPES OF EQUIPMENT, SALES, AND MARKET STRUCTURE**

1. How many different types of CHP equipment do you manufacture/sell?
  
2. What is your company's target market for CHP applications? [Circle all that apply]  
  
    <50kW .....1  
    50-100kW .....2  
    101-250kW .....3

251-500kW .....4  
 501kw-1,000kW .....5  
 1,001-3,000kW .....6  
 >3,000 kW .....7  
 Don't know/unsure.....98  
 Refused.....99

3. Would you please describe the different types of CHP equipment that you manufacture/sell?

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4. How many CHP systems did you sell last year? \_\_\_\_\_  
 4a-g. Do you have a rough breakdown by size category? \_\_\_\_\_

5. How many of these CHP system sales were in NJ? \_\_\_\_\_  
 5a-g. Do you have a rough breakdown by size category? \_\_\_\_\_

System Size	4. # of CHP Systems Sold	5. # of CHP Systems Sold in NJ
a. <50 kW		
b. 50-100 kW		
c. 101-250 kW		
d. 251-500 kW		
e. 501kw-1,000 kW		
f. 1,001-3,000 kW		
g. >3,000 kW		

6. How many of these NJ system sales were recipients of CHP program funding?  
 \_\_\_\_\_

7. [All] Can you please describe how the sale of CHP products normally works? [PROBE: Do the majority of your sales go to contractors/installers or end use customers? Do most contractors/installers install equipment from one manufacturer or a select few manufacturers, or not? Etc.]

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**B. BASELINE PRACTICTICES/PERCEPTIONS**

1. [All] What percent of building owners or managers for whom CHP systems could be practical do you believe are aware of the availability of these systems? [2.1]  
\_\_\_\_\_ %
  
2. [All] Do you believe building owner and manager awareness has increased, decreased, or remained the same over the last two years? [2.1, 8.5]
  1. Increased
  2. Decreased
  3. Stayed the same98. DK
  
3. [All] [IF 00 < 3] Could you estimate by what percent?  
\_\_\_\_\_ %
  
4. Do you believe that the level of awareness varies by the size of the facility or the size of the energy demands of the facility? Please explain.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
5. Have you completed any New Jersey demonstration projects resulted in any changes to your products or product development?
  1. Yes
  2. No98. DK
  
6. [IF B5=1] Would you please expand on the changes that have resulted from the demonstration projects?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
6. Are you familiar with any changes in state or federal regulations which may have an impact in the types of systems you can or are likely to sell in New Jersey going forward?  
\_\_\_\_\_  
\_\_\_\_\_
  
7. In your opinion, is the NJOCE’s CHP program critical, very important, somewhat important, not very important, or irrelevant to the sustainability and growth of the CHP market in New Jersey?
  1. Critical
  2. Very important
  3. Somewhat important

- 4. Not very important
- 5. Irrelevant
- 98. DK

8. Does this viewpoint differ as it applies to different sectors of the CHP market in NJ? (i.e by size, etc.). Please explain.

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### C. MARKET BARRIERS

1. What do you think the barriers are to participating in the New Jersey CHP program for manufacturers like yourself?
  
2. What do you consider to be the major barriers to customer participation in the New Jersey CHP program? *(Do not prompt; Circle all that apply)*

None .....	0
First costs .....	1
Lack of awareness of program .....	2
Sufficient thermal load.....	3
Fuel Costs.....	4
Payback.....	5
Lack of technical knowledge .....	6
Other ( _____ ).....	7
Don't know/unsure .....	98

3. How effective is the New Jersey CHP program in reducing these barriers?  
(PROBE: What do you need as far as support, information, or tools to help you sell the CHP concept in New Jersey?)

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Thinking back over the past two years, do you think the [Read Barrier] CHP systems has Increased significantly (1); Increased Somewhat (2); Stayed the Same(3); Decreased Somewhat(3); or Decreased Significantly (5)?

Barrier	←Increased	Same	Decreased→	
4. Initial cost of	1	2	3	4 5 DK
5. Operational cost of	1	2	3	4 5 DK
8. Maintenance cost of	1	2	3	4 5 DK
9. Availability of	1	2	3	4 5 DK
10. State of Technology (as a barrier) to	1	2	3	4 5 DK
11. Difficulty of Permitting (Air)	1	2	3	4 5 DK
12. Difficulty of Permitting (Building)	1	2	3	4 5 DK
13. Availability of information on (Lack of information being a barrier)	1	2	3	4 5 DK
14. End-user awareness of (Lack of awareness being a barrier)	1	2	3	4 5 DK

15. Internal approval process for (Difficult process being a barrier)	1	2	3	4	5	DK
16. Tariffs on (Utility tariffs)	1	2	3	4	5	DK
17. Utility Interconnection	1	2	3	4	5	DK
18. Cost of studies/selecting a	1	2	3	4	5	DK
19. Availability of financial incentives (Prog inctvs more avail=decr bar)	1	2	3	4	5	DK
20. Avail of technical assistance for (Prog tech asst more avail=decr bar)	1	2	3	4	5	DK
21. Energy Savings available from (More savings avail = decr in bar)	1	2	3	4	5	DK
22. Other Barrier _____	1	2	3	4	5	DK
23. Other Barrier _____	1	2	3	4	5	DK

24. Overall, do you feel these barriers are increasing, decreasing, or remaining the same?

1. Increasing → 0a. Why? \_\_\_\_\_

2. Staying the same

3. Decreasing → 0b. Why? \_\_\_\_\_

98. DK

25. What is the biggest impediment to selling more CHP systems?

\_\_\_\_\_

**QUESTIONS TO ASSESS CHARACTERISTICS OF RESPONDENTS  
(PARTICIPANTS AND NON-PARTICIPANTS)**

4. In what areas of the country do you sell CHP systems?

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5. Is there a difference in demand of CHP systems between areas of the country where electricity markets are regulated versus those where it is deregulated? If so, please describe how demand in these areas is different.

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6. Is there a difference in demand for CHP systems in New Jersey versus other areas of the country? If so, please describe.

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7. Is there a particular utility area in New Jersey where you have sold more systems? If so, please name that utility area, and indicate why you believe more systems have been sold there.

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**D. PROGRAM EFFECTIVENESS**

1. Overall, how would you rate the effectiveness of the New Jersey CHP program?

- Very effective -> **SKIP TO 5** .....1
- Somewhat effective .....2
- Neutral .....3
- Not very effective .....4
- Very un-effective .....5
- Don't know/unsure .....8

2. Why do you rate the effectiveness of the New Jersey CHP program this way?

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3. What should be changed about the program? (*Do not prompt; Circle all that apply*)

- No suggestions .....1
- Higher incentive amounts .....2
- Higher project size threshold for incentives .....3
- Lower project size threshold for incentives .....4
- More marketing directly to end users .....5
- Too much of his time is needed to complete paperwork .....6
- Should be more technical support for customers .....7
- Better communication with vendors .....8
- More timely program announcements .....9
- Others \_\_\_\_\_
- Don't know/unsure .....98

**4. IF MORE THAN ONE SUGGESTED CHANGE**

Which one of these suggestions would be most important to change?

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5. Please tell me how much you agree or disagree with each of the following statements. Would you say that you strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree with the following statements

*1-strongly disagree, 2-somewhat disagree, 3-neither, 4-somewhat agree, 5-strongly agree*

<b>Statement</b>	<b>Rating</b>
a. Large (1mw and >) customers understand the benefits of CHP	1 2 3 4 5
b. Smaller customers (<1mw) understand the benefits of CHP	1 2 3 4 5
c. The CHP program has increased customer interest in CHP	1 2 3 4 5
d. The CHP program has increased your firm's resource commitment to selling its CHP equipment in NJ	1 2 3 4 5
e. The CHP program has had a meaningful impact on the feasibility of CHP systems for NJ customers	1 2 3 4 5

*FINALLY< I'd like to ask a few general questions:*

29. What single aspect of the CHP program have you found most helpful?

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30. And what single aspect of the program have you found least helpful?

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31. Do you have any final comments about the CHP program?

## E. (BUSINESS / FIRM-O-GRAPHIC MODULE)

(PARTICIPANTS AND NON-PARTICIPANTS)

### E1. Approximately how many full time employees or full time equivalents does your firm have at your locations in New Jersey State?

One .....	1
2 to 5 .....	2
6 to 10 .....	3
11 to 20 .....	4
More than 20.....	5
Don't know .....	98
Refused .....	99

### E2. Does your firm have locations in other states?

Yes → where? .....	1
No .....	2
Don't know .....	98
Refused .....	99

### E3. In which types of buildings or sectors have your systems been installed? (check all that apply).

Agriculture .....	1
Amusement, Social, and Recreational Buildings .....	2
Education, Schools, colleges, libraries, laboratories (non-manufacturing owned) .....	3
Food Sales .....	4
Food Service, restaurants .....	5
Government Service Building .....	6
Health Care, hospitals and other health treatment.....	7
Inpatient .....	7a
Outpatient .....	7b
Lodging, Hotel, Motel .....	8
Mercantile .....	9
Retail (Other Than Mall) .....	9a
Enclosed and Strip Malls .....	9b
Multifamily .....	10
5+ apartments.....	10a
Dormitory .....	10b
Office and bank building .....	11
Public Assembly .....	12
Public Order and Safety .....	13
Religious Worship .....	14
Service .....	15

Warehouse and Storage (excluding manufacturer owned).....	16
Manufacturing plants, warehouse, laboratories (Identify Industry Type _____ (e.g., chemical, food, paper, etc.) .....	17
Water / wastewater .....	18
Other, miscellaneous non-residential buildings .....	19
Vacant.....	20

E4. Approximately what percent of your business is with commercial customers?

\_\_\_\_\_ [PROBE FOR PERCENT OF CLIENTS THAT ARE COMMERCIAL]